

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q**

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 2021

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number 001-39482



Sema4 Holdings Corp.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

**333 Ludlow Street, North Tower, 8th Floor
Stamford, Connecticut**

(Address of Principal Executive Offices)

85-196622

(I.R.S. Employer
Identification No.)

06902

(Zip Code)

(800) 298-6470

Registrant's telephone number, including area code

(Former name, former address and former fiscal year, if changed since last report)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A common stock, par value \$0.0001 per share	SMFR	The Nasdaq Global Select Market
Warrants to purchase one share of Class A common stock, each at an exercise price of \$11.50 per share	SMFRW	The Nasdaq Global Select Market

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes x No o

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	o	Accelerated filer	o
Non-accelerated filer	x	Smaller reporting company	x
		Emerging growth company	x

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes o No x

The registrant had outstanding 241,261,362 shares of Class A common stock as of November 8, 2021.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain matters discussed in this report, including matters discussed under the caption “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” may constitute forward-looking statements for purposes of the Securities Act of 1933, as amended, or the Securities Act, and the Securities Exchange Act of 1934, as amended, or the Exchange Act, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from the future results, performance or achievements expressed or implied by such forward-looking statements. The words “anticipate,” “believe,” “estimate,” “may,” “expect” and similar expressions are generally intended to identify forward-looking statements. Our actual results may differ materially from the results anticipated in these forward-looking statements due to a variety of factors, including, without limitation, those discussed under the captions “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and elsewhere in this report, as well as other factors which may be identified from time to time in our other filings with the Securities and Exchange Commission, or the SEC, or in the documents where such forward-looking statements appear. All written or oral forward-looking statements attributable to us are expressly qualified in their entirety by these cautionary statements. Such forward-looking statements include, but are not limited to, statements about:

- our estimates of the sufficiency of our existing capital resources combined with future anticipated cash flows to finance our operating requirements
- our expected losses;
- our expectations for incurring capital expenditures to expand our research and development and manufacturing capabilities;
- unforeseen circumstances or other disruptions to normal business operations, including supply chain interruptions and manufacturing constraints, arising from or related to COVID-19;
- our expectations for generating revenue or becoming profitable on a sustained basis;
- our expectations or ability to enter into service, collaboration and other partnership agreements;
- our expectations or ability to build our own commercial infrastructure to scale market and sell our products;
- actions or authorizations by the U.S. Food and Drug Administration or other regulatory authorities;
- risks related to governmental regulation and other legal obligations, including privacy, data protection, information security, consumer protection, and anti-corruption and anti-bribery;
- our ability to obtain and maintain intellectual property protection for our product candidates;
- our ability to compete against existing and emerging technologies;
- our stock price and its volatility;
- our ability to attract and retain key personnel;
- third-party payor reimbursement and coverage decisions;
- our reliance on third-party laboratories and service providers for our test volume in connection with our diagnostic solutions and data programs;
- our expectations for future capital requirements; and
- our ability to successfully implement our business strategy.

The forward-looking statements contained in this report reflect our views and assumptions only as of the date that this report is signed. Except as required by law, we assume no responsibility for updating any forward-looking statements.

We qualify all of our forward-looking statements by these cautionary statements. In addition, with respect to all of our forward-looking statements, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995.

Sema4 Holdings Corp.
Condensed Consolidated Balance Sheets
(in thousands, except share amounts)

Part I - Financial Information
Item 1. Unaudited Condensed Consolidated Financial Statements

	September 30, 2021 (unaudited)	December 31, 2020
Assets		
Current assets:		
Cash and cash equivalents	\$ 461,276	\$ 108,132
Accounts receivable	21,257	32,044
Due from related parties	413	289
Inventory	31,174	24,962
Prepaid expenses	20,205	4,557
Other current assets	4,186	4,124
Total current assets	\$ 538,511	\$ 174,108
Property and equipment, net	60,333	63,110
Restricted cash	900	10,828
Other assets	3,613	3,596
Total assets	\$ 603,357	\$ 251,642
Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)		
Current liabilities:		
Accounts payable and accrued expenses	\$ 43,079	\$ 38,591
Due to related parties	1,425	1,425
Current contract liabilities	493	1,783
Other current liabilities	26,369	31,643
Total current liabilities	\$ 71,366	\$ 73,442
Long-term debt, net of current portion	11,000	18,971
Stock-based compensation liabilities	—	131,989
Other liabilities	21,699	22,852
Warrant liability	46,629	—
Earn-out contingent liability	61,400	—
Total liabilities	\$ 212,094	\$ 247,254
Commitments and contingencies (Note 9)		
Redeemable convertible preferred stock:		
Series A-1 redeemable convertible preferred stock, \$0.00001 par value: 0 and 55,399,943 shares authorized, issued and outstanding at September 30, 2021 and December 31, 2020, respectively; aggregate liquidation preference of \$0 and \$55,000 at September 30, 2021 and December 31, 2020, respectively	—	51,811
Series A-2 redeemable convertible preferred stock, \$0.00001 par value: 0 and 64,718,940 shares authorized at September 30, 2021 and December 31, 2020, respectively; 0 and 49,700,364 shares authorized, issued and outstanding at September 30, 2021 and December 31, 2020, respectively; aggregate liquidation preference of \$0 and \$49,342 at September 30, 2021 and December 31, 2020, respectively	—	46,480

Sema4 Holdings Corp.
Condensed Consolidated Balance Sheets
(in thousands, except share amounts)

Series B redeemable convertible preferred stock, \$0.00001 par value: 0 and 41,937,960 shares authorized, issued and outstanding at September 30, 2021 and December 31, 2020, respectively; aggregate liquidation preference of \$0 and \$204,302 at September 30, 2021 and December 31, 2020, respectively	—	118,824
Series C redeemable convertible preferred stock, \$0.00001 par value: 0 and 24,497,317 shares authorized at September 30, 2021 and December 31, 2020, respectively; 0 and 24,496,946 shares issued and outstanding at September 30, 2021 and December 31, 2020, respectively; aggregate liquidation preference of \$0 and \$121,397 at September 30, 2021 and December 31, 2020, respectively	—	117,324
Redeemable convertible preferred stock	—	334,439
Stockholders' equity (deficit):		
Preferred Stock, \$0.0001 par value: 1,000,000 and 0 shares authorized at September 30, 2021 and December 31, 2020, respectively; 0 shares issued and outstanding at September 30, 2021 and December 31, 2020, respectively	—	—
Class A common stock: \$0.0001 par value, 380,000,000 shares authorized, 240,190,402 shares issued and outstanding at September 30, 2021 and \$0.00001 par value: 309,584,750 shares authorized, 124 shares issued and outstanding at December 31, 2020	24	—
Class B convertible common stock, \$0.00001 par value: 0 and 18,575,085 shares authorized at September 30, 2021 and December 31, 2020, respectively; 0 and 130,557 shares issued and outstanding at September 30, 2021 and December 31, 2020, respectively	—	—
Additional paid-in capital	926,253	\$ —
Accumulated deficit	(535,014)	(330,051)
Total stockholders' equity (deficit)	391,263	(330,051)
Total liabilities, redeemable convertible preferred stock and stockholders' equity (deficit)	\$ 603,357	\$ 251,642

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

Sema4 Holdings Corp.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(in thousands, except share amounts)
(unaudited)

	Three months ended September 30,		Nine months ended September 30,	
	2021	2020	2021	2020
Revenue				
Diagnostic test revenue (including related party revenue of \$20 and \$86 for the three months ended September 30, 2021 and 2020, respectively and \$90 and \$186 for the nine months ended September 30, 2021 and 2020, respectively)	\$ 41,410	\$ 37,893	\$ 148,973	\$ 113,759
Other revenue (including related party revenue of \$65 and \$0 for the three months ended September 30, 2021 and 2020, respectively and \$153 and \$0 for the nine months ended September 30, 2021 and 2020, respectively)	1,768	715	5,421	1,606
Total revenue	43,178	38,608	154,394	115,365
Cost of services (including related party expenses of \$656 and \$452 for the three months ended September 30, 2021 and 2020, respectively and \$1,942 and \$1,485 for the nine months ended, September 30, 2021 and 2020 respectively)	58,752	36,530	180,195	111,754
Gross (loss) profit	(15,574)	2,078	(25,801)	3,611
Research and development	17,831	19,083	82,916	41,540
Selling and marketing	22,121	12,735	69,937	33,154
General and administrative	33,230	24,342	147,941	39,627
Related party expenses	847	1,933	3,532	6,239
Loss from operations	(89,603)	(56,015)	(330,127)	(116,949)
Other income (expense), net:				
Change in fair market value of warrant and earn-out contingent liabilities	122,171	—	122,171	—
Interest income	27	63	57	473
Interest expense	(683)	(637)	(2,128)	(1,826)
Other income (expense), net	(520)	(26)	5,064	2,645
Total other income (expense), net	120,995	(600)	125,164	1,292
Income (loss) before income taxes	\$ 31,392	\$ (56,615)	\$ (204,963)	\$ (115,657)
Income tax provision	—	—	—	—
Net income (loss) and comprehensive income (loss)	\$ 31,392	\$ (56,615)	\$ (204,963)	\$ (115,657)
Weighted average shares outstanding of Class A common stock for basic earnings	185,680,394	124	63,121,738	124
Weighted average shares outstanding of Class A common stock for diluted earnings	210,330,946	124	63,121,738	124
Basic net income (loss) per share, Class A common stock	\$ 0.17	\$ (456,573)	\$ (3.25)	\$ (932,718)
Diluted net income (loss) per share, Class A common stock	\$ 0.15	\$ (456,573)	\$ (3.25)	\$ (932,718)

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

Sema4 Holdings Corp.
Condensed Consolidated Statement of Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)
(in thousands, except share amounts)
(unaudited)

	Redeemable Convertible Preferred Stock		Three months ended September 30, 2021						
	Shares	Amount	Class A Common Stock		Class B Common Stock		Additional paid-in capital	Accumulated deficit	Total stockholders' equity (deficit)
			Shares	Par value	Shares	Par value			
Balances at June 30, 2021	171,535,213	\$ 334,439	4,458	\$ —	1,383,736	\$ —	\$ 1,483	\$ (566,406)	\$ (564,923)
Net income	—	—	—	—	—	—	—	31,392	31,392
Conversion of Preferred Stock	(171,535,213)	(334,439)	148,543,062	15	—	—	104,517	—	104,532
Conversion of Class B Common Stock	—	—	1,309,320	—	(1,383,736)	—	(744)	—	(744)
Net equity infusion from the Business Combination	—	—	90,333,562	9	—	—	510,742	—	510,751
Stock based compensation modification reclassification	—	—	—	—	—	—	304,837	—	304,837
Stock based compensation expense	—	—	—	—	—	—	5,418	—	5,418
Balances at September 30, 2021	—	\$ —	240,190,402	\$ 24	—	\$ —	\$ 926,253	\$ (535,014)	\$ 391,263

	Redeemable Convertible Preferred Stock		Nine months ended September 30, 2021						
	Shares	Amount	Class A Common Stock		Class B Common Stock		Additional paid-in capital	Accumulated deficit	Total stockholders' equity (deficit)
			Shares	Par value	Shares	Par value			
Balances at December 31, 2020	171,535,213	\$ 334,439	124	\$ —	130,557	\$ —	\$ —	\$ (330,051)	\$ (330,051)
Net loss	—	—	—	—	—	—	—	(204,963)	(204,963)
Stock option exercises	—	—	4,334	—	1,253,179	—	1,483	—	1,483
Conversion of Preferred Stock	(171,535,213)	(334,439)	148,543,062	15	—	—	104,517	—	104,532
Conversion of Class B Common Stock	—	—	1,309,320	—	(1,383,736)	—	(744)	—	(744)
Net equity infusion from the Business Combination	—	—	90,333,562	9	—	—	510,742	—	510,751
Stock based compensation modification reclassification	—	—	—	—	—	—	304,837	—	304,837
Stock based compensation expense	—	—	—	—	—	—	5,418	—	5,418
Balances at September 30, 2021	—	\$ —	240,190,402	\$ 24	—	\$ —	\$ 926,253	\$ (535,014)	\$ 391,263

Sema4 Holdings Corp.
Condensed Consolidated Statement of Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)
(in thousands, except share amounts)
(unaudited)

	Redeemable Convertible Preferred Stock		Three months ended September 30, 2020						
	Shares	Amount	Class A Common Stock		Class B Common Stock		Additional paid-in capital	Accumulated deficit	Total stockholders' equity (deficit)
			Shares	Par value	Shares	Par value			
Balances at June 30, 2020	147,038,267	\$ 217,115	124	\$ —	—	\$ —	—	\$ (147,753)	\$ (147,753)
Net loss	—	—	—	—	—	—	—	(56,615)	(56,615)
Issuance of Preferred Series C, net of issuance costs	24,496,946	117,324	—	—	—	—	—	—	—
Balances at September 30, 2020	171,535,213	\$ 334,439	124	\$ —	—	\$ —	—	(204,368)	(204,368)

	Redeemable Convertible Preferred Stock		Nine months ended September 30, 2020						
	Shares	Amount	Class A Common Stock		Class B Common Stock		Additional paid-in capital	Accumulated deficit	Total stockholders' equity (deficit)
			Shares	Par value	Shares	Par value			
Balances at December 31, 2019	147,038,267	\$ 217,115	124	\$ —	—	\$ —	—	\$ (88,711)	\$ (88,711)
Net loss	—	—	—	—	—	—	—	(115,657)	(115,657)
Issuance of Preferred Series C, net of issuance costs	24,496,946	117,324	—	—	—	—	—	—	—
Balances at September 30, 2020	171,535,213	\$ 334,439	124	\$ —	—	\$ —	—	(204,368)	(204,368)

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

Sema4 Holdings Corp.
Condensed Consolidated Statements of Cash Flows
(in thousands)
(unaudited)

	Nine months ended September 30,	
	2021	2020
Operating activities		
Net loss	\$ (204,963)	\$ (115,657)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization expense	16,012	8,147
Stock-based compensation expense	182,454	30,073
Change in fair value of warrant and contingent liabilities	(122,171)	—
Provision for excess and obsolete inventory	1,122	—
Non-cash lease expense	1,174	2,203
Loss on extinguishment of debt	301	—
Change in operating assets and liabilities:		
Accounts receivable	10,787	(3,159)
Inventory	(7,334)	(8,105)
Prepaid expenses and other current assets	(15,710)	516
Due to/from related parties	(124)	617
Other assets	(17)	1,174
Accounts payable and accrued expenses	4,685	(537)
Contract liabilities	(1,290)	(135)
Other current liabilities	(3,375)	10,068
Net cash used in operating activities	(138,449)	(74,795)
Investing activities		
Purchases of property and equipment	(4,344)	(17,310)
Development of internal-use software assets	(8,749)	(3,165)
Net cash used in investing activities	(13,093)	(20,475)
Financing activities		
Proceeds from issuance of Series C redeemable convertible preferred stock, net of issuance costs	—	117,326
Proceeds from PIPE issuance	350,000	—
Proceeds from equity infusion from the merger, net of redemptions	442,684	—
Legacy Sema4 Shareholder payout	(230,665)	—
Payment of transaction costs	(51,760)	—
Stock Appreciation Rights payout	(3,795)	—
Repayment of long-term debt	(8,741)	—
Capital lease principal payments	(2,960)	(3,384)
Long-term debt principal payments	(1,000)	—
Proceeds from long-term debt	—	6,000
Exercise of stock options	995	—
Net cash provided by financing activities	494,758	119,942
Net increase in cash, cash equivalents and restricted cash	343,216	24,672
Cash, cash equivalents and restricted cash, at beginning of period	118,960	115,006
Cash, cash equivalents and restricted cash, at end of period	\$ 462,176	\$ 139,678

Sema4 Holdings Corp.
Condensed Consolidated Statements of Cash Flows
(in thousands)
(unaudited)

Supplemental disclosures of cash flow information

Cash paid for interest	\$	2,128	\$	1,826
Cash paid for taxes	\$	50	\$	—
Purchases of property and equipment in accounts payable and accrued expenses	\$	193	\$	268
Software development costs in accounts payable and accrued expenses	\$	1,228	\$	1,629
Assets acquired under capital leases obligations	\$	641	\$	5,637

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

Sema4 Holdings Corp.**Notes to Unaudited Condensed Consolidated Financial Statements****1. Organization and Description of Business**

Mount Sinai Genomics Inc., a Delaware corporation (“Legacy Sema4”) provides genomics-related diagnostic and information services and pursues genomics medical research. Legacy Sema4 utilizes an integrated portfolio of laboratory processes, software tools and informatics capabilities to process DNA-containing samples, analyze information about patient-specific genetic variation and generate test reports for clinicians and their patients. Legacy Sema4 provides a variety of genetic diagnostic tests and information with a focus on reproductive health, including pediatric, oncology and other conditions. In 2020, the Legacy Sema4 began to provide diagnostic testing services in response to the recent novel coronavirus (“COVID-19”) outbreak. Legacy Sema4 serves patients and bills third-party payors across the United States, with a substantial portion of its diagnostic testing volume occurring in New York, California, Florida, Connecticut and New Jersey.

On July 22, 2021 (the “Closing Date”), CM Life Sciences, Inc. (“CMLS”) completed the acquisition of Legacy Sema4, pursuant to that certain Agreement and Plan of Merger (as amended, the “Merger Agreement”), dated February 9, 2021. On the Closing Date, S-IV Sub, Inc. (“Merger Sub”) merged with and into the Legacy Sema4, with Legacy Sema4 surviving the merger as a wholly-owned subsidiary of CMLS (the “Merger” and, together with the other transactions contemplated by the Merger Agreement, the “Business Combination”). In connection with the consummation of the Business Combination, CMLS changed its name to “Sema4 Holdings Corp.” (“Sema4 Holdings”) and Legacy Sema4 changed its name to “Sema4 OpCo, Inc.” All equity securities of Legacy Sema4 were converted into the right to receive the applicable portion of the merger consideration.

The Merger was accounted for as a reverse recapitalization with Legacy Sema4 as the accounting acquirer and CMLS as the acquired company for accounting purposes. The shares and net loss per common share, prior to the Merger, have been retroactively restated as shares reflecting the exchange ratio established in the Merger (1 share of Legacy Sema4 Class A common stock for 123.8339 shares of Sema4 Holdings Class A common stock) (the “Conversion Ratio”).

Prior to the Merger, shares of CMLS Class A common stock, CMLS’s public warrants, and CMLS’s public units were traded on the Nasdaq Capital Market under the ticker symbols “CMLF”, “CMFLW”, and “CMLFU” respectively. On July 23, 2021, shares of Sema4 Holdings Class A common stock and Sema4 Holdings’ public warrants began trading on the Nasdaq Global Select Market (the “Nasdaq”) under the ticker symbols “SMFR” and “SMFRW,” respectively. See Note 3, “Business Combination,” for additional details.

Unless otherwise stated herein or unless the context otherwise requires, references in these notes to the “Company,” or “Sema4” refer to (i) Legacy Sema4 prior to the consummation of the Business Combination; and (ii) Sema4 Holdings and its subsidiary following the consummation of the Business Combination.

2. Summary of Significant Accounting Policies***Basis of Presentation***

The accompanying unaudited condensed consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America (“U.S. GAAP”) for interim financial information and pursuant to the accounting disclosure rules and regulations of the Securities and Exchange Commission (the “SEC”) regarding interim financial reporting. Accordingly, they do not include all of the information and footnotes required by U.S. GAAP for complete financial statements. As such, the accompanying unaudited condensed consolidated financial statements should be read in conjunction with the Company’s audited financial statements and notes thereto as of and for the years ended December 31, 2020, 2019 and 2018.

The accompanying unaudited condensed consolidated financial statements reflect all normal recurring adjustments that are necessary to state fairly the results for the interim periods presented. Interim results are not necessarily indicative of the results of operations or cash flows for a full year or any subsequent interim period.

The Company’s historical financial information includes costs of certain services historically provided by Icahn School of Medicine at Mount Sinai (“ISMMS”) pursuant to the Transition Services Agreement (“TSA”) and service agreements.

Sema4 Holdings Corp.

Notes to Unaudited Condensed Consolidated Financial Statements

Except as described elsewhere in Note 2 and in Note 3, “Business Combination”, there have been no material changes to the Company’s significant accounting policies as described in the unaudited condensed consolidated financial statements for the periods ended September 30, 2021 and 2020.

Although the Company has incurred recurring losses in each year since inception, the Company expects its cash and cash equivalents will be sufficient to fund operations for at least the next twelve months from the date of filing of this Form 10-Q.

Segment Information

The Company operates and manages its business as one reportable operating segment based on how the Chief Executive Officer, who is the Company’s chief operating decision maker (“CODM”), assesses performance and allocates resources across the business.

Use of Estimates

The preparation of unaudited condensed consolidated financial statements in conformity with U.S. GAAP requires management to make certain estimates, judgments and assumptions that affect the reported amounts of assets and liabilities and the related disclosures at the date of the unaudited condensed consolidated financial statements as well as the reported amounts of revenues and expenses during the periods presented. The Company bases these estimates on current facts, historical and anticipated results, trends and various other assumptions that it believes are reasonable in the circumstances, including assumptions as to future events. These estimates include, but are not limited to, the transaction price for certain contracts with customers, the capitalization of software costs and the valuation of stock-based awards, inventory, warrant liability and earn-out contingent liability. Actual results could differ materially from those estimates, judgments and assumptions.

Concentration of Credit Risk and Other Risks and Uncertainties

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents and accounts receivable.

The Company’s cash and cash equivalents are deposited with high-quality financial institutions. The Company has balances in financial institutions that exceed federal depository insurance limits. Management believes these financial institutions are financially sound and, accordingly, that minimal credit risk exists. The Company has not experienced any losses on its deposits of cash and cash equivalents.

The Company assesses both the customer and, if applicable, the third-party payor that reimburses the Company on the customer’s behalf when evaluating the concentration of credit risk. Significant customers and payors are those that represent more than 10% of the Company’s total annual revenues or accounts receivable balance at each respective balance sheet date. The significant concentrations of accounts receivable as of September 30, 2021 and December 31, 2020 were primarily from large managed care insurance companies and a reference laboratory. There was no individual customer that accounted for 10% or more of the Company’s revenue or accounts receivable for any of the periods presented. The Company does not require collateral as a means to mitigate customer credit risk.

For each significant payor, revenue as a percentage of total revenues and accounts receivable as a percentage of total accounts receivable are as follows:

	Revenue				Accounts Receivable	
	Three months ended September 30,		Nine months ended September 30,		As of	As of
	2021	2020	2021	2020	September 30,	December 31,
				2021	2020	
Payor A	23 %	22 %	19 %	34 %	17 %	10 %
Payor B	*	10 %	*	13 %	*	*
Payor C	15 %	16 %	13 %	15 %	*	*
Payor D	*	12 %	10 %	11 %	10 %	*
Payor E	*	*	*	*	*	20 %

*less than 10%

Sema4 Holdings Corp.**Notes to Unaudited Condensed Consolidated Financial Statements**

The Company is subject to a concentration of risk from a limited number of suppliers for certain reagents and laboratory supplies. One supplier accounted for approximately 8% and 12% for the three months ended September 30, 2021 and 2020, respectively and 10% and 9% of purchases of lab supplies, reagents and kits for the nine months ended September 30, 2021 and 2020, respectively. This risk is managed by maintaining a target quantity of surplus stock.

Impact of COVID-19

In March 2020, the World Health Organization declared the COVID-19 outbreak a global pandemic. COVID-19 has had, and continues to have, an extensive impact on global health and economic conditions. Many jurisdictions, including those in which the Company has current operations, have implemented measures to combat the spread of COVID-19, such as travel restrictions and shelter in place orders. In addition, the healthcare sector generally experienced a decline in discretionary care services at the onset of the pandemic.

Beginning in April 2020, the Company's diagnostic test volumes decreased significantly as compared to the prior year as a result of COVID-19 and the related limitations and priorities across the healthcare system. In response, beginning in May 2020, the Company entered into several service agreements with state governments and healthcare institutions to provide testing for the presence of COVID-19 strains. While test volumes have since improved, the Company continues to experience changes in the mix of tests due to the impact of COVID-19. COVID-19 could continue to have a material impact on the Company's results of operations, cash flows and financial condition for the foreseeable future.

In March 2020, the Coronavirus Aid, Relief and Economic Security Act ("CARES Act") was signed into law, which was a stimulus bill that, among other things, provided assistance to qualifying businesses and individuals and included funding for the healthcare system. During 2020, as part of the stimulus provided by the CARES Act, the Company received \$5.4 million, comprised of \$2.6 million received under the Provider Relief Fund ("PRF") distribution, which was recognized in other income, net in the statements of operations and comprehensive loss, and \$2.8 million received under the Employee Retention Credit ("ERC") distribution, which was recorded in the other liabilities and reflected in this balance as of September 30, 2021 and December 31, 2020.

During 2021, the Company received an additional \$5.6 million under the PRF distribution, which was recognized in other income (expense), net in the condensed consolidated statements of operations and comprehensive loss.

Cash, Cash Equivalents and Restricted Cash

Cash equivalents consist of amounts invested in money market funds. Carrying values of cash equivalents approximate fair value due to the short-term nature of these instruments.

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported on the condensed consolidated balance sheets that sum to the total of the same amounts shown on the condensed consolidated statements of cash flows (in thousands):

	As of September 30, 2021	As of December 31, 2020
Cash and cash equivalents	\$ 461,276	\$ 108,132
Restricted cash	900	10,828
Total	\$ 462,176	\$ 118,960

Restricted cash as of September 30, 2021 consists of money market deposit accounts that secure an irrevocable standby letter of credit that serves as collateral for security deposit operating leases (see Note 9).

Warrant Liability

As of the consummation of the Merger in July 2021, there were 21,995,000 warrants to purchase shares of Class A common stock outstanding, including 14,758,333 public warrants and 7,236,667 private placement warrants. As of September 30, 2021, there were 21,994,972 warrants to purchase shares of Class A common stock outstanding, including 14,758,305 public warrants and 7,236,667 private placement warrants outstanding. Each warrant expires five years after the Business Combination or earlier upon redemption or liquidation, and entitles the holder to purchase one share of Class

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A common stock at an exercise price of \$11.50 per share, subject to adjustment, at any time commencing on September 4, 2021.

The Company may redeem the outstanding public warrants if the price per share of the common stock equals or exceeds \$18.00 as described below:

- in whole and not in part;
- at a price of \$0.01 per public warrant;
- upon not less than 30 days' prior written notice of redemption to each warrant holder; and
- if, and only if, the closing price of the Class A common stock equals or exceeds \$18.00 per share (as adjusted) for any 20 trading days within a 30-trading day period ending three trading days before sending the notice of redemption to warrant holders.

The Company may redeem the outstanding public warrants if the price per share of the common stock equals or exceeds \$10.00 as described below:

- in whole and not in part;
- at \$0.10 per warrant upon a minimum of 30 days' prior written notice of redemption provided that holders will be able to exercise their warrants on a cashless basis prior to redemption and receive that number of shares based on the redemption date and the fair market value of the common stock;
- if, and only if, the closing price of the Class A common stock equals or exceeds \$10.00 per share (as adjusted) for any 20 trading days within the 30-trading day period ending three trading days before the Company sends the notice of redemption to the warrant holders; and
- if the closing price of the common stock for any 20 trading days within a 30-trading day period ending three trading days before the Company sends notice of redemption to the warrant holders is less than \$18.00 per share (as adjusted), the private placement warrants must also be concurrently called for redemption on the same terms as the outstanding public warrants, as described above.

The private placement warrants were issued to CMLS Holdings, LLC, Mr. Munib Islam, Dr. Emily Leproust and Mr. Nat Turner, and are identical to the public warrants underlying the units sold in the initial public offering, except that (1) the private placement warrants and the common stock issuable upon the exercise of the private placement warrants were not be transferable, assignable or salable until 30 days after the completion of a Business Combination, subject to certain limited exceptions, (2) the private placement warrants are exercisable on a cashless basis, (3) the private placement warrants are non-redeemable (except as described above, upon a redemption of warrants when the price per share of Class A common stock equals or exceeds \$10.00) so long as they are held by the initial purchasers or their permitted transferees, and (4) the holders of the private placement warrants and the common stock issuable upon the exercise of the private placement warrants have certain registration rights. If the private placement warrants are held by someone other than the initial purchasers or their permitted transferees, the private placement warrants will be redeemable by the Company and exercisable by such holders on the same basis as the public warrants.

The Company accounts for warrants as liability-classified instruments based on an assessment of the warrant terms and applicable authoritative guidance in accordance with ASC 480-Distinguishing Liabilities from Equity ("ASC 480") and ASC 815-Derivatives and Hedging ("ASC 815"). The assessment considers whether the warrants are freestanding financial instruments pursuant to ASC 480, whether the warrants meet the definition of a liability pursuant to ASC 480, and whether the warrants meet all of the requirements for equity classification under ASC 815. This assessment is conducted at the time of warrant issuance and as of each subsequent quarterly period end date while the warrants are outstanding.

Earn-out contingent liability

In connection with the Merger, all Legacy Sema4 stockholders and option holders at that time became entitled to a pro rata share of 19,021,576 earn-out shares and earn-out Restricted Stock Units ("RSUs"). Based on an assessment of the earn-out shares for the Legacy Sema4 stockholders, the Company considered ASC 480 and ASC 815 and accounted for the

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earn-out shares as a liability. The Company subsequently measures the fair value of the liability at each reporting period and reports the changes in fair value recorded as a component of other income (expense), net in the condensed consolidated statements of operations and comprehensive loss.

The Company determined the fair value of the earn-out shares issued to the Legacy Sema4 stockholders as of September 30, 2021 was \$61.4 million.

As for the earn-out RSUs for the Legacy Sema4 option holders, the vesting of such arrangement is conditioned on the satisfaction of both the service requirement and on the satisfaction of a market-based requirement. Therefore, the Company accounts for this arrangement in accordance with ASC 718- Compensation — Stock Compensation (“ASC 718”) and no amounts have been recorded in relation to the earn-out RSU during the quarter because they were not granted to the option holders during the three and nine months ended on September 30, 2021.

The estimated fair value of the earn-out is determined using a Monte Carlo valuation analysis.

Capitalized Internal-Use Software Costs

We capitalize certain costs related to the development of our software applications for internal use. Capitalization begins during the application development stage, once the preliminary project stage has been completed. If a project constitutes an enhancement to existing software, we assess whether the enhancement creates additional functionality to the software, thus qualifying the work incurred for capitalization. Costs incurred prior to meeting these criteria together with costs incurred for training and maintenance are expensed as incurred. Once the project is available for general release, capitalization ceases and we estimate the useful life of the asset and begin amortization. We exercise judgment in determining the point at which various projects may be capitalized, in assessing the ongoing value of the capitalized costs and in determining the estimated useful lives over which the costs are amortized. We periodically assess whether triggering events are present to review internal-use software for impairment. To the extent that we change our estimates related to internal-use software, the amount of internal-use software development costs we capitalize and amortize could change in future periods.

Emerging Growth Company

The Company is an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012. As such, the Company is eligible for exemptions from various reporting requirements applicable to other public companies that are not emerging growth companies, including reduced reporting and extended transition periods to comply with new or revised accounting standards for public business entities. The Company has elected to avail itself of this exemption and, therefore, will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Recently Adopted Accounting Pronouncements

Effective January 1, 2021, the Company adopted Accounting Standards Update (“ASU”) 2018-18, Collaborative Arrangements: Clarifying the Interaction between Topic 808 and Topic 606 (“ASU 2018-18”), which clarifies that certain transactions between participants in a collaborative arrangement should be accounted for under ASC Topic 606 (“ASC 606”), Revenue from Contracts with Customers, when the counterparty is a customer. In addition, ASC Topic 808 (“ASC 808”), Collaborative Arrangements precludes an entity from presenting consideration from a transaction in a collaborative arrangement as revenue from contracts with customers if the counterparty is not a customer for that transaction. Adoption of ASU 2018-18 did not have an impact on the Company’s unaudited condensed consolidated financial statements as the Company is not currently a participant in any such collaborative arrangements.

Recently Issued Accounting Pronouncements Not Yet Adopted

In February 2016, the FASB issued ASU 2016-02, Leases (“ASU 2016-02”), which requires lessees to recognize right-of-use assets and lease liabilities for most leases on their balance sheets. Expense recognition for lessees under ASU 2016-02 is similar to current lease accounting. ASU 2016-02 will require enhanced disclosures to help the financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases. The recognition, measurement and presentation of expenses and cash flows arising from a lease will primarily depend on its classification as a finance or operating lease. As an emerging growth company, the provisions of ASU 2016-02 are effective for the

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Company for annual and interim periods beginning after December 15, 2021. Early adoption is permitted. The Company is evaluating the transition options permissible under ASU 2016-02 and plans to adopt through a cumulative adjustment to retained earnings on the date of adoption. Significant implementation matters being addressed by the Company include documenting the new lease accounting process, and determining incremental borrowing rate and complete population of the leases for evaluation. The Company is evaluating the effect this ASU will have on its financial statements, related disclosures and ongoing financial reporting. The Company expects implementation of this ASU to result in the recognition of right-of-use assets and corresponding lease liabilities in its balance sheets, principally related to office and facility leases.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* (“ASU 2016-13”). The new credit losses standard changes the impairment model for most financial assets and certain other instruments. For trade and other receivables, contract assets recognized as a result of applying ASC 606, loans and certain other instruments, entities will be required to use a new forward looking “expected loss” model that generally will result in earlier recognition of credit losses than under today’s incurred loss model. As an emerging growth company, ASU 2016-13 is effective for annual periods beginning after December 15, 2022, with early adoption permitted. Application of the amendments is through a cumulative-effect adjustment to the opening retained earnings as of the beginning of the first reporting period in which the guidance is effective. The Company is currently evaluating the impact of the new guidance on its financial statements and related disclosures.

In August 2018, the FASB issued ASU 2018-15, *Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* (“ASU 2018-15”), which aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal use software license). The accounting for the service element of a hosting arrangement that is a service contract is not affected by the standard. ASU 2018-15 will require an entity (customer) in a hosting arrangement that is a service contract to follow the guidance in Subtopic 350-40 to determine which implementation costs to capitalize as an asset related to the service contract and which costs to expense. ASU 2018-15 also requires the entity (customer) to expense the capitalized implementation costs of a hosting arrangement that is a service contract over the term of the hosting arrangement. Additionally, ASU 2018-15 requires the entity to present the expense related to the capitalized implementation costs in the same line item in the statement of income as the fees associated with the hosting element (service) of the arrangement and classify payments for capitalized implementation costs in the statement of cash flows in the same manner as payments made for fees associated with the hosting element. The entity is also required to present the capitalized implementation costs on the balance sheets in the same line item that a prepayment for the fees of the associated hosting arrangement would be presented. The amendments in ASU 2018-15 are effective for the Company in annual reporting periods beginning after December 15, 2020 and interim periods beginning after December 15, 2021. Early adoption is permitted. The Company is expecting to prospectively apply amendments to all implementation costs incurred after the date of adoption.

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* (“ASU 2019-12”). ASU 2019-12 simplifies the accounting for income taxes by removing certain exceptions to the general principles in ASC 740 and clarifying and amending existing guidance to improve consistent application. ASU 2019-12 is effective for fiscal years beginning after December 15, 2021. Early adoption is permitted. The Company is currently assessing the impact of adopting this new accounting guidance will have on its financial statements and related disclosures.

3. Business Combination

As discussed in Note 1, on July 22, 2021, the Company consummated the Business Combination and received net cash proceeds of \$510.0 million.

Pursuant to the Business Combination, the following occurred:

- Holders of 10,188 shares of CMLS’s Class A common stock sold in its initial public offering (the “public shares”) exercised their right to have such shares redeemed for a full pro rata portion of the trust account holding the proceeds from CMLS’s initial public offering (the “IPO”), which was approximately \$10.00 per share, or \$101,880 in aggregate.

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- Each share of CMLS's Class B common stock was automatically converted into common stock of the Company.
- Each share of the Legacy Sema4 Class B common stock was converted into 1/100th of a share of Legacy Sema4 Class A common stock and each share of Legacy Sema4 common stock and preferred stock was canceled and received a portion of the merger consideration, resulting in certain Legacy Sema4 stockholders receiving \$230,665,220 of cash and the Legacy Sema4 stockholders receiving an aggregate of 178,336,298 shares of common stock of the Company.
- Pursuant to subscription agreements entered into on February 9, 2021, certain investors agreed to subscribe for an aggregate of 35,000,000 newly-issued shares of common stock at a purchase price of \$10.00 per share for an aggregate purchase price of \$350,000,000 (the "PIPE Investment"). Concurrently with the closing of the Business Combination, the Company consummated the PIPE Investment.
- After giving effect to the Merger, the redemption of public shares and the conversion of the CMLS Class B common stock as described above, and the consummation of the PIPE Investment, there were 240,190,402 shares of the Company's common stock issued and outstanding.

The Company recorded \$51.8 million of transaction costs which consist of direct, incremental legal, professional, accounting, and other third-party fees that were directly related to the execution of the Merger in additional paid-in capital. Upon consummation of the Merger, \$9.0 million of the transaction costs relates to costs incurred by Legacy Sema4 and reclassified to offset against equity from prepaid expense and other current assets.

4. Revenue Recognition

Diagnostic Revenue

The majority of the Company's revenue is generated from diagnostic services provided to three groups of customers: patients with third-party insurance coverage; patients without third-party insurance coverage or those who elect to self-pay; and institutional clients, such as hospitals, clinics and reference laboratories. Revenue from diagnostic testing services is recorded at the estimated transaction price, subject to the constraint for variable consideration, upon transfer of control of the service.

Other Revenue

The Company enters into both short-term and long-term project-based collaboration service agreements with third parties, whereby the Company provides diagnostic testing, research and related data aggregation reporting services. The consideration to which the Company is entitled pursuant to its collaboration service agreements generally includes non-refundable upfront payments and variable payments based upon the achievement of certain milestones during the contract term. Non-refundable upfront payments are generally received in advance of performing the services and, therefore, are recorded as a contract liability upon receipt. Milestone payments are included in the transaction price only when it is probable that doing so will not result in a significant reversal of cumulative revenue recognized when the uncertainty associated with the milestone is subsequently resolved. Revenue for such collaboration service agreements is recognized over time using an input measure based on costs incurred to satisfy the performance obligation.

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Disaggregated revenue

The following tables summarize the Company's revenue disaggregated by type of customer (in thousands):

	Three months ended September 30,	
	2021	2020
Diagnostic test revenue		
Patients with third-party insurance	\$ 36,738	\$ 31,627
Institutional customers	3,656	5,796
Self-pay patients	1,016	470
Total diagnostic test revenue	41,410	37,893
Other revenue	1,768	715
Total	\$ 43,178	\$ 38,608

	Nine months ended September 30,	
	2021	2020
Diagnostic test revenue		
Patients with third-party insurance	\$ 123,395	\$ 103,422
Institutional customers	23,075	8,948
Self-pay patients	2,503	1,389
Total diagnostic test revenue	148,973	113,759
Other revenue	5,421	1,606
Total	\$ 154,394	\$ 115,365

Reassessment of variable consideration

Subsequent changes to the estimate of the transaction price, determined on a portfolio basis when applicable, are generally recorded as adjustments to revenue in the period of the change. The Company updates estimated variable consideration quarterly.

For the three months ended September 30, 2021, the quarterly change in estimate resulted in a net \$0.6 million adjustment for tests in which the performance obligation of delivering the test results was met in prior periods. The change in estimate is a result of changes in the estimated transaction price due to contractual adjustments, obtaining updated information from payors and patients that was unknown at the time the performance obligation was met and settlements with third party payors. For the three months ended September 30, 2020, the quarterly change in estimate did not result in material adjustments to the Company's previously reported revenue or accounts receivable amounts.

Remaining performance obligations

Due to the long-term nature of the collaboration service agreement, the Company's obligations pursuant to such agreement represent partially unsatisfied performance obligations as of September 30, 2021. The revenues under existing collaboration service agreements with original expected durations of more than one year are estimated to be approximately \$10.7 million. The Company expects to recognize the majority of this revenue over the next 4 years.

Contract assets and liabilities

Contract assets consist of the Company's right to consideration that is conditional upon its future performance. Contract assets arise in collaboration service agreements for which revenue is recognized over time but the Company's right to bill the customer is contingent upon the achievement of contractually-defined milestones.

Contract liabilities consist of customer payments in excess of revenues recognized. For collaboration service agreements, the Company assesses the performance obligations and recognizes contract liabilities as current or non-current based upon forecasted performance.

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A reconciliation of the beginning and ending balances of contract assets and contract liabilities is shown in the table below (in thousands):

	Contract Assets	Contract Liabilities
December 31, 2020	\$ 2,028	\$ 3,811
Contract asset additions	832	—
Customer prepayments	—	1,723
Revenue recognized	105	(2,076)
September 30, 2021	<u>\$ 2,965</u>	<u>\$ 3,458</u>

The decrease in contract liabilities as of September 30, 2021 is primarily due to the execution of the performance obligations during the period. The Company presents contract assets and contract liabilities with respect to customer contracts on a net basis on its condensed consolidated balance sheets. As of September 30, 2021 and December 31, 2020, \$0.5 million and \$1.8 million is recorded as current contract liabilities, respectively.

Revenues recognized that were included in the contract liability balance at the beginning of each period were \$0.3 million and \$0.1 million, respectively, for the three months ended September 30, 2021 and September 30, 2020 and \$2.1 million and \$0.3 million for the nine months ended September 30, 2021 and September 30, 2020.

Costs to fulfill contracts

Costs associated with fulfilling the Company's performance obligations pursuant to its collaboration service agreements include costs for services that are subcontracted to ISMMS. Amounts are generally prepaid and then expensed in line with the pattern of revenue recognition. Prepayment of amounts prior to the costs being incurred are recognized on the condensed consolidated balance sheets as current or non-current based upon forecasted performance.

As of September 30, 2021 and December 31, 2020, the Company had outstanding deferred costs to fulfill contracts of \$2.2 million and \$3.0 million, respectively. As of September 30, 2021 and December 31, 2020, all outstanding deferred costs were recorded as prepaid expenses and other current assets.

Amortization of deferred costs was \$0.3 million and \$0.2 million for the three months ended September 30, 2021 and 2020, respectively and \$0.9 million and \$0.7 million for the nine months ended September 30, 2021 and 2020, respectively. The amortization of these costs is recorded in the cost of services on the condensed consolidated statements of operations and comprehensive loss.

5. Fair Value Measurements

Financial assets and liabilities are recorded at fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible. The Company determines the fair value of its financial instruments based on assumptions that market participants would use in pricing an asset or liability in the principal or most advantageous market. The following hierarchy lists three levels of fair value based on the extent to which inputs used in measuring fair value are observable in the market:

Level 1: Observable inputs such as quoted prices (unadjusted) in active markets that are accessible at the measurement date for identical assets or liabilities.

Level 2: Observable inputs such as quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active or model-derived valuations whose significant inputs are observable.

Level 3: Unobservable inputs that are significant to the measurement of fair value but are supported by little to no market data.

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The Company's financial assets and liabilities consist of cash and cash equivalents, restricted cash, accounts receivable, accounts payable, accrued liabilities, capital leases, warrant liability, earn-out contingent liability and long-term debt. The Company's cash and cash equivalents, restricted cash, accounts receivable, accounts payable and accrued liabilities approximate their fair value due to the relatively short-term nature of these accounts.

The Company's capital leases and long-term debt are classified within Level 1 of the fair value hierarchy because such long-term debt and capital lease agreements bear interest at rates for instruments with similar characteristics; accordingly, the carrying value of these liabilities approximate their fair values.

The following tables set forth the fair value of financial instruments that were measured at fair value on a recurring basis (in thousands):

	As of September 30, 2021			
	Total	Level 1	Level 2	Level 3
Financial Assets:				
Money market funds	\$ 451,784	\$ 451,784	\$ —	\$ —
Total financial assets	\$ 451,784	\$ 451,784	\$ —	\$ —

Financial Liabilities:				
Public warrant liability	\$ 31,287	\$ 31,287	\$ —	\$ —
Private warrant liability	15,342	—	15,342	—
Earn-out contingent liability	61,400	—	—	61,400
Total financial liabilities	\$ 108,029	\$ 31,287	\$ 15,342	\$ 61,400

	As of December 31, 2020			
	Total	Level 1	Level 2	Level 3
Financial Assets:				
Money market funds	\$ 92,940	\$ 92,940	\$ —	\$ —
Total financial assets	\$ 92,940	\$ 92,940	\$ —	\$ —

As of September 30, 2021 and December 31, 2020, money market funds are classified within Level 1 of the fair value hierarchy as the fair value is based on quoted prices in active markets.

The Company's outstanding warrants include publicly-traded warrants (the "Public Warrants") which were originally issued in the IPO and warrants sold in a private placement to CMLS Holdings LLC (the "Private Warrants"). The Company evaluated its warrants under ASC 815-40, Derivatives and Hedging—Contracts in Entity's Own Equity, and concluded that they do not meet the criteria to be classified in stockholders' equity. Since the Public Warrants and Private Warrants meet the definition of a derivative under ASC 815, the Company recorded these warrants as non-current liabilities on the balance sheet at fair value upon the closing of the Business Combination, with subsequent changes in their respective fair values recognized in other income (expense), net on the condensed consolidated statements of operations and comprehensive loss at each reporting date. As of September 30, 2021, the Public Warrants are classified within Level 1 of the fair value hierarchy as they are traded in active markets. The Private Warrants are classified within Level 2 of the fair value hierarchy as management determined the fair value of each Private Warrant is the same as that of a Public Warrant because the terms are substantially the same.

The contingent obligation to issue earn-out shares for Legacy Sema4 stockholders was accounted for as a liability and required remeasurement at each reporting date. The estimated fair value of the total earn-out shares as of September 30, 2021 is determined based on a Monte Carlo simulation valuation model. The fair value of the earn-out contingent liability is sensitive to expected volatility estimated based on selected guideline public companies and Company's common stock price which is sensitive to changes in the forecasts of earnings and/or the relevant operating metrics. The key assumptions utilized in the valuation included the Company's stock price of \$7.59, expected volatility of 67.5%, risk-free rate of 0.24%, and an expected term of 1.8 years. The earn-out contingent liability is categorized as Level 3 of the fair value hierarchy as the Company utilizes unobservable inputs in estimating volatility rate. Initial fair value determined and recorded at the

Sema4 Holdings Corp.**Notes to Unaudited Condensed Consolidated Financial Statements**

Closing Date was \$143.1 million and a gain of \$81.7 million was recorded in the change in fair market value of warrant and earn-out contingent liabilities in the condensed consolidated statements of operations and comprehensive loss based on re-measurement performed as of September 30, 2021.

There were no transfers between Level 1, Level 2 and Level 3 during the periods presented.

6. Property and Equipment

Property and equipment consisted of the following (in thousands):

	As of September 30, 2021	As of December 31, 2020
Laboratory equipment	\$ 24,276	\$ 22,818
Equipment under capital leases	21,384	20,743
Leasehold improvements	21,650	16,736
Capitalized software	23,135	14,631
Building under capital lease	6,276	6,276
Construction in-progress	1,660	4,673
Computer equipment	4,840	4,118
Furniture, fixtures and other equipment	3,222	3,214
Total property and equipment	<u>106,443</u>	<u>93,209</u>
Less: accumulated depreciation and amortization	<u>(46,110)</u>	<u>(30,099)</u>
Property and equipment, net	<u>\$ 60,333</u>	<u>\$ 63,110</u>

For the three months ended September 30, 2021 and 2020, depreciation and amortization expense was \$5.5 million and \$3.1 million. For the nine months ended September 30, 2021 and 2020, depreciation and amortization expense was \$16.0 million and \$8.1 million, respectively. This included software amortization expense of \$1.4 million and \$0.8 million for the three months ended September 30, 2021 and 2020 and \$4.0 million and \$2.0 million for the nine months ended September 30, 2021 and 2020, respectively. Depreciation and amortization expense is included within the condensed consolidated statements of operations and comprehensive loss as follows (in thousands):

	Three months ended September 30,	
	2021	2020
Cost of services	\$ 3,679	\$ 1,983
Research and development	1,500	182
Selling and marketing	1	—
General and administrative	311	902
Total depreciation and amortization expenses	<u>\$ 5,491</u>	<u>\$ 3,067</u>

	Nine months ended September 30,	
	2021	2020
Cost of services	\$ 10,824	\$ 5,805
Research and development	4,197	692
Selling and marketing	2	—
General and administrative	989	1,650
Total depreciation and amortization expenses	<u>\$ 16,012</u>	<u>\$ 8,147</u>

7. Related Party Transactions

On June 1, 2017, the Company signed a contribution and funding agreement and other agreements with ISMMS, whereby ISMMS contributed certain assets and liabilities related to the Company's operations, provided certain services to

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the Company, and also committed to funding the Company up to \$55.0 million in future capital contributions in exchange for equity in the Company, of which \$55.0 million was drawn as of December 31, 2019. Following the transaction, the Company commenced operations and began providing the services and performing research.

For three and nine months ended September 30, 2021 and 2020, the Company incurred certain related party costs. Expenses recognized under the TSA totaled \$0 and \$1.7 million for the three months ended September 30, 2021 and 2020, respectively and \$1.4 million and \$5.5 million for the nine months ended September 30, 2021 and 2020 and are presented within related party expenses in the condensed consolidated statements of operations and comprehensive loss. The Company had TSA payables due to ISMMS of \$0 and \$0.6 million as of September 30, 2021 and December 31, 2020, respectively. These amounts are included within due to related parties on the Company's condensed consolidated balance sheets.

Expenses recognized pursuant to other service arrangements with ISMMS totaled \$1.5 million and \$0.6 million for the three months ended September 30, 2021 and 2020 and \$4.1 million and \$2.2 million for the nine months ended September 30, 2021 and 2020, respectively. These amounts are included in either cost of services or related party expenses on the condensed consolidated statements of operations and comprehensive loss depending on the particular activity to which the costs relate. Payables due to ISMMS for the other service arrangements were \$1.4 million \$0.8 million as of September 30, 2021 and December 31, 2020, respectively. These amounts are included within due to related parties on the Company's condensed consolidated balance sheets.

Total related party costs are included within cost of services and related party expenses in the condensed consolidated statements of operations and comprehensive loss as follows (in thousands):

	Three months ended September 30,	
	2021	2020
Cost of services	\$ 656	\$ 452
Related party expenses	847	1,933
Total related party costs	\$ 1,503	\$ 2,385

	Nine months ended September 30,	
	2021	2020
Cost of services	\$ 1,942	\$ 1,485
Related party expenses	3,532	6,239
Total related party costs	\$ 5,474	\$ 7,724

8. Long-Term Debt**2016 Funding Commitment**

In June 2017, ISMMS assigned a loan funding commitment from the Connecticut Department of Economic and Community Development ("DECD") to the Company (the "DECD Loan Agreement"). The DECD Loan Agreement, as amended, provides for a total loan commitment of \$15.5 million at a fixed annual interest rate of 2.0% for a term of 10 years. The Company is required to make interest-only payments through July 2023 and principal and interest payments commencing in August 2023. The final payment of principal and interest is due in July 2028. This commitment is collateralized by providing a security interest in certain machinery and equipment the Company acquired from ISMMS, as defined in a separate security agreement.

The outstanding loan balance from the DECD Loan Agreement was \$11.0 million as of September 30, 2021 and December 31, 2020.

2020 Master Loan Agreement

In August 2020, the Company entered into a loan and security agreement with a bank (the "Master Loan Agreement"), in which the Company received a loan of \$6.3 million and deposited the proceeds into a deposit account held by the bank.

Sema4 Holdings Corp.**Notes to Unaudited Condensed Consolidated Financial Statements**

The Company was required to make sixty consecutive monthly payments of principal and interest at a fixed monthly amount of \$0.1 million beginning in November 2020. Interest payments were fixed at an annual interest rate of 4.75%.

The Company recorded the \$6.3 million proceeds as restricted cash on the condensed consolidated balance sheets at December 31, 2020. The outstanding loan balance was \$6.1 million at December 31, 2020. In July 2021, the Company terminated the Master Loan Agreement by paying off the full amount, including \$5.4 million principal and interest and \$0.1 million in early payment penalties assessed pursuant to the terms of the agreement which is included in other income (expense), net in the condensed consolidated statements of operations and comprehensive loss.

2020 Master Lease Agreement

In December 2020, the Company entered into a lease agreement with a lender whereby the Company agreed to sell certain equipment and immediately lease back the equipment, resulting in proceeds of \$3.6 million. Per the terms of the agreement, a financial institution issued an irrevocable standby letter of credit to the lender for \$3.6 million. The Company was required to make sixty consecutive monthly payments of principal and interest at a fixed monthly amount of \$0.1 million beginning in February 2021. Interest payments were fixed at an annual interest rate of 3.54%.

The Company was required to maintain an aggregate amount on deposit equal to at least 105% of the value of any outstanding letters of credit issued by the financial institution on the Company's behalf. The letter of credit was required to be in place until all obligations had been paid in full. Further, the Company was required to furnish annual audited financial statements and other financial information to the lender on a regular basis. The Company was in compliance with the covenants as of December 31, 2020.

The Company recorded the \$3.6 million proceeds as restricted cash on the condensed consolidated balance sheets at December 31, 2020. The outstanding loan balance was \$3.6 million at December 31, 2020. In July 2021, the Company terminated the Master Lease Agreement by paying off the full amount, including \$3.3 million principal and interest and early payment penalties of \$0.2 million assessed pursuant to the terms of the agreement which is included in other income (expense), net in the condensed consolidated statements of operations and comprehensive loss.

Maturities of Long-Term Debt

As of September 30, 2021, long-term debt matures as follows (in thousands):

2021 (remainder of year)	\$	—
2022		—
2023		875
2024		2,131
2025		2,174
Thereafter		5,820
Total maturities of long-term debt		11,000
Less: current portion of long-term debt		—
Total long-term debt, net of current maturities	\$	11,000

9. Commitments and Contingencies**Operating Leases**

The Company's operating leases consist of office and lab space leases and a ground lease associated with a building under capital lease. The Company has entered into leases of office and lab space with ISMMS, including month-to-month leases in place during the nine months ended September 30, 2021 and 2020. Pursuant to the terms of a lease agreement, the Company was required to have issued an irrevocable standby letter of credit to the lessor for \$0.9 million, which was included in restricted cash on the condensed consolidated balance sheets as of September 30, 2021 and December 31, 2020.

