

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 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 March 31, 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: 001-40326

TuSimple Holdings Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

TuSimple Holdings Inc.

9191 Towne Centre Drive

Suite 600

San Diego, CA

(Address of principal executive offices)

86-2341575

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

92122

(Zip Code)

Registrant's telephone number, including area code: (619) 916-3144

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	TSP	The Nasdaq Stock Market LLC (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 No *

* The registrant became subject to such requirements on April 14, 2021, and it has filed all reports so required since that date.

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input checked="" type="checkbox"/>		

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.

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

As of April 30, 2021, the number of shares of the registrant's Class A common stock outstanding was 185,040,398 and the number of shares of the registrant's Class B common stock outstanding was 24,000,000.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of the federal securities laws, which statements involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this Quarterly Report on Form 10-Q are forward-looking statements. The words “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “design,” “intend,” “expect,” “could,” “plan,” “potential,” “predict,” “seek,” “should,” “would,” or the negative version of these words and similar expressions are intended to identify forward-looking statements. Forward-looking statements contained in this Quarterly Report on Form 10-Q include, but are not limited to, statements about:

- our future performance, including our revenue, cost of revenue, and operating expenses;
- the sufficiency of our cash and cash equivalents to meet our operating requirements;
- our ability to scale our Autonomous Freight Network, which we refer to as our AFN;
- our ability to attract new users to services provided on our AFN;
- our ability to increase reservations for our purpose-built L4 autonomous semi-trucks;
- our ability to convert reservations for our purpose-built L4 autonomous semi-trucks into purchases;
- our ability to fulfill all reservations for our purpose-built L4 autonomous semi-trucks according to each customer’s delivery schedule;
- our ability to effectively manage our growth and future expenses;
- the estimated timing for when additional routes will be available;
- our ability to compete in a market that is rapidly evolving and subject to technological developments;
- our estimated total addressable market, the market for autonomous truck and freight transport solutions, and our market position;
- our ability to successfully collaborate with business partners;
- our ability to obtain, maintain, protect, and enforce our intellectual property;
- our ability to comply with modified or new laws and regulations applicable to our business or industry;
- our ability to attract and retain employees with the technical skills we require and other key personnel;
- our anticipated investments in research and development and sales and marketing, and the effect of these investments on our results of operations;
- the increased expenses associated with being a public company; and
- the potential impact of the COVID-19 pandemic on our, and our partners’, business and results of operations, and on the global economy generally.

We caution you that the foregoing list may not contain all of the forward-looking statements made in this Quarterly Report on Form 10-Q.

You should not rely upon forward-looking statements as predictions of future events. We have based the forward-looking statements contained in this Quarterly Report on Form 10-Q primarily on our current expectations and projections about future events and trends that we believe may affect our business, financial condition, results of operations, and prospects. These forward-looking statements are subject to a number of risks, uncertainties, and assumptions, including those described in “Risk Factors.” Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties, and assumptions, the forward-looking events and circumstances discussed in this Quarterly Report on Form 10-Q may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

Except as required by applicable law, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. Moreover, the forward-looking statements made in this Quarterly Report on Form 10-Q relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statements made in this Quarterly Report on Form 10-Q to reflect events or circumstances after the date of this Quarterly Report on Form 10-Q or to reflect new information or the occurrence of unanticipated events, except as required by applicable law. We may not actually achieve the plans, intentions, or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, or investments we may make.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this Quarterly Report on Form 10-Q, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

TuSimple Holdings Inc.
Condensed Consolidated Balance Sheets
(in thousands, except share data)
(unaudited)

	December 31, 2020	March 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 310,815	\$ 508,706
Restricted cash	1,536	785
Accounts receivable, net	1,144	1,429
Prepaid expenses and other current assets	2,280	5,640
Amounts due from related parties	3,708	3,715
Total current assets	319,483	520,275
Property and equipment, net	22,116	23,030
Other assets	4,986	5,054
Total assets	<u>\$ 346,585</u>	<u>\$ 548,359</u>
LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDER'S DEFICIT		
Current liabilities:		
Accounts payable	\$ 4,542	\$ 13,779
Amounts due to related parties	5,715	9,660
Accrued expenses and other current liabilities	22,961	16,826
Short-term debt	4,623	4,670
Warrants liability	42,452	—
Capital lease liabilities, current	805	825
Total current liabilities	81,098	45,760
Capital lease liabilities, noncurrent	3,767	3,556
Other liabilities	2,402	3,673
Total liabilities	<u>87,267</u>	<u>52,989</u>
Commitments and contingencies (Note 4)		
Redeemable convertible preferred stock, \$0.0001 par value; 138,102,770 and 138,102,770 shares authorized as of December 31, 2020 and March 31, 2021; 102,074,703 and 120,534,419 shares issued and outstanding as of December 31, 2020 and March 31, 2021, respectively; aggregate liquidation preference of \$598,842 and \$847,614 as of December 31, 2020 and March 31, 2021, respectively	664,791	1,282,916
Stockholders' deficit:		
Common stock, \$0.0001 par value; 361,897,230 and 361,897,230 shares authorized as of December 31, 2020 and March 31, 2021; 60,543,337 and 60,603,953 shares issued and outstanding as of December 31, 2020 and March 31, 2021, respectively	6	6
Additional paid-in-capital	—	2,176
Accumulated deficit	(405,178)	(790,338)
Accumulated other comprehensive income (loss)	(301)	610
Total stockholders' deficit	<u>(405,473)</u>	<u>(787,546)</u>
Total liabilities, redeemable convertible preferred stock and stockholders' deficit	<u>\$ 346,585</u>	<u>\$ 548,359</u>

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

TuSimple Holdings Inc.
Condensed Consolidated Statements of Operations
(in thousands, except share and per share data)
(unaudited)

	Three Months Ended	
	March 31,	
	2020	2021
Revenue	\$ 259	\$ 944
Costs and expenses:		
Cost of revenue	771	2,246
Research and development	18,182	41,434
Sales and marketing	437	678
General and administrative	6,726	15,224
Total costs and expenses	<u>26,116</u>	<u>59,582</u>
Loss from operations	(25,857)	(58,638)
Change in fair value of warrants liability	—	(326,900)
Other income, net	96	378
Loss before provision for income taxes	(25,761)	(385,160)
Provision for income taxes	—	—
Net loss	(25,761)	(385,160)
Accretion of redeemable convertible preferred stock	—	(4,135)
Net loss attributable to common stockholders	<u>\$ (25,761)</u>	<u>\$ (389,295)</u>
Net loss per share attributable to common stockholders, basic and diluted	<u>\$ (0.45)</u>	<u>\$ (6.43)</u>
Weighted-average shares used in computing net loss per share attributable to common stockholders, basic and diluted	<u>56,679,887</u>	<u>60,576,886</u>

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

TuSimple Holdings Inc.
Condensed Consolidated Statements of Comprehensive Loss
(in thousands)
(unaudited)

	Three Months Ended	
	March 31,	
	<u>2020</u>	<u>2021</u>
Net loss	\$ (25,761)	\$ (385,160)
Other comprehensive loss:		
Foreign currency translation adjustment	2	911
Comprehensive loss	<u>\$ (25,759)</u>	<u>\$ (384,249)</u>

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

TuSimple Holdings Inc.
Condensed Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Deficit
(in thousands, except share amounts)
(unaudited)

	Redeemable Convertible Preferred Stock		Common Stock					Accumulated Other Comprehensive Loss	Accumulated Deficit	Total TuSimple Holdings Inc. Stockholders' Deficit	Noncontrolling Interests	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Additional Paid-in Capital	Total						
Balance as of December 31, 2019	74,939,388	\$ 293,736	56,516,425	\$ 6	\$ —	\$ (658)	\$ (218,718)	\$ (219,370)	\$ (44)	\$ (219,414)		
Issuance of common stock from exercise of options	—	—	2,125,000	—	—	—	—	—	—	—		
Stock-based compensation	—	—	—	—	1,227	—	—	1,227	—	1,227		
Acquisition of noncontrolling interest in subsidiary	—	—	—	—	—	(44)	—	(44)	44	—		
Foreign currency translation adjustment	—	—	—	—	—	2	—	2	—	2		
Net loss	—	—	—	—	—	—	(25,761)	(25,761)	—	(25,761)		
Balance as of March 31, 2020	<u>74,939,388</u>	<u>\$ 293,736</u>	<u>58,641,425</u>	<u>\$ 6</u>	<u>\$ 1,227</u>	<u>\$ (700)</u>	<u>\$ (244,479)</u>	<u>\$ (243,946)</u>	<u>\$ —</u>	<u>\$ (243,946)</u>		

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

TuSimple Holdings Inc.
Condensed Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Deficit
(in thousands, except share amounts)
(unaudited)

	Redeemable Convertible Preferred Stock		Common Stock			Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Additional Paid-in Capital			
Balance as of December 31, 2020	102,074,703	\$ 664,791	60,543,337	\$ 6	\$ —	\$ (301)	\$ (405,178)	\$ (405,473)
Issuance of Series E redeemable convertible preferred stock, net of issuance costs	4,650,999	61,631	—	—	—	—	—	—
Issuance of Series E redeemable convertible preferred stock from the exercise of warrants	9,477,073	379,084	—	—	—	—	—	—
Issuance of Series E-2 redeemable convertible preferred stock from the exercise of warrants	4,331,644	173,275	—	—	—	—	—	—
Issuance of common stock from exercise of options	—	—	60,616	—	1	—	—	1
Vesting of early exercised stock options	—	—	—	—	21	—	—	21
Accretion of redeemable convertible preferred stock to redemption value	—	4,135	—	—	(4,135)	—	—	(4,135)
Stock-based compensation	—	—	—	—	6,289	—	—	6,289
Foreign currency translation adjustment	—	—	—	—	—	911	—	911
Net loss	—	—	—	—	—	—	(385,160)	(385,160)
Balance as of March 31, 2021	<u>120,534,419</u>	<u>\$ 1,282,916</u>	<u>60,603,953</u>	<u>\$ 6</u>	<u>\$ 2,176</u>	<u>\$ 610</u>	<u>\$ (790,338)</u>	<u>\$ (787,546)</u>

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

TuSimple Holdings Inc.
Condensed Consolidated Statements of Cash Flows
(in thousands)
(unaudited)

	Three Months Ended	
	March 31,	
	2020	2021
Cash flows from operating activities:		
Net loss	\$ (25,761)	\$ (385,160)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	1,227	6,289
Depreciation and amortization	1,825	2,110
Change in fair value of warrants liability	—	326,900
Changes in operating assets and liabilities:		
Accounts receivable	(17)	(285)
Prepaid expenses and other current assets	1,055	(3,360)
Other assets	(120)	(152)
Accounts payable	1,143	9,237
Amounts due to/from related parties	(386)	4,558
Accrued expenses and other current liabilities	(2,262)	(8,217)
Other liabilities	932	1,347
Net cash used in operating activities	<u>(22,364)</u>	<u>(46,733)</u>
Cash flows from investing activities:		
Purchases of property and equipment	(1,120)	(1,210)
Purchases of intangible assets	(62)	(87)
Proceeds from disposal of property and equipment	—	100
Net cash used in investing activities	<u>(1,182)</u>	<u>(1,197)</u>
Cash flows from financing activities:		
Proceeds from issuance of redeemable convertible preferred stock	—	61,631
Proceeds from exercise of warrants for redeemable convertible preferred stock	—	183,007
Proceeds from exercise of stock options	—	253
Principal payments on related party loan	—	(613)
Principal payments on capital lease obligations	—	(191)
Principal payments on other liabilities	(171)	(117)
Net cash provided by (used in) financing activities	<u>(171)</u>	<u>243,970</u>
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	(42)	1,100
Net increase (decrease) in cash, cash equivalents, and restricted cash	(23,759)	197,140
Cash, cash equivalents, and restricted cash - beginning of period	64,110	312,351
Cash, cash equivalents, and restricted cash - end of period	<u>\$ 40,351</u>	<u>\$ 509,491</u>

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

TuSimple Holdings Inc.
Condensed Consolidated Statements of Cash Flows
(in thousands)
(unaudited)

	Three Months Ended	
	March 31,	
	2020	2021
Supplemental disclosure of cash flow information:		
Cash paid for interest	\$ 173	\$ 195
Supplemental schedule of non-cash investing and financing activities:		
Acquisitions of property and equipment included in liabilities	\$ 686	\$ 1,939
Accretion of redeemable convertible preferred stock	\$ —	\$ 4,135
Vesting of early exercised stock options	\$ —	\$ 21
Exercise of liability-classified warrants	\$ —	\$ 369,352
Cashless exercise of stock options for common stock	\$ 975	\$ —

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

Note 1. Description of Business and Summary of Significant Accounting Policies

Description of Business

TuSimple Holdings Inc. (“TuSimple” or the “Company”) is principally engaged in the operation and development of autonomous trucks and an autonomous freight network (“AFN”). The Company is headquartered in San Diego, California.

TuSimple was originally incorporated as Tusimple (Cayman) Limited, a limited liability company in the Cayman Islands, on October 25, 2016. In February 2021, the Company deregistered as a Cayman Islands exempted company and continued and domesticated as a corporation incorporated under the laws of the State of Delaware (the “Domestication”). The business, assets and liabilities of the Company and its subsidiaries on a consolidated basis, as well as its principal locations and fiscal year, were the same immediately after the Domestication as they were immediately prior to the Domestication. In addition, the directors and executive officers of the Company immediately after the Domestication were the same individuals who were directors and executive officers, respectively, of the Company immediately prior to the Domestication.

Initial Public Offering and Private Placement

On April 19, 2021, the Company closed its initial public offering (“IPO”), in which it issued and sold 27,027,027 shares of its authorized Class A common stock at \$40.00 per share, resulting in net proceeds of \$1.0 billion after deducting underwriting discounts and commissions of \$50.1 million and offering costs. In connection with the IPO, the Company closed a concurrent private placement in which it issued and sold 874,999 shares of its Class A common stock at a purchase price of \$40.00 per share and received aggregate proceeds of \$35.0 million. The Company did not pay any underwriting discounts or commissions with respect to the shares of Class A common stock that were sold in this private placement.

Immediately prior to the completion of the IPO and concurrent private placement, the Company filed an amended and restated certificate of incorporation, which became effective on April 19, 2021. The amended and restated certificate of incorporation authorized 4,876,000,000 shares of Class A common stock and reclassified all outstanding common stock into Class A common stock, authorized 24,000,000 shares of Class B common stock, which are not publicly traded, and authorized 100,000,000 shares of undesignated preferred stock. Additionally, Xiaodi Hou and Mo Chen (the “Founders”) each exchanged 12,000,000 shares of their newly designated Class A common stock for an equivalent number of shares of Class B common stock. The rights of the holders of Class A common stock and Class B common stock are identical, except with respect to voting, conversion, and transfer rights. The holders of our Class A common stock are entitled to one vote per share and the holders of our Class B common stock are entitled to 10 votes per share. Additionally, each share of Class B common stock will automatically convert, on a one-for-one basis, into shares of Class A common stock on the earliest of (i) the date specified by a vote of the holders of Class B common stock representing 75% of the outstanding shares of Class B common stock, (ii) the date that is between 90 days and 270 days, as determined by the board of directors, after the death or incapacitation of the last Founder to die or become incapacitated, or (iii) the date that is between 61 and 180 days, as determined by the board of directors, after the date on which the number of outstanding shares of Class B common stock held by the Founders (or their permitted affiliates) is less than 12,000,000 shares.

Immediately prior to the completion of the IPO and concurrent private placement, all shares of the Company’s outstanding redeemable convertible preferred stock automatically converted into 120,534,419 shares of Class A common stock. Refer to Note 10. Subsequent Events for further information.

Basis of Presentation and Consolidation

The accompanying unaudited condensed consolidated financial statements (“Financial Statements”) have been prepared in accordance with accounting principles generally accepted in the United States (“GAAP”) and applicable rules and regulations of the Securities and Exchange Commission (“SEC”) regarding interim financial reporting. The condensed consolidated financial statements include the accounts of the Company and its consolidated subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation. These Financial Statements should be read in conjunction with the audited consolidated financial statements and notes included in the Company’s final prospectus filed with the SEC pursuant to Rule 424(b) under the Securities Act of 1933, as amended, on April 16, 2021 (the “Prospectus”).

The condensed consolidated balance sheet as of December 31, 2020 was derived from the audited consolidated financial statements as of that date, but does not include all disclosures required by GAAP. In management’s opinion, the accompanying Financial Statements reflect all normal recurring adjustments necessary for their fair presentation. Other than described below, there have been no changes to the Company’s significant accounting policies described in the Prospectus that have had a material impact on the Company’s Financial Statements.

Stock-Based Compensation

The Company accounts for stock-based compensation expense in accordance with the fair value recognition and measurement provisions of GAAP, which requires compensation cost for the grant-date fair value of stock-based awards to be recognized over the requisite service period. The Company determines the fair value of stock-based awards granted or modified on the grant date (or modification date, if applicable) at fair value, using appropriate valuation techniques.

Time-Based Service Awards

For stock-based awards with time-based vesting conditions only, generally being stock options, the fair value of each stock award granted is estimated using the Black-Scholes option-pricing model. The Black-Scholes option-pricing model requires the input of highly subjective assumptions, including the fair value of the underlying common stock, the expected stock price volatility over the term of the award, actual and projected employee stock option exercise behaviors, the risk-free interest rate for the expected term of the award and expected dividends. Stock-based compensation is recognized straight-line over the requisite service period, which is generally four years. The Company accounts for forfeitures as they occur instead of estimating the number of awards expected to be forfeited.

Performance-Based Awards

The Company has granted restricted stock units (“RSUs”), share value awards (“SVAs”), and stock options that vest only upon the satisfaction of both time-based service and performance-based conditions. The time-based service condition for these awards generally is satisfied over three years. The performance-based conditions are satisfied upon the occurrence of a qualifying event, defined as the earlier of (i) the closing of certain specific liquidation or change in control transactions, or (ii) an IPO. The Company records stock-based compensation expense for performance-based equity awards such as RSUs, SVAs, and stock options on an accelerated attribution method over the requisite service period, which is generally three years, and only if performance-based conditions are considered probable to be satisfied. As of March 31, 2021, the Company had not recognized stock-based compensation expense for awards with performance-based conditions which include a qualifying event because the qualifying event described above had not occurred and, therefore, cannot be considered probable. In the period in which the Company’s qualifying event is probable, the Company will record a cumulative one-time stock-based compensation expense determined using the grant-date fair values. Stock-based compensation related to remaining time-based service after the qualifying event will be recorded over the remaining requisite service period. For performance-based RSUs and SVAs, the Company determines the grant-date fair value as the fair value of the Company’s common stock on the grant date.

For performance-based awards with a vesting schedule based entirely on the attainment of both performance and market conditions, stock-based compensation expense associated with each tranche is recognized over the longer of (i) the expected achievement period for the operational milestones for such tranche and (ii) the expected achievement period for the related market capitalization milestone determined on the grant date, beginning at the point in time when the relevant operational milestones are considered probable of being met. If such operational milestones become probable any time after the grant date, the Company will recognize a cumulative catch-up expense from the grant date to that point in time. If the related market capitalization milestone is achieved earlier than its expected achievement period and the achievement of the related operational milestones, then the stock-based compensation expense will be recognized over the expected achievement period for the operational milestones, which may accelerate the rate at which such expense is recognized. The fair value of such awards is estimated on the grant date using Monte Carlo simulations. Refer to Note 6. Stock Based Compensation for further information.

Recently Adopted Accounting Pronouncements

In August 2018, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2018-15, *Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that Is a Service Contract*, 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 Company adopted the guidance as of January 1, 2021 with no material impact to the Company’s Financial Statements.

In December 2019, the FASB issued ASU no. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*. This ASU simplifies the accounting for income taxes by eliminating some exceptions to the general approach in ASC 740, Income Taxes, for recognizing deferred taxes for investments, performing intraperiod allocation and calculating income taxes in interim periods. The ASU adds guidance to reduce complexity in certain areas, including recognizing deferred taxes for tax goodwill and allocating taxes to members of a consolidated group. It also clarifies certain aspects of the existing guidance to promote more consistent application, among other things. The Company adopted ASU 2019-12 in the first quarter of 2021 and the adoption had no material impact to the Company’s consolidated financial statements.

Note 2. Fair Value Measurements

The following table presents the Company's assets and liabilities that are measured at fair value on a recurring basis and indicates the fair value hierarchy of the valuation (in thousands):

	As of December 31, 2020			
	Total	Level 1	Level 2	Level 3
Assets:				
Cash equivalents:				
Certificates of deposit	\$ 279,279	\$ 279,279	\$ —	\$ —
Total	\$ 279,279	\$ 279,279	\$ —	\$ —
Liabilities:				
Warrants liability	\$ 42,452	\$ —	\$ —	\$ 42,452
Total	\$ 42,452	\$ —	\$ —	\$ 42,452

	As of March 31, 2021			
	Total	Level 1	Level 2	Level 3
Assets:				
Cash equivalents:				
Certificates of deposit	\$ 115,800	\$ 115,800	\$ —	\$ —
Total	\$ 115,800	\$ 115,800	\$ —	\$ —

Warrants Liability

As of December 31, 2020, the fair value of the warrants liability was estimated using the Black-Scholes option-pricing model. The fair value of the underlying redeemable convertible preferred stock used within the Black-Scholes option-pricing model was estimated using a hybrid between a probability-weighted expected return method ("PWERM") and option pricing model ("OPM"), estimating the probability-weighted value across multiple scenarios, while using an OPM to estimate the allocation of value within one or more of these scenarios. Discrete future outcomes considered under the PWERM include an IPO of the Company's common stock, as well as continued operation as a private company. The significant unobservable inputs into the valuation model include the timing and probability of occurrence of these discrete future outcomes and a discount for the lack of marketability of the redeemable convertible preferred stock.

In February and March 2021, Traton SE ("Traton") and Navistar, Inc. ("Navistar") exercised warrants to purchase 4,331,644 and 9,477,073 shares of Series E-2 and Series E redeemable convertible preferred stock at an exercise price of \$11.31 and \$14.14, resulting in proceeds of \$49.0 million and \$134.0 million, respectively. Immediately prior to their exercise, the fair value of the warrants liability was remeasured using the Black-Scholes model. The warrants exercised by Traton represented only a portion of their total and the unexercised warrants expired as of the exercise date. As of March 31, 2021, there were no warrants outstanding. Refer to Note 5. Redeemable Convertible Preferred Stock, Preferred Stock Warrants, and Stockholders' Deficit for further information.

The Company used the following assumptions in the model:

	As of		
	December 31, 2020	February 26, 2021	March 19, 2021
Discount for lack of marketability	9.00% - 30.00%	—	—
Fair value of underlying securities	\$14.14	\$40.00	\$40.00
Expected volatility	53.90% - 76.90%	62.95%	60.85%
Expected term (in years)	0.33 - 1.91	1.76	0.79
Risk-free interest rate	0.10% - 0.13%	0.14%	0.08%

The following table sets forth a summary of the changes in the estimated fair value of the Company's warrants liability (in thousands):

Balance as of December 31, 2020	\$ 42,452
Change in fair value of warrants	326,900
Exercises during the period	(369,352)
Balance as of March 31, 2021	<u>\$ —</u>

Note 3. Balance Sheet Components

Property and Equipment, Net

Property and equipment as of December 31, 2020 and March 31, 2021 were as follows (in thousands):

	As of	
	December 31, 2020	March 31, 2021
Electronic equipment	\$ 11,429	\$ 13,787
Office and other equipment	6,152	11,252
Validation vehicles	12,775	12,877
Leasehold improvements	7,565	2,912
Property and equipment, gross	37,921	40,828
Accumulated depreciation and amortization	(15,805)	(17,798)
Property and equipment, net	<u>\$ 22,116</u>	<u>\$ 23,030</u>

Depreciation and amortization expense was \$1.8 million and \$2.1 million for the three months ended March 31, 2020 and 2021, respectively.

As of December 31, 2020 and March 31, 2021, property and equipment financed under capital leases was \$4.6 million and \$4.5 million, net of accumulated amortization of \$1.8 million and \$1.9 million, respectively.

Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities as of December 31, 2020 and March 31, 2021 were as follows (in thousands):

	As of	
	December 31, 2020	March 31, 2021
Accrued payroll	\$ 11,941	\$ 8,498
Accrued professional fees	7,865	2,342
Other	3,155	5,986
Accrued expenses and other current liabilities	<u>\$ 22,961</u>	<u>\$ 16,826</u>

Note 4. Commitments and Contingencies**Lease Commitments**

The Company has entered into various noncancelable operating leases for its facilities with various expiry dates through 2033.

Future minimum lease payments for non-cancelable operating and capital leases as of March 31, 2021 are as follows (in thousands):

Year Ending December 31,	Capital Leases	Operating Leases
Remainder of 2021	\$ 1,040	\$ 4,704
2022	1,274	6,471
2023	999	6,654
2024	984	4,677
2025	1,817	3,280
Thereafter	—	23,867
Total minimum lease payments	<u>\$ 6,114</u>	<u>\$ 49,653</u>
Amount representing interest	(1,733)	
Present value of minimum lease payments	<u>\$ 4,381</u>	

Rental expenses amounted to \$1.1 million and \$1.2 million for the three months ended March 31, 2020 and 2021, respectively.

Joint Development Agreement

In April 2020, the Company entered into a Development Agreement (“DA”) with Scania relating to a hub-to-hub pilot program using Scania vehicles and the Company’s autonomous technology in northern Europe. Under the DA, each party will fund its own costs related to the program. There are no reimbursements paid between the parties and there are no spending floors included within the DA. Upon successful completion of the development activities, the parties intend to set up a long-term cooperation agreement covering development, maintenance, operation and sales of self-driving systems on a global scale. The terms and conditions of such arrangement will be negotiated by the parties and included in a separate agreement.

In July 2020, the Company entered into a Joint Development Agreement (“JDA”) with Navistar, Inc., under which the parties will work collaboratively to develop purpose-built L4 autonomous semi-trucks for the North American market. Under the JDA, the parties grant each other rights to their background intellectual property to permit them to conduct research and development activities. Pursuant to the JDA, the Company agrees to reimburse Navistar up to \$10.0 million for research and development expenses incurred. Payment of reimbursements is deferred to align with the achievement of certain milestones and reimbursements due are recorded within accrued expenses in the Company’s condensed consolidated balance sheets. All reimbursements are expected to be paid within 12 months of the Company incurring the obligation. Upon successful completion of the development activities under the JDA, the parties will enter into good faith negotiations for a production license agreement. Products developed will be jointly commercialized by the parties.

As of March 31, 2021, expenses incurred to-date by Navistar for reimbursement under the JDA are \$5.3 million.

Post-Employment Agreements

The Company has entered into post-employment agreements with former employees under which the Company is required to pay additional compensation upon the occurrence of an IPO or Sale Event. No amounts have been recorded under such agreements as of December 31, 2020 and March 31, 2021, respectively, as occurrence of the contingent events was not considered probable. The estimated amounts payable upon occurrence of the contingent events were \$4.7 million and \$4.8 million as of December 31, 2020 and March 31, 2021, respectively.

Litigation and Legal Proceedings

The Company is not currently a party to any pending material litigation or other legal proceeding or claims.

Note 5. Redeemable Convertible Preferred Stock, Preferred Stock Warrants, and Stockholders’ Deficit**Redeemable Convertible Preferred Stock**

In January 2021, the Company issued 4,650,999 shares of Series E redeemable convertible preferred stock at \$14.14 per share for aggregate proceeds of \$61.6 million, net of issuance costs of \$4.1 million. The Series E redeemable convertible preferred stock were accreted to redemption value immediately upon issuance and \$4.1 million of accretion was recorded within additional paid-in capital within the condensed consolidated statements of redeemable convertible preferred stock and stockholders’ deficit.

In February 2021, Traton exercised warrants to purchase 4,331,644 shares of Series E-2 redeemable convertible preferred stock at an exercise price of \$11.31, resulting in aggregate proceeds of \$49.0 million.

In March 2021, Navistar exercised warrants to purchase 9,477,073 shares of Series E redeemable convertible preferred stock at an exercise price of \$14.14, resulting in proceeds of \$134.0 million.

Note 6. Stock-Based Compensation

2017 Share Plan

In April 2017, the Company adopted the 2017 Share Plan (the "2017 Plan") under which employees, directors, and consultants may be granted various forms of equity incentive compensation at the discretion of the board of directors, including stock options, restricted shares, RSUs, and SVAs.

Stock options granted under the 2017 Plan have a contractual term of ten years and have varying vesting terms, but generally vest over a requisite service period of four years. The exercise price of the stock options granted may not be less than the par value of the common stock on the grant date for non-U.S. tax residents and may not be less than the fair market value of the common stock on the grant date for U.S. tax residents. Certain share options contain a performance condition and are only exercisable subject to the grantee's continuous service and the completion of an IPO. Options which contain a performance condition and for which the service condition has been satisfied are forfeited should employment terminate before the Company's IPO.

In March 2021, the Company's board of directors approved an amendment to the 2017 Plan to increase the number of shares of common stock reserved for issuance by 2,300,000 shares. For a total of 24,267,694 shares reserved.

The 2017 Plan was terminated in connection with the Company's IPO in April 2021, and the Company will not grant any additional awards under the 2017 Plan. However, the 2017 Plan will continue to govern the terms and conditions of the outstanding awards previously granted under the 2017 Plan.

2021 Equity Incentive Plan

In March 2021, the board of directors adopted the 2021 Plan, which became effective upon its approval by the board of directors, but for which no awards were eligible to be granted prior to the Company's IPO in April 2021. The 2021 Plan provides for the grant of stock options, stock appreciation rights ("SARs"), restricted stock, and RSUs to the Company's employees, directors, and consultants. The number of shares of the Company's Class A common stock reserved for issuance under the 2021 Plan is 20,134,146 plus up to 19,892,067 shares of Class A common stock subject to awards under the Company's 2017 Plan. The number of shares of Class A common stock available for issuance under the 2021 Plan will also include an annual increase on the first day of each fiscal year beginning on January 1, 2022, equal to either (i) 2.5% of the Company's fully-diluted capitalization as of the last day of the immediately preceding fiscal year or (ii) such other amount as determined by the board of directors.

Stock Options

A summary of the stock option activity for the three months ended March 31, 2021 is as follows (in thousands, except share amounts, per share amounts, and years):

	<u>Options Outstanding</u>	<u>Weighted- Average Exercise Price</u>	<u>Weighted- Average Remaining Life (Years)</u>	<u>Aggregate Intrinsic Value</u>
Outstanding at December 31, 2020	13,295,497	\$ 1.29	7.99	\$ 97,986
Granted	1,515,968	\$ 10.73		
Exercised	(60,616)	\$ 4.18		
Forfeited	(589,536)	\$ 1.12		
Outstanding at March 31, 2021	<u>14,161,313</u>	\$ 2.29	7.88	\$ 533,909
Expected to vest at March 31, 2021	<u>14,161,313</u>	\$ 2.29	7.88	\$ 533,909
Vested and exercisable at March 31, 2021	<u>578,613</u>	\$ 2.78	9.43	\$ 21,537

As of March 31, 2021, there was \$55.1 million of unrecognized stock-based compensation expense related to unvested stock options with time-based vesting conditions only, which is expected to be recognized over a weighted-average service period of 3.95 years.

As of March 31, 2021, no share-based compensation expense has been recognized for stock options with a performance condition based on the occurrence of an IPO, as such event was not probable. The total unrecognized share-based compensation expense relating to these awards as of March 31, 2021 was \$25.6 million. Of this amount, \$18.3 million relates to awards for which the time-based vesting condition has been satisfied or partially satisfied on that date, calculated using the accelerated attribution method and the grant date fair value of the awards.

The estimated grant-date fair value of the Company's stock-based option awards was calculated using the Black-Scholes option-pricing model, based on the following assumptions:

	Three Months Ended	
	March 31, 2020	March 31, 2021
Risk-free interest rate	0.14% - 0.53%	0.33% - 1.04%
Expected volatility	51.00% - 60.00%	50.00%
Expected term (in years)	2.55 - 6.10	4.05 - 6.22
Fair value of common stock	\$1.52 - \$14.14	\$ 40.00

CEO Performance Award

In March 2021, incremental to the stock options discussed above, the Company granted 1,150,000 share option awards to the CEO with an exercise price of \$14.14 and a contractual life of ten years that vest upon the attainment of both operational milestones (performance conditions) and market conditions, assuming continued employment as the CEO through the vesting date. The options will vest upon certification by the Board of Directors that all the following milestones have been attained: (i) the average market capitalization of the Company during any consecutive 180-day period is no less than \$25.0 billion, (ii) the average number of L4 autonomous semi-trucks operating on its Autonomous Freight Network in any 90-day period is no less than 1,500, and (iii) the Company's revenues from its Autonomous Freight Network for any 12-month period exceed \$200.0 million.

As of March 31, 2021, there was a total of \$31.6 million unrecognized stock-based compensation expense for the operational milestones that were considered probable to achieve which will be recognized over a period of 3.67 years. For the three months ended March 31, 2021, the Company recorded stock-based compensation expense of \$0.7 million related to the CEO Performance Award.

RSUs

The following table summarizes the activity related to RSUs for the three months ended March 31, 2021:

	RSUs Outstanding	Weighted- Average Grant Date Fair Value per Share
Unvested and Outstanding at December 31, 2020	1,100,000	\$ 14.14
Granted	60,360	\$ 40.00
Unvested and outstanding at March 31, 2021	<u>1,160,360</u>	<u>\$ 15.49</u>

SVAs

The following table summarizes the activity related to SVAs for the three months ended March 31, 2021:

	SVAs Outstanding	Weighted- Average Grant Date Fair Value per Share
Unvested and Outstanding at December 31, 2020	3,653,146	\$ 3.20
Cancelled	(63,020)	\$ 12.29
Unvested and outstanding at March 31, 2021	<u>3,590,126</u>	<u>\$ 3.04</u>

For the three months ended March 31, 2021, no share-based compensation expense has been recognized for RSUs and SVAs with a performance condition based on the occurrence of an IPO, as such event was not probable. The total unrecognized stock-based compensation expense relating to these awards as of March 31, 2021 was \$30.2 million. Of this amount, \$24.3 million relates to awards for which the time-based vesting condition has been satisfied or partially satisfied on that date, calculated using the accelerated attribution method and the grant date fair value of the awards.

Early Exercise of Common Stock Options

The Company's board of directors authorized certain stock option holders to exercise unvested options to purchase shares of common stock. Shares received from such early exercises are subject to repurchase in the event of the optionee's termination of service, at the original issuance price, until the options are fully vested. As of March 31, 2021, 4,998 shares of common stock were subject to repurchase at a weighted-average price of \$4.20 per share. The cash proceeds received for unvested shares of common stock recorded within accrued expenses and other current liabilities in the condensed consolidated balance sheets were \$0.2 million as of March 31, 2021.

Stock-based Compensation Expense

Total stock-based compensation expense was as follows (in thousands):

	Three Months Ended	
	March 31, 2020	March 31, 2021
Research and development	\$ —	\$ 1,669
Sales and marketing	—	318
General and administrative	1,227	4,302
Total stock-based compensation expense	<u>\$ 1,227</u>	<u>\$ 6,289</u>

Note 7. Income Taxes

Prior to February 2021, the Company was a Cayman Islands incorporated holding company. In February 2021, the Company implemented a domestication pursuant to Section 388 of the Delaware General Corporation Law to which it became a Delaware corporation and is no longer subject to the laws of the Cayman Islands.

Following the Domestication, the U.S. federal income tax rate is the applicable statutory rate. The Company's interim period income tax provision is determined using the estimated annual effective income tax rate applied to year-to-date pretax losses adjusted for the tax effects of legislative changes and other discrete items that relate to the interim period. The estimated annual effective income tax rate is impacted by expected annual earnings, valuation allowances related to current year losses, income tax related to foreign operations, and state tax.

The Company's effective tax rate was zero percent for the three months ended March 31, 2021, which is lower than the U.S. federal rate of 21 percent and was primarily due to valuation allowances recorded on current year losses. As of March 31, 2021, the Company continues to maintain a full valuation allowance against its U.S. and foreign net deferred tax assets due to significant negative evidence, including cumulative losses in the most recent three-year period and the Company's assessment that it is not more likely than not that the net deferred tax assets will be realized.

Note 8. Net Loss Per Share Attributable to Common Stockholders

Basic net loss per share of common stock attributable to common stockholders is calculated by dividing net loss attributable to common stockholders by the weighted-average shares of common stock outstanding for the period. Diluted net loss per share attributable to common shareholders is the same as basic net loss per share attributable to ordinary shareholders for all years presented because the effects of potentially dilutive items were antidilutive given the Company's net loss in each period presented.

The following table presents the calculation of basic and diluted net loss per share attributable to common stockholders (in thousands, except share and per share amounts):

	Three Months Ended	
	March 31,	
	2020	2021
Numerator:		
Net loss	(25,761)	(385,160)
Less: Accretion of redeemable convertible preferred stock	—	(4,135)
Net loss attributable to common stockholders, basic and diluted	<u>(25,761)</u>	<u>(389,295)</u>
Denominator:		
Weighted-average shares used in computing net loss per share, basic and diluted	<u>56,679,887</u>	<u>60,576,886</u>
Net loss per share:		
Net loss per share attributable to common stockholders, basic and diluted	<u>\$ (0.45)</u>	<u>\$ (6.43)</u>

Note 9. Related Party Transactions

At December 31, 2020, the Company had short-term, unsecured, interest free loans outstanding of approximately \$0.6 million due to its executive chairman and one of its directors. During the three months ended March 31, 2021, the Company paid off these loans in their entirety.

Note 10. Subsequent Events

Initial Public Offering

On April 19, 2021, the Company closed its IPO, in which it issued and sold 27,027,027 shares of its Class A common stock. The price was \$40.00 per share. The Company received net proceeds of approximately \$1.0 billion from the IPO after deducting underwriting discounts and commissions of \$50.1 million and offering expenses. Upon closing of the IPO, (i) the Company filed an amended and restated certificate of incorporation which authorized 4,876,000,000 shares of Class A common stock and reclassified all outstanding common stock into Class A common stock, authorized 24,000,000 shares of Class B common stock, and authorized 100,000,000 shares of undesignated preferred stock, (ii) the Founders each exchanged 12,000,000 shares of their newly designated Class A common stock for an equivalent number of shares of Class B common stock, and (iii) all shares of the Company's outstanding redeemable convertible preferred stock automatically converted into 120,534,419 shares of Class A common stock.

Total outstanding shares of Class A common stock and Class B common stock after closing of the IPO and after conversion of all shares of the Company's outstanding redeemable convertible preferred stock were 185,040,398 and 24,000,000, respectively.

Upon the closing of the IPO, the Company recognized \$42.6 million of stock-based compensation expense related to stock options, RSUs, and SVAs for which the time-based vesting conditions had been satisfied or partially satisfied and the performance-based conditions were satisfied upon closing of the IPO. The Company will issue 3,426,096 shares of Class A common stock upon settlement of such RSUs and SVAs, which has not yet occurred as of the date of this filing.

Additionally, the Company recorded \$4.8 million in compensation expense to former employees in connection with separation agreements for which payment was contingent upon the occurrence of an IPO or Sale Event.

Private Placement

On April 19, 2021, the Company closed a concurrent private placement in which it issued and sold 874,999 shares of its Class A common stock at a purchase price of \$40.00 per share and received aggregate proceeds of \$35.0 million. The Company did not pay any underwriting discounts or commissions with respect to the shares of Class A common stock that were sold in this private placement.

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our condensed consolidated financial statements and the accompanying notes thereto included elsewhere in this Quarterly Report on Form 10-Q and our final prospectus (the “Prospectus”) filed with the Securities and Exchange Commission (the “SEC”) pursuant to Rule 424(b) under the Securities Act of 1933, as amended (the “Securities Act”), on April 16, 2021. In addition to historical consolidated financial information, the following discussion contains forward-looking statements that reflect our plans, estimates, and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. You should review the section titled “Special Note Regarding Forward-Looking Statements” for a discussion of forward-looking statements and the section titled “Risk Factors” for a discussion of factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis and elsewhere in this Quarterly Report on Form 10-Q. Our historical results are not necessarily indicative of the results that may be expected for any period in the future.

Overview

When used in this report, the terms “TuSimple”, “Company”, “we”, “us”, and “our” mean TuSimple Holdings Inc. and all subsidiaries.

TuSimple is an autonomous technology company that is revolutionizing the estimated \$4 trillion global truck freight market. We have developed industry-leading autonomous technology specifically designed for semi-trucks, which has enabled us to build the world’s first Autonomous Freight Network (“AFN”) in partnership with world-class shippers, carriers, railroads, freight brokers, fleet asset owners, and truck hardware partners. We believe that our technology and our AFN will make long haul trucking significantly safer as well as more reliable, efficient, and environmentally friendly, creating significant benefits for all who rely on the freight ecosystem to deliver essential goods.

Our AFN provides autonomous freight capacity as a service through multiple service models based on users’ needs. We believe that allowing our users the flexibility to select different service models is critical to our superior customer experience and will help drive rapid adoption of our network.

- **Carrier-Owned Capacity.** Shippers, carriers, and railroads that prefer to own their fleet will be able to purchase our purpose-built L4 autonomous semi-truck from a semi-truck original equipment manufacturer (“OEM”) partner and subscribe to TuSimple Path—a comprehensive turnkey product to enable autonomous operations across our network. TuSimple Path includes features such as our on-board autonomous driving software, TuSimple Connect cloud-based autonomous operations oversight system, HD digital route mapping support, and emergency roadside assistance. Users will pay TuSimple a per mile, usage-based fee for access to TuSimple Path and benefit from lower overall freight costs with an expected payback period of less than one year on their upfront incremental capital investment to purchase our purpose-built L4 autonomous semi-trucks.
- **TuSimple Capacity.** Our fleet of purpose-built L4 autonomous semi-trucks, financed through third party fleet asset owners, will serve users that desire access to safe, reliable, low cost, and more environmentally friendly freight transportation without owning semi-truck assets. Users of TuSimple Capacity can range from relatively smaller users of freight logistics to large shippers, carriers, and railroads seeking to supplement their own captive fleet for incremental freight capacity. We will charge users of TuSimple Capacity a per mile rate to ship freight, which we expect will be at a meaningful discount to prevailing market freight rates. We believe that our competitive advantage in terms of pricing will be enabled by our anticipated cost structure, which is expected to be significantly lower than that of human-operated semi-trucks. Users will benefit directly from lower shipping costs compared to conventional truck freight.

We are also working in partnership with leading semi-truck OEMs Navistar and Traton as well as components partners to build the world’s first purpose-built L4 autonomous semi-truck to be operated exclusively on our network. We believe that this collaborative approach to create semi-trucks designed and built with integrated auto-grade components and sensors will increase our AFN’s reliability at scale. Vertically integrating through partnerships with OEMs and Tier 1 suppliers allows us to maintain strong supply chain and hardware design control while remaining capital light and primarily focusing on developing proprietary autonomous technology.

We have developed a robust ecosystem of shippers, carriers, railroads, freight brokers, fleet asset owners, and third-party service providers, including UPS, McLane, U.S. Xpress, Werner, Schneider, and CN, that provide critical validation and enhance the network effect benefits of our approach. We believe that our unmatched partnership network creates a significant and sustainable competitive advantage, especially as we work with shippers, carriers, and railroads to strategically locate our AFN terminals near their distribution centers. The continued growth of our AFN infrastructure and partnerships will continue to improve our user experience and drive more users to our platform which will allow us to further densify our strategic terminal network and reinforce rapid network growth.

Coronavirus (“COVID-19”) Impact

The extensive impact of the pandemic caused by COVID-19 has resulted and will likely continue to result in significant disruption to the global economy, as well as businesses and capital markets around the world. In an effort to halt the outbreak of COVID-19, a number of countries, states, counties and other jurisdictions have imposed, and may impose in the future, various measures, including but not limited to, voluntary and mandatory quarantines, stay-at-home orders, travel restrictions, limitations on gatherings of people, reduced operations and extended closures of businesses.

The COVID-19 pandemic and measures to prevent its spread have had the following impact on our business:

- *Our Workforce.* Employee health and safety is our priority. In response to COVID-19, we established new protocols to help protect the health and safety of our workforce. We will continue to stay up-to-date and follow county and CDC guidelines regarding requirements for a healthy work environment.
- *Operations and Supply Chain.* As a result of COVID-19, we have experienced some delays in our supply chains which temporarily limited our ability to outfit semi-trucks with key components during the second quarter of 2020; however, we have not experienced material disruptions in our shipping activity or in our ability to continue developing our AFN to date. We will continue to monitor the situation for any potential adverse impacts and execute appropriate countermeasures, as necessary.
- *Liquidity and Working Capital.* We have not experienced any significant impairment in our liquidity or working capital, and from July 2020 through May 2021, we raised additional funds through the issuance of Series D-1 and E redeemable convertible preferred stock in private financings and through the issuance of Class A common stock in our IPO and concurrent private placement. We will continue to monitor our liquidity and working capital positions.

While we have not experienced significant disruptions to our business due to the COVID-19 pandemic to date, the broader and long-term implications of the COVID-19 pandemic on our workforce, operations and supply chain, user demand, results of operations, and overall financial performance remain uncertain.

See “Risk Factors” for further discussion of the possible impact of COVID-19 on our business.

Initial Public Offering and Concurrent Private Placement

On April 14, 2021, our registration statement on Form S-1 (File No. 333-254616) related to our IPO was declared effective by the SEC, and our Class A common stock began trading on the Nasdaq Global Select Market (“Nasdaq”) on April 15, 2021. Our IPO and concurrent private placement closed on April 19, 2021. As a result, our condensed consolidated financial statements as of March 31, 2021 do not reflect the impact of our IPO and concurrent private placement. For additional information, see Note 10. Subsequent Events to our condensed consolidated financial statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Key Factors Affecting Our Performance

We believe that our performance and future success depend on several factors that present significant opportunities for us but also pose risks and challenges, including those set forth in the section entitled “Risk Factors” in this Quarterly Report on Form 10-Q.

Full Commercialization of our AFN at Scale

To date, we have only recorded limited revenue from the freight capacity services we provide on our AFN. Prior to full commercialization of our AFN at scale, we must increase the number of users, grow our network of terminals, expand our high definition digital mapped routes, increase the number of purpose-built L4 autonomous semi-trucks and achieve several research and development milestones. While not yet commercially available, we have received significant interest from potential users, with over 5,700 reservations for our purpose-built L4 semi-trucks as of March 31, 2021. Additionally, we continue to grow our database of HD digital maps of freight corridors and surface streets with approximately 5,000 mapped miles as of March 31, 2021. Due to the fixed costs associated with operating our AFN, including labor for operating terminals, autonomous operations oversight systems, and maintaining our purpose-built L4 autonomous semi-trucks, we expect our margins to improve as more users are added to our AFN and as we achieve economies of scale. Until we can generate sufficient additional revenue from our AFN, we expect to finance our operations through equity and/or debt financings. The amount and timing of our future funding requirements will depend on many factors, including the pace and results of our development efforts.

Continued Investment in R&D and Innovation

We believe that we are the industry-leading autonomous truck company with the most efficient and reliable autonomous trucking technologies and an unmatched product and service offering. Our financial performance will be significantly dependent on our ability to maintain this leading position. We expect to incur substantial and increasing research and development expenses. We develop most of our key technologies in-house to achieve a rapid pace of innovation. Accordingly, we dedicate significant resources towards research and development and invest heavily in recruiting talent, especially for software developers and engineers with high levels of experience in artificial intelligence and designing and developing autonomous driving related algorithms. Our research and development staff totaled 820 professionals and accounted for approximately 84% of our total employees as of March 31, 2021. We will continue to recruit and retain talented software developers and engineers to grow our strength in the key technologies. We expect our strategic focus on innovations will further solidify our leadership position.