Sema4 Holdings Corp.**Notes to Unaudited Condensed Consolidated Financial Statements**

Future minimum payments under non-cancelable operating leases as of September 30, 2021 are as follows (in thousands):

2021 (remainder of year)	\$	1,076
2022		4,383
2023		4,474
2024		4,562
2025		4,684
Thereafter		50,239
Total operating lease obligations	\$	<u>69,418</u>

Rent expense related to non-cancelable operating leases was \$1.4 million for the three months ended September 30, 2021 and 2020, respectively. Rent expense related to month-to-month operating leases was \$0.3 million and \$0.9 million for the three months ended September 30, 2021 and 2020. Rent expense related to non-cancelable operating leases was \$4.3 million and \$4.0 million for the nine months ended September 30, 2021 and 2020, respectively. Rent expense related to month-to-month operating leases was \$0.9 million and \$2.4 million for the nine months ended September 30, 2021 and 2020.

Capital Leases

The Company entered into various capital lease agreements to obtain laboratory equipment that contain bargain purchase commitments at the end of the lease term. The terms of the capital leases range from 3 to 5 years with interest rates ranging from 1.9% to 12.0%. The leases are secured by the underlying equipment. The Company also leases a building used for office and laboratory space in which the building is accounted for as a capital lease and the land is as an operating lease.

Property and equipment under capital leases was \$27.7 million and \$27.0 million as of September 30, 2021 and December 31, 2020, respectively. Accumulated amortization on capital lease assets was \$12.6 million and \$9.7 million on September 30, 2021 and December 31, 2020, respectively.

For all capital leases, the portion of the future payments designated as principal repayment is recorded as a capital lease obligation on the Company's condensed consolidated balance sheets in accordance with repayment terms. Future payments under capital leases as of September 30, 2021, are as follows (in thousands):

2021 (remainder of year)	\$	1,225
2022		4,808
2023		3,584
2024		2,763
2025		2,451
Thereafter		51,886
Total capital lease obligations		<u>66,717</u>
Less: amounts representing interest		(44,271)
Present value of net minimum capital lease payments		<u>22,446</u>
Less : current portion		(3,515)
Capital lease obligations, net of current portion	\$	<u>18,931</u>

Interest expense related to capital leases was \$0.6 million for the three months ended September 30, 2021 and 2020 and \$1.7 million for the nine months ended September 30, 2021 and 2020.

Sema4 Holdings Corp.

Notes to Unaudited Condensed Consolidated Financial Statements

Contingencies

The Company is a party to various actions and claims arising in the normal course of business. The Company does not believe that the outcome of these matters will have a material effect on the Company's condensed consolidated financial position, results of operations or cash flows. However, no assurance can be given that the final outcome of such proceedings will not materially impact the Company's condensed consolidated financial condition or results of operations.

The Company was not a party to any material legal proceedings as of September 30, 2021, nor is it a party to any legal proceedings as of the date of issuance of these condensed consolidated financial statements.

10. Stock-Based Compensation

Stock Incentive Plans

The Company's 2017 equity Incentive Plan (the "2017 Plan"), as amended in February 2018, allowed the grant of options, restricted stock awards, stock appreciation rights and restricted stock units. No options granted under the 2017 Plan are exercisable after 10 years from the date of grant, and option awards generally vest over a four-year period.

The 2017 Plan was terminated in connection with the adoption of the Company's 2021 Equity Incentive Plan (the "2021 Plan"). Any awards granted under the 2017 Plan that remained outstanding as of the Closing Date and were converted into awards with respect to the Company's Class A common stock in connection with the consummation of the Business Combination continue to be subject to the terms of the 2017 Plan and applicable award agreements, except for a modification of the repurchase provision, which is discussed further below.

On July 22, 2021, in connection with the Business Combination, the 2021 Plan became effective and 32,734,983 authorized shares of common stock were reserved for issuance thereunder. This Plan will be administered by the Compensation Committee of the Company's Board of Directors, including determination of the vesting, exercisability and payment of the awards to be granted under this Plan. No awards granted under the 2021 Plan are exercisable after 10 years from the date of grant. The Company did not make any grants under the 2021 Plan during the three and nine month period ended September 30, 2021.

Employee Stock Purchase Plan

The 2021 Employee Stock Purchase Plan (the "2021 ESPP") became effective in connection with the Business Combination. The 2021 ESPP authorizes the issuance of shares of common stock pursuant to purchase rights granted to employees. A total of 4,804,011 shares of common stock have been reserved for future issuance under the 2021 ESPP. On each January 1 of each of 2022 through 2031, the aggregate number of shares of common stock reserved for issuance under the 2021 Plan may be increased automatically by the number of shares equal to one percent (1%) of the total number of shares of all classes of common stock issued and outstanding on the immediately preceding December 31. The Company did not make any grants of purchase rights under the 2021 ESPP during the three and nine month periods ended September 30, 2021.

Stock Option Activity

Under the 2017 Plan, the Company had a call option to repurchase awards for cash from the plan participants upon termination of the participant's employment or consulting agreement (the "2017 Plan Call Option"). The options granted under the 2017 plan were accounted for as liability awards due to the 2017 Plan Call Option. The Company had a history of repurchase practice and the intention to repurchase the vested options. Therefore, fair value of the liability awards were remeasured at each reporting period until the stockholder bears the risks and rewards of equity ownership for a reasonable period of time, which the Company concludes is at least six months.

Upon consummation of the Business Combination, the Company's Board of Directors waived the Company's right under the 2017 Plan Call Option to repurchase awards for cash from the plan participants upon termination of the participant's employment or consulting agreement. As such, the Company modified the liability awards to equity awards and reclassified the modification date fair value of the awards to shareholders' equity in the unaudited condensed consolidated financial statements as of July 22, 2021. An incremental expense of \$0.4 million resulting from the modification event was recorded in the three months ended September 30, 2021.

Sema4 Holdings Corp.
Notes to Unaudited Condensed Consolidated Financial Statements

The following summarizes the stock option activity, which reflects the conversion of the options granted under the 2017 Plan into awards with respect to the Company Class A common stock in connection with the consummation of the Business Combination (in thousands, except share and per share amounts):

Class A Common Stock	Stock Options Outstanding	Weighted Average Exercise Price
Balance at December 31, 2020	32,339,970	\$ 0.54
Options granted under 2017 Plan	241,112	\$ 1.90
Options exercised	(1,257,513)	\$ 0.85
Options forfeited and canceled	(2,477,613)	\$ 1.18
Balance at September 30, 2021	28,845,956	\$ 0.49
Options exercisable at September 30, 2021	22,851,188	\$ 0.33

The estimated fair value of the stock option awards as of September 30, 2021 and September 30, 2020, was estimated using the Black-Scholes option pricing model with the following assumptions:

	Nine months ended September 30,	
	2021	2020
Expected volatility	49.60 %	65.00 %
Expected term (in years)	5.00	2.00 - 4.50
Risk-free interest rate	0.71 %	0.15% - 0.27%
Dividend yield	0.00 %	0.00 %
Fair value of Class A common stock	\$11.60	\$0.89 - \$1.85

As of September 30, 2021, unrecognized stock-based compensation cost related to the unvested portion of the Company's stock options was \$25.5 million. The Company expects to recognize the unrecognized compensation cost on a graded-vesting basis over a weighted-average period of 1.5 years.

Stock Appreciation Rights (SAR) Activity

The Company historically granted SAR to one employee and one consultant with exercise condition of a liquidation event. As a result of the Business Combination, settlement of the outstanding vested SARs in exchange for a cash payment and to cancel the outstanding unvested SARs was agreed upon and an expense of \$3.8 million related to the vested SAR was recognized by the Company during the three months ended September 30, 2021. There were no outstanding SARs as of September 30, 2021.

Stock-based compensation expense for all awards granted and outstanding is included within the condensed consolidated statements of operations and comprehensive loss as follows (in thousands):

	Three months ended September 30,	
	2021	2020
Cost of services	\$ 3,699	\$ 3,506
Research and development	3,160	6,583
Selling and marketing	2,263	2,758
General and administrative	8,889	16,606
Total stock-based compensation expense	\$ 18,011	\$ 29,453

Sema4 Holdings Corp.

Notes to Unaudited Condensed Consolidated Financial Statements

	Nine months ended September 30,	
	2021	2020
Cost of services	\$ 23,162	\$ 3,500
Research and development	40,977	6,687
Selling and marketing	20,722	2,865
General and administrative	97,593	17,021
Total stock-based compensation expense	\$ 182,454	\$ 30,073

11. Redeemable Convertible Preferred Stock

There were no shares of Redeemable Convertible Preferred Stock outstanding as of September 30, 2021. Redeemable Convertible Preferred Stock as of December 31, 2020 consisted of the following (in thousands, except share data):

Redeemable Convertible Preferred Stock	Shares Authorized	Shares Issued and Outstanding	Amount	Aggregate Liquidation Preference
Series A-1	55,399,943	55,399,943	\$ 51,811	\$ 55,000
Series A-2	64,718,940	49,700,364	46,480	49,342
Series B	41,937,960	41,937,960	118,824	204,302
Series C	24,497,317	24,496,946	117,324	121,397
Total Redeemable Convertible Preferred Stock	186,554,160	171,535,213	\$ 334,439	\$ 430,041

Prior to the completion of the Business Combination, there were no significant changes to the terms of the Convertible Preferred Stock. Upon closing of the Merger, each share Preferred Stock (as defined in the Proxy Statement) was cancelled and received a portion of the merger consideration, resulting in certain Legacy Sema4 preferred stockholders receiving \$230.0 million of cash and an aggregate of 148,543,062 shares of common stock. The Company recorded the conversion at the carrying value of the Redeemable Convertible Preferred Stock at the time of Closing.

12. Common Stock

There were 240,190,402 shares of Sema4 Holdings Class A common stock and 124 shares of Legacy Sema4 Class A common stock issued and outstanding as of September 30, 2021 and December 31, 2020, respectively. There were 0 and 130,557 shares of Class B common stock issued and outstanding as of September 30, 2021 and December 31, 2020, respectively.

13. Income Taxes

Income taxes for the three and nine months ended September 30, 2021 and September 30, 2020 are recorded at the Company's estimated annual effective income tax rate, subject to adjustments for discrete events, should they occur. The Company's estimated annual effective tax rate was 0.0% for the three and nine months ended September 30, 2021 and September 30, 2020. The primary reconciling item between the federal statutory rate of 21.0% for these periods and the Company's overall effective tax rate of 0.0% was related to the effects of the valuation allowance recorded against the full amount of its net deferred tax assets.

A valuation allowance is required when it is more likely than not that some portion or all of the Company's deferred tax assets will not be realized. The realization of deferred tax assets depends on the generation of sufficient future taxable income during the period in which the Company's related temporary differences become deductible. The Company has recorded a full valuation allowance against its net deferred tax assets as of September 30, 2021 and September 30, 2020 since management believes that based on the earnings history of the Company, it is more likely than not that the benefits of these assets will not be realized.

Sema4 Holdings Corp.
Notes to Unaudited Condensed Consolidated Financial Statements
14. Net Income (Loss) per Share

Basic and diluted loss per share attributable to common stockholders was calculated as follows (amounts in thousands, except for share and per share amounts):

	Three months ended September 30,		Nine months ended September 30,	
	2021	2020	2021	2020
Numerator:				
Net income (loss) attributable to common stockholders	\$ 31,392	\$ (56,615)	\$ (204,963)	\$ (115,657)
Denominator:				
Denominator for basic earnings per share-weighted-average common shares	185,680,394	124	63,121,738	124
Effect of dilutive securities:				
Employee stock options	24,650,552	—	—	—
Denominator for diluted earnings per share-adjusted weighted-average common shares	210,330,946	—	—	—
Basic earnings/(loss) per share	\$ 0.17	\$ (456,573)	\$ (3.25)	\$ (932,718)
Diluted earnings/(loss) per share	\$ 0.15	\$ (456,573)	\$ (3.25)	\$ (932,718)

As a result of the Merger, the Company has retroactively adjusted the weighted-average number of shares of common stock outstanding prior to the Merger by multiplying them by the conversion ratio of 123.8339 used to determine the number of shares of common stock into which they converted. The common stock issued as a result of the redeemable convertible preferred stock conversion upon closing of the Merger was included in the basic and diluted earnings/(loss) per share calculation on a prospective basis.

Prior to the consummation of the Merger, the Company applied the two-class method to calculate its basic and diluted net loss per share of common stock, as there were outstanding Class B common stock and redeemable convertible preferred stock that were participating securities. The two-class method is an earnings allocation formula that treats a participating security as having rights to earnings that otherwise would have been available to common stockholders. As the securities were all converted into Sema4 Holdings Class A common stock upon consummation of the Merger, all outstanding Legacy Sema4 Class B common stock has been retroactively converted to the Sema4 Holdings Class A common stock.

The following tables summarize the outstanding shares of potentially dilutive securities that were excluded from the computation of diluted net loss per share attributable to common stockholders for the period presented because including them would have been anti-dilutive:

	Three months ended September 30,		Nine months ended September 30,	
	2021	2020	2021	2020
Outstanding options to purchase Class A common stock	—	12,796,144	28,846,080	12,769,144
Outstanding warrants	21,994,972	—	21,994,972	—
Outstanding earn-out shares	16,331,812	—	16,331,812	—
Total	38,326,784	12,796,144	67,172,864	12,769,144

15. Subsequent Events

On November 15, 2021, the Company entered into a Loan and Security Agreement (the "SVB Agreement") with Silicon Valley Bank ("SVB"), whereby SVB agreed to provide a \$125,000,000 revolving credit facility ("Revolver") with a maturity date of November 15, 2024. Any borrowings under the Revolver will bear interest at a floating rate that is the greater of either (a) Wall Street Journal Prime Rate (the "Prime Rate") plus 0.75% (the "Prime Rate Margin") or (b) 4.00%. The Revolver also requires an unused line fee of 0.25% per annum payable quarterly. The Revolver is secured by certain assets of the Company and its subsidiary, Sema4 Opco, Inc.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion and analysis of our financial condition and results of operations together with our unaudited condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report and our audited financial statements for the year ended December 31, 2020 and the related notes incorporated by reference in our audited financial statements appearing in the definitive proxy statement filed by CM Life Sciences, Inc. with the SEC on July 2, 2021 (the "Proxy Statement"). This discussion contains forward-looking statements and involves numerous risks and uncertainties. Actual results may differ materially from the results described in or implied by the forward-looking statements. You should carefully read the section entitled "Risk Factors" to gain an understanding of the important factors that could cause actual results to differ materially from these forward-looking statements.

Unless the context otherwise requires, references herein to the "Company," "Sema4" or "we," "us" or "our" refers to Mount Sinai Genomics Inc. d/b/a Sema4 ("Legacy Sema4"), prior to the consummation of the Business Combination (the "Closing," and such date of the consummation of the Business Combination, the "Closing Date") and to Sema4 Holdings Corp. ("Sema4 Holdings") and its subsidiary following the Business Combination.

Overview

We are a patient-centered, health intelligence company with a mission to use artificial intelligence, or AI, and machine learning to enable personalized medicine for all. By leveraging leading data scientists and technology, our platform powers remarkable and unique insights that transform the practice of medicine including how disease is diagnosed, treated, and prevented.

We were established out of Icahn School of Medicine at Mount Sinai ("ISMMS"), and commenced operations in June 2017 as a commercial entity that could effectively engage diverse patient populations and health care institutions at scale. We have since established and deployed our comprehensive and integrated genomic and clinical data platform and established a mature diagnostic testing business. We now maintain a database that includes more than 11.9 million de-identified individual clinical records, many with genomic profiles. We also manage a data asset over 39.2 petabytes in size, expanding at 1.4 petabytes per month with an accelerating growth rate.

Currently, we derive the majority of our revenue from our diagnostic test solutions. Our diagnostic business generates revenue and engages with patients primarily through our Women's Health and Oncology solutions.

Our Women's Health solutions sequence and analyze an industry-leading number of genes and use interpretive information tools to translate raw sequencing and clinical data efficiently and accurately into digestible clinical reports that guide decision-making by patients and physicians. Our Oncology diagnostic solutions feature both somatic tumor profiling and hereditary cancer screenings, along with a foundational whole exome and whole transcriptome sequencing approach. Our Sema4 Signal Hereditary Cancer solution determines if a patient carries an inherited genetic change that increases the risk of cancer or informs on cancer treatment. We believe our Signal Whole Exome and Transcriptome solution is one of the most comprehensive molecular profiling solutions from a commercial entity to receive New York State approval. Beginning in May of 2020, we also expanded our diagnostic testing services to include testing for the presence of COVID-19.

We have also expanded beyond diagnostic testing to enter into collaboration service agreements with third parties to provide diagnostic testing, research, and related data aggregation reporting services. We have established and continue to seek strategic relationships with pharmaceutical and biotech, or biopharma, companies to enable innovation across the entire drug lifecycle, from next-generation drug discovery and development, to post-market efficacy surveillance, to informing on bioavailability, toxicity, tolerability, and other features critical to drug development.

Factors Affecting Our Performance

We believe several important factors have impacted, and will continue to impact, our performance and results of operations. While each of these areas presents significant opportunities for us, they also pose significant risks and challenges that we must address. See the section titled "Risk Factors" for more information.

Number of accessioned and resulted tests

We believe the number of accessioned and resulted tests in any period is an important indicator of the growth in our diagnostic testing services and correlates with long-term patient relationships and the size of our genomic database. A test is accessioned when we receive the test at our laboratory, enter the relevant information about the test into our computer

system and the test sample is routed to the appropriate workflow. Once the appropriate workflow is completed, the test is result and details are provided to ordered patients or healthcare professionals for review.

Success obtaining and maintaining reimbursement

Our ability to increase the number of billable tests and our revenue therefrom will depend on our success in achieving reimbursement for our tests from third-party payors. Reimbursement by a payor may depend on several factors, including a payor's determination that a test is appropriate, medically necessary, cost-effective, and has received prior authorization. Since each payor makes its own decision as to whether to establish a policy or enter into a contract to provide coverage for our tests, as well as the amount it will reimburse us for a test, seeking these approvals is a time-consuming and costly process.

In cases where we or our partners have established reimbursement rates with third-party payors, we face additional challenges in complying with their procedural requirements for reimbursement. These requirements often vary from payor to payor and are reassessed by third-party payors regularly. As a result in the past we have needed additional time and resources to comply with the requirements.

We expect to continue to focus our resources on increasing the adoption of, and expanding coverage and reimbursement for, our current and any future tests we may develop or acquire. If we fail to expand and maintain broad adoption of, and coverage and reimbursement for, our tests, our ability to generate revenue and our future business prospects may be adversely affected.

Ability to lower the costs associated with performing our tests

Reducing the costs associated with performing our diagnostic tests is both our focus and a strategic objective. We source, and will continue to source, components of our diagnostic testing workflows from third parties. We also rely upon third-party service providers for data storage and workflow management.

Increasing adoption of our services by existing and new customers

Our performance depends on our ability to retain and broaden the adoption of our services with existing customers as well as our ability to attract new customers. Our success in retaining and gaining new customers is dependent on the market's confidence in our services and the willingness of customers to continue to seek more comprehensive and integrated genomic and clinical data insights.

Investment in platform innovation to support commercial growth

We are seeking to leverage and deploy our Centrellis and Traversa platforms to develop a pipeline of future disease-specific research and diagnostic and therapeutic products and services. We have limited experience in the development or commercialization of clinical or research products in connection with our database and our Centrellis platform.

We operate in a rapidly evolving and highly competitive industry. Our business faces changing technologies, shifting provider and patient needs, and frequent introductions of rival products and services. To compete successfully, we must accurately anticipate technology developments and deliver innovative, relevant, and useful products, services, and technologies on time. As our business evolves, the competitive pressure to innovate will encompass a wider range of products and services. We must continue to invest significant resources in research and development, including investments through acquisitions and partnerships. These investments are critical to the enhancement of our current diagnostics and health information and data science technologies from which existing and new service offerings are derived.

We expect to incur significant expenses to advance these development efforts, but they may not be successful. New potential services may fail at any stage of development and, if we determine that any of our current or future services are unlikely to succeed, we may abandon them without any return on our investment. If we are unsuccessful in developing additional services, our growth potential may be impaired.

Key Performance Indicators

We use the following key financial and operating metrics to evaluate our business and operations, measure our performance, identify trends affecting our business, project our future performance, and make strategic decisions. These key financial and operating metrics should be read in conjunction with the following discussion of our results of operations

and financial condition together with our unaudited condensed consolidated financial statements and the related notes and other financial information included elsewhere in this Quarterly Report.

The principal focus of our commercial operations is to offer our diagnostic tests through both our direct sales force and laboratory distribution partners. Test volume correlates with genomic database size and long-term patient relationships. Thus, test volumes drive database diversity and enable potential identification of variants of unknown significance and population-specific insights. The number of tests that we accession and result are key indicators that we use to assess the operational efficiency of our business. A test is accessioned when we receive the test at our laboratory, the relevant information about the test is entered into our computer system and the test sample is routed through the appropriate workflow. Once the appropriate workflow is completed, the test is result and details are provided to ordered patients or healthcare professionals for reviews.

During the nine months ended September 30, 2021, we accessioned approximately 480,291 tests in our laboratories, 271,354 tests of which were for COVID-19, compared to the period ended September 30, 2020, in which we accessioned approximately 197,593 tests in our laboratories, 47,578 of which were for COVID-19. We resulted approximately 481,896 tests in our laboratories, 272,973 tests of which were for COVID-19, compared to the period ended September 30, 2020, in which we resulted approximately 214,554 tests in our laboratories, 67,675 of which were for COVID-19. This 143% and 125% increase in accessioned and resulted volumes, respectively, from 2020 to 2021 largely resulted from newly entered service agreements for COVID-19 testing as well as an increase in non-COVID-19 institutional testing. The volume of resulted tests during the periods may include tests accessioned in prior periods that are completed and delivered during the period.

COVID-19 Impact

COVID-19 has had, and continues to have, an extensive impact on the global health and economic environments.

While test volumes have since improved, we continue to experience changes in the mix of tests due to the impact of COVID-19. We anticipate that demand for COVID-19 tests will eventually decrease as vaccines continue to be developed and deployed to the general population. However, no additional decline is expected for our other revenue streams for the remainder of 2021. The full extent to which the COVID-19 pandemic will directly or indirectly impact our business, results of operations, and financial condition will depend on future developments that are highly uncertain and cannot be accurately predicted, including new information that may emerge concerning COVID-19, the actions taken to contain it or treat it and the economic impact on local, regional, national and international markets and supply chains. Therefore, COVID-19 could continue to have a material impact on our results of operations, cash flows, and financial condition for the foreseeable future.

In March 2020, the Coronavirus Aid, Relief and Economic Security Act, ("CARES Act"), was signed into law which was a stimulus bill that, among other things, provided assistance to qualifying businesses and individuals and included funding for the healthcare system. We received \$5.4 million in 2020 as part of the stimulus, comprised of \$2.6 million received under the Provider Relief Fund ("PRF"), distribution and \$2.8 million received under the Employee Retention Credit ("ERC"), distribution. In 2021, we received an additional \$5.6 million under the PRF distribution.

PRF distributions to healthcare providers are not loans and will not be required to be repaid; however, as a condition to receiving these payments, providers must agree to certain terms and conditions and submit sufficient documentation demonstrating that the funds are being used for healthcare-related expenses or lost revenue attributable to the COVID-19 pandemic. We have concluded it is probable that all terms and conditions associated with the PRF distribution have been met. As a result, we recorded the PRF distributions in other income (expense), net in the statements of operations, and comprehensive loss during the periods in which we received the distributions.

ERC distributions are refundable tax credits for 50% of qualified wages paid to employees during the pandemic. A company is eligible for the ERC if it has not received a Paycheck Protection Program loan under the CARES Act and (1) its operations have been fully or partially suspended because of COVID-19 or (2) its gross receipts in a calendar quarter in 2020 declined by more than 50% from the same period in 2019. At the time of applying for the ERC, we concluded that it was reasonably possible the eligibility requirements would be met; however, due to a change in circumstances, we are re-evaluating our position. As such, we deferred the recognition of the ERC distribution and recorded the proceeds in other liabilities on the balance sheets.

Components of Results of Operations

Revenue

We derive the majority of our revenue from diagnostic testing services, which primarily relate to Women's Health, Oncology, and COVID-19. We also recognize revenue from collaboration service agreements with biopharma companies and other third parties under which we provide diagnostic testing and related data aggregation reporting services.

In accordance with the Accounting Standards Codification Topic 606, *Revenue from Contracts with Customers* ("ASC 606"), we recognize revenue when control of the promised goods or services is transferred to the customer in an amount that reflects the consideration which we expect to be entitled to in exchange for those goods or services.

Diagnostic Test Revenue

We primarily generate revenue from performing diagnostic testing services for three groups of customers: patients with third-party insurance coverage; patients without third-party insurance coverage or those who elect to self-pay; and institutional clients, such as hospitals, clinics, state governments, and reference laboratories. Customers are billed upon delivery of test results. The amount of revenue recognized for diagnostic testing services depends on several factors, such as contracted rates with our customers and third-party insurance providers, insurance reimbursement policies, payor mix, historical collection experience, price concessions, and other business and economic conditions and trends. To date, the majority of our diagnostic test revenue has been earned from patients with third-party insurance coverage.

In accordance with the ASC 606, revenue is recognized at the point in time in which test results are delivered to customers in an amount that reflects what we expect to collect in exchange for our services.

Other Revenue

We generate revenue from providing diagnostic testing and related data aggregation reporting services under both short-term and long-term project-based collaboration service agreements with third parties. The terms of these contracts generally include non-refundable upfront payments, which we record as contract liabilities, and variable payments based upon the achievement of certain milestones during the contract term.

In accordance with the ASC 606, we recognize revenue for collaboration service agreements over time, based on costs incurred during the contract period.

With respect to existing collaboration service agreements, our revenue may fluctuate due to the pattern in which we may deliver our services, our ability to achieve milestones, the timing of costs incurred, changes in estimates of total anticipated costs that we expect to incur during the contract period, and other events that may not be within our control. Our ability to increase our revenue will depend on our ability to enter contracts with third-party partners.

Cost of Services

The cost of services reflect the aggregate costs incurred in performing diagnostic testing and collaboration services. These costs include expenses for reagents and laboratory supplies, personnel-related expenses (comprising salaries and benefits), stock-based compensation, shipping and handling fees, costs of third-party reference lab testing and third-party providers of genetic counseling and phlebotomy services, amortization of software development costs and equipment and allocated facility costs associated with testing. Allocated facility costs include depreciation of laboratory equipment, facility occupancy, and information technology costs. The cost of services are recorded as the services are performed.

We expect the cost of services to generally increase in line with the anticipated growth in diagnostic testing volume and services we provide under our collaboration service agreements. However, we expect the cost per test to decrease over the long term due to the efficiencies we may gain from improved utilization of our laboratory capacity, automation, and other value engineering initiatives. These expected reductions may be offset by new tests which often have a higher cost per test during the introductory phases before we can gain efficiencies. The cost per test may fluctuate from quarter to quarter.

Research and Development Expenses

Research and development expenses represent costs incurred to develop our technology and future test offerings. These costs are principally associated with our efforts to develop the software we use to analyze data and process customer orders. These costs primarily consist of personnel-related expenses (comprising salaries and benefits), stock-based

compensation, costs of reagents and laboratory supplies, costs of consultants and third-party services, equipment and related depreciation expenses, non-capitalizable software development costs, research funding to our research partners as part of research and development agreements and allocated facility and information technology costs associated with genomics medical research. Research and development costs are generally expensed as incurred and certain non-refundable advanced payments provided to our research partners are expensed as the related activities are performed.

We generally expect our research and development expenses to continue to increase as we innovate and expand the application of our platforms. However, we expect research and development expenses to decrease as a percentage of revenue in the long term, although the percentage may fluctuate from period to period due to the timing and extent of our development and commercialization efforts and fluctuations in our compensation-related charges.

Selling and Marketing Expenses

Selling and marketing expenses primarily consist of personnel-related expenses (comprising salaries, and benefits) and stock-based compensation for employees performing commercial sales, account management, marketing, and medical education. Selling and marketing costs are expensed as incurred.

We generally expect our selling and marketing expenses to continue increasing in absolute dollars as we expand our commercial sales and marketing teams and increase marketing activities. However, we expect selling and marketing expenses to decrease as a percentage of revenue in the long term, subject to fluctuations due to the timing and magnitude of these expenses.

General and Administrative Expenses

General and administrative expenses primarily consist of personnel-related expenses (comprising salaries and benefits) and stock-based compensation for employees in executive leadership, legal, finance and accounting, human resources, information technology, strategy, and other administrative functions. In addition, these expenses include office occupancy and information technology costs. General and administrative costs are expensed as incurred.

We generally expect our general and administrative expenses to continue to increase in absolute dollars as we increase headcount and incur costs associated with operating as a public company, including expenses related to legal, accounting, and regulatory matters; maintaining compliance with requirements of Nasdaq and of the SEC; director and officer insurance premiums and investor relations. We expect these expenses to decrease as a percentage of revenue in the long term as revenue increases, although the percentage may fluctuate due to compensation-related charges.

Related Party Expenses

Related party expenses consist of amounts due to ISMMS for expenses under our TSA which expired at the end of the first quarter of 2021, and other service agreements. Additional information can be found in Legacy Sema4's audited financial statements in Note 7, "Related Party Transactions" included within the Proxy Statement and our unaudited condensed consolidated financial statements in Note 7, "Related Party Transactions" included within this Quarterly Report.

We expect related party expenses to decrease as we establish our own internal and external resources to fulfill the administrative and other services we have historically procured from ISMMS.

Interest Income

Interest income consists of interest earned on money market funds.

Interest Expense

Interest expense consists of interest costs related to our capital leases and our long-term debt arrangements.

Other Income (expense), Net

Other income (expense), net primarily consists of funding received under the CARES Act and, gains and losses on equipment disposals. We recognized \$2.6 million of the \$5.4 million of funding received under the CARES Act as other income, net on the statements of operations and comprehensive loss during the nine months ended September 30, 2020 and recognized \$5.6 million of additional funding received under the CARES Act during the first quarter of 2021 and the amount is included in other income, net for the period ended nine months ended September 30, 2021. In addition, the loss

incurred due to early payment penalties recognized upon extinguishment of debt of \$0.3 million is included in other income (expense), net.

Comparison of the three months ended September 30, 2021 and 2020

The following table sets forth our results of operations for the periods presented (in thousands):

	Three months ended September 30,	
	2021	2020
	(in thousands)	
Revenue		
Diagnostic test revenue	\$ 41,410	\$ 37,893
Other revenue	1,768	715
Total revenue	43,178	38,608
Cost of services	58,752	36,530
Gross (loss) profit	(15,574)	2,078
Research and development	17,831	19,083
Selling and marketing	22,121	12,735
General and administrative	33,230	24,342
Related party expenses	847	1,933
Loss from operations	(89,603)	(56,015)
Other income (expense):		
Change in fair market value of warrant and earn-out contingent liabilities	122,171	—
Interest income	27	63
Interest expense	(683)	(637)
Other income (expense), net	(520)	(26)
Total other income (expense), net	120,995	(600)
Income (loss) before income taxes	31,392	(56,615)
Income tax provision	—	—
Net income (loss) and comprehensive income (loss)	\$ 31,392	\$ (56,615)

Revenue

	Three months ended September 30,		Change	
	2021	2020	2020 to 2021	
			\$	%
	(dollars in thousands)			
Diagnostic test revenue	\$ 41,410	\$ 37,893	\$ 3,517	9 %
Other revenue	1,768	715	1,053	147 %
Total revenue	\$ 43,178	\$ 38,608	\$ 4,570	12 %

Total revenue increased by \$4.6 million, or 12%, to \$43.2 million for the three months ended September 30, 2021, from \$38.6 million for the three months ended September 30, 2020.

Diagnostic test revenue increased by \$3.5 million, or 9%, to \$41.4 million for the three months ended September 30, 2021, from \$37.9 million for the three months ended September 30, 2020. The increase was primarily attributable to an increase in overall volumes, excluding COVID-19 tests of 36%, partially offset by the change in the mix of tests performed and corresponding reduced reimbursement rates. Oncology testing volume increased by 166%. Women's health testing volume, including carrier screening and NIPT testing, increased by 33%, which was partially offset by a lower average selling price.

Other revenue increased by \$1.1 million, or 147%, to \$1.8 million for the three months ended September 30, 2021, from \$0.7 million for the three months ended September 30, 2020. The increase was primarily attributable to fulfillment of performance obligations under a single arrangement for which there was no revenue in the third quarter of 2020 and has now generated \$0.7 million in revenue in the third quarter of 2021.

Cost of Services

	Three months ended September 30,		Change	
	2021	2020	2020 to 2021	
			\$	%
	(dollars in thousands)			
Cost of services	\$ 58,752	\$ 36,530	\$ 22,222	61 %

Cost of services increased by \$22.2 million, or 61%, to \$58.8 million for the three months ended September 30, 2021, from \$36.5 million for the three months ended September 30, 2020. The increase was primarily driven by the following components: a \$13.3 million increase in reagents and laboratory supplies expense due primarily to the increase in accessioned volumes; a \$4.8 million increase in overall personnel-related expenses driven by an increase in average headcount; a \$2.3 million increase in occupancy and depreciation expenses in connection with our laboratory move at the end of 2020 and the Stamford laboratory facility commencing operations in the first quarter 2021; a \$0.8 million increase in software expenses due to increased cloud storage and expanded computing capacity requirements for testing data; and a \$0.7 million increase in expenses for logistical costs due to higher accessioned volumes. The cost of services are expected to scale over time as we undertake various strategic initiatives.

Research and Development

	Three months ended September 30,		Change	
	2021	2020	2020 to 2021	
			\$	%
	(dollars in thousands)			
Research and development	\$ 17,831	\$ 19,083	\$ (1,252)	(7)%

Research and development expense decreased by \$1.3 million, or 7%, to \$17.8 million for the three months ended September 30, 2021, from \$19.1 million for the three months ended September 30, 2020. The decrease was primarily attributable to a \$3.4 million decrease in stock-based compensation expense, offset by a \$1.8 million increase in depreciation expenses; and a \$0.4 million increase in software expenses.

Selling and Marketing

	Three months ended September 30,		Change	
	2021	2020	2020 to 2021	
			\$	%
	(dollars in thousands)			
Selling and marketing	\$ 22,121	\$ 12,735	\$ 9,386	74 %

Selling and marketing expense increased by \$9.4 million, or 74%, to \$22.1 million for the three months ended September 30, 2021, from \$12.7 million for the three months ended September 30, 2020. The increase was primarily attributable to the expansion of our commercial footprint and the following cost components: a \$5.7 million increase in personnel-related expenses driven by increased headcount; a \$1.5 million increase in information technology-related expenses; and a \$2.1 million increase in consulting service expenses to support revenue cycle transformation initiatives.

General and Administrative

	Three months ended September 30,		Change	
	2021	2020	2020 to 2021	
			\$	%
	(dollars in thousands)			
General and administrative	\$ 33,230	\$ 24,342	\$ 8,888	37 %

General and administrative expense increased by \$8.9 million, or 37%, to \$33.2 million for the three months ended September 30, 2021, from \$24.3 million for the three months ended September 30, 2020. The increase was primarily attributable to an increase in expenses of \$8.7 million for professional services incurred in connection with the Business Combination; an increase in personnel-related costs of \$5.6 million driven by an increase in headcount; a \$1.7 million

increase in insurance expenses driven by transitioning to obtaining standalone insurance policies separate from ISMMS; and a \$0.7 million increase in software expenses due to increased cloud storage requirements. These increases were partially offset by a decrease in stock-based compensation expense of \$7.7 million and a \$0.5 million decrease in occupancy expenses due to our laboratory move from New York City to Stamford, Connecticut.

Related Party Expenses

	Three months ended September 30,		Change	
	2021	2020	2020 to 2021	
			\$	%
	(dollars in thousands)			
Related party expenses	\$ 847	\$ 1,933	\$ (1,086)	(56)%

Related party expenses decreased by \$1.1 million, or 56%, to \$0.8 million for the three months ended September 30, 2021, from \$1.9 million for the three months ended September 30, 2020. The decrease was primarily attributable to the discontinued fees related to information technology support pursuant to the TSA with ISMMS as a result of the termination of the agreement in the first quarter of 2021 and a decrease in rent and facility expenses driven by a reduction of office and lab space leased from ISMMS pursuant to the TSA.

Interest Income

	Three months ended September 30,		Change	
	2021	2020	2020 to 2021	
			\$	%
	(dollars in thousands)			
Interest income	\$ 27	\$ 63	\$ (36)	(57)%

Interest income decreased by \$0.1 million, or 57%, to a nominal amount for the three months ended September 30, 2021, from \$0.1 million for the three months ended September 30, 2020. The decrease was due to declines in interest rates on money market deposit accounts.

Interest Expense

	Three months ended September 30,		Change	
	2021	2020	2020 to 2021	
			\$	%
	(dollars in thousands)			
Interest expense	\$ (683)	\$ (637)	\$ (46)	7 %

Interest expense increased by \$0.1 million, or 7%, to \$0.7 million for the three months ended September 30, 2021, from \$0.6 million for the three months ended September 30, 2020. The increase was driven by new loans executed in the second half of 2020.

Other Income (expense), Net

	Three months ended September 30,		Change	
	2021	2020	2020 to 2021	
			\$	%
	(dollars in thousands)			
Other income (expense), net	\$ (520)	\$ (26)	\$ (494)	NM% ⁽¹⁾

(1) Not Meaningful ("NM")

Other income (expense), net increased by \$0.5 million, to \$0.5 million for the three months ended September 30, 2021, from a nominal amount for the three months ended September 30, 2020. The increase in the expense was primarily attributable to penalty payments of \$0.3 million related to debt that was repaid earlier than the maturity date during the three months ended September 30, 2020.

Comparison of the nine months ended September 30, 2021 and 2020

The following table sets forth our results of operations for the periods presented (in thousands):

	Nine months ended September 30,	
	2021	2020
(in thousands)		
Revenue		
Diagnostic test revenue	\$ 148,973	\$ 113,759
Other revenue	5,421	1,606
Total revenue	154,394	115,365
Cost of services	180,195	111,754
Gross (loss) profit	(25,801)	3,611
Research and development	82,916	41,540
Selling and marketing	69,937	33,154
General and administrative	147,941	39,627
Related party expenses	3,532	6,239
Loss from operations	(330,127)	(116,949)
Other income (expense):		
Change in fair market value of warrant and earn-out contingent liabilities	122,171	—
Interest income	57	473
Interest expense	(2,128)	(1,826)
Other income (expense), net	5,064	2,645
Total other income (expense), net	125,164	1,292
Loss before income taxes	(204,963)	(115,657)
Income tax provision	—	—
Net income (loss) and comprehensive income (loss)	\$ (204,963)	\$ (115,657)

Revenue

	Nine months ended September 30,		Change	
	2021	2020	\$	%
	(dollars in thousands)			
Diagnostic test revenue	\$ 148,973	\$ 113,759	\$ 35,214	31 %
Other revenue	5,421	1,606	3,815	238 %
Total revenue	\$ 154,394	\$ 115,365	\$ 39,029	34 %

Total revenue increased by \$39.0 million, or 34%, to \$154.4 million for the nine months ended September 30, 2021, from \$115.4 million for the nine months ended September 30, 2020.

Diagnostic test revenue increased by \$35.2 million, or 31%, to \$149.0 million for the nine months ended September 30, 2021, from \$113.8 million for the nine months ended September 30, 2020. The increase was primarily attributable to a 303% increase in COVID-19 test volumes and overall increase in volumes of 125%, partially offset by the change in the mix of tests performed and reduced reimbursement rates. COVID-19 testing was introduced in May of 2020 which had a minor impact on volume during the nine months ended September 30, 2020, compared to approximately 272,973 tests in the nine months ended September 30, 2021. There was also an increase in large carrier screening tests performed during the nine months ended September 30, 2020.

Other revenue increased by \$3.8 million, or 238%, to \$5.4 million for the nine months ended September 30, 2021, from \$1.6 million for the nine months ended September 30, 2020. The increase was primarily attributable to growth in collaboration service activities due to the execution of a third-party contracts which generated \$2.9 million in revenues in 2021 compared to \$0.7 million in 2020, partially offset by reduced revenues recognized related to an existing third-party contract.

Cost of Services

	Nine months ended September 30,		Change	
	2021	2020	\$	%
	(dollars in thousands)			
Cost of services	\$ 180,195	\$ 111,754	\$ 68,441	61 %

Cost of services increased by \$68.4 million, or 61%, to \$180.2 million for the nine months ended September 30, 2021, from \$111.8 million for the nine months ended September 30, 2020. The increase was primarily driven by the following cost components: a \$19.7 million increase in stock-based compensation expense primarily driven by the increase in fair value of the liability-classified awards until the Closing Date; a \$12.8 million increase in personnel-related expenses driven by an increase in average headcount; a \$4.6 million increase in costs driven by temporary hires contracted to perform COVID-19 testing activities; a \$3.6 million increase in logistical expenses as a result of an increase in operations; a \$16.6 million increase in reagents and laboratory supplies expense due primarily to the 125% increase in volumes; a \$2.8 million increase in software expenses due to increased cloud storage and expanded computing capacity requirements from New York City to Stamford, Connecticut for testing data; a \$1.2 million increase in the inventory obsolescence reserve for expiring COVID-19 testing kits; a \$2.9 million increase in occupancy expenses and a \$4.0 million increase in depreciation expenses in connection with our laboratory move at the end of 2020, with production activities commencing at the Stamford facility in the first quarter of 2021.

Research and Development

	Nine months ended September 30,		Change	
	2021	2020	\$	%
	(dollars in thousands)			
Research and development	\$ 82,916	\$ 41,540	\$ 41,376	100 %

Research and development expenses increased by \$41.4 million, or 100%, to \$82.9 million for the nine months ended September 30, 2021, from \$41.5 million for the nine months ended September 30, 2020. The increase was primarily attributable to the following cost components: a \$34.3 million increase in stock-based compensation expense driven by the increase in fair value of the liability-classified awards until the Closing Date; a \$4.0 million increase in depreciation expenses; a \$2.1 million increase in expenses for reagents, laboratory supplies and laboratory software for research and development; a \$0.6 million increase in other personnel-related expenses driven by an increase in headcount.

Selling and Marketing

	Nine months ended September 30,		Change	
	2021	2020	\$	%
	(dollars in thousands)			
Selling and marketing	\$ 69,937	\$ 33,154	\$ 36,783	111 %

Selling and marketing expenses increased by \$36.7 million, or 111%, to \$69.9 million for the nine months ended September 30, 2021, from \$33.2 million for the nine months ended September 30, 2020. The increase was primarily attributable to the following cost components: an \$17.9 million increase in stock-based compensation expense driven by the increase in fair value of the liability-classified awards until the Closing Date; a \$11.9 million increase in personnel-related expenses driven by increased headcount; a \$2.8 million increase in consulting service expenses to support revenue cycle transformation initiatives; a \$2.0 million increase in information technology-related expenses; a \$0.8 million increase in other administrative expenses; and a \$1.0 million increase in travel and business expenses.

General and Administrative

	Nine months ended September 30,		Change	
	2021	2020	2020 to 2021	
			\$	%
	(dollars in thousands)			
General and administrative	\$ 147,941	\$ 39,627	\$ 108,314	273 %

General and administrative expenses increased by \$108.3 million, or 273%, to \$147.9 million for the nine months ended September 30, 2021, from \$39.6 million for the nine months ended September 30, 2020. The increase was primarily attributable to the following cost components: an \$80.6 million increase in stock-based compensation expense driven by the increase in fair value of the liability-classified awards until the Closing Date; a \$13.9 million increase in professional services incurred in connection with the Business Combination transaction; a \$9.8 million increase in personnel-related expenses driven by an increase in average headcount including executive headcount; a \$1.3 million increase in software expenses due to increased cloud storage requirements; and a \$3.5 million increase in insurance expenses driven by transitioning to obtaining standalone insurance policies separate from ISMMS. These increases were partially offset by a \$1.2 million decrease in occupancy expenses in connection with our laboratory move from New York City to Stamford, Connecticut.

Related Party Expenses

	Nine months ended September 30,		Change	
	2021	2020	2020 to 2021	
			\$	%
	(dollars in thousands)			
Related party expenses	\$ 3,532	\$ 6,239	\$ (2,707)	(43)%

Related party expenses decreased by \$2.7 million, or 43%, to \$3.5 million for the nine months ended September 30, 2021, from \$6.2 million for the nine months ended September 30, 2020. The decrease was primarily attributable to the following cost components: a \$1.5 million decrease in rent and facility expenses driven by a reduction of office and lab space leased from ISMMS pursuant to the transition services agreement which ended in the first quarter of 2021; and a \$0.9 million decrease in fees associated with information technology support pursuant to the TSA with ISMMS.

Interest Income

	Nine months ended September 30,		Change	
	2021	2020	2020 to 2021	
			\$	%
	(dollars in thousands)			
Interest income	\$ 57	\$ 473	\$ (416)	(88)%

Interest income decreased by \$0.4 million, or 88%, to \$0.1 million for the nine months ended September 30, 2021, from \$0.5 million for the nine months ended September 30, 2020. The decrease was due to declines in interest rates on money market deposit.

Interest Expense

	Nine months ended September 30,		Change	
	2021	2020	2020 to 2021	
			\$	%
	(dollars in thousands)			
Interest expense	\$ (2,128)	\$ (1,826)	\$ (302)	17 %

Interest expense increased by \$0.3 million, or 17%, to \$2.1 million for the nine months ended September 30, 2021, from \$1.8 million for the nine months ended September 30, 2020. The increase was driven by new capital lease obligations for our Stamford laboratory facility which commenced operations in 2021.

Other Income, Net

	Nine months ended September 30,		Change	
			2020 to 2021	
	2021	2020	\$	%
	(dollars in thousands)			
Other income, net	\$ 5,064	\$ 2,645	\$ 2,419	91 %

Other income, net increased by \$2.5 million or 91% to \$5.1 million for the nine months ended September 30, 2021, from \$2.6 million for the nine months ended September 30, 2020. The increase in other income, net was primarily attributable to the \$5.6 million in funding that we received and recognized as other income under the CARES Act in the first quarter of 2021, partially offset by \$0.3 million in penalties related to an early repayment of debt. This is compared to \$2.6 million in funding received in 2020.

Reconciliation of Non-GAAP Financial Measures

In addition to our results determined in accordance with GAAP, we believe the following non-GAAP measures are useful in evaluating our operating performance. We use the following non-GAAP financial information to evaluate our ongoing operations, as a component in determining employee bonus compensation, and for internal planning and forecasting purposes. We believe that non-GAAP financial information, when taken collectively, may be helpful to investors because it provides consistency and comparability with past financial performance. However, non-GAAP financial information is presented for supplemental informational purposes only and should not be considered in isolation or as a substitute for financial information presented in accordance with GAAP. In addition, other companies, including companies in our industry, may calculate similarly-titled non-GAAP measures differently or may use other measures to evaluate their performance, all of which could reduce the usefulness of our non-GAAP financial measures as tools for comparison. A reconciliation is provided below for each non-GAAP financial measure to the most directly comparable financial measure stated in accordance with GAAP. Investors are encouraged to review the related GAAP financial measures and the reconciliation of these non-GAAP financial measures to their most directly comparable GAAP financial measures, and not to rely on any single financial measure to evaluate our business.

Non-GAAP financial measures have limitations as analytical tools and you should not consider them in isolation, or as substitutes for analysis of our results as reported under GAAP. We may in the future incur expenses similar to the adjustments in the presentation of Non-GAAP financial measures. Other limitations include that Non-GAAP financial measures do not reflect:

- all expenditures or future requirements for capital expenditures or contractual commitments;
- changes in our working capital needs;
- provision for income taxes, which may be a necessary element of our costs and ability to operate;
- the costs of replacing the assets being depreciated, which will often have to be replaced in the future;
- the non-cash component of employee compensation expense; and
- the impact of earnings or charges resulting from matters we consider not to be reflective, on a recurring basis, of our ongoing operations

Adjusted Gross Profit and Adjusted Gross Margin

Adjusted Gross Profit is a non-GAAP financial measure that we define as revenue less cost of services, excluding stock-based compensation expense, and COVID-19 costs. We define Adjusted Gross Margin as our Adjusted Gross Profit divided by our revenue. We believe these non-GAAP financial measures are useful in evaluating our operating performance compared to that of other companies in our industry, as these metrics generally eliminate the effects of certain items that may vary from company to company for reasons unrelated to overall operating performance.

The following is a reconciliation of revenue to our Adjusted Gross Profit and Adjusted Gross Margin for the three months ended September 30, 2021 and 2020:

	Three months ended September 30,	
	2021	2020
	(in thousands)	
Revenue	\$ 43,178	\$ 38,608
Cost of services	58,752	36,530
Gross (Loss) Profit	(15,574)	2,078
Gross Margin	(36)%	5 %
Add:		
Stock-based compensation expense	3,699	3,506
Adjusted Gross (Loss) Profit	\$ (11,875)	\$ 5,584
Adjusted Gross Margin	(28)%	14 %

The following is a reconciliation of revenue to our Adjusted Gross Profit and Adjusted Gross Margin for the nine months ended September 30, 2021 and 2020:

	Nine months ended September 30,	
	2021	2020
	(in thousands)	
Revenue	154,394	115,365
Cost of services	180,195	111,754
Gross (Loss) Profit	(25,801)	3,611
Gross Margin	(17)%	3 %
Add:		
Stock-based compensation expense	23,162	3,500
COVID Costs ⁽¹⁾	—	3,179
Adjusted Gross (Loss) Profit	\$ (2,639)	\$ 10,290
Adjusted Gross Margin	(2)%	9 %

(1) Represents labor costs with respect to laboratory employees' downtime. During the second quarter of 2020, we did not reduce the workforce in our laboratory from COVID-19. However, we were adversely affected by the decrease in volume in Women's Health and other products. Accordingly, we have adjusted our Gross Profit to reflect the management-assessed impact from the decrease in productivity of existing laboratory employees due to COVID-19 in the second quarter of 2020.

Adjusted EBITDA

Adjusted EBITDA is a non-GAAP financial measure that we define as net loss adjusted for interest expense, net, depreciation and amortization, stock-based compensation expenses, transaction costs, other income (expense), net, change in fair market value of warrant and earn-out contingent liabilities and COVID-19 costs. We believe Adjusted EBITDA is useful in evaluating our operating performance compared to that of other companies in our industry, as this metric generally eliminates the effects of certain factors that may vary from company to company for reasons unrelated to overall operating performance.

The following is a reconciliation of our net loss to Adjusted EBITDA for the three months ended September 30, 2021 and 2020:

	Three months ended September 30,	
	2021	2020
	(in thousands)	
Net Income (loss)	\$ 31,392	\$ (56,615)
Interest expense, net ⁽¹⁾	656	574
Depreciation and amortization	5,491	3,067
Stock-based compensation expense	18,011	29,453
Transaction costs ⁽²⁾	391	—
Change in fair market value of warrant and earn-out contingent liabilities ⁽³⁾	(122,171)	—
Other (income) expense, net ⁽⁴⁾	343	26
Adjusted EBITDA	<u>\$ (65,887)</u>	<u>\$ (23,495)</u>

(1) Represents the total of Interest Expense related to our capital leases and interest-bearing loans and Interest Income on money market funds.

(2) Represents professional service costs incurred in connection with pursuing the Business Combination transaction that did not meet the requirement for capitalization.

(3) For the three months ended September 30, 2021, represents the change in fair market value of the liabilities associated with our public warrants and private placement warrants and the earn-out shares issuable under the terms of the Merger Agreement.

(4) For the three months ended September 30, 2021, consists primarily of penalties related to early extinguishment of debt.

The following is a reconciliation of our net loss to Adjusted EBITDA for the nine months ended September 30, 2021 and 2020:

	Nine months ended September 30,	
	2021	2020
	(in thousands)	
Net loss	\$ (204,963)	\$ (115,657)
Interest expense, net ⁽¹⁾	2,071	1,353
Depreciation and amortization	16,012	8,147
Stock-based compensation expense	182,454	30,073
Transaction costs ⁽²⁾	5,496	—
Change in fair market value of warrant and earn-out contingent liabilities ⁽³⁾	(122,171)	—
Other (income) expense, net ⁽⁴⁾	(5,241)	(2,645)
COVID-19 costs ⁽⁵⁾	—	3,179
Adjusted EBITDA	<u>\$ (126,342)</u>	<u>\$ (75,550)</u>

(1) Represents the total of Interest Expense related to our capital leases and interest-bearing loans and Interest Income on money market funds.

(2) Represents professional service costs incurred in connection with pursuing the Business Combination transaction that did not meet the requirement for capitalization.

(3) For the nine months ended September 30, 2021, represents the change in fair market value of the liabilities associated with our public warrants and private placement warrants and the earn-out shares issuable under the terms of the Merger Agreement.

(4) For the nine months ended September 30, 2021 and 2020, consists primarily of funding received under the CARES Act Provider Relief Fund, offset by penalties related to early extinguishment of debt occurred in three months ended September 30, 2021.

(5) Represents labor costs with respect to laboratory employees' downtime. During the second quarter of 2020, we did not reduce the workforce in our laboratory from COVID-19. However, we suffered significantly due to the decrease in volume in Women's Health and other products. Accordingly, we have adjusted our Gross Profit to reflect the management-assessed impact from the decrease in productivity of existing laboratory employees due to COVID-19 in the second quarter of 2020.

Going Concern, Liquidity and Capital Resources

On July 22, 2021, we completed the Business Combination with CMLS and received net cash proceeds of \$510 million. Management determined that the cash proceeds received from the Business Combination provides us with sufficient liquidity to meet our obligations for at least twelve months from the date of this Quarterly Report.

Accordingly, the unaudited condensed consolidated financial statements included in this Quarterly Report have been prepared on a basis that assumes we will continue as a going concern and which contemplates the realization of assets and satisfaction of liabilities and commitments in the ordinary course of business.

Material Cash Requirements for Known Contractual Obligations and Commitments

The following is a description of commitments for known and reasonably likely cash requirements as of September 30, 2021 and December 31, 2020. We anticipate fulfilling such commitments with our existing cash and cash equivalents, which amounted to \$461.3 million and \$108.1 million as of September 30, 2021 and December 31, 2020, respectively, or through additional capital raised to finance our operations; see “*Going Concern, Liquidity and Capital Resources*”.

Our future minimum payments under non-cancellable operating lease agreements were \$69.4 million as of September 30, 2021 and \$73.3 million as of December 31, 2020. The timing of these future payments, by year, can be found in Legacy Sema4’s audited financial statements in Note 9, “*Commitments and Contingencies*” included within the Proxy Statement and our unaudited condensed consolidated financial statements in Note 9, “*Commitments and Contingencies*,” included within the Quarterly Report respectively.

Our future payments under capital leases were \$66.7 million as of September 30, 2021. The timing of these future payments, by year, can be found in Legacy Sema4’s audited financial statements in Note 9, “*Commitments and Contingencies*” included within the Proxy Statement and our unaudited condensed consolidated financial statements in Note 9, “*Commitments and Contingencies*,” included within this Quarterly Report, respectively.

Cash Flows

	Nine months ended September 30,	
	2021	2020
	(in thousands)	
Net cash used in operating activities	\$ (138,449)	\$ (74,795)
Net cash used in investing activities	(13,093)	(20,475)
Net cash provided by financing activities	494,758	119,942

Operating Activities

Net cash used in operating activities during the nine months ended September 30, 2021 was \$138.4 million, which was primarily attributable to a net loss of \$205.0 million and a change in fair value of the warrant and earn-out liabilities of \$122.2 million, partially offset by non-cash depreciation and amortization of \$16.0 million and non-cash stock-based compensation expense of \$182.5 million. The net change in our operating assets and liabilities primarily reflected a \$10.8 million decrease in accounts receivable due to a decrease in COVID-19 test volume performed during the second and third quarter of 2021, a \$7.3 million increase in inventories driven by a higher volume of purchases to support increasing testing volumes, a \$15.7 million increase in prepaid expenses and other current assets mainly driven by new insurance policy premiums paid during the nine months period, a \$4.7 million increase in accounts payable and accrued expenses due to the timing of vendor payments of large vendors, and a \$3.4 million decrease in other current liabilities mainly driven by the repayment of capital leases and decrease in compensation related accruals.

Net cash used in operating activities during the nine months ended September 30, 2020 was \$74.8 million, which was primarily attributable to a net loss of \$115.7 million, partially offset by non-cash depreciation and amortization of \$8.1 million and non-cash stock-based compensation expense of \$30.1 million. The net change in our operating assets and liabilities primarily reflected an increase in inventory of \$8.1 million and an increase in other current liabilities of \$10.1 million.

Investing Activities

Net cash used in investing activities during the nine months ended September 30, 2021 was \$13.1 million, which was attributable to \$4.3 million in purchases of property and equipment and \$8.7 million of costs related to development of internal-use software assets.

Net cash used in investing activities during the nine months ended September 30, 2020 was \$20.5 million, which was attributable to \$17.3 million in purchases of property and equipment and \$3.2 million of costs related to development of internal-use software assets.

Financing Activities

Net cash provided by financing activities during the nine months ended September 30, 2021 was \$494.8 million, which was attributable to the consummation of the Merger including: \$350.0 million from PIPE investment proceeds; \$442.7 million from an equity infusion from the Merger, net of redemptions; offset by \$230.7 million in the cash payments to certain Legacy Sema4 stockholders; payment of transaction costs of \$51.8 million; and \$3.8 million of stock appreciate rights pay-outs. These amounts were further offset by an \$8.7 million repayment of long-term debt and \$3.0 million of capital lease principal payments.

Net cash provided by financing activities during the nine months ended September 30, 2020 was \$120.0 million, which was attributable to \$117.3 million in proceeds, net of issuance costs from the issuance of Series C redeemable convertible preferred stock, and \$6.0 million in cash proceeds from the issuance of long-term debt, partially offset by \$3.4 million in principal payments on our capital lease obligations.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

Critical Accounting Policies and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our unaudited condensed consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these unaudited condensed consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the unaudited condensed consolidated financial statements, as well as the reported revenue generated and expenses incurred during the reporting periods. Our estimates are based on our historical experience and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about items that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Except as described in Note 2, "*Summary of Significant Accounting Policies – Recent Accounting Pronouncement Issued but Not Yet Adopted*," to our unaudited condensed consolidated financial statements included in this Quarterly Report, there have been no material changes to our critical accounting policies and estimates as compared to the critical accounting policies and estimates disclosed in Legacy Sema4's audited consolidated financial statements and notes thereto included within the Proxy Statement.

JOBS Act Accounting Election

We are considered an "emerging growth company" within the meaning of the JOBS Act. The JOBS Act allows an emerging growth company to delay the adoption of new or revised accounting standards that have different effective dates for public and private companies until those standards apply to private companies. We have elected to use this extended transition period and, as a result, our financial statements may not be comparable to companies that comply with public company effective dates. We also intend to rely on other exemptions provided by the JOBS Act, including not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act.

Following the completion of the Business Combination, we will remain an emerging growth company until the earliest of (1) September 1, 2025, (2) the last day of the fiscal year in which we have total annual gross revenue of at least \$1.07 billion, (3) the last day of the fiscal year in which we are deemed to be a "large accelerated filer" as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our common stock held by non-affiliates exceeded \$700.0 million as of the last business day of the second fiscal quarter of such year or (4) the date on which we have issued more than \$1.0 billion in non-convertible debt securities during the prior three-year period.

Recent Accounting Pronouncements

Additional information on recent accounting pronouncements can be found in Legacy Sema4's audited financial statements in Note 2, "*Summary of Significant Accounting Policies*" included within the Proxy Statement and our unaudited condensed consolidated financial statements in Note 2, "*Summary of Significant Accounting Policies*." Included within the Quarterly Report.

Internal Controls

In connection with the preparation of Legacy Sema4's audited financial statements included in the Proxy Statement, we identified material weaknesses in our controls, which existed as of December 31, 2020. Our management is actively engaged and committed to taking the steps necessary to remediate the control deficiencies that constituted the material weaknesses. During 2021, we made the following enhancements to our control environment:

- In May 2021, we hired a permanent Chief Accounting Officer with substantial technical accounting and internal controls experience, whose responsibilities include working with our Chief Financial Officer, existing employees and third-party consultants to improve the design, implementation, execution and supervision of our controls.
- We added accounting and information technology employees with appropriate experience, certification, education and training to the organization to strengthen our internal accounting team, to provide oversight, structure and reporting lines, and to provide additional review over our disclosures. This includes hiring a Corporate Controller, whose primary responsibilities include working with third-party consultants to improve the design, implementation, execution, and supervision of our controls. We expect to continue evaluating our needs for additional personnel. We expect to provide enhanced training to existing and new employees in order to enhance the level of communication and understanding of controls with personnel that provide key information and perform key roles within our financial accounting and reporting group.
- We engaged outside consultants to assist in the design, implementation, and documentation of internal controls that address the relevant risks, are properly designed, and provide for appropriate evidence of performance of the internal controls; and
- We engaged outside consultants to assist us in the evaluation of our Enterprise Resource Planning ("ERP") system in order to mitigate the internal control gaps and limitations with the current configuration, and to enhance the information technology general controls environment.

Our remediation activities are continuing during 2021. In addition to the above actions, we expect to engage in additional activities, including, but not limited to:

- Hiring more technical accounting resources to enhance our control environment;
- Engaging external consultants to provide support and to assist us in our evaluation of more complex applications of GAAP, and to assist us with documenting and assessing our accounting policies and procedures until we have sufficient technical accounting resources;
- Implementing business process-level controls across all significant accounts and information technology general controls across all relevant systems. This includes providing training for control owners that will present expectations as it relates to the control design, execution and monitoring of such controls, including enhancements to the documentation to evidence the execution of the controls; and
- Implementing improvements to our ERP system to enhance the accuracy of our financial records, enable the enforcement of systematic segregation of duties, and to improve our information technology general controls environment.

We continue to enhance corporate oversight over process-level controls and structures to ensure that there is appropriate assignment of authority, responsibility, and accountability to enable remediation of our material weaknesses. We believe that our remediation plan will be sufficient to remediate the identified material weaknesses and strengthen our controls. As we continue to evaluate, and work to improve our controls, management may determine that additional measures to address control deficiencies or modifications to the remediation plan are necessary.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risks in the ordinary course of our business. These risks primarily relate to interest rates. Our cash, cash equivalents, and restricted cash consists of bank deposits and money market funds, which totaled \$118.9 million and \$115.0 million at December 31, 2020 and 2019, respectively, and \$462.2 million as of September 30, 2021. Such interest-bearing instruments carry a degree of risk; however, because our investments are primarily high-quality credit instruments with short-term durations with high-quality institutions, we have not been exposed to, nor do we anticipate

being exposed to, material risks due to changes in interest rates. A 100 basis point change in interest rates would not have a material effect on the fair market value of our cash, cash equivalents and restricted cash.

Our loans and financing obligations are recorded at amortized cost and are set at fixed interest rates. As a result, fluctuations in interest rates would not impact our financial statements. However, the fair value of our debt will generally fluctuate with movements of interest rates. Additional information on our long-term debt can be found in Sema4's audited financial statements in Note 8, "Long-Term Debt" and Sema4's unaudited condensed consolidated financial statements in Note 8, "Long-Term Debt."

Item 4. Controls and Procedures

Disclosure controls and procedures are controls and other procedures that are designed to ensure that information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed in our reports filed or submitted under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure.

Evaluation of Disclosure Controls and Procedures

As required by Rules 13a-15 and 15d-15 under the Exchange Act, our Chief Executive Officer and Chief Financial Officer carried out an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of September 30, 2021. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were not effective as of September 30, 2021 because of the material weaknesses in internal control over financial reporting discussed below.

Notwithstanding the material weakness in internal control over financial reporting described below, our management has concluded that our condensed consolidated financial statements included in the Quarterly Report on Form 10-Q are fairly stated in all material respects in accordance with accounting principles generally accepted in the United States of America.

Material Weaknesses

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of a company's annual or interim financial statements will not be prevented or detected on a timely basis.

As disclosed in the Proxy Statement, we have identified material weaknesses in our internal control over the financial statement close process related to deficiencies in information technology general controls and process level controls. These control deficiencies could result in a misstatement of our accounts or disclosures that would result in a material misstatement of our financial results that would not be prevented or detected, and accordingly, we determined that these control deficiencies result in material weaknesses.

Remediation Plan

We are in the process of developing a detailed plan for remediation of the material weaknesses, as well as compliance with Section 404 of the Sarbanes-Oxley Act. Management has continued to implement remediation steps to address the material weaknesses and to improve our internal control over financial reporting. Specifically, we have hired key personnel in order to enhance the level of communication and understanding of controls within our financial accounting and reporting group. We also engaged external consultants to perform a gap analysis and assessment of design and implementation of internal controls that address relevant risks, as well as assist with remediation actions. As of September 30, 2021, the material weaknesses have not yet been fully remediated.

While we have performed certain remediation activities to strengthen our controls to address the identified material weaknesses, control weaknesses are not considered remediated until new internal controls have been operational for a period of time, are tested, and management concludes that these controls are operating effectively. We will continue to monitor the effectiveness of our remediation measures in connection with our future assessments of the effectiveness of internal control over financial reporting and disclosure controls and procedures, and we will make any changes to the

design of our plan and take such other actions that we deem appropriate given the circumstances. For more information, see “[Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations—Internal Controls](#)” above.

Changes in Internal Control Over Financial Reporting

There was no change in our internal control over financial reporting that occurred during the fiscal quarter ended September 30, 2021 covered by this Quarterly Report on Form 10-Q that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting, other than as described herein. We are continuing to take steps to remediate the material weakness in our internal control over financial reporting, as discussed above.

During the fiscal quarter ended September 30, 2021, we completed the Business Combination and the internal controls of CMLS became our internal controls. We are engaged in the process of design and implementation of our internal control over financial reporting in a manner commensurate with the scale of our operations subsequent to the Business Combination, including the enhancement of our internal and external technical accounting resources.

Inherent Limitation on the Effectiveness of Internal Control

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures, or our internal controls, will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within our Company have been detected.

Part II - Other Information

Item 1. Legal Proceedings

We, and our subsidiary, are currently not a party to, and our property is not currently the subject of, any material pending legal proceedings; however, we may become involved in various claims and legal actions arising in the ordinary course of business.

Item 1A. Risk Factors

You should carefully review and consider the following risk factors and the other information contained in this Quarterly Report on Form 10-Q before deciding whether to invest in our common stock. We cannot assure you that any of the events discussed below will not occur. These events could have a material and adverse impact on our business, financial condition, results of operations and prospects. Unless otherwise indicated, references to our business being harmed in these risk factors will include harm to our business, reputation, financial condition, results of operations, net revenue and future prospects. In such event, the trading price of our common stock could decline, and you could lose all or part of your investment. We may face additional risks and uncertainties that are not presently known to us, or that we currently deem immaterial, which may also impair our business or financial condition. The following discussion should be read in conjunction with the unaudited condensed consolidated financial statements and notes thereto included herein.

Risk Factors Summary

Our business is subject to a number of risks and uncertainties, including those risks discussed at length below. These risks include, among others, the following:

- The COVID-19 pandemic has affected and may further materially and adversely affect our business and financial results.
- We face intense competition. If we do not continue to innovate and provide products and services that are useful to users, we may not remain competitive, which could harm our business and operating results.
- If third-party payors, including managed care organizations, private health insurers and government health plans, do not provide adequate reimbursement for our tests, or seek to amend or renegotiate their fee reimbursement schedules, or if we are unable to comply with their requirements for reimbursement, our commercial success could be negatively affected.
- We have limited experience with the development and commercialization of our databases and our health information and genomic platforms.
- If we fail to comply with federal and state laboratory licensing requirements or standards, we could lose the ability to perform our tests or experience disruptions to our business.
- We rely on highly skilled personnel in a broad array of disciplines and, if we are unable to hire, retain or motivate these individuals, or maintain our corporate culture, we may not be able to maintain the quality of our services or grow effectively.
- We need to scale our infrastructure in advance of demand for our products and services, and our failure to generate sufficient demand for our products and services would have a negative impact on our business and our ability to attain profitability.
- We rely on a limited number of suppliers or, in some cases, single suppliers, for some of our laboratory instruments and materials and may not be able to find replacements or immediately transition to alternative suppliers or service providers.
- We rely on a limited number of product and service providers for data infrastructure and analytics capabilities, and any disruption of, or interference with, our use of data and workflow services could adversely affect our business, financial condition, and results of operations, and we may not be able to find replacements or immediately transition to alternative products or service providers.

- Our projections are subject to significant risks, assumptions, estimates and uncertainties, including assumptions regarding adoption of our products and services. As a result, our projected revenues, market share, expenses and profitability may differ materially from our expectations in any given quarter or fiscal year.
- Uncertainty in the development and commercialization of our enhanced or new tests or services could materially adversely affect our business, financial condition and results of operations.
- We currently use, and in the future expect to increase our use of, information and rights from customers, strategic partners, and collaborators for several aspects of our operations, and if we cannot maintain current and enter new relationships with these parties with adequate access and authorization to such information, our business will suffer.
- Our operating results could be subject to significant fluctuation, which could increase the volatility of our stock and warrant prices and cause losses to our stockholders.
- We may need to raise additional capital to fund our existing operations, develop additional products and services, commercialize new products and services or expand our operations.
- We expect to make significant investments in our continued research and development of new products and services, which may not be successful.
- We have identified material weaknesses, some of which have a pervasive effect across the organization, and may identify additional material weaknesses or significant deficiencies, in our internal controls over financial reporting. Our failure to remedy these matters could result in a material misstatement of our financial statements.
- We rely on third-party laboratories to perform certain elements of our service offerings.
- Future changes in FDA enforcement discretion for LDTs could subject our operations to much more significant regulatory requirements.
- For each product and service we are developing that may require FDA premarket review prior to marketing, the FDA may not grant clearance, authorization or premarket approval and failure to obtain necessary approvals for our future products and services would adversely affect our ability to grow our business.
- Compliance with the HIPAA security, privacy and breach notification regulations may increase our costs.
- We face uncertainty related to healthcare reform, pricing, coverage and reimbursement, which could reduce our revenue.
- Our inability to effectively protect our proprietary products, processes, and technologies, including the confidentiality of our trade secrets, could harm our competitive position.
- Security breaches, privacy issues, loss of data and other incidents could compromise sensitive, protected, or personal information related to our business, could prevent it from accessing critical information, and could expose it to regulatory liability, which could adversely affect our business.
- We will incur increased costs and demands on management as a result of compliance with laws and regulations applicable to public companies, which could harm our operating results.

Risks Related to Our Business, Industry and Operations

The COVID-19 pandemic has affected and may further materially and adversely affect our business and financial results.

The COVID-19 pandemic, together with related precautionary measures, began to materially disrupt our business in April 2020 and may continue to disrupt our business for an unknown period of time. The territories in which we market, sell, distribute and perform our tests and performs our health information and data science services are attempting to address the COVID-19 pandemic in varying ways, including stay-at-home orders, temporarily closing businesses, restricting gatherings, restricting travel, and mandating social distancing and face coverings. Certain jurisdictions have begun re-opening only to return to restrictions due to increases in new COVID-19 cases and the emergence of new variant strains of COVID-19. Even in areas where “stay-at-home” restrictions have been lifted and the number of cases of

COVID-19 has declined, many individuals remain cautious about resuming activities such as preventive-care medical visits. Medical practices continue to be cautious about allowing individuals, such as sales representatives, into their offices. Many individuals continue to work from home rather than from an office setting. The level and nature of the disruption caused by COVID-19 is unpredictable, may be cyclical and long-lasting and may vary from location to location, and the emergence of new variant strains of COVID-19 in regions that have reopened has necessitated, and may in the future necessitate, renewed government restrictions. As a result, we experienced a significant impact to our 2020 operating results, including our order volumes, revenues, margins, and cash utilization, among other measures.

Beginning in March 2020, we undertook temporary precautionary measures intended to help minimize the risk of the virus to our employees, including requiring most employees to work remotely; suspending field-based, face-to-face interactions by our sales force; requiring on-site employees to undergo COVID-19 testing, wear personal protective equipment (including face masks or shields) and maintain social distancing; pausing all non-essential travel for our employees; and limiting employee attendance at industry events and in-person work-related meetings, to the extent those events and meetings are continuing. Our current partners also took similar precautions, including suspending face-to-face interactions between sales representatives and healthcare providers.

We expect to adjust our precautionary measures at our various locations based on local recovery levels and applicable governmental regulations. For example, a portion of our sales force has recommenced field-based interactions, although access to healthcare providers remains limited and the resumption of normal activities is expected to be gradual. Our business could be negatively affected if it takes excessive, ineffective or inadequate precautions.

The COVID-19 pandemic has materially impacted our business, and may continue to impact our business for an unknown period of time. Such impacts may include the following:

- Healthcare providers or patients have canceled or delayed scheduling, and for an extended period of time may continue to cancel or delay scheduling, standard wellness visits and other non-emergency appointments and procedures (including oncology and pregnancy-related screenings), contributing to a decline in orders for our products or services;
- Restrictions on travel, commerce and shipping may prevent patients and pathologists from shipping samples to our clinical laboratories;
- Illnesses, quarantines, financial hardships, restrictions on travel, commerce and shipping, or other consequences of the pandemic, may disrupt our supply chain or other business relationships, and it or other parties may assert rights under force majeure clauses to excuse performance;
- We have experienced, and for an extended period of time may continue to experience, reduced volumes at our clinical laboratories and it may need to suspend operations at some or all of our clinical laboratories;
- We have taken, and may take additional, cost cutting measures, which may hinder our efforts to commercialize our products or delay the development of future products and services. Further, we might not realize all of the cost savings it expects to achieve as a result of those efforts;
- We and our partners have postponed or cancelled clinical studies, which may delay or prevent our launch of future products and services;
- Our workforce, much of which has been asked to work remotely in an effort to reduce the spread of COVID-19, may be infected by the virus or otherwise distracted;
- A combination of factors, including infection from the virus, supply shortfalls, and inability to obtain or maintain equipment, could adversely affect our lab capacity and our ability to meet the demand for our testing services. In addition, in April of 2020 we began offering a COVID-19 test and by devoting lab capacity and supplies to that test, we may experience capacity limitations and supply shortfalls that adversely affect our ability to provide women's health and oncology testing, and other tests that may generate more revenue and higher profits; and
- We may inaccurately estimate the duration or severity of the COVID-19 pandemic, which could cause us to misalign our staffing, spending, activities and precautionary measures with current or future market conditions.

Despite our efforts, the ultimate impact of COVID-19, or the impact of the emergence of new strains of the virus and any future resurgences of COVID-19 or variant strains, depends on factors beyond our knowledge or control, including the

duration and severity of the pandemic, third-party actions taken to contain its spread and mitigate its public health effects and short- and long-term changes in the behaviors of medical professionals and patients resulting from the pandemic.

Additionally, the anticipated economic consequences of the COVID-19 pandemic have adversely impacted financial markets, resulting in high share price volatility, reduced market liquidity, and substantial declines in the market prices of the securities of many publicly traded companies. Volatile or declining markets for equities could adversely affect our ability to raise capital in the future when needed through the sale of shares of common stock or other equity or equity-linked securities. If these market conditions persist when and if we need to raise capital, and if we are able to sell shares of our common stock under then prevailing market conditions, we might have to accept lower prices for our shares and issue a larger number of shares than might have been the case under better market conditions, resulting in significant dilution of the interests of our stockholders.

Due to the high degree of uncertainty regarding the implementation and impact of the CARES Act and other legislation related to COVID-19, there can be no assurance that we will be able to comply with the applicable terms and conditions of the CARES Act and retain such assistance.

On March 27, 2020, the CARES Act was signed into law, aimed at providing emergency assistance and health care for individuals, families, and businesses affected by the COVID-19 pandemic and generally supporting the U.S. economy. The CARES Act, among other things, includes provisions relating to refundable payroll tax credits, deferment of employer social security payments, net operating loss carryback periods, alternative minimum tax credit refunds, and modifications to the net interest deduction limitations. The CARES Act and similar legislation intended to provide assistance related to the COVID-19 pandemic also authorized \$175.0 billion in funding to be distributed by the U.S. Department of Health and Human Services, or the HHS, to eligible health care providers. This funding, known as the Provider Relief Fund, is designated to fund eligible healthcare providers' healthcare-related expenses or lost revenues attributable to COVID-19. On December 27, 2020, the Consolidated Appropriations Act, 2021 was signed into law, which adds \$3.0 billion to the Provider Relief Fund. Payments from the Provider Relief Fund are subject to certain eligibility criteria, as well as reporting and auditing requirements, but do not need to be repaid to the U.S. government if recipients comply with the applicable terms and conditions.

In 2020, we received \$5.4 million as part of the stimulus, comprised of \$2.6 million received under the Provider Relief Fund, or PRF, distribution and \$2.8 million received under the Employee Retention Credit, or ERC, distribution. During the three months ended March 31, 2021, we received an additional \$5.6 million under the PRF distribution. PRF distributions to healthcare providers are not loans and will not be required to be repaid; however, as a condition to receiving these payments, providers must agree to certain terms and conditions and submit sufficient documentation demonstrating that the funds are being used for healthcare-related expenses or lost revenue attributable to the COVID-19 pandemic. ERC distributions are refundable tax credits for 50% of qualified wages paid to employees during the pandemic. A company is eligible for the ERC if it has not received a Paycheck Protection Program loan under the CARES Act and (1) its operations have been fully or partially suspended because of COVID-19 or (2) its gross receipts in a calendar quarter in 2020 declined by more than 50% from the same period in 2019. At the time of applying for the ERC, we concluded that the eligibility requirements were met. However, subsequent to the filing of the application, our revenue was revised due to a change in estimate as a result of finalizing its accounting records, which impacted the applicable periods and calculations for determining eligibility, and may no longer meet the eligibility requirements. As such, we have deferred the recognition of the ERC distribution and recorded the proceeds in other liabilities on the balance sheets as of December 31, 2020 and September 30, 2021.

Due to the high degree of uncertainty regarding the implementation of the CARES Act, the Consolidated Appropriations Act, 2021 and other stimulus legislation, and due to our revenue revisions, there can be no assurance that the terms and conditions of the PRF, ERC or other relief programs will not change or be interpreted in ways that affect our ability to comply with such terms and conditions in the future, which could affect our ability to retain such assistance. We will continue to monitor our compliance with the terms and conditions of the PRF, including demonstrating that the distributions received have been used for healthcare-related expenses or lost revenue attributable to COVID-19, and the ERC. If we are unable to comply with current or future terms and conditions, our ability to retain some or all of the distributions received may be impacted, and we may be subject to actions including payment recoupment, audits and inquiries by governmental authorities, and criminal, civil or administrative penalties.

Other companies or institutions may develop and market novel or improved technologies, which may make our technologies less competitive or obsolete.

We operate in a rapidly evolving and highly competitive industry. There are a number of private and public companies that offer products or services or have announced that they are developing products or services that compete, or may one day compete, with our products or services. Some of our current and potential competitors possess greater brand recognition, financial and other resources and development capabilities than it does. As the fields of genomic analysis and health information become more widely known to the public, we anticipate that competition will further increase. We expect to compete with a broad range of organizations in the U.S. and other countries that are engaged in the development, production and commercialization of genetic screening products, including women's health and oncology screening products, health information services, and analytics, and data science services, and other diagnostic products. These competitors include:

- companies that offer clinical, research and data clinical services, molecular genetic testing and other clinical diagnostics, life science research and drug discovery services, data services and healthcare analytics, and consumer genetics products;
- academic and scientific institutions;
- governmental agencies; and
- public and private research organizations.

We may be unable to compete effectively against our competitors either because their products and services are superior or because they may have more expertise, experience, financial resources, or stronger business relationships. These competitors may have broader product lines and greater name recognition than we do. Furthermore, we must compete successfully in our existing markets, including women's health and oncology, but also in any new markets it expands into. Even if we do develop new marketable products or services, our current and future competitors may develop products and services that are more commercially attractive than ours, and they may bring those products and services to market earlier or more effectively than it. If we are unable to compete successfully against current or future competitors, we may be unable to increase market acceptance for and sales of our tests and services, which could prevent us from increasing or sustaining our revenues or achieving sustained profitability.

We face intense competition. If we do not continue to innovate and provide products and services that are useful to users, we may not remain competitive, which could harm our business and operating results.

Our business environment is rapidly evolving and intensely competitive. Our businesses face changing technologies, shifting provider and patient needs, and frequent introductions of rival products and services. To compete successfully, we must accurately anticipate technology developments and deliver innovative, relevant and useful products, services, and technologies in a timely manner. As our businesses evolve, the competitive pressure to innovate will encompass a wider range of products and services. We must continue to invest significant resources in research and development, including through acquisitions and collaborations, joint ventures and partnerships, in order to enhance our current diagnostics and health information and data science technologies, and existing and new products and services based off these technologies.

We have many competitors in different industries. Our current and potential domestic and international competitors range from large and established companies to emerging start-ups in addition to academic and scientific institutions, and public and private research organizations. Some competitors have longer operating histories in various sectors. They can use their experience and resources in ways that could affect our competitive position, including by making acquisitions, continuing to invest heavily in research and development and in talent, aggressively initiating intellectual property claims (whether or not meritorious), and continuing to compete aggressively for our customers and partners in the market for health information and data science products and services. Our competitors may be able to innovate and provide products and services faster than we can or may foresee the need for products and services before we do.

Our operating results may also suffer if our products and services are not responsive to the needs of our customers and partners. As technologies continue to develop, our competitors may be able to offer products and services that are, or that are seen to be, substantially similar to or better than our current products and services. This may force us to compete in different ways and expend significant resources in order to remain competitive. If our competitors are more successful than it in developing compelling products and services for or in attracting and retaining customers or partners in the market for health information and data science products and services, our operating results could be harmed.

If third-party payors, including managed care organizations, private health insurers and government health plans, do not provide adequate reimbursement for our tests, or seek to amend or renegotiate their fee reimbursement schedules, or if we are unable to comply with their requirements for reimbursement, our commercial success could be negatively affected.

Our ability to increase the number of billable tests and our revenue therefrom will depend on our success in achieving reimbursement for our tests from third-party payors. Reimbursement by a payor may depend on a number of factors, including a payer's determination that a test is appropriate, medically necessary, cost-effective and has received prior authorization. The commercial success of our current and future products, if approved, will depend on the extent to which our customers receive coverage and adequate reimbursement from third-party payors, including as managed care organizations and government payers (e.g., Medicare and Medicaid).

Since each payer makes its own decision as to whether to establish a policy or enter into a contract to cover our tests, as well as the amount it will reimburse for a test, seeking these approvals is a time-consuming and costly process. In addition, the determination by a payer to cover and the amount it will reimburse for our tests will likely be made on an indication-by-indication basis and may consider our billing practices and reimbursements from other payors and from our patient billing programs. To date, we have obtained policy-level reimbursement approval or contractual reimbursement for some indications for our tests from most of the large commercial third-party payors in the United States, and the Centers for Medicare & Medicaid Services, or CMS, provides reimbursement for our multi-gene tests for hereditary breast and ovarian cancer-related disorders as well as other tests. We believe that establishing adequate reimbursement from Medicare is an important factor in gaining adoption from healthcare providers. Our claims for reimbursement from third-party payors may be denied upon submission, and we must appeal the claims. The appeals process is time consuming and expensive and may not result in payment. In cases where there is not a contracted rate for reimbursement, there is typically a greater coinsurance or copayment requirement from the patient, which may result in further delay or decreased likelihood of collection.

A significant portion of the payments for our tests are paid or reimbursed under insurance programs with third-party payors. To contain reimbursement and utilization rates, third-party payors often attempt to, or do in fact, amend or renegotiate their fee reimbursement schedules. Loss of revenue caused by third-party payor cost containment efforts or an inability to negotiate satisfactory reimbursement rates could have a material adverse effect on our revenue and results of operations.

Furthermore, in cases where we or our partners have established reimbursement rates with third-party payors, we face additional challenges in complying with their procedural requirements for reimbursement. These requirements often vary from payer to payer and are reassessed by third party payors on a regular basis, and we have needed additional time and resources to comply with them. We have also experienced, and may continue to experience, delays in or denials of coverage if it does not adequately comply with these requirements. Our third-party payors have also requested, and in the future may request, audits of the amounts paid to it. We have been required to repay certain amounts to payers as a result of such audits, and we could be adversely affected if we are required to repay other payors for alleged overpayments due to lack of compliance with their reimbursement policies. In addition, we have experienced, and may continue to experience, delays in reimbursement when we transition to being an in-network provider with a payer.

We expect to continue to focus our resources on increasing adoption of, and expanding coverage and reimbursement for, our current tests and any future tests we may develop or acquire. If we fail to expand and maintain broad adoption of, and coverage and reimbursement for, our tests, our ability to generate revenue could be harmed and our future prospects and our business could suffer.

We have limited experience with the development and commercialization of our databases and our health information and genomic platforms.

We have limited experience with the development or commercialization of clinical or research products in connection with the databases it manages and to which it has access, and our Centrellis and Traversa platforms. Our partners' usage of an advanced machine learning engine for therapeutic decision-making are at an early stage of development and usage under current and proposed collaborations, and we are continuing to develop new processes that may support the development of new therapeutics applications such as the delivery of personalized clinically actionable insights into clinical reports, clinical trial matching, real-world evidence trials, and clinical decision support, via an advanced programmable interface layer. Although our partners have invested significant financial resources to develop and utilize new technologies to support preclinical studies and other early research and development activities, and provide general and administrative support for these operations, our future success is dependent on our current and future partners' ability to successfully derive

actionable insights from the database and our platform, and our partners' ability, where applicable, to obtain regulatory approval for new therapeutic solutions based off existing models or to obtain regulatory approval and marketing for, and to successfully commercialize, new therapeutics. The use of our platform and the databases it manages and to which it has access for these purposes will require additional regulatory investments for Centrellis, such as "good practice" quality guidelines and regulations, or GxP, and data quality and integrity controls.

Ethical, legal and social concerns related to the use of genomic medicine and health information analysis could reduce demand for our tests.

Genomic medicine and health information analysis has raised ethical, legal and social issues regarding privacy rights and the appropriate uses of the resulting information. Domestic and international governmental and regulatory authorities could, for social or other purposes, such as data privacy, limit or regulate the use of health information or health information testing or prohibit testing for specific information derived from health information testing, including, for example, data on genetic predisposition to certain conditions, particularly for those that have no known cure. Similarly, these concerns may lead patients to refuse to use, or clinicians to be reluctant to order, genomic tests as part of health information assessment even if permissible, or lead patients to withhold or withdraw consent for our use of their data. These and other ethical, legal and social concerns may limit market acceptance of our tests or services or reduce the potential markets for our tests, or services either of which could have an adverse effect on our business, research, financial condition or results of operations.

If we fail to comply with federal and state laboratory licensing requirements or standards, we could lose the ability to perform our tests or experience disruptions to our business.

We are subject to Clinical Laboratory Improvement Amendments of 1988, or CLIA, a federal law that regulates clinical laboratories that perform testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention or treatment of disease. CLIA regulations establish specific standards with respect to personnel qualifications, facility administration, proficiency testing, quality control, quality assurance and inspections. CLIA certification is also required in order for us to be eligible to bill state and federal healthcare programs, as well as many private third-party payors, for our tests. We have current CLIA, CAP, and other certifications to conduct our tests at our laboratories in Connecticut. To renew these certifications, we are subject to survey and inspection on a regular basis and at the request of the certifying bodies. Moreover, CLIA inspectors may make random inspections of our clinical reference laboratories.

We would also be required to maintain in-state licenses if we were to conduct testing in other states. Several states require the licensure of out-of-state laboratories that accept specimens from certain states.

In addition to having laboratory licenses in New York, our clinical reference laboratories are approved on test-specific bases for the tests they run as laboratory-developed tests, or LDTs, by the New York State Department of Health, or NYDOH. Other states may adopt similar licensure requirements in the future, which may require us to modify, delay or stop our operations in such jurisdictions. We may also be subject to regulation in foreign jurisdictions as we seek to expand international utilization of our tests or such jurisdictions adopt new licensure requirements, which may require review of our tests in order to offer them or may have other limitations such as restrictions on the transport of samples necessary for us to perform our tests that may limit our ability to make our tests available outside of the United States. Complying with licensure requirements in new jurisdictions may be expensive, time-consuming, and subject us to significant and unanticipated delays.

Failure to comply with applicable clinical laboratory licensure requirements or standards may result in a range of enforcement actions, including license suspension, limitation, or revocation, directed plan of action, onsite monitoring, civil monetary penalties, criminal sanctions, and cancellation of the laboratory's approval to receive Medicare and Medicaid payment for our services, as well as significant adverse publicity. Any sanction imposed under CLIA, its implementing regulations, or state or foreign laws or regulations governing clinical laboratory licensure, or our failure to renew our CLIA certifications, a state or foreign license, or accreditation, could have a material adverse effect on our business, financial condition and results of operations. Even if we were able to bring our laboratory back into compliance, we could incur significant expenses and potentially lose revenue in doing so.

The College of American Pathologists, or CAP, maintains a clinical laboratory accreditation program. CAP asserts that its program is "designed to go well beyond regulatory compliance" and helps laboratories achieve the highest standards of excellence to positively impact patient care. While not required to operate a CLIA-certified laboratory, many private insurers require CAP accreditation as a condition to contracting with clinical laboratories to cover their tests. In addition, some countries outside the United States require CAP accreditation as a condition to permitting clinical laboratories to test

samples taken from their citizens. We have CAP accreditations for our laboratories. Failure to maintain CAP accreditation could have a material adverse effect on the sales of our tests and the results of our operations.

Risks Related to Our Business Model

We rely on highly skilled personnel in a broad array of disciplines and, if we are unable to hire, retain or motivate these individuals, or maintain our corporate culture, we may not be able to maintain the quality of our services or grow effectively.

Our performance, including our research and development programs and laboratory operations, largely depends on our continuing ability to identify, hire, develop, motivate and retain highly skilled personnel for all areas of our organization, including software developers, geneticists, biostatisticians, bioinformaticians, data scientists, certified laboratory directors and technicians and other scientific and technical personnel to process and interpret our tests and related data. In addition, we may need to continue to expand our sales force with qualified and experienced personnel. Competition in our industry for qualified employees is intense, and we may not be able to attract or retain qualified personnel in the future due to the competition for qualified personnel among life science and technology businesses as well as universities and public and private research institutions, particularly in the New York City and the tri-state area. Further, we may be unable to obtain the necessary visas for foreign personnel to work in the United States. In addition, our compensation arrangements, such as our equity award programs, may not always be successful in attracting new employees and retaining and motivating our existing employees. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience constraints that could adversely affect our ability to scale our business, support our research and development efforts and our clinical laboratories. We believe that our corporate culture fosters innovation, creativity and teamwork. However, as our organization grows, we may find it increasingly difficult to maintain the beneficial aspects of our corporate culture. This could negatively impact our ability to retain and attract employees and our future success.

The loss of any member or change in structure of our senior management team could adversely affect our business.

Our success depends in large part upon the skills, experience and performance of members of our executive management team and others in key leadership positions. The efforts of these persons will be critical to us as we continue to develop our technologies and test processes and focus on scaling our business. If we were to lose one or more key executives, including our founder and CEO, Eric Schadt, we may experience difficulties in competing effectively, developing our tests and technologies and implementing our business strategy. Only certain of our executives have employment contracts, and the majority of our employees are at-will, which means that either we or any employee may terminate their employment at any time or in the notice period set forth in an executive's contract. We do not carry key person insurance for any of our executives or employees. In addition, we do not have a long-term retention agreement in place with our CEO. Furthermore, we compete against other leading companies in the diagnostics, health information, and data sciences markets for top talent. If such competitors offer better compensation or opportunities, there is no guarantee that we would be able to retain our key executives.

Our founder and CEO, Eric Schadt, and certain other of our employees have performed, and will continue to perform, duties for or on behalf of Mount Sinai.

Our founder CEO, Eric Schadt, and certain of our other employees continue to perform duties for or on behalf of the Mount Sinai Health System, which refer to together with its related entities as Mount Sinai. In the case of Dr. Schadt, in addition to serving as our CEO and as a director, Dr. Schadt also serves as the Dean for Precision Medicine and a professor at Icahn School of Medicine at Mount Sinai, or ISMMS. We expect Dr. Schadt to continue to devote a substantial amount of time to the obligations of managing a public company while maintaining certain duties for Mount Sinai. Though we do not expect Dr. Schadt's role as a CEO and a director to conflict with his roles at Mount Sinai, there can be no guarantee that such conflicts will not occur in the future.

We may not be able to manage our future growth effectively, which could make it difficult to execute our business strategy.

Our expected future growth could create a strain on our organizational, administrative and operational infrastructure, including data and laboratory operations, quality control, customer service, marketing and sales, and management. We may not be able to maintain the quality of or expected turnaround times for our products or services, or satisfy customer demand as it grows. We may need to continue expanding our sales force to facilitate our growth, and it may have difficulties locating, recruiting, training and retaining sales personnel. Our ability to manage our growth effectively will require us to continue to improve our operational, financial and management controls, as well as our reporting systems and procedures. As we grow, any failure of our controls or interruption of our facilities or systems could have a negative impact on our

business and financial operations. We plan to develop and launch new versions of our Centrellis and Traversa platforms and our core diagnostic products, which will affect a broad range of business processes and functional areas. The time and resources required to implement these new systems is uncertain, and failure to complete these activities in a timely and efficient manner could adversely affect our operations. Future growth in our business could also make it difficult for it to maintain our corporate culture. If we are unable to manage our growth effectively, it may be difficult for us to execute our business strategy and our business could be harmed.

We need to scale our infrastructure in advance of demand for our products and services, and our failure to generate sufficient demand for our products and services would have a negative impact on our business and our ability to attain profitability.

Our success depends in large part on our ability to extend our market position, to provide customers with high-quality health reports and health information and data science services in a manner that differentiates us from our competitors, and to deploy technologies and achieve sufficient volumes to realize economies of scale. In order to execute our business model, we intend to continue to invest heavily in order to significantly scale our infrastructure, including our lab infrastructure and testing capacity and our information and computing systems, expand our commercial operations, customer service, billing and systems processes and enhance our internal quality assurance program. We will also need to enhance our capacity for data privacy management as we scale our infrastructure. We expect that much of this growth will be in advance of both demand for our products and services as well as our ability to diversify our offerings, including services related to Centrellis and Traversa and the databases we manage and to which we have access, and our ability to find appropriate partners through collaborations and acquisitions. Our current and future expense levels are to a large extent fixed and are largely based on our investment plans and our estimates of future revenue. Because the timing and amount of revenue from our products and services are difficult to forecast, when revenue does not meet our expectations, we may not be able to adjust our spending promptly or reduce our spending to levels commensurate with our revenue. Even if we are able to successfully scale our infrastructure and operations while successfully diversifying our offering, we cannot assure you that demand for our products and services, including our Centrellis platform, will increase at levels consistent with the growth of our infrastructure. If we fail to generate demand commensurate with this growth or if we fail to scale our infrastructure sufficiently in advance of demand to successfully meet such demand, our business, prospects, financial condition and results of operations could be adversely affected.

International expansion of our business could expose us to business, regulatory, political, operational, financial and economic risks associated with doing business outside of the United States.

When cleared, authorized or approved, we and our collaborators may market, sell, and distribute our products and services outside of the United States, and our business would be subject to risks associated with doing business outside of the United States, including an increase in our expenses and diversion of our management's attention from the development of future products and services. Accordingly, our business and financial results in the future could be adversely affected due to a variety of factors, including:

- multiple, conflicting and changing laws and regulations such as privacy, security and data use regulations, tax laws, export and import restrictions, economic sanctions and embargoes, employment laws, anticorruption laws, regulatory requirements, reimbursement or payer regimes and other governmental;
- approvals, permits and licenses;
- failure by us, our collaborators or our distributors to obtain regulatory clearance, authorization or approval for the use of our products and services in various countries;
- additional potentially relevant third-party patent rights;
- complexities and difficulties in obtaining intellectual property protection and enforcing our intellectual property;
- difficulties in staffing and managing foreign operations;
- complexities associated with managing multiple payer reimbursement regimes, government payers or patient self-pay systems;
- difficulties in negotiating favorable reimbursement negotiations with governmental authorities;

- logistics and regulations associated with shipping samples, including infrastructure conditions and transportation delays;
- limits in our ability to penetrate international markets if we are not able to conduct our clinical diagnostic services locally;
- financial risks, such as longer payment cycles, difficulty collecting accounts receivable, the impact of local and regional financial crises on demand and payment for our products and services and exposure to foreign currency exchange rate fluctuations;
- natural disasters, political and economic instability, including wars, terrorism and political unrest, and outbreak of disease;
- boycotts, curtailment of trade and other business restrictions; and
- regulatory and compliance risks that relate to maintaining accurate information and control over sales and distributors' activities that may fall within the purview of the Foreign Corrupt Practices Act of 1977, or FCPA, its books and records provisions, or its anti-bribery provisions or laws similar to the FCPA in other jurisdictions in which we may in the future operate, such as the United Kingdom's Bribery Act of 2010 and anti-bribery requirements of member states in the European Union, or EU.

Any of these factors could significantly harm our future international expansion and operations and, consequently, our revenue and results of operations.

Unfavorable U.S. or global economic conditions could adversely affect our business, financial condition or results of operations.

Our results of operations could be adversely affected by general conditions in the global economy and financial markets. A severe or prolonged economic downturn could result in a variety of risks to our business, including weakened demand for our products and services and our ability to raise additional capital when needed on favorable terms, if at all. A weak or declining economy could strain our collaborators and suppliers, possibly resulting in supply disruption, or cause delays in their payments to us. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

We rely on a limited number of suppliers or, in some cases, single suppliers, for some of our laboratory instruments and materials and may not be able to find replacements or immediately transition to alternative suppliers or service providers.

We have sourced and will continue to source components of our diagnostic testing workflow, including sequencers and other laboratory equipment, reagents, lab supplies and other laboratory services and materials and related services, from third parties.

Our failure to maintain a continued supply of our sequencers and other laboratory equipment, reagents, lab supplies and other laboratory services and materials, along with the right to use certain hardware and software and related services, would adversely impact our business, financial condition, and results of operations. In particular, while we are seeking to validate our tests on additional sequencing platforms we have not, to date, validated viable alternative sequencing platform on which our testing could be run in a commercially viable manner. These efforts will require significant resources, expenditures and time and attention of management, and there is no guarantee that we will be successful in implementing any such sequencing platforms in a commercially sustainable way. We also cannot guarantee that we will appropriately prioritize or select alternative sequencing platforms on which to focus our efforts, in particular given our limited product and research and development resources and various business initiatives, which could result in increased costs and delayed timelines or otherwise adversely impact our business and results of operations.

Because we rely on third-party manufacturers, we do not control the manufacture of these components, including whether such components will meet our quality control requirements, nor the ability of our suppliers to comply with applicable legal and regulatory requirements. In many cases, our suppliers are not contractually required to supply these components to the quality or performance standards that we require. If the supply of components we receive does not meet our quality control or performance standards, we may not be able to use the components, or if we use them not knowing that they are of inadequate quality, which occasionally occurs with respect to certain reagents, our tests may not work properly or at all, or may provide erroneous results, and we may be subject to significant delays caused by interruption in

production or manufacturing or to lost revenue from such interruption or from spoiled tests. In addition, any natural or other disaster, acts of war or terrorism, shipping embargoes, labor unrest, political instability, outbreak of disease or similar events at our third-party manufacturers' facilities that cause a loss of manufacturing capacity would heighten the risks that it faces.

In the event of any adverse developments with our sole suppliers, or if any of our sole suppliers modifies any of the components they supply to us, our ability to supply our products may be interrupted, and obtaining substitute components could be difficult or require us to re-design or re-validate our products. Our failure to maintain a continued supply of components, or a supply that meets our quality control requirements, or changes to or termination of our agreements or inability to renew our agreements with these parties or enter into new agreements with other suppliers could result in the loss of access to important components of our tests and impact our test performance or affect our ability to perform our tests in a timely manner or at all, which could impair, delay or suspend our commercialization activities. In the event that we transition to a new supplier from any of our sole suppliers, doing so could be time-consuming and expensive, may result in interruptions in our ability to supply our products to the market, could affect the performance of our tests or could require that we re-validate our affected tests using replacement equipment and supplies, which could delay the performance of our tests, impact diagnostic solutions and health information derived from such tests, and result in increased costs. Any of these occurrences could have a material adverse effect on our business, financial condition and results of operations.

We rely on a limited number of product and service providers for data infrastructure and analytics capabilities, and any disruption of, or interference with, our use of data and workflow services could adversely affect our business, financial condition, and results of operations, and we may not be able to find replacements or immediately transition to alternative products or service providers.

We currently rely upon third-party services for data storage and workflow management, including cloud storage solution providers, such as Amazon Web Services, or AWS, and Google Cloud Platform, or GCP. We rely on each of AWS and GCP features to complete several vital workflows in our health information and data science service delivery. To varying degrees some of those services are proprietary to how each platform performs in connection with our current usage of the services. Further, we have also built several proprietary workflows with our vendor and partner Command Health where we maintain versions of developed software on such platforms.

Nearly all of our data storage and analytics are conducted on, and the data and content we generate on our platforms are processed through, servers hosted by these providers, particularly AWS and GCP. We also rely on email service providers, bandwidth providers, internet service providers and mobile networks to deliver communications to patients, physicians and partners and to allow patients, physicians and our partners to access various offerings from our platforms. If our third-party vendors are unable or unwilling to provide the services necessary to support our business, or if our agreements with such vendors are terminated, our operations could be significantly disrupted. Some of our vendor agreements may be unilaterally terminated by the licensor for convenience, including with respect to AWS or GCP, and if such agreements are terminated, we may not be able to enter into similar relationships in the future on reasonable terms or at all.

Any damage to, or failure of, our systems or the systems of our third-party data centers or our other third-party providers could result in interruptions to the availability or functionality of database and platforms. As a result, we could lose health information data and miss opportunities to acquire and retain patients, physicians and partners including health systems and pharmaceutical and biotech companies, which could result in decreased revenue. If for any reason our arrangements with our data centers or third-party providers are terminated or interrupted, such termination or interruption could adversely affect our business, financial condition and results of operations. We exercise little control over these providers, which increases our vulnerability to problems with the services they provide. We could incur additional expense in arranging for new or redesigned facilities, technology, services and support. In addition, the failure of our third-party data centers or any other third-party providers to meet our capacity needs or any system failure as a result of reliance on third parties, including network, software or hardware failure, which causes a delay or interruption in our services and products, including our ability to handle existing or increased processing of data on our platforms, could have a material adverse effect on our business, revenues, operating results and financial condition.

Our current and future products and services may never achieve significant commercial market acceptance.

Our success depends on the market's confidence that we can provide data-driven research and diagnostic products and services that improve clinical outcomes, lower healthcare costs and enable better product development by pharmaceutical and biotech, or Biopharma, companies. Failure of our products and services, or those jointly developed with our collaborators, to perform as expected or to be updated to meet market demands could significantly impair our operating

results and our reputation. We believe patients, health systems, clinicians, academic institutions and Biopharma companies are likely to be particularly sensitive to defects, errors, inaccuracies and delays with our products and services. Furthermore, inadequate performance of these products or services may result in lower confidence in our Centrellis platform in general.

We and our collaborators may not succeed in achieving significant commercial market acceptance for our current or future products and services due to a number of factors, including:

- Our ability to demonstrate the utility of our platforms including Centrellis and Traversa, and related products and services and their potential advantages over existing clinical artificial intelligence technology, life sciences research, clinical diagnostic and drug discovery technologies to academic institutions, Biopharma companies and the medical community;
- Our ability, and that of our collaborators, to perform clinical trials or other research to gather adequate evidence and/or to secure and maintain FDA and other regulatory clearance authorization or approval for our products or products developed based off our platform;
- the agreement by third-party payors to reimburse our products or services, the scope and extent of which will affect patients' willingness or ability to pay for our products or services and will likely heavily influence physicians' decisions to recommend our products or services;
- the rate of adoption of our platforms and related products and services by academic institutions, clinicians, patients, key opinion leaders, advocacy groups and Biopharma companies; and
- the impact of our investments in product and services, and technological innovation and commercial growth.

Additionally, our customers and collaborators, including Mount Sinai, may decide to decrease or discontinue their use of our products and services due to changes in their research and development plans, failures in their clinical trials, financial constraints, the regulatory environment, negative publicity about our products and services, competing products or the reimbursement landscape, all of which are circumstances outside of our control. We may not be successful in addressing these or other factors that might affect the market acceptance of our products, services and technologies. Failure to achieve widespread market acceptance of our platform and related products and services would materially harm our business, financial condition and results of operations.

Our projections are subject to significant risks, assumptions, estimates and uncertainties, including assumptions regarding adoption of our products and services. As a result, our projected revenues, market share, expenses and profitability may differ materially from our expectations in any given quarter or fiscal year.

We operate in rapidly changing and competitive industries and our projections are subject to the risks and assumptions made by our management with respect to these industries. Operating results are difficult to forecast as they generally depend on our assessment of the timing of adoption of our current and future products and services, which is uncertain. Furthermore, as we invest in the continued development of new businesses that have yet to achieve significant commercial success, whether because of competition or otherwise, we may not recover the often substantial up-front costs of developing and marketing those products and services or recover the opportunity cost of diverting management and financial resources away from other products or services. Additionally, our business may be affected by reductions in customer or partner demand as a result of a number of factors which may be difficult to predict. Similarly, our assumptions and expectations with respect to margins and the pricing of our products and services may not prove to be accurate as a result of competitive pressures or customer or partner demands. This may result in decreased revenue, and we may be unable to adopt measures in a timely manner to compensate for any unexpected shortfall in revenue. This inability could cause our operating results in a given quarter or year to be higher or lower than expected. Any failure to achieve our projected operating results could harm the trading price of our securities and our financial position.

We have estimated the sizes of the markets for our current and future products and services, and these markets may be smaller than we estimate.

Our estimates of the annual addressable markets for our current products and services and those under development are based on a number of internal and third-party estimates, including, without limitation, the number of patients who have developed one or more of a broad range of cancers, the number of individuals who are at a higher risk for developing one or more of a broad range of cancers, the number of individuals who have developed or are at a higher risk of developing certain disorders, the number of individuals with certain infectious diseases. The estimates also depend on whether we or

our collaborators are able to engage, diagnose or treat patients through or using our products and services, the number of potential clinical tests utilized per treatment course per patient, the ongoing engagement by patients, physicians and health systems on our platforms, and the assumed prices at which we can sell our current and future products and services for markets that have not been established. While we believe our assumptions and the data underlying our estimates are reasonable, these assumptions and estimates may not be correct and the conditions supporting our assumptions or estimates may change at any time, thereby reducing the predictive accuracy of these underlying factors. As a result, our estimates of the annual addressable market for our current or future products and services may prove to be incorrect. If the actual number of patients who would benefit from our products or services, the price at which we can sell future products and services or the annual addressable market for our products or services is smaller than we have estimated, it may impair our sales growth and have an adverse impact on our business.

Uncertainty in the development and commercialization of our enhanced or new tests or services could materially adversely affect our business, financial condition and results of operations.

Our success will depend in part on our ability to effectively introduce enhanced or new offerings. The focus of our research and development efforts has expanded beyond our current products and services, focused substantially on women's health and oncology, as we are now also applying our expertise in processing and analyzing new areas, such as rare diseases. In recent years we have developed and/or launched several new products or enhanced versions of existing products, including products leveraging alternative sequencing technologies, and we expect to continue our efforts in all of these areas and more. The development and launch of enhanced or new tests requires the completion of certain clinical development and commercialization activities that are complex, costly, time-intensive and uncertain, and requires us to accurately anticipate patients', clinicians', payors' and other counterparties' attitudes and needs as well as emerging technology and industry trends. This process is conducted in various stages, and each stage presents the risk that we will not achieve our goals.