Improvement of Operating Efficiency

We aim to improve operating efficiency in every aspect of our business, such as research and development, supply chain, collaboration with business partners, and sales and marketing, as well as service offerings. As we continue to scale our AFN, we expect utilization rates across our network, including terminals, routes, and semi-trucks, to increase, leading to improved operating efficiency.

Investment in Sales and Marketing

As our purpose-built L4 autonomous semi-trucks reach commercialization and as our AFN continues to grow, we will need to devote significant resources to our sales and marketing activities and towards building brand awareness but in a cost-effective manner.

Components of Results of Operations

Revenue

To date, all of our revenue recognized has been from freight capacity services provided through the TuSimple Capacity service model on our AFN. Revenue is recognized over time as the goods are transported from one location to another based on the number of miles traveled. Shipments are completed within a short period of time, typically spanning one to two days. As we continue to grow and improve our technology, we expect a new revenue stream through our Carrier-Owned Capacity service model. We expect to derive revenue from per-mile fees charged to users of Carrier-Owned Capacity on our AFN. Recognition of this future revenue will be subject to the terms of any arrangements with our partners or users, which have not yet been negotiated. To date, we have not recorded any revenue under the Carrier-Owned Capacity service model.

Cost of Revenue

Our cost of revenue consists primarily of fuel costs, depreciation of property and equipment (including semi-trucks acquired under capital leases), labor costs, and other costs directly attributable to the provision of freight capacity services. Currently, we operate our semi-trucks with two occupants, a safety engineer and a safety driver. We expect to gradually lower the average number of occupants in our semi-trucks as we continue to improve our autonomous technology and ultimately remove all occupants upon achievement of full driver-out, L4 autonomous operations. This achievement is expected to significantly decrease the cost per mile to operate our purpose-built L4 autonomous semi-trucks.

Research and Development

Research and development costs consist primarily of personnel-related expenses associated with software developers and engineering personnel and consultants responsible for the design, development, and testing of our autonomous truck driving solutions, depreciation of equipment used in research and development, and allocated overhead costs. Research and development costs are expensed as incurred. We expect our research and development expenses to increase in absolute dollars as we increase our investment in scaling our AFN through our proprietary technologies.

Sales and Marketing

Sales and marketing costs consist primarily of personnel-related expenses associated with our sales and marketing activities, advertising expenses, sponsorship, public relations, and other related marketing activities. Although we incurred limited sales and marketing expenses in the three months ended March 31, 2020 and 2021, we expect that our sales and marketing expenses will increase in absolute dollars from period to period as we further scale our AFN, educate market participants on the benefits of autonomous trucking and our autonomous trucking solutions, hire additional sales and marketing personnel, increase our marketing activities, grow our domestic and international operations, and build brand awareness.

General and Administrative

General and administrative costs consist primarily of personnel-related expenses associated with our management and administration activities, professional service fees and other general corporate expenses.

We will continue to incur additional general and administrative expenses as a result of operating as a public company, including expenses related to compliance with the rules and regulations of the SEC and stock exchange listing standards, additional insurance expenses, investor relations activities, and other administrative and professional services. We also expect to increase the size of our general and administrative function to support the growth of our business. As a result, we expect that our general and administrative expenses will increase in absolute dollars.

Change in Fair Value of Warrants Liability

The change in the fair value of warrants liability consists of the net changes in the fair value of our outstanding warrants to purchase redeemable convertible preferred stock that are remeasured at the end of each reporting period and upon their exercise. All outstanding warrants were exercised or expired during the three months ended March 31, 2021 and we recorded one final remeasurement at fair value as of the exercise date.

Other Income, Net

Other income, net consists primarily of interest income earned on our cash and cash equivalents, interest expense on our related party borrowings, income from government grants, and foreign currency exchange gains (losses), net of remeasurement of transactions and monetary assets and liabilities denominated in currencies other than the functional currency at the end of the period.

Provision for Income Taxes

Provision for income taxes consists primarily of U.S. federal and state income taxes and income taxes in certain foreign jurisdictions in which we conduct business. Since inception, we have incurred operating losses and, accordingly, have not recorded a provision for income taxes for any of the periods presented.

We have a full valuation allowance for net deferred tax assets, including federal and state net operating loss carryforwards and research and development credit carryforwards. We expect to maintain this valuation allowance until it becomes more likely than not that the benefit of our federal and state deferred tax assets will be realized by way of expected future taxable income.

Results of Operations

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

	Three Months Ended March 31,	
	2020	2021
Revenue	\$ 259	\$ 944
Costs and expenses:		
Cost of revenue	771	2,246
Research and development (1)	18,182	41,434
Sales and marketing (1)	437	678
General and administrative (1)	6,726	15,224
Total costs and expenses	26,116	59,582
Loss from operations	\$ (25,857)	\$ (58,638)
Change in fair value of warrants liability	—	(326,900)
Other income, net	96	378
Loss before provision for income taxes	\$ (25,761)	\$ (385,160)
Provision for income taxes	—	—
Net loss	\$ (25,761)	\$ (385,160)
Accretion of redeemable convertible preferred stock	—	(4,135)
Net loss attributable to common stockholders	\$ (25,761)	\$ (389,295)

(1) Includes stock-based compensation expense as follows (in thousands)

	Three Months Ended March 31,	
	2020	2021
Research and development	\$ —	\$ 1,669
Sales and marketing	—	318
General and administrative	1,227	4,302
Total stock-based compensation expense	\$ 1,227	\$ 6,289

Comparison of the Three Months Ended March 31, 2021 and 2020

Revenue

	Three Months Ended March 31,		
	2020	2021	% Change
	(\$ in thousands)		
Revenue	\$ 259	\$ 944	264%

Revenue increased by \$0.7 million, or 264%, from \$0.3 million for the three months ended March 31, 2020 to \$0.9 million for the three months ended March 31, 2021. The increase in revenue was driven by an increase the number of customers using our TuSimple Capacity service model on our AFN.

Cost of Revenue

	Three Months Ended March 31,		
	2020	2021	% Change
	(\$ in thousands)		
Cost of Revenue	\$ 771	\$ 2,246	191%

Cost of revenue increased by \$1.5 million, or 191%, from \$0.8 million for the three months ended March 31, 2020 to \$2.2 million for the three months ended March 31, 2021 due to increased operating costs associated with the expansion of our AFN.

Research and Development

	Three Months Ended March 31,		
	2020	2021	% Change
	(\$ in thousands)		
Research and Development	\$ 18,182	\$ 41,434	128%

Research and development expenses increased by \$23.2 million, or 128%, from \$18.2 million for the three months ended March 31, 2020 to \$41.4 million for the three months ended March 31, 2021. The increase was primarily attributable to an increase of \$13.0 million in personnel-related costs due to an increase in employee headcount, which includes an increase of \$1.7 million in stock-based compensation expense, an increase of \$5.3 million in joint development costs with Navistar, an increase of \$1.9 million in equipment, supplies, and materials, an increase of \$1.3 million in other vehicle-related costs due to the testing and development of our L4 autonomous semi-trucks and the continued development and expansion of our AFN, and an increase of \$1.7 million in depreciation and allocated facility costs due to the expansion of our operational facilities.

Sales and Marketing

	Three Months Ended March 31,		
	2020	2021	% Change
	(\$ in thousands)		
Sales and marketing	\$ 437	\$ 678	55%

Sales and marketing expenses increased by \$0.3 million, or 55%, from \$0.4 million for the three months ended March 31, 2020 to \$0.7 million for the three months ended March 31, 2021. The increase was primarily attributable to an increase in business development, public relations, and marketing consulting services incurred in connection with the IPO.

General and Administrative

	Three Months Ended March 31,		
	2020	2021	% Change
	(\$ in thousands)		
General and Administrative	\$ 6,726	\$ 15,224	126%

General and administrative expenses increased by \$8.5 million, or 126%, from \$6.7 million for the three months ended March 31, 2020 to \$15.2 million for the three months ended March 31, 2021. The increase was primarily attributable to an increase of \$6.6 million in personnel-related costs due to an increase in employee headcount, which includes an increase of \$3.1 million in stock-based compensation expense, and an increase of \$1.4 million in legal, accounting and other professional services.

Change in Fair Value of Warrants Liability

	Three Months Ended March 31,		
	2020	2021	% Change
	(\$ in thousands)		
Change in Fair Value of Warrants Liability	\$ —	\$ (326,900)	*

* Percentage not meaningful

Loss from the change in fair value of warrants liability of \$326.9 million for the three months ended March 31, 2021 was driven by the remeasurement of redeemable convertible preferred stock warrants at fair value, immediately prior to their exercise dates during the period. There were no such warrants outstanding as of March 31, 2020.

Other Income, Net

	Three Months Ended March 31,		
	2020	2021	% Change
	(\$ in thousands)		
Other Income, Net	\$ 96	\$ 378	294%

Other income, net increased by \$0.3 million, or 294%, from \$0.1 for the three months ended March 31, 2020 to \$0.4 million for the three months ended March 31, 2021. The increase was primarily attributable to an increase in interest income earned on cash and cash equivalents.

Liquidity and Capital Resources

We have financed our operations primarily through the sale of redeemable convertible preferred stock and loans from stockholders, which have historically been sufficient to meet our working capital and capital expenditure requirements. As of March 31, 2021, our principal sources of liquidity were \$508.7 million of cash and cash equivalents, exclusive of restricted cash of \$0.8 million. In April 2021, we closed our IPO and concurrent private placement, resulting in net proceeds of \$1.0 billion and \$35.0 million, respectively. Cash and cash equivalents consist primarily of cash on deposit with banks as well as certificates of deposit. Based on our current operating plan, we believe that the net proceeds from our IPO and concurrent private placement, together with our existing cash and cash equivalents and anticipated cash generated from sales of our services, will be sufficient to meet our anticipated cash needs for at least the next 12 months.

Our future capital requirements will depend on many factors, including, but not limited to, the rate of our growth, our ability to attract and retain users and their willingness to pay for our services, and the timing and extent of spending to support our efforts to develop our L4 autonomous semi-trucks and AFN. Further, we may enter into future arrangements to acquire or invest in businesses, products, services, strategic partnerships, and technologies. As such, we may be required to seek additional equity and/or debt financing. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of common stockholders. The incurrence of indebtedness would result in increased fixed obligations and could result in operating covenants that would restrict our operations. If we are unable to maintain sufficient financial resources, our business, financial condition and results of operations may be materially and adversely affected.

Cash Flows

The following table summarizes our cash flows for the periods presented (in thousands):

	Three Months Ended March 31,	
	2020	2021
Net cash (used in) provided by:		
Operating activities	\$ (22,364)	\$ (46,733)
Investing activities	\$ (1,182)	\$ (1,197)
Financing activities	\$ (171)	\$ 243,970

Operating Activities

Net cash used in operating activities was \$22.4 million and \$46.7 million for the three months ended March 31, 2020 and 2021, respectively. The increase was primarily due to an increase in cash net losses and working capital as we continue to operate, develop, and expand our AFN and L4 autonomous semi-truck technology, grow our research and development and general support personnel, and incur incremental expenses associated with being a public company.

Investing Activities

Net cash used in investing activities remained flat for both periods, totaling \$1.2 million for the three months ended March 31, 2020 and 2021, respectively, as we continue to invest in technological assets and equipment as we expand our AFN.

Financing Activities

Net cash used by financing activities of \$0.2 million for the three months ended March 31, 2020 was driven primarily by principal payments on loans while net cash provided by financing activities of \$244.0 million for the three months ended March 31, 2021 was related primarily to proceeds from the exercise of warrants for redeemable convertible preferred stock of \$183.0 million, proceeds from the issuance of redeemable convertible preferred stock of \$61.6 million.

Commitments and Contractual Obligations

There were no material changes to our commitments and contractual obligations from those disclosed in the Prospectus. See Note 4. Commitments and Contingencies to our condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q for additional information regarding contractual obligations and commitments.

Off-Balance Sheet Arrangements

We did not have, during the periods presented, any off-balance sheet financing arrangements or any relationships with unconsolidated entities or financial partnerships, including entities sometimes referred to as structured finance or special purpose entities, that were established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Critical Accounting Policies and Estimates

We prepare our condensed consolidated financial statements in accordance with GAAP. The preparation of these condensed consolidated financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. We base our estimates on historical experience and other assumptions that we believe are reasonable under the circumstances. Our actual results could differ significantly from these estimates under different assumptions and conditions.

There have been no material changes to our critical accounting policies and estimates as compared to the critical accounting policies and estimates discussed in the Prospectus except as described in Note 1. Description of Business and Summary of Significant Accounting Policies to our condensed consolidated financial statements and except for the determination of the fair value of our Class A common stock, which is used in estimating the fair value of stock-based awards at grant date as discussed below.

Prior to our IPO, our common stock was not publicly traded; therefore, we estimated the fair value of our common stock as discussed in the Prospectus. Following our IPO, the closing sale price per share of our Class A common stock as reported on the Nasdaq on the date of grant is used to determine the fair value of our Class A common stock.

JOBS Act Accounting Election

We are an emerging growth company, as defined in the Jumpstart Our Business Startups (JOBS) Act. The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This provision allows an emerging growth company to delay the adoption of some accounting standards until those standards would otherwise apply to private companies. We have elected to use the extended transition period under the JOBS Act for the adoption of certain accounting standards until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

Recent Accounting Pronouncements

For information on recently issued accounting pronouncements, refer to Note 1. Description of Business and Summary of Significant Accounting Policies in our condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

We are exposed to market risks in the ordinary course of our business, which primarily relate to fluctuations in foreign exchange rates.

Foreign Currency Exchange Risk

The functional currency of our foreign subsidiaries is the local currency or U.S. dollar depending on the nature of the subsidiaries' activities. Foreign currency transactions recognized in the condensed consolidated statements of operations are converted to the functional currency by applying the exchange rate prevailing on the date of the transaction. Our results of operations and cash flows are subject to fluctuations due to changes in foreign currency exchange rates. The effect of a hypothetical 10% change in foreign currency exchange rates applicable to our business would not have had a material impact on our historical condensed consolidated financial statements for the three months ended March 31, 2020 and 2021. As the impact of foreign currency exchange rates has not been material to our condensed consolidated financial statements, we have not engaged in any foreign currency hedging strategies. As our international operations grow, we will continue to reassess our approach to manage our risk relating to fluctuations in currency rates.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our disclosure controls and procedures are designed to ensure that information we are required to disclose in reports that we file or submit under the Securities Exchange Act of 1934, as amended (the "Exchange Act") is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Our management, with the participation and supervision of our Chief Executive Officer and our Chief Financial Officer, have evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that as of such date, our disclosure controls and procedures were not effective due to the material weakness in our internal control over financial reporting described below. In light of this fact, our management has performed additional analyses, reconciliations, and other post-closing procedures and has concluded that, notwithstanding the material weakness in our internal control over financial reporting, the condensed consolidated financial statements for the periods covered by and included in this Quarterly Report on Form 10-Q fairly present, in all material respects, our financial position, results of operations and cash flows for the periods presented in conformity with GAAP.

Previously Reported Material Weakness

As disclosed in the section titled "Risk Factors" in Part II, Item 1A of this Quarterly Report on Form 10-Q, we previously identified control deficiencies in the design and implementation of our internal control over financial reporting that constituted a material weakness. 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 our financial statements will not be prevented or detected on a timely basis.

The material weakness identified in our internal control over financial reporting related to a lack of appropriately designed and implemented controls over the review and approval of manual journal entries (including consolidation entries) and the related supporting journal entry calculations. We have concluded that this material weakness arose because, as a private company, we did not have the necessary business processes, systems, personnel, and related internal controls necessary to satisfy the accounting and financial reporting requirements of a public company.

Remediation Plans

We have commenced measures to remediate the identified material weakness, including: (i) the hiring of additional finance and accounting personnel over time to augment our accounting staff and to provide more resources for complex accounting matters and financial reporting; (ii) further developing and implementing formal policies, processes and documentation procedures relating to our financial reporting; and (iii) the adoption of new technological solutions. We intend to continue to take steps to remediate the material weakness described above and further evolving our accounting processes.

The actions we are taking are subject to ongoing executive management review and are also subject to audit committee oversight. To date, we have hired additional financial and accounting personnel with technical accounting experience and implemented new technology solutions to assist with our financial reporting process. We are still implementing formal policies, processes, and documentation procedures related to the review and approval of manual journal entries. We will not be able to fully remediate this material weakness until these steps have been completed and have been operating effectively for a sufficient period of time. We currently expect that the material weakness will be remediated by December 31, 2021, and costs associated with the remediation plan are not expected to be material. If we are unable to successfully remediate the material weakness, or if in the future, we identify further material weaknesses in our internal control over financial reporting, we may not detect errors on a timely basis and our condensed consolidated financial statements may be materially misstated.

Changes in Internal Control over Financial Reporting

We are taking actions to remediate the material weakness relating to our internal control over financial reporting, as described above. Except as otherwise described herein, there were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the period covered by this Quarterly Report on Form 10-Q that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on the Effectiveness of Controls

The effectiveness of any system of disclosure controls and procedures and internal control over financial reporting, including ours, is subject to inherent limitations, including the exercise of judgment in designing, implementing, operating, and evaluating the controls and procedures, and the inability to eliminate misconduct completely. Accordingly, in designing and evaluating the disclosure controls and procedures, management recognizes that any system of internal control over financial reporting, including ours, no matter how well designed and operated, can only provide reasonable assurance, not absolute assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs. Moreover, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. We intend to continue to monitor and upgrade our internal controls as necessary or appropriate for our business but cannot assure you that such improvements will be sufficient to provide us with effective internal control over financial reporting.

Item 1. Legal Proceedings.

From time to time, we are involved in various legal proceedings arising from the normal course of business activities. We are not presently a party to any litigation the outcome of which, we believe, if determined adversely against us, would individually or taken together have a material adverse effect on our business, operating results, cash flows or financial condition. Defending such proceedings is costly and can impose a significant burden on management and employees. We may receive unfavorable preliminary or interim rulings in the course of litigation, and there can be no assurances that favorable final outcomes will be obtained.

Item 1A. Risk Factors.

Investing in our Class A common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information in this Quarterly Report on Form 10-Q and the Prospectus, including the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our condensed consolidated financial statements and the accompanying notes, before deciding whether to invest in shares of our Class A common stock. Our business, financial condition, results of operations, or prospects could also be harmed by risks and uncertainties not currently known to us or that we currently do not believe are material. If any of these risks actually occur, it may materially harm our business, financial condition, liquidity, and results of operations. As a result, the market price of our Class A common stock could decline, and you could lose all or part of your investment.

Risks Related to Our Technology, Business Model, and Industry***Autonomous driving is an emerging technology and involves significant risks and uncertainties.***

Our autonomous driving technology is highly dependent on internally-developed software, as well as on partnerships with third parties such as semi-truck original equipment manufacturers (“OEM”) and other Tier 1 suppliers. We develop and integrate our autonomous driving technology and work with OEMs and other suppliers to develop autonomous driving technology hardware.

We currently operate on our Autonomous Freight Network (“AFN”) Level 4 (“L4”) autonomous semi-trucks equipped with our autonomous driving technology. We also partner with OEMs, such as Navistar and Traton, that are seeking to manufacture purpose-built L4 autonomous semi-trucks capable of incorporating our autonomous driving technology, and may in the future partner with other OEMs. In addition to OEMs, we depend on other third parties, such as ZF, Knorr-Bremse, and Nvidia, to produce components for our L4 autonomous semi-trucks. The timely development and performance of our autonomous driving programs is dependent on the materials, cooperation, and quality delivered by our partners. Further, we do not control technology for serial production, such as brakes, gear shifting, and steering. There can be no assurance that those applications can be developed and validated at the high reliability standard required for L4 autonomous driving in a cost-effective and timely manner. Our dependence on these relationships exposes us to the risk that components manufactured by OEMs or other suppliers could contain defects that would cause our autonomous driving technology to not operate as intended.

Although we believe that our algorithms, data analysis and processing, and artificial intelligence technology are promising, we cannot assure you that our technology will achieve the necessary reliability for L4 autonomy at commercial scale. For example, we are still improving our technology in terms of handling non-compliant driving behavior by other cars on the road and low reflectivity objects and performing in extreme weather conditions, such as snow or heavy fog. There can be no assurance that our data analytics and artificial intelligence could predict every single potential issue that may arise during the operation of our L4 autonomous semi-trucks.

We have a limited operating history in a new market and face significant challenges as our industry is rapidly evolving.

We commenced operations in 2015 and recently launched in July 2020 our AFN, an ecosystem consisting of L4 autonomous semi-trucks, high definition digital mapped routes, strategically placed terminals, and TuSimple Connect, a proprietary cloud-based autonomous operations oversight system. We expect to derive substantially all of our revenue from our AFN, which is still in the early stages of development and commercialization.

You should consider our business and prospects in light of the risks and challenges we face as a new entrant into a novel industry, including, among other things, with respect to our ability to:

- navigate an evolving and complex regulatory environment;
- design, outfit, and produce safe, reliable, and quality L4 autonomous semi-trucks with our partners on an ongoing basis;
- successfully produce with OEM partners a line of purpose-built L4 autonomous semi-trucks on the timeline we estimate;
- improve and enhance our software and autonomous technology;
- establish and expand our user base;
- successfully market our AFN and our other products and services;
- properly price our products and services;
- improve and maintain our operational efficiency;
- maintain a reliable, secure, high-performance, and scalable technology infrastructure;
- attract, retain, and motivate talented employees;
- anticipate and adapt to changing market conditions, including technological developments and changes in competitive landscape; and
- build a well-recognized and respected brand.

If we fail to address any or all of these risks and challenges, our business may be materially and adversely affected. There are also a number of additional challenges to L4 autonomous driving, many of which are not within our control, including market acceptance of autonomous driving, governmental licensing requirements, concerns regarding data security and privacy, actual and threatened litigation (whether or not a judgment is rendered against us), and the general perception that an autonomous vehicle is not safe because there is no human driver. There can be no assurance that the market will accept our technology, in which case our future business, results of operations and financial condition could be adversely affected.

The autonomous trucking and freight transport industry is in its early stages and is rapidly evolving. Our autonomous driving technology has not yet commercialized at scale. We cannot assure you that we will be able to adjust to changing market or regulatory conditions quickly or cost-effectively. If we fail to do so, our business, results of operations and financial condition will be adversely affected.

Our business model has yet to be tested and any failure to commercialize our strategic plans would have an adverse effect on our operating results and business, harm our reputation and could result in substantial liabilities that exceed our resources.

You should be aware of the difficulties normally encountered by a relatively new enterprise that is beginning to scale its business, many of which are beyond our control, including unknown future challenges and opportunities, substantial risks and expenses in the course of entering new markets and undertaking marketing activities. The likelihood of our success must be considered in light of these risks, expenses, complications, delays, and the competitive environment in which we operate. There is, therefore, substantial uncertainty that our business plan will prove successful, and we may not be able to generate significant revenue, raise additional capital, or operate profitably. We will continue to encounter risks and difficulties frequently experienced by early commercial stage companies, including scaling up our infrastructure and headcount, and may encounter unforeseen expenses, difficulties, or delays in connection with our growth. In addition, as a result of the capital-intensive nature of our business, we can be expected to continue to sustain substantial operating expenses without generating sufficient revenue to cover expenditures. Any investment in our company is therefore highly speculative and could result in the loss of your entire investment.

Our future business depends in large part on our ability to continue to develop and successfully commercialize our L4 autonomous driving technology, our AFN, and other freight capacity services we plan to offer. Our ability to develop, deliver, and commercialize at scale our autonomous driving software and systems to support or perform autonomous operation of large semi-trucks is still unproven.