We have relatively limited experience developing and commercializing products and services outside of the fields of women's health and oncology diagnostics, and we may not be successful in our current or future efforts to do so. We also have limited experience forecasting our future financial performance from our new products and services, and our actual results may fall below our financial guidance or other projections, or the expectations of analysts or investors, which could cause the price of our common stock and warrants to decline. We may experience research and development, regulatory, marketing and other difficulties that could delay or prevent our introduction of enhanced or new tests and result in increased costs and the diversion of management's attention and resources from other business matters, such as from our current product and service offerings, which currently represent the significant majority of our current revenues. For example, any tests that we may enhance or develop may not prove to be clinically effective in clinical trials or commercially, or may not meet our desired target product profile, be offered at acceptable cost and with the sensitivity, specificity and other test performance metrics necessary to address the relevant clinical need or commercial opportunity; our test performance in commercial experience may be inconsistent with our validation or other clinical data; we may not be successful in achieving market awareness and demand, whether through our own sales and marketing operations or through collaborative arrangements; healthcare providers may not order or use, or third-party payors may not reimburse for, any tests that we may enhance or develop; or we may otherwise have to abandon a test or service in which we have invested substantial resources. For example, we are subject to the risk that the biological characteristics of the genetic mutations we seek to target, and upon which our technologies rely, are uncertain and difficult to predict. We may also experience unforeseen difficulties when implementing updates to our processes.

We cannot assure you that we can successfully complete the development of any new or enhanced product, or that we can establish or maintain the collaborative relationships that may be essential to our collaborators' goals, including clinical development or commercialization efforts. For example, clinical development requires large numbers of patient specimens and, for certain products, may require large, prospective, and controlled clinical trials. We may not be able to identify and help enroll patients or collect a sufficient amount of appropriate health data in a timely manner; or we may experience delays during data analysis process due to slower than anticipated supplies of patient data, or due to changes in study design or inputs, or other unforeseen circumstances; or we or our collaborators may be unable to afford or manage the large-sized clinical trials that some of our planned future products may require. Further, the publication of clinical data in peer-reviewed journals is a crucial step in commercializing and obtaining reimbursement for certain diagnostic solutions such as the ones offered by us, and our inability to control when, if ever, results are published may delay or limit our ability to derive sufficient revenues from any diagnostic solution that is the subject of or component in a study. Peer-reviewed publications regarding our products may be limited by many factors, including delays in the completion of, poor design of, or lack of compelling data from, clinical studies, as well as delays in the review, acceptance and publication process. If our diagnostic solutions or the technology underlying our current and future diagnostic solutions do not receive sufficient

favorable exposure in peer-reviewed publications, the rate of clinician adoption of our diagnostic solutions and positive reimbursement coverage determinations for our diagnostic solutions could be negatively affected.

In addition, development of the data necessary to obtain regulatory clearance and approval of tests is time-consuming and carries with it the risk of not yielding the desired results. The performance achieved in published studies may not be repeated in later studies that may be required to obtain premarket clearance or approval from the Food and Drug Administration, or the FDA. Limited results from earlier-stage verification studies may not predict results from studies in larger numbers of subjects drawn from more diverse populations over longer periods of time. Unfavorable results from ongoing preclinical and clinical studies may delay, limit or prevent regulatory approvals or clearances or commercialization of our product candidates, or could result in delays, modifications or abandonment of ongoing analytical or future clinical studies, or abandonment of a product development program, any of which could have a material adverse effect on our business, operating results or financial condition.

These and other factors beyond our control could result in delays or other difficulties in the research and development, approval, production, launch, marketing or distribution of enhanced or new tests and could adversely affect our competitive position and results of operations.

We currently use, and in the future expect to increase our use of, information and rights from customers, strategic partners, and collaborators for several aspects of our operations, and if we cannot maintain current and enter new relationships with these parties with adequate access and authorization to such information, our business will suffer.

Accessing, combining, curating, and analyzing health information, including longitudinal patient medical history data and genetic data, are core features of the Centrellis platform and key elements of our long term business model. The regulatory landscape around the storage, processing and deidentification of genetic data is evolving globally and greatly impacts the ability of us, our strategic partners and collaborators to process and use the data in connection with our products and services.

We have limited resources to conduct our health information services, data analysis, life sciences research, clinical diagnostics and drug discovery operations and have not yet fully established infrastructure for sales, marketing or distribution in connection with our products and services. Accordingly, we have entered into service and collaboration agreements under which our partners, including health systems, have provided, and may in the future provide, funding, data access, and other resources for developing and potentially commercializing our products and services. These collaborations may result in us incurring significant expenses in pursuit of potential products and services, and we may not be successful in identifying, developing or commercializing any potential products or services.

Our future success depends in part on our ability to maintain and grow our existing relationships, including with Mount Sinai, and to establish new relationships. Many factors may impact the success of such collaborations, including our ability to perform our obligations, our collaborators' satisfaction with our products and services, our collaborators' performance of their obligations to us, our collaborators' internal priorities, resource allocation decisions and competitive opportunities, the ability to obtain regulatory approvals, disagreements with collaborators, the costs required of either party to the collaboration and related financing needs, and operating, legal and other risks in any relevant jurisdiction. Our ability to support such collaborations may also depend on factors outside of our control including the willingness of patients to engage with us and share their data, societal perspectives on privacy, and the willingness of health systems to establish collaborations, relationships and programs utilizing their data, all of which may impact the utility of these databases and the insights we will be able to generate from expanding datasets. In addition to reducing our revenue or delaying the development of our future products and services, the loss of one or more of these relationships may reduce our access to research, longitudinal patient health data, clinical trials or computing technologies that facilitate the collection and incorporation of new information into the databases we manage and to which we have access. All of the risks relating to product and service development, regulatory clearance, authorization or approval and commercialization described herein apply to us derivatively through the activities of our collaborators. We engage in conversations with companies regarding potential collaborations on an ongoing basis. These conversations may not result in a commercial agreement. Even if an agreement is reached, the resulting relationship may not be successful, and any products and services developed as part of the collaboration may not produce successful outcomes. Speculation in the industry about our existing or potential collaborations can be a catalyst for adverse speculation about us, or our products or services, which can adversely affect our reputation and our business.

If our products and services do not perform as expected, we may not realize the expected benefits of such products and services.

The success of our products depends on the market's confidence that we can provide reliable products and services that enable high quality diagnostic testing and health information services with high sensitivity and specificity and short turnaround times. There is no guarantee that the accuracy and reproducibility we have demonstrated to date will continue as our product deliveries increase and our product and service portfolio expands.

Our products and services use a number of complex and sophisticated biochemical and bioinformatics processes, many of which are highly sensitive to external factors. An operational, technological or other failure in one of these complex processes or fluctuations in external variables may result in sensitivity or specificity rates that are lower than we anticipate or result in longer than expected turnaround times. In addition, labs are required to validate their processes before using our products for clinical purposes. These validations are outside of our control. If our products do not perform, or are perceived to not have performed, as expected or favorably in it to competitive products, our operating results, reputation, and business will suffer, and we may also be subject to legal claims arising from product limitations, errors, or inaccuracies.

If our sales and development or other collaborations and commercial relationships are not successful and we are not able to offset the resulting impact through our own efforts or through agreements with new partners, our commercialization activities may be impaired and our financial results could be adversely affected.

Part of our business strategy is to develop relationships with health systems, biopharma companies, and other partners to utilize our products and to provide access to data. Developing and commercializing products with third parties reduces our control over such development and commercialization efforts and subjects us to the various risks inherent in a joint effort with a third party, such as delays, operational issues, technical difficulties and other contingencies outside of our influence or control. The financial condition of these third parties could weaken, or they could terminate their relationship with us and/or stop sharing data or other information; reduce their marketing efforts relating to our products; develop and commercialize, or otherwise utilize competing products in addition to or in lieu of our tests; merge with or be acquired by a competitor of us or a company that chooses to de-prioritize the efforts to utilize our products or provide us with adequate data; or otherwise breach their agreements with us. Further, we must expend resources to operationalize our existing collaborations with our health system partners, which requires substantial effort in areas such as integrations for testing workflow, EMR, consents, marketing, and billing. To the extent, we are not successful at operationalizing existing collaborations with health partners, we may not be able to further improve or pursue new agreements with additional partners. Furthermore, our partners may misappropriate our trade secrets or use our proprietary information in such a way as to expose us to litigation and potential liability; and our compliance risk may increase to the extent that we are responsible for our partners' activities. Disagreements or disputes with our health systems and other partners, including disagreements over customers, proprietary or other rights or our or their compliance with financial or other contractual obligations, might cause delays or impair the development or commercialization of our products, services, and technologies, lead to additional responsibilities for us with respect to new products, services and technologies, or result in litigation or arbitration, any of which would divert management attention and resources and be time-consuming and expensive. As is typical for companies in our industry, it is continually evaluating and pursuing various strategic or commercial relationships, some of which may involve the sale and issuance of our common stock, which could result in additional dilution of the percentage ownership of our stockholders and could cause the price of our common stock and warrants to decline.

If our relationships are not successful, our ability to develop and improve of products, services and technologies, and to successfully execute our commercial strategy regarding such products, services and technologies, could be compromised.

If we are unable to deploy and maintain effective sales, marketing and medical affairs capabilities, we will have difficulty achieving market awareness and selling our products and services.

To achieve commercial success for our tests and our future products and services, we must continue to develop and grow our sales, marketing and medical affairs organizations to effectively explain to healthcare providers the reliability, effectiveness and benefits of our current and future products and services as compared to alternatives. We may not be able to successfully manage our dispersed or inside sales forces or our sales force may not be effective. Because of the competition for their services, we may be unable to hire, partner with or retain additional qualified sales representatives or marketing or medical affairs personnel, either as our employees or independent contractors or through independent sales or other third-party organizations. Market competition for commercial, marketing and medical affairs talent is significant, and we may not be able to hire or retain such talent on commercially reasonable terms, if at all.

Establishing and maintaining sales, marketing and medical affairs capabilities will be expensive and time-consuming. Our expenses associated with maintaining our sales force may be disproportionate to the revenues we may be able to generate on sales of the certain tests or any future products or services.

We may never become profitable.

Sema4 has incurred losses since Sema4 was formed and we expect to continue to generate significant operating losses for the foreseeable future. As of December 31, 2020 and September 30, 2021, we have an accumulated deficit of approximately \$330.1 million and \$535.0 million, respectively. We expect to continue investing significantly toward development and commercialization of our health information technology and other products and services. If our revenue does not grow significantly, we will not be profitable. We cannot be certain that the revenue from the sale of any products or services based on our technologies will be sufficient to make us profitable.

Our operating results could be subject to significant fluctuation, which could increase the volatility of our stock and warrant prices and cause losses to our stockholders.

Our revenues and results of operations may fluctuate significantly, depending on a variety of factors, including the following:

- our success in marketing and selling, and changes in demand for, our tests, and the level of reimbursement and collection obtained for such tests;
- seasonal and environmental variations affecting healthcare provider recommendations for our tests and patient compliance with healthcare provider recommendations, including without limitation holidays, weather events, and circumstances such as the outbreak of coronavirus or influenza that may limit patient access to medical practices for diagnostic tests and preventive services;
- our success in collecting payments from third-party payors, patients and collaborative partners, variation in the timing of these payments and recognition of these payments as revenues;
- the pricing of our tests, including potential changes in CMS or other reimbursement rates;
- circumstances affecting our ability to provide our tests, including weather events, supply shortages, or regulatory or other circumstances that adversely affect our ability to manufacture our tests or process tests in our clinical laboratories;
- circumstances affecting our ability to provide health information and data science services to biopharma partners, including software or hardware failures, insufficient capacity, regulatory changes or other circumstances that adversely affect the ability of us to deliver these services;
- fluctuations in the amount and timing of our selling and marketing costs and our ability to manage costs and expenses and effectively implement our business;
- our research and development activities, including the timing of clinical trials; and
- our ability to collect, use, and commercialize data in a changing regulatory environment at a time when the public is growing increasingly concerned about privacy.

Our revenue growth rate could decline over time, and it may experience downward pressure on our operating margins in the future.

Our revenue growth rate could decline over time as a result of a number of factors, including increasing competition and the continued expansion of our business into a variety of new fields. Changes in geographic mix and product and service mix and an increasing competition for tests may also affect our revenue growth rate. We may also experience a decline in our revenue growth rate as our revenues increase to higher levels, if there is a decrease in the rate of adoption of our products, services, and technologies, among other factors.

In addition to a decline in our revenue growth rate, we may also experience downward pressure on our gross operating margins resulting from a variety of factors, such as the continued expansion of our business into new fields, including new products and services, as well as significant investments in new areas, all of which may have margins lower than those that we generate from testing. We may also experience downward pressure on our gross operating margins from increasing

competition and increased costs for many aspects of our business. We may also pay increased fees to our partners as well as increased acquisition costs. We may also face an increase in infrastructure costs, supporting other businesses. Additionally, our expenditures to promote new products and services or to distribute certain products and services or increased investment in our innovation efforts across our Centrellis platform may affect our operating margins.

Due to these factors and the evolving nature of our business, our historical projected revenue growth rate and historical gross operating margins may not be indicative of our future performance.

We may need to raise additional capital to fund our existing operations, develop additional products and services, commercialize new products and services or expand our operations.

Sema4 has incurred net losses and negative cash flows from operations since its inception, including net losses of \$241.3 million, \$29.7 million and \$23.9 million for the years ended December 31, 2020, 2019 and 2018, respectively, and net losses of \$205.0 million and \$115.7 million for the nine months ended September 30, 2021 and 2020, respectively. As of September 30, 2021, we had an accumulated deficit of \$535.0 million. We expect to continue to generate significant operating losses for the foreseeable future, and we may therefore also seek to sell common or preferred equity or convertible debt securities, enter into a credit facility or another form of third-party funding or seek other debt financing.

We may also consider raising additional capital in the future to expand our business, to pursue strategic investments, to take advantage of financing opportunities or for other reasons, including to:

- increase our sales and marketing efforts to drive market adoption of our current and future products and services;
- fund development efforts for our current and future products and services;
- expand our products and services into other disease indications and clinical applications;
- acquire, license or invest in technologies;
- acquire or invest in complementary businesses or assets; and
- finance capital expenditures and general and administrative expenses.

Our present and future funding requirements will depend on many factors, including:

- our ability to achieve revenue growth;
- our rate of progress in establishing payer coverage and reimbursement arrangements with commercial third-party payors and government payers;
- the cost of expanding our laboratory operations and offerings, including our sales and marketing efforts;
- our rate of progress in, and cost of the sales and marketing activities associated with, establishing adoption of our Centrellis solution;
- our rate of progress in, and cost of research and development activities associated with, products and services in research and early development;
- the effect of competing technological, product and market developments;
- costs related to international expansion; and
- the potential cost of and delays in product development as a result of any regulatory oversight applicable to our products and services.

The various ways we could raise additional capital carry potential risks. If we raise funds by issuing equity securities, dilution to our stockholders could result. Any preferred equity securities issued also could provide for rights, preferences or privileges senior to those of holders of our common stock. If we raise funds by issuing debt securities, those debt securities would have rights, preferences and privileges senior to those of holders of our common stock. The terms of debt securities issued or borrowings pursuant to a credit agreement could impose significant restrictions on our operations. If we raise funds through collaborations and licensing arrangements, we might be required to relinquish significant rights to our technologies or products and services or grant licenses on terms that are not favorable to us.

We expect to make significant investments in our continued research and development of new products and services, which may not be successful.

We are seeking to leverage and deploy our Centrellis and Traversa platforms to develop a pipeline of future disease-specific research, diagnostic and therapeutic products and services. For example, we are attempting to extend current products into additional indications and sample types, and we are developing our population health program, and our pharmacogenomics solutions with a view toward advancing the development of tests designed to identify genetic variants for drug response that are associated with medically actionable and clinically relevant data to make more informed treatment decisions. We expect to incur significant expenses to advance these development efforts, but they may not be successful.

Developing new products and services is a speculative and risky endeavor. Products or services that initially show promise may fail to achieve the desired results or may not achieve acceptable levels of analytical accuracy or clinical utility. We may need to alter our products in development and repeat analysis or clinical studies before we identify a potentially successful product or service. Product development is expensive, may take years to complete and can have uncertain outcomes. Failure can occur at any stage of the development. If, after development, a product or service appears successful, we or our collaborators may, depending on the nature of the product or service, still need to obtain FDA and other regulatory clearances, authorizations or approvals before we can market it. In the case of clinical products, the FDA's clearance, authorization or approval pathways are likely to involve significant time, as well as additional research, development and clinical study expenditures. The FDA may not clear, authorize or approve any future product or service we develop. Even if we develop a product or service that receives regulatory clearance, authorization or approval, or succeeds in initial product testing, we or our collaborators would need to commit substantial resources to commercialize, sell and market it before it could be profitable, and the product or service may never be commercially successful. Additionally, development of any product or service may be disrupted or made less viable by the development of competing products or services.

New potential products and services may fail at any stage of development or recalled after commercialization and if we determine that any of our current or future products or services are unlikely to succeed, we may abandon them without any return on our investment. If we are unsuccessful in developing additional products or services, our potential for growth may be impaired.

We have identified material weaknesses, some of which have a pervasive effect across the organization, and may identify additional material weaknesses or significant deficiencies, in our internal controls over financial reporting. Our failure to remedy these matters could result in a material misstatement of our financial statements.

In the course of preparing Legacy Sema4's financial statements for 2020, 2019 and 2018, we identified material weaknesses in our internal control over financial reporting which could, if not remediated, result in material misstatements in our financial statements. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis. The material weaknesses identified related to the fact that we did not design and maintain accounting policies, procedures and controls to ensure complete, accurate and timely financial reporting in accordance with U.S. GAAP. Specifically, the material weaknesses identified included the following:

- We did not design and maintain accounting policies, processes and controls to analyze, account for and report our revenue arrangements in accordance with ASC 606, Revenue from Contracts with Customers, and ASC 605, Revenue Recognition.
- We did not design and maintain formal accounting policies, procedures and controls to achieve complete, accurate and timely financial accounting, reporting and disclosures, including controls over the preparation and review of account reconciliations and journal entries; the accounting for cost capitalization policies in accordance with ASC 330, Inventory, and ASC 350-40, Intangibles – Goodwill and Other – Internal-Use Software; and the application of ASC 840, Leases.
- We had not developed and effectively communicated to our employees our accounting policies and procedures, which resulted in inconsistent practices. Since these entity level programs have a pervasive effect across the organization, management has determined that these circumstances constitute a material weakness.
- Our accounting and operating systems lacked controls over access, and program change management that are needed to ensure access to financial data is adequately restricted to appropriate personnel.

- We do not have sufficient, qualified finance and accounting staff with the appropriate U.S. GAAP technical accounting expertise to identify, evaluate and account for accounting and financial reporting, and effectively design and implement systems and processes that allow for the timely production of accurate financial information in accordance with internal financial reporting timelines, commensurate with our size and the nature and complexity of our operations. As a result, we did not design and maintain formal accounting policies, processes and controls related to complex transactions necessary for an effective financial reporting process.

Our management is in the process of implementing a remediation plan that is expected to include policies and procedures to support internal control over financial reporting for a public company as well as supplementing the accounting and finance function with robust technical accounting and financial reporting experience and training. However, we cannot guarantee that the steps we have taken or may subsequently take have been or will be sufficient to remediate the material weaknesses or ensure that our internal controls are effective. For a discussion of our remediation plan and actions, see “Item 2. [Management’s Discussion and Analysis of Financial Condition and Results of Operations—Internal Controls](#)” and “[Item 4. Controls and Procedures](#).” As of September 30, 2021, the material weaknesses have not yet been fully remediated.

In addition, prior to the consummation of the Business Combination, following the issuance of the SEC Statement (as defined below), on April 12, 2021, after consultation with CMLS’s prior independent registered public accounting firm, CMLS’s management and CMLS’s audit committee concluded that, in light of the SEC Statement, it was appropriate to restate CMLS’s previously issued audited financial statements as of and for the period ended December 31, 2020, or the “Restatement.” See “—Risks Related to Our Common Stock and Warrants—Our warrants are accounted for as liabilities and the changes in value of our warrants could have a material effect on our financial results.” As part of such process, CMLS identified a material weakness in CMLS’s internal controls over financial reporting.

Furthermore, as a public company, we are required to comply with certain rules and requirements related to our disclosure controls and procedures and our internal control over financial reporting. Any failure to develop or maintain effective controls as a public company, or any difficulties encountered in their implementation or improvement, could harm our operating results or cause us to fail to meet our reporting obligations and may result in a restatement of our financial statements for prior periods. For more information, see “*Risk Factors—Risks Related to Being a Public Company—Our internal controls over financial reporting may not be effective and our independent registered public accounting firm may not be able to certify as to their effectiveness, which could have a significant and adverse effect on our business and reputation.*”

Our ability to use our net operating loss carry forwards and certain other tax attributes may be limited.

At December 31, 2020, our total gross deferred tax assets were \$61.4 million. Due to our lack of earnings history, future deductible temporary differences related to compensation and uncertainties surrounding our ability to generate future taxable income, our net deferred tax assets have been fully offset by a valuation allowance. The deferred tax assets are primarily comprised of federal and state tax net operating losses and tax credit carryforwards, and tax deductible temporary differences.

Furthermore, under Section 382 of the Internal Revenue Code of 1986, as amended, or the Internal Revenue Code, if a corporation undergoes an “ownership change,” the corporation’s ability to use its pre-change net operating loss carryforwards, or NOLs, and other pre-change tax attributes (such as research tax credits) to offset its future taxable income may be limited. In general, an “ownership change” occurs if there is a cumulative change in its ownership by “5% shareholders” that exceeds 50 percentage points over a rolling three-year period. Our existing NOLs and tax credit carryovers may be subject to limitations arising from previous ownership changes, and if we undergo one or more ownership changes in connection with completed acquisitions, including the Business Combination, or future transactions in our stock, our ability to utilize NOLs and tax credit carryovers could be further limited by Section 382 of the Internal Revenue Code. As a result, if we earn future taxable income, our ability to use our pre-change net operating loss and tax credit carryforwards to offset U.S. federal taxable income may be subject to limitations, which could potentially result in increased future tax liability to us. In addition, the Tax Cuts and Jobs Act limits the deduction for NOLs to 80% of current year taxable income and eliminates NOL carrybacks. Further, there may also be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state liability.

Risks Related to Our Key Relationships

We rely on third-party laboratories to perform certain elements of our service offerings.

A limited but meaningful portion of our genomic analysis services is performed by third-party laboratories and service providers, while the remaining portion is performed in our laboratories. The third-party laboratories are subject to contractual obligations to perform these services for us, but are not otherwise under our control. We therefore do not control the capacity and quality control efforts of these third-party laboratories other than through our ability to enforce contractual obligations on volume and quality systems, and we have no control over such laboratories' compliance with applicable legal and regulatory requirements. We also have no control over the timeliness of such laboratories' performance of their obligations to us, and the third-party laboratories that we have contracted with have in the past had, and occasionally continue to have, issues with delivering results to us or resolving issues with us within the time frames we expected or established in our contracts with them, which sometimes results in longer than expected turnaround times for, or negatively impacts the performance of, these tests and services. In the event of any adverse developments with these third-party laboratories or their ability to perform their obligations in a timely manner and in accordance with the standards that we and our customers expect, our ability to service customers may be delayed, interrupted or otherwise adversely affected, which could result in a loss of customers and harm to our reputation. Furthermore, when these issues arise, we have had to expend time, management's attention and other resources to address and remedy such issues.

We may not have sufficient alternative backup if one or more of the third-party laboratories that we contract with are unable to satisfy their obligations to us with sufficient performance, quality and timeliness, including as a result of the COVID-19 pandemic. Any natural or other disaster, acts of war or terrorism, shipping embargoes, labor unrest, political instability, outbreaks of disease or similar events at one or more of these third-party laboratories' facilities that causes a loss of capacity would heighten the risks that we face. Changes to or termination of agreements or inability to renew agreements with these third-party laboratories or enter into new agreements with other laboratories that are able to perform such portions of our service offerings could impair, delay or suspend our efforts to market and sell these services. In addition, certain third-party payors, including some state Medicaid payers, that we are under contract with may take the position that sending out testing to third-party laboratories and billing for such tests is contrary to the terms of its provider agreement and may refuse to pay us for the testing. If any of these events occur, our business, financial condition and results of operations could suffer. Further, some state laws impose anti-markup restrictions that prevent an entity from realizing a profit margin on outsourced testing. If we are unable to markup outsourced testing, our revenues and operating margins may suffer.

We rely on Mount Sinai, a related party, and its clinicians for a portion of our test volume in connection with our diagnostic solutions and for data programs, and we have entered into certain other arrangements with Mount Sinai.

We rely on Mount Sinai, which is a related party, and its clinicians for a portion of our test volumes in connection with our diagnostic solutions and for a significant portion of the de-identified clinical records in our databases. In 2020, orders from Mount Sinai clinicians accounted for 5.5% of our total test volume, down from 12.8% in 2019. In addition, we sublease certain facilities from Mount Sinai, we provide certain research and data services to Mount Sinai, and we and Mount Sinai have entered into certain collaborative and commercial arrangements. Furthermore, we may in the future enter into other contracts for services or other engagements with Mount Sinai.

Mount Sinai is primarily made up of not-for-profit hospitals, a medical and graduate school and employed clinicians. The charitable missions of the Mount Sinai entities include patient care, teaching and research. As such, the Mount Sinai entities are required to deal with us strictly on an arms-length, fair market value basis, and the interests of Mount Sinai may not necessarily be aligned with our interests or those of our other stockholders.

We are subject to risks as a result of our reliance on Mount Sinai, and if our transactions and relationship with Mount Sinai were to cease, our business could be disrupted and it could have a material adverse effect on our business, research, financial condition and results of operations.

In addition, ISMMS is one of our significant stockholders. Following the expiration of the lock-up period under the ISMMS Lock-Up Agreement, ISMMS may choose to dispose of some or all of the shares of our common stock held by it. Any disposal of shares of common stock by ISMMS, or the perception that these sales could occur, could cause the market price of our stock or warrants to decline.

We rely on commercial courier delivery services to transport samples to our facilities in a timely and cost-efficient manner and if these delivery services are disrupted, our business could be harmed.

Our core business depends on our ability to quickly and reliably deliver test results to our customers. We typically receive blood, saliva, or tissue samples for analysis at our laboratory facilities within days of collection from the patient. Disruptions and errors in these delivery service and accessioning errors and breaches, whether due to error by the courier service, labor disruptions, bad weather, natural disaster, terrorist acts or threats, outbreaks of disease or for other reasons,

could adversely affect specimen integrity, our ability to process or store samples in a timely manner and to service our customers, and ultimately our reputation and our business. In addition, if we are unable to continue to obtain expedited delivery services on commercially reasonable terms, our operating results may be adversely affected.

Risks Related to Legal, Regulatory and Compliance

We may be subject to increased compliance risks as a result of our rapid growth, including our dependence on our sales, marketing and billing efforts.

We have had to expand our training and compliance efforts in line with our increasing reliance on personnel in our sales, marketing and billing functions, and our expansion of these functions in line with the overall growth in our business. We continue to monitor our personnel, but we have in the past experienced, and may in the future experience, situations in which employees fail to strictly adhere to our policies. In addition, sales and marketing activities in the healthcare space are subject to various rules and regulations. Moreover, our billing and marketing messaging can be complex and nuanced, and there may be errors or misunderstandings in our employees' communication of such messaging. Furthermore, we utilize text messaging, email, phone calls and other similar methods to communicate with patients who are existing or potential users of our products for various business purposes. These activities subject us to laws and regulations relating to communications with consumers, such as the CAN-SPAM Act and the Telephone Consumer Protection Act, violations of which could subject us to claims by consumers, who may seek actual or statutory damages, which could be material in the aggregate. As we continue to scale up our sales and marketing efforts in line with the growth in our business, in particular our increased pace of product launches as well as further geographical expansion, we face an increased need to continuously monitor and improve our policies, processes and procedures to maintain compliance with a growing number and variety of laws and regulations, including with respect to consumer marketing. To the extent that there is any violation, whether actual, perceived or alleged, of our policies or applicable laws and regulations, we may incur additional training and compliance costs, may receive inquiries from third-party payors or other third parties, or be held liable or otherwise responsible for such acts of non-compliance. Any of the foregoing could adversely affect our cash flow and financial condition.

If we use hazardous materials in a manner that causes injury, we could be liable for resulting damages.

Our activities currently require the use of hazardous chemicals and biological material. We cannot eliminate the risk of accidental contamination or injury to employees or third parties from the use, storage, handling or disposal of these materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could exceed our resources or any applicable insurance coverage we may have. Additionally, we are subject on an ongoing basis to federal, state and local laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products. The cost of compliance with these laws and regulations may become significant, and our failure to comply may result in substantial fines or other consequences, and either could negatively affect our operating results.

We and our partners will have to maintain compliance with FDA requirements for research, products and services and failure to maintain compliance with FDA requirements may prevent or delay the marketing of our products and services.

Even if we have obtained marketing authorization, we will have to comply with the scope of that clearance, authorization or approval. Failure to secure and to comply with clearance, authorization or approval or the additional, extensive and ongoing post-marketing obligations imposed by the FDA or other regulatory requirements of other regulatory agencies could result in unanticipated compliance expenditures, a range of administrative enforcement actions, injunctions and criminal prosecution. FDA post-market obligations include, among other things, compliance with the FDA QSR, establishing registration and device listings, labeling requirements, reporting of certain adverse events and malfunctions, and reporting of certain recalls. In addition, circumstances may arise that cause us to recall equipment used in connection with our research, products and services. Such recalls could have an adverse effect on our ability to provide those products and services, which in turn would adversely affect our financial condition. Our collaborators will also be required to maintain FDA clearance, authorization or approval for the products and services that we jointly develop. Any failure by us or our collaborators to maintain such clearance, authorization or approval could impair or cause a delay in our ability to profit from these collaborations.

Future changes in FDA enforcement discretion for LDTs could subject our operations to much more significant regulatory requirements.

We currently offer a laboratory-develop test, or LDT, version of certain tests. The FDA has a policy of enforcement discretion with respect to, or LDTs, whereby the FDA does not actively enforce its medical device regulatory requirements

for such tests. However, in October 2014, the FDA issued two draft guidance documents stating that the FDA intended to modify its policy of enforcement discretion with respect to LDTs in a risk-based manner consistent with the existing classification of medical devices. Although the FDA halted finalization of the guidance in November 2016 to allow for further public discussion on an appropriate oversight approach to LDTs and to give Congressional authorizing committees the opportunity to develop a legislative solution, it is unclear if Congress or the FDA will modify the current approach to the regulation of LDTs in a way that would subject our current or future services marketed as LDTs to the enforcement of FDA regulatory requirements. The FDA Commissioner and the Director of the Center for Devices and Radiological Health, or CDRH, have expressed significant concerns regarding disparities between some LDTs and *in vitro* diagnostics that have been reviewed, cleared, authorized or approved by the FDA. If the FDA were to determine that certain tests offered by us as LDTs are not within the policy for LDTs for any reason, including new rules, policies or guidance, or due to changes in statute, our tests may become subject to extensive FDA requirements or our business may otherwise be adversely affected. If the FDA were to disagree with our LDT status or modify our approach to regulating LDTs, we could experience reduced revenue or increased costs, which could adversely affect our business, prospects, results of operations and financial condition. If required, the regulatory marketing authorization process required to bring our current or future LDTs into compliance may involve, among other things, successfully completing additional clinical validations and submitting to and obtaining clearance from the FDA for a premarket clearance (510(k)) submission or authorization for a *de novo* or approval of a PMA. Furthermore, pending legislative proposals, if passed, such as the VALID Act, could create new or different regulatory and compliance burdens on us and could have a negative effect on our ability to keep products on the market or develop new products, which could have a material effect on our business. In the event that the FDA requires marketing authorization of our LDTs in the future, the FDA may not ultimately grant any clearance, authorization or approval requested by us in a timely manner, or at all. In addition, if the FDA inspects our laboratory in relation to the marketing of any FDA-authorized test, any enforcement action the FDA takes might not be limited to the FDA-authorized test carried by us and could encompass our other testing services.

Recently, the FDA has also taken a more active role in certain diagnostic areas, including the oversight of pharmacogenetic, or PGx, and COVID-19 tests. In 2019, the FDA contacted several laboratories to demand changes to PGx test reports and marketing materials. In February 2020, the FDA issued a statement indicating that it continues to have concerns about the claims that certain clinical laboratories make with respect to their PGx tests, and published tables that list PGx associations for which the FDA has determined that the data support therapeutic management recommendations, a potential impact on safety or response, or a potential impact on pharmacokinetic properties only, respectively. To date, however, the FDA has not provided any general guidance on the types of claims or other characteristics that will cause a PGx test to fall outside FDA's enforcement discretion. As such, the extent to which the FDA will allow any laboratory to offer PGx tests in their current form without meeting FDA regulatory requirements for medical devices is unclear at this time.

For each product and service we are developing that may require FDA premarket review prior to marketing, the FDA may not grant clearance, authorization or premarket approval and failure to obtain necessary approvals for our future products and services would adversely affect our ability to grow our business.

Before we begin to manufacture, label and market additional clinical diagnostic products for commercial diagnostic use in the United States, we may be required to obtain either clearance, marketing authorization or approval from the FDA, unless an exemption applies or the FDA exercises its enforcement discretion and refrains from enforcing its requirements. For example, the FDA currently has a policy of refraining from enforcing its medical device requirements with respect to LDTs, which the FDA considers to be a type of *in vitro* diagnostic test that is designed, manufactured and used within a single properly licensed laboratory.

The process of obtaining PMA is much more rigorous, costly, lengthy and uncertain than the 510(k) clearance process. In the PMA approval process, the FDA must determine that a proposed device is safe and effective for its intended use based, in part, on extensive data, including, but not limited to, technical, preclinical, clinical trial, manufacturing and labeling data. Conversely, in the 510(k) clearance process, the FDA must determine that a proposed device is "substantially equivalent" to a legally marketed "predicate" device in order for the product to be cleared for marketing. To be "substantially equivalent," the proposed device must have the same intended use as the predicate device, and either have the same technological characteristics or if it has different technological characteristics as the predicate device, the proposed device must be as safe and effective as, and not raise different questions of safety or effectiveness than, the predicate device. Clinical data is sometimes required to support substantial equivalence. For lower-risk devices that would otherwise automatically be placed into Class III, which require a PMA because no predicate device is available and the devices do not fall within an existing 510(k)-exempt classification, an applicant may submit a *de novo* request to down classify the device into Class II or Class I, which would not require a PMA. In the *de novo* process, the FDA must determine that general and special controls are sufficient to provide reasonable assurance of the safety and effectiveness of

a device, which is low to moderate risk and has no predicate. In other words, the applicant must justify the “down-classification” to Class I or II for a new product type that would otherwise automatically be placed into Class III, but is lower risk. Clinical data may be required. For laboratory tests for which FDA clearance, authorization or approval is required, the FDA may also require data to support analytical and clinical validity.

The 510(k), *de novo* and PMA processes can be expensive and lengthy and require the payment of significant fees, unless an exemption applies. The FDA’s 510(k) clearance pathway usually takes from three to nine months from submission, but it can take longer for a novel type of product. The FDA’s *de novo* classification pathway usually takes from six to 12 months, but for many applicants can take up to 18 months or more.

The process of obtaining a PMA generally takes from one to three years, or even longer, from the time the PMA is submitted to the FDA until an approval is obtained. Any delay or failure to obtain necessary regulatory clearances, authorizations or approvals would have a material adverse effect on our business, financial condition and prospects.

The FDA can delay, limit or deny clearance, authorization or approval of a device for many reasons, including:

- the inability to demonstrate to the satisfaction of the FDA that the products are safe or effective for their intended uses;
- the disagreement of the FDA with the design, conduct or implementation of the clinical trials or the analysis or interpretation of data from preclinical studies, analytical studies or clinical trials;
- serious and unexpected adverse device effects experienced by participants in clinical trials;
- the data from preclinical studies, analytical studies and clinical trials may be insufficient to support clearance, authorization or approval, where required;
- the inability to demonstrate that the clinical and other benefits of the device outweigh the risks;
- an advisory committee, if convened by the FDA, may recommend against approval of a PMA or other application or may recommend that the FDA require, as a condition of approval, additional preclinical studies or clinical trials, limitations on approved labeling or distribution and use restrictions, or even if an advisory committee makes a favorable recommendation, the FDA may still not approve the product;
- the FDA may identify deficiencies in our marketing application;
- the FDA may identify deficiencies in our or our collaborators’ manufacturing processes, facilities or analytical methods;
- the potential for policies or regulations of the FDA or applicable foreign regulatory bodies to change significantly in a manner rendering clinical data or regulatory filings insufficient for clearance, authorization or approval; and
- the FDA or foreign regulatory authorities may audit clinical trial data and conclude that the data is not sufficiently reliable to support a PMA.

There are numerous FDA personnel assigned to review different aspects of marketing submissions, which can present uncertainties based on their ability to exercise judgment and discretion during the review process. During the course of review, the FDA may request or require additional data and information, and the development and provision of these data and information may be time-consuming and expensive. The process of obtaining regulatory clearances, authorizations or approvals to market a medical device can be costly and time-consuming, and we may not be able to obtain these clearances, authorizations or approvals on a timely basis, or at all for our products in development. If we are unable to obtain clearance, authorization or approval for any products for which it plans to seek clearance, authorization or approval, our business may be harmed.

Modifications to our products with FDA marketing authorization may require new FDA clearances, authorizations or approvals, or may require it to cease marketing or recall the modified clinical diagnostic products or future clinical products until clearances are obtained.

Any modification to a 510(k)-cleared device that significantly affects its safety or effectiveness, or that constitutes a major change in its intended use, could require a new 510(k) clearance, a new *de novo* authorization or approval of a PMA. The FDA requires every manufacturer to make this determination in the first instance, but the FDA may review any

manufacturer's decision. The FDA may not agree with our decisions regarding whether new clearances, authorizations or approvals are necessary.

For any product approved pursuant to a PMA, we would be required to seek supplemental approval for many types of modifications to the approved product. The FDA requires manufacturers in the first instance to determine whether a PMA supplement or other regulatory filing is needed or whether the change may be reported via the PMA Annual Report, but may disagree with a company's assessment.

If the FDA disagrees with our determination, which it may not review until we submit an annual report or the FDA conducts an inspection or other inquiry, and requires us to seek new clearances, authorizations or approvals for modifications to its previously cleared, authorized or approved clinical diagnostic products for which we have concluded new clearances, authorizations or approvals are unnecessary, we may be required to cease marketing or distribution of these clinical diagnostic products or to recall the modified products until we obtain clearance, authorization or approval. We may also be subject to enforcement action, including, among other things, significant regulatory fines or penalties.

In addition, for example, we plan to match our test reports for certain indications to identified mutations with FDA-approved targeted therapies or relevant clinical trials of targeted therapies. If a patient or physician who orders a test using one of our products is unable to obtain, or be reimbursed for the use of, targeted therapies because they are not indicated in the FDA-approved label for treatment, the patient is unable to enroll in an identified clinical trial due to the enrollment criteria of the trial, or some other reason, the ordering physician may conclude the test report does not contain actionable information. If physicians do not believe our products consistently generate actionable information about their patients' disease or condition, they may be less likely to use our products.

Furthermore, we cannot provide assurance that customers will always use these products in the manner in which they are intended. Any intentional or unintentional misuse of these products by customers could lead to substantial civil and criminal monetary and non-monetary penalties, and could result in significant legal and investigatory fees.

Our business is subject to various complex laws and regulations applicable to clinical diagnostics. We could be subject to significant fines and penalties if we or our partners fail to comply with these laws and regulations.

As a provider of clinical diagnostic products and services, we and our partners are subject to extensive and frequently changing federal, state, local and foreign laws and regulations governing various aspects of our business.

In particular, the clinical laboratory and healthcare industry is subject to significant governmental certification and licensing regulations, as well as federal, state and foreign laws regarding:

- test ordering and billing practices;
- marketing, sales and pricing practices;
- health information privacy and security, including HIPAA and comparable state laws;
- insurance;
- anti-markup legislation;
- fraud and abuse; and
- consumer protection.

We are also required to comply with FDA regulations, including with respect to its labeling and promotion activities. In addition, advertising and marketing of its clinical products are subject to regulation by the Federal Trade Commission, or FTC, and advertising of laboratory services is regulated by certain state laws. Violation of any FDA requirement could result in enforcement actions, such as seizures, injunctions, civil penalties and criminal prosecutions, and violation of any FTC or state law requirement could result in injunctions and other remedies, all of which could have a material adverse effect on our business. Most states also have similar regulatory and enforcement authority for devices. Additionally, most foreign countries have authorities comparable to the FDA and processes for obtaining marketing approvals. Obtaining and maintaining these approvals, and complying with all laws and regulations, may subject us to similar risks and delays as those we could experience under FDA, FTC and state regulation. We incur various costs in complying and overseeing compliance with these laws and regulations. The growth of our business and sales organization, the acquisition of

additional businesses or products and services and our expansion outside of the U.S. may increase the potential of violating these laws, regulations or our internal policies and procedures.

Healthcare policy has been a subject of extensive discussion in the executive and legislative branches of the federal and many state governments and healthcare laws and regulations are subject to change. Development of the existing commercialization strategy for our tests and planned development of products in our pipeline has been based on existing healthcare policies. We cannot predict what additional changes, if any, will be proposed or adopted or the effect that such proposals or adoption may have on our business, financial condition and results of operations.

If we or our partners, fail to comply with these laws and regulations, it could incur significant fines and penalties and our reputation and prospects could suffer. Additionally, any such partners could be forced to cease offering our products and services in certain jurisdictions, which could materially disrupt our business. An adverse outcome could include us being required to pay treble damages, incur civil and criminal penalties, paying attorneys' fees, entering into a corporate integrity agreement, being excluded from participation in government healthcare programs, including Medicare and Medicaid, and other adverse actions that could materially and adversely affect our business, financial condition and results of operations.

Compliance with the HIPAA security, privacy and breach notification regulations may increase our costs.

The HIPAA privacy, security and breach notification regulations, including the expanded requirements under HITECH, establish comprehensive federal standards with respect to the uses and disclosures of protected health information, or PHI, by health plans, healthcare providers and healthcare clearinghouses, in addition to setting standards to protect the confidentiality, integrity and security of PHI. The regulations establish a complex regulatory framework on a variety of subjects, including:

- the circumstances under which uses and disclosures of PHI are permitted or required without a specific authorization by the patient, including but not limited to treatment purposes, activities to obtain payments for our services, and our healthcare operations activities;
- a patient's rights to access, amend and receive an accounting of certain disclosures of PHI;
- requirements to notify individuals if there is a breach of their PHI;
- the contents of notices of privacy practices for PHI;
- administrative, technical and physical safeguards required of entities that use or receive PHI;
- deidentification of PHI; and
- the protection of computing systems maintaining electronic PHI.

We have implemented practices intended to meet the requirements of the HIPAA privacy, security and breach notification regulations, as required by law. We are required to comply with federal privacy, security and breach notification regulations as well as varying state privacy, security and breach notification laws and regulations, which may be more stringent than federal HIPAA requirements. In addition, for healthcare data transfers from other countries relating to citizens of those countries, we must comply with the laws of those countries. The federal privacy regulations under HIPAA restrict our ability to use or disclose patient identifiable data, without patient authorization, for purposes other than payment, treatment, healthcare operations and certain other specified disclosures such as public health and governmental oversight of the healthcare industry.

HIPAA provides for significant fines and other penalties for wrongful use or disclosure of PHI, including potential civil and criminal fines and penalties. Computer networks are always vulnerable to breach and unauthorized persons may in the future be able to exploit weaknesses in the security systems of our computer networks and gain access to PHI. Additionally, we share PHI with third-parties who are legally obligated to safeguard and maintain the confidentiality of PHI. Unauthorized persons may be able to gain access to PHI stored in such third-parties computer networks. Any wrongful use or disclosure of PHI by us or such third-parties, including disclosure due to data theft or unauthorized access to us or our third-parties computer networks, could subject it to fines or penalties that could adversely affect our business and results of operations. Although the HIPAA statute and regulations do not expressly provide for a private right of damages, we could also be liable for damages under state laws to private parties for the wrongful use or disclosure of confidential health information or other private personal information.

Some of our activities may subject it to risks under federal and state laws prohibiting ‘kickbacks’ and false or fraudulent claims.

In addition to FDA marketing and promotion restrictions, several other types of state and federal healthcare fraud and abuse laws have been applied in recent years to restrict certain marketing practices in the healthcare product and service industry and to regulate billing practices and financial relationships with healthcare providers, hospitals and other healthcare providers. These laws include a federal law commonly known as the Medicare/Medicaid anti-kickback law, and several similar state laws, which prohibit payments intended to induce healthcare providers or others either to refer patients or to acquire or arrange for or recommend the acquisition of healthcare products or services. While the federal law applies only to referrals, products or services for which payment may be made by a federal healthcare program, state laws often apply regardless of whether federal funds may be involved. These laws constrain the sales, marketing and other promotional activities of manufacturers of medical devices and providers of laboratory services by limiting the kinds of financial arrangements, including sales programs, that may be used with hospitals, healthcare providers, laboratories and other potential purchasers or prescribers of medical devices and laboratory services. Other federal and state laws generally prohibit individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payors that are false or fraudulent, or are for items or services that were not provided as claimed.

In 2018, Congress passed EKRA as part of the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act. Similar to the Medicare/Medicaid anti-kickback law, EKRA imposes criminal penalties for knowing or willful payment or offer, or solicitation or receipt, of any remuneration, whether directly or indirectly, overtly or covertly, in cash or in kind, in exchange for the referral or inducement of laboratory testing (among other healthcare services) unless a specific exception applies. However, unlike the Medicare/Medicaid anti-kickback law, EKRA is not limited to services covered by federal or state healthcare programs but applies more broadly to services covered by “healthcare benefit programs,” including commercial insurers. As currently drafted, EKRA potentially expands the universe of arrangements that could be subject to government enforcement under federal fraud and abuse laws. In addition, while the Medicare/Medicaid anti-kickback law includes certain exceptions that are widely relied upon in the healthcare industry, not all of those same exceptions apply under EKRA. Because EKRA is a relatively new law, there is no agency guidance or court precedent to indicate how and to what extent it will be applied and enforced. We cannot assure you that our relationships with healthcare providers, hospitals, customers, our own sales representatives, or any other party will not be subject to scrutiny or will survive regulatory challenge under EKRA.

Additionally, to avoid liability under federal false claims laws, we or our partners must carefully and accurately code claims for reimbursement, proactively monitor the accuracy and appropriateness of claims and payments received, diligently investigate any credible information indicating that it may have received an overpayment, and promptly return any overpayments. Medicare payments are subject to audit, including through the Comprehensive Error Rate Testing, or CERT, program, and payments may be recouped by CMS if it is determined that they were improperly made. Currently, a small percentage of our revenues are generated by payments from Medicare. The federal anti-kickback statute and certain state-level false claims laws prescribe civil and criminal penalties (including fines) for noncompliance that can be substantial. In addition, various states have enacted false claim laws analogous to the federal laws that apply where a claim is submitted to any third-party payor and not only a governmental payer program. While we continually strive to comply with these complex requirements, interpretations of the applicability of these laws to marketing and billing practices are constantly evolving and even an unsuccessful challenge could cause adverse publicity and be costly to respond to, and thus could harm our business and prospects. Our failure to comply with applicable laws could result in various adverse consequences that could have a material adverse effect upon our business, including the exclusion of our products and services from government programs and the imposition of civil or criminal sanctions.

Our business could be harmed by the loss, suspension or other restriction on a license, certification or accreditation, or by the imposition of a fine or penalties, under CLIA, our implementing regulations or other state, federal and foreign laws and regulations affecting licensure or certification, or by future changes in these laws or regulations.

Federal law requires virtually all clinical laboratories to comply with CLIA, which generally involves becoming certified by the federal and state government for the testing that will be performed and complying with various operational, personnel, facilities administration, quality and proficiency testing requirements intended to ensure that testing services are accurate and reliable. CLIA certification is also a prerequisite to be eligible to bill state and federal healthcare programs, as well as many private third-party payors, for laboratory research and clinical diagnostic testing services. For example, as a condition of our CLIA certification, a laboratory may be subject to survey and inspection every other year, additional random inspections and surprise inspections based on complaints received by state or federal regulators. The biennial survey and inspection is conducted by CMS, a CMS agent or, if the laboratory holds a CLIA certificate of accreditation, a

CMS-approved accreditation organization, such as CAP. Sanctions for failure to comply with CLIA requirements, including proficiency testing violations, may include suspension, revocation or limitation of a laboratory's CLIA certificate, which is necessary to conduct business, as well as the imposition of significant civil, administrative or criminal sanctions against the lab, its owners and other individuals. In addition, we are subject to regulation under certain state laws and regulations governing laboratory licensure. Some states have enacted laboratory licensure and compliance laws that are more stringent than CLIA. Changes in state licensure laws that affect our ability to offer and provide research and diagnostic products and services across state or foreign country lines could materially and adversely affect our business. In addition, state and foreign requirements for laboratory certification may be costly or difficult to meet and could affect our ability to receive specimens from certain states or foreign countries.

Any sanction imposed under CLIA, its implementing regulations or state or foreign laws or regulations governing licensure, or our failure to renew a CLIA certificate, a state or foreign license or accreditation, could have a material adverse effect on our business.

We may never obtain approval in the EU or in any other foreign country for any of our products or services and, even if we do, we or our partners and collaborators may never be able to commercialize them in another jurisdiction, which would limit our ability to realize their full market potential.

In order to eventually market any of our current or future products and services in any particular foreign jurisdiction, we must establish compliance with numerous and varying regulatory requirements on a jurisdiction-by-jurisdiction basis regarding quality, safety, performance, privacy and efficacy. In addition, clinical trials or clinical investigations conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory clearance, authorization or approval in one country does not guarantee regulatory clearance, authorization or approval in any other country. Approval processes vary among countries and can involve additional product testing and validation and additional administrative review periods.

Seeking foreign regulatory clearance, authorization or approval could result in difficulties and costs for us and our collaborators and require additional preclinical studies, clinical trials or clinical investigations which could be costly and time-consuming. Regulatory requirements and ethical approval obligations can vary widely from country to country and could delay or prevent the introduction of our products and services in those countries. The foreign regulatory clearance, authorization or approval process involves all of the risks and uncertainties associated with FDA clearance, authorization or approval. We currently have limited experience in obtaining regulatory clearance, authorization or approval in international markets. If we or our collaborators fail to comply with regulatory requirements in international markets or to obtain and maintain required regulatory clearances, authorizations or approvals in international markets, or if those approvals are delayed, our target market will be reduced and our ability to realize the full market potential of our products and services will be unrealized.

Complying with numerous statutes and regulations pertaining to our business is an expensive and time-consuming process, and any failure to comply could result in substantial penalties.

Our operations are subject to other extensive federal, state, local and foreign laws and regulations, all of which are subject to change. These laws and regulations currently include, among others:

- HIPAA, which establishes comprehensive federal standards with respect to the privacy and security of protected health information and requirements for the use of certain standardized electronic transactions;
- amendments to HIPAA under HITECH, which strengthen and expand HIPAA privacy and security compliance requirements, increase penalties for violators and expand vicarious liability, extend enforcement authority to state attorneys general, and impose requirements for breach notification;
- the General Data Protection Regulation, or GDPR, which imposes strict privacy and security requirements on controllers and processors of European personal data, including enhanced protections for "special categories" of personal data, including sensitive information such as health and genetic information of data subjects;
- the CCPA, which, among other things, regulates how subject businesses may collect, use, disclose and/or sell the personal information of consumers who reside in California, affords rights to consumers that they may exercise against businesses that collect their information, and requires implementation of reasonable security measures to safeguard personal information of California consumers;

- the federal Anti-Kickback Statute, which prohibits knowingly and willfully offering, paying, soliciting or receiving remuneration, directly or indirectly, overtly or covertly, in cash or in kind, to induce or in return for the referral of an individual, for the furnishing of or arrangement for the furnishing of any item or service for which payment may be made in whole or in part by a federal healthcare program, or the purchasing, leasing, ordering, arranging for, or recommend purchasing, leasing or ordering, any good, facility, item or service for which payment may be made, in whole or in part, under a federal healthcare program;
- EKRA, which prohibits payments for referrals to recovery homes, clinical treatment facilities, and laboratories and reaches beyond federal health care programs, to include private insurance;
- the federal physician self-referral law, known as the Stark Law, which prohibits a physician from making a referral to an entity for certain designated health services covered by the Medicare program, including laboratory and pathology services, if the physician or an immediate family member has a financial relationship with the entity unless an exception applies, and prohibits an entity from billing for designated health services furnished pursuant to a prohibited referral;
- the federal false claims law, which imposes liability on any person or entity that, among other things, knowingly presents, or causes to be presented, a false or fraudulent claim for payment to the federal government;
- the federal Civil Monetary Penalties Law, which prohibits, among other things, the offering or transfer of remuneration to a Medicare or state healthcare program beneficiary if the person knows or should know it is likely to influence the beneficiary's selection of a particular provider, practitioner or supplier of services reimbursable by Medicare or a state healthcare program, unless an exception applies;
- the HIPAA fraud and abuse provisions, which create new federal criminal statutes that prohibit, among other things, defrauding health care benefit programs, willfully obstructing a criminal investigation of a healthcare offense and falsifying or concealing a material fact or making any materially false statements in connection with the payment for healthcare benefits, items or services;
- other federal and state fraud and abuse laws, such as anti-kickback laws, prohibitions on self-referral, fee-splitting restrictions, insurance fraud laws, anti-markup laws, prohibitions on the provision of tests at no or discounted cost to induce physician or patient adoption, and false claims acts, which may extend to services reimbursable by any third-party payer, including private insurers;
- the 21st Century Cures Act information blocking prohibition, which prohibits covered actors from engaging in certain practices that are likely to interfere with the access, exchange, or use of electronic health information;
- the Physician Payments Sunshine Act and similar state laws that require reporting of certain payments and other transfers of value made by applicable manufacturers, directly or indirectly, to or on behalf of covered recipients including physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals as well as ownership and investment interests held by physicians and their immediate family members.
- Beginning in 2022, applicable manufacturers also will be required to report such information regarding its relationships with physician assistants, nurse practitioners, clinical nurse specialists, certified registered nurse anesthetists and certified nurse midwives during the previous year;
- state laws that limit or prohibit the provision of certain payments and other transfers of value to certain covered healthcare providers;
- the prohibition on reassignment of Medicare claims, which, subject to certain exceptions, precludes the reassignment of Medicare claims to any other party;
- state laws that prohibit other specified practices, such as billing clinicians for testing that they order; waiving coinsurance, copayments, deductibles and other amounts owed by patients; billing a state Medicaid program at a price that is higher than what is charged to one or more other payers;
- similar foreign laws and regulations that may apply to it in the countries in which we operate or may operate in the future; and
- laws that relate to maintaining accurate information and control over activities that may fall within the purview of the U.S. Foreign Corrupt Practices Act, its books and records provisions, or anti-bribery provisions.