Our continued enhancement of our autonomous driving technology is and will be subject to risks, including with respect to:

- our ability to continue to enhance our data analytics and software technology;
- designing, developing, and securing necessary components on acceptable terms and in a timely manner;
- our ability to attract, recruit, hire, and train skilled employees; and
- our ability to enter into strategic relationships with key members in the trucking and freight transport industries, as well as component suppliers.

We have limited experience to date in applying our autonomous driving technology at scale. While we currently operate autonomous semi-trucks equipped with our autonomous driving technology, we have not yet produced and sold to third parties our purpose-built L4 autonomous semi-trucks at scale. Even if we are successful in developing and commercializing our technology, we could face unexpected difficulties, delays, and cost overruns, including as a result of factors beyond our control such as unforeseen issues with our technology, problems with suppliers, and adverse regulatory developments. Any failure to develop our technology within our projected costs and timelines could have a material adverse effect on our business, prospects, operating results, and financial condition.

Since the market for autonomous solutions is relatively new and disruptive, if our L4 autonomous driving technology fails to gain acceptance from users and other stakeholders in the freight transportation industry, our business, prospects, operating results, and financial condition could be materially harmed.

Demand for autonomous driving technology depends to a large extent on general, economic, political, and social conditions in a given market. The market opportunities we are pursuing are at an early stage of development, and it is difficult to predict user demand or adoption rates for our solutions, including the AFN, or the future growth of the markets in which we operate. Despite the fact that the automotive industry has engaged in considerable effort to research and test L2 and L3 autonomous cars, our technology targeting L4 autonomous semi-trucks requires significant investment and may never be commercially successful on a large scale, or at all.

Further, even if we succeed in operating at commercial scale, because of the disruptive nature of our business to the freight transportation industry, key industry participants may not accept our AFN, may develop competing services or may otherwise seek to subvert our efforts. For example, autonomous semi-trucks might displace individual semi-truck drivers and small fleet owners. Labor unions may also raise concerns about autonomous semi-trucks displacing drivers or otherwise negatively affecting employment opportunities for their members, as has been the case in other industries that have been subject to automation. This has in the past resulted, and could in the future result, in negative publicity, lobbying efforts to U.S. local, state, and federal, lawmaking authorities, or equivalent authorities in the foreign jurisdictions in which we seek to do business, to implement legislation or regulations that make it more difficult to operate our business or boycotts of us or our users. Any such occurrences could materially harm our future business.

Additionally, regulatory, safety, and reliability issues, or the perception thereof, many of which are outside of our control, could also cause the public or our potential partners and users to lose confidence in autonomous solutions in general. The safety of such technology depends in part on user interaction and users, as well as other drivers, pedestrians, other obstacles on the roadways or other unforeseen events. For example, there have been several crashes involving automobiles of other manufacturers resulting in death or personal injury where autopilot features are engaged. Even though these incidents were unrelated to our AFN and our technology, such cases resulted in significant negative publicity and, in the future, could result in suspension or prohibition of self-driving vehicles. If safety and reliability issues for autonomous driving technology cannot be addressed properly, our business, prospects, operating results, and financial condition could be materially harmed.

Our autonomous driving technology and related hardware and software could have undetected defects, errors or bugs in hardware or software which could create safety issues, reduce market adoption, damage our reputation with current or prospective users or expose us to product liability and other claims that could materially and adversely affect our business.

Our autonomous driving technology is highly technical and very complex, and has in the past and may in the future experience defects, errors or bugs at various stages of development. We may be unable to timely correct problems to our partners' and users' satisfaction. Additionally, there may be undetected errors or defects especially as we introduce new systems or as new versions are released. These risks are particularly prevalent in the highly competitive freight transport market, as any such errors or defects could delay or prevent the adoption of autonomous driving technology in trucks. Errors or defects in our products may only be discovered after they have been tested, commercialized, and deployed. If that is the case, we may incur significant additional development costs and product recall, repair or replacement costs, or more importantly, liability for personal injury or property damage caused by such errors or defects, as these problems would also likely result in claims against us. Our reputation or brand may be damaged as a result of these problems and users may be reluctant to use our services, which could adversely affect our ability to retain existing users and attract new users, and could materially and adversely affect our financial results.

In addition, we could face material legal claims for breach of contract, product liability, tort or breach of warranty as a result of these problems. Any such lawsuit may cause irreparable damage to our brand and reputation. In addition, defending a lawsuit, regardless of its merit, could be costly and may divert management's attention and adversely affect the market's perception of us and our services. In addition, our business liability insurance coverage could prove inadequate with respect to a claim and future coverage may be unavailable on acceptable terms or at all. These product-related issues could result in claims against us and our business could be materially and adversely affected.

The operation of our L4 autonomous semi-trucks is different from non-autonomous semi-trucks and may be unfamiliar to our users and other road users.

We have specifically engineered our L4 autonomous semi-trucks with our technology to provide a superior ability to sense, predict, and react to real-world driving situations. Our proprietary artificial intelligence ("AI") and machine vision capabilities are specifically engineered to meet the demands of commercial trucks. In certain instances, these protections may cause the vehicle to behave in ways that are unfamiliar to drivers of non-autonomous driving trucks. For example, our L4 autonomous semi-trucks adhere strictly to safety rules, including stopping for three seconds at a stop sign. These safety rules may not be strictly adhered to by human drivers, and thus may be unfamiliar or come as a surprise to other drivers on the road.

Furthermore, there can be no assurance that our users will be able to properly adapt to the different operation processes for our L4 autonomous semi-trucks. For example, they may not be able to adapt their business processes to address activities such as the dispatching of trucks, pre-trip inspections, remote monitoring, and rescuing of trucks. Any accidents resulting from such failure to operate our L4 autonomous semi-trucks properly could harm our brand and reputation, result in adverse publicity, and product liability claims, and have a material adverse effect on our business, prospects, financial condition, and operating results.

Reservations for our purpose-built L4 autonomous semi-trucks are cancellable

As of March 31, 2021, we have accepted over 5,700 reservations for our purpose-built L4 autonomous semi-truck. Until the customer enters into a purchase agreement for our purpose-built L4 autonomous semi-truck, which is within the discretion of the customer, the reservation can be canceled and the customer is entitled to a full refund of its deposit. We have not entered into purchase agreements with any of our customers that have reserved our purpose-built L4 autonomous semi-trucks.

Because all of our reservations are cancellable, it is possible that a significant number of customers who submitted reservations for our purpose-built L4 autonomous semi-trucks may cancel those reservations. Given the anticipated lead times between customer reservation and delivery of our purpose-built L4 autonomous semi-trucks, there is a heightened risk that customers that have made reservations may not ultimately take delivery of our vehicles due to potential changes in customer preferences, competitive developments, and other factors. As a result, no assurance can be made that reservations will not be canceled, or that reservations will ultimately result in the purchase of purpose-built L4 autonomous semi-trucks. Any cancellations could harm our financial condition, business, prospects, and operating results.

We operate in a highly competitive market and some market participants have substantially greater resources than we do. We compete against a large number of both established competitors and new market entrants.

The market for autonomous trucking and freight transport solutions is highly competitive. Many companies are seeking to develop autonomous trucking and delivery solutions. Competition in these markets is based primarily on technology, innovation, quality, safety, reputation, and price. Our future success will depend on our ability to further develop and protect our technology in a timely manner and to stay ahead of existing and new competitors. Our competitors in this market are working towards commercializing autonomous driving technology and may have substantial financial, marketing, research and development, and other resources. Some examples of our competitors include Waymo, Aurora, Embark, and Kodiak.

In addition, we also face competition from traditional freight transport companies, such as non-autonomous trucking companies, railroads, and air carriers. Traditional shipping fleets and other carriers operating with human drivers are still the predominant operators in the market. Because of the long history of such traditional freight transport companies serving the freight market, there may be many constituencies in the market that would resist a shift towards autonomous freight transport, which could include lobbying and marketing campaigns, particularly because our technology will displace semi-truck drivers. In addition, the market leaders in the automotive industry may start, or have already started, pursuing large scale deployment of autonomous vehicle technology on their own. These companies may have more operational and financial resources than us. We cannot guarantee that we will be able to effectively compete with them. We may also face competition from Tier 1 suppliers and other technology and automotive supply companies if they decide to expand vertically and develop their own autonomous semi-trucks, some of whom have significantly greater resources than we do. We do not know how close these competitors are to commercializing autonomous driving systems.

Furthermore, although we believe that we have the first-mover advantage in the competitive autonomous freight segment, many established and new market participants have entered or have announced plans to enter the autonomous vehicle market. Most of these participants have significantly greater financial, manufacturing, marketing, and other resources than we do and may be able to devote greater resources to the design, development, manufacturing, distribution, promotion, sale, and support of their products. If existing competitors or new entrants are able to commercialize earlier than expected, our competitive advantage could be adversely affected.

Risks Related to Our Dependence on Third Parties

We rely on our business partners and other industry participants for our AFN. Business collaboration with partners is subject to risks, and these relationships may not lead to significant revenue. Any adverse change in our cooperation with them could harm our business.

Strategic business relationships are and will continue to be an important factor in the growth and success of our business. We have alliances and partnerships with other companies in the trucking and automotive industry to help us in our efforts to continue to enhance our technology, commercialize our solutions, and drive market acceptance. We have established partnerships with leading semi-truck manufacturers, such as Navistar, to co-develop and validate critical components required for L4 autonomous semi-trucks. We will also need to identify and negotiate additional relationships with other third parties, such as those who can provide service centers, maintenance, refueling, roadside service, towing, sensor support, and financing services. We may not be able to successfully identify and negotiate definitive agreements with these third parties to provide the services we would require on terms that are attractive or at all, which would cause us to incur increased costs to develop and provide these capabilities.

Collaboration with these third parties is subject to risks, some of which are outside our control. For example, certain of our agreements with our partners grant our partner or us the right to terminate such agreements for cause or without cause, including in some cases by paying a termination for convenience fee. If any of our partnerships with semi-truck manufacturers, such as our agreement with Navistar, are terminated, it may delay or prevent our efforts to produce purpose-built L4 autonomous semi-trucks at scale. In addition, such agreements have in the past and may in the future contain certain exclusivity provisions which, if triggered, could preclude us from working with other businesses with superior technology or with whom we may prefer to partner with for other reasons. We could experience delays to the extent our partners do not meet agreed upon timelines or experience capacity constraints. We could also experience disagreement in budget or funding for the joint development project. There is also a risk of other potential disputes with partners in the future, including with respect to intellectual property rights. Our ability to successfully commercialize could also be adversely affected by perceptions about the quality of our or our partners' trucks.

If our existing partner agreements were to be terminated, we may be unable to enter into new agreements on terms and conditions acceptable to us. The expense and time required to complete any transition, and to assure that vehicles manufactured at facilities of new third-party partners comply with our quality standards and regulatory requirements, may be greater than anticipated. Any of the foregoing could adversely affect our business, results of operations, and financial condition.

We rely on third-party suppliers and because some of the raw materials and key components in our products come from limited or sole sources of supply, we are susceptible to supply shortages, long lead times for components, and supply changes, any of which could disrupt our supply chain and could delay deliveries of our products to users.

All of the components that are used to outfit semi-trucks with our autonomous technology and that will be used to manufacture our purpose-built L4 autonomous semi-trucks are sourced from third-party suppliers. To date, the semi-trucks we have used have had our autonomous technology added to an existing semi-truck design and we are working to have fully-integrated trucks available for users by 2024. We do not have any experience in managing a large supply chain to manufacture and deliver products at scale. In addition, some of the key components used to manufacture our L4 autonomous semi-trucks come from limited or sole sources of supply. For example, we depend on actuation suppliers to develop and design redundant actuation for steering, braking, and engine transmission. We are also dependent on our suppliers' production timeline for supplying automotive-grade LiDAR at scale. We are therefore subject to the risk of shortages and long lead times in the supply of these components and the risk that our suppliers discontinue or modify components used in our products. In addition, our agreements with our third party suppliers are non-exclusive. Our suppliers may dedicate more resources to other companies, including our competitors. We may in the future experience component shortages and price fluctuations of certain key components and materials, and the predictability of the availability and pricing of these components may be limited. Component shortages or pricing fluctuations could be material in the future. In the event of a component shortage, supply interruption or material pricing change from suppliers of these components, we may not be able to develop alternate sources in a timely manner or at all in the case of sole or limited sources. Developing alternate sources of supply for these components may be time-consuming, difficult, and costly and we may not be able to source these components on terms that are acceptable to us, or at all, which may undermine our ability to meet our requirements or to fill user orders in a timely manner. Any interruption or delay in the supply of any of these parts or components, or the inability to obtain these parts or components from alternate sources at acceptable prices and within a reasonable amount of time, would adversely affect our ability to meet scheduled product deliveries to users. This could adversely affect our relationships with our users and could cause delays in our ability to expand our operations, including with our partners manufacturing purpose-built L4 autonomous semi-trucks. Even where we are able to pass increased component costs along to our users, there may be a lapse of time before we are able to do so such that we must absorb the increased cost initially. If we are unable to buy these components in quantities sufficient to meet our requirements on a timely basis, we will not be able to have sufficient ability to meet user demand, which may result in users using competitive services instead of ours.

Risks Related to Our Financial Position and Need for Additional Capital

We are an early stage company with a history of losses, and expect to incur significant expenses and continuing losses for the foreseeable future.

We have not recognized a material amount of revenue to date and had accumulated deficit of \$754.6 million as of March 31, 2021. We have developed and launched our AFN but there can be no assurance that it will be commercially successful at scale. Our potential profitability is dependent upon a number of factors, many of which are beyond our control.

We expect the rate at which we will incur losses to be significantly higher in future periods as we:

- design, develop, and manufacture purpose-built L4 autonomous semi-trucks with our OEM partners;
- seek to achieve and commercialize full L4 autonomy for our purpose-built L4 autonomous semi-trucks;
- seek to expand our AFN, on a nationwide basis in the United States and internationally;
- expand our design, development, maintenance, and repair capabilities;
- respond to competition in the autonomous driving market and from traditional freight transportation providers;
- respond to evolving regulatory developments in the nascent autonomous vehicle market;
- increase our sales and marketing activities; and
- increase our general and administrative functions to support our growing operations and for being a public reporting company.

Because we will incur the costs and expenses from these efforts before we receive any incremental revenue, our losses in future periods will be significant. In addition, we may find that these efforts are more expensive than we currently anticipate or that these efforts may not result in revenue, which would further increase our losses. In particular, we expect to incur substantial and potentially increasing research and development ("R&D") costs. Because we account for R&D as an operating expense, these expenditures will adversely affect our results from operations in the future. Further, our R&D program may not produce successful results, and our new products may not achieve market acceptance, create additional revenue, or become profitable.

We expect to need to raise additional funds and these funds may not be available to us on attractive terms when we need them, or at all. If we cannot raise additional funds on attractive terms when we need them, our operations and prospects could be negatively affected.

The commercialization of L4 autonomous semi-trucks outfitted with our technology, purpose-built L4 autonomous semi-trucks manufactured by our OEM partners and our AFN and related technology is capital-intensive. To date, we have financed our operations primarily through the issuance of equity securities and convertible debt securities. We will need to raise additional capital to continue to fund our research and development and commercialization activities and to improve our liquidity position. Our ability to obtain the necessary financing to carry out our business plan is subject to a number of factors, including general market volatility, investor acceptance of our business plan, regulatory requirements, including foreign investment reviews, and the successful development of our autonomous technology. These factors may make the timing, amount, terms, and conditions of such financing unattractive or unavailable to us.

We may raise these additional funds through the issuance of equity, equity-related, or debt securities. To the extent that we raise additional financing by issuing equity securities or convertible debt securities, our stockholders may experience substantial dilution, and to the extent we engage in debt financing, we may become subject to restrictive covenants that could limit our flexibility in conducting future business activities. Financial institutions may request credit enhancement such as third-party guarantee and pledge of equity interest in order to extend loans to us. We cannot be certain that additional funds will be available to us on attractive terms when required, or at all. If we cannot raise additional funds when we need them, our financial condition, results of operations, business, and prospects could be materially adversely affected.

Future sales and issuances of our share capital or rights to purchase our share capital could result in substantial dilution to our existing stockholders. We may sell Class A common stock, convertible securities, and other equity securities in one or more transactions at prices and in a manner as we may determine from time to time. If we sell any such securities in subsequent transactions, investors may be materially diluted. New investors in such subsequent transactions could gain rights, preferences, and privileges senior to those of holders of our Class A common stock.

We may be subject to risks associated with potential future acquisitions.

Although we have no current acquisition plans, if appropriate opportunities arise, we may acquire additional assets, products, technology or businesses that are complementary to our existing business. Any future acquisitions and the subsequent integration of new assets and businesses would require significant attention from our management and could result in a diversion of resources from our existing business, which in turn could have an adverse effect on our operations, and consequently our results of operations and financial condition. Acquired assets or businesses may not generate the financial results we expect. Acquisitions could result in the use of substantial amounts of cash, potentially dilutive issuances of equity securities, significant goodwill impairment charges, amortization expenses for other intangible assets and exposure to potential unknown liabilities of the acquired business. Moreover, the costs of identifying and consummating acquisitions may be significant.

Risks Related to Our Business Operations

We depend on the experience and expertise of our senior management team, technical engineers, and certain key employees, and the loss of any executive officer or key employee, or the inability to identify and recruit executive officers, technical engineers, and key employees in a timely manner, could harm our business, operating results, and financial condition.

Our success depends largely upon the continued services of our key executive officers and certain key employees. We rely on our executive officers and key employees in the areas of business strategy, research and development, marketing, sales, services, and general and administrative functions. From time to time, there may be changes in our executive management team or key employees resulting from the hiring or departure of executives or key employees, which could disrupt our business. We do not maintain key-man insurance for any member of our senior management team or any other employee. We do not have employment agreements with our executive officers or other key personnel that require them to continue to work for us for any specified period and, therefore, they could terminate their employment with us at any time. The loss of one or more of our executive officers or key employees could have a serious adverse effect on our business.

To execute our growth plan, we must attract and retain highly qualified personnel. Competition for these personnel is intense in the technology industry, especially for engineers with high levels of experience in artificial intelligence and designing and developing autonomous driving related algorithms. Furthermore, it can be difficult to recruit personnel from other geographies to relocate to our Southern California location. We may also need to recruit highly qualified technical engineers internationally and therefore subject us to the compliance of relevant immigration laws and regulations. We have, from time to time, experienced, and we expect to continue to experience, difficulty in hiring and retaining employees with appropriate qualifications. Many of the companies with which we compete for experienced personnel have greater resources than we have and can offer more attractive compensation packages for new employees. If we hire employees from competitors or other companies, their former employers may attempt to assert that these employees or our company have breached their legal obligations, resulting in a diversion of our time and resources and potentially in litigation. In addition, job candidates and existing employees often consider the value of the share incentive awards they receive in connection with their employment. If the perceived value of our share awards declines, it may adversely affect our ability to recruit and retain highly skilled employees. If we fail to attract new personnel on a timely basis or fail to retain and motivate our current personnel, we may not be able to commercialize and then expand our AFN in a timely manner and our business and future growth prospects could be adversely affected.

We have experienced rapid growth in recent periods and expect to continue to invest in our growth for the foreseeable future. If we fail to manage our growth effectively, we may be unable to execute our business plan, maintain high levels of service, or adequately address competitive challenges.

We have recently experienced a period of rapid growth in our headcount and operations. Our number of full-time employees has increased significantly over the last few years, from approximately 130 employees as of January 1, 2018 to approximately 980 employees as of March 31, 2021. The recent rapid growth in our business has placed, and is expected to continue to place, a significant strain on our managerial, administrative, operational, and financial resources, as well as our infrastructure. We plan to continue to expand our operations in the future. Our success will depend in part on our ability to manage this growth effectively and execute our business plan. To manage the expected growth of our operations and personnel, we will need to continue to improve our operational, financial, and management controls and our reporting systems and procedures.

We rely heavily on information technology (“IT”) systems to manage critical business functions. To manage our growth effectively, we must continue to improve and expand our infrastructure, including our IT, financial, and administrative systems and controls. In particular, we may need to significantly expand our IT infrastructure as the amount of data we store and transmit increases over time, which will require that we both utilize existing IT products and adopt new technology. If we are not able to scale our IT infrastructure in a cost-effective and secure manner, our ability to offer competitive solutions will be harmed and our business, financial condition, and operating results may suffer.

We must also continue to manage our employees, operations, finances, research and development, and capital investments efficiently. Our productivity and the quality of our solutions may be adversely affected if we do not integrate and train our new employees quickly and effectively or if we fail to appropriately coordinate across our executive, research and development, technology, service development, analytics, finance, human resources, marketing, sales, operations, and customer support teams. As we continue to grow, we will incur additional expenses, and our growth may continue to place a strain on our resources, infrastructure, and ability to maintain the quality of our solutions. If we do not adapt to meet these evolving challenges, or if the current and future members of our management team do not effectively manage our growth, the quality of our solutions may suffer and our corporate culture may be harmed. Failure to manage our future growth effectively could cause our business to suffer, which, in turn, could have an adverse impact on our business, financial condition, and operating results.

Our management team has limited experience managing a public company.

Most of the members of our management team have limited, if any, experience managing a publicly-traded company, interacting with public company investors, and complying with the increasingly complex laws pertaining to public companies. Our management team may not successfully or efficiently manage our public company reporting obligations under the federal securities laws and the continuous scrutiny of securities analysts and investors. These new obligations and constituents will require significant attention from our senior management and could divert their attention away from the day-to-day management of our business, which could adversely affect our business, financial condition, and operating results.

We may be subject to product liability or warranty claims that could result in significant direct or indirect costs, including reputational harm, increased insurance premiums or the need to self-insure, which could adversely affect our business and operating results.

Our technology is used for autonomous driving, which presents the risk of significant injury, including fatalities. We may be subject to claims if one of our or a user's semi-truck is involved in an accident and persons are injured or purport to be injured or if property is damaged. Any insurance that we carry may not be sufficient or it may not apply to all situations. The risk of serious injury, death, and substantial damage to property is much higher with a substantially heavier fast-moving autonomous semi-truck, as compared to a collision with a slower moving autonomous passenger car in an urban environment. In accidents involving semi-trucks, most of the resulting fatalities are victims outside of the semi-truck. If we experience such an event or multiple events, our insurance premiums could increase significantly or insurance may not be available to us at all. Further, if insurance is not available on commercially reasonable terms, or at all, we might need to self-insure. In addition, lawmakers or governmental agencies could pass laws or adopt regulations that limit the use of autonomous trucking technology or increase liability associated with its use. Any of these events could adversely affect our brand, relationships with users, operating results, or financial condition.

Our L4 autonomous semi-trucks are expensive and, as a result, we, along with our users, may need to obtain financing to purchase or lease semi-trucks.

Because acquiring semi-trucks and then outfitting them with our autonomous technology is expensive, we will need to obtain committed financing capacity for our self-operated fleet to support our growth, and we may in the future be required to find financing solutions to help our users or us purchase or finance our purpose-built L4 autonomous semi-trucks manufactured in partnership with OEMs. Our ability to attract financing depends on many factors that are outside of our control, including our or our users' perceived creditworthiness and the condition of credit markets generally. If we are unable to procure financing partners willing to finance such deployments, our ability to grow our business may be harmed.

We will be required to make significant capital expenditures to maintain our fleet of L4 autonomous semi-trucks.

We expect our capital expenditure requirements will primarily relate to maintaining and upgrading our fleet of L4 autonomous semi-trucks to serve our users and remain competitive. The aging of our fleet will require us to make regular capital expenditures to maintain our level of service. In addition, changing competitive conditions or the emergence of any significant advances in autonomous driving technology could require us to invest significant capital in additional equipment or capacity in order to remain competitive. If we are unable to fund any such investment or otherwise fail to invest in new vehicles, our business, financial condition or results of operations could be materially and adversely affected.

We and our manufacturing partners may experience significant delays in the manufacture, launch, and financing of our purpose-built L4 autonomous semi-trucks, which could harm our business and prospects.

Any delay in the manufacture, launch, and financing of our purpose-built L4 autonomous semi-trucks could materially damage our brand, business, prospects, financial condition, and operating results. Vehicle manufacturers often experience delays in the manufacture and commercial release of new products. To the extent we delay the launch of our purpose-built L4 autonomous semi-trucks, our growth prospects could be adversely affected. Furthermore, we rely on third party suppliers for the provision and development of many of the key components and materials that will be used in our existing L4 autonomous semi-trucks and those that will be purpose-built. To the extent our suppliers experience any delays in providing us with or developing necessary components, we could experience delays in delivering on our timelines.

If our L4 autonomous semi-trucks fail to perform as expected, our ability to develop our AFN and market, sell or lease our purpose-built L4 autonomous semi-trucks could be harmed. Future product recalls involving our purpose-built L4 autonomous semi-trucks or hardware deployed on our L4 autonomous semi-trucks could materially and adversely affect our business, prospects, operating results, and financial condition.

Our L4 autonomous semi-trucks and, once production begins, our purpose-built L4 autonomous semi-trucks may contain defects in design and manufacture that may cause them not to perform as expected or may require repair. For example, our L4 autonomous semi-trucks currently use, and our purpose-built L4 autonomous semi-trucks are expected to use, a substantial amount of software to operate which will require modification and updates over the life of the vehicle. Software products are inherently complex and often contain defects and errors when first introduced. There can be no assurance that we will be able to detect and fix any defects in the semi-trucks' hardware or software prior to commencing user sales or during the life of the trucks. Our purpose-built L4 autonomous semi-trucks may not perform consistent with users' expectations or consistent with other trucks that may become available. Any product defects or any other failure of our purpose-built L4 autonomous semi-trucks to perform as expected could harm our reputation, ability to develop our AFN and result in adverse publicity, lost revenue, delivery delays, product recalls, product liability claims, and significant warranty and other expenses, and could have a material adverse impact on our business, financial condition, operating results, and prospects.

Once production begins, we may experience recalls involving our purpose-built L4 autonomous semi-trucks, which could adversely affect our brand in our target markets and could adversely affect our business, prospects, and results of operations. Any product recall in the future may result in adverse publicity, damage our brand, and materially adversely affect our business, prospects, operating results, and financial condition. In the future, we may voluntarily or involuntarily, initiate a recall if any of our purpose-built L4 autonomous semi-truck components (including LiDAR sensors, cameras, and other components) prove to be defective or noncompliant with applicable motor vehicle safety standards. Such recalls typically involve significant expense and diversion of management attention and other resources, which could adversely affect our brand image, as well as our business, prospects, financial condition, and results of operations.

If we are unable to establish and maintain confidence in our long-term business prospects among users, securities and industry analysts, and within our industries, or are subject to negative publicity, then our financial condition, operating results, business prospects, and access to capital may suffer materially.

Users may be less likely to purchase or use our L4 autonomous semi-trucks if they are not convinced that our business will succeed or that our service and support and other operations will continue in the long term. Similarly, suppliers and other third parties will be less likely to invest time and resources in developing business relationships with us if they are not convinced that our business will succeed. Accordingly, in order to build and maintain our business, we must maintain confidence among users, suppliers, securities and industry analysts, and other parties in our long-term financial viability and business prospects. Maintaining such confidence may be particularly complicated by certain factors including those that are largely outside of our control, such as our limited operating history at scale, user unfamiliarity with our solutions, any delays in scaling manufacturing, delivery, and service operations to meet demand, competition and uncertainty regarding the future of autonomous vehicles, and our performance compared with market expectations.

We identified a material weakness in our internal control over financial reporting and we may identify additional material weaknesses in the future that may cause us to fail to meet our reporting obligations or result in material misstatements of our financial statements. If we fail to remediate any material weaknesses or if we otherwise fail to establish and maintain effective control over financial reporting, our ability to accurately and timely report our financial results could be adversely affected.

In the course of preparing our financial statements for the year ended December 31, 2020, we identified control deficiencies in the design and implementation of our internal control over financial reporting that constituted a material weakness. The material weakness had not been remediated as of March 31, 2021. 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 our financial statements will not be prevented or detected on a timely basis.

The material weakness identified in our internal control over financial reporting related to a lack of appropriately designed and implemented controls over the review and approval of manual journal entries (including consolidation entries) and the related supporting journal entry calculations. We have taken and plan to take the following actions: (i) hiring of additional finance and accounting personnel over time to augment our accounting staff and to provide more resources for complex accounting matters and financial reporting; and (ii) further developing and implementing formal policies, processes, and documentation procedures relating to our financial reporting. To date, we have hired additional financial and accounting personnel with technical accounting experience and implemented new technology solutions to assist with our financial reporting process. We are still implementing formal policies, processes, and documentation procedures related to the review and approval of manual journal entries. We will not be able to fully remediate this material weakness until these steps have been completed and have been operating effectively for a sufficient period of time. We currently expect that the material weakness will be remediated by December 31, 2021, and costs associated with the remediation plan are not expected to be material. However, we cannot assure you that these measures will be sufficient to remediate the material weakness that has been identified or prevent future material weaknesses or significant deficiencies from occurring.

Our independent registered public accounting firm is not required to formally attest to the effectiveness of our internal control over financial reporting until after we are no longer an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. At such time, our independent registered public accounting firm may issue a report that is adverse in the event it is not satisfied with the level at which our internal control over financial reporting is documented, designed, or operating. Any failure to implement and maintain effective internal control over financial reporting also could adversely affect the results of the period including management evaluations and annual independent registered public accounting firm attestation reports regarding the effectiveness of our internal control over financial reporting that we will eventually be required to include in our periodic reports that are filed with the SEC. Ineffective disclosure controls and procedures and internal control over financial reporting could also cause investors to lose confidence in our reported financial and other information, which would likely have a negative effect on the trading price of our Class A common stock. In addition, if we are unable to continue to meet these requirements, we may not be able to remain listed on the Nasdaq Global Select Market.

Pandemics and epidemics, including the ongoing COVID-19 pandemic, natural disasters, terrorist activities, political unrest, and other outbreaks could have a material adverse impact on our business, results of operations, financial condition, cash flows or liquidity, and the extent to which we will be impacted will depend on future developments, which cannot be predicted.

The COVID-19 pandemic has caused us to modify our business practices (such as employee travel plan and cancellation of physical participation in meetings, events, and conference), and we may take further actions as required by governmental authorities or that we determine are in the best interests of our employees, users, and business partners. In addition, the business and operations of our manufacturers, suppliers, and other business partners have also been adversely impacted by the COVID-19 pandemic and may be further adversely impacted in the future, which could result in delays in our ability to commercialize our autonomous trucking solutions.

As a result of social distancing, travel bans, and quarantine measures, access to our facilities, users, management, support staff, and professional advisors has been limited, which in turn has impacted, and will continue to impact, our operations, and financial condition.

The extent to which COVID-19 impacts our, and those of our partners and potential users, business, results of operations, and financial condition will depend on future developments, which are uncertain and cannot be predicted, including, but not limited to, the occurrence of a “second wave,” duration and spread of the outbreak, its severity, the actions to contain the virus or treat its impact, and how quickly and to what extent normal economic and operating conditions can resume. Even if the COVID-19 outbreak subsides, we may continue to experience materially adverse impacts to our business as a result of its global economic impact, including any recession that has occurred or may occur in the future.

We are also vulnerable to natural disasters and other calamities. Although we have servers that are hosted in an offsite location, our backup system does not capture data on a real-time basis and we may be unable to recover certain data in the event of a server failure. We cannot assure you that any backup systems will be adequate to protect us from the effects of fire, floods, typhoons, earthquakes, power loss, telecommunications failures, break-ins, war, riots, terrorist attacks or similar events. Any of the foregoing events may give rise to interruptions, breakdowns, system failures, technology platform failures or internet failures, which could cause the loss or corruption of data or malfunctions of software or hardware as well as adversely affect our ability to provide services.

Risks Related to Our Intellectual Property, Information Technology and Data Privacy

We may become subject to litigation brought by third parties claiming infringement, misappropriation or other violation by us of their intellectual property rights.

The industry in which our business operates is characterized by a large number of patents, some of which may be of questionable scope, validity or enforceability, and some of which may appear to overlap with other issued patents. As a result, there is a significant

amount of uncertainty in the industry regarding patent protection and infringement. In recent years, there has been significant litigation globally involving patents and other intellectual property rights. Third parties have asserted, and may in the future assert, that we have infringed, misappropriated or otherwise violated their intellectual property rights. We have received letters from third parties that identify patents owned by third parties and invite us to obtain licenses to such patents. We work with patent counsel to evaluate the merits of their claims and sometimes we may decide to engage in licensing discussions. We may not be able to obtain a commercially reasonable license or a license that we obtain (if any) may not entirely resolve the potential risks of intellectual property infringement. As we face increasing competition and as a public company, the possibility of intellectual property rights claims against us grows. Such claims and litigation may involve one or more of our competitors focused on using their patents and other intellectual property to obtain competitive advantage, or patent holding companies or other adverse intellectual property rights holders who have no relevant product revenue, and therefore our own pending patents and other intellectual property rights may provide little or no deterrence to these rights holders in bringing intellectual property rights claims against us. There may be intellectual property rights held by others, including issued or pending patents and trademarks, that cover significant aspects of our technologies or business methods, and we cannot assure that we are not infringing or violating, and have not infringed or violated, any third-party intellectual property rights or that we will not be held to have done so or be accused of doing so in the future. In addition, because patent applications can take many years until the patents issue, there may be applications now pending of which we are unaware, which may later result in issued patents that our products may infringe. We expect that in the future we may receive notices that claim we or our collaborators have misappropriated or misused other parties' intellectual property rights, particularly as the number of competitors in our market grows.

To defend ourselves against any intellectual property claims brought by third parties, whether with or without merits, can be time-consuming and could result in substantial costs and a diversion of our resources. These claims and any resulting lawsuits, if resolved adversely to us, could subject us to significant liability for damages, impose temporary or permanent injunctions against our products, technologies or business operations, or invalidate or render unenforceable our intellectual property.

If our technology is determined to infringe a valid and enforceable patent, or if we wish to avoid potential intellectual property litigation on any alleged infringement, misappropriation or other violation of third party intellectual property rights, we may be required to do one or more of the following: (i) cease development, sales, or use of our products that incorporate or use the asserted intellectual property right; (ii) obtain a license from the owner of the asserted intellectual property right, which may be unavailable on commercially reasonable terms, or at all, or which may be non-exclusive, thereby giving our competitors and other third parties access to the same technologies licensed to us; (iii) pay substantial royalties or other damages; or (iv) redesign our technology or one or more aspects or systems of our L4 autonomous semi-trucks to avoid any infringement or allegations thereof. The aforementioned options sometimes may not be commercially feasible. Additionally, in our ordinary course of business, we agree to indemnify our users, partners, and other commercial counterparties for any infringement arising out of their use of our intellectual property, along with providing standard indemnification provisions, so we may face liability to our users, business partners or third parties for indemnification or other remedies in the event that they are sued for infringement.

We may also in the future license third party technology or other intellectual property, and we may face claims that our use of such in-licensed technology or other intellectual property infringes, misappropriates or otherwise violates the intellectual property rights of others. In such cases, we will seek indemnification from our licensors. However, our rights to indemnification may be unavailable or insufficient to cover our costs and losses.

We also may not be successful in any attempt to redesign our technology to avoid any alleged infringement. A successful claim of infringement against us, or our failure or inability to develop and implement non-infringing technology, or license the infringed technology on acceptable terms and on a timely basis, could materially adversely affect our business and results of operations. Furthermore, such lawsuits, regardless of their success, would likely be time-consuming and expensive to resolve and would divert management's time and attention from our business, which could seriously harm our business. Also, such lawsuits, regardless of their success, could seriously harm our reputation with users and in the industry at large.

Our business may be adversely affected if we are unable to adequately establish, maintain, protect, and enforce our intellectual property and proprietary rights or prevent third parties from making unauthorized use of our technology and other intellectual property rights.

Our intellectual property is an essential asset of our business. Failure to adequately protect our intellectual property rights could result in our competitors offering similar products, potentially resulting in the loss of our competitive advantage, and a decrease in our revenue which would adversely affect our business prospects, financial condition, and operating results. Our success depends, at least in part, on our ability to protect our core technology and intellectual property. We rely on a combination of intellectual property rights, such as patents, trademarks, copyrights, and trade secrets (including know-how), in addition to employee and third-party nondisclosure agreements, intellectual property licenses, and other contractual rights, to establish, maintain, protect, and enforce our rights in our technology, proprietary information, and processes. Intellectual property laws and our procedures and restrictions provide only limited protection and any of our intellectual property rights may be challenged, invalidated, circumvented, infringed or misappropriated. If we fail to protect our intellectual property rights adequately, we may lose an important advantage in the markets in which we compete. While we take measures to protect our intellectual property, such efforts may be insufficient or ineffective, and any of our intellectual property rights may be challenged, which could result in them being narrowed in scope or declared invalid or unenforceable. Other parties may also independently develop technologies that are substantially similar or superior to ours. We also may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. However, the measures we take to protect our intellectual property from unauthorized use by others may not be effective and there can be no assurance that our intellectual property rights will be sufficient to protect against others offering products, services, or technologies that are substantially similar or superior to ours and that compete with our business.

Litigation may be necessary in the future to enforce our intellectual property rights and to protect our trade secrets. Our efforts to enforce our intellectual property rights may be met with defenses, counterclaims, and countersuits attacking the validity and enforceability of our intellectual property. Any litigation initiated by us concerning the violation by third parties of our intellectual property rights is likely to be expensive and time-consuming and could lead to the invalidation of, or render unenforceable, our intellectual property, or could otherwise have negative consequences for us. Furthermore, it could result in a court or governmental agency invalidating or rendering unenforceable our patents or other intellectual property rights upon which the suit is based. We will not be able to protect our intellectual property if we are unable to enforce our rights or if we do not detect unauthorized use of our intellectual property. Our inability to protect our proprietary technology against unauthorized copying or use, as well as any costly litigation or diversion of our management's attention and resources, could delay the introduction and implementation of new technologies, result in our substituting inferior or more costly technologies into our products or injure our reputation. Moreover, policing unauthorized use of our technologies, trade secrets, and intellectual property may be difficult, expensive, and time-consuming, particularly in foreign countries where the laws may not be as protective of intellectual property rights as those in the United States and where mechanisms for enforcement of intellectual property rights may be weak. If we fail to meaningfully establish, maintain, protect, and enforce our intellectual property and proprietary rights, our business, operating results, and financial condition could be adversely affected.

Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our products.

There are a number of recent changes to the patent laws that may have a significant impact on our ability to protect our technology and enforce our intellectual property rights. For example, the Leahy-Smith America Invents Act (the "AIA") enacted in September 2011, resulted in significant changes in patent legislation. An important change introduced by the AIA is that, as of March 16, 2013, the United States transitioned from a "first-to-invent" to a "first-to-file" system for deciding which party should be granted a patent when two or more patent applications are filed by different parties claiming the same invention. Under a "first-to-file" system, assuming the other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to a patent on the invention regardless of whether another inventor had made the invention earlier. A third party that files a patent application in the USPTO after that date but before us could therefore be awarded a patent covering an invention of ours even if we made the invention before it was made by the third party. Circumstances could prevent us from promptly filing patent applications on our inventions.

The AIA also includes a number of significant changes that affect the way patent applications will be prosecuted and also may affect patent litigation. These include allowing third party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, *inter partes* review, and derivation proceedings. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action. The AIA and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Further, the standards applied by the USPTO and foreign patent offices in granting patents are not always applied uniformly or predictably. For example, there is no uniform worldwide policy regarding patentable subject matter or the scope of claims allowable for business methods. As such, we do not know the degree of future protection that we will have on our technologies, products, and services. While we will endeavor to try to protect our technologies, products, and services with intellectual property rights such as patents, as appropriate, the process of obtaining patents is time-consuming, expensive, and sometimes unpredictable.

Additionally, the U.S. Supreme Court has ruled on several patent cases in recent years, such as *Impression Products, Inc. v. Lexmark International, Inc.*, *Association for Molecular Pathology v. Myriad Genetics, Inc.*, *Mayo Collaborative Services v. Prometheus Laboratories, Inc.* and *Alice Corporation Pty. Ltd. v. CLS Bank International*, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that could weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future.

Our patent applications may not issue as patents, which may have a material adverse effect on our ability to prevent others from commercially exploiting products similar to ours.

We cannot be certain that we are the first inventor of the subject matter to which we have filed a particular patent application, or if we are the first party to file such a patent application. If another party has filed a patent application to the same subject matter as we have, we may not be entitled to the protection sought by the patent application. Further, the scope of protection of issued patent claims is often difficult to determine. As a result, we cannot be certain that the patent applications that we file will issue, or that our issued patents will be broad enough to protect our proprietary rights or otherwise afford protection against competitors with similar technology. In addition, the issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability. Our competitors may challenge or seek to invalidate our issued patents, or design around our issued patents, which may adversely affect our business, prospects, financial condition or operating results. Also, the costs associated with enforcing patents, confidentiality and invention agreements, or other intellectual property rights may make aggressive enforcement impracticable.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting, maintaining, defending, and enforcing patents and other intellectual property rights on our product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection or other intellectual property rights to develop their own products and may export otherwise infringing, misappropriating, or violating products to territories where we have patent or other intellectual property protection, but enforcement rights are not as strong as those in the United States. These products may compete with our product candidates, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of some countries do not favor the enforcement of patents and other intellectual property rights, which could make it difficult for us to stop the infringement, misappropriation, or other violation of our intellectual property rights generally. Proceedings to enforce our intellectual property rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful.

Many countries, including European Union countries, India, Japan, and China, have compulsory licensing laws under which a patent owner may be compelled under specified circumstances to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In those countries, we may have limited remedies if patents are infringed or if we are compelled to grant a license to a third party, which could materially diminish the value of those patents. This could limit our potential revenue opportunities. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license, which could adversely affect our business, financial condition, results of operations, and prospects.

In addition to patented technology, we rely on our unpatented proprietary technology, trade secrets, processes, and know-how.

We rely on proprietary information (such as trade secrets, know-how, and confidential information) to protect intellectual property that may not be patentable, or that we believe is best protected by means that do not require public disclosure. We generally seek to protect this proprietary information by entering into confidentiality agreements, or consulting, services, or employment agreements that contain non-disclosure and non-use provisions with our employees, consultants, contractors, scientific advisors, and third parties. However, we cannot guarantee that we have entered into such agreements with each party that has or may have had access to our trade secrets or proprietary information and, even if entered into, these agreements may be breached or may otherwise fail to prevent disclosure, third-party infringement or misappropriation of our proprietary information, may be limited as to their term and may not provide an adequate remedy in the event of unauthorized disclosure or use of proprietary information. We have limited control over the protection of trade secrets used by our third-party manufacturers and suppliers and could lose future trade secret protection if any unauthorized disclosure of such information occurs. In addition, our proprietary information may otherwise become known or be independently developed by our competitors or other third parties. To the extent that our employees, consultants, contractors, and other third parties use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain protection for our proprietary information could adversely affect our competitive business position. Furthermore, laws regarding trade secret rights in certain markets where we operate may afford little or no protection to our trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor or other third party, we would have no right to prevent them from using that trade secret to compete with us. If any of our trade secrets were to be disclosed (whether lawfully or otherwise) to or independently developed by a competitor or other third party, it could have a material adverse effect on our business, operating results, and financial condition.

We also rely on physical and electronic security measures to protect our proprietary information, but we cannot guarantee that these security measures provide adequate protection for such proprietary information or will never be breached. There is a risk that third parties may obtain unauthorized access to and improperly utilize or disclose our proprietary information, which would harm our competitive advantages. We may not be able to detect or prevent the unauthorized access to or use of our information by third parties, and we may not be able to take appropriate and timely steps to mitigate the damages (or the damages may not be capable of being mitigated or remedied).

We utilize open source software, which may pose particular risks to our proprietary software, technologies, products, and services in a manner that could harm our business.

We use open source software in our products and services and anticipate using open source software in the future. Some open source software licenses require those who distribute open source software as part of their own software products to publicly disclose all or part of the source code to such software product or to make available any modifications or derivative works of the open source code on unfavorable terms or at no cost. This could result in our proprietary software being made available in the source code form and/or licensed to others under open source licenses, which could allow our competitors or other third parties to use our proprietary software freely without spending the development effort, and which could lead to a loss of the competitive advantage of our proprietary technologies and, as a result, sales of our products and services. The terms of many open source licenses to which we are subject have not been interpreted by U.S. or foreign courts, and there is a risk that open source software licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to provide or distribute our products or services or retain our ownership of our proprietary intellectual property. Additionally, we could face claims from third parties claiming ownership of, or demanding release of, the open source software or derivative works that we developed using such software, which could include our proprietary source code, or otherwise seeking to enforce the terms of, or alleging breach of, the applicable open source license. These claims could result in litigation and could require us to make our proprietary software source code freely available, purchase a costly license, or cease offering the implicated products or services unless and until we can re-engineer them to avoid breach of the applicable open source software licenses or potential infringement. This re-engineering process could require us to expend significant additional research and development resources, and we cannot guarantee that we will be successful.

Additionally, the use of certain open source software can lead to greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties or controls on the origin of software. There is typically no support available for open source software, and we cannot ensure that the authors of such open source software will implement or push updates to address security risks or will not abandon further development and maintenance. Many of the risks associated with the use of open source software, such as the lack of warranties or assurances of title, non-infringement, or performance, cannot be eliminated, and could, if not properly addressed, negatively affect our business. We have processes to help alleviate these risks, including a review process for screening requests from our developers for the use of open source software, but we cannot be sure that all open source software is identified or submitted for approval prior to use in our products and services. Any of these risks could be difficult to eliminate or manage, and, if not addressed, could adversely affect our ownership of proprietary intellectual property, the security of our vehicles, or our business, results of operations, and financial condition.

If our software contains serious errors or defects, we may lose revenue and market acceptance and may incur costs to defend or settle claims with our licensees, franchisees or other parties.

Software inevitably contains errors, defects, security vulnerabilities or software bugs, some of which are difficult to detect and correct, particularly when first introduced or when new versions or enhancements are released. Despite internal testing, our software may contain serious errors or defects, security vulnerabilities or software bugs that we may be unable to successfully detect or correct in a timely manner or at all, which could result in security incidents, data breaches, vehicle safety issues, product liability claims, lost revenue, significant expenditures of capital, a delay or loss in market acceptance, and damage to our reputation and brand, any of which could adversely affect our business, results of operations, and financial condition.

We are exposed to, and may be adversely affected by, interruptions to our information technology systems and networks and sophisticated cyber-attacks.

We collect and maintain information in digital form that is necessary to conduct our business, and we rely on information technology systems and networks (“IT systems”) in connection with many of our business activities. Some of these networks and systems are managed by third-party service providers and are not under our direct control, and as a result, a number of third-party service providers may or could have access to our confidential information. Our operations routinely involve receiving, storing, processing, and transmitting confidential or sensitive information pertaining to our business, users, dealers, suppliers, employees, and other sensitive matters, including intellectual property, proprietary business information, and personal information. It is critical that we do so in a secure manner to maintain the confidentiality and integrity of such confidential or sensitive information. We have established physical, electronic, and organizational measures designed to safeguard and secure our systems to prevent a data compromise, and rely on commercially available systems, software, tools, and monitoring to provide security for our IT systems and the processing, transmission, and storage of digital information. Despite the implementation of preventative and detective security controls, such IT systems are vulnerable to damage or interruption from a variety of sources, including telecommunications or network failures or interruptions, system malfunction, natural disasters, malicious human acts, terrorism, and war. Such IT systems, including our servers, are additionally vulnerable to physical or electronic break-ins, security breaches from inadvertent or intentional actions by our employees, third-party service providers, contractors, consultants, business partners, and/or other third parties, or from cyber-attacks by malicious third parties (including the deployment of harmful malware, ransomware, denial-of-service attacks, social engineering, and other means to affect service reliability and threaten the confidentiality, integrity, and availability of information).