We have adopted policies and procedures designed to comply with these laws and regulations. In the ordinary course of our business, we conduct internal reviews of our compliance with these laws. Our compliance may also be subject to governmental review. The growth of our business and our expansion outside of the United States may increase the potential of violating these laws or our internal policies and procedures. The risk of us being found in violation of these or other laws and regulations is further increased by the fact that many have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Any action brought against us for violation of these or other laws or regulations, even if it successfully defends against it, could cause it to incur significant legal expenses and divert our management's attention from the operation of our business. If our operations are found to be in violation of any of these laws and regulations, it may be subject to any applicable penalty associated with the violation, including significant administrative, civil and criminal penalties, damages, fines, imprisonment, exclusion from participation in Federal healthcare programs, refunding of payments received by it and curtailment or cessation of our operations, which may impact existing contracts with key payors, collaborators, health systems, and commercial partners. Any of the foregoing consequences could seriously harm our business and our financial results.

We face uncertainty related to healthcare reform, pricing, coverage and reimbursement, which could reduce our revenue.

Healthcare reform laws, including the Patient Protection and Affordable Care Act, ACA, and the Protecting Access to Medicare Act of 2014, or PAMA, are significantly affecting the U.S. healthcare and medical services industry. Existing legislation, and possible future legal and regulatory changes, including potential repeal or modification of the ACA, elimination of penalties regarding the individual mandate for coverage, or approval of health plans that allow lower levels of coverage for preventive services, could materially change the structure and finances of the health insurance system and the methodology for reimbursing medical services, drugs and devices, including our current and future products and services. The ACA has also been the subject of various legal challenges and in December 2018, a federal district court in Texas found that the ACA's "individual mandate" was unconstitutional such that the whole of the ACA is invalid. The decision was appealed, and in December 2019, the Fifth Circuit Court of Appeals affirmed certain portions of the district court's decision but remanded to the district court to determine if any portions of the ACA may still be valid. If the plaintiffs in this case, or in any other case challenging the ACA, are ultimately successful, insurance coverage for our tests could be materially and adversely affected. Any change in reimbursement policy could result in a change in patient cost-sharing, which could adversely affect a provider's willingness to prescribe and patient's willingness and ability to use our tests and any other product or service we may develop. Healthcare reforms, which may intend to reduce healthcare costs, may have the effect of discouraging third-party payors from covering certain kinds of medical products and services, particularly newly developed technologies, or other products or tests we may develop in the future. We cannot predict whether future healthcare reform initiatives will be implemented at the federal or state level or the effect any such future legislation or regulation will have on it. The taxes imposed by new legislation, cost reduction measures and the expansion in the government's role in the U.S. healthcare industry may result in decreased profits to us, which may adversely affect our business, financial condition and results of operations.

PAMA presents significant uncertainty for future CMS reimbursement rates for our tests. Because Medicare currently covers a significant number of patients, any reduction in the CMS reimbursement rate for our tests would negatively affect our revenues and our business prospects. Under PAMA, CMS reimbursement rates for clinical diagnostic laboratory tests are updated every three years, or annually for clinical laboratory tests that are considered "advanced diagnostic laboratory tests". The CMS reimbursement rates for clinical diagnostic laboratory tests are updated based on the volume-weighted median of private payer rates for each clinical diagnostic laboratory test based on data submitted by certain applicable laboratories. Further, laboratories that fail to report or erroneously report required payment information may be subject to substantial civil money penalties. There can be no assurance under PAMA that adequate CMS reimbursement rates will continue to be assigned to our tests. Congress could modify or repeal PAMA in the future or CMS could modify regulations under PAMA, and any such action could have the effect of reducing the CMS reimbursement rate for our tests. Further, it is possible that Medicare or other federal payers that provide reimbursement for our tests may suspend, revoke or discontinue coverage at any time, may require co-payments from patients, or may reduce the reimbursement rates payable to it. Any such action could have a negative impact on our revenues.

Coverage of our screening products that it may develop may also depend, in whole or in part, on whether payers determine, or courts and/or regulatory authorities determine, coverage is required under applicable federal or state laws mandating coverage of certain cancer screening services.

Several states have laws mandating coverage for preventive services, such as certain cancer screening services, applicable to certain health insurers. However, not all of these laws apply to our current tests and not all of these laws presently mandate coverage for patients within the certain age ranges. We and payers may disagree about how these

mandates apply to our tests and we may find the mandates difficult to enforce. Further, if the ACA is repealed, replaced or overturned, or even if it is not, states may decide to modify their laws, which may include repeal of those coverage mandates that we believe currently apply to our oncology tests.

Outside of the U.S., we would largely depend on public or government-controlled payers for coverage of our oncology tests. As compared to many more routine diagnostic tests, our oncology tests are more complicated, expensive and are performed in a central, specialized lab. In order to accommodate the unique characteristics of our diagnostic products, public payers in certain non-U.S. markets have designed reimbursement frameworks specifically for each test type. These payers could decide to modify or discontinue these special frameworks, potentially leading to lower reimbursement prices or the impossibility of providing the test in the market. These changes could also impose additional administrative burdens on us, if it were to ever sell our tests in foreign jurisdictions, including complex public tendering procedures, or on ordering physicians, which could adversely affect the number of payers covering the test or the number of orders placed. Public payers could condition reimbursement of our tests upon performance of our tests locally or, even in laboratories owned or operated by the payers. Any such change would adversely affect our ability to continue to serve those patients through our labs. We may develop future oncologic tests that could be performed locally by laboratory partners and in hospitals around the world, however those developments efforts may be unsuccessful and any such tests that we may develop may not be approved by regulators or accepted by payers or patients.

Product and professional liability suits against us could result in expensive and time-consuming litigation, payment of substantial damages and increases in our insurance rates.

The sale and use of our solutions, products and services could lead to product or professional liability claims, including class action lawsuits. We may also be subject to liability for errors in the test results including health information it provides to healthcare providers or patients or for a misunderstanding of, or inappropriate reliance upon, the information it provides. Claims could also arise out of clinical studies we may conduct or any of our other activities. A product or professional liability claim could result in substantial damages, be costly and time consuming to defend, and cause material harm to our business, reputation or financial condition. We cannot assure you that our liability insurance would protect our assets from the financial impact of defending a product or professional liability claim. Any claim brought against us, with or without merit, could increase our liability insurance rates or prevent it from securing insurance coverage in the future.

Errors, defects, or mistakes in our products or services, and operations could harm our reputation, decrease market acceptance of our products or services.

We are creating new products and services, many of which are initially based on largely untested technologies. As all of our products and services progress, we or others may determine that it made product or service-level scientific or technological mistakes. The diagnostic and testing processes utilize a number of complex and sophisticated molecular, biochemical, informatics, and mechanical processes, many of which are highly sensitive to external factors. An operational or technological failure in one of these complex processes or fluctuations in external factors may result in less efficient processing or variation between testing runs. Refinements to our processes may initially result in unanticipated issues that reduce the efficiency or increase variability. In particular, sequencing, which is a key component of these processes, could be inefficient with higher than expected variability thereby increasing total sequencing costs and reducing the number of samples we can process in a given time period. Therefore, inefficient or variable processes can cause variability in our operating results and damage our reputation.

In addition, our laboratory operations could result in any number of errors or defects. our quality assurance system may fail to prevent it from inadvertent problems with samples, sample quality, lab processes including sequencing, software, data upload or analysis, raw materials, reagent manufacturing, assay quality or design, or other components or processes. In addition, our assays may have quality or design errors, and it may have inadequate procedures or instrumentation to process samples, assemble our proprietary primer mixes and commercial materials, upload and analyze data, or otherwise conduct our laboratory operations. If we provide products or services with undiscovered errors to our customers, our clinical diagnostics may falsely indicate a patient has a disease or genetic variant, fail to assess a patient's risk of getting a disease or having a child with a disease, or fail to detect disease or variant in a patient who requires or could benefit from treatment or intervention. We believe our customers are likely to be particularly sensitive to product and service defects, errors and delays, including if our products and services fail to indicate the presence of residual disease with high accuracy from clinical specimens or if we fail to list or inaccurately indicate the presence or absence of disease in our test report or analysis. In drug discovery, such errors may interfere with our collaborators' clinical studies or result in adverse safety or efficacy profiles for their products in development. This may harm our customers' businesses and may cause it to incur significant costs, divert the attention of key personnel, encourage regulatory enforcement action against it, create a significant customer relations problem for us and cause our reputation to suffer. We may also be subject to

warranty and liability claims for damages related to errors or defects in our products or services. Any of these developments could harm our business and operating results.

We are subject to increasingly complex taxation rules and practices, which may affect how it conducts our business and our results of operations.

As our business grows, we are required to comply with increasingly complex taxation rules and practices. We are subject to tax in multiple U.S. tax jurisdictions and may be subject to foreign tax jurisdictions in the future. The development of our tax strategies requires additional expertise and may impact how it conducts our business. Our future effective tax rates could be unfavorably affected by changes in, or interpretations of, tax rules and regulations in the jurisdictions in which we do business or by changes in the valuation of our deferred tax assets and liabilities. Furthermore, we provide for certain tax liabilities that involve significant judgment. We are and may be subject to the examination of our tax returns by federal, state and foreign tax authorities. If our tax strategies are ineffective or it is not in compliance with domestic and international tax laws, as applicable, our financial position, operating results and cash flows could be adversely affected.

Risks Related to Our Intellectual Property and Trade Secrets

Our inability to effectively protect our proprietary products, processes, and technologies, including the confidentiality of our trade secrets, could harm our competitive position.

We currently rely upon trade secret protection and copyright, as well as non-disclosure agreements and invention assignment agreements with our employees, consultants and third parties, and to a limited extent patent protection, to protect our confidential and proprietary information. Although our competitors have utilized and are expected to continue utilizing similar methods and have aggregated and are expected to continue to aggregate similar databases of genetic testing information, our success will depend upon our ability to develop proprietary methods and databases and to defend any advantages afforded to us by our methods and databases relative to our competitors. If we do not protect our intellectual property adequately, competitors may be able to use our methods and databases and thereby erode any competitive advantages we may have.

We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies are covered by valid and enforceable patents or are effectively maintained as trade secrets. In this regard, we have applied, and we intend to continue applying, for patents covering such aspects of our technologies as it deems appropriate. However, we expect that potential patent coverage it may obtain will not be sufficient to prevent substantial competition. In this regard, we believe it is probable that others will independently develop similar or alternative technologies or design around those technologies for which we may obtain patent protection. In addition, any patent applications we file may be challenged and may not result in issued patents or may be invalidated or narrowed in scope after they are issued. Questions as to inventorship or ownership may also arise. Any finding that our patents or applications are unenforceable could harm our ability to prevent others from practicing the related technology, and a finding that others have inventorship or ownership rights to our patents and applications could require us to obtain certain rights to practice related technologies, which may not be available on favorable terms, if at all. If we initiate lawsuits to protect or enforce our patents, or litigate against third-party claims, which would be expensive, and we lose, it may lose some of our intellectual property rights. Furthermore, these lawsuits may divert the attention of our management and technical personnel.

We expect to rely substantially upon trade secrets and proprietary know-how protection for our confidential and proprietary information, and we have taken security measures to protect this information. These measures, however, may not provide adequate protection for our trade secrets, know-how or other confidential information. Among other things, we seek to protect our trade secrets and confidential information by entering into confidentiality agreements with employees and consultants. There can be no assurance that any confidentiality agreements that we have with our employees and consultants will provide meaningful protection for our trade secrets and confidential information or will provide adequate remedies in the event of unauthorized use or disclosure of such information. Accordingly, there also can be no assurance that our trade secrets will not otherwise become known or be independently developed by competitors. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret can be difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, trade secrets may be independently developed by others in a manner that could prevent legal recourse by us. If any of our confidential or proprietary information, such as our trade secrets, were to be disclosed or misappropriated, or if any such information was independently developed by a competitor, our competitive position could be harmed.

Any inability to effectively protect our proprietary technologies under certain jurisdictions and legal regimes could harm our competitive position.

Our success and ability to compete in certain jurisdictions and under certain legal regimes depend to a large extent on our ability to develop proprietary products and technologies and to maintain adequate protection of our intellectual property in the United States and other countries; this becomes increasingly important as we expand our operations and enter into strategic collaborations with partners to develop and commercialize products. The laws of some foreign countries do not protect proprietary rights to the same extent as the laws of the United States, and we may encounter difficulties in establishing and enforcing its proprietary rights outside of the United States. In addition, the proprietary positions of companies developing and commercializing tools for molecular diagnostics, including our own, generally are uncertain and involve complex legal and factual questions. This uncertainty may materially affect our ability to defend or obtain patents or to address the patents and patent applications owned or controlled by our collaborators and licensors.

Any of these factors could adversely affect our ability to obtain commercially relevant or competitively advantageous patent protection for our products.

If patent regulations or standards are modified, such changes could have a negative impact on our business.

From time to time, the U.S. Supreme Court, other federal courts, the U.S. Congress or the USPTO may change the standards of patentability and validity of patents within the cancer screening and diagnostics space, and any such changes could have a negative impact on our business.

There have been several cases involving “gene patents” and diagnostic claims that have been considered by the U.S. Supreme Court. In March 2012, the Supreme Court in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, found a patented diagnostic method claim unpatentable because the relationship between a metabolite concentration and optimized dosage was a patent-ineligible “law of nature.” In June 2013, the Supreme Court ruled in *ACLU v. Myriad Genetics, Inc.*, that an isolated genomic DNA sequence is not patent eligible while cDNA is eligible. The *Prometheus and Myriad* decisions, as well as subsequent case law, affect the legal concept of subject matter eligibility by seemingly narrowing the scope of the statute defining patentable inventions.

In December 2014 and again in 2019, the USPTO published revised guidelines for patent examiners to apply when examining process claims for patent eligibility in view of several recent Supreme Court decisions, including *Mayo*, *Association for Molecular Pathology v. Myriad Genetics, Inc.*, and *Alice Corporation Pty. Ltd. v. CLS Bank International*, and others. The guidance indicates that claims directed to a law of nature, a natural phenomenon, or an abstract idea that do not meet the eligibility requirements should be rejected as non-statutory, patent ineligible subject matter. While these guidelines may be subject to review and modification by the USPTO over time, we cannot assure you that our intellectual property strategy or patent portfolio will not be negatively impacted by the decisions described above, rulings in other cases or changes in guidance or procedures issued by the USPTO.

Additional substantive changes to patent law, whether new or associated with the America Invents Act — which substantially revised the U.S. patent system — may affect our ability to obtain, enforce or defend our patents. Accordingly, it is not clear what, if any, impact these substantive changes will ultimately have on the cost of prosecuting our patent applications, our ability to obtain patents based on our discoveries and our ability to enforce or defend our issued patents, all of which could have a material adverse effect on our business.

If we are not able to adequately protect our trade secrets and other proprietary information, including the databases it manages and to which it has access, the value of our technology and products could be significantly diminished.

We rely on trade secret and proprietary know-how protection for our confidential and proprietary information and have taken security measures to protect this information. These measures, however, may not provide adequate protection. For example, we have a policy of requiring our consultants, advisors and collaborators, including, for example, our strategic collaborators with whom we seek to develop and commercialize products, to enter into confidentiality agreements and our employees to enter into invention, non-disclosure and in certain cases non-compete agreements. However, breaches of our physical or electronic security systems, or breaches caused by our employees who failing to abide by their confidentiality obligations during or upon termination of their employment with us, could compromise these protection efforts. Any action we take to enforce our rights may be time-consuming, expensive, and possibly unsuccessful. Even if successful, the resulting remedy may not adequately compensate us for the harm caused by the breach. These risks are heightened in countries where laws or law enforcement practices may not protect proprietary rights as fully as in the United States or Europe. Any unauthorized use or disclosure of, or access to, our trade secrets, know-how or other proprietary information,

whether accidentally or through willful misconduct, could have a material adverse effect on our programs and our strategy, and on our ability to compete effectively.

If our trademarks and trade names are not adequately protected, it may not be able to build name recognition in our markets of interest, and our business may be adversely affected.

Failure to maintain our trademark registrations, or to obtain new trademark registrations in the future, could limit our ability to protect our trademarks and impede our marketing efforts in the countries in which we operate. We may not be able to protect our rights to trademarks and trade names which we may need to build name recognition with potential partners or customers in our markets of interest. As a means to enforce our trademark rights and prevent infringement, we may be required to file trademark claims against third parties or initiate trademark opposition proceedings. This can be expensive and time-consuming, and possibly unsuccessful. Our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented, declared generic or determined to infringe on other marks.

Our pending trademark applications in the United States and in other foreign jurisdictions where we may file may not be successful. Even if these applications result in registered trademarks, third parties may challenge these trademarks in the future. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then it may not be able to compete effectively, and our business may be adversely affected.

Litigation or other proceedings resulting from either third-party claims of patent infringement, or asserting infringement by third parties of our technology, could be costly, time-consuming, and could limit our ability to commercialize our products or services.

Our success depends in part on our non-infringement of the patents or intellectual property rights of third parties, and our ability to successfully prevent third parties from infringing our intellectual property. We operate in a crowded technology area in which there has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the genetic diagnostics industry. Third parties, including our competitors, have asserted and may in the future assert that we are infringing their intellectual property rights. We may also become subject to and/or initiate future intellectual property litigation as our product portfolio and the level of competition in our industry grow.

Because the U.S. Patent & Trademark Office, or USPTO, maintains patent applications in secrecy until a patent application publishes or the patent is issued, we have no way of knowing if others may have filed patent applications covering technologies used by it or our partners. Additionally, there may be third-party patents, patent applications and other intellectual property relevant to our technologies that may block or compete with our technologies. From time-to-time we have received correspondence from third parties alleging to hold intellectual property rights that could block our development or commercialization of products. While none of these inquiries to date have had any material effect on it, we may receive inquiries in the future that could have a material effect on our business. Even if third-party claims are without merit, defending a lawsuit may result in substantial expense to us and may divert the attention of management and key personnel. In addition, we cannot provide assurance that it would prevail in any such suits to the extent necessary to conduct our business according to our strategic plan or that the damages or other remedies, if any, awarded against it would not be substantial. Claims of intellectual property infringement may require that we, or our strategic partners, enter into unsustainably high royalty or license agreements with third parties that may only be available on unacceptable terms, if at all. In addition, we could experience delays in product introductions or sales growth while we attempt to develop non-infringing alternatives. These claims could also result in injunctions against the further development and commercial sale of services or products containing our technologies, which would have a material adverse effect on our business, financial condition and results of operations.

Further, patents and patent applications owned by us may become the subject of interference proceedings in the USPTO to determine priority of invention, which could result in substantial cost to us as well as a possible adverse decision as to the priority of invention of the patent or patent application involved. An adverse decision in an interference proceeding may result in the loss of rights under a patent or patent application subject to such a proceeding. We cannot predict whether, or offer any assurance that, the patent infringement claims may initiate in the future will be successful. We are and may become subject to counterclaims by patent infringement defendants. Our patents may be declared invalid or unenforceable, or narrowed in scope. Even if we prevail in an infringement action, we cannot assure you that it would be adequately compensated for the harm to our business. If we are unable to enjoin third-party infringement, our revenues may be adversely impacted and it may lose market share; and such third-party product may continue to exist in the market, but fail to meet our regulatory or safety standards, thereby causing irreparable harm to our reputation as a provider of quality products, which in turn could result in loss of market share and have a material adverse effect on our business, financial condition and our results of operations.

In addition, our agreements with some of our customers, suppliers, and other entities with whom we do business require us to defend or indemnify these parties to the extent they become involved in patent infringement claims, including the types of claims described in this risk factor. We have agreed, and may in the future agree, to defend or indemnify third parties if we determine it to be in the best interests of our business relationships. If we are required or agree to defend or indemnify third parties in connection with any infringement claims, we could incur significant costs and expenses that could adversely affect our business, financial condition and results of operations.

Our use of open-source software could subject it to possible litigation or cause us to subject our platform to unwanted open-source license conditions that could negatively impact our sales.

A limited but meaningful portion of our platforms and products incorporate open-source software, and it will incorporate open-source software into other offerings or products in the future. Such open-source software is generally licensed by its authors or other third parties under open-source licenses. There is little legal precedent governing the interpretation of certain terms of these licenses, and therefore the potential impact of these terms on our business is unknown and may result in unanticipated obligations regarding our products and technologies. If an author or other third party that distributes such open-source software were to allege that we had not complied with the conditions of one or more of these licenses, we could be required to incur significant legal expenses defending against such allegations. In addition, if we combine our proprietary software with open-source software in a certain manner, under some open-source licenses, we could be required to release the source code of our proprietary software, which could substantially help our competitors develop products that are similar to or better than our products.

We rely on strategic collaborative and licensing arrangements with third parties to develop critical intellectual property. We may not be able to successfully establish and maintain such intellectual property.

The development and commercialization of our products and services rely, directly or indirectly, upon strategic collaborations and licensing agreements with third parties. Such arrangements provide us with intellectual property and other business rights crucial to our product development and commercialization. We have incorporated licensed technology into our tests. Our dependence on licensing, collaboration and other similar agreements with third parties may subject it to a number of risks. There can be no assurance that any current contractual arrangements between us and third parties or between our strategic partners and other third parties will be continued on materially similar terms and will not be breached or terminated early. Any failure to obtain or retain the rights to necessary technologies on acceptable commercial terms could require us to re-configure our products and services, which could negatively impact their commercial sale or increase the associated costs, either of which could materially harm our business and adversely affect our future revenues and ability to achieve sustained profitability.

We expect to continue and expand our reliance on collaborative and licensing arrangements. Establishing new strategic collaborations and licensing arrangements is difficult and time-consuming. Discussions with potential collaborators or licensors may not lead to the establishment of collaborations on favorable terms, if at all. To the extent we agree to work exclusively with one collaborator in a given area, our opportunities to collaborate with other entities could be limited. Potential collaborators or licensors may reject collaborations with it based upon their assessment of our financial, regulatory or intellectual property position or other factors. Even if we successfully establish new collaborations, these relationships may never result in the successful commercialization of any product or service. In addition, the success of the projects that require collaboration with third parties will be dependent on the continued success of such collaborators. There is no guarantee that our collaborators will continue to be successful and, as a result, we may expend considerable time and resources developing products or services that will not ultimately be commercialized.

Risks Related to Cybersecurity, Privacy and Information Technology

Interruption, interference with, or failure of our information technology and communications systems could hurt our ability to effectively provide our products and services, which could harm our reputation, financial condition, and operating results.

The availability of our products and services and fulfillment of our customer contracts depend on the continuing operation of our information technology and communications systems. Our systems are vulnerable to damage, interference, or interruption from terrorist attacks, natural disasters, the effects of climate change (such as sea level rise, drought, flooding, wildfires, and increased storm severity), power loss, telecommunications failures, computer viruses, ransomware attacks, computer denial of service attacks, phishing schemes, or other attempts to harm or access our systems. Some of our data centers are located in areas with a high risk of major earthquakes or other natural disasters. Our data centers are also subject to break-ins, sabotage, and intentional acts of vandalism, and, in some cases, to potential disruptions resulting from

problems experienced by facility operators. Some of our systems are not fully redundant, and disaster recovery planning cannot account for all eventualities.

The occurrence of a natural disaster, closure of a facility, or other unanticipated problems at our data centers could result in lengthy interruptions in our service. In addition, our products and services are highly technical and complex and may contain errors or vulnerabilities, which could result in interruptions in or failure of our services or systems.

Security breaches, privacy issues, loss of data and other incidents could compromise sensitive, protected, or personal information related to our business, could prevent it from accessing critical information, and could expose it to regulatory liability, which could adversely affect our business.

In the ordinary course of our business, we collect and store sensitive data, including PHI, personally identifiable information, genetic information, credit card information, intellectual property and proprietary business information owned or controlled by us or our customers, payers and other parties. We manage and maintain our applications and data utilizing a combination of on-site systems, managed data center systems and cloud-based systems. We also communicate PHI and other sensitive patient data through our various customer tools and platforms. In addition to storing and transmitting sensitive data that is subject to multiple legal protections, these applications and data encompass a wide variety of business-critical information including research and development information, commercial information, and business and financial information. We face a number of risks relative to protecting this critical information, including loss of access risk, inappropriate disclosure, inappropriate modification, and the risk of our being unable to adequately monitor and modify our controls over our critical information. Any technical problems that may arise in connection with the data that we access and our systems, including those that are hosted by third-party providers, could result in interruptions to our business and operations or exposure to security vulnerabilities. These types of problems may be caused by a variety of factors, including infrastructure changes, intentional or accidental human actions or omissions, software errors, malware, viruses, security attacks, fraud, spikes in customer usage and denial of service issues. From time to time, large third-party web hosting providers have experienced outages or other problems that have resulted in their systems being offline and inaccessible. Such outages could materially impact our business and operations.

The secure processing, storage, maintenance and transmission of this critical information are vital to our operations and business strategy, and it devotes significant resources to protecting such information. Although we take what we believe to be reasonable and appropriate measures, including a formal, dedicated enterprise security program, to protect sensitive information from various compromises (including unauthorized access, disclosure, or modification or lack of availability), our information technology and infrastructure may be vulnerable to attacks by hackers or viruses or breached due to employee error, malfeasance or other disruptions. Any such breach or interruption could compromise our networks and the information stored therein could be accessed by unauthorized parties, altered, publicly disclosed, lost or stolen.

Further, our some of customer tools and platforms are currently accessible through a portal and there is no guarantee that we can protect our portal from a security breach. Unauthorized access, loss or dissemination could also disrupt our operations (including our ability to conduct our analyses, provide test results, bill payers or patients, process claims and appeals, provide customer assistance, conduct research and development activities, collect, process and prepare company financial information, provide information about our tests and other patient and physician education and outreach efforts through our website, and manage the administrative aspects of our business) and damage our reputation, any of which could adversely affect our business. In addition to data security risks, we also face privacy risks. Should we actually violate, or be perceived to have violated, any privacy promises it makes to patients or consumers, it could be subject to a complaint from an affected individual or interested privacy regulator, such as the FTC, a state Attorney General, an EU Member State Data Protection Authority, or a data protection authority in another international jurisdiction. This risk is heightened given the sensitivity of the data we collect.

Any security compromise that causes an apparent privacy violation could also result in legal claims or proceedings; liability under federal, state, foreign, or multinational laws that regulate the privacy, security, or breach of personal information, such as but not limited to the HIPAA, HITECH, state data security and data breach notification laws, the EU's GDPR, the UK Data Protection Act of 2018; and related regulatory penalties. Penalties for failure to comply with a requirement of HIPAA or HITECH vary significantly, and, depending on the knowledge and culpability of the HIPAA-regulated entity, may include civil monetary penalties of up to \$1.5 million per calendar year for each provision of HIPAA that is violated. A person who knowingly obtains or discloses individually identifiable health information in violation of HIPAA may face a criminal penalty of up to \$50,000 and up to one-year imprisonment. The criminal penalties increase if the wrongful conduct involves false pretenses or the intent to sell, transfer or use identifiable health information for commercial advantage, personal gain or malicious harm. Penalties for unfair or deceptive acts or practices under the FTC Act or state Unfair and Deceptive Acts and Practices, or UDAP, statutes may also vary significantly.

There has been unprecedented activity in the development of data protection regulation around the world. As a result, the interpretation and application of consumer, health-related and data protection laws in the United States, Europe and elsewhere are often uncertain, contradictory and in flux. The GDPR took effect on May 25, 2018. The GDPR applies to any entity established in the EU as well as extraterritorially to any entity outside the EU that offers goods or services to, or monitors the behavior of, individuals who are located in the EU. The GDPR imposes strict requirements on controllers and processors of personal data, including enhanced protections for “special categories” of personal data, which includes sensitive information such as health and genetic information of data subjects. The GDPR also grants individuals various rights in relation to their personal data, including the rights of access, rectification, objection to certain processing and deletion. The GDPR provides an individual with an express right to seek legal remedies if the individual believes his or her rights have been violated. Failure to comply with the requirements of the GDPR or the related national data protection laws of the member states of the EU, which may deviate from or be more restrictive than the GDPR, may result in significant administrative fines issued by EU regulators. Maximum penalties for violations of the GDPR are capped at 20 million euros or 4% of an organization’s annual global revenue, whichever is greater.

Further, the United Kingdom’s decision to leave the EU, often referred to as Brexit, has created uncertainty with regard to data protection regulation in the United Kingdom. In particular, it is still unclear whether the transfer of personal information from the EU to the United Kingdom will in the future remain lawful under the GDPR. The United Kingdom-EU post-Brexit trade deal provides that transfers of personal information to the United Kingdom will not be treated as restricted transfers to a non-EU country for a period of up to six months from January 1, 2021. However, unless the EU Commission makes an “adequacy finding” with respect to the United Kingdom before the end of that transition period, from that date the United Kingdom will be a “third country” under the GDPR and transfers of personal information from the EU to the United Kingdom will require an “adequacy mechanism,” such as the SCCs.

Additionally, the implementation of GDPR has led other jurisdictions to either amend or propose legislation to amend their existing data privacy and cybersecurity laws to resemble the requirements of GDPR. For example, on June 28, 2018, California adopted the CCPA. The CCPA regulates how certain for-profit businesses that meet one or more CCPA applicability thresholds collect, use, and disclose the personal information of consumers who reside in California. Among other things, the CCPA confers to California consumers the right to receive notice of the categories of personal information that will be collected by a business, how the business will use and share the personal information, and the third parties who will receive the personal information; the CCPA also confers rights to access, delete, or transfer personal information; and the right to receive equal service and pricing from a business after exercising a consumer right granted by the CCPA. In addition, the CCPA allows California consumers the right to opt out of the “sale” of their personal information, which the CCPA defines broadly as any disclosure of personal information to a third party in exchange for monetary or other valuable consideration. The CCPA also requires a business to implement reasonable security procedures to safeguard personal information against unauthorized access, use, or disclosure. California amended the law in September 2018 to exempt all PHI collected by certain parties subject to HIPAA, and further amended the law in September 2020 to clarify that de-identified data as defined under HIPAA will also be exempt from the CCPA. The California Attorney General’s final regulations implementing the CCPA took effect on August 14, 2020. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches resulting from a business’s failure to implement and maintain reasonable data security procedures that is expected to increase data breach litigation. In addition, California voters recently approved the California Privacy Rights Act of 2020, or CPRA, that is scheduled to go into effect on January 1, 2023. The CPRA would, among other things, amend the CCPA to give California residents the ability to limit the use of their sensitive information, provide for penalties for CPRA violations concerning California residents under the age of 16, and establish a new California Privacy Protection Agency to implement and enforce the law. Other jurisdictions in the United States are beginning to propose laws similar to CCPA. Some observers have noted that the CCPA could mark the beginning of a trend toward more stringent privacy legislation, which could increase our potential liability and adversely affect our business, results of operations, and financial condition.

It is possible the GDPR, CCPA and other emerging United States and international data protection laws may be interpreted and applied in manner that is inconsistent with our practices. If so, this could result in government-imposed fines or orders requiring that we change our practices, which could adversely affect our business. In addition, these privacy laws and regulations may differ from country to country and state to state, and our obligations under these laws and regulations vary based on the nature of our activities in the particular jurisdiction, such as whether we collect samples from individuals in the local jurisdiction, perform testing in the local jurisdiction, or process personal information regarding employees or other individuals in the local jurisdiction. Complying with these various laws and regulations could cause us to incur substantial costs or require it to change our business practices and compliance procedures in a manner adverse to our business. We can provide no assurance that it is or will remain in compliance with diverse privacy and data security requirements in all of the jurisdictions in which it does business. Failure to comply with privacy and data security

requirements could result in a variety of consequences, or damage to our reputation, any of which could have a material adverse effect on our business.

Data privacy and security concerns relating to our technology and our practices could damage our reputation, subject it to significant legal and financial exposure, and deter current and potential users or customers from using our products and services. Software bugs or defects, security breaches, and attacks on our systems could result in the improper disclosure and use of user data and interference with our users and customers' ability to use our products and services, harming our business operations and reputation.

Concerns about our practices with regard to the collection, use, disclosure, or security of personal information or other data-privacy-related matters, even if unfounded, could harm our reputation, financial condition, and operating results. Our policies and practices may change over time as expectations regarding privacy and data change.

Our products and services involve the storage and transmission of protected health information and other personal information, proprietary information, and bugs, theft, misuse, defects, vulnerabilities in our products and services, and security breaches expose it to a risk of loss of this information, improper use and disclosure of such information, litigation, and other potential liability. Systems and control failures, security breaches, failure to comply with our privacy policies, and/or inadvertent disclosure of user data could result in government and legal exposure, seriously harm our reputation and brand and, therefore, our business, and impair our ability to attract and retain users or customers. We expect to continue to expend significant resources to maintain security protections that shield against bugs, theft, misuse, or security vulnerabilities or breaches.

We experience cyber-attacks and other attempts to gain unauthorized access to our systems on a regular basis. We may experience future security issues, whether due to employee error or malfeasance or system errors or vulnerabilities in our or other parties' systems, which could result in significant legal and financial exposure. Government inquiries and enforcement actions, litigation, and adverse press coverage could harm our business. We may be unable to anticipate or detect attacks or vulnerabilities or implement adequate preventative measures. Attacks and security issues could also compromise trade secrets and other sensitive information, harming our business.

While we have dedicated significant resources to privacy and security incident response capabilities, including dedicated worldwide incident response teams, our response process may not be adequate, may fail to accurately assess the severity of an incident, may not respond quickly enough, or may fail to sufficiently remediate an incident. As a result, we may suffer significant legal, reputational, or financial exposure, which could harm our business, financial condition, and operating results.

We depend on our scientific computing and information technology and management systems and any failure of these systems could harm our business.

We depend on scientific computing and information technology and management systems, including third-party cloud computing infrastructure, operating systems and artificial intelligence platforms, for significant elements of our operations, including our laboratory information management system, clinical database, analytical platform, laboratory workflow tools, customer and collaborator reporting and related functions. We also depend on our proprietary workflow software to support new product and service launches and regulatory compliance.

We use complex software processes and bioinformatic pipelines to manage samples and evaluate sequencing result data. These are subject to initial design or ongoing modifications which may result in unanticipated issues that could cause variability in patient results, leading to service disruptions or errors, resulting in liability.

We have installed, and expects to expand, a number of enterprise software systems that affect a broad range of business processes and functional areas, including systems laboratory operations, handling human resources, financial controls and reporting, contract management, regulatory compliance and other infrastructure operations, and patient consent and information management. In addition to these business systems, we have installed, and intends to extend, the capabilities of both our preventative and detective security controls by augmenting the monitoring and alerting functions, the network design and the automatic countermeasure operations of our technical systems. These information technology and telecommunications systems support a variety of functions, including laboratory operations, test validation, sample tracking, quality control, customer service support, billing and reimbursement, research and development activities, scientific and medical curation and general administrative activities. In addition, our third-party billing and collections provider depends upon technology and telecommunications systems provided by outside vendors.

Information technology and telecommunications systems are vulnerable to damage from a variety of sources, including telecommunications or network failures, malicious internal or external human acts and natural disasters. Moreover, despite network security and back-up measures, some of our servers are potentially vulnerable to physical or electronic break-ins, computer viruses and similar disruptive problems. Despite the precautionary measures we have taken to prevent unanticipated problems that could affect our information technology and telecommunications systems, failures or significant downtime of these systems or those used by our collaborators or subcontractors could prevent it from conducting our comprehensive screening analysis, clinical diagnostics and drug discovery, preparing and providing reports to researchers, clinicians and our collaborators, billing payers, handling physician inquiries, conducting research and development activities and managing the administrative aspects of our business. Any disruption or loss of information technology or telecommunications systems on which critical aspects of our operations depend could have an adverse effect on our business and our reputation, and we may be unable to regain or repair our reputation in the future.

Risks Related to Being a Public Company

We will incur increased costs and demands on management as a result of compliance with laws and regulations applicable to public companies, which could harm our operating results.

As a public company, we incur significant legal, accounting and other expenses, including costs associated with public company reporting requirements. In addition, the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, as well as rules implemented by the SEC and Nasdaq, impose a number of requirements on public companies, including with respect to corporate governance practices. The SEC and other regulators have continued to adopt new rules and regulations and make additional changes to existing regulations that require the company's compliance. In addition, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, enacted in 2010, includes significant corporate governance and executive-compensation-related provisions. Our management and other personnel will need to devote a substantial amount of time to these compliance and disclosure obligations. If these requirements divert the attention of our management and personnel from other aspects of our business concerns, they could have a material adverse effect on our business, financial condition and results of operations. Moreover, these rules and regulations applicable to public companies substantially could increase our legal, accounting and financial compliance costs, require that we hire additional personnel and make some activities more time consuming and costly.

A market for our securities may not continue, which would adversely affect the liquidity and price of our securities.

The price of our securities may fluctuate significantly due to general market and economic conditions. An active trading market for our securities following the Business Combination may never develop or, if developed, it may not be sustained. In addition, the price of our securities can vary due to general economic conditions and forecasts, our general business condition and the release of our financial reports.

If the recently completed Business Combination's benefits do not meet the expectations of investors, stockholders or financial analysts, the market price of our securities may decline.

If the benefits of the recently completed Business Combination do not meet the expectations of investors or securities analysts, the market price of our securities may decline. In addition, fluctuations in the price of our securities could contribute to the loss of all or part of your investment. If an active market for our securities develops and continues, the trading price of our securities could be volatile and subject to wide fluctuations in response to various factors, some of which are beyond our control. Any of the factors listed below could have a material adverse effect on your investment in our securities and our securities may trade at prices significantly below the price you paid for them. In such circumstances, the trading price of our securities may not recover and may experience a further decline.

Factors affecting the trading price of our securities may include:

- actual or anticipated fluctuations in our quarterly financial results or the quarterly financial results of companies perceived to be similar to us;
- changes in the market's expectations about our operating results;
- the public's reaction to our press releases, our other public announcements and our filings with the SEC;
- speculation in the press or investment community;

- announcements of technological innovation, new products, acquisitions, strategic alliances, significant agreements by us or competitors;
- success of competitors;
- our operating results falling below our financial guidance or other projections or failing to meet the expectation of securities analysts or investors in a particular period;
- changes in financial estimates and recommendations by securities analysts concerning us or the market in general;
- operating and stock price performance of other companies that investors deem comparable to us;
- our ability to market new and enhanced products on a timely basis;
- changes in laws and regulations affecting our business;
- commencement of, or involvement in, litigation involving us;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- the volume of shares of our common stock available for public sale;
- any major change in our Board or management;
- sales of substantial amounts of common stock by our directors, officers or significant stockholders or the perception that such sales could occur;
- the expiration of the market stand-off or contractual lock-up agreements;
- the realization of any of the risk factors described herein;
- additions or departures of key personnel;
- failure to comply with the requirements of Nasdaq;
- failure to comply with SOX or other laws or regulations;
- actual, potential or perceived control, accounting or reporting problems;
- changes in accounting principles, policies and guidelines; and
- general economic and political conditions such as recessions, interest rates, fuel prices, international currency fluctuations and acts of war or terrorism.

Broad market and industry factors may materially harm the market price of our securities irrespective of our operating performance. The stock market in general and Nasdaq have experienced price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of the particular companies affected. The trading prices and valuations of these stocks, and of our securities, may not be predictable. A loss of investor confidence in the market for the stocks of other companies which investors perceive to be similar to us could depress our stock price regardless of our business, prospects, financial conditions or results of operations. A decline in the market price of our securities also could adversely affect our ability to issue additional securities and our ability to obtain additional financing in the future.

In the past, securities class action litigation has often been initiated against companies following periods of volatility in their stock price. This type of litigation could result in substantial costs and divert our management's attention and resources, and could also require us to make substantial payments to satisfy judgments or to settle litigation.

If securities or industry analysts do not publish or cease publishing research or reports about us, our business, or our market, or if they change their recommendations regarding our common stock adversely, then the price and trading volume of our common could decline.

The trading market for our common stock is influenced by the research and reports that industry or securities analysts may publish about us, our business, our market, or our competitors. Securities and industry analysts do not currently, and

may never, publish securities or industry analysts commence coverage of us, our stock price and trading volume would likely be negatively impacted. If any of the analysts who may cover us change their recommendation regarding our stock adversely, or provide more favorable relative recommendations about our competitors, the price of our common stock would likely decline. If any analyst who may cover us were to cease coverage of us or fail to regularly publish reports on it, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline.

Changes in laws, regulations or rules, or a failure to comply with any laws, regulations or rules, may adversely affect our business, investments and results of operations.

We are subject to laws, regulations and rules enacted by national, regional and local governments and Nasdaq. In particular, we are required to comply with certain SEC, Nasdaq and other legal or regulatory requirements. Compliance with, and monitoring of, applicable laws, regulations and rules may be difficult, time consuming and costly. Those laws, regulations or rules and their interpretation and application may also change from time to time and those changes could have a material adverse effect on our business, investments and results of operations. In addition, a failure to comply with applicable laws, regulations or rules, as interpreted and applied, could have a material adverse effect on our business and results of operations.

Anti-takeover provisions contained in our Amended and Restated Certificate of Incorporation and Bylaws, as well as provisions of Delaware law, could impair a takeover attempt.

Our Amended and Restated Certificate of Incorporation contains provisions that may discourage unsolicited takeover proposals that stockholders may consider to be in their best interests. We are also subject to anti-takeover provisions under Delaware law, which could delay or prevent a change of control. Together, these provisions may make more difficult the removal of management and may discourage transactions that otherwise could involve payment of a premium over prevailing market prices for our securities. These provisions will include:

- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- a classified board of directors with three-year staggered terms, which could delay the ability of stockholders to change the membership of a majority of the Board;
- the requirement that directors may only be removed from the Board for cause;
- the right of our Board to elect a director to fill a vacancy created by the expansion of our Board or the resignation, death or removal of a director in certain circumstances, which prevents stockholders from being able to fill vacancies on our Board;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- a prohibition on stockholders calling a special meeting and the requirement that a meeting of stockholders may only be called by a majority of the board, our chairman of the board or our chief executive officer and may not be called by any other person, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors;
- the requirement that changes or amendments to certain provisions of our Amended and Restated Certificate of Incorporation must be approved by holders of at least two-thirds of our common stock; and
- advance notice procedures that stockholders must comply with in order to nominate candidates to our Board or to propose matters to be acted upon at a meeting of stockholders, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us.

The JOBS Act permits "emerging growth companies" like us to take advantage of certain exemptions from various reporting requirements applicable to other public companies that are not emerging growth companies.

We currently qualify as an "emerging growth company" as defined in Section 2(a)(19) of the Securities Act, as modified by the JOBS Act. As such, we take advantage of certain exemptions from various reporting requirements applicable to other public companies that are not emerging growth companies for as long as we continue to be an emerging growth company, including: (i) the exemption from the auditor attestation requirements with respect to internal control

over financial reporting under Section 404 of SOX; (ii) the exemptions from say-on-pay, say-on-frequency and say-on-golden parachute voting requirements; and (iii) reduced disclosure obligations regarding executive compensation in our periodic reports. As a result, our stockholders may not have access to certain information they deem important. We will remain an emerging growth company until the earliest of (i) the last day of the fiscal year: (a) following September 1, 2025, the fifth anniversary of our IPO; (b) in which we have total annual gross revenue of at least \$1.07 billion; or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds \$700.0 million as of the prior June 30th, and (ii) the date on which we have issued more than \$1.0 billion in non-convertible debt during the prior three-year period.

In addition, Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the exemption from complying with new or revised accounting standards provided in Section 7(a)(2)(B) of the Securities Act as long as we are an emerging growth company. An emerging growth company can therefore delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies, but any such election to opt out is irrevocable. We have elected to avail ourselves of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we, as an emerging growth company, can adopt the new or revised standard at the time private companies adopt the new or revised standard. This may make comparison of our financial statements with another public company that is neither an emerging growth company nor an emerging growth company that has opted out of using the extended transition period difficult or impossible because of the potential differences in accounting standards used.

Additionally, we are a “smaller reporting company” as defined in Item 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We will remain a smaller reporting company until the last day of the fiscal year in which (i) the market value of our common stock held by non-affiliates exceeds \$250 million as of the prior June 30, or (ii) our annual revenues exceeded \$100 million during such completed fiscal year and the market value of our common stock held by non-affiliates exceeds \$700 million as of the prior June 30.

We cannot predict if investors will find our common stock less attractive because we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

Our internal controls over financial reporting may not be effective and our independent registered public accounting firm may not be able to certify as to their effectiveness, which could have a significant and adverse effect on our business and reputation.

As a public company following the Business Combination, we are required to comply with the SEC’s rules implementing Sections 302 and 404 of SOX, which require management to certify financial and other information in our quarterly and annual reports and provide an annual management report on the effectiveness of internal control over financial reporting. To comply with the requirements of being a public company, we are required to provide management’s assessment on internal controls, and we may need to undertake various actions, such as implementing additional internal controls and procedures and hiring additional accounting or internal audit staff. Further, as an emerging growth company, our independent registered public accounting firm is not required to formally attest to the effectiveness of our internal controls over financial reporting pursuant to Section 404 until the date we are no longer an emerging growth company. At such time, our independent registered public accounting firm may issue a report that is adverse in the event that it is not satisfied with the level at which the controls of the company are documented, designed or operating.

Testing and maintaining these controls can divert our management’s attention from other matters that are important to the operation of our business. If we identify material weaknesses in the internal control over financial reporting of the company or are unable to comply with the requirements of Section 404 or assert that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal controls over financial reporting when we no longer qualify as an emerging growth company, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our common stock could be negatively affected, and we could become subject to investigations by the SEC or other regulatory authorities, which could require additional financial and management resources.

The Amended and Restated Certificate of Incorporation designates the Court of Chancery of the State of Delaware and federal court within the State of Delaware as the exclusive forum for certain types of actions and proceedings that the

our stockholders may initiate, which could limit a stockholder's ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

The Amended and Restated Certificate of Incorporation designates the Court of Chancery of the State of Delaware and federal court within the State of Delaware as the exclusive forum for certain types of actions and proceedings that the our stockholders may initiate, which could limit a stockholder's ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

The Amended and Restated Certificate of Incorporation provides that, subject to limited exceptions, the Court of Chancery of the State of Delaware and federal court within the State of Delaware will be exclusive forums for any:

- derivative action or proceeding brought on our behalf;
- action asserting a claim of breach of a fiduciary duty owed by, or other wrongdoing by, any of our directors, officers, stockholders, employees or agents to us or our stockholders;
- action asserting a claim against the us or any of our directors, officers, stockholders, employees or agents arising pursuant to any provision of the General Corporation Law, the Company's Amended and Restated Certificate of Incorporation or Bylaws or as to which the General Corporation Law confers jurisdiction on the Court of Chancery of the State of Delaware;
- action to interpret, apply, enforce or determine the validity of the Amended and Restated Certificate of Incorporation or the Bylaws; or
- other action asserting a claim against us or any of our directors, officers, stockholders, employees or agents that is governed by the internal affairs doctrine.

This choice of forum provision does not apply to actions brought to enforce a duty or liability created under the Exchange Act or any other claim for which federal courts have jurisdiction. Furthermore, in accordance with our Bylaws, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States will be, to the fullest extent permitted by law, the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. Any person or entity purchasing or otherwise acquiring or holding any interest in any of our securities shall be deemed to have notice of and consented to our exclusive forum provision in the Bylaws and the choice of forum provision in the Amended and Restated Certificate of Incorporation.

These provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, or other employees, which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provisions contained in our restated certificate of incorporation to be inapplicable or unenforceable in an action, it may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, results of operations and financial condition.

The stockholders will not be deemed to have waived our compliance with the federal securities laws and the regulations promulgated thereunder.

Any person or entity purchasing or otherwise acquiring or holding any interest in any of our securities shall be deemed to have notice of and consented to its exclusive forum provisions, including the choice of forum provision. These provisions may limit a stockholders' ability to bring a claim, and may result in increased costs for a stockholder to bring a claim in a judicial forum of their choosing for disputes with us or our directors, officers, or other employees, which may discourage lawsuits against us and our directors, officers, and other employees.

Risks Related to Our Common Stock and Warrants

We may amend the terms of the public warrants in a manner that may be adverse to holders with the approval by the holders of at least 50% of the then-outstanding public warrants. As a result, the exercise price of a holder's public warrants could be increased, the exercise period could be shortened and the number of shares of our common stock purchasable upon exercise of a public warrant could be decreased, all without the approval of that warrant holder.

Our public warrants were issued in registered form under a warrant agreement between Continental Stock Transfer & Trust Company, as warrant agent, and us. The warrant agreement provides that the terms of the public warrants may be amended without the consent of any holder to cure any ambiguity or correct any defective provision, but requires the approval by the holders of at least 50% of the then-outstanding public warrants to make any change that adversely affects

the interests of the registered holders. Accordingly, we may amend the terms of the public warrants in a manner adverse to a holder if holders of at least 50% of the then-outstanding public warrants approve of such amendment. Although our ability to amend the terms of the public warrants with the consent of at least 50% of the then-outstanding public warrants is unlimited, examples of such amendments could be amendments to, among other things, increase the exercise price of the public warrants, convert the warrants into cash or stock, shorten the exercise period or decrease the number of shares of common stock purchasable upon exercise of a public warrant.

We may redeem unexpired public warrants prior to their exercise at a time that is disadvantageous to warrant holders, thereby making their public warrants worthless.

We have the ability to redeem outstanding public warrants at any time after they become exercisable and prior to their expiration, at a price of \$0.01 per public warrant; provided that the last reported sales price of our common stock equals or exceeds \$18.00 per share (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations and the like) for any 20 trading days within a 30 trading-day period ending on the third trading day prior to the date on which we give notice of such redemption to the warrant holders. If and when the public warrants become redeemable by us, we may exercise our redemption right even if we are unable to register or qualify the underlying securities for sale under all applicable state securities laws. We will use our best efforts to register or qualify such shares of common stock under the blue sky laws of the state of residence in those states in which the warrants were offered by us. Redemption of the outstanding public warrants could force the warrant holders: (i) to exercise their public warrants and pay the exercise price therefor at a time when it may be disadvantageous for them to do so; (ii) to sell their public warrants at the then-current market price when they might otherwise wish to hold their public warrants; or (iii) to accept the nominal redemption price which, at the time the outstanding public warrants are called for redemption, is likely to be substantially less than the market value of their public warrants. None of the private placement warrants will be redeemable by us so long as they are held by CMLS Holdings LLC, or the "Sponsor," or its permitted transferees.

Our warrants are exercisable for our common stock, which will increase the number of shares eligible for future resale in the public market and result in dilution to our stockholders.

As of September 30, 2021, our public warrants are exercisable for 14,758,305 shares of common stock at \$11.50 per share. Our private warrants are exercisable for 7,236,667 shares of common stock at \$11.50 per share. The additional shares of our common stock issuable upon exercise of our warrants will result in dilution to the then existing holders of our common stock and increase the number of shares eligible for resale in the public market. Sales of substantial numbers of such shares in the public market could adversely affect the market price of our common stock.

In addition, the assumptions used in preparing the pro forma financial information may not prove to be accurate and other factors may affect our financial condition or results of operations. Any potential decline in our financial condition or results of operations may cause significant variations in our stock price.

Our warrants are accounted for as liabilities and the changes in value of our warrants could have a material effect on our financial results.

On April 12, 2021, the Acting Director of the Division of Corporation Finance and Acting Chief Accountant of the SEC together issued a statement regarding the accounting and reporting considerations for warrants issued by special purpose acquisition companies, or SPACs, entitled "Staff Statement on Accounting and Reporting Considerations for Warrants Issued by Special Purpose Acquisition Companies, or the "SEC Statement." Specifically, the SEC Statement focused on certain settlement terms and provisions related to certain tender offers following a business combination, which terms are similar to those contained in the warrant agreement governing our warrants. As a result of the SEC Statement, we reevaluated the accounting treatment of our 14,758,333 public warrants and 7,236,667 private placement warrants outstanding at such time, and determined to classify the warrants as derivative liabilities measured at fair value, with changes in fair value each period reported in earnings.

As a result, included on CMLS's balance sheet as of December 31, 2020 are derivative liabilities related to our warrants. Accounting Standards Codification 815, Derivatives and Hedging, or ASC 815, provides for the remeasurement of the fair value of such derivatives at each balance sheet date, with a resulting non-cash gain or loss related to the change in the fair value being recognized in earnings in the statement of operations. As a result of the recurring fair value measurement, our financial statements and results of operations may fluctuate quarterly, based on factors, which are outside of our control. Due to the recurring fair value measurement, we expect that we will recognize non-cash gains or losses on our warrants each reporting period and that the amount of such gains or losses could be material.

The price of our common stock and warrants may be volatile.