We have experienced data breaches, cyber-attacks, attempts to breach our systems, and other similar incidents, none of which have been material. Any future cyber incidents could, however, materially disrupt operational systems, result in the loss of trade secrets or other proprietary or competitively sensitive information, compromise personally identifiable information regarding users or employees and jeopardize the security of our facilities. The risk of a security breach or disruption, particularly through cyber-attacks or cyber intrusion, including by computer hackers, foreign governments, and cyber terrorists, has generally increased as the number, intensity, and sophistication of attempted attacks and intrusions from around the world have increased. We can provide no assurance that our current IT Systems, or those of the third parties upon which we rely, are fully protected against cybersecurity threats. It is possible that we or our third-party service providers may experience cybersecurity and other breach incidents that remain undetected for an extended period. Even when a security breach is detected, the full extent of the breach may not be determined immediately. Because techniques used to obtain unauthorized access or to sabotage systems change frequently and generally are not recognized until they are launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures. Information technology security threats, including security breaches, computer malware, and other cyber-attacks are increasing in both frequency and sophistication and could cause us to incur financial liability, subject us to legal or regulatory sanctions or damage our reputation with users, dealers, suppliers, and other stakeholders. We continuously seek to maintain information security and controls, however our efforts to mitigate and address network security problems, bugs, viruses, worms, malicious software programs, and security vulnerabilities may not be successful and the impact of a material cybersecurity event could have a material adverse effect on our competitive position, reputation, results of operations, financial condition, and cash flows.

Unauthorized control or manipulation of systems in autonomous semi-trucks may cause them to operate improperly or not at all, or compromise their safety and data security, which could result in loss of confidence in us and our products, cancellation of contracts with certain of our OEM or Tier 1 partners and harm our business.

There have been reports of vehicles of certain OEMs being “hacked” to grant access to and operation of the vehicles to unauthorized persons. Our L4 autonomous semi-trucks contain complex IT systems and are designed with built-in data connectivity. We have designed, implemented, and tested security measures intended to prevent unauthorized access to our information technology networks and systems installed in our L4 autonomous semi-trucks. However, hackers may attempt to gain unauthorized access to modify, alter, and use such networks and systems to gain control of, or to change, our semi-trucks’ functionality, user interface and performance characteristics, or to gain access to data stored in or generated by our products. As techniques used to obtain unauthorized access to or sabotage systems change frequently and may not be known until launched against us or our third-party service providers, there can be no assurance that we will be able to anticipate, or implement adequate measures to protect against, these attacks. Any such security incidents could result in unexpected control of or changes to the vehicles’ functionality and safe operation and could result in legal claims or proceedings and negative publicity, which would negatively affect our brand and harm our business, prospects, financial condition, and operating results.

We collect, process, transmit, and store personal information in connection with the operation of our business and are subject to various data privacy and consumer protection laws. The costs to comply with, or our actual or perceived failure to comply with, changing U.S. and foreign laws related to data privacy, security, and protection, such as the California Consumer Privacy Act and the E.U. General Data Protection Regulation, or contractual obligations related to data privacy, security, and protection, could adversely affect our financial condition, operating results, and our reputation.

In operating our business and providing services and solutions to clients, we collect, use, store, transmit, and otherwise process employee, partner, and client data, including personal data, in and across multiple jurisdictions. We use the electronic systems of our L4 autonomous semi-trucks to log information about each semi-truck’s use in order to aid us in vehicle diagnostics, repair, and maintenance, as well as to help us collect data regarding drivers’ use patterns and preference in order to help us customize and optimize the driving and riding experiences. Our L4 autonomous semi-trucks also collect personal information of drivers and passengers, such as a voice command of a person, in order to aid the manual operation of our semi-trucks. When our L4 autonomous semi-trucks are in operation, the camera, LiDAR, and other sensing components of our semi-trucks will collect street view, mapping data, landscape images, and other LiDAR information, which may include personal information such as license plate numbers of other vehicles, facial features of pedestrians, appearance of individuals, GPS data, geolocation data, in order train the data analytics and artificial intelligence technology equipped in our semi-trucks for the purpose of identifying different objects, and predicting potential issues that may arise during the operation of our semi-trucks.

We leverage systems and applications that are spread over the United States, China, and Sweden, requiring us to regularly move data across national borders. As a result, we are subject to a variety of laws and regulations in the United States, China, the European Union, and other foreign jurisdictions as well as contractual obligations, regarding data privacy, protection, and security. Some of these laws and regulations require obtaining data subjects’ consent to the collection and use of their data, honoring data subjects’ request to delete their data or limit the processing of their data, providing notifications in the event of a data breach, and setting up the proper legal mechanisms for cross-border data transfers. Some users may refuse to provide consent to our collection and use of their personal information, or may restrict our use of such personal information, and in some cases it is not feasible to obtain consent from data subjects in the general public whose personal information may be captured by our L4 autonomous semi-trucks, all of which may hinder our ability to train our data analytics and artificial intelligence technology, and may harm the competitiveness of our technology. In many cases, these laws and regulations apply not only to the collection and processing of personal information from third parties with whom we do not have any contractual relationship, but also to the sharing or transfer of information between or among us, our subsidiaries and other third parties with which we have commercial relationships, such as our service providers, partners, and clients. The regulatory framework for data privacy, protection, and security worldwide is continuously evolving and developing and, as a result, interpretation and implementation standards and enforcement practices are likely to remain uncertain for the foreseeable future. In particular, some of these laws and regulations may require us to store certain categories of data collected from individuals residing in a jurisdiction only on servers physically located in such jurisdiction, and may further require us to conduct security assessments and/or adopt other cross-border data transfer mechanisms in order to transfer such data outside of such jurisdiction. With the continuously evolving and rapidly changing privacy regulatory regime, our ability to freely transfer data among our affiliates and with our partners in different jurisdictions may be impeded, or we may need to incur significant costs in order to comply with such requirements. In addition, the number of high-profile data breaches at major companies continues to accelerate, which will likely lead to even greater regulatory scrutiny.

The scope and interpretation of the laws and regulations that are or may be applicable to us are often uncertain and may be conflicting, particularly with respect to foreign laws. For example, the E.U. General Data Protection Regulation (the “GDPR”), which became effective in May 2018, greatly increased the European Commission’s jurisdictional reach of its laws and added a broad array of requirements for handling personal data with respect to EU data subjects. EU member states are tasked under the GDPR to enact, and have enacted, certain implementing legislation that adds to and/or further interprets the GDPR requirements and potentially extends our obligations and potential liability for failing to meet such obligations. The GDPR, together with national legislation, regulations and guidelines of the EU member states and the United Kingdom governing the processing of personal data, impose strict obligations and restrictions on the ability to collect, use, retain, protect, disclose, transfer, and otherwise process personal data with respect to EU and UK data subjects. In particular, the GDPR includes obligations and restrictions concerning the consent and rights of individuals to whom the personal data relates, the transfer of personal data out of the EEA or the United Kingdom, security breach notifications and the security and confidentiality of personal data. Among other stringent requirements, the GDPR restricts transfers of data outside of the EU to third countries deemed to lack adequate privacy protections (such as the U.S.), unless an appropriate safeguard specified by the GDPR is implemented. A July 16, 2020 decision of the Court of Justice of the European Union invalidated a key mechanism for lawful data transfer to the U.S. and called into question the viability of its primary alternative. As such, the ability of companies to lawfully transfer personal data from the EU to the U.S. is presently uncertain. Other countries have enacted or are considering enacting similar cross-border data transfer rules or data localization requirements. These developments could limit our ability to launch our products in the EU and other foreign markets. The GDPR authorizes fines for certain violations of up to 4% of global annual revenue or €20 million, whichever is greater. Such fines are in addition to any civil litigation claims by data subjects. Much remains unknown with respect to how to interpret and implement the GDPR and guidance on implementation and compliance practices is often updated or otherwise revised. Given the breadth and depth of changes in data protection obligations, including classification of data and our commitment to a range of administrative, technical and physical controls to protect data and enable data transfers outside of the EU and the United Kingdom, our compliance with the GDPR’s requirements will continue to require time, resources and review of the technology and systems we use to satisfy the GDPR’s requirements, including as EU member states enact their legislation. Further, while the United Kingdom enacted the Data Protection Act 2018 in May 2018 that supplements the GDPR, and has publicly announced that it will continue to regulate the protection of personal data in the same way post-Brexit, Brexit has created uncertainty with regard to the future of regulation of data protection in the United Kingdom.

The implementation of the GDPR has led other jurisdictions to amend, or propose legislation to amend, their existing data protection laws to align with the requirements of the GDPR, with the aim of obtaining an adequate level of data protection to facilitate the transfer of personal data to most jurisdictions from the EU. Accordingly, the challenges we face in the EU will likely also apply to other jurisdictions outside the EU that adopt laws similar in construction to the GDPR or regulatory frameworks of equivalent complexity. For example, the U.S., Brazil, the Cayman Islands, China, India, and Japan have also proposed or adopted sweeping new data protection laws, in some cases including data localization laws that will require that personal data stay within their borders.

The U.S. federal government and various states and governmental agencies also have adopted or are considering adopting various laws, regulations, and standards regarding the collection, use, retention, security, disclosure, transfer, and other processing of sensitive and personal information. In addition, many states in which we operate have laws that protect the privacy and security of sensitive and personal information. Certain state laws may be more stringent or broader in scope, or offer greater individual rights, with respect to sensitive and personal information than federal, international, or other state laws, and such laws may differ from each other, which may complicate compliance efforts. For example, California enacted the California Consumer Privacy Act of 2018 (the “CCPA”) on June 28, 2018, which came into effect on January 1, 2020. The CCPA creates individual privacy rights for California residents and increases the privacy and security obligations of entities handling personal data of California consumers and meeting certain thresholds. Failure to comply with the CCPA may result in attorney general enforcement action and damage to our reputation. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that result in the loss of certain types of personal information. This private right of action may increase the likelihood of, and risks associated with, class action data breach litigation. In addition, the CCPA’s restrictions on “sales” of personal information may restrict our use of cookies and similar tracking technologies for advertising purposes. To the extent the CCPA applies to us, it will increase our compliance costs and potential liability. In addition, many similar laws have been proposed at the federal level and in other states. For instance, the state of Nevada recently enacted a law that went into force on October 1, 2019 and requires companies to honor consumers’ requests to no longer sell their data. Violators may be subject to injunctions and civil penalties of up to \$5,000 per violation. New legislation proposed or enacted in Illinois, Massachusetts, New Jersey, New York, Rhode Island, Washington, and other states, and a proposed right to privacy amendment to the Vermont Constitution, imposes, or has the potential to impose, additional obligations on companies that collect, store, use, retain, disclose, transfer, and otherwise process confidential, sensitive, and personal information, and will continue to shape the data privacy environment throughout the United States. State laws are changing rapidly and there is discussion in Congress of a new federal data protection and privacy law to which we would become subject if it is enacted. All of these evolving compliance and operational requirements impose significant costs that are likely to increase over time, may require us to modify our data processing practices and policies, and may divert resources from other initiatives and projects. Furthermore, non-compliance with data privacy laws and regulations, or a major breach of our network security and systems, could have serious negative consequences for our businesses and future prospects, including possible fines, penalties, and damages, reduced customer demand for our L4 autonomous semi-trucks, and harm to our reputation and brand, all of which may have a material and adverse impact on our business, financial condition, and operating results.

We outsource important aspects of the storage, processing, and transmission of personal information, and thus rely on third parties to manage functions that have material cybersecurity risks. In an attempt to address these risks, we may require third-party service providers who handle personal information to sign confidentiality agreements or data processing agreements (if required by applicable data privacy laws), which would contractually require them to safeguard personal information to the same extent that applies to us, and in some cases we require such service providers to complete information security questionnaires, quality verification questionnaires, or undergo third-party security examinations or provide data security certifications or security audit results. In addition, we periodically hire third-party security experts to assess and test our security posture. However, we cannot assure that these contractual measures and other safeguards will adequately protect us from the risks associated with the storage and transmission of the personal information of our users, employees, drivers, and passengers.

Many statutory requirements include obligations for companies to notify individuals of security breaches involving certain personal information, which could result from breaches experienced by us or our third-party service providers. For example, laws in all 50 U.S. states and the District of Columbia require businesses to provide notice to consumers whose personal information has been disclosed as a result of a data breach. These laws are not consistent, and compliance in the event of a widespread data breach is difficult and may be costly. Moreover, states have been frequently amending existing laws, requiring attention to changing regulatory requirements. We also may be contractually required to notify users or other counterparties of a security breach. Although we may have contractual protections with our third-party service providers, contractors, and consultants, any actual or perceived security breach could harm our reputation and brand, expose us to potential liability or require us to expend significant resources on data security and in responding to any such actual or perceived breach. Any contractual protections we may have from our third-party service providers, contractors or consultants may not be sufficient to adequately protect us from any such liabilities and losses, and we may be unable to enforce any such contractual protections.

In China, the PRC Cyber Security Law became effective on June 1, 2017. The Cyber Security Law reaffirms the basic principles and requirements specified in other existing laws and regulations on personal information protection, such as the requirements on the collection, use, processing, storage, and disclosure of personal information. Specifically, it requires that network operators take technical measures and other necessary measures in accordance with applicable laws and regulations and the compulsory requirements of the national and industrial standards to safeguard the safe and stable operation of its networks, maintain the integrity, confidentiality, and availability of network data, take technical and other necessary measures to ensure the security of the personal information they have collected against unauthorized access, alteration, disclosure, or loss, and formulate contingency plans for network security incidents and remediation measures. It also requires a subset of network operators that meet certain thresholds to be critical information infrastructure operators (“CIIO”) to store personal information and important data collected and generated during its operation within the territory of China locally on servers in China. The interpretation of what network operators are qualified as CIIOs is unclear. If we are deemed to be a CIIO, we would become subject to additional requirements applicable to CIIOs. Any violation of the Cyber Security Law may subject a network operator to warnings, fines, confiscation of illegal gains, revocation of licenses, cancellation of filings, shutdown of websites, or criminal liabilities.

In addition to government regulation, privacy advocates and industry groups have and may in the future propose self-regulatory standards from time to time. These and other industry standards may legally or contractually apply to us, or we may elect to comply with such standards. We expect that there will continue to be new proposed laws and regulations concerning data privacy and security, and we cannot yet determine the impact such future laws, regulations, and standards may have on our business. New laws, amendments to or re-interpretations of existing laws, regulations, standards, and other obligations may require us to incur additional costs and restrict our business operations. Because the interpretation and application of laws, regulations, standards, and other obligations relating to data privacy and security are still uncertain, it is possible that these laws, regulations, standards, and other obligations may be interpreted and applied in a manner that is inconsistent with our data processing practices and policies or the features of our products and services. If so, in addition to the possibility of fines, lawsuits, regulatory investigations, public censure, other claims and penalties and significant costs for remediation and damage to our reputation, we could be required to fundamentally change our business activities and practices, which could adversely affect our business. We may be unable to make such changes and modifications in a commercially reasonable manner, or at all. Any inability to adequately address data privacy or security-related concerns, even if unfounded, or to comply with applicable laws, regulations, standards, and other obligations relating to data privacy and security, could result in additional cost and liability to us, harm our reputation and brand, damage our relationship with important clients, and affect our financial condition, operating results, and our reputation.

We make public statements about our use and disclosure of personal information through our privacy policy, information provided on our website and press statements. Also, we enter into contracts with third parties (such as our partners and clients) that contain provisions regarding the collection, sharing, and processing of personal information. Although we endeavor to comply with our public statements and documentation as well as our contractual and other privacy-related obligations, we may at times fail to do so or be alleged to have failed to do so. The publication of our privacy policy and other statements that provide promises and assurances about data privacy and security can subject us to potential government or legal action if they are found to be deceptive, unfair or misrepresentative of our actual practices. In addition, from time to time, concerns may be expressed about whether our products and services compromise the privacy of clients and others. Any concerns about our data privacy and security practices (even if unfounded), or any failure, real or perceived, by us to comply with our posted privacy policies, contractual obligations, or any legal or regulatory requirements, standards, certifications, or orders, or other privacy or consumer protection-related laws and regulations applicable to us, could cause our clients to reduce their use of our L4 autonomous semi-trucks and could affect our financial condition, operating results, and our reputation, and may result in governmental or regulatory investigations, enforcement actions, regulatory fines, criminal compliance orders, litigations, breach of contract claims, or public statements against us by government regulatory authorities, our partners and/or clients, data subjects, consumer advocacy groups, or others, all of which could be costly and have an adverse effect on our business.

Furthermore, enforcement actions and investigations by regulatory authorities related to data security incidents and privacy violations continue to increase. Non-compliance could result in proceedings against us by data protection authorities, governmental entities or others, including class action privacy litigation in certain jurisdictions, which would subject us to significant fines, penalties, judgments, and negative publicity, and may otherwise affect our financial condition, operating results, and our reputation. Given the complexity of operationalizing the GDPR and other data privacy and security laws and regulations to which we are subject, the maturity level of proposed compliance frameworks and the relative lack of guidance in the interpretation of the numerous requirements of the GDPR and other data privacy and security laws and regulations to which we are subject, we may not be able to respond quickly or effectively to regulatory, legislative, and other developments, and these changes may in turn impair our ability to offer our existing or planned products and services and/or increase our cost of doing business. In addition, if our practices are not consistent or viewed as not consistent with legal and regulatory requirements, including changes in laws, regulations, and standards or new interpretations or applications of existing laws, regulations and standards, we may become subject to audits, inquiries, whistleblower complaints, adverse media coverage, investigations, loss of export privileges, or severe criminal or civil sanctions, all of which may affect our financial condition, operating results, and our reputation. Unauthorized access or disclosure of personal or other sensitive or confidential data of Company (including data about third parties which the Company possesses), whether through systems failure, employee negligence, fraud, or misappropriation, by the Company, our service providers or other parties with whom we do business (if they fail to meet the standards we impose, or if their systems on which our data is stored experience any data breaches or security incidents) could also subject us to significant litigation, monetary damages, regulatory enforcement actions, fines, and criminal prosecution in one or more jurisdictions.

Risks Related to Regulations

Our business may be adversely affected by changes in automotive safety regulations or concerns that drive further regulation of the automobile safety market.

Government vehicle safety regulations have a substantial impact on our business, prospects, and our future plans. Government safety regulations are subject to change based on a number of factors that are not within our control, including new scientific or technological data, adverse publicity regarding industry recalls and safety risks associated with autonomous driving technology, accidents involving autonomous vehicles, domestic and foreign political developments or considerations, and litigation relating to autonomous vehicles. Changes in government regulations, especially in autonomous driving and the freight industry could adversely affect our business. If government priorities shift and we are unable to adapt to changing regulations, our business may be materially and adversely affected.

The costs of complying with safety regulations could increase as regulators impose more stringent compliance and reporting requirements in response to product recalls and safety issues in the automotive industry. As the semi-trucks that carry our systems go into production, we would be subject to existing stringent requirements under the National Traffic and Motor Vehicle Safety Act of 1966 (the "Vehicle Safety Act"), including a duty to report, subject to strict timing requirements, safety defects. The Vehicle Safety Act imposes potentially significant civil penalties for violations including the failure to comply with such reporting actions. We are also subject to the existing U.S. Transportation Recall Enhancement, Accountability and Documentation Act (the "TREAD Act"), which requires motor vehicle equipment manufacturers, such as us, to comply with "Early Warning" requirements by reporting certain information to the National Highway Traffic Safety Administration (the "NHTSA") such as information related to defects or reports of injury. The TREAD Act imposes criminal liability for violating such requirements if a defect subsequently causes death or bodily injury. In addition, the National Traffic and Motor Vehicle Safety Act authorizes NHTSA to require a manufacturer to recall and repair vehicles that contain safety defects or fail to comply with U.S. federal motor vehicle safety standards. Sales into foreign countries may be subject to similar regulations. If we cannot rapidly address any safety concerns or defects with our products, our business, results of operations, and financial condition will be adversely affected.

The U.S. Department of Transportation issued regulations in 2016 that require manufacturers of certain autonomous vehicles to provide documentation covering specific topics to regulators, such as how automated systems detect objects on the road, how information is displayed to drivers, what cybersecurity measures are in place and the methods used to test the design and validation of autonomous driving systems. If the obligations associated with complying with safety regulations increase it may require increased resources, divert management's attention, and adversely affect our business.

We are subject to substantial regulations, including regulations governing autonomous vehicles, and unfavorable changes to, or failure by us to comply with, these regulations could substantially harm our business and operating results.

Our L4 autonomous semi-trucks are subject to substantial regulation under international, federal, state, and local laws. Regulations designed to govern autonomous vehicle operation, testing and/or manufacture are still developing and may change significantly. These regulations could include requirements that significantly delay or narrowly limit the commercialization of autonomous vehicles, limit the number of autonomous vehicles that we can manufacture or use on our platform, impose restrictions on the number of vehicles in operation and the locations where they may be operated or impose significant liabilities on manufacturers or operators of autonomous vehicles or developers of autonomous vehicle technology. If regulations of this nature are implemented, we may not be able to commercialize our autonomous vehicle technology in the manner we expect, or at all. In addition, the costs of complying with such regulations could be prohibitive and prevent us from operating our business in the manner we intend.

Further, we are subject to international, federal, state, and local laws and regulations, governing pollution, protection of the environment, and occupational health, and safety, including those related to the use, generation, storage, management, discharge, transportation, disposal, and release of, and human exposure to, hazardous and toxic materials. Such laws and regulations have tended to become more stringent over time.

Fines, penalties, costs or liabilities associated with such existing or new regulations or laws, including as a result of our failure to comply, could be substantial and in certain cases joint and several, and could adversely impact our business, prospects, financial condition, and operating results.

Risks Related to Our International Operations

We face risks associated with our international operations, including unfavorable regulatory, political, tax, and labor conditions, which could harm our business.

While we currently have much of our operations in the United States, we still face risks associated with our current and future international operations. We have international operations in China and subsidiaries in China, Hong Kong, and Japan that are subject to the legal, political, regulatory, and social requirements, and economic conditions in these jurisdictions. Additionally, as part of our long-term growth strategy, we intend to expand our services into other international locations. We are and will be subject to a number of risks associated with international business activities that may increase our costs, impact our ability to expand on a global basis, and require significant management attention. These risks include:

- conforming the semi-trucks equipped with our autonomous technology to various international regulatory requirements as applicable,
- difficulty in staffing and managing foreign operations;
- difficulties attracting users in new jurisdictions;
- differing driving and traffic behavior and road designs and infrastructure in a range of countries, which could delay our ability to enter and expand in different markets;
- foreign government taxes, regulations, and permit requirements;
- fluctuations in foreign currency exchange rates and interest rates;
- United States and foreign government trade restrictions, tariffs, and price or exchange controls;
- compliance by us and our business partners with anti-corruption laws, import and export control laws, tariffs, trade barriers, economic sanctions, and other regulatory limitations on our ability to provide our services and products in certain international markets;
- attract, recruit, and retain talents internationally;
- foreign labor laws, regulations, and restrictions;
- changes in diplomatic and trade relationships;
- political instability, natural disasters, war or events of terrorism; and
- the strength of international economies.

If we fail to successfully address these risks, our business, prospects, operating results and financial condition could be materially harmed.

Changes to trade policy, tariffs, and import/export regulations may have a material adverse effect on our business, financial condition, and results of operations.

Changes in global political, regulatory and economic conditions, or in laws and policies governing foreign trade, manufacturing, development, and investment in the territories or countries where we currently purchase components, seek to offer our services, or conduct our business, could adversely affect our business. The United States has recently instituted or proposed changes in trade policies that include the negotiation or termination of trade agreements, the imposition of higher tariffs on imports into the United States, economic sanctions on individuals, corporations or countries, and other government regulations affecting trade between the United States and other countries. A number of other nations have proposed or instituted similar measures directed at trade with the United States in response. As a result of these developments, there may be greater restrictions and economic disincentives on international trade that could adversely affect our business. For example, such changes could adversely affect the automotive market, our ability to access key components. It may be time-consuming and expensive for us to alter our business operations to adapt to or comply with any such changes, and any failure to do so could have a material adverse effect on its business, financial condition and results of operations.

As we expand our operations to international markets, we may become subject to various restrictions under U.S. export control laws and regulations, including the U.S. Department of Commerce's Export Administration Regulations (EAR). The U.S. export control laws include restrictions or prohibitions on the sale or supply of certain products and services to U.S. embargoed or sanctioned countries, governments, persons, and entities, and also require authorization for the export of certain products using encryption technology. In addition, various countries regulate the import of certain artificial intelligence technology, including through import permitting and licensing requirements and have enacted or could enact laws that could limit our ability to distribute our services in those countries. Changes in our offerings, technologies, or semi-trucks, or changes in export and import laws, may delay the introduction and growth of our business in international markets, prevent our users with international operations from using our services or, in some cases, prevent the access or use of our services to and from certain countries, governments, persons, or entities altogether. Further, any change in export or import regulations or related laws, shift in the enforcement or scope of existing regulations, or change in the countries, governments, persons, or technology targeted by such regulations could result in decreased use of our services or in our decreased ability to export or sell our services to existing or potential users with international operations. Any decreased use of our services or products or limitation on our ability to export or sell our services or products would likely harm our business.

Risks Related to Our Class A Common Stock

The dual class structure of our common stock has the effect of concentrating voting control with certain stockholders, in particular, our Founders, which will limit our ability to influence the outcome of important transactions, including a change in control.

Our Class B common stock has 10 votes per share, and our Class A common stock has one vote per share. Our Founders, Mo Chen and Xiaodi Hou, are the only holders of shares of Class B common stock and together hold approximately 63% of the voting power of the outstanding common stock. Because of the 10-to-one voting ratio between Class B and Class A common stock, our Founders will continue to control a majority of the combined voting power of our common stock and therefore be able to control all matters submitted to our stockholders for approval so long as the shares of Class B common stock represent at least 50% of all outstanding voting power of our Class A and Class B common stock. This concentrated control will limit or preclude your ability to influence corporate matters for the foreseeable future.

Future transfers of Class B common stock by our Founders will generally result in those shares converting to Class A common stock, subject to limited exceptions, including the ability of each of our Founders to grant their voting proxy with respect to their Class B common stock to the other Founder. In addition, each share of our Class B common stock will automatically convert, on a one-for-one basis, into shares of Class A common stock on the earliest of (i) the date specified by a vote of the holders of Class B common stock representing 75% of the outstanding shares of Class B common stock, (ii) the date that is between 90 days and 270 days, as determined by the board of directors, after the death or incapacitation of the last Founder to die or become incapacitated or (iii) the date that is between 61 and 180 days, as determined by the board of directors, after the date on which the number of outstanding shares of Class B common stock held by the Founders (or their permitted affiliates) represents less than 50% of the total number of shares of Class B common stock held collectively by the Founders (or their permitted affiliates) at 11:59 pm Pacific Time on April 19, 2021. For a description of the dual class structure, see the section titled "Description of Capital Stock—Anti-Takeover Provisions" within our Prospectus.

The dual class structure of our common stock may adversely affect the trading market for our Class A common stock.

Our dual class structure, combined with the concentrated control of our Founders, directors, officers and employees and their affiliates, may result in a lower or more volatile market price of our Class A common stock or in adverse publicity or other adverse consequences. For example, certain index providers have announced restrictions on including companies with multiple class shares structures in certain of their indexes. In July 2017, FTSE Russell and Standard & Poor's announced that they would cease to allow most newly public companies utilizing dual or multi-class capital structures to be included in their indices. Under the announced policies, our dual class capital structure would make us ineligible for inclusion in any of these indices. Given the sustained flow of investment funds into passive strategies that seek to track certain indexes, exclusion from stock indexes would likely preclude investment by many of these funds and could make our Class A common stock less attractive to other investors. As a result, the market price of our Class A common stock could be adversely affected.

The stock price of our Class A common stock has been, and will likely continue to be, volatile and you could lose all or part of your investment.

Prior to the listing of our Class A common stock, there was no public market for our Class A common stock. Since our IPO, the stock price of our Class A common stock has experienced volatility and the market prices of securities of other newly public companies have historically been highly volatile. The public trading price of our Class A common stock could be subject to fluctuations in response to various factors, including those listed in this Quarterly Report on Form 10-Q, some of which are beyond our control. These fluctuations could cause you to lose all or part of your investment in our Class A common stock since you might be unable to sell your shares at or above the price you paid. Factors that could cause fluctuations in the public trading price of our Class A common stock include the following:

- overall performance of the equity markets;
- our operating performance and the performance of other similar companies;
- changes in the estimates of our operating results that we provide to the public, our failure to meet these projections, or changes in recommendations by securities analysts that elect to follow our common stock;
- announcements of technological innovations, new products, acquisitions, strategic alliances, or significant agreements by us or by our competitors;
- announcements of user additions and user cancellations or delays;
- rumors and market speculation involving us or other companies in our industry, which may include short seller reports;
- detrimental adverse publicity about us, our services, or our industry;
- recruitment or departure of key personnel;
- the impact of the COVID-19 pandemic;
- litigation involving us, our industry, or both, or investigations by regulators into our operations or those of our competitors;
- new laws or regulations or new interpretations of existing laws or regulations applicable to our business;
- the economy as a whole, market conditions in our industry, and the industries of our users;
- trading activity by a limited number of stockholders who together beneficially own a majority of our outstanding common stock;
- the expiration of market standoff or contractual lock-up agreements; and
- sales of shares of our Class A common stock by us or our stockholders.

We may fail to meet our publicly announced guidance or other expectations about our business, which could cause our stock price to decline.

We may provide from time to time guidance regarding our expected financial and business performance, which may include projections regarding sales and production, as well as anticipated future revenues, gross margins, profitability, and cash flows. Correctly identifying key factors affecting business conditions and predicting future events is inherently an uncertain process, and our guidance may not ultimately be accurate and has in the past been inaccurate in certain respects, such as the timing of new products. Our guidance is based on certain assumptions such as those relating to anticipated production and sales, average sales prices, supplier and commodity costs, and planned cost reductions. If our guidance is not accurate or varies from actual results due to our inability to meet our assumptions or the impact on our financial performance that could occur as a result of various risks and uncertainties, the market value of our common stock could decline significantly.

Because we do not expect to pay dividends in the foreseeable future, investors must rely on price appreciation of our Class A common stock for return on the investment.

We currently intend to retain most, if not all, of our available funds and any future earnings to fund the growth of our business. As a result, we do not expect to pay any cash dividends in the foreseeable future. Therefore, you should not rely on an investment in our Class A common stock as a source for any future dividend income.

Our board of directors has complete discretion as to whether to distribute dividends. Even if our board of directors decides to declare and pay dividends, the timing, amount, and form of future dividends, if any, will depend on, among other things, our future results of operations and cash flow, our capital requirements and surplus, our financial condition, contractual restrictions, and other factors deemed relevant by our board of directors. Accordingly, the return on your investment in our Class A common stock will likely depend entirely upon any future price appreciation of our Class A common stock. There is no guarantee that our Class A common stock will appreciate in value or even maintain the price at which you purchased the Class A common stock. You may not realize a return on your investment in our Class A common stock and you may even lose your entire investment in our Class A common stock.

If securities or industry analysts do not publish research or reports about our business or if they issue an adverse or misleading opinion regarding our Class A common stock, our share price and trading volume could decline.

The trading market for our Class A common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. We do not have any control over these analysts. If few securities or industry analysts commence coverage of us, the trading price for our common stock would be negatively impacted. If any of the analysts who cover us issue an adverse or misleading opinion regarding us, our business model, our financial statement, our intellectual property or our share performance, our share price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our share price or trading volume to decline.

Sales of a substantial number of our Class A common stock in the public market could cause our share price to fall.

Sales of substantial amounts of our Class A common stock in the public market, or the perception that these sales could occur, could adversely affect the market price of our Class A common stock and could materially impair our ability to raise capital through equity offerings in the future. Many of our existing security holders have substantial unrecognized gains on the value of the equity they hold, and may take, or attempt to take, steps to sell, directly or indirectly, their shares or otherwise secure, or limit the risk to, the value of their unrecognized gains on those shares.

In connection with our IPO in April 2021, we, our officers, directors, and substantially all of existing stockholders have agreed not to sell any of our shares of Class A common stock or are otherwise subject to similar lockup restrictions until prior to the opening of trading on the second full trading day after the later of (i) August 13, 2021 and (ii) the release of the Company's second regular earnings announcement following the IPO without the prior written consent of Morgan Stanley & Co. LLC on behalf of the underwriters, subject to certain exceptions. Additionally, approximately 13.4 million shares of Class A common stock are subject to an early release if the last reported sales price of the Class A common stock is at least 33.0% greater than the \$40.00 IPO price for any 10 out of 15 consecutive trading days ending on or after the date of the release of the Company's first regular earnings announcement following the IPO. Any early release will occur prior to the opening of trading on the second trading day following the satisfaction of the foregoing price-based condition. However, the underwriters may release these securities from these restrictions at any time, subject to applicable regulations of the Financial Industry Regulatory Authority, Inc. We cannot predict what effect, if any, market sales of securities held by our significant stockholders or any other stockholder or the availability of these securities for future sale will have on the market price of our Class A common stock.

We are an "emerging growth company," and the reduced disclosures applicable to emerging growth companies may make our common stock less attractive to investors.

We are an "emerging growth company," as defined in the JOBS Act, and for as long as we are an emerging growth company, we may choose to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not "emerging growth companies," including, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a non-binding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

The JOBS Act also provides that an emerging growth company does not need to comply with any new or revised financial accounting standards until such date that a private company is otherwise required to comply with such new or revised accounting standards. We cannot predict if investors will find our common stock less attractive if we choose to rely on these exemptions. If some investors find our common stock less attractive as a result of any choices to reduce future disclosure, there may be a less active trading market for our common stock, and our share price may be more volatile.

The requirements of being a public company, particularly after we are no longer an “emerging growth company”, may strain our resources, divert management’s attention, and affect our ability to attract and retain qualified board members.

As a public company, and particularly after we cease to be an “emerging growth company”, we will incur significant legal, accounting and other expenses that we did not incur as a private company. In addition, changing laws, regulations and standards relating to corporate governance and public disclosure, including regulations implemented by the Public Company Accounting Oversight Board, the SEC, and the Nasdaq Global Select Market, have increased and will continue to increase our legal and financial compliance costs and make some activities more time consuming. These laws, regulations, and standards are subject to varying interpretations, and as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. We intend to invest resources to comply with evolving laws, regulations, and standards, and this investment may result in increased general and administrative expenses and a diversion of management’s time and attention from revenue-generating activities to compliance activities. If, notwithstanding our efforts, we fail to comply with new laws, regulations, and standards, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

Failure to comply with these rules might also make it more difficult for us to obtain certain types of insurance, including director and officer liability insurance, and we might be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these events could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, on committees of our board of directors or as members of senior management.

In addition, as a result of our disclosure obligations as a public company, we will have reduced strategic flexibility and will be under pressure to focus on short-term results, which may adversely affect our ability to achieve long-term profitability.

Our failure to timely and effectively implement controls and procedures required by Section 404(a) of the Sarbanes-Oxley Act could have a material adverse effect on our business.

As a public company, we are required to provide management’s assessment regarding internal control over financial reporting in our second Annual Report on Form 10-K. The standards required for a public company under Section 404(a) of the Sarbanes-Oxley Act are significantly more stringent than those required of TuSimple as a private company. Management may not be able to effectively and timely implement controls and procedures that adequately respond to the increased regulatory compliance and reporting requirements that became applicable after transitioning from a private company. If we are not able to implement the additional requirements of Section 404(a) in a timely manner or with adequate compliance, we may not be able to assess whether our internal controls over financial reporting are effective, which may subject us to adverse regulatory consequences and could harm investor confidence and the market price of our securities.

We may be subject to securities litigation, which is expensive and could divert our management’s attention.

In the past, companies that have experienced volatility in the market price of their securities have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Regardless of the merits or the ultimate results of such litigation, securities litigation brought against us could result in substantial costs and divert our management’s attention from other business concerns.

Anti-takeover provisions in our charter documents may discourage our acquisition by a third party, which could limit our stockholders' opportunity to sell their shares, at a premium.

Our amended and restated certificate of incorporation includes provisions that could limit the ability of others to acquire control of our company, could modify our structure or could cause us to engage in change-of-control transactions. These provisions could have the effect of depriving our stockholders of an opportunity to sell their shares at a premium over prevailing market prices by discouraging third parties from seeking to obtain control in a tender offer or similar transaction. Among other things, the charter documents provide:

- for a dual class common stock structure, which provides our Founders with the ability to control the outcome of matters requiring stockholders' approval;
- until the first date on which the outstanding shares of Class B common stock represent less than 40% of the total voting power of our common stock, we shall not consummate any transaction that would result in a change in control of us without first obtaining the affirmative vote of the holders of a majority of the then-outstanding shares of Class B common stock voting as a separate class;
- certain amendments to our restated certificate of incorporation or bylaws will require the approval of two-thirds of the combined vote of our then-outstanding shares of Class A and Class B common stock;
- at any time after our 2022 annual meeting of stockholders when the outstanding shares of our Class B common stock represent less than 40% of the total voting power of our common stock (the "Voting Threshold Date"), directors will be able to be removed only for cause and only by the affirmative vote of the holders of at least two-thirds of the voting power of our common stock;
- at any time after the Voting Threshold Date, our board of directors will be classified into three classes of directors with staggered three-year terms;
- at any time after the Vesting Threshold Date, subject to the rights of any series of preferred stock then outstanding, stockholders will no longer be able to act by written consent in lieu of a meeting; and
- our board of directors has the authority, without further action by our stockholders, to issue preferred stock in one or more series and to fix their designations, powers, preferences, privileges, and relative participating, optional, or special rights, and the qualifications, limitations, or restrictions, including dividend rights, conversion rights, voting rights, terms of redemption, and liquidation preferences, any or all of which may be greater than the rights associated with our Class A common stock.

Our 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 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.

Our 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 any of our directors, officers or other employees to us or our stockholders;
- action asserting a claim against us arising pursuant to any provision of the DGCL, our amended and restated certificate of incorporation or bylaws; or
- other action asserting a claim against us 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. Our amended and restated certificate of incorporation also provides that the federal district courts of the United States are the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. We intend for this provision to apply to any complaints asserting a cause of action under the Securities Act despite the fact that Section 22 of the Securities Act creates concurrent jurisdiction for the federal and state courts over all actions brought to enforce any duty or liability created by the Securities Act or the rules and regulations promulgated thereunder. There is uncertainty as to whether a court would enforce such a provision with respect to claims under the Securities Act, and our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to the provisions of our amended and restated certificate of incorporation described above.

These choice of forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees, which may discourage such lawsuits against us and our directors, officers and employees. Alternatively, if a court were to find these provisions of our amended and restated certificate of incorporation inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business and financial condition.

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

Unregistered Sale of Securities

From January 1, 2021 through April 15, 2021 (the date of the filing of our registration statement on Form S-8), we granted to our directors, officers, and employees stock options to purchase an aggregate of 2,665,968 shares of Class A common stock under our 2017 Share Plan, with a weighted-average per share exercise price of \$12.20, and we issued 60,616 shares of Class A common stock upon exercise of stock options under our 2017 Share Plan at exercise prices ranging from \$2.43 to \$4.20 per share.

From January 1, 2021 through April 15, 2021 (the date of the filing of our registration statement on Form S-8), we granted to our directors and employees RSUs representing an aggregate of 60,360 shares of our Class A common stock under our 2017 Share Plan.

In January 2021, we issued an aggregate of 4,650,999 shares of Series E redeemable convertible preferred stock to new and existing investors at a purchase price of \$14.14 per share for gross proceeds \$65.8 million.

In February 2021, we issued an aggregate of 4,331,644 shares of Series E-2 redeemable convertible preferred stock for proceeds of \$49.0 million upon the exercise of an outstanding warrant.

In March 2021, we issued an aggregate of 9,477,073 shares of Series E redeemable convertible preferred stock for proceeds of \$134.0 million upon the exercise of an outstanding warrant.

In April 2021, we sold an aggregate of 874,999 shares of our Class A common stock at \$40.00 per share in a private placement that closed concurrently with our IPO and generated proceeds of \$35.0 million.

The foregoing transactions did not involve any underwriters, any underwriting discounts or commissions, or any public offering. We believe the offers, sales, and issuances of the above securities were exempt from registration under the Securities Act (or Regulation D or Regulation S promulgated thereafter) by virtue of Section 4(a)(2) of the Securities Act, because the issuance of securities to the recipient did not involve a public offering, or in reliance on Rule 701 because the transactions were pursuant to compensatory benefit plans or contracts relating to compensation as provided under such rule. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof. All recipients had adequate access, through their relationships with us or otherwise, to information about us. The issuances of these securities were made without any general solicitation or advertising.

Use of Proceeds

The Registration Statement on Form S-1 (File No. 333-254616) for the IPO was declared effective by the SEC on April 14, 2021. The Registration Statement on Form S-1 registered an aggregate of 33,783,783 shares of our Class A common stock (6,756,756 of which were offered and sold by Sun Dream Inc, the selling stockholder). On April 19, 2019, we closed the IPO, in which we sold 27,027,027 shares of our Class A common stock at a public offering price of \$40.00 per share for an aggregate offering price of \$1.0 billion. The selling stockholder sold 6,756,756 shares of our Class A common stock at a public offering price of \$40.00 per share for an aggregate offering price of approximately \$451.0 million. Upon completion of the sale of the shares of our Class A common stock referenced in the preceding sentences, the IPO terminated.

Immediately subsequent to the closing of our IPO an aggregate 874,999 shares of our Class A common stock were purchased from us at \$40.00 per share for proceeds of \$35.0 million in a concurrent private placement.

The managing underwriters of our IPO were Morgan Stanley & Co. LLC, Citigroup Global Markets Inc., and J.P. Morgan Securities LLC. We incurred underwriting discounts and commissions totaling approximately \$50.1 million. We did not receive any proceeds from the sale of shares by the selling stockholder in the IPO. No payments were made by us to directors, officers, or persons owing ten percent or more of our common stock or to their associates, or to our affiliates, other than payments in the ordinary course of business to officers for salaries and non-employee directors pursuant to our director compensation policy. We have invested or intend to invest the net offering proceeds in short-term interest-bearing investment-grade securities, certificates of deposit, or government securities. There has been no material change in the planned use of proceeds from our IPO as described in our Prospectus.

Item 6. Exhibits.

Exhibit Number	Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
3.1	Amended and Restated Certificate of Incorporation.					X
3.2	Amended and Restated Bylaws.					X
10.1	Form of Indemnification Agreement between the Registrant and each of its directors and executive officers.	S-1	333-254616	10.1	03/23/2021	
10.2	Ordinary Share Purchase Agreement by and between the Registrant and Classic Elite Limited dated January 8, 2021.	S-1	333-254616	10.9	03/23/2021	
10.3	Ordinary Share Purchase Agreement by and between the Registrant and Perry Creek Capital Partners LP dated January 22, 2021.	S-1	333-254616	10.10	03/23/2021	
10.4	Ordinary Share Purchase Agreement by and between the Registrant and Perry Creek Capital Fund II LP dated January 22, 2021.	S-1	333-254616	10.11	03/23/2021	
10.5	Series E-2 Preferred Stock Purchase Agreement by and among the Registrant, TRATON International S.A. and other parties thereto dated February 26, 2021.	S-1	333-254616	10.12	03/23/2021	
10.6	2017 Share Plan and forms of agreements thereunder.	S-1	333-254616	10.13	03/23/2021	
10.7	2021 Equity Incentive Plan and forms of agreements thereunder.	S-1	333-254616	10.14	03/23/2021	
10.8	2021 Employee Stock Purchase Plan.	S-1	333-254616	10.15	03/23/2021	
10.9	Employment Agreement, dated as of March 22, 2021, by and between Mo Chen and the Registrant.	S-1	333-254616	10.17	03/23/2021	
10.10	Employment Agreement, dated as of March 22, 2021, by and between Xiaodi Hou and the Registrant.	S-1	333-254616	10.18	03/23/2021	
10.11	Employment Agreement, dated as of March 22, 2021, by and between Cheng Lu and the Registrant.	S-1	333-254616	10.19	03/23/2021	
10.12	Employment Agreement, dated as of March 22, 2021, by and between Patrick Dillon and the Registrant.	S-1	333-254616	10.20	03/23/2021	
10.13	Employment Agreement, dated as of March 22, 2021, by and between James Mullen and the Registrant.	S-1	333-254616	10.21	03/23/2021	
10.14	Severance and Change in Control Agreement, dated as of March 22, 2021, by and between Mo Chen and the Registrant.	S-1	333-254616	10.22	03/23/2021	
10.15	Severance and Change in Control Agreement, dated as of March 22, 2021, by and between Xiaodi Hou and the Registrant.	S-1	333-254616	10.23	03/23/2021	
10.16	Severance and Change in Control Agreement, dated as of March 21, 2021, by and between Cheng Lu and the Registrant.	S-1	333-254616	10.24	03/23/2021	
10.17	Severance and Change in Control Agreement, dated as of March 22, 2021, by and between Patrick Dillon and the Registrant.	S-1	333-254616	10.25	03/23/2021	
10.18	Severance and Change in Control Agreement, dated as of March 21, 2021, by and between James Mullen and the Registrant.	S-1	333-254616	10.26	03/23/2021	
10.19	Director Offer Letter, dated January 19, 2021, by and between Karen C. Francis and the Registrant.	S-1	333-254616	10.27	03/23/2021	
10.20	Director Offer Letter, dated January 19, 2021, by and between Brad Buss and the Registrant.	S-1	333-254616	10.28	03/23/2021	
31.1	Certification of Principal Executive Officer 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.					X
31.2	Certification of Principal Financial Officer 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.					X
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.					X
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.					X
101.INS	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document.					X
101.SCH	Inline XBRL Taxonomy Extension Schema Document					X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document					X

101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document	X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document	X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document	X
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)	X

* The certifications attached as Exhibit 32.1 and 32.2 that accompany this Quarterly Report on Form 10-Q are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of TuSimple Holdings Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Quarterly Report on Form 10-Q, irrespective of any general incorporation language contained in such filing.

SIGNATURES

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

TuSimple Holdings Inc.

Date: May 10, 2021

By: /s/ Cheng Lu

Cheng Lu
President and Chief Executive Officer
(Principal Executive Officer)

Date: May 10, 2021

By: /s/ Patrick Dillon

Patrick Dillon
Chief Financial Officer
(Principal Financial Officer)

TUSIMPLE HOLDINGS INC.

RESTATED CERTIFICATE OF INCORPORATION

TuSimple Holdings Inc., a Delaware corporation, hereby certifies as follows:

1. The name of this corporation is TuSimple Holdings Inc. The date of the filing of its original Certificate of Incorporation with the Secretary of State was February 23, 2021.

2. The Restated Certificate of Incorporation of this corporation is attached hereto as Exhibit A, which is incorporated herein by this reference, and which restates, integrates and further amends the provisions of the Certificate of Incorporation of this corporation, as previously amended and/or restated. The Restated Certificate of Incorporation has been duly adopted by this corporation's Board of Directors and by the stockholders in accordance with Sections 242 and 245 of the General Corporation Law of the State of Delaware, with the approval of this corporation's stockholders having been given by written consent without a meeting in accordance with Section 228 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, this corporation has caused this Restated Certificate of Incorporation to be signed by its duly authorized officer and the foregoing facts stated herein are true and correct.