The price of our common stock and warrants may fluctuate due to a variety of factors, including:

- changes in the industries in which we and our customers operate;
- variations in our operating performance and the performance of our competitors in general;
- material and adverse impact of the COVID-19 pandemic on the markets and the broader global economy;
- actual or anticipated fluctuations in our quarterly or annual operating results;
- the public's reaction to our press releases, our other public announcements and our filings with the SEC;
- our failure or the failure of our competitors to meet analysts' projections or guidance that we or our competitors may give to the market;
- additions and departures of key personnel;
- changes in laws and regulations affecting our business;
- commencement of, or involvement in, litigation involving us;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- publication of research reports by securities analysts about us or our competitors or our industry;
- sales of shares of our common stock by certain investors, or the PIPE Investors, in the \$350.0 million private placement we consummated in connection with the Business Combination, or the PIPE Investment;
- the volume of shares of our common stock available for public sale; and
- general economic and political conditions such as recessions, interest rates, social, political and economic risks and acts of war or terrorism.

These market and industry factors may materially reduce the market price of our common stock and warrants regardless of our operating performance.

A portion of our total outstanding shares are restricted from immediate resale but may be sold into the market in the near future. This could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a significant number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock.

Immediately after the closing of the Business Combination: (i) holders of Legacy Sema4 common stock owned approximately 64.89% of our total outstanding common stock, (ii) holders of public shares owned 18.43% of our total outstanding common stock, (iii) the Sponsor and certain of CMLS's other initial stockholders owned 4.61% of our total outstanding common stock and (iv) the PIPE Investors owned approximately 12.07% of our total outstanding shares of common stock.

Although the Sponsor and certain of our stockholders are subject to certain lock-up restrictions regarding the transfer of our common stock, these shares may be sold after the expiration or early termination of the respective applicable lock-ups. As restrictions on resale end, the market price of our common stock could decline if the holders of currently restricted shares sell them or are perceived by the market as intending to sell them.

Even though we consummated the Business Combination, there is no guarantee that the public warrants will ever be in the money, and they may expire worthless and the terms of our public warrants may be amended.

The exercise price for the public warrants is \$11.50 per share of common stock. There is no guarantee that the public warrants will ever be in the money prior to their expiration, and as such, the public warrants may expire worthless.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Recent Sales of Unregistered Securities

The information required by this Item 2 related to the PIPE Investment is contained in the Current Report on Form 8-K, filed with SEC on July 28, 2021, as amended.

Issuer Purchases of Equity Securities

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

On November 15, 2021 (the "Effective Date"), the Company entered into the SVB Agreement with SVB and Sema4 OpCo (and together with the Company, the "Borrower"). The SVB Agreement provides for a Revolver up to an aggregate principal amount of \$125.0 million, including a sublimit of \$20.0 million (minus any Cash Management Services) for Letters of Credit (as such terms are defined in the SVB Agreement). The outstanding principal amount of any Advance (as such term is defined in the SVB Agreement) will bear interest at a floating rate per annum equal to the greater of (1) 4.00% and (2) the Prime Rate plus the Prime Rate Margin. The Revolver will mature on November 15, 2024.

The obligations under the SVB Agreement are secured by a first priority perfected security interest in substantially all of the Company's assets except for (i) Governmental Collection Accounts (as defined in the SVB Agreement), (ii) more than 65% of the presently existing and thereafter arising issued and outstanding shares of capital stock owned by Borrowers in a Foreign Subsidiary (as such term is defined in the SVB Agreement) and (iii) intellectual property pursuant to the terms of the SVB Agreement.

The SVB Agreement contains customary representations and warranties and customary affirmative and negative covenants, including, among other things, restrictions on indebtedness, liens, investments, mergers, dispositions, and dividends and other distributions.

The SVB Agreement requires the Borrower to comply with certain financial covenants if Liquidity (as such term is defined in the SVB Agreement) falls below \$135.0 million. These financial covenants include (i) a minimum Adjusted Quick Ratio (as such term is defined in the SVB Agreement) and (ii) the achievement of certain minimum revenue targets. On a monthly basis, the Borrowers would be required to maintain a minimum Adjusted Quick Ratio of greater than or equal to 1.25 to 1.0. The Borrower must also maintain certain trailing six-month minimum revenue targets through maturity if outstanding borrowings under the Revolver exceed \$50.0 million.

The SVB Agreement also includes customary events of default, including failure to pay principal, interest or certain other amounts when due, material inaccuracy of representations and warranties, violation of covenants, certain bankruptcy and insolvency events, certain undischarged judgments, material invalidity of guarantees or grant of security interest, material adverse change, and involuntary delisting from Nasdaq, in certain cases subject to certain thresholds and grace periods. If one or more events of default occurs and continues beyond any applicable cure period, SVB may, without notice or demand to the Borrower, terminate its commitment to make further loans and declare all of the obligations of the Borrowers under the SVB Agreement to be immediately due and payable.

The foregoing description of the SVB Agreement is not intended to be complete and is qualified in its entirety by reference to the SVB Agreement, a copy of which is filed as Exhibit 10.26 to this Quarterly Report on Form 10-Q.

Item 6. Exhibits

The following exhibits are filed as part of, or incorporated by reference into, this Quarterly Report.

Incorporated by Reference

No.	Description of Exhibit	Form	Exhibit	Filing Date
2.1+	Agreement and Plan of Merger, dated February 9, 2021, by and among CMLS, Merger Sub and Legacy Sema4, as amended by Amendment to Agreement and Plan of Merger dated May 3, 2021.	DEF14M	Annex A	07/02/2021
3.1	Third Amended and Restated Certificate of Incorporation of Sema4 Holdings Corp.	8-K	3.1	07/28/2021
3.2	Restated Bylaws of Sema4 Holdings Corp.	8-K	3.2	07/28/2021
10.1	Amended and Restated Registration Rights Agreement, dated as of July 22, 2021, by and among the Company, certain equity holders of the Company named therein and certain equity holders of Sema4 named therein.	8-K	10.2	07/28/2021
10.2	Form Director of and Officer Indemnification Agreement.	8-K	10.4	07/28/2021
10.3	2021 Equity Incentive Award Plan.	8-K	10.5	07/28/2021
10.4	Form of Stock Option Agreement under the 2021 Incentive Award Plan.	8-K	10.6	07/28/2021
10.5	Form of RSU Agreement under the 2021 Incentive Award Plan.	8-K	10.7	07/28/2021
10.6	Form of Earn-Out RSU Agreement.	8-K	10.8	07/28/2021
10.7	2021 Employee Stock Purchase Plan.	8-K	10.9	07/28/2021
10.8	Amended and Restated Employment of Agreement of Eric Schadt.	8-K	10.10	07/28/2021
10.9	Employment Agreement of Isaac Ro.	8-K	10.11	07/28/2021
10.10	Employment Agreement of Dan Clark.	8-K	10.12	07/28/2021
10.11	Employment Agreement of James Coffin.	8-K	10.13	07/28/2021
10.12	Employment Agreement of Anthony Prentice.	8-K	10.14	07/28/2021
10.13	Employment Agreement of Kareem Saad.	8-K	10.15	07/28/2021
10.14	Employment Agreement of Karen White.	8-K	10.16	07/28/2021

10.15	Sub-Sublease, dated as of June 6, 2017, by and between Icahn School of Medicine at Mount Sinai and the Company, as amended July 31, 2019.	8-K	10.17	07/28/2021
10.16	Sublease Agreement, dated as of November 8, 2019, by and between Marriott International, Inc. and the Company.	8-K	10.18	07/28/2021
10.17	Sublease, dated as of June 1, 2017, by and between Icahn School of Medicine at Mount Sinai and the Company, as amended December 22, 2017.	8-K	10.19	07/28/2021
10.18	Sublease, dated as of April 23, 2019, by and between Icahn School of Medicine at Mount Sinai and the Company.	8-K	10.20	07/28/2021
10.19	Lease Agreement, dated as of January 31, 2020, by and between 1 Commercial Street Associates, LLC and the Company.	8-K	10.21	07/28/2021
10.20#	Master Services Agreement, dated as of April 2, 2018, by and among the Company, Icahn School of Medicine at Mount Sinai, The Mount Sinai Hospital, and the parties thereto, as amended July 31, 2019.	8-K	10.22	07/28/2021
10.21#	Master Services Agreement, dated as of May 10, 2018, by and between the Company and Icahn School of Medicine at Mount Sinai, as amended July 31, 2019.	8-K	10.23	07/28/2021
10.22#	Data Structuring and Curation Agreement, dated as of August 1, 2019, by and between Icahn School of Medicine at Mount Sinai and the Company, as amended March 11, 2020.	8-K	10.24	07/28/2021
10.23#	BioMe Biospecimen and Data Access Agreement, dated as of July 19, 2019, by and between Icahn School of Medicine at Mount Sinai and the Company.	8-K	10.25	07/28/2021
10.24#	Non-Exclusive Patent License Agreement, dated as of June 1, 2017, by and between the Company and Icahn School of Medicine at Mount Sinai.	8-K	10.26	07/28/2021
10.25#	Supply Agreement, dated as of June 20, 2014, by and between the Company and Illumina, Inc., and amendments thereto.	8-K	10.27	07/28/2021
10.26*	Loan and Security Agreement, dated as of November 15, 2021, between Silicon Valley Bank, the Company and Semad OpCo, Inc.			
31.1*	Certification of Principal Executive Officer Pursuant to Securities Exchange Act Rules 13a-14(a) and 15(d)-14(a), as adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.			

31.2*	Certification of Principal Financial Officer Pursuant to Securities Exchange Act Rules 13a-14(a) and 15(d)-14(a), as adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2**	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as inline XBRL with applicable taxonomy extension information contained in Exhibits 101.)

* Filed herewith.

** Furnished.

+ Certain of the exhibits and schedules to this Exhibit have been omitted in accordance with Regulation S-K Item 601(a)(5). The Company agrees to furnish a copy of all omitted exhibits and schedules to the SEC upon its request.

The Company has omitted portions of the exhibit as permitted under Regulation S-K Item 601(b)(10).

Signatures

Pursuant to the requirements of Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

SEMA4 HOLDINGS CORP.

Date: November 15, 2021

/s/ Eric Schadt
Name: Eric Schadt
Title: Chief Executive Officer and Director (Principal Executive Officer)

Date: November 15, 2021

/s/ Isaac Ro
Name: Isaac Ro
Title: Chief Financial Officer (Principal Financial Officer)

LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT (this "Agreement") is dated as of the Effective Date between SILICON VALLEY BANK, a California corporation ("Bank"), and the borrowers listed on Schedule I hereto (individually and collectively, jointly and severally, "Borrower"). The parties agree as follows:

1 LOAN AND TERMS OF PAYMENT**1.1 Revolving Line.**

(a) Availability. Subject to the terms and conditions of this Agreement, Bank shall make Advances not exceeding the Availability Amount. Amounts borrowed under the Revolving Line may be prepaid or repaid as set forth on Schedule I hereto.

(b) Termination; Repayment. The Revolving Line terminates on the Revolving Line Maturity Date, when the outstanding principal amount of all Advances, the accrued and unpaid interest thereon, and all other outstanding Obligations relating to the Revolving Line shall be immediately due and payable.

1.2 Letters of Credit Sublimit.

(a) As part of the Revolving Line, Bank shall issue or have issued Letters of Credit denominated in Dollars or a Foreign Currency for Borrower's account. The aggregate Dollar Equivalent of the face amount of outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit and any Letter of Credit Reserve) may not exceed the Revolving Line minus the sum of (x) all outstanding principal amounts of any Advances, and minus (y) all amounts used for Cash Management Services. In addition, the aggregate Dollar Equivalent of the face amount of outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit and any Letter of Credit Reserve) is as set forth on Schedule I hereto. Any amounts needed to fully reimburse Bank for any amounts not paid by Borrower in connection with Letters of Credit will be treated as Advances under the Revolving Line and will accrue interest at the interest rate applicable to Advances.

(b) If, on the Revolving Line Maturity Date (or the effective date of any termination of this Agreement), there are any outstanding Letters of Credit, then on such date Borrower shall provide to Bank cash collateral in an amount equal to at least (i) 105.0% of the face amount of all such Letters of Credit denominated in Dollars and (ii) 110.0% of the Dollar Equivalent of the face amount of all such Letters of Credit denominated in a Foreign Currency, plus, in each case, all interest, fees, and costs due or estimated by Bank to become due in connection therewith, to secure all of the Obligations relating to such Letters of Credit.

(c) All Letters of Credit shall be in form and substance acceptable to Bank in its sole discretion and shall be subject to the terms and conditions of Bank's standard Application and Letter of Credit Agreement (the "**Letter of Credit Application**"). Borrower shall execute any further documentation in connection with the Letters of Credit as Bank may reasonably request. Borrower shall be bound by the regulations and interpretations of the issuer of any Letters of Credit guaranteed by Bank and issued for Borrower's account or by Bank's interpretations of any Letter of Credit issued by Bank for Borrower's account. Bank shall not be liable for any error, negligence, or mistake, whether of omission or commission, in following Borrower's instructions or those contained in the Letters of Credit or any modifications, amendments, or supplements thereto.

(d) The obligation of Borrower to immediately reimburse Bank for drawings made under Letters of Credit shall be absolute, unconditional, and irrevocable, and shall be performed strictly in accordance with the terms of this Agreement, such Letters of Credit, and the Letter of Credit Application.

(e) Borrower may request that Bank issue a Letter of Credit payable in a Foreign Currency. If a demand for payment is made under any such Letter of Credit, Bank shall treat such demand as an Advance to Borrower of the Dollar Equivalent of the amount thereof (plus fees and charges in connection therewith such as wire, cable, SWIFT or similar charges).

(f) To guard against fluctuations in currency exchange rates, upon the issuance of any Letter of Credit payable in a Foreign Currency, Bank shall create a reserve (the "**Letter of Credit Reserve**") under the Revolving Line in an amount equal to a percentage (which percentage shall be determined by Bank in its sole discretion) of the Dollar Equivalent of the face amount of such Letter of Credit. The amount of the Letter of Credit Reserve may be adjusted by Bank from time to time to account for fluctuations in the exchange rate. The availability of funds under the Revolving Line shall be reduced by the amount of such Letter of Credit Reserve for as long as such Letter of Credit remains outstanding.

1.3 Cash Management Services Sublimit. As part of the Revolving Line, Bank shall permit Borrower to use Bank's cash management services, which may include merchant services, direct deposit of payroll, business credit card, and check cashing services identified in Bank's various cash management services agreements (collectively, the "**Cash Management Services**"). The aggregate amount used for Cash Management Services at any one time may not exceed the Revolving Line, minus the sum of (x) all outstanding principal amounts of any Advances, and (y) the aggregate Dollar Equivalent of the face amount of outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit and any Letter of Credit Reserve). In addition, the aggregate amount used for Cash Management Services at any one time is as set forth on Schedule I hereto. Any amounts needed to fully reimburse Bank for any amounts not paid by Borrower in connection with Cash Management Services which are not paid or reimbursed on or before the date when due will be treated as Advances under the Revolving Line and will accrue interest at the interest rate applicable to Advances.

1.4 Payment of Interest on the Credit Extensions.

(a) Interest Payments. Interest on the principal amount of each Advance is payable as set forth on Schedule I hereto.

(b) Interest Rate.

(i) Advances. Subject to Section 1.4(c), the outstanding principal amount of any Advance shall accrue interest as set forth on Schedule I hereto.

(ii) All-In Rate. Notwithstanding any terms in this Agreement to the contrary, if at any time the interest rate applicable to any Obligations is less than 0.0%, such interest rate shall be deemed to be 0.0% for all purposes of this Agreement.

(c) Default Rate. Immediately upon the occurrence and during the continuance of an Event of Default, the outstanding Obligations shall bear interest at a rate per annum which is 5.0% above the rate that is otherwise applicable thereto (the "**Default Rate**") unless Bank otherwise elects, in its sole discretion, to impose a lesser increase. Fees and expenses which are required to be paid by Borrower pursuant to the Loan Documents (including, without limitation, Bank Expenses) but are not paid when due shall bear interest until paid at a rate equal to the highest rate applicable to the Obligations. Payment or acceptance of the increased interest rate provided in this Section 1.4(c) is not a permitted alternative to timely payment and shall not constitute a waiver of any Event of Default or otherwise prejudice or limit any rights or remedies of Bank.

(d) Adjustment to Interest Rate. Each change in the interest rate applicable to any amounts payable under the Loan Documents based on changes to the Prime Rate shall be effective on the effective date of any change to the Prime Rate and to the extent of such change.

(e) Interest Computation. Interest shall be computed as set forth on Schedule I hereto. In computing interest, the date of the making of any Credit Extension shall be included and the date of payment shall be excluded; provided, however, that if any Credit Extension is repaid on the same day on which it is made, such day shall be included in computing interest on such Credit Extension.

1.5 Fees. Borrower shall pay to Bank:

(a) Revolving Line Commitment Fee. A fully earned, non-refundable commitment fee as set forth on Schedule I hereto;

(b) **Anniversary Fees.** For each twelve (12) month anniversary of the Effective Date, a non-refundable anniversary fee (each, an “**Anniversary Fee**” and, collectively, the “**Anniversary Fees**”) in an amount equal to \$500,000.00, which shall be fully-earned and non-refundable as of the Effective Date and due and payable on the earliest to occur of (i) each such twelve (12) month anniversary of the Effective Date, (ii) the termination of this Agreement (iii) the Revolving Line Maturity Date, and (iv) the occurrence of an Event of Default;

(c) **Letter of Credit Fee.** Bank’s customary fees and expenses for the issuance or renewal of Letters of Credit, including, without limitation, a Letter of Credit Fee with respect to each Letter of Credit payable upon the issuance, each anniversary of such issuance and any renewal thereof, which shall be fully earned and non-refundable as of such date;

(d) **Termination Fee.** Upon termination of this Agreement or the termination of the Revolving Line for any reason prior to the Revolving Line Maturity Date, in addition to the payment of any other amounts then owing, a termination fee in an amount equal to (i) 1.50% of the Revolving Line if such termination occurs on or prior to the first anniversary of the Effective Date, (ii) 0.75% of the Revolving Line if such termination occurs at any time after the first anniversary of the Effective Date but on or prior to the second anniversary of the Effective Date, or (iii) 0.0% of the Revolving Line if such termination occurs at any time after the second anniversary of the Effective Date, which shall be fully earned and non-refundable as of such date (the “**Termination Fee**”); provided that no Termination Fee shall be charged if the credit facility hereunder is replaced with a new facility from Bank;

(e) **Unused Revolving Line Facility Fee.** Payable quarterly in arrears, on the last calendar day of each calendar quarter prior to the Revolving Line Maturity Date, and on the Revolving Line Maturity Date, a fee (the “**Unused Revolving Line Facility Fee**”) in an amount equal to 0.25% per annum of the average unused portion of the Revolving Line, as determined by Bank, computed on the basis of a year with the applicable number of days as set forth in Section 1.4(e), which shall be fully earned and non-refundable as of such date. The unused portion of the Revolving Line, for purposes of this calculation, shall be calculated on a calendar year basis and shall equal the difference between (i) the Revolving Line, and (ii) the average for the period of the daily closing balance of the Revolving Line outstanding plus the sum of (x) the aggregate Dollar Equivalent of the face amount of outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit and any Letter of Credit Reserve), and (y) all amounts used for Cash Management Services;

(f) **Good Faith Deposit.** Borrower has paid to Bank a good faith deposit of \$100,000.00 prior to the date hereof which shall be applied towards Bank Expenses incurred through the Effective Date; and

(g) **Bank Expenses.** All Bank Expenses incurred through and after the Effective Date, when due (or, if no stated due date, upon demand by Bank).

Unless otherwise provided in this Agreement or in a separate writing by Bank, Borrower shall not be entitled to any credit, rebate, or repayment of any fees earned by Bank pursuant to this Agreement, notwithstanding any termination of this Agreement or the suspension or termination of Bank’s obligation to make loans and advances hereunder. Bank may deduct amounts owing by Borrower under the clauses of this Section 1.5 pursuant to the terms of Section 1.6(c). Bank shall provide Borrower written notice of deductions made pursuant to the terms of the clauses of this Section 1.5.

1.6 Payments; Application of Payments; Debit of Accounts.

(a) All payments (including prepayments) to be made by Borrower under any Loan Document shall be made in immediately available funds in Dollars, without setoff, counterclaim, or deduction, before 12:00 p.m. Eastern time on the date when due. Payments of principal and/or interest received after 12:00 p.m. Eastern time are considered received at the opening of business on the next Business Day. When a payment is due on a day that is not a Business Day, the payment shall be due the next Business Day, and additional fees or interest, as applicable, shall continue to accrue until paid.

(b) Bank has the right to determine in its commercially reasonable discretion the order and manner in which all payments with respect to the Obligations may be applied. Borrower shall have no right to

specify the order or the accounts to which Bank shall allocate or apply any payments required to be made by Borrower to Bank or otherwise received by Bank under this Agreement when any such allocation or application is not specified elsewhere in this Agreement.

(c) Bank may debit the Designated Deposit Account (or, if funds in the Designated Deposit Account are insufficient or if an Event of Default as occurred and is continuing, any other account of Borrower maintained with Bank (other than any Excluded Account)) for principal and interest payments or any other amounts Borrower owes Bank when due under the Loan Documents. These debits shall not constitute a set-off.

1.7 Change in Circumstances.

(a) Increased Costs. If any Change in Law shall: (i) impose, modify, or deem applicable any reserve, special deposit, compulsory loan, insurance charge, or similar requirement against assets of, deposits with or for the account of, or advances, loans, or other credit extended or participated in by, Bank, (ii) subject Bank to any Taxes (other than (A) Indemnified Taxes, (B) Taxes described in clauses (b) through (d) of the definition of Excluded Taxes, and (C) Connection Income Taxes) on its loans, loan principal, letters of credit, commitment, or other obligations, or its deposits, reserves, other liabilities, or capital attributable thereto, or (iii) impose on Bank any other condition, cost, or expense (other than Taxes) affecting this Agreement or Credit Extensions made by Bank, and the result of any of the foregoing shall be to increase the cost to Bank of making, converting to, continuing, or maintaining any Credit Extension (or of maintaining its obligation to make any such Credit Extension), or to reduce the amount of any sum received or receivable by Bank hereunder (whether of principal, interest, or any other amount) then, upon written request of Bank, Borrower shall promptly pay to Bank such additional amount or amounts as will compensate Bank for such additional costs incurred or reduction suffered.

(b) Capital Requirements. If Bank determines that any Change in Law affecting Bank regarding capital or liquidity requirements, has or would have the effect of reducing the rate of return on Bank's capital as a consequence of this Agreement, the Revolving Line, any term loan facility, or the Credit Extensions made by Bank to a level below that which Bank could have achieved but for such Change in Law (taking into consideration Bank's policies with respect to capital adequacy and liquidity), then from time to time upon written request of Bank, Borrower shall promptly pay to Bank such additional amount or amounts as will compensate Bank for any such reduction suffered.

(c) Delay in Requests. Failure or delay on the part of Bank to demand compensation pursuant to this Section 1.7 shall not constitute a waiver of Bank's right to demand such compensation; provided that Borrower shall not be required to compensate Bank pursuant to subsection (a) for any increased costs incurred or reductions suffered more than 9 months prior to the date that Bank notifies Borrower of the Change in Law giving rise to such increased costs or reductions (except that if the Change in Law giving rise to such increased costs or reductions is retroactive, then the 9-month period shall be extended to include the period of retroactive effect).

1.8 Taxes.

(a) Payments Free of Taxes. Any and all payments by or on account of any Obligation of Borrower under any Loan Document shall be made without deduction or withholding for any Taxes, except as required by Applicable Law. If any Applicable Law (as determined in the good-faith discretion of Borrower) requires the deduction or withholding of any Tax from any such payment by Borrower, then (i) Borrower shall be entitled to make such deduction or withholding, (ii) Borrower shall timely pay the full amount deducted or withheld to the relevant Governmental Authority in accordance with Applicable Law, and (iii) if such Tax is an Indemnified Tax, the sum payable by Borrower shall be increased as necessary so that, after such deduction or withholding has been made (including such deductions and withholdings applicable to additional sums payable under this Section 1.8), Bank receives an amount equal to the sum it would have received had no such deduction or withholding been made.

(b) Payment of Other Taxes by Borrower. Without limiting the provisions of subsection (a) above, Borrower shall timely pay any Other Taxes to the relevant Governmental Authority in accordance with Applicable Law.

(c) **Tax Indemnification.** Without limiting the provisions of subsections (a) and (b) above, Borrower shall, and does hereby, indemnify Bank, within 10 days after demand therefor, for the full amount of any Indemnified Taxes (including Indemnified Taxes imposed or asserted on or attributable to amounts payable under this Section 1.8) payable or paid by Bank or required to be withheld or deducted from a payment to Bank and any reasonable expenses arising therefrom or with respect thereto, whether or not such Indemnified Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to Borrower by Bank shall be conclusive absent manifest error.

(d) **Evidence of Payments.** As soon as practicable after any payment of Taxes by Borrower to a Governmental Authority pursuant to this Section 1.8, Borrower shall deliver to Bank a certified copy of a receipt issued by such Governmental Authority evidencing such payment, a copy of the return reporting such payment, or other evidence of such payment reasonably satisfactory to Bank.

(e) **Status of Bank.** If Bank (including any assignee or successor) is entitled to an exemption from or reduction of withholding tax with respect to payments made under any Loan Document, Bank shall deliver to Borrower, at the time or times reasonably requested by Borrower, such properly completed and executed documentation reasonably requested by Borrower as will permit such payments to be made without withholding or at a reduced rate of withholding. In addition, Bank, if reasonably requested by Borrower, shall deliver such other documentation prescribed by Applicable Law or reasonably requested by Borrower as will enable Borrower to determine whether or not Bank is subject to backup withholding or information reporting requirements. Without limiting the generality of the foregoing, Bank shall deliver whichever of IRS Form W-9, IRS Form W-8BEN-E, IRS Form W-8ECI or W-8IMY is applicable, as well as any applicable supporting documentation or certifications. Bank agrees that if any form or certification it previously delivered expires or becomes obsolete or inaccurate in any respect, it shall update such form or certification or promptly notify Borrower in writing of its legal inability to do so. If a payment made to Bank under any Loan Document would be subject to U.S. federal withholding Tax imposed by FATCA if Bank were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Internal Revenue Code, as applicable), Bank shall deliver to Borrower at the time or times prescribed by law and at such time or times reasonably requested by Borrower such documentation prescribed by Applicable Law (including as prescribed by Section 1471(b)(3)(C)(i) of the Internal Revenue Code) and such additional documentation reasonably requested by Borrower as may be necessary for Borrower to comply with its obligations under FATCA and to determine that Bank has complied with Bank's obligations under FATCA or to determine the amount, if any, to deduct and withhold from such payment. Solely for purposes of the preceding sentence, "FATCA" shall include any amendments made to FATCA after the date of this Agreement.

(f) **Treatment of Certain Refunds.** If Bank determines, in its sole discretion exercised in good faith, that it has received a refund of any Taxes as to which it has been indemnified pursuant to this Section (including by the payment of additional amounts pursuant to this Section), it shall pay to Borrower an amount equal to such refund (but only to the extent of indemnity payments made under this Section with respect to the Taxes giving rise to such refund), net of all out-of-pocket expenses (including Taxes) of Bank and without interest (other than any interest paid by the relevant Governmental Authority with respect to such refund). Borrower, upon the request of Bank, shall repay to Bank the amount paid over pursuant to this paragraph (f) (plus any penalties, interest or other charges imposed by the relevant Governmental Authority) in the event that Bank is required to repay such refund to such Governmental Authority. Notwithstanding anything to the contrary in this paragraph (f), in no event will Bank be required to pay any amount to Borrower pursuant to this paragraph (f) the payment of which would place Bank in a less favorable net after-Tax position than Bank would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid. This paragraph shall not be construed to require Bank to make available its Tax returns (or any other information relating to its Taxes that it deems confidential) to Borrower or any other Person.

1.9 Procedures for Borrowing.

(a) Subject to the prior satisfaction of all other applicable conditions to the making of an Advance set forth in this Agreement (which must be satisfied no later than 12:00 p.m. Eastern time on the applicable Funding Date), to obtain an Advance (other than under Sections 1.2 or 1.3), Borrower (via an individual duly

authorized by an Administrator) shall notify Bank (which notice shall be irrevocable) by 12:00 p.m. Eastern time on the Funding Date of the Advance. Such notice shall be made through Bank's online banking program, provided, however, if Borrower is not utilizing Bank's online banking program, then such notice shall be in a written format acceptable to Bank that is executed by an Authorized Signer. In connection with any such notification, Borrower shall deliver to Bank by electronic mail or through Bank's online banking program such reports and information, including without limitation, sales journals, cash receipts journals, accounts receivable aging reports, as Bank may reasonably request. Bank shall have received satisfactory evidence that the Board has approved that such Authorized Signer may provide such notices and request Advances (which requirement may be deemed satisfied by the prior delivery of Borrowing Resolutions or a secretary's certificate that certifies as to such Board approval).

(b) Bank shall credit proceeds of a Credit Extension to the Designated Deposit Account. Bank may make Advances under this Agreement based on instructions from an Authorized Signer or without instructions if such Advances are necessary to meet Obligations which have become due.

2 **CONDITIONS OF CREDIT EXTENSIONS**

2.1 Conditions Precedent to Initial Credit Extension. Bank's obligation to make the initial Credit Extension is subject to the condition precedent that Bank shall have received, in form and substance satisfactory to Bank, such documents, and completion of such other matters, as Bank may have reasonably requested, including, without limitation:

- (a) duly executed Loan Documents;
- (b) duly executed Control Agreements required by Bank;
- (c) the Operating Documents of each Borrower and (i) a long-form good standing certificate of each Borrower certified by the Secretary of State of the State of Delaware and (ii) good standing/foreign qualification certificates certified by the Secretary of State (or equivalent agency) of each other jurisdiction in which each Borrower is qualified to conduct business, in the case of (i) and (ii), each as of a date no earlier than 30 days prior to the Effective Date;
- (d) certificate duly executed by a Responsible Officer or secretary of each Borrower with respect to such Borrower's (i) Operating Documents and (ii) Borrowing Resolutions;
- (e) duly executed subordination agreement by Connecticut Department of Economics and Community Development ("CDEC") in favor of Bank (the "**CDEC Subordination Agreement**"), together with copies of the underlying documents evidencing Borrower's Indebtedness with CDEC;
- (f) certified copies, dated as of a recent date, of searches for financing statement filed in the central filing office of the State of Delaware, accompanied by written evidence (including any UCC termination statements) that the Liens indicated in any such financing statements either constitute Permitted Liens or have been or, in connection with the initial Credit Extension, will be terminated or released;
- (g) duly executed Perfection Certificate of each Borrower;
- (h) a legal opinion of Borrower's counsel dated as of the Effective Date;
- (i) evidence satisfactory to Bank that the insurance policies required by Section 5.6 hereof are in full force and effect;
- (j) with respect to the initial Advance, the completion of the Initial Audit; and
- (k) payment of the fees and Bank Expenses then due as specified in Section 1.5 hereof.

2.2 Conditions Precedent to all Credit Extensions. Bank's obligation to make each Credit Extension, including the initial Credit Extension, is subject to the following conditions precedent:

(a) receipt of Borrower's Credit Extension request and the related materials and documents as required by and in accordance with Section 1.9;

(b) the representations and warranties in this Agreement shall be true and correct in all material respects as of the date of any Credit Extension request and as of the Funding Date of each Credit Extension; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true and correct in all material respects as of such date, and no Default or Event of Default shall have occurred and be continuing or result from the Credit Extension. Each Credit Extension is Borrower's representation and warranty on that date that the representations and warranties in this Agreement are true and correct in all material respects as of such date; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true and correct in all material respects as of such date; and

(c) a Material Adverse Change shall not have occurred and be continuing.

2.3 Covenant to Deliver. Borrower shall deliver to Bank each item required to be delivered to Bank under this Agreement as a condition precedent to any Credit Extension. A Credit Extension made prior to the receipt by Bank of any such item shall not constitute a waiver by Bank of Borrower's obligation to deliver such item, and the making of any Credit Extension in the absence of a required item shall be in Bank's sole discretion.

3 CREATION OF SECURITY INTEREST

3.1 Grant of Security Interest.

(a) Borrower hereby grants Bank, to secure the payment and performance in full of all of the Obligations, a continuing security interest in, and pledges to Bank, the Collateral, wherever located, whether now owned or hereafter acquired or arising, and all proceeds and products thereof.

(b) Borrower acknowledges that it previously has entered, or may in the future enter, into Bank Services Agreements with Bank. Regardless of the terms of any Bank Services Agreement, Borrower agrees that any amounts Borrower owes Bank thereunder shall be deemed to be Obligations hereunder and that it is the intent of Borrower and Bank to have all such Obligations secured by the first priority perfected security interest in the Collateral granted herein (subject to Permitted Liens).

3.2 Authorization to File Financing Statements. Borrower hereby authorizes Bank to file financing statements, without notice to Borrower, with all jurisdictions deemed necessary or appropriate by Bank to perfect or protect Bank's interest or rights hereunder, including a notice that any disposition of the Collateral in violation of this Agreement, by either Borrower or any other Person, shall be deemed to violate the rights of Bank under the Code. Such financing statements may indicate the Collateral as "all assets of the Debtor" or words of similar effect.

1.3 Termination. If this Agreement is terminated, Bank's Lien in the Collateral shall continue until the Obligations (other than inchoate indemnity or other obligations which, by their terms, survive termination of this Agreement) are repaid in full in cash. Upon payment in full in cash of the Obligations (other than inchoate indemnity or other obligations which, by their terms, survive termination of this Agreement) and at such time as Bank's obligation to make Credit Extensions has terminated, Bank shall, at Borrower's sole cost and expense, terminate its security interest in the Collateral and all rights therein shall revert to Borrower, and Bank shall take such actions as may be reasonably requested by Borrower to evidence such repayment and release (including delivery of a payoff letter and filing of UCC-3 termination statements (or authorizing Borrower to file such UCC-3 termination statements)) and all of Borrower's obligations pursuant to Sections 5 and 6 herein shall terminate. In the event (a) all Obligations (other than inchoate indemnity or other obligations which, by their terms, survive termination of this Agreement), except for Bank Services, are satisfied in full, and (b) this Agreement is terminated,

Bank shall terminate the security interest granted herein upon Borrower providing cash collateral acceptable to Bank in its commercially reasonable discretion for Bank Services, if any. In the event such Bank Services consist of outstanding Letters of Credit, Borrower shall provide to Bank cash collateral in an amount equal to at least (x) 105.0% of the face amount of all such Letters of Credit denominated in Dollars and (y) 110.0% of the Dollar Equivalent of the face amount of all such Letters of Credit denominated in a Foreign Currency, plus, in each case, all interest, fees, and costs due or estimated by Bank to become due in connection therewith, to secure all of the Obligations relating to such Letters of Credit.

4 REPRESENTATIONS AND WARRANTIES

Borrower represents and warrants as follows:

4.1 Due Organization, Authorization; Power and Authority.

(a) Each Borrower and each of its Subsidiaries are each duly existing and in good standing as a Registered Organization in their respective jurisdiction of formation and are qualified and licensed to do business and are in good standing in any jurisdiction in which the conduct of their respective business or their ownership of property requires that they be qualified, except where the failure to do so could not reasonably be expected to have a material adverse effect on such Borrower's business or operations.

(b) All information set forth on the Perfection Certificate pertaining to such Borrower and each of its Subsidiaries is true and correct in all material respects (it being understood and agreed that such Borrower may from time to time update certain information in the Perfection Certificate after the Effective Date to the extent permitted by one or more specific provisions in this Agreement and the Perfection Certificate shall be deemed to be updated to the extent such notice is provided to Bank of such permitted update).

(c) The execution, delivery, and performance by Borrower and each of its Subsidiaries of the Loan Documents to which they are parties have been duly authorized, and do not (i) conflict with any of Borrower's or any such Subsidiary's organizational documents, (ii) contravene, conflict with, constitute a default under, or violate any material Applicable Law, (iii) contravene, conflict with, or violate any applicable order, writ, judgment, injunction, decree, determination or award of any Governmental Authority by which Borrower or any of its Subsidiaries or any of their property or assets are bound or affected, (iv) require any action by, filing, registration, or qualification with, or Governmental Approval from, any Governmental Authority (except financing statements filed in connection herewith and such Governmental Approvals which have already been obtained and are in full force and effect or are to be obtained pursuant to Section 5.2(b)), or (v) conflict with, contravene, constitute a default or breach under, or result in or permit the termination or acceleration of, any material agreement by which Borrower or any of its Subsidiaries is bound. Neither Borrower nor any of its Subsidiaries are in default under any agreement to which they are parties or by which it is bound in which the default could reasonably be expected to have a material adverse effect on Borrower's or any of its Subsidiary's business or operations.

4.2 Collateral.

(a) The security interest granted herein is and shall at all times continue to be a first priority perfected security interest in the Collateral (subject to Permitted Liens). Borrower has good title to, rights in, and the power to transfer each item of the Collateral upon which it purports to grant a Lien hereunder, free and clear of any and all Liens except Permitted Liens.

(b) Borrower has no Collateral Accounts at or with any bank or financial institution other than Bank or Bank's Affiliates except for the Collateral Accounts described in the Perfection Certificate delivered to Bank in connection herewith and which Borrower has taken such actions as are reasonably requested by Bank and necessary to give Bank a perfected security interest therein, to the extent required by and pursuant to the terms of Section 5.7(c). To Borrower's knowledge, the Accounts are bona fide, existing obligations of the Account Debtors.

(c) The Collateral is not in the possession of any third-party bailee (such as a warehouse) except as otherwise provided in the Perfection Certificate or as permitted pursuant to Section 6.2. None of the components of the Collateral (other than mobile equipment such as laptop computers and personal digital assistants

in the possession of Borrower's employees or agents) shall be maintained at locations other than as provided in the Perfection Certificate or as permitted pursuant to Section 6.2.

(d) All Inventory is in all material respects of good and marketable quality, free from material defects.

(e) Borrower owns, or possesses the right to use to the extent necessary in its business, all Intellectual Property, licenses, and other intangible assets that are used in the conduct of its business as now operated, except to the extent that such failure to own or possess the right to use such asset would not reasonably be expected to have a material adverse effect on Borrower's business or operations, and no such asset, to the knowledge of Borrower, conflicts with the valid Intellectual Property, license, or intangible asset of any other Person to the extent that such conflict could reasonably be expected to have a material adverse effect on Borrower's business or operations.

(f) Except as noted on the Perfection Certificate or for which notice has been given to Bank pursuant to and in accordance with Section 5.9(b). Borrower is not a party to, nor is it bound by, any Restricted License.

4.3 Litigation. Other than as set forth in the Perfection Certificate or as disclosed to Bank pursuant to Section 5.3(i), there are no actions, investigations or proceedings pending or, to the knowledge of any Responsible Officer, threatened in writing by or against Borrower or any of its Subsidiaries involving more than, individually or in the aggregate, \$1,250,000.00 not covered by independent third party insurance as to which liability has been accepted by the carrier providing such insurance.

4.4 Financial Statements; Financial Condition. All consolidated financial statements for Borrower and any of its Subsidiaries delivered to Bank by submission to the Financial Statement Repository or otherwise submitted to Bank fairly present in all material respects Borrower's consolidated financial condition as of the date thereof and Borrower's consolidated results of operations for the periods covered thereby, subject, in the case of unaudited financial statements, to normal year-end adjustments and the absence of footnote disclosures. There has not been any material deterioration in Borrower's consolidated financial condition since the date of the most recent financial statements submitted to the Financial Statement Repository or otherwise submitted to Bank by Borrower.

4.5 Solvency. The fair salable value of Borrower's consolidated assets (including goodwill minus disposition costs) exceeds the fair value of Borrower's liabilities; Borrower is not left with unreasonably small capital after the transactions in this Agreement; and Borrower and each of its Subsidiaries are able to pay their debts (including trade debts) as they mature.

1.6 Regulatory Compliance. Borrower is not an "investment company" or a company "controlled" by an "investment company" under the Investment Company Act of 1940, as amended. Borrower is not engaged as one of its important activities in extending credit for margin stock (under Regulations X, T and U of the Federal Reserve Board of Governors). Borrower and each of its Subsidiaries (a) have complied in all material respects with all Applicable Law, including Healthcare Laws, and (b) have not violated any Applicable Law (including Healthcare Laws) the violation of which could reasonably be expected to have a material adverse effect on Borrower's business or operations. Borrower and each of its Subsidiaries have duly complied with, and their respective facilities, business, assets, property, leaseholds, real property and Equipment are in compliance with, Environmental Laws, except where the failure to do so could not reasonably be expected to have a material adverse effect on Borrower's business or operations; there have been no outstanding citations, notices or orders of non-compliance issued to Borrower or any of its Subsidiaries or relating to their respective facilities, businesses, assets, property, leaseholds, real property or Equipment under such Environmental Laws except where the failure to obtain or make or file the same would not reasonably be expected to have a material adverse effect on Borrower's business or operations. Borrower and each of its Subsidiaries have obtained all consents, including Healthcare Permits, approvals and authorizations of, made all declarations or filings with, and given all notices to, all Governmental Authorities that are necessary to continue their respective businesses as currently conducted, except where the failure to obtain or make or file the same would not reasonably be expected to have a material adverse effect on Borrower's business or operations.

Without limiting the generality of the foregoing: (i) neither Borrower nor any Subsidiary nor Affiliate of Borrower, nor to the knowledge of Borrower, any individual employed by Borrower or any Subsidiary, would reasonably be expected to have criminal culpability or to be excluded from participation in any Medical Reimbursement Program for corporate or individual actions or failures to act known to Borrower or any Subsidiary where such culpability or exclusion has resulted or could reasonably be expected to result in an Exclusion Event and neither Borrower nor any Subsidiary nor, to the knowledge of the Borrower, any individual employed by Borrower or any Subsidiary has been subject to sanction or been indicted or convicted of a crime, or pled nolo contendere or to sufficient facts, in connection with any allegation of violation of any Medical Reimbursement Program or Healthcare Law; (ii) to the knowledge of Borrower, no officer or other member of management of Borrower or any Subsidiary could reasonably be expected to have individual culpability for matters under investigation by the OIG or other Governmental Authority unless such officer or other member of management has been, within a reasonable period of time after discovery of such actual or potential culpability, either suspended or removed from positions of responsibility related to those activities under challenge by the OIG or other Governmental Authority; (iii) current billing policies, arrangements, protocols, practices and instructions of Borrower and its Subsidiaries comply with requirements of Medical Reimbursement Programs and are administered by properly trained personnel; (iv) current arrangements of Borrower and its Subsidiaries and Affiliates with physicians and other healthcare providers and referral sources comply with all Healthcare Laws; (v) neither Borrower nor any Subsidiary or Affiliate of Borrower (A) is or has within the last five (5) years been a party to a Corporate Integrity Agreement with the OIG that imposes restrictions or costs on such Person nor (B) has or has had within the last five (5) years any reporting obligations pursuant to a settlement agreement, plan of correction or other remedial measure entered into with any Governmental Authority; (vi) neither Borrower nor any Subsidiary or Affiliate of Borrower is in receipt of any written notice of any violation of any Requirement of Law, judgment, order writ, decree, permit, concession, franchise or other governmental approval applicable to it or any of its property; (vii) neither Borrower nor any Subsidiary or Affiliate of Borrower (A) failed to repay any overpayments received from, or has failed to refund any amount due to, any Medical Reimbursement Program in violation of any Healthcare Law nor (B) received written notice of, or has any knowledge of, any overpayment or refunds due to any Medical Reimbursement Program, other than notices of a non-material nature received in the ordinary course of business; and (viii) neither Borrower nor any Subsidiary of Borrower is affiliated in any way with a Person that currently is the subject of an Exclusion Event.

4.7 Subsidiaries; Investments. Borrower does not own any stock, partnership, or other ownership interest or other equity securities except for Permitted Investments.

4.8 Tax Returns and Payments; Pension Contributions.

(a) Borrower and each of its Subsidiaries have timely filed (subject to validly filed extensions), or submitted extensions for, all required tax returns and reports, and Borrower and each of its Subsidiaries have timely paid all foreign, federal, state and local taxes, assessments, deposits, and contributions owed by Borrower and each of its Subsidiaries except (a) to the extent such taxes are being contested in good faith by appropriate proceedings promptly instituted and diligently conducted, so long as such reserve or other appropriate provision, if any, as shall be required in conformity with GAAP shall have been made therefor, or (b) if such taxes, assessments, deposits, and contributions do not, individually or in the aggregate, exceed \$100,000.00. Borrower is unaware of any claims or adjustments proposed for any of Borrower's or any of its Subsidiary's prior tax years which could result in additional taxes becoming due and payable by Borrower or any of its Subsidiaries in excess of \$100,000.00 in the aggregate.

(b) Borrower and each of its Subsidiaries have paid all amounts necessary to fund all present pension, profit sharing, and deferred compensation plans in accordance with their terms, and neither Borrower nor any of its Subsidiaries has withdrawn from participation in, and has not permitted partial or complete termination of, or permitted the occurrence of any other event with respect to, any such plan which could reasonably be expected to result in any liability of Borrower or any of its Subsidiaries, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other Governmental Authority.

4.9 Full Disclosure. No written representation, warranty, or other statement of Borrower or any of its Subsidiaries in any report, certificate, or written statement submitted to the Financial Statement Repository or otherwise submitted to Bank by Borrower in connection with the Loan Documents, as of the date such representation, warranty, or other statement was made, taken together with all such reports, certificates, and written

statements submitted to the Financial Statement Repository or otherwise submitted to Bank by Borrower in connection with the Loan Documents, contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements contained in the reports, certificates, or written statements not misleading in light of the circumstances under which they were made (it being recognized by Bank that the projections and forecasts provided by Borrower or any of its Subsidiaries in good faith and based upon reasonable assumptions are not viewed as facts and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results).

4.10 Sanctions. Neither Borrower nor any of its Subsidiaries is: (a) in violation of any Sanctions; or (b) a Sanctioned Person. Neither Borrower nor any of its Subsidiaries, directors, or officers, or to the knowledge of Borrower, any of its employees, agents, or Affiliates: (i) conducts any business or engages in any transaction or dealing with any Sanctioned Person, including making or receiving any contribution of funds, goods, or services to or for the benefit of any Sanctioned Person; (ii) deals in, or otherwise engages in any transaction relating to, any property or interests in property blocked pursuant to any Sanctions; (iii) engages in or conspires to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding, or attempts to violate, any of the prohibitions set forth in any Sanctions; or (iv) otherwise engages in any transaction that could cause Bank to violate any Sanctions.

4.11 Healthcare Permits. (a) Borrower has obtained all Healthcare Permits and other rights from, and has made all declarations and filings with, all applicable Governmental Authorities, all self-regulatory authorities and all courts and other tribunals necessary to engage in the management and/or operation of their respective business; (b) each such Healthcare Permit is valid and in full force and effect, and Borrower is in compliance with the terms and conditions of all such Healthcare Permits; and (c) Borrower has not received notice from any Governmental Authority with respect to the revocation, suspension, restriction, limitation or termination of any Healthcare Permit nor, to the knowledge of Borrower, is any such action proposed or threatened in writing.

4.12 Compliance with Healthcare Laws.

(a) Borrower is in compliance with all applicable Healthcare Laws. Without limiting the generality of the foregoing, Borrower has not received written notice by a Governmental Authority of any violation (or of any investigation, audit, or other proceeding involving allegations of any violation) of any Healthcare Laws, and no investigation, inspection, audit or other proceeding involving allegations of any violation is, to the knowledge of Borrower, threatened in writing or contemplated.

(b) To the knowledge of Borrower, Borrower is not in default or violation of any law which is applicable to Borrower or its respective assets or the conduct of its respective businesses and Borrower has not been debarred or excluded from participation under a state or federal health care program, including any state or federal workers compensation program.

(c) Borrower is not a party to any corporate integrity agreements, deferred prosecution agreements, monitoring agreements, consent decrees, settlement orders or similar agreements with or imposed by any Governmental Authority.

5 AFFIRMATIVE COVENANTS

Borrower shall do all of the following:

5.1 Use of Proceeds. Cause the proceeds of the Credit Extensions to be used solely (a) as working capital or (b) to fund its general business purposes, and not for personal, family, household or agricultural purposes.

5.2 Government Compliance.

(a) Maintain its and all of its Subsidiaries' legal existence (except as permitted under Section 6.3 with respect to Subsidiaries only) and good standing in their respective jurisdictions of formation and maintain qualification in each jurisdiction in which the failure to so qualify would reasonably be expected to have a material adverse effect on Borrower's business or operations. Borrower shall comply, and have each Subsidiary comply, in

all material respects, with all laws, ordinances and regulations to which it is subject, the failure to comply with which could reasonably be expected to have a material adverse effect on Borrower's business or operations.

(b) Obtain all of the Governmental Approvals necessary for the performance by Borrower and each of its Subsidiaries of their obligations under the Loan Documents to which they are parties, including any grant of a security interest to Bank in the Collateral. Borrower shall promptly provide copies of any such obtained Governmental Approvals to Bank.

(c) Cause the operations and property of Borrower, each of its Subsidiaries, to comply with all applicable Healthcare Laws. Without limiting the foregoing, the operations and property of Borrower and each of its Subsidiaries shall comply with HIPAA in all material respects. Borrower has established and maintains a corporate compliance program that (i) addresses the material Requirements of Law, including all applicable Healthcare Laws, of Governmental Authorities having jurisdiction over its business and operations, and (ii) has been structured to account for the guidance issued by the U.S. Department of Health and Human Services regarding characteristics of effective corporate compliance programs. As of the Effective Date, Borrower has delivered to Bank an accurate and complete copy of each material report, study, survey or other document of which Borrower has knowledge that addresses or otherwise relates to the compliance by Borrower and each of its Subsidiaries, with applicable Healthcare Laws.

5.3 Financial Statements, Reports. Deliver to Bank by submitting to the Financial Statement Repository:

(a) Monthly Financial Statements. As soon as available, but no later than 30 days after the last day of each month, a company prepared consolidated balance sheet and income statement covering Borrower's consolidated operations for such month and in a form reasonably acceptable to Bank;

(b) Compliance Statement. Within 30 days after the last day of each month and together with the statements set forth in Section 5.3(a), a duly completed Compliance Statement in substantially the form of Exhibit A;

(c) 10-Q reports. Within 45 days after the end of the first 3 fiscal quarters of Borrower, a company prepared consolidated balance sheet and income statement covering Borrower's consolidated operations for such quarter, consistent with such quarterly financial statements submitted to the SEC, in a form of presentation reasonably acceptable to Bank;

(d) Annual Operating Budget and Financial Projections. As soon as available, and in any event within 60 days after the last day of each fiscal year of Borrower, and contemporaneously with any updates or amendments thereto, (A) annual operating budgets (including income statements, balance sheets and cash flow statements, by month) for the current fiscal year of Borrower, and (B) annual financial projections for the current fiscal year (on a quarterly basis), in each case as approved by the Board, together with any related business forecasts used in the preparation of such annual financial projections;

(e) 10-K Reports and Annual Audited Financial Statements. As soon as available, and in any event within 90 days following the end of Borrower's fiscal year, Borrower's 10-K report, together with audited consolidated financial statements prepared under GAAP, consistently applied, together with an unqualified opinion on the financial statements from an independent certified public accounting firm reasonably acceptable to Bank;

(f) SEC Filings. Within 5 days of filing, notification of the filing and copies of all periodic and other reports, proxy statements and other materials filed by Borrower and/or any of its Subsidiaries or any Guarantor with the SEC, any Governmental Authority succeeding to any or all of the functions of the SEC, or with any national securities exchange, or distributed to its shareholders, as the case may be. Documents required to be delivered pursuant to the terms hereof (to the extent any such documents are included in materials otherwise filed with the SEC) may be delivered electronically and if so delivered, shall be deemed to have been delivered on the date on which Borrower or any of its Subsidiaries posts such documents, or provides a link thereto, on Borrower's or any of its Subsidiaries' website on the internet at Borrower's or any of its Subsidiaries' website address; provided,

however, Borrower shall promptly notify Bank in writing (which may be by electronic mail) of the posting of any such documents;

(g) **Security Holder and Subordinated Debt Holder Reports.** Within 5 days of delivery, copies of all statements, reports, and notices made available to Borrower's security holders or to any holders of Subordinated Debt (solely in their capacities as security holders or holders of Subordinated Debt and not in any other role);

(h) **Beneficial Ownership Information.** Prompt written notice of any changes to the beneficial ownership information set out in Section 14 of the Perfection Certificate. Borrower understands and acknowledges that Bank relies on such true, accurate, and up-to-date beneficial ownership information to meet Bank's regulatory obligations to obtain, verify, and record information about the beneficial owners of its legal entity customers;

(i) **Legal Action Notice.** Prompt written notice of any legal actions, investigations or proceedings pending or threatened in writing against Borrower or any of its Subsidiaries that could reasonably be expected to result in damages or costs to Borrower or any of its Subsidiaries of, individually or in the aggregate, \$1,250,000.00 or more;

(j) **Tort Claim Notice.** If Borrower shall acquire a commercial tort claim with a value in excess of \$500,000.00, Borrower shall promptly notify Bank in a writing signed by Borrower of the general details thereof, and grant to Bank in such writing a security interest therein and in the proceeds thereof, all upon the terms of this Agreement, with such writing to be in form and substance reasonably satisfactory to Bank;

(k) **Government Filings.** Within 5 Business Days after the same are sent or received, copies of all material correspondence, reports, documents, and other filings by Borrower or any of its Subsidiaries with any Governmental Authority regarding compliance with or maintenance of Governmental Approvals or Applicable Law or that could reasonably be expected to have a material effect on any of the Governmental Approvals or otherwise on the business of Borrower or any of its Subsidiaries;

(l) **Registered Organization.** If Borrower is not a Registered Organization as of the Effective Date but later becomes one, promptly notify Bank of such occurrence and provide Bank with Borrower's organizational identification number;

(m) **Default.** Prompt written notice of the occurrence of a Default or Event of Default; and

(n) **Other Information.** Promptly, from time to time, such other financial information regarding Borrower or any of its Subsidiaries or compliance with the terms of any Loan Documents as reasonably requested by Bank.

Any submission by Borrower of a Compliance Statement or any other financial statement submitted to the Financial Statement Repository pursuant to this Section 5.3 or otherwise submitted to Bank shall be deemed to be a representation by Borrower that (i) as of the date of such Compliance Statement or other financial statement, the information and calculations set forth therein are true and correct, (ii) as of the end of the compliance period set forth in such submission, Borrower is in compliance with all required covenants except as noted in such Compliance Statement or other financial statement, as applicable, (iii) as of the date of such submission, no Events of Default have occurred and are continuing, (iv) all representations and warranties other than any representations or warranties that are made as of a specific date in Section 4 are true and correct in all material respects as of the date of such submission except as noted in such Compliance Statement or other financial statement, as applicable, (v) as of the date of such submission, Borrower and each of its Subsidiaries has timely filed all required tax returns and reports, and Borrower has timely paid all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower except as otherwise permitted pursuant to the terms of Section 4.8, and (vi) as of the date of such submission, no Liens have been levied or claims made against Borrower or any of its Subsidiaries relating to unpaid employee payroll or benefits of which Borrower has not previously provided written notification to Bank.

5.4 Taxes; Pensions.

(a) Timely file, and require each of its Subsidiaries to timely file (in each case, unless subject to a valid extension), all required tax returns and reports and timely pay, and require each of its Subsidiaries to timely pay (subject to validly filed extensions), all foreign, federal, state, and local taxes, assessments, deposits, and contributions owed by Borrower and each of its Subsidiaries, except for (i) deferred payment of any taxes contested pursuant to the terms of Section 4.8(a) hereof, and (ii) if such taxes, assessments, deposits, and contributions do not individually or in the aggregate exceed \$100,000.00, and shall deliver to Bank, on demand, appropriate certificates attesting to such payments, and pay, and require each of its Subsidiaries to pay, all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms.

(b) To the extent Borrower or any of its Subsidiaries defers payment of any contested taxes, (i) notify Bank in writing of the commencement of, and any material development in, the proceedings, and (ii) post bonds or take any other steps required to prevent the Governmental Authority levying such contested taxes from obtaining a Lien upon any of the Collateral that is other than a "Permitted Lien."

5.5 Access to Collateral; Books and Records. At reasonable times, on 5 Business Days' notice (provided no notice is required if an Event of Default has occurred and is continuing), Bank, or its agents, shall have the right to inspect the Collateral and the right to audit and copy Borrower's Books. Such inspections and audits shall be conducted no more often than once every 12 months, unless an Event of Default has occurred and is continuing, in which case such inspections and audits shall occur as often as Bank shall determine is necessary. The foregoing inspections and audits shall be conducted at Borrower's expense and the charge therefor shall be \$1,000.00 per person per day (or such higher amount as shall represent Bank's then-current standard charge for the same), plus reasonable documented out-of-pocket expenses. In the event Borrower and Bank schedule an audit more than eight (8) days in advance, and Borrower cancels or seeks to or reschedules the audit with less than eight (8) days written notice to Bank, then (without limiting any of Bank's rights or remedies) Borrower shall pay Bank a fee of \$2,000.00 plus any reasonable documented out-of-pocket expenses incurred by Bank to compensate Bank for the anticipated costs and expenses of the cancellation or rescheduling.

5.6 Insurance.

(a) Keep its business and the Collateral insured for risks and in amounts standard for companies of Borrower's size in Borrower's industry and location and as Bank may reasonably request. Insurance policies shall be in a form, with financially sound and reputable insurance companies that are not Affiliates of Borrower, and in amounts that are reasonably satisfactory to Bank.

(b) All property policies shall have a lender's loss payable endorsement showing Bank as lender loss payee. All liability policies shall show, or have endorsements showing, Bank as an additional insured. Bank shall be named as lender loss payee and/or additional insured with respect to any such insurance providing coverage in respect of any Collateral.

(c) Ensure that proceeds payable under any property policy are, at Bank's option, payable to Bank on account of the Obligations. Notwithstanding the foregoing, (a) so long as no Event of Default has occurred and is continuing, Borrower shall have the option of applying the proceeds of any casualty policy up to \$750,000.00 with respect to any loss, but not exceeding \$1,250,000.00 in the aggregate for all losses under all casualty policies in any 12 month period, toward the replacement or repair of destroyed or damaged property; provided that any such replaced or repaired property (i) shall be of equal or like value as the replaced or repaired Collateral and (ii) shall be deemed Collateral in which Bank has been granted a first priority security interest (subject only to Permitted Liens that are permitted pursuant to the terms of this Agreement to have superior priority to Bank's Lien), and (b) after the occurrence and during the continuance of an Event of Default, all proceeds payable under such casualty policy shall, at the option of Bank, be payable to Bank on account of the Obligations then due.

(d) At Bank's reasonable request, Borrower shall deliver certified copies of insurance policies and evidence of all premium payments. Each provider of any such insurance required under this Section 5.6 shall agree, by endorsement upon the policy or policies issued by it or by independent instruments furnished to Bank, that it will give Bank 30 days' prior written notice before any such policy or policies shall be canceled. If Borrower fails to obtain insurance as required under this Section 5.6 or to pay any amount or furnish any required

proof of payment to third persons and Bank, Bank may make all or part of such payment or obtain such insurance policies required in this Section 5.6, and take any action under the policies Bank deems prudent.

5.7 Accounts.

(a) Maintain all of Borrower's, any of its Subsidiaries', and any Guarantor's operating accounts, depository accounts and excess cash with Bank or Bank's Affiliates. Notwithstanding the foregoing, Borrower shall be permitted to maintain (i) payment transmitter accounts with Stripe (the "**Stripe Account**"), and (ii) payment transmitter accounts with Chase Orbital (the "**Chase Account**" together with the Stripe Account, the "**Permitted Accounts**"), provided that, (x) any and all funds held in or deposited into the Permitted Accounts shall be transferred to an account of Borrower maintained with Bank at least every 3 Business Days, and (y) the aggregate balance in the Permitted Accounts shall not exceed \$250,000.00 at any time.

(b) In addition to the foregoing, Borrower, any Subsidiary of Borrower, and any Guarantor shall obtain any business credit card and any letter of credit exclusively from Bank.

(c) In addition to and without limiting the restrictions in (a), Borrower shall provide Bank 5 days prior written notice before establishing any Collateral Account at or with any bank or financial institution other than Bank or Bank's Affiliates. For each Collateral Account that Borrower at any time maintains, Borrower shall cause the applicable bank or financial institution (other than Bank) at or with which any Collateral Account is maintained to execute and deliver a Control Agreement or other appropriate instrument with respect to such Collateral Account to perfect Bank's Lien in such Collateral Account in accordance with the terms hereunder which Control Agreement may not be terminated without the prior written consent of Bank. The provisions of the previous sentence shall not apply to (i) the Permitted Accounts, (ii) deposit accounts exclusively used for payroll, payroll taxes, and other employee wage and benefit payments to or for the benefit of Borrower's employees and identified to Bank by Borrower as such, (iii) deposit accounts holding funds in trust or escrow funds for the benefit or payable to Borrower's customers or other third parties identified to Bank by Borrower as such in writing, provided that such accounts shall not hold any funds of Borrower, and (iv) all Governmental Collection Accounts (the "**Excluded Accounts**").

(d) Upon the expiration of the Transition Period, Borrower shall cause all payments in respect of Accounts payable by Governmental Account Debtors, and only such payments, owing to Borrower to be wire transferred or sent via automated clearing house (ACH) directly to the applicable Governmental Collection Account. All amounts collected into the Governmental Collection Accounts shall be transferred to an account of Borrower maintained at Bank on a daily basis. Borrower shall immediately notify Bank in the event a sweep agreement affiliated with a Governmental Collection Account is rescinded for any reason by any party. Bank hereby disclaims any right or interest (including any security interest or right of offset (or set-off) in or to such Governmental Collection Accounts.

5.8 Financial Covenants.

(a) **Adjusted Quick Ratio.** At all times when Liquidity is less than \$135,000,000.00, maintain, to be tested as of the last day of each month, an Adjusted Quick Ratio of greater than or equal to 1.25 to 1.0.

(b) **Minimum Revenue.** At all times when (i) Liquidity is less than \$135,000,000.00, and (ii) the sum of (A) the outstanding principal amount of all Advances, plus the accrued and unpaid interest thereon, plus (B) all amounts used for Cash Management Services, plus (C) the aggregate Dollar Equivalent of the face amount of outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit and any Letter of Credit Reserve), is greater than \$50,000,000.00, achieve, to be tested as of the last day of each month, minimum revenue (calculated in accordance with GAAP), measured on a trailing 6 month basis, of at least:

Trailing 6 Month Period Ending	Minimum Revenue
December 31, 2021	\$100,000,000.00
January 31, 2022	\$101,666,667.00
February 28, 2022	\$103,333,333.00
March 31, 2022	\$105,000,000.00
April 30, 2022	\$106,666,667.00
May 31, 2022	\$111,666,667.00
June 30, 2022	\$120,000,000.00
July 31, 2022	\$121,666,667.00
August 31, 2022	\$123,333,333.00
September 30, 2022	\$125,000,000.00
October 31, 2022	\$126,666,667.00
November 30, 2022	\$128,333,333.00
December 31, 2022	\$130,000,000.00
January 31, 2023	\$131,666,667.00
February 28, 2023	\$136,666,667.00
March 31, 2023	\$145,000,000.00
April 30, 2023	\$146,666,667.00
May 31, 2023	\$151,666,667.00
June 30, 2023	\$160,000,000.00
July 31, 2023	\$161,666,667.00
August 31, 2023	\$166,666,667.00
September 30, 2023	\$175,000,000.00
October 31, 2023	\$176,666,667.00
November 30, 2023	\$178,333,333.00
December 31, 2023	\$180,000,000.00

With respect to the period ending January 31, 2024 and each testing period thereafter, the levels of minimum revenue shall be mutually agreed upon between Bank and Borrower based upon, among other factors, Bank's then current credit underwriting and the greater of (x) 70.0% of the levels of minimum revenue as set forth in Borrower's Board-approved operating plan and financial projections delivered to Bank pursuant to Section 5.3(d), and (y) 20.0% of Borrower's year-over-year revenue growth. With respect thereto, Borrower's failure to agree in writing (which agreement shall be set forth in a written amendment to this Agreement) on or before March 31, 2024, to any minimum revenue covenant levels proposed by Bank with respect to any period from January 1, 2024 through and including the Revolving Line Maturity Date, shall result in an immediate Event of Default for which there shall be no grace or cure period.

5.9 Protection of Intellectual Property Rights.

(a) (i) Use commercially reasonable efforts to protect, defend, and maintain the validity and enforceability of Borrower's and each Subsidiary's Intellectual Property, except to the extent that such failure to do so would not reasonably be expected to have a material adverse effect on Borrower's business or operations; (ii) promptly advise Bank in writing of infringements or any other event that could reasonably be expected to materially and adversely affect the value Borrower's and each Subsidiary's Intellectual Property material to Borrower's business; and (iii) not allow any Intellectual Property material to Borrower's or any Subsidiary's business to be abandoned, forfeited, or dedicated to the public without Bank's written consent.

(b) Provide written notice to Bank within 30 days of entering or becoming bound by any Restricted License (other than over-the-counter software that is commercially available to the public). Borrower shall take such commercially reasonable steps as Bank reasonably requests to obtain the consent of, or waiver by, any person whose consent or waiver is necessary for (i) any such Restricted License to be deemed "Collateral" and

for Bank to have a security interest in it that might otherwise be restricted or prohibited by law or by the terms of any such Restricted License, whether now existing or entered into in the future, and (ii) Bank to have the ability in the event of a liquidation of any Collateral to dispose of such Collateral in accordance with Bank's rights and remedies under this Agreement and the other Loan Documents.

5.10 Litigation Cooperation. From the date hereof and continuing through the termination of this Agreement, make available to Bank, without expense to Bank and upon at least 1 Business Days' notice (provided that no notice is required if an Event of Default has occurred and is continuing), Borrower and its officers, employees, and agents and Borrower's books and records, to the extent that Bank may deem them reasonably necessary to prosecute or defend any third-party suit or proceeding instituted by or against Bank with respect to any Collateral or relating to Borrower.

5.11 Online Banking.

(a) Utilize Bank's online banking platform for all matters requested by Bank which shall include, without limitation (and without request by Bank for the following matters), uploading information pertaining to Accounts and Account Debtors, requesting approval for exceptions, requesting Credit Extensions, and uploading financial statements and other reports required to be delivered by this Agreement (including, without limitation, those described in Section 5.3 of this Agreement).

(b) Comply with the terms of Bank's Online Banking Agreement as in effect from time to time and ensure that all persons utilizing Bank's online banking platform are duly authorized to do so by an Administrator. Bank shall be entitled to assume the authenticity, accuracy and completeness of any information, instruction or request for a Credit Extension submitted via Bank's online banking platform and to further assume that any submissions or requests made via Bank's online banking platform have been duly authorized by an Administrator.

5.12 Inventory; Returns. Keep all Inventory in good and marketable condition, free from material defects. Returns and allowances between Borrower and its Account Debtors shall follow Borrower's customary practices as they exist at the Effective Date. Borrower shall promptly notify Bank of all returns, recoveries, disputes and claims that involve more than \$500,000.00.

5.13 Further Assurances. Execute any further instruments and take such further action as Bank reasonably requests to perfect, protect, ensure the priority of or continue Bank's Lien on the Collateral or to effect the purposes of this Agreement.

5.14 Sanctions. (a) Not, and not permit any of its Subsidiaries to, engage in any of the activities described in Section 4.10 in the future; (b) not, and not permit any of its Subsidiaries to, become a Sanctioned Person; (c) ensure that the proceeds of the Obligations are not used to violate any Sanctions; and (d) deliver to Bank any certification or other evidence requested from time to time by Bank in its sole discretion, confirming each such Person's compliance with this Section 5.14. In addition, have implemented, and will consistently apply while this Agreement is in effect, procedures to ensure that the representations and warranties in Section 4.10 remain true and correct while this Agreement is in effect.

5.15 Post-Closing Matters. Within 30 days after the Effective Date, Borrower shall deliver to Bank (a) duly executed landlord's consent in form and substance satisfactory to Bank, in favor of Bank for Borrower's leased locations at (i) 333 Ludlow Street, Stamford, Connecticut 06902, (ii) 62 Southfield Ave, Stamford, Connecticut 06902, (iii) 1 Commercial Street, Branford, Connecticut 06902, and (iv) 200 Park Avenue South, New York, New York 10003, by the respective landlord thereof; (b) evidence satisfactory to Bank that the insurance certificates and endorsements required by Section 5.6 hereof are in full force and effect, together with appropriate evidence showing lender loss payable and additional insured clauses or endorsements in favor of Bank; (c) the duly executed CDEC Subordination Agreement in form and substance satisfactory to Bank, together with copies of the underlying documents evidencing Borrower's Indebtedness with CDEC; (d) good standing/foreign qualification certificates certified by the Secretary of State (or equivalent agency) of each other jurisdiction in which each Borrower is qualified to conduct business, each as of a date no earlier than 30 days prior to the Effective Date; (e) duly executed marketing consent forms satisfactory to Bank; and (f) a UCC-3 financing statement with respect to Borrower's Lien

in favor of Banc of America Leasing and Capital LLC, filed with the Delaware Secretary of State, satisfactory to Bank.

6 **NEGATIVE COVENANTS**

Borrower shall not do any of the following without Bank's prior written consent:

6.1 Dispositions. Convey, sell, lease, transfer, assign, or otherwise dispose of (including, without limitation, pursuant to a Division) (collectively, "**Transfer**"), or permit any of its Subsidiaries to Transfer, all or any part of its business or property, except for Transfers (a) of Inventory in the ordinary course of business; (b) of worn-out, obsolete, or surplus Equipment that is, in the reasonable judgment of Borrower, no longer economically practicable to maintain or useful in the ordinary course of business of Borrower; (c) consisting of Permitted Liens and Permitted Investments; (d) consisting of the sale or issuance of any stock, partnership, membership, or other ownership interest or other equity securities of Borrower permitted under Section 6.2 of this Agreement; (e) consisting of Borrower's or its Subsidiaries' use or transfer of money or Cash Equivalents in a manner that is not prohibited by the terms of this Agreement or the other Loan Documents; (f) consisting of non-exclusive licenses for the use of the property of Borrower or its Subsidiaries in the ordinary course of business, and licenses of Intellectual Property that could not result in a legal transfer of title of the licensed property but that may be exclusive in respects other than territory and that may be exclusive as to territory only as to discreet geographical areas outside of the United States; and (g) other immaterial assets not otherwise permitted under this Section 6.1 with a value not to exceed \$500,000.00 in the aggregate in any 12 month period.

6.2 Changes in Business, Management, Control, or Business Locations. (a) Engage in or permit any of its Subsidiaries to engage in any business other than the businesses currently engaged in by Borrower and such Subsidiary, as applicable, or reasonably related thereto; (b) liquidate or dissolve or permit any of its Subsidiaries to liquidate or dissolve; (c) fail to provide notice to Bank of any Key Person departing from or ceasing to be employed by Borrower within 5 days after such Key Person's departure from Borrower; (d) permit, allow or suffer to occur any Change in Control; or (e) without at least 30 days' prior written notice to Bank, (i) add any new offices or business locations, including warehouses (unless each such new office or business location contains less than \$250,000.00 in Borrower's assets or property) or deliver any portion of the Collateral valued, individually or in the aggregate, in excess of \$250,000.00 to a bailee at a location other than to a bailee and at a location already disclosed in the Perfection Certificate, (ii) change its jurisdiction of organization, (iii) change its organizational structure or type, (iv) change its legal name, or (v) change any organizational number (if any) assigned by its jurisdiction of organization. If Borrower intends to add any new offices or business locations, including warehouses, containing in excess of \$250,000.00 of Borrower's assets or property, then Borrower will use commercially reasonable efforts to cause the landlord of any such new offices or business locations, including warehouses, to execute and deliver a landlord consent in form and substance satisfactory to Bank. If Borrower intends to deliver any portion of the Collateral valued, individually or in the aggregate, in excess of \$250,000.00 to a bailee, and Bank and such bailee are not already parties to a bailee agreement governing both the Collateral and the location to which Borrower intends to deliver the Collateral, then Borrower will use commercially reasonable efforts to cause such bailee to execute and deliver a bailee agreement in form and substance reasonably satisfactory to Bank.

6.3 Mergers or Acquisitions. Merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with any other Person, or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the stock, partnership, membership, or other ownership interest or other equity securities or property of another Person (including, without limitation, by the formation of any Subsidiary or pursuant to a Division) other than a Permitted Acquisition. A Subsidiary may merge or consolidate into another Subsidiary or into Borrower.

6.4 Indebtedness. Create, incur, assume, or be liable for any Indebtedness, or permit any Subsidiary to do so, other than Permitted Indebtedness.

6.5 Encumbrance. Create, incur, allow, or suffer to exist any Lien on any of its property, or assign or convey any right to receive income, including the sale of any Accounts, or permit any of its Subsidiaries to do so, except, in each case, for Permitted Liens, permit any Collateral not to be subject to the first priority security interest granted herein, or enter into any agreement, document, instrument, or other arrangement (except with or in favor of

Bank) with any Person which directly or indirectly prohibits or has the effect of prohibiting Borrower or any Subsidiary from assigning, mortgaging, pledging, granting a security interest in or upon, or encumbering any of Borrower's or any Subsidiary's Intellectual Property, except as is otherwise permitted in Section 6.1 hereof and the definition of "Permitted Liens" herein.

6.6 Maintenance of Collateral Accounts. Maintain any Collateral Account except pursuant to the terms of Section 5.7(c).

1.7 Distributions; Investments. (a) Pay any dividends or make any distribution or payment or redeem, retire or purchase any stock, partnership, membership, or other ownership interest or other equity securities, provided that Borrower may (i) convert any of its convertible securities into other securities pursuant to the terms of such convertible securities or otherwise in exchange thereof, (ii) make cash payments in lieu of fractional shares in connection with any such conversions in an aggregate amount not to exceed \$10,000.00 in any twelve (12) month period, (iii) pay dividends solely in common stock, and (iv) repurchase the stock, partnership, membership, or other ownership interest or other equity securities of current or former employees, directors, or consultants pursuant to stock repurchase agreements, or similar agreements, so long as an Event of Default does not exist at the time of any such repurchase and would not exist after giving effect to any such repurchase, provided that the aggregate amount of all such repurchases does not exceed \$100,000.00 in any 12 month period; or (b) directly or indirectly make any Investment (including, without limitation, by the formation of any Subsidiary) other than Permitted Investments, or permit any of its Subsidiaries to do so. Notwithstanding the foregoing, Subsidiaries of Borrower shall be permitted to pay dividends to Borrower or make distributions to Borrower.

1.8 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower, except for (a) transactions that are in the ordinary course of Borrower's business, upon fair and reasonable terms that are no less favorable to Borrower than would be obtained in an arm's-length transaction with a non-affiliated Person; (b) sales of equity securities in bona fide venture financing transactions that are not prohibited by Section 6.2, (c) the incurrence of Subordinated Debt, (d) reasonable and customary compensation and other benefits arrangements (including retirement, health, stock option, and other benefit plans and indemnification arrangements approved by the relevant board of directors, board of managers or equivalent corporate body) with Borrower's and its Subsidiaries employees, officers, directors and managers approved by the Board or such Subsidiary's board of directors, and (e) transactions permitted pursuant to Section 6.1, 6.4 or 6.7.

6.9 Subordinated Debt. Except as expressly permitted under the terms of the subordination, intercreditor, or other similar agreement to which any Subordinated Debt is subject: (a) make or permit any payment on such Subordinated Debt; or (b) amend any provision in any document relating to such Subordinated Debt which would increase the amount thereof, provide for earlier or greater principal, interest, or other payments thereon, or adversely affect the subordination thereof to Obligations owed to Bank.

6.10 Compliance. (a) Become an "investment company" or a company controlled by an "investment company", under the Investment Company Act of 1940, as amended, or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System), or use the proceeds of any Credit Extension for that purpose; (b)(i) fail to meet the minimum funding requirements of ERISA, (ii) permit a Reportable Event or Prohibited Transaction, as defined in ERISA, to occur, (iii) fail to comply with the Federal Fair Labor Standards Act, or (iv) violate any other applicable law or regulation, if the foregoing subclauses (i) through (iv), individually or in the aggregate, could reasonably be expected to have a material adverse effect on Borrower's business or operations, or permit any of its Subsidiaries to do so; or (c) withdraw or permit any Subsidiary to withdraw from participation in, permit partial or complete termination of, or permit the occurrence of any other event with respect to, any present pension, profit sharing, and deferred compensation plan which could reasonably be expected to result in any liability of Borrower, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other Governmental Authority.

7 EVENTS OF DEFAULT

Any one of the following shall constitute an event of default (an "Event of Default") under this Agreement:

7.1 Payment Default. Borrower fails to (a) make any payment of principal or interest on any Credit Extension on its due date, or (b) pay any other Obligations within 3 Business Days after such Obligations are due and payable (which 3 Business Day cure period shall not apply to payments due on the Revolving Line Maturity Date). During the cure period, the failure to make or pay any payment specified under clause (b) hereunder is not an Event of Default (but no Credit Extension will be made during the cure period);

7.2 Covenant Default.

(a) Borrower fails or neglects to perform any obligation in Section 5 (other than Sections 5.2 (Government Compliance), 5.10 (Litigation Cooperation), 5.12 (Inventory; Returns) and 5.13 (Further Assurances)) or violates any covenant in Section 6; or

(b) Borrower fails or neglects to perform, keep, or observe any other term, provision, condition, covenant, or agreement contained in this Agreement or any Loan Documents, and as to any default (other than those specified in this Section 7) under such other term, provision, condition, covenant, or agreement that can be cured, has failed to cure the default within 10 days after the occurrence thereof; provided, however, that if the default cannot by its nature be cured within the 10-day period or cannot after diligent attempts by Borrower be cured within such 10 day period, and such default is likely to be cured within a reasonable time, then Borrower shall have an additional period (which shall not in any case exceed 30 days) to attempt to cure such default, and within such reasonable time period the failure to cure the default shall not be deemed an Event of Default (but no Credit Extensions shall be made during such cure period). Cure periods provided under this section shall not apply, among other things, to financial covenants or any other covenants that are required to be satisfied, completed, or tested by a date certain or any covenants set forth in clause (a) above;

7.3 Material Adverse Change. A Material Adverse Change occurs;

7.4 Attachment; Levy; Restraint on Business.

(a) (i) The service of process seeking to attach, by trustee or similar process, any funds of Borrower or any Subsidiary, or (ii) a notice of lien or levy is filed against any of Borrower's or any of its Subsidiaries' assets by any Governmental Authority, and the same under subclauses (i) and (ii) hereof are not, within 10 days after the occurrence thereof, discharged or stayed (whether through the posting of a bond or otherwise); provided, however, no Credit Extensions shall be made during any 10 day cure period; or

(b) (i) any material portion of Borrower's or any of its Subsidiaries' assets is attached, seized, levied on, or comes into possession of a trustee or receiver, or (ii) any court order enjoins, restrains, or prevents Borrower or any of its Subsidiaries from conducting all or any material part of its business;

7.5 Insolvency. (a) Borrower and its Subsidiaries, taken as a whole, are unable to pay their debts (including trade debts) as they become due or otherwise become insolvent; (b) Borrower or any of its Subsidiaries begins an Insolvency Proceeding; or (c) an Insolvency Proceeding is begun against Borrower or any of its Subsidiaries and is not dismissed or stayed within 45 days (but no Credit Extensions shall be made while any of the conditions described in clause (a) exist or until any Insolvency Proceeding is dismissed);

7.6 Other Agreements. There is, under any agreement to which Borrower, any of Borrower's Subsidiaries, or any Guarantor is a party with a third party or parties, (a) any default resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount individually or in the aggregate in excess of \$500,000.00; or (b) any breach or default by Borrower, any of Borrower's Subsidiaries, or any Guarantor, the result of which could have a material adverse effect on Borrower's, any of Borrower's Subsidiaries', or any Guarantor's business or operations;

7.7 Judgments; Penalties. One or more fines, penalties or final judgments, orders or decrees for the payment of money in an amount, individually or in the aggregate, of at least \$1,250,000.00 (not covered by independent third-party insurance as to which liability has been accepted by such insurance carrier) shall be rendered against Borrower or any of its Subsidiaries by any Governmental Authority, and the same are not, within 10 days after the entry, assessment or issuance thereof, discharged, satisfied, or paid after execution thereof, or stayed

pending appeal, or such judgments are not discharged prior to the expiration of any such stay (provided that no Credit Extensions will be made prior to the discharge, satisfaction, payment, or stay of such fine, penalty, judgment, order or decree);

7.8 Misrepresentations. Borrower or any of its Subsidiaries or any Person acting for Borrower or any of its Subsidiaries makes any representation, warranty, or other statement now or later in this Agreement, any Loan Document or in any writing delivered to Bank in connection with this Agreement or any Loan Document or to induce Bank to enter this Agreement or any Loan Document, and such representation, warranty, or other statement is incorrect in any material respect when made (it being agreed and acknowledged by Bank that the projections and forecasts provided by Borrower or any of its Subsidiaries in good faith and based upon reasonable assumptions are not viewed as facts and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results);

7.9 Subordinated Debt. If: (a) any document, instrument, or agreement evidencing any Subordinated Debt shall for any reason be revoked or invalidated or otherwise cease to be in full force and effect, or any Person (other than Bank) shall be in breach thereof or contest in any manner the validity or enforceability thereof or deny that it has any further liability or obligation thereunder; (b) a default or event of default (however defined) has occurred under any document, instrument, or agreement evidencing any Subordinated Debt, which default shall not have been cured or waived within any applicable grace period; or (c) the Obligations shall for any reason be subordinated or shall not have the priority contemplated by this Agreement or any applicable subordination or intercreditor agreement;

7.10 Lien Priority. There is a material impairment in the perfection or priority of Bank's security interest in the Collateral;

7.11 Guaranty. (a) Any guaranty of any Obligations terminates or ceases for any reason to be in full force and effect; (b) any Guarantor does not perform any obligation or covenant under any guaranty of the Obligations; (c) any circumstance described in Sections 7.3, 7.4, 7.5, 7.6, 7.7, or 7.8 of this Agreement occurs with respect to any Guarantor; (d) the death, liquidation, winding up, or termination of existence of any Guarantor; or (e) (i) a material impairment in the perfection or priority of Bank's Lien in the collateral provided by Guarantor or in the value of such collateral, or (ii) a material adverse change in the general affairs, management, results of operation, condition (financial or otherwise), or the prospect of repayment of the Obligations occurs with respect to any Guarantor; or

7.12 Governmental Approvals. Any Governmental Approval shall have been (a) revoked, rescinded, suspended, modified in an adverse manner or not renewed in the ordinary course for a full term or (b) subject to any decision by a Governmental Authority that designates a hearing with respect to any applications for renewal of any of such Governmental Approval or that could result in the Governmental Authority taking any of the actions described in clause (a) above, and such decision or such revocation, rescission, suspension, modification or non-renewal (i) causes or could reasonably be expected to cause a Material Adverse Change, or (ii) materially and adversely affects the legal qualifications of Borrower or any of its Subsidiaries to hold such Governmental Approval in any applicable jurisdiction and such revocation, rescission, suspension, modification or non-renewal could reasonably be expected to affect the status of or legal qualifications of Borrower or any of its Subsidiaries to hold any Governmental Approval in any other jurisdiction.

7.13 Delisting. After an initial public offering of the Borrower's common stock on an exchange or market, such shares are delisted from such exchange or market because of Borrower's failure to comply with continued listing standards thereof or due to a voluntary delisting which results in such shares not being listed on such exchange or market, or a similar exchange.

8 BANK'S RIGHTS AND REMEDIES

8.1 Rights and Remedies. Upon the occurrence and during the continuance of an Event of Default, Bank may, without notice or demand, do any or all of the following, to the extent not prohibited by applicable law:

- (a) declare all Obligations immediately due and payable (but if an Event of Default described in Section 7.5 occurs, all Obligations are immediately due and payable without any action by Bank);
- (b) stop advancing money or extending credit for Borrower's benefit under this Agreement or under any other agreement between Borrower and Bank;
- (c) demand that Borrower (i) deposit cash with Bank in an amount equal to at least (A) 105.0% of the aggregate face amount of any Letters of Credit denominated in Dollars remaining undrawn, and (B) 110.0% of the Dollar Equivalent of the aggregate face amount of any Letters of Credit denominated in a Foreign Currency remaining undrawn (plus, in each case, all interest, fees, and costs due or estimated by Bank to become due in connection therewith), to secure all of the Obligations relating to such Letters of Credit, as collateral security for the repayment of any future drawings under such Letters of Credit, and Borrower shall forthwith deposit and pay such amounts, and (ii) pay in advance all letter of credit fees scheduled to be paid or payable over the remaining term of any Letters of Credit;
- (d) terminate any FX Contracts (it being understood and agreed that (i) Bank is not obligated to deliver the currency which Borrower has contracted to receive under any FX Contract, and Bank may cover its exposure for any FX Contracts by purchasing or selling currency in the interbank market as Bank deems appropriate; (ii) Borrower shall be liable for all losses, damages, costs, margin obligations, and expenses incurred by Bank arising from Borrower's failure to satisfy its obligations under any FX Contract or the execution of any FX Contract; and (iii) Bank shall not be liable to Borrower for any gain in value of a FX Contract that Bank may obtain in covering Borrower's breach);
- (e) verify the amount of, demand payment of and performance under, and collect any Accounts and General Intangibles, settle or adjust disputes and claims directly with Account Debtors for amounts on terms and in any order that Bank considers advisable, and notify any Person owing Borrower money of Bank's security interest in such funds. Borrower shall collect all payments in trust for Bank and, if requested by Bank, immediately deliver the payments to Bank in the form received from the Account Debtor, with proper endorsements for deposit;
- (f) make any payments and do any acts it considers necessary or reasonable to protect the Collateral and/or its security interest in the Collateral. Borrower shall assemble the Collateral if Bank requests and make it available as Bank designates at a location reasonably convenient to Bank and Borrower. Bank may peaceably enter premises where the Collateral is located, take and maintain possession of any part of the Collateral, and pay, purchase, contest, or compromise any Lien which appears to be prior or superior to its security interest and pay all expenses incurred. Borrower grants Bank a license to enter and occupy any of its premises, without charge, to exercise any of Bank's rights or remedies;
- (g) apply to the outstanding Obligations then due any (i) balances and deposits of Borrower it holds (other than any Excluded Account), or (ii) amount held by Bank owing to or for the credit or the account of Borrower;
- (h) ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sale, and sell the Collateral. For use solely upon the occurrence and during the continuation of an Event of Default, Bank is hereby granted a non-exclusive, royalty-free license or other right to use, without charge, Borrower's labels, Patents, Copyrights, mask works, rights of use of any name, trade secrets, trade names, Trademarks, and advertising matter, or any similar property as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Bank's exercise of its rights under this Section 8.1, Borrower's rights under all licenses and all franchise agreements inure to Bank's benefit;
- (i) place a "hold" on any account maintained with Bank (other than any Excluded Account) and/or deliver a notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any Control Agreement or similar agreements providing control of any Collateral;
- (j) demand and receive possession of Borrower's Books; and

(k) exercise all rights and remedies available to Bank under the Loan Documents or at law or equity, including all remedies provided under the Code or any Applicable Law (including disposal of the Collateral pursuant to the terms thereof).

8.2 Power of Attorney. Borrower hereby irrevocably appoints Bank as its true and lawful attorney-in-fact, (a) exercisable upon the occurrence and during the continuance of an Event of Default, to: (i) endorse Borrower's name on any checks, payment instruments, or other forms of payment or security; (ii) sign Borrower's name on any invoice or bill of lading for any Account or drafts against Account Debtors; (iii) demand, collect, sue, and give releases to any Account Debtor for monies due, settle and adjust disputes and claims about the Accounts directly with Account Debtors, and compromise, prosecute, or defend any action, claim, case, or proceeding about any Collateral (including filing a claim or voting a claim in any bankruptcy case in Bank's or Borrower's name, as Bank chooses); (iv) make, settle, and adjust all claims under Borrower's insurance policies; (v) pay, contest, or settle any Lien, charge, encumbrance, security interest, or other claim in or to the Collateral, or any judgment based thereon, or otherwise take any action to terminate or discharge the same; and (vi) transfer the Collateral into the name of Bank or a third party as the Code permits; and (b) regardless of whether an Event of Default has occurred, to sign Borrower's name on any documents necessary to perfect or continue the perfection of Bank's security interest in the Collateral. Bank's foregoing appointment as Borrower's attorney in fact, and all of Bank's rights and powers, coupled with an interest, are irrevocable until such time as all Obligations (other than inchoate indemnity or other obligations which, by their terms, survive termination of this Agreement) have been satisfied in full, Bank is under no further obligation to make Credit Extensions and the Loan Documents have been terminated. Bank shall not incur any liability in connection with or arising from the exercise of such power of attorney and shall have no obligation to exercise any of the foregoing rights and remedies.

8.3 Protective Payments. If Borrower fails to timely obtain the insurance called for by Section 5.6 or fails to pay any premium thereon or fails to timely pay any other amount which Borrower is obligated to pay under this Agreement or any other Loan Document or which may be required to preserve the Collateral, Bank may obtain such insurance or make such payment, and all amounts so paid by Bank are Bank Expenses and immediately due and payable, bearing interest at the then highest rate applicable to the Obligations, and secured by the Collateral. Bank will make reasonable efforts to provide Borrower with notice of Bank obtaining such insurance at the time it is obtained or within a reasonable time thereafter. No payments by Bank are deemed an agreement to make similar payments in the future or Bank's waiver of any Event of Default.

8.4 Application of Payments and Proceeds Upon Default. If an Event of Default has occurred and is continuing, Bank may apply any funds in its possession, whether from Borrower account balances, payments, proceeds realized as the result of any collection of Accounts or other disposition of the Collateral, or otherwise, to the Obligations in such order as Bank shall determine in its sole discretion. Any surplus shall be paid to Borrower or other Persons legally entitled thereto; Borrower shall remain liable to Bank for any deficiency. If Bank, in its commercially reasonable discretion, directly or indirectly, enters into a deferred payment or other credit transaction with any purchaser at any sale of Collateral, Bank shall have the option, exercisable at any time, of either reducing the Obligations by the principal amount of the purchase price or deferring the reduction of the Obligations until the actual receipt by Bank of cash therefor.

8.5 Bank's Liability for Collateral. Bank's sole duty with respect to the custody, safekeeping, and physical preservation of the Collateral in its possession or under its control, under Section 9-207 of the Code or otherwise, shall be to deal with it in the same manner as Bank deals with its own property consisting of similar instruments or interests. Borrower bears all risk of loss, damage, or destruction of the Collateral.

8.6 No Waiver; Remedies Cumulative. Bank's failure, at any time or times, to require strict performance by Borrower of any provision of this Agreement or any other Loan Document shall not waive, affect, or diminish any right of Bank thereafter to demand strict performance and compliance herewith or therewith. No waiver hereunder shall be effective unless signed by the party granting the waiver and then is only effective for the specific instance and purpose for which it is given. Bank's rights and remedies under this Agreement and the other Loan Documents are cumulative. Bank has all rights and remedies provided under the Code, by law, or in equity. Bank's exercise of one right or remedy is not an election and shall not preclude Bank from exercising any other remedy under this Agreement or other remedy available at law or in equity, and Bank's waiver of any Event of

Default is not a continuing waiver. Bank's delay in exercising any remedy is not a waiver, election, or acquiescence.

8.7 Demand Waiver. Borrower waives demand, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees held by Bank on which Borrower is liable.

8.8 Borrower Liability. Any Borrower may, acting singly, request Credit Extensions hereunder. Each Borrower hereby appoints each other as agent for the other for all purposes hereunder, including with respect to requesting Credit Extensions hereunder. Each Borrower hereunder shall be liable for the Credit Extensions and Obligations as set forth on Schedule I hereto. Each Borrower waives (a) any suretyship defenses available to it under the Code or any other Applicable Law, and (b) any right to require Bank to: (i) proceed against any Borrower or any other person; (ii) proceed against or exhaust any security; or (iii) pursue any other remedy. Bank may exercise or not exercise any right or remedy it has against any Borrower or any security it holds (including the right to foreclose by judicial or non-judicial sale) without affecting any Borrower's liability. Notwithstanding any other provision of this Agreement or other related document, each Borrower irrevocably waives all rights that it may have at law or in equity (including, without limitation, any law subrogating Borrower to the rights of Bank under this Agreement) to seek contribution, indemnification or any other form of reimbursement from any other Borrower, or any other Person now or hereafter primarily or secondarily liable for any of the Obligations, for any payment made by Borrower with respect to the Obligations in connection with this Agreement or otherwise and all rights that it might have to benefit from, or to participate in, any security for the Obligations as a result of any payment made by Borrower with respect to the Obligations in connection with this Agreement or otherwise. Any agreement providing for indemnification, reimbursement or any other arrangement prohibited under this Section 8.8 shall be null and void. If any payment is made to a Borrower in contravention of this Section 8.8, such Borrower shall hold such payment in trust for Bank and such payment shall be promptly delivered to Bank for application to the Obligations, whether matured or unmatured.

9 NOTICES

All notices, consents, requests, approvals, demands, or other communication by any party to this Agreement or any other Loan Document must be in writing and shall be deemed to have been validly served, given, or delivered: (a) upon the earlier of actual receipt and 3 Business Days after deposit in the U.S. mail, first class, registered or certified mail return receipt requested, with proper postage prepaid; (b) upon transmission, when sent by electronic mail; (c) 1 Business Day after deposit with a reputable overnight courier with all charges prepaid; or (d) when delivered, if hand-delivered by messenger, all of which shall be addressed to the party to be notified and sent to the address or email address indicated below; provided that, for clause (b), if such notice, consent, request, approval, demand, or other communication is not sent during the normal business hours of the recipient, it shall be deemed to have been sent at the opening of business on the next Business Day of the recipient. Bank or Borrower may change its mailing or electronic mail address by giving the other party written notice thereof in accordance with the terms of this Section 9.

If to Borrower: Sema4 Holdings Corp.
 Sema4 OpCo, Inc. 333 Ludlow Street, Stamford, Connecticut 06902
 Attn: General Counsel
 Email: legal@sema4.com
 Website URL: https://sema4.com/

with a copy to (which Goodwin Procter LLP
shall not constitute 100 Northern Ave.
notice): Boston, Massachusetts 02210
 Attn: Mark D. Smith
 Email: marksmith@goodwinlaw.com

If to Bank: Silicon Valley Bank 275 Grove Street, Suite 2-200

Newton, MA 02466
Attn: Clark Hayes
Email: CHayes@svb.com

with a copy to (which Morrison & Foerster LLP
shall not constitute 200 Clarendon Street, Floor 20
notice): Boston, Massachusetts 02116
Attn: David A. Ephraim, Esquire
Email: DEphraim@mfofo.com

10 CHOICE OF LAW, VENUE AND JURY TRIAL WAIVER

Except as otherwise expressly provided in any of the Loan Documents, Massachusetts law governs the Loan Documents without regard to principles of conflicts of law that would require the application of the laws of another jurisdiction. Borrower and Bank each irrevocably and unconditionally submit to the exclusive jurisdiction of the State and Federal courts in Boston, Massachusetts; provided, however, that nothing in this Agreement shall be deemed to operate to preclude Bank from bringing suit or taking other legal action in any other jurisdiction with respect to the Loan Documents or to realize on the Collateral or any other security for the Obligations, or to enforce a judgment or other court order in favor of Bank. Borrower expressly, irrevocably and unconditionally submits and consents in advance to such jurisdiction in any action or suit commenced in any such court, and Borrower hereby irrevocably and unconditionally waives, to the fullest extent permitted by Applicable Law, any objection that it may have based upon lack of personal jurisdiction, improper venue, or forum non conveniens and hereby irrevocably and unconditionally consents to the granting of such legal or equitable relief as is deemed appropriate by such court. Borrower hereby waives personal service of the summons, complaints, and other process issued in such action or suit and agrees that service of such summons, complaints, and other process may be made by registered or certified mail addressed to Borrower at the address set forth in, or subsequently provided by Borrower in accordance with, Section 9 of this Agreement and that service so made shall be deemed completed upon the earlier to occur of Borrower's actual receipt thereof or three (3) days after deposit in the U.S. mails, proper postage prepaid.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, BORROWER AND BANK EACH WAIVES ITS RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION ARISING OUT OF OR BASED UPON THIS AGREEMENT, THE LOAN DOCUMENTS OR ANY CONTEMPLATED TRANSACTION, INCLUDING CONTRACT, TORT, BREACH OF DUTY AND ALL OTHER CLAIMS. THIS WAIVER IS A MATERIAL INDUCEMENT FOR THE PARTIES HERETO TO ENTER INTO THIS AGREEMENT. EACH PARTY HERETO HAS REVIEWED THIS WAIVER WITH ITS COUNSEL.

This Section 10 shall survive the termination of this Agreement and the repayment of all Obligations.

11 GENERAL PROVISIONS

11.1 Termination Prior to Maturity Date; Survival. All covenants, representations and warranties made in this Agreement shall continue in full force until this Agreement has terminated pursuant to its terms and all Obligations (other than inchoate indemnity or other obligations which, by their terms, survive termination of this Agreement) have been satisfied. So long as Borrower has satisfied the Obligations (other than inchoate indemnity obligations, and any other obligations which, by their terms, are to survive the termination of this Agreement and the repayment of all Obligations, and any Obligations under Bank Services Agreements that are cash collateralized in accordance with Section 3.3 of this Agreement), this Agreement may be terminated prior to the Revolving Line Maturity Date by Borrower, effective 3 Business Days after written notice of termination is given to Bank. Those obligations that are expressly specified in this Agreement as surviving this Agreement's termination and the repayment of all Obligations shall continue to survive notwithstanding this Agreement's termination and the repayment of all Obligations.

1.2 Successors and Assigns. This Agreement binds and is for the benefit of the successors and permitted assigns of each party. Borrower may not assign or transfer this Agreement or any rights or obligations under it without Bank's prior written consent (which may be granted or withheld in Bank's sole discretion) and any

other attempted assignment or transfer by Borrower shall be null and void. Bank has the right, without the consent of or notice to Borrower, to sell, transfer, assign, negotiate, or grant participation in all or any part of, or any interest in, Bank's obligations, rights, and benefits under this Agreement and the other Loan Documents (other than the Warrant, as to which assignment, transfer and other such actions are governed by the terms thereof). Notwithstanding the foregoing, so long as no Event of Default shall have occurred and is continuing, Bank shall not assign its interest in the Loan Documents to any Person who in the reasonable estimation of Bank is (a) a direct competitor of Borrower, whether as an operating company or direct or indirect parent with voting control over such operating company or (b) a vulture fund or distressed debt fund. Bank, acting solely for this purpose as a non-fiduciary agent of Borrower, shall maintain a register for the recordation of the names and addresses of the applicable lenders hereunder, and the applicable commitment(s) of, and principal amount (and stated interest) of the applicable loans owing to, each lender pursuant to the terms hereof from time to time (the "Register"). The entries in the Register shall be conclusive absent manifest error, and Borrower, Bank and the other lenders hereunder shall treat each Person whose name is recorded in the Register pursuant to the terms hereof as a lender hereunder for all purposes of this Agreement and the other Loan Documents. The Register shall be available for inspection by Borrower and any lender hereunder, at any reasonable time and from time to time upon reasonable prior notice. Bank and each other lender hereunder that sells a participation in any Advance, acting solely for this purpose as a non-fiduciary agent of Borrower, shall maintain a register on which it enters the name and address of each participant and the principal amounts (and stated interest) of each participant's interest in the applicable Advances or other Obligations under the Loan Documents (the "Participant Register"); provided that neither Bank nor any other lender hereunder shall have any obligation to disclose all or any portion of the Participant Register (including the identity of any participant or any information relating to a participant's interest in any Advances, Letters of Credit or its other Obligations under any Loan Document) to any Person except to the extent that such disclosure is necessary to establish that such Advance, Letter of Credit or other Obligation is in registered form under Section 5f.103-1(c) of the United States Treasury Regulations. The entries in the Participant Register shall be conclusive absent manifest error, and such lender hereunder shall treat each Person whose name is recorded in the Participant Register as the owner of such participation for all purposes of this Agreement and the other Loan Documents notwithstanding notice to the contrary.

11.3 Indemnification.

(a) General Indemnification. Borrower shall indemnify, defend, and hold Bank and its Affiliates and the partners, directors, officers, employees, agents, trustees, administrators, managers, advisors, and representatives of Bank and its Affiliates (each, an "**Indemnified Person**") harmless against: all losses, claims, damages, liabilities, and related reasonable documented out-of-pocket expenses (including Bank Expenses and the reasonable documented fees, charges, and out-of-pocket disbursements of any counsel for any Indemnified Person) (collectively, "**Claims**") arising out of, in connection with, or as a result of (i) the execution or delivery of this Agreement, any other Loan Document, or any agreement or instrument contemplated hereby or thereby, the performance by the parties hereto of their respective obligations hereunder or thereunder, or the consummation of the transactions contemplated hereby or thereby, (ii) any Credit Extension or the use or proposed use of the proceeds therefrom, (iii) any actual or alleged presence or release of hazardous materials on or from any property owned or operated by Borrower or any of its Subsidiaries, or any environmental liability related in any way to Borrower or any of its Subsidiaries, or (iv) any actual or prospective claim, litigation, investigation or proceeding relating to any of the foregoing, whether based on contract, tort, or any other theory, whether brought by a third party or by Borrower, and regardless of whether any Indemnified Person is a party thereto; provided that such indemnity shall not, as to any Indemnified Person, be available to the extent that such losses, claims, damages, liabilities, or related expenses are determined by a court of competent jurisdiction by final and non-appealable judgment to have resulted from the gross negligence or willful misconduct of such Indemnified Person. All amounts due under this Section 11.3 shall be payable promptly after demand therefor. This section 11.3(a) shall not apply with respect to Taxes other than Taxes that represent losses, claims, damages, etc. arising from any non-Tax claim.

(b) Waiver of Consequential Damages, Etc. To the fullest extent permitted by Applicable Law, Borrower shall not assert, and hereby waives, any claim against any Indemnified Person, on any theory of liability, for special, indirect, consequential, or punitive damages (as opposed to direct or actual damages) or any loss of profits arising out of, in connection with, or as a result of, this Agreement, any other Loan Document or any agreement or instrument contemplated hereby, the transactions contemplated hereby or thereby, any Credit Extension, or the use of the proceeds thereof. No Indemnified Person shall be liable for any damages arising from

the use by unintended recipients of any information or other materials distributed by it through telecommunications, electronic, or other information transmission systems in connection with this Agreement or the other Loan Documents or the transactions contemplated hereby or thereby.

This Section 11.3 shall survive the termination of this Agreement and the repayment of all Obligations until all statutes of limitation with respect to the Claims, losses, and expenses for which indemnity is given shall have run.

11.4 Time of Essence. Time is of the essence for the performance of all Obligations in this Agreement.

11.5 Severability of Provisions. Each provision of this Agreement is severable from every other provision in determining the enforceability of any provision.

11.6 Amendments in Writing; Waiver; Integration. No purported amendment or modification of any Loan Document, or waiver, discharge, or termination of any obligation under any Loan Document, shall be effective unless, and only to the extent, expressly set forth in a writing signed by each party hereto. Without limiting the generality of the foregoing, no oral promise or statement, nor any action, inaction, delay, failure to require performance, or course of conduct shall operate as, or evidence, an amendment, supplement or waiver or have any other effect on any Loan Document. Any waiver granted shall be limited to the specific circumstance expressly described in it, and shall not apply to any subsequent or other circumstance, whether similar or dissimilar, or give rise to, or evidence, any obligation or commitment to grant any further waiver. The Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements. All prior agreements, understandings, representations, warranties, and negotiations between the parties about the subject matter of the Loan Documents merge into the Loan Documents.

11.7 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, is an original, and all taken together, constitute one Agreement. Delivery of an executed signature page of this Agreement by electronic mail transmission shall be effective as delivery of a manually executed counterpart hereof.

11.8 Confidentiality. Bank agrees to maintain the confidentiality of Information (as defined below), except that Information may be disclosed (a) to Bank's Subsidiaries and Affiliates and their respective employees, directors, agents, attorneys, accountants, and other professional advisors (collectively, "**Representatives**" and, together with Bank, collectively, "**Bank Entities**"); (b) to prospective transferees, assignees, credit providers or purchasers of Bank's interests under or in connection with this Agreement and their Representatives (provided, however, any such prospective transferee, assignee, credit provider, purchaser, or their Representatives shall have entered into an agreement containing provisions substantially the same as those in this Section 11.8); (c) as required by law, regulation, subpoena, or other order; (d) to Bank's regulators or as otherwise required or requested in connection with Bank's examination or audit; (e) in connection with the exercise of remedies under the Loan Documents or any action or proceeding relating to this Agreement or any other Loan Document or the enforcement of rights hereunder or thereunder; and (f) to third-party service providers of Bank so long as such service providers have executed a confidentiality agreement with Bank with terms no less restrictive than those contained herein. "**Information**" means all information received from Borrower regarding Borrower or its business, in each case other than information that is either: (i) in the public domain or in Bank's possession when disclosed to Bank, or becomes part of the public domain (other than as a result of its disclosure by Bank in violation of this Agreement) after disclosure to Bank; or (ii) disclosed to Bank by a third party, if Bank does not know that the third party is prohibited from disclosing the information.

11.9 Electronic Execution of Documents. The words "execution," "signed," "signature," and words of like import in any Loan Document shall be deemed to include electronic signatures, including any Electronic Signature as defined in the Electronic Transactions Law (2003 Revision) of the Cayman Islands (the "**Cayman Islands Electronic Signature Law**"), if applicable, or the keeping of records in electronic form, including any Electronic Record, as defined in Cayman Islands Electronic Signature Law, each of which shall be of the same legal effect, validity and enforceability as a manually executed signature or the use of a paper-based recordkeeping systems, as the case may be, to the extent and as provided for in any Applicable Law, including, without limitation, any state law based on the Uniform Electronic Transactions Act or the Cayman Islands Electronic Signature Law;

provided, however that sections 8 and 19(3) of the Cayman Islands Electronic Signature Law shall not apply to this Agreement or the execution or delivery thereof.

11.10 Right of Setoff. Borrower hereby grants to Bank a Lien and a right of setoff as security for all Obligations to Bank, whether now existing or hereafter arising upon and against all deposits, credits, collateral and property, now or hereafter in the possession, custody, safekeeping or control of Bank or any entity under the control of Bank (including a subsidiary of Bank) or in transit to any of them, and other obligations owing to Bank or any such entity. At any time after the occurrence and during the continuance of an Event of Default, without demand or notice, Bank may setoff the same or any part thereof and apply the same to any Obligation of Borrower then due regardless of the adequacy of any other collateral securing the Obligations. ANY AND ALL RIGHTS TO REQUIRE BANK TO EXERCISE ITS RIGHTS OR REMEDIES WITH RESPECT TO ANY OTHER COLLATERAL WHICH SECURES THE OBLIGATIONS, PRIOR TO EXERCISING ITS RIGHT OF SETOFF WITH RESPECT TO SUCH DEPOSITS, CREDITS OR OTHER PROPERTY OF BORROWER, ARE HEREBY KNOWINGLY, VOLUNTARILY, AND IRREVOCABLY WAIVED.

11.11 Captions and Section References. The headings used in this Agreement are for convenience only and shall not affect the interpretation of this Agreement. Unless indicated otherwise, section references herein are to sections of this Agreement.

11.12 Construction of Agreement. The parties hereto mutually acknowledge that they and their attorneys have participated in the preparation and negotiation of this Agreement. In cases of uncertainty this Agreement shall be construed without regard to which of the parties caused the uncertainty to exist.

11.13 Relationship. The relationship of the parties to this Agreement is determined solely by the provisions of this Agreement. The parties do not intend to create any agency, partnership, joint venture, trust, fiduciary, or other relationship with duties or incidents different from those of parties to an arm's-length contract.

11.14 Third Parties. Nothing in this Agreement, whether express or implied, is intended to: (a) confer any benefits, rights, or remedies under or by reason of this Agreement on any Persons other than the express parties to it and their respective permitted successors and assigns; (b) relieve or discharge the obligation or liability of any Person not an express party to this Agreement; or (c) give any Person not an express party to this Agreement any right of subrogation or action against any party to this Agreement.

11.15 Anti-Terrorism Law. Bank hereby notifies Borrower that, pursuant to the requirements of Anti-Terrorism Law, Bank may be required to obtain, verify, and record information that identifies Borrower, which information may include the name and address of Borrower and other information that will allow Bank to identify Borrower in accordance with Anti-Terrorism Law. Borrower hereby agrees to take any action necessary to enable Bank to comply with the requirements of Anti-Terrorism Law.

12 ACCOUNTING TERMS AND OTHER DEFINITIONS

12.1 Accounting and Other Terms.

(a) Accounting terms not defined in this Agreement shall be construed following GAAP. Calculations and determinations must be made following GAAP (except for with respect to unaudited financial statements for the absence of footnotes and subject to year-end audit adjustments), provided that if at any time any change in GAAP would affect the computation of any financial ratio or requirement set forth in any Loan Document, and either Borrower or Bank shall so request, Borrower and Bank shall negotiate in good faith to amend such ratio or requirement to preserve the original intent thereof in light of such change in GAAP; provided, further, that, until so amended, (i) such ratio or requirement shall continue to be computed in accordance with GAAP prior to such change therein and (ii) Borrower shall provide Bank financial statements and other documents required under this Agreement or as reasonably requested hereunder setting forth a reconciliation between calculations of such ratio or requirement made before and after giving effect to such change in GAAP. Notwithstanding the foregoing, all financial covenant and other financial calculations shall be computed with respect to Borrower only, and not on a consolidated basis.

(b) As used in the Loan Documents: (i) the words “shall” or “will” are mandatory, the word “may” is permissive, the word “or” is not exclusive, the words “includes” and “including” are not limiting, the singular includes the plural, and numbers denoting amounts that are set off in brackets are negative; (ii) the term “continuing” in the context of an Event of Default means that the Event of Default has not been remedied (if capable of being remedied) or waived; and (iii) whenever a representation or warranty is made to Borrower’s knowledge or awareness, to the “best of” Borrower’s knowledge, or with a similar qualification, knowledge or awareness means the actual knowledge, after reasonable investigation, of any Responsible Officer.

12.2 Definitions. Capitalized terms not otherwise defined in this Agreement shall have the meanings set forth in this Section 12.2. All other terms contained in this Agreement, unless otherwise indicated, shall have the meaning provided by the Code to the extent such terms are defined therein. As used in this Agreement, the following capitalized terms have the following meanings:

“**Account**” is, as to any Person, any “account” of such Person as “account” is defined in the Code with such additions to such term as may hereafter be made, and includes, without limitation, all accounts receivable and other sums owing to such Person.

“**Account Debtor**” is any “account debtor” as defined in the Code, with such additions to such term as may hereafter be made.

“**Adjusted Quick Ratio**” is the ratio of (a) Quick Assets to (b)(i) Current Liabilities minus (ii) the current portion of Deferred Revenue.

“**Administrator**” is an individual that is named:

(a) as an “Administrator” in the “SVB Online Services” form completed by Borrower with the authority to determine who will be authorized to use SVB Online Services (as defined in Bank’s Online Banking Agreement as in effect from time to time) on behalf of Borrower; and

(b) as an Authorized Signer of Borrower in an approval by the Board.

“**Advance**” or “**Advances**” means a revolving credit loan (or revolving credit loans) under the Revolving Line.

“**Affiliate**” is, with respect to any Person, each other Person that owns or controls directly or indirectly the Person, any Person that controls or is controlled by or is under common control with the Person, and each of that Person’s senior executive officers, directors, partners, and, for any Person that is a limited liability company, that Person’s managers and members.

“**Agreement**” is defined in the preamble hereof.

“**Anniversary Fee**” and “**Anniversary Fees**” are each defined in Section 1.5(b).

“**Anti-Terrorism Law**” means any law relating to terrorism or money-laundering, including Executive Order No. 13224 and the USA Patriot Act.

“**Applicable Law**” means all applicable provisions of constitutions, laws, statutes, ordinances, rules, treaties, regulations, permits, licenses, approvals, interpretations and orders of courts or Governmental Authorities and all orders and decrees of all courts and arbitrators.

“**Authorized Signer**” means any individual listed in Borrower’s Borrowing Resolution who is authorized to execute the Loan Documents, including making (and executing if applicable) any Credit Extension request, on behalf of Borrower.

“**Availability Amount**” is the Revolving Line minus the sum of (i) all outstanding principal amounts of any Advances, (ii) the aggregate Dollar Equivalent of the face amount of outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit and any Letter of Credit Reserve), and (iii) all amounts used for Cash Management Services.

“**Bank**” is defined in the preamble hereof.

“**Bank Entities**” is defined in Section 11.8.

“**Bank Expenses**” are all documented audit fees, costs, and reasonable documented expenses (including reasonable, out-of-pocket and documented attorneys’ fees and expenses) for preparing, amending, negotiating, administering, defending and enforcing the Loan Documents (including, without limitation, those incurred in connection with appeals or Insolvency Proceedings) or otherwise incurred with respect to Borrower or any Guarantor.

“**Bank Services**” are any products, credit services, and/or financial accommodations previously, now, or hereafter provided to Borrower or any of its Subsidiaries by Bank or any Bank Affiliate, including, without limitation, any letters of credit, cash management services (including, without limitation, merchant services, direct deposit of payroll, business credit cards, and check cashing services), interest rate swap arrangements, and foreign exchange services as any such products or services may be identified in Bank’s various agreements related thereto (each, a “**Bank Services Agreement**”) and shall include, without limitation, any Letters of Credit pursuant to Section 1.2 and Cash Management Services pursuant to Section 1.3.

“**Bank Services Agreement**” is defined in the definition of Bank Services.

“**Board**” is Borrower’s board of directors or equivalent governing body.

“**Borrower**” is set forth on Schedule I hereto.

“**Borrower’s Books**” are all Borrower’s books and records including ledgers, federal and state tax returns, records regarding Borrower’s assets or liabilities, the Collateral, business operations or financial condition, and all computer programs or storage or any equipment containing such information.

“**Borrowing Resolutions**” are, with respect to any Person, those resolutions adopted by such Person’s board of directors or equivalent governing body (and, if required under the terms of such Person’s Operating Documents, stockholders or equivalent equity holders) and delivered by such Person to Bank approving the Loan Documents to which such Person is a party and the transactions contemplated thereby, together with a certificate executed by its secretary on behalf of such Person certifying (a) such Person has the authority to execute, deliver, and perform its obligations under each of the Loan Documents to which it is a party, (b) that set forth as a part of or attached as an exhibit to such certificate is a true, correct, and complete copy of the resolutions then in full force and effect authorizing and ratifying the execution, delivery, and performance by such Person of the Loan Documents to which it is a party, (c) the name(s) of the Person(s) authorized to execute the Loan Documents, including making (and executing if applicable) any Credit Extension request, on behalf of such Person, together with a sample of the true signature(s) of such Person(s), and (d) that Bank may conclusively rely on such certificate unless and until such Person shall have delivered to Bank a further certificate canceling or amending such prior certificate.

“**Business Day**” is a day other than a Saturday, Sunday or other day on which commercial banks in the State of California are authorized or required by law to close, except if any determination of a “Business Day” shall relate to an FX Contract, the term “Business Day” shall also mean a day on which dealings are carried on in the country of settlement of the Foreign Currency.

“**Cash Equivalents**” are (a) marketable direct obligations issued or unconditionally guaranteed by the United States or any agency or any State thereof having maturities of not more than 1 year from the date of acquisition; (b) commercial paper maturing no more than 1 year after its creation and having the highest rating from either Standard & Poor’s Ratings Group or Moody’s Investors Service, Inc.; (c) Bank’s certificates of deposit issued

maturing no more than 1 year after issue; and (d) money market funds at least 95.0% of the assets of which constitute Cash Equivalents of the kinds described in clauses (a) through (c) of this definition.

“**Cash Management Services**” is defined in Section 1.3.

“**Cayman Islands Electronic Signature Law**” is defined in Section 11.9.

“**CDEC**” is defined in Section 2.1(e).

“**CDEC Subordination Agreement**” is defined in Section 2.1(e).

“**Change in Control**” means (a) at any time, any “person” or “group” (as such terms are used in Sections 13(d) and 14(d) of the Exchange Act), shall become, or obtain rights (whether by means of warrants, options, or otherwise) to become, the “beneficial owner” (as defined in Rules 13(d)-3 and 13(d)5 under the Exchange Act), directly or indirectly, of 40.0% or more of the ordinary voting power for the election of directors, partners, managers, and members, as applicable, of Borrower (determined on a fully diluted basis) other than by the sale of Borrower’s equity securities in a public offering or to venture capital or private equity investors so long as Borrower identifies to Bank the venture capital or private equity investors at least 7 Business Days prior to the closing of the transaction and provides to Bank a description of the material terms of the transaction; (b) during any period of 12 consecutive months, a majority of the members of the Board of Borrower cease to be composed of individuals (i) who were members of that board or equivalent governing body on the first day of such period, (ii) whose election or nomination to that board or equivalent governing body was approved by individuals referred to in clause (i) above constituting at the time of such election or nomination at least a majority of that board or equivalent governing body, or (iii) whose election or nomination to that board or other equivalent governing body was approved by individuals referred to in clauses (i) and (ii) above constituting at the time of such election or nomination at least a majority of that board or equivalent governing body; or (c) at any time, Borrower shall cease to own and control, of record and beneficially, directly or indirectly, 100.0% of each class of outstanding stock, partnership, membership, or other ownership interest or other equity securities of each Subsidiary of Borrower free and clear of all Liens (except Permitted Liens).

“**Change in Law**” means the occurrence, after the Effective Date, of: (a) the adoption or taking effect of any law, rule, regulation, or treaty; (b) any change in Applicable Law or in the administration, interpretation, implementation, or application thereof by any Governmental Authority; or (c) the making or issuance of any request, rule, guideline, or directive (whether or not having the force of law) by any Governmental Authority; provided that, notwithstanding anything herein to the contrary, (i) the Dodd-Frank Wall Street Reform and Consumer Protection Act and all requests, rules, guidelines, or directives thereunder or issued in connection therewith and (ii) all requests, rules, guidelines, or directives promulgated by Bank for International Settlements, the Basel Committee on Banking Supervision (or any successor or similar authority), or the United States or foreign regulatory authorities, in each case pursuant to Basel III, shall in each case be deemed to be a “Change in Law”, regardless of the date enacted, adopted, or issued.

“**Chase Account**” is defined in Section 5.7(a).

“**Claims**” is defined in Section 11.3.

“**CMS**” is defined in the definition of Medicare Regulations.

“**Code**” is the Uniform Commercial Code, as the same may, from time to time, be enacted and in effect in the Commonwealth of Massachusetts; provided, that, to the extent that the Code is used to define any term herein or in any Loan Document and such term is defined differently in different Articles or Divisions of the Code, the definition of such term contained in Article or Division 9 shall govern; provided further, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection, or priority of, or remedies with respect to, Bank’s Lien on any Collateral is governed by the Uniform Commercial Code in effect in a jurisdiction other than the Commonwealth of Massachusetts, the term “Code” shall mean the Uniform Commercial Code as enacted and in effect in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority, or remedies and for purposes of definitions relating to such provisions.

“**Collateral**” consists of all of Borrower’s right, title and interest in and to the following personal property:

(a) (i) all goods, Accounts (including health-care receivables), Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles (except as provided below), commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts, certificates of deposit, fixtures, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, securities accounts, securities entitlements and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and (ii) all Borrower’s Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing.

(b) Notwithstanding the foregoing, the Collateral does not include (i) the Governmental Collection Account(s), (ii) with respect to stock in Foreign Subsidiaries, more than 65% of the presently existing and hereafter arising issued and outstanding shares of capital stock owned by Borrower in a Foreign Subsidiary, which shares entitle the holder thereof to vote for directors or any other matter, or (iii) any Intellectual Property; provided, however, the Collateral shall include all Accounts and all proceeds of Intellectual Property. If a judicial authority (including a U.S. Bankruptcy Court) would hold that a security interest in the underlying Intellectual Property is necessary to have a security interest in such Accounts and such property that are proceeds of Intellectual Property, then the Collateral shall automatically, and effective as of the Effective Date, include the Intellectual Property to the extent necessary to permit perfection of Bank’s security interest in such Accounts and such other property of Borrower that are proceeds of the Intellectual Property.

(c) Pursuant to the terms of a certain negative pledge arrangement with Bank, Borrower has agreed not to encumber any of its Intellectual Property without Bank’s prior written consent.

“**Collateral Account**” is any Deposit Account, Securities Account, or Commodity Account.

“**Commodity Account**” is any “commodity account” as defined in the Code, with such additions to such term as may hereafter be made.

“**Compliance Statement**” is that certain statement in the form attached hereto as Exhibit A.

“**Connection Income Taxes**” means Other Connection Taxes that are imposed on or measured by net income (however denominated) or that are franchise Taxes or branch profits Taxes.

“**Contingent Obligation**” is, for any Person, any direct or indirect liability of that Person for (a) any direct or indirect guaranty by such Person of any indebtedness, lease, dividend, letter of credit, credit card, or other obligation of another, (b) any other obligation endorsed, co-made, discounted or sold with recourse by that Person, or for which that Person is directly or indirectly liable; (c) any obligations for undrawn letters of credit for the account of that Person; and (d) all obligations from any interest rate, currency or commodity swap agreement, interest rate cap or collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates, or commodity prices; but “Contingent Obligation” does not include endorsements in the ordinary course of business. The amount of a Contingent Obligation is the stated or determined amount of the primary obligation for which the Contingent Obligation is made or, if not determinable, the maximum reasonably anticipated liability for it determined by the Person in good faith; but the amount may not exceed the maximum of the obligations under any guarantee or other support arrangement.

“**Control Agreement**” is any control agreement entered into among the depository institution at which Borrower maintains a Deposit Account or the securities intermediary or commodity intermediary at which Borrower maintains a Securities Account or a Commodity Account, Borrower, and Bank pursuant to which Bank obtains control (within the meaning of the Code) over such Deposit Account, Securities Account, or Commodity Account.

“**Copyrights**” are any and all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret.

“**Corporate Integrity Agreement**” is an agreement executed by the OIG and healthcare providers and other entities as part of the settlement of federal healthcare program investigations arising under a variety of civil false claims statutes.

“**Credit Extension**” is any Advance, Letter of Credit, amount utilized for Cash Management Services, FX Contract, or any other extension of credit by Bank for Borrower’s benefit.

“**Current Liabilities**” are (a) all Obligations of Borrower to Bank (including the aggregate Dollar Equivalent of the face amount of outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit and any Letter of Credit Reserve)), plus (b) without duplication of (a), the aggregate amount of Borrower’s Total Liabilities that mature within one (1) year.

“**Default**” means any event which with notice or passage of time or both, would constitute an Event of Default.

“**Default Rate**” is defined in Section 1.4(c).

“**Deferred Revenue**” is all amounts received or invoiced in advance of performance under contracts and not yet recognized as revenue

“**Deposit Account**” is any “**deposit account**” as defined in the Code with such additions to such term as may hereafter be made.

“**Designated Deposit Account**” is the deposit account established by Borrower with Bank for purposes of receiving Credit Extensions.

“**Division**” means, in reference to any Person which is an entity, the division of such Person into 2 or more separate Persons, with the dividing Person either continuing or terminating its existence as part of such division, including, without limitation, as contemplated under Section 18-217 of the Delaware Limited Liability Company Act for limited liability companies formed under Delaware law, Section 17-220 of the Delaware Revised Uniform Limited Partnership Act for limited partnerships formed under Delaware law, or any analogous action taken pursuant to any other Applicable Law with respect to any corporation, limited liability company, partnership or other entity.

“**Dollars,**” “**dollars**” or use of the sign “\$” means only lawful money of the United States and not any other currency, regardless of whether that currency uses the “\$” sign to denote its currency or may be readily converted into lawful money of the United States.

“**Dollar Equivalent**” is, at any time, (a) with respect to any amount denominated in Dollars, such amount, and (b) with respect to any amount denominated in a Foreign Currency, the equivalent amount therefor in Dollars as determined by Bank at such time on the basis of the then-prevailing rate of exchange in San Francisco, California, for sales of the Foreign Currency for transfer to the country issuing such Foreign Currency.

“**Domestic Subsidiary**” means a Subsidiary organized under the laws of the United States or any state or territory thereof or the District of Columbia.

“**EBITDA**” shall mean (a) Net Income, plus (b) to the extent deducted in the calculation of Net Income (i) Interest Expense, (ii) depreciation expense and amortization expense, (iii) income tax expense, (iv) provisions for taxes based on income, profits or capital, including federal, foreign, state, franchise, excise, and similar taxes paid or accrued, including any and all present or future stamp or documentary taxes or any other excise or property taxes, charges or similar levies arising from any payment made under the Loan Documents or from the execution, delivery or enforcement of, or otherwise with respect thereto, (v) management and board of director fees, (vi) non-cash stock compensation expense, and (vii) other non-cash items reducing Net Income.

“**Effective Date**” is set forth on Schedule I hereto.

“**Environmental Laws**” means any Applicable Law (including any permits, concessions, grants, franchises, licenses, agreements, or governmental restrictions) relating to pollution or the protection of health, safety, or the environment or the release of any materials into the environment (including those related to hazardous materials, air emissions, discharges to waste or public systems, and health and safety matters).

“**Equipment**” is all “equipment” as defined in the Code with such additions to such term as may hereafter be made, and includes without limitation all machinery, fixtures, goods, vehicles (including motor vehicles and trailers), and any interest in any of the foregoing.

“**ERISA**” is the Employee Retirement Income Security Act of 1974, as amended, and its regulations.

“**Event of Default**” is defined in Section 7.

“**Exchange Act**” is the Securities Exchange Act of 1934, as amended.

“**Excluded Accounts**” is defined in Section 5.7(c).

“**Excluded Taxes**” means any of the following Taxes imposed on or with respect to Bank or required to be withheld or deducted from a payment to Bank, (a) Taxes imposed on or measured by net income (however denominated), franchise Taxes, and branch profits Taxes, in each case, (i) imposed as a result of Bank being organized under the laws of, or having its principal office or its applicable lending office located in, the jurisdiction imposing such Tax (or any political subdivision thereof) or (ii) that are Other Connection Taxes, (b) U.S. federal withholding Taxes imposed on amounts payable to or for the account of Bank with respect to an applicable interest in a Credit Extension or the Revolving Line pursuant to a law in effect on the date on which (i) Bank acquires such interest in the Credit Extensions or Revolving Line or (ii) Bank changes its lending office, except in each case to the extent that, pursuant to Section 1.8, amounts with respect to such Taxes were payable either to Bank’s assignor immediately before Bank became a party hereto or to Bank immediately before it changed its lending office, (c) Taxes attributable to Bank’s failure to comply with Section 1.8(e), and (d) any withholding Taxes imposed under FATCA.

“**Exclusion Event**” means an event or events resulting in the exclusion of Borrower or any Guarantor from participation in any Medical Reimbursement Program.

“**FATCA**” means Sections 1471 through 1474 of the Internal Revenue Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof, any agreements entered into pursuant to Section 1471(b)(1) of the Internal Revenue Code and any fiscal or regulatory legislation, rules or practices adopted pursuant to any intergovernmental agreement, treaty or convention among Governmental Authorities and implementing such Sections of the Internal Revenue Code.

“**Financial Statement Repository**” is NEDevice&DigHealth@svb.com or such other means of collecting information approved and designated by Bank after providing notice thereof to Borrower from time to time.

“**Foreign Currency**” is the lawful money of a country other than the United States.

“**Foreign Subsidiary**” means any Subsidiary which is not a Domestic Subsidiary.

“**Funding Date**” is any date on which a Credit Extension is made to or for the account of Borrower which shall be a Business Day.

“**FX Contract**” is any foreign exchange contract by and between Borrower and Bank under which Borrower commits to purchase from or sell to Bank a specific amount of Foreign Currency at a set price or on a specified date.

“GAAP” is generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other Person as may be approved by a significant segment of the accounting profession, which are applicable to the circumstances as of the date of determination.

“General Intangibles” is all “general intangibles” as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation, all Intellectual Property, claims, income and other tax refunds, security and other deposits, payment intangibles, contract rights, options to purchase or sell real or personal property, rights in all litigation presently or hereafter pending (whether in contract, tort or otherwise), insurance policies (including without limitation key man, property damage, and business interruption insurance), payments of insurance and rights to payment of any kind.

“Governmental Account Debtor” means an account debtor making payments under Medicare, Medicaid, TRICARE and any other health care program operated by or financed in whole or in part by any federal, state or local government (but specifically excluding Medicare Advantage plans).

“Governmental Approval” is any consent, authorization, approval, order, license, franchise, permit, certificate, accreditation, registration, filing or notice, of, issued by, from or to, or other act by or in respect of, any Governmental Authority, including, without limitation, Healthcare Permits.

“Governmental Authority” is any nation or government, any state or other political subdivision thereof, any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative functions of or pertaining to government, any securities exchange and any self-regulatory organization.

“Governmental Collection Account(s)” is/are Borrower’s segregated operating account(s) held at Bank which shall collect all payments in respect of Accounts payable by Governmental Account Debtors.

“Guarantor” is any Person providing a Guaranty in favor of Bank.

“Guaranty” is any guarantee of all or any part of the Obligations, as the same may from time to time be amended, restated, modified or otherwise supplemented.

“Healthcare Laws” means all applicable laws relating to the operation or management of hospitalist practices, the provision of hospitalist services, proper billing and collection practices relating to the payment for healthcare services, insurance law (including law related to payment for “no-fault” claims) and workers compensation law as they relate to the provision of, and billing and payment for, healthcare services, patient healthcare, patient healthcare information, patient abuse, the quality and adequacy of rehabilitative care, rate setting, equipment, personnel, operating policies, fee splitting, including, without limitation, (a) all federal and state fraud and abuse laws, including, without limitation, the federal Anti-Kickback Statute (42 U.S.C. §1320a-7b(b)), the Stark Law (42 U.S.C. §1395nn), the civil False Claims Act (31 U.S.C. §3729 et seq.), the administrative False Claims Law (42 U.S.C. § 1320a-7b(a)), the Anti-Inducement Law (42 U.S.C. § 1320a-7a(a)(5)), the exclusion laws (42 U.S.C. § 1320a-7); (b) the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009; (c) the Medicare Regulations and the Medicaid Program (Title XIX of the Social Security Act); (d) quality, safety and accreditation standards and requirements of all applicable state laws or regulatory bodies; (e) all laws, policies, procedures, requirements and regulations pursuant to which Healthcare Permits are issued; (f) any laws, regulations or administrative guidance with respect to fee splitting by healthcare professionals and the corporate practice of medicine in any jurisdiction in which any Borrower or any Guarantor operates; and (g) any and all comparable state or local laws and other applicable health care laws, regulations, manual provisions, policies and administrative guidance, each of (a) through (g) as may be amended from time to time and the regulations promulgated pursuant to each such law.

“Healthcare Permit” means, with respect to any Person, a permit issued or required under Healthcare Laws applicable to the business of Borrower or any Guarantor, or necessary in the testing, possession, manufacture,

ownership, warehousing, marketing, promoting, sale, labeling, furnishing, distribution or delivery of goods or services under Healthcare Laws applicable to the business of Borrower or any Guarantor.

“HHS” is defined in the definition of OIG.

“HIPAA” means, collectively, the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic Clinical Health (HITECKH) Act and the implementing regulations thereto.

“Indebtedness” is (a) indebtedness for borrowed money or the deferred price of property or services, such as reimbursement and other obligations for surety bonds and letters of credit, (b) obligations evidenced by notes, bonds, debentures or similar instruments, (c) capital lease obligations, (d) Contingent Obligations and (e) other short- and long-term obligations under debt agreements, lines of credit and extensions of credit.

“Indemnified Person” is defined in Section 11.3.

“Indemnified Taxes” means (a) Taxes, other than Excluded Taxes, imposed on or with respect to any payment made by or on account of any obligation of Borrower under any Loan Document and (b) to the extent not otherwise described in clause (a), Other Taxes.

“Information” is defined in Section 11.8.

“Initial Audit” is Bank’s inspection of Borrower’s Accounts, the Collateral, and Borrower’s Books, with results satisfactory to Bank in its sole discretion.

“Insolvency Proceeding” is any proceeding by or against any Person under the United States Bankruptcy Code, or any other bankruptcy or insolvency law, including assignments for the benefit of creditors, compositions, extensions generally with its creditors, or proceedings seeking reorganization, arrangement, receivership or other relief.

“Intellectual Property” means, with respect to any Person, all of such Person’s right, title, and interest in and to the following:

- (a) its Copyrights, Trademarks and Patents;
- (b) any and all trade secrets and trade secret rights, including, without limitation, any rights to unpatented inventions, know-how and operating manuals;
- (c) any and all source code;
- (d) any and all design rights which may be available to such Person;
- (e) any and all claims for damages by way of past, present and future infringement of any of the foregoing, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the Intellectual Property rights identified above; and
- (f) all amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents.

“Interest Expense” means for any fiscal period, interest expense (whether cash or non-cash) determined in accordance with GAAP for the relevant period ending on such date, including, in any event, interest expense with respect to any Credit Extension and other Indebtedness of Target, including, without limitation or duplication, all commissions, discounts, or related amortization and other fees and charges with respect to letters of credit and bankers’ acceptance financing and the net costs associated with interest rate swap, cap, and similar arrangements, and the interest portion of any deferred payment obligation (including leases of all types).

“Internal Revenue Code” means the U.S. Internal Revenue Code of 1986, and the rules and regulations promulgated thereunder, each as amended or modified from time to time.

“Inventory” is all **“inventory”** as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation all merchandise, raw materials, parts, supplies, packing and shipping materials, work in process and finished products, including without limitation such inventory as is temporarily out of Borrower’s custody or possession or in transit and including any returned goods and any documents of title representing any of the above.

“Investment” is any beneficial ownership interest in any Person (including stock, partnership, membership, or other ownership interest or other equity securities), and any loan, advance or capital contribution to any Person.

“Key Person” is each of Borrower’s Chief Executive Officer and Chief Financial Officer.

“Letter of Credit” is a standby or commercial letter of credit issued by Bank upon request of Borrower based upon an application, guarantee, indemnity, or similar agreement on the part of Bank as set forth in Section 1.2.

“Letter of Credit Application” is defined in Section 1.2(c).

“Letter of Credit Fee” is a fee equal to 1.50% per annum of the Dollar Equivalent of the face amount of each Letter of Credit issued according to Section 1.2.

“Letter of Credit Reserve” is defined in Section 1.2(f).

“Lien” is a claim, mortgage, deed of trust, levy, attachment charge, pledge, hypothecation, security interest or other encumbrance of any kind, whether voluntarily incurred or arising by operation of law or otherwise against any property.

“Liquidity” is, at any time (a) Borrower’s unrestricted and unencumbered cash maintained at Bank, minus (b) the sum of (i) all outstanding principal amounts of any Advances, (ii) the aggregate Dollar Equivalent of the face amount of outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit and any Letter of Credit Reserve), and (iii) all outstanding amounts used for Cash Management Services.

“Loan Documents” are, collectively, this Agreement and any schedules, exhibits, certificates, notices, and any other documents related to this Agreement, the Perfection Certificate, the CDEC Subordination Agreement, any Control Agreements, any Bank Services Agreement, any subordination agreement, any note, or notes or guaranties executed by Borrower or any Guarantor, landlord waivers and consents, bailee waivers and consents, and any other present or future agreement by Borrower and/or any Guarantor with or for the benefit of Bank in connection with this Agreement or Bank Services, all as amended, restated, or otherwise modified in accordance with the terms thereof.

“Net Income” means, for any period as at any date of determination, the net profit (or loss), after provision for taxes, of Target for such period taken as a single accounting period.

“Material Adverse Change” is (a) a material impairment in the perfection or priority of Bank’s Lien in the Collateral or in the value of such Collateral; (b) a material adverse change in the business, operations, or condition (financial or otherwise) of Borrower; (c) a material impairment of the prospect of repayment of any portion of the Obligations; or (d) Bank determines, based upon information available to it and in its reasonable judgment, that there is a substantial likelihood that Borrower shall fail to comply with one or more of the financial covenants in Section 5 during the next succeeding financial reporting period.

“Medicaid” means that means-tested entitlement program under Title XIX of the Social Security Act, which provides federal grants to states for medical assistance based on specific eligibility criteria, as set forth at Section 1396, et seq. of Title 42 of the United States Code, as amended, and any statute succeeding thereto.

“Medicaid Regulations” means, collectively, (i) all federal statutes (whether set forth in Title XIX of the Social Security Act or elsewhere) affecting the medical assistance program established by Title XIX of the Social Security Act and any statutes succeeding thereto; (ii) all applicable provisions of all federal rules, regulations, manuals and orders of all Governmental Authorities promulgated pursuant to or in connection with the statutes described in clause (i) above and all federal administrative, reimbursement and other guidelines of all Governmental Authorities having the force of law promulgated pursuant to or in connection with the statutes described in clause (i) above; (iii) all state statutes and plans for medical assistance enacted in connection with the statutes and provisions described in clauses (i) and (ii) above; and (iv) all applicable provisions of all rules, regulations, manuals and orders of all Governmental Authorities promulgated pursuant to or in connection with the statutes described in clause (iii) above and all state administrative, reimbursement and other guidelines of all Governmental Authorities having the force of law promulgated pursuant to or in connection with the statutes described in clause (ii) above, in each case as may be amended, supplemented or otherwise modified from time to time.

“Medical Reimbursement Programs” means a collective reference to Medicare, Medicaid and any other health care program operated by or financed in whole or in part by any foreign or domestic federal, state or local government and any other non-government funded third party payor programs.

“Medicare” means that government-sponsored entitlement program under Title XVIII of the Social Security Act, which provides for a health insurance system for eligible elderly and disabled individuals, as set forth at 42 U.S.C. Section 1395, et seq., as amended, and any statute succeeding thereto.

“Medicare Regulations” means, collectively, all federal statutes (whether set forth in Title XVIII of the Social Security Act or elsewhere) affecting the health insurance program for the aged and disabled established by Title XVIII of the Social Security Act and any statutes succeeding thereto; together with all applicable provisions of all rules, regulations, manuals and orders and administrative, reimbursement and other guidelines having the force of law of all Governmental Authorities (including The Centers for Medicare & Medicaid Services (“CMS”), the OIG, HHS, or any person succeeding to the functions of any of the foregoing) promulgated pursuant to or in connection with any of the foregoing having the force of law, as each may be amended, supplemented or otherwise modified from time to time.

“Obligations” are Borrower’s obligations to pay when due any debts, principal, interest, fees, Bank Expenses, the Unused Revolving Line Facility Fee, the Letter of Credit Fee, the Anniversary Fees, the Termination Fee, and other amounts Borrower owes Bank now or later, whether under this Agreement, the other Loan Documents (other than the Warrant), or otherwise, including, without limitation, all obligations relating to Bank Services and interest accruing after Insolvency Proceedings begin and debts, liabilities, or obligations of Borrower assigned to Bank, and to perform Borrower’s duties under the Loan Documents (other than the Warrant).

“OFAC” is the Office of Foreign Assets Control of the United States Department of the Treasury and any successor thereto.

“OIG” means The Office of Inspector General of the United States Department of Health and Human Services (“HHS”) and any successor thereof.

“Operating Documents” are, for any Person, such Person’s formation documents, as certified by the Secretary of State (or equivalent agency) of such Person’s jurisdiction of organization on a date that is no earlier than 30 days prior to the Effective Date, and, (a) if such Person is a corporation, its bylaws in current form, (b) if such Person is a limited liability company, its limited liability company agreement (or similar agreement), and (c) if such Person is a partnership or limited partnership, its partnership agreement or limited partnership agreement (or similar agreement), each of the foregoing with all current amendments or modifications thereto.

“Other Connection Taxes” means, with respect to Bank, Taxes imposed as a result of a present or former connection between Bank and the jurisdiction imposing such Tax (other than connections arising from Bank having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, engaged in any other transaction pursuant to, or enforced any Loan Document, or sold or assigned an interest in any Credit Extension or Loan Document).

“**Other Taxes**” means all present or future stamp, court, documentary, intangible, recording, filing or similar Taxes that arise from any payment made under, from the execution, delivery, performance, enforcement or registration of, from the receipt or perfection of a security interest under, or otherwise with respect to, any Loan Document, except any such Taxes that are Other Connection Taxes imposed with respect to an assignment.

“**Patents**” means all patents, patent applications, and like protections including without limitation improvements, divisions, continuations, renewals, reissues, extensions, and continuations-in-part of the same.

“**Participant Register**” is defined in Section 11.2

“**Payment Date**” is set forth on Schedule I hereto.

“**Perfection Certificate**” is the Perfection Certificate delivered by Borrower in connection with this Agreement.

“**Permitted Accounts**” is defined in Section 5.7(a).

“**Permitted Acquisition**” means a transaction whereby Borrower acquires all or substantially all of the equity interest or property of another Person (a “**Target**”), which satisfies each of the following conditions:

- (a) Borrower provides Bank with evidence, satisfactory to Bank in its commercially reasonable discretion, that Target achieved EBITDA of at least (\$15,000,000.00) for the trailing 12 month period ending on the date of the transaction. Dollar amounts in this section that are set off in parentheses denote negative dollar amounts;
- (b) such transaction shall only involve an entity formed, and assets located, in the United States, and the party or parties being acquired is in the same or a substantially similar line of business as Borrower or a business reasonably related and complementary thereto or a logical extension thereof, as determined by Bank in its commercially reasonable discretion;
- (c) no Event of Default has occurred and is continuing or would result from giving effect to the transaction and Bank has received evidence, satisfactory to Bank in its commercially reasonable discretion, that Borrower is in compliance with all terms and conditions of this Agreement (and that it will be in compliance immediately after giving effect to the transaction);
- (d) the transaction is approved by the board of directors (or equivalent control group) of all parties to the transaction;
- (e) the total value of the consideration to be paid by Borrower and its Subsidiaries in connection with any individual transaction or in the aggregate for all such transactions does not exceed \$25,000,000.00 in any 12 month period;
- (f) Borrower provides Bank (i) written notice of the transaction at least 15 days before the closing of the transaction, and (ii) copies of the transaction agreement and other material documents relative to the contemplated transaction and such other financial information, financial analysis, documentation or other information relating to such transaction as Bank shall reasonably request at least 15 days before the closing of the transaction;
- (g) Borrower is a surviving legal entity after completion of the contemplated transaction;
- (h) the contemplated transaction is consensual and non-hostile;
- (i) no Indebtedness will be incurred, assumed, or would exist with respect to Borrower or its Subsidiaries as a result of the contemplated transaction, other than Permitted Indebtedness, and no Liens will be incurred, assumed, or would exist with respect to the assets of Borrower or its Subsidiaries as a result of the contemplated transaction, other than Permitted Liens;
- (j) any Target acquired in the transaction shall, within 30 days of the consummation of the transaction (or such longer period of time as Bank may agree in writing in its sole and absolute discretion), provide Bank either joinder documentation to cause such Target to become a co-borrower hereunder or a guaranty to cause

such Target to become a Guarantor hereunder (as determined by Bank in its sole discretion), together with documentation, all in form and substance satisfactory to Bank (including being sufficient to grant Bank a first priority Lien (subject to Permitted Liens) in and to the assets of such Target);

(k) the transaction and Target are accretive in all respects; and

(l) Borrower shall have delivered to Bank on date on which any such transaction is to be consummated (or such later date as is agreed by Bank in its sole discretion), a certificate of a Responsible Officer of Borrower, in form and substance reasonably satisfactory to Bank, certifying that all of the requirements set forth in this definition have been satisfied or will be satisfied on or prior to the consummation of such purchase or other acquisition.

"Permitted Indebtedness" is:

(a) Borrower's Indebtedness to Bank under this Agreement and the other Loan Documents;

(b) Indebtedness existing on the Effective Date which is shown on the Perfection Certificate;

(c) Subordinated Debt;

(d) unsecured Indebtedness to trade creditors incurred in the ordinary course of business;

(e) Indebtedness incurred as a result of endorsing negotiable instruments received in the ordinary course of business;

(f) Indebtedness secured by Liens permitted under clauses (a) and (c) of the definition of "Permitted Liens" hereunder;

(g) Indebtedness incurred to finance insurance premiums in the ordinary course of Borrower's business;

(h) Indebtedness in respect of performance bonds, bid bonds, appeal bonds, surety bonds and similar obligations, in each case provided in the ordinary course of Borrower's business in an aggregate amount not to exceed \$250,000.00 outstanding at any time;

(i) other unsecured Indebtedness not otherwise permitted hereunder in an aggregate amount not to exceed \$500,000.00 outstanding at any time; and

(j) extensions, refinancings, modifications, amendments and restatements of any items of Permitted Indebtedness (a) through (g) above, provided that the principal amount thereof is not increased or the terms thereof are not modified to impose more burdensome terms upon Borrower or its Subsidiary, as the case may be.

"Permitted Investments" are:

(a) Investments (including, without limitation, Subsidiaries) existing on the Effective Date which are shown on the Perfection Certificate;

(b) Investments consisting of Cash Equivalents;

(c) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of Borrower's business;

(d) Investments consisting of deposit or securities accounts (but only to the extent that Borrower is permitted to maintain such accounts pursuant to Section 5.7 of this Agreement) in which, to the extent required pursuant to Section 5.7, Bank has a first priority perfected security interest;

- (e) Investments accepted in connection with Transfers permitted by Section 6.1;
- (f) Investments consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers, directors, partners, managers and members relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee equity purchase plans or similar agreements approved by the Board;
- (g) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of business;
- (h) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business; provided that this paragraph (h) shall not apply to Investments of Borrower in any Subsidiary;
- (i) Investments in connection with joint ventures and strategic alliances permitted under this Agreement, in an aggregate amount not to exceed \$500,000.00 at any time; and
- (j) other Investments not otherwise permitted by Section 6.7 not exceeding \$500,000.00 in the aggregate in any fiscal year.

"Permitted Liens" are:

- (a) Liens existing on the Effective Date which are shown on the Perfection Certificate or arising under this Agreement or the other Loan Documents;
- (b) Liens for taxes, fees, assessments or other government charges or levies, either (i) not due and payable or (ii) being contested in good faith and for which Borrower maintains adequate reserves on Borrower's Books, provided that no notice of any such Lien has been filed or recorded under the Internal Revenue Code;
- (c) purchase money Liens and capital leases (i) on Equipment acquired or held by Borrower incurred for financing the acquisition of the Equipment securing no more than \$10,000,000.00 in the aggregate amount outstanding, or (ii) existing on Equipment when acquired, if the Lien is confined to the property and improvements and the proceeds of the Equipment;
- (d) Liens of carriers, warehousemen, suppliers, or other Persons that are possessory in nature arising in the ordinary course of business so long as such Liens attach only to Inventory, securing liabilities in the aggregate amount not to exceed \$500,000.00, and which are not delinquent or remain payable without penalty or which are being contested in good faith and by appropriate proceedings which proceedings have the effect of preventing the forfeiture or sale of the property subject thereto;
- (e) Liens to secure payment of workers' compensation, employment insurance, old-age pensions, social security and other like obligations incurred in the ordinary course of business (other than Liens imposed by ERISA);
- (f) leases or subleases of real property granted in the ordinary course of Borrower's business (or, if referring to another Person, in the ordinary course of such Person's business), and leases, subleases, non-exclusive licenses or sublicenses of personal property (other than Intellectual Property) granted in the ordinary course of Borrower's business (or, if referring to another Person, in the ordinary course of such Person's business), if the leases, subleases, licenses and sublicenses do not prohibit granting Bank a security interest therein;
- (g) non-exclusive licenses of Intellectual Property granted to third parties in the ordinary course of business, and licenses of Intellectual Property that could not result in a legal transfer of title of the licensed property that may be exclusive in respects other than territory and that may be exclusive as to territory only as to discreet geographical areas outside of the United States;

- (h) Liens arising from attachments or judgments, orders, or decrees in circumstances not constituting an Event of Default under Sections 7.4 and 7.7;
- (i) customary Liens of any bank in connection with statutory, common law and contractual rights of setoff and recoupment with respect to any deposit account or securities account of Borrower, provided that (i) to the extent required by Section 5.7, Bank has a first priority perfected security interest in such account and (ii) such account is permitted to be maintained pursuant to Section 5.7 of this Agreement;
- (j) Liens in favor of customs or revenue authorities arising as a matter of law to secure payment of customs duties in connection with the importation of goods;
- (k) Liens arising from the filing of any precautionary financing statement on operating leases covering the leased property, to the extent such operating leases are permitted under this Agreement;
- (l) Liens securing Indebtedness permitted under clause (h) of the definition of "Permitted Indebtedness" hereunder; and
- (m) Liens incurred in the extension, renewal or refinancing of the Indebtedness secured by Liens described in (a) through (l), but any extension, renewal or replacement Lien must be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness may not increase.

"**Person**" is any individual, sole proprietorship, partnership, limited liability company, joint venture, company, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or government agency.

"**Prime Rate**" is set forth on Schedule I hereto.

"**Prime Rate Margin**" is set forth on Schedule I hereto.

"**Quick Assets**" is, on any date, Borrower's, unrestricted and unencumbered cash maintained with Bank, plus billed accounts receivable.

"**Register**" is defined in Section 11.2.

"**Registered Organization**" is any "registered organization" as defined in the Code with such additions to such term as may hereafter be made.

"**Representatives**" is defined in Section 11.8.

"**Responsible Officer**" is any of the Chief Executive Officer, President, Chief Financial Officer and Controller of Borrower.

"**Restricted License**" is any material license or other similar material agreement with respect to which Borrower is the licensee (a) that prohibits or otherwise restricts Borrower from granting a security interest in Borrower's interest in such license or agreement or any other property, or (b) for which a default under or termination of could interfere with Bank's right to sell any Collateral.

"**Revolving Line**" is set forth on Schedule I hereto.

"**Revolving Line Maturity Date**" is set forth on Schedule I hereto.

"**Sanctioned Person**" means a Person that: (a) is listed on any Sanctions list maintained by OFAC or any similar Sanctions list maintained by any other Governmental Authority having jurisdiction over Borrower; (b) is located, organized, or resident in any country, territory, or region that is the subject or target of Sanctions; or (c) is 50.0% or more owned or controlled by 1 or more Persons described in clauses (a) and (b) hereof.

“**Sanctions**” means the economic sanctions laws, regulations, embargoes or restrictive measures administered, enacted or enforced by the United States government and any of its agencies, including, without limitation, OFAC and the U.S. State Department, or any other Governmental Authority having jurisdiction over Borrower.

“**SEC**” is the Securities and Exchange Commission, any successor thereto, and any analogous Governmental Authority.

“**Securities Account**” is any “securities account” as defined in the Code with such additions to such term as may hereafter be made.

“**Stripe Account**” is defined in Section 5.7(a).

“**Subordinated Debt**” is indebtedness incurred by Borrower or any of its Subsidiaries subordinated to all of Borrower’s or any of its Subsidiaries’ now or hereafter indebtedness to Bank (pursuant to a subordination, intercreditor, or other similar agreement in form and substance satisfactory to Bank entered into between Bank and the other creditor), on terms acceptable to Bank.

“**Subsidiary**” is, as to any Person, a corporation, partnership, limited liability company or other entity of which shares of stock, partnership, membership, or other ownership interest or other equity securities having ordinary voting power (other than stock, partnership, membership, or other ownership interest or other equity securities having such power only by reason of the happening of a contingency) to elect a majority of the board of directors or other managers of such corporation, partnership or other entity are at the time owned, or the management of which is otherwise controlled, directly or indirectly through one or more intermediaries, or both, by such Person. Unless the context otherwise requires, each reference to a Subsidiary herein shall be a reference to a Subsidiary of Borrower or Guarantor.

“**Taxes**” means all present or future taxes, levies, imposts, duties, deductions, withholdings (including backup withholding), assessments, fees or other charges imposed by any Governmental Authority, including any interest, additions to tax or penalties applicable thereto.

“**Termination Fee**” is defined in Section 1.5(d).

“**Total Liabilities**” is on any day, obligations that should, under GAAP, be classified as liabilities on Borrower’s consolidated balance sheet, including all Indebtedness.

“**Trademarks**” means, with respect to any Person, any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of such Person connected with and symbolized by such trademarks.

“**Transfer**” is defined in Section 6.1.

“**Transition Period**” means the period of time commencing on the Effective Date and continuing through the earlier to occur of (i) March 15, 2022, and (ii) an Event of Default.

“**Unused Revolving Line Facility Fee**” is defined in Section 1.5(e).

“**USA Patriot Act**” means the “Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001” (Public Law 107-56, signed into law on October 26, 2001), as amended from time to time.

[Signature page follows]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as a sealed instrument under the laws of the Commonwealth of Massachusetts as of the Effective Date.

BORROWER:

SEMA4 HOLDINGS CORP.

By: /s/ Isaac Ro_____

Name: Isaac Ro

Title: Chief Financial Officer

SEMA4 OPCO, INC.

By: /s/ Isaac Ro_____

Name: Isaac Ro

Title: Chief Financial Officer

BANK:

SILICON VALLEY BANK

By: /s/ Evan Chen_____

Name: Evan Chen

Title: Vice President

SCHEDULE I
LSA PROVISIONS

<u>LSA Section</u>	<u>LSA Provision</u>
1.1(a) – Revolving Line – Availability	Amounts borrowed under the Revolving Line may be prepaid or repaid and, prior to the Revolving Line Maturity Date, reborrowed, subject to the applicable terms and conditions precedent herein.
1.2(a) – Letter of Credit Sublimit	The aggregate Dollar Equivalent of the face amount of outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit and any Letter of Credit Reserve) may not exceed \$20,000,000.00 minus all amounts used for Cash Management Services.
1.3 – Cash Management Services Sublimit	The aggregate amount used for Cash Management Services at any one time may not exceed \$20,000,000.00 minus the aggregate Dollar Equivalent of the face amount of outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit and any Letter of Credit Reserve).
1.4(a) – Interest Payments – Advances	Interest on the principal amount of each Advance is payable in arrears monthly (A) on each Payment Date, (B) on the date of any prepayment and (C) on the Revolving Line Maturity Date.
1.4(b)(i) – Interest Rate – Advances	The outstanding principal amount of any Advance shall accrue interest at a floating rate per annum equal to the greater of (1) 4.00% and (2) the Prime Rate plus the Prime Rate Margin, which interest shall be payable in accordance with Section 1.4(a).
1.4(e) – Interest Computation	Interest shall be computed on the basis of the actual number of days elapsed and a 360-day year for any Credit Extension.
1.5(a) – Revolving Line Commitment Fee	A fully earned, non-refundable commitment fee of \$500,000.00 on the Effective Date.
8.8 – Borrower Liability	Each Borrower hereunder shall be jointly and severally obligated to repay all Credit Extensions made hereunder and any other Obligations related thereto, regardless of which Borrower actually receives said Credit Extension, as if each Borrower hereunder directly received all Credit Extensions.
12.2 – “Borrower”	“ Borrower ” means each of (a) SEMA4 HOLDINGS CORP., a Delaware corporation, and (b) SEMA4 OPCO, INC., a Delaware corporation.
12.2 – “Effective Date”	“ Effective Date ” is November 15, 2021.
12.2 – “Payment Date”	“ Payment Date ” is the last calendar day of each month.

12.2 – “Prime Rate”	“ Prime Rate ” is the rate of interest per annum from time to time published in the money rates section of <u>The Wall Street Journal</u> or any successor publication thereto as the “prime rate” then in effect; provided that if such rate of interest, as set forth from time to time in the money rates section of <u>The Wall Street Journal</u> , becomes unavailable for any reason as determined by Bank, the “Prime Rate” shall mean the rate of interest per annum announced by Bank as its prime rate in effect at its principal office in the State of California (such Bank announced Prime Rate not being intended to be the lowest rate of interest charged by Bank in connection with extensions of credit to debtors); provided that, in the event such rate of interest is less than 0.0% per annum, such rate shall be deemed to be 0.0% per annum for purposes of this Agreement.
12.2 – “Prime Rate Margin”	“ Prime Rate Margin ” is 0.75%.
12.2 – “Revolving Line”	“ Revolving Line ” is an aggregate principal amount equal to \$125,000,000.00.
12.2 – “Revolving Line Maturity Date”	“ Revolving Line Maturity Date ” is November 15, 2024.

EXHIBIT A
COMPLIANCE STATEMENT

TO: SILICON VALLEY BANK
FROM: SEMA4 HOLDINGS CORP.
SEMA4 OPCO, INC.

Date: _____

Under the terms and conditions of the Loan and Security Agreement between Borrower and Bank (as amended, modified, supplemented and/or restated from time to time, the "**Agreement**"), Borrower is in compliance for the period ending _____ with all required covenants except as noted below. Attached are the required documents evidencing such compliance, setting forth calculations prepared in accordance with GAAP consistently applied from one period to the next except as explained in an accompanying letter or footnotes (other than, with respect to unaudited financial statements, for the absence of footnotes and year-end audit adjustments). Capitalized terms used but not otherwise defined herein shall have the meanings given them in the Agreement.

Please indicate compliance status by circling Yes/No under "Complies" column.

<u>Reporting Covenants</u>	<u>Required</u>			<u>Complies</u>
Monthly financial statements with Compliance Statement	Monthly within 30 days			Yes No
10-Q Report	Quarterly within 45 days of Q1, Q2, and Q3			Yes No
10-K Report and annual financial statements (CPA Audited)	FYE within 90 days			Yes No
Filed 10-Q, 10-K and 8-K	Within 5 days after filing with SEC			Yes No
Board approved projections	FYE within 60 days and as amended/updated			Yes No
Financial Covenants:	Applies:	Required	Actual	Complies
Maintain as indicated:				
AQR	Yes No	1.25:1.0	____:1.0	Yes No
Minimum Trailing 6 Month Revenue	Yes No	See Section 5.8(b)	\$ _____	Yes No

The following financial covenant analyses and information set forth in Schedule 1 attached hereto are true and correct as of the date of this Compliance Statement.

The following are the exceptions with respect to the statements above: (If no exceptions exist, state "No exceptions to note.")

Schedule 1 to Compliance Statement

Financial Covenants of Borrower

In the event of a conflict between this Schedule and the Agreement, the terms of the Agreement shall govern.

Dated: _____

I. Adjusted Quick Ratio (Section 5.8(a))

Required at all times when Liquidity is less than \$135,000,000.00: 1.25:1.00

Actual:

A.	Aggregate value of the unrestricted and unencumbered cash and cash equivalents of Borrower	\$
B.	Aggregate value of the net billed accounts receivable of Borrower	\$
C.	Quick Assets (the sum of lines A and B)	\$
D.	Aggregate value of Obligations to Bank	\$
E.	Aggregate value of liabilities of Borrower and its Subsidiaries (including all Indebtedness) that matures within one (1) year	\$
F.	Current Liabilities (the sum of lines D and E)	\$
G.	Quick Ratio (line C divided by line F)	\$

Is line G equal to or greater than 1.25:1:00?

No, not in compliance Yes, in compliance

II. Minimum Revenue (Section 5.8(b))

Required at all times when (i) Liquidity is less than \$135,000,000.00, and (ii) the sum of (A) the outstanding principal amount of all Advances, plus the accrued and unpaid interest thereon, plus (B) all amounts used for Cash Management Services, plus (C) the aggregate Dollar Equivalent of the face amount of outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit and any Letter of Credit Reserve), is greater than \$50,000,000.00:

Trailing 6 Month Period Ending	Minimum Revenue
December 31, 2021	\$100,000,000.00
January 31, 2022	\$101,666,667.00
February 28, 2022	\$103,333,333.00
March 31, 2022	\$105,000,000.00
April 30, 2022	\$106,666,667.00
May 31, 2022	\$111,666,667.00
June 30, 2022	\$120,000,000.00
July 31, 2022	\$121,666,667.00
August 31, 2022	\$123,333,333.00
September 30, 2022	\$125,000,000.00
October 31, 2022	\$126,666,667.00
November 30, 2022	\$128,333,333.00
December 31, 2022	\$130,000,000.00
January 31, 2023	\$131,666,667.00
February 28, 2023	\$136,666,667.00
March 31, 2023	\$145,000,000.00
April 30, 2023	\$146,666,667.00
May 31, 2023	\$151,666,667.00
June 30, 2023	\$160,000,000.00
July 31, 2023	\$161,666,667.00
August 31, 2023	\$166,666,667.00
September 30, 2023	\$175,000,000.00
October 31, 2023	\$176,666,667.00
November 30, 2023	\$178,333,333.00
December 31, 2023	\$180,000,000.00

**See Section 5.8(b) with respect to each period after December 31, 2023*

No, not in compliance Yes, in compliance

ny-2285520

CERTIFICATIONS
PURSUANT TO RULES 13a-14(a) AND 15d-14(a)
UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Eric Schadt, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Sema4 Holdings Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - c. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 15, 2021

By: /s/ Eric Schadt
Eric Schadt
Chief Executive Officer and Director
(Principal Executive Officer)

CERTIFICATIONS
PURSUANT TO RULES 13a-14(a) AND 15d-14(a)
UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Isaac Ro, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Sema4 Holdings Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - c. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 15, 2021

By: /s/ Isaac Ro
Isaac Ro
Chief Financial Officer
(Principal Financial Officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADDED BY
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Sema4 Holdings Corp. (the "Company") on Form 10-Q for the quarterly period ended September 30, 2021, as filed with the Securities and Exchange Commission (the "Report"), I, Eric Schadt, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as added by §906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. To my knowledge, the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of and for the period covered by the Report.

Date: November 15, 2021

By: /s/ Eric Schadt
Eric Schadt
Chief Executive Officer and Director
(Principal Executive Officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADDED BY
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Sema4 Holdings Corp. (the "Company") on Form 10-Q for the quarterly period ended September 30, 2021, as filed with the Securities and Exchange Commission (the "Report"), I, Isaac Ro, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as added by §906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. To my knowledge, the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of and for the period covered by the Report.

Date: November 15, 2021

By: /s/ Isaac Ro
Isaac Ro
Chief Financial Officer
(Principal Financial Officer)