Dated: April 19, 2021

TUSIMPLE HOLDINGS INC.

By: /s/ Cheng Lu

Name: Cheng Lu

Title: President and Chief Executive Officer

EXHIBIT A

**TUSIMPLE HOLDINGS INC.
RESTATED CERTIFICATE OF INCORPORATION**

**ARTICLE I:
NAME**

The name of this corporation is TuSimple Holdings Inc. (the "**Corporation**").

**ARTICLE II:
AGENT FOR SERVICE OF PROCESS**

The address of the registered office of the Corporation in the State of Delaware is 251 Little Falls Drive, Wilmington, New Castle County, DE 19808, and the name of the registered agent of the Corporation in the State of Delaware at such address is Corporation Service Company.

**ARTICLE III:
PURPOSE**

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware, as the same exists or may hereafter be amended (the "**General Corporation Law**").

**ARTICLE IV:
AUTHORIZED STOCK**

1. Total Authorized.

1.1 The total number of shares of all classes of stock that the Corporation has authority to issue is 5,000,000,000 shares, consisting of three classes: 4,876,000,000 shares of Class A Common Stock, \$0.0001 par value per share ("**Class A Common Stock**"), 24,000,000 shares of Class B Common Stock, \$0.0001 par value per share ("**Class B Common Stock**" and together with the Class A Common Stock, the "**Common Stock**"), and 100,000,000 shares of Preferred Stock, \$0.0001 par value per share (the "**Preferred Stock**").

Immediately upon the effectiveness of this Restated Certificate of Incorporation for filing by the Secretary of State of the State of Delaware (the "**Effective Time**"), each share of the Corporation's Common Stock issued and outstanding or held as treasury stock immediately prior to the Effective Time, shall, automatically and without further action by any stockholder, be reclassified as, and shall become, one share of Class A Common Stock. Any stock certificate that immediately prior to the Effective Time represented shares of the Corporation's Common Stock shall from and after the Effective Time be deemed to represent shares of Class A Common Stock, without the need for surrender or exchange thereof.

1.2 The number of authorized shares of Class A Common Stock or Class B Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote (or written consent if action by written consent of stockholders

is permitted at such time under this Restated Certificate of Incorporation) of the holders of capital stock representing a majority of the voting power of all the then-outstanding shares of capital stock of the Corporation entitled to vote thereon, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law, and no vote of the holders of the Class A Common Stock or Class B Common Stock voting separately as a class shall be required therefor.

2. Preferred Stock.

2.1 The Corporation's Board of Directors ("**Board of Directors**") is authorized, subject to any limitations prescribed by the law of the State of Delaware, by resolution or resolutions adopted from time to time, to provide for the issuance of shares of Preferred Stock in one or more series, and, by filing a certificate of designation pursuant to the applicable law of the State of Delaware ("**Certificate of Designation**"), to establish from time to time the number of shares to be included in each such series, to fix the designation, powers (including voting powers), preferences and relative, participating, optional or other special rights (and the qualifications, limitations or restrictions thereof) of the shares of each such series and, except where otherwise provided in the applicable Certificate of Designation, to increase (but not above the total number of authorized shares of the Preferred Stock) or decrease (but not below the number of shares of such series then outstanding) the number of shares of any such series. The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote (or written consent if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation) of the holders of a majority of the voting power of all the then-outstanding shares of capital stock of the Corporation entitled to vote thereon, without a separate vote of the holders of the Preferred Stock, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law, unless a separate vote of the holders of one or more series of Preferred Stock is required pursuant to the terms of any Certificate of Designation.

2.2 Except as otherwise expressly provided in any Certificate of Designation designating any series of Preferred Stock pursuant to the foregoing provisions of this Article IV, (i) any new series of Preferred Stock may be designated, fixed and determined as provided herein by the Board of Directors without approval of the holders of Common Stock or the holders of Preferred Stock, or any series thereof, and (ii) any such new series may have powers, preferences and rights, including, without limitation, voting powers, dividend rights, liquidation rights, redemption rights and conversion rights, senior to, junior to or pari passu with the rights of the Common Stock, any series of the Preferred Stock, or any future class or series of capital stock of the Corporation.

3. Rights of Class A Common Stock and Class B Common Stock.

3.1 **Equal Status.** Except as otherwise provided in this Restated Certificate of Incorporation or required by applicable law, shares of Class A Common Stock and Class B Common Stock shall have the same rights and powers, rank equally (including as to dividends and distributions, and upon any liquidation, dissolution or winding up of the Corporation), share ratably and be identical in all respects and as to all matters.

3.2 Voting Rights. Except as otherwise expressly provided by this Restated Certificate of Incorporation or as provided by applicable law, the holders of shares of Class A Common Stock and Class B Common Stock shall (a) at all times vote together as a single class on all matters (including the election of directors) submitted to a vote or for the consent (if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation) of the stockholders of the Corporation, (b) be entitled to notice of any stockholders' meeting in accordance with the Bylaws of the Corporation (as the same may be amended and/or restated from time to time, the "**Bylaws**") and (c) be entitled to vote upon such matters and in such manner as may be provided by applicable law; provided, however, that, except as otherwise required by applicable law, holders of shares of Class A Common Stock and Class B Common Stock shall not be entitled to vote on any amendment to this Restated Certificate of Incorporation (including any Certificate of Designation relating to any series of Preferred Stock) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together as a class with the holders of one or more other such series, to vote thereon pursuant to this Restated Certificate of Incorporation (including any Certificate of Designation relating to any series of Preferred Stock). Except as otherwise expressly provided herein or required by applicable law, each holder of Class A Common Stock shall have the right to one (1) vote per share of Class A Common Stock held of record by such holder and each holder of Class B Common Stock shall have the right to ten (10) votes per share of Class B Common Stock held of record by such holder.

3.3 Dividends and Distribution Rights. Shares of Class A Common Stock and Class B Common Stock shall be treated equally, identically and ratably, on a per share basis, with respect to any dividends or distributions as may be declared and paid from time to time by the Board of Directors out of any assets of the Corporation legally available therefor; provided, however, that in the event a dividend is paid in the form of shares of Class A Common Stock or Class B Common Stock (or rights to acquire such shares), then holders of Class A Common Stock shall receive shares of Class A Common Stock (or rights to acquire such shares, as the case may be) and holders of Class B Common Stock shall receive shares of Class B Common Stock (or rights to acquire such shares, as the case may be), with holders of shares of Class A Common Stock and Class B Common Stock receiving, on a per share basis, an identical number of shares of Class A Common Stock or Class B Common Stock, as applicable. Notwithstanding the foregoing, the Board of Directors may pay or make a disparate dividend or distribution per share of Class A Common Stock or Class B Common Stock (whether in the amount of such dividend or distribution payable per share, the form in which such dividend or distribution is payable, the timing of the payment, or otherwise) if such disparate dividend or distribution is approved in advance by the affirmative vote (or written consent if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation) of the holders of a majority of the outstanding shares of Class A Common Stock and Class B Common Stock, each voting separately as a class.

3.4 Subdivisions, Combinations or Reclassifications. Shares of Class A Common Stock or Class B Common Stock may not be subdivided, combined or reclassified unless the shares of the other class are concurrently therewith proportionately subdivided, combined or reclassified in a manner that maintains the same proportionate equity ownership between the holders of the outstanding Class A Common Stock and Class B Common Stock on the record date for such subdivision, combination or reclassification; provided, however, that shares of one such

class may be subdivided, combined or reclassified in a different or disproportionate manner if such subdivision, combination or reclassification is approved in advance by the affirmative vote (or written consent if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation) of the holders of a majority of the outstanding shares of Class A Common Stock and Class B Common Stock, each voting separately as a class.

3.5 Liquidation, Dissolution or Winding Up. Subject to the preferential or other rights of any holders of Preferred Stock then outstanding, upon the liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, holders of Class A Common Stock and Class B Common Stock will be entitled to receive ratably all assets of the Corporation available for distribution to its stockholders unless disparate or different treatment of the shares of each such class with respect to distributions upon any such liquidation, dissolution or winding up is approved in advance by the affirmative vote (or written consent if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation) of the holders of a majority of the outstanding shares of Class A Common Stock and Class B Common Stock, each voting separately as a class.

3.6 Merger or Consolidation. In the case of any distribution or payment in respect of the shares of Class A Common Stock or Class B Common Stock upon the merger or consolidation of the Corporation with or into any other entity, or in the case of any other transaction having an effect on stockholders substantially similar to that resulting from a merger or consolidation, such distribution or payment shall be made ratably on a per share basis among the holders of the Class A Common Stock and Class B Common Stock as a single class; provided, however, that shares of one such class may receive different or disproportionate distributions or payments in connection with such merger, consolidation or other transaction if (i) the only difference in the per share distribution to the holders of the Class A Common Stock and Class B Common Stock is that any securities distributed to the holder of a share Class B Common Stock have ten times the voting power of any securities distributed to the holder of a share of Class A Common Stock, or (ii) such merger, consolidation or other transaction is approved by the affirmative vote (or written consent if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation) of the holders of a majority of the outstanding shares of Class A Common Stock and Class B Common Stock, each voting separately as a class.

3.7 Change in Control Class B Vote. Until the first date on which the outstanding shares of Class B Common Stock represent less than forty percent (40%) of the total voting power of the then outstanding shares of capital stock of the Corporation then entitled to vote generally in the election of directors, the Corporation shall not consummate a Change in Control Transaction (as defined in Section 5 of Article V) without first obtaining the affirmative vote (or written consent if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation) of the holders of a majority of the then outstanding shares of Class B Common Stock, voting as a separate class, in addition to any other vote required by applicable law, this Restated Certificate of Incorporation or the Bylaws.

3.8 So long as any shares of Class B Common Stock remain outstanding, the Corporation shall not, without the approval by vote or written consent of the holders of a majority of the voting power of the Class B Common Stock then outstanding, voting together as a single

class, directly or indirectly, or whether by amendment, or through merger, recapitalization, consolidation or otherwise:

(i) amend, alter, or repeal any provision of the Certificate of Incorporation or the Bylaws that modifies the voting, conversion or other powers, preferences, or other special rights or privileges, or restrictions of the Class B Common Stock; or

(ii) reclassify any outstanding shares of Class A Common Stock of the Corporation into shares having rights as to dividends or liquidation that are senior to the Class B Common Stock or the right to more than one (1) vote for each share thereof.

**ARTICLE V:
CLASS B COMMON STOCK CONVERSION**

1. Optional Conversion. Each share of Class B Common Stock shall be convertible into one (1) fully paid and nonassessable share of Class A Common Stock at the option of the holder thereof at any time upon written notice to the Corporation. Before any holder of Class B Common Stock shall be entitled to convert any of such holder's shares of such Class B Common Stock into shares of Class A Common Stock, such holder shall deliver an instruction, duly signed and authenticated in accordance with any procedures set forth in the Bylaws or any policies of the Corporation then in effect, at the principal corporate office of the Corporation or of any transfer agent for the Class B Common Stock, and shall give written notice to the Corporation at its principal corporate office of such holder's election to convert the same and shall state therein the name or names in which the shares of Class A Common Stock issuable on conversion thereof are to be registered on the books of the Corporation. The Corporation shall, as soon as practicable thereafter, register on the Corporation's books ownership of the number of shares of Class A Common Stock to which such record holder of Class B Common Stock, or to which the nominee or nominees of such record holder, shall be entitled as aforesaid. Such conversion shall be deemed to have occurred immediately prior to the close of business on the date such notice of the election to convert is received by the Corporation, and the person or persons entitled to receive the shares of Class A Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Class A Common Stock as of such date.

2. Automatic Conversion of all Outstanding Class B Common Stock. Each share of Class B Common Stock shall automatically, without further action by the Corporation or the holder thereof, be converted into one (1) fully paid and nonassessable share of Class A Common Stock immediately prior to the close of business on the earliest to occur of (i) the date specified by the affirmative vote (or written consent if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation) of the holders of Class B Common Stock representing seventy-five percent (75%) of the outstanding shares of Class B Common Stock, voting as a separate class, (ii) the date that is (A) ninety (90) days after the date of the death or Incapacity of the last Founder to die or become Incapacitated or (B) such later date, not to exceed a total period of two hundred and seventy (270) days after the date of the death or Incapacity of the last Founder to die or become Incapacitated, as may be approved prior to the date that is ninety (90) days after the date of death or Incapacity of the last Founder to die or become Incapacitated by a majority of the Independent Directors then in office, with such later date, if any, maintained by the secretary of the Corporation in writing as part of the

books and records of the Corporation, a copy of which shall be furnished, without cost, to any stockholder who makes a request therefor or (iii) the date fixed by the Board of Directors that is no less than sixty one (61) days and no more than one hundred eighty (180) days following the date that the total number of outstanding shares of Class B Common Stock held by the Founders and their Permitted Entities and Permitted Transferees collectively represents less than fifty percent (50%) of the total number of shares of Class B Common Stock held collectively by the Founders and their Permitted Entities and Permitted Transferees as of 11:59 p.m. Pacific Time on the Effective Date (each event referred to in (i), (ii) and (iii) is referred to herein as a “**Final Automatic Conversion**”). The Corporation shall provide notice of the Final Automatic Conversion of shares of Class B Common Stock pursuant to this Section 2 of Article V to record holders of such shares of Class B Common Stock as soon as practicable following the Final Automatic Conversion. Such notice shall be provided by any means then permitted by the General Corporation Law; provided, however, that no failure to give such notice nor any defect therein shall affect the validity of the Final Automatic Conversion. Upon and after the Final Automatic Conversion, the person registered on the Corporation’s books as the record holder of the shares of Class B Common Stock so converted immediately prior to the Final Automatic Conversion shall be registered on the Corporation’s books as the record holder of the shares of Class A Common Stock issued upon the Final Automatic Conversion of such shares of Class B Common Stock, without further action on the part of the record holder thereof. Immediately upon the effectiveness of the Final Automatic Conversion, the rights of the holders of shares of Class B Common Stock as such shall cease, and the holders shall be treated for all purposes as having become the record holder or holders of such shares of Class A Common Stock into which such shares of Class B Common Stock were converted.

3. Conversion on Transfer. Each share of Class B Common Stock shall automatically, without further action by the Corporation or the holder thereof, be converted into one (1) fully paid and nonassessable share of Class A Common Stock, upon the occurrence of a Transfer (as defined below), other than a Permitted Transfer (as defined below), of such share of Class B Common Stock.

4. Policies and Procedures. The Corporation may, from time to time, as it may deem necessary or advisable, establish such policies and procedures, not in violation of applicable law or this Restated Certificate of Incorporation or the Bylaws, relating to the conversion of shares of the Class B Common Stock into shares of Class A Common Stock. If the Corporation has reason to believe that a Transfer that is not a Permitted Transfer has occurred, the Corporation may request that the purported transferor furnish affidavits or other evidence to the Corporation as it reasonably deems necessary to determine whether a Transfer that is not a Permitted Transfer has occurred, and if such transferor does not within ten (10) days after the date of such request furnish sufficient evidence to the Corporation (in the manner provided in the request) to enable the Corporation to determine that no such Transfer has occurred, any such shares of Class B Common Stock, to the extent not previously converted, shall be automatically converted into shares of Class A Common Stock at the close of business on the tenth (10th) day following such request, and such conversion shall thereupon be registered on the books and records of the Corporation. In connection with any action of stockholders taken at a meeting or by written consent (if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation), the stock ledger of the Corporation shall be presumptive evidence as to who are the stockholders entitled to vote in person or by proxy at any meeting of stockholders

or in connection with any such written consent and the classes of shares held by each such stockholder and the number of shares of each class held by such stockholder.

5. **Definitions.**

(a) “**Change in Control Transaction**” shall mean the occurrence of any of the following events:

(i) the sale, lease, exchange, encumbrance or other disposition (other than licenses that do not constitute an effective disposition of all or substantially all of the assets of the Corporation and its subsidiaries taken as a whole, and the grant of security interests in the ordinary course of business) by the Corporation of all or substantially all of the Corporation’s assets; or

(ii) the merger or consolidation of the Corporation with or into any other entity, other than a merger or consolidation that would result in the Class B Common Stock of the Corporation outstanding immediately prior thereto representing (either by remaining outstanding or by being converted into voting securities of the surviving entity or its sole parent entity) more than fifty percent (50%) of the total voting power represented by the voting securities of the Corporation or such surviving entity or its sole parent entity outstanding immediately after such merger or consolidation.

(b) “**Convertible Security**” shall mean any evidences of indebtedness or other securities (other than shares of Class B Common Stock) convertible into or exchangeable for Class B Common Stock, either directly or indirectly.

(c) “**Effective Date**” means the date that this Restated Certificate of Incorporation is accepted for filing by the Secretary of State of the State of Delaware.

(d) “**Securities Act**” shall mean the Securities Act of 1933, as amended.

(e) “**Family Member**” shall mean with respect to any natural person who is a Qualified Stockholder, the spouse, domestic partner, parents, grandparents, children and grandchildren of such Qualified Stockholder. Children and grandchildren shall include adopted persons, but only so long as they are adopted while a minor.

(f) “**Founder**” shall mean either Mo Chen or Xiaodi Hou, an individual.

(g) “**Incapacity**” (or “**Incapacitated**”) shall mean, with respect to an individual, that such individual is incapable of managing his or her financial affairs under the criteria set forth in the applicable probate code, that can be expected to result in death, or which has lasted or can be expected to last for a continuous period of not less than twelve (12) months as determined by a licensed medical practitioner. In the event of a dispute regarding whether an individual has suffered an Incapacity, no Incapacity of such individual will be deemed to have occurred unless and until an affirmative ruling regarding such Incapacity has been made by a court of competent jurisdiction.

(h) “**Independent Directors**” shall mean members of the Board of Directors that are not officers or otherwise employees of the Corporation or its subsidiaries; provided that a

director shall not be considered an officer or employee of the Corporation solely due to such director's position as a member of the Board of Directors or the board of directors or similar governing body of one or more subsidiaries of the Corporation or such director's service as a non-executive chairman, lead independent director or in any similar capacity.

(i) **"Initial Public Offering Closing"** shall mean the closing of the Corporation's initial public offering pursuant to an effective registration statement under the Securities Act covering the offer and sale of Class A Common Stock to the public.

(j) **"Option"** shall mean rights, options, restricted stock units, share value awards or warrants to subscribe for, purchase or otherwise acquire Class B Common Stock or Convertible Securities (as defined above).

(k) **"Parent"** of an entity shall mean any entity that directly or indirectly owns or controls a majority of the voting power of the voting securities of such entity.

(l) **"Permitted Entity"** shall mean with respect to a Qualified Stockholder: (a) a Permitted Trust solely for the benefit of such Qualified Stockholder or such Qualified Stockholder's Family Member, for bona fide estate planning purposes; or (b) any general partnership, limited partnership, limited liability company, corporation or other entity exclusively owned by such Qualified Stockholder or any other Permitted Entity of such Qualified Stockholder.

(m) **"Permitted Transfer"** shall mean, and be restricted to, any Transfer of a share of Class B Common Stock:

(i) by a Qualified Stockholder to (A) a Founder's estate or a Founder's heirs, effective either (1) upon the death of such Founder or (2) during or following any Incapacity of such Founder, (B) any Permitted Entity of such Qualified Stockholder, (C) to such Qualified Stockholder's revocable living trust, which revocable living trust is itself both a Permitted Trust and a Qualified Stockholder or (D) a Founder; or

(ii) by a Permitted Entity of a Qualified Stockholder to (A) such Qualified Stockholder, (B) any other Permitted Entity of such Qualified Stockholder or (C) a Founder.

(n) **"Permitted Transferee"** shall mean a transferee of shares of Class B Common Stock received in a Permitted Transfer.

(o) **"Permitted Trust"** shall mean a bona fide trust where each trustee is (i) a Qualified Stockholder, (ii) a Family Member, or (iii) a professional in the business of providing trustee services, including private professional fiduciaries, trust companies and bank trust departments.

(p) **"Person"** shall mean a natural person, corporation, limited liability company, partnership, joint venture, trust, unincorporated association or other legal entity.

(q) **"Qualified Stockholder"** shall mean: (a) the record holder of a share of Class B Common Stock as of 11:59 p.m. Pacific Time on the Effective Date; (b) each natural person who Transferred shares of Class B Common Stock (including any Option exercisable or

Convertible Security exchangeable for or convertible into shares of Class B Common Stock) to a Permitted Entity that is or becomes a Qualified Stockholder; (c) a Permitted Transferee and (d) a Founder.

(r) “**Transfer**” of a share of Class B Common Stock shall mean any sale, assignment, transfer, conveyance, hypothecation or other transfer or disposition of such share or any legal or beneficial interest in such share, whether or not for value and whether voluntary or involuntary or by operation of law, including, without limitation, a transfer of a share of Class B Common Stock to a broker or other nominee (regardless of whether there is a corresponding change in beneficial ownership), or the transfer of, or entering into a binding agreement with respect to, Voting Control over such share by proxy or otherwise; provided, however, that the following shall not be considered a “**Transfer**” within the meaning of this Section 5 of Article V:

(i) the granting of a revocable proxy to officers or directors of the Corporation at the request of the Board of Directors in connection with actions to be taken at an annual or special meeting of stockholders or in connection with any action by written consent of the stockholders solicited by the Board of Directors (if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation);

(ii) entering into a voting trust, agreement or arrangement (with or without granting a proxy) solely with stockholders who are holders of Class B Common Stock that (A) is disclosed either in a Schedule 13D filed with the Securities and Exchange Commission or in writing to the Secretary of the Corporation, (B) either has a term not exceeding one (1) year or is terminable by the holder of the shares subject thereto at any time and (C) does not involve any payment of cash, securities, property or other consideration to the holder of the shares subject thereto other than the mutual promise to vote shares in a designated manner;

(iii) entering into a voting trust, agreement or arrangement (with or without granting a proxy) pursuant to a written agreement to which the Corporation is a party;

(iv) the pledge of shares of Class B Common Stock by a stockholder that creates a mere security interest in such shares pursuant to a bona fide loan or indebtedness transaction for so long as such stockholder continues to exercise Voting Control over such pledged shares; provided, however, that a foreclosure on such shares or other similar action by the pledgee shall constitute a Transfer unless such foreclosure or similar action qualifies as a Permitted Transfer;

(v) the fact that, as of the Effective Date or at any time after the Effective Date, the spouse of any holder of Class B Common Stock possesses or obtains an interest in such holder’s shares of Class B Common Stock arising solely by reason of the application of the community property laws of any jurisdiction, so long as no other event or circumstance shall exist or have occurred that constitutes a Transfer of such shares of Class B Common Stock; provided that any transfer of shares by any holder of shares of Class B Common Stock to such holder’s spouse, including a transfer in connection with a divorce proceeding, domestic relations order or similar legal requirement, shall constitute a “**Transfer**” of such shares of Class B Common Stock unless otherwise exempt from the definition of Transfer;

(vi) entering into a trading plan pursuant to Rule 10b5-1 under the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), with a broker or other nominee; provided, however, that a sale of such shares of Class B Common Stock pursuant to such plan shall constitute a “**Transfer**” at the time of such sale;

(vii) in connection with a merger or consolidation of the Corporation with or into any other entity, or in the case of any other transaction having an effect on stockholders substantially similar to that resulting from a merger or consolidation, that has been approved by the Board of Directors, the entering into a support, voting, tender or similar agreement or arrangement (in each case, with or without the grant of a proxy) that has also been approved by the Board of Directors;

(viii) granting a proxy by a Founder or such Founder’s Permitted Transferees to a Person designated by such Founder and approved, in advance, by a majority of the Independent Directors then in office to exercise dispositive power and/or Voting Control of shares of Class B Common Stock owned directly or indirectly, beneficially and of record, by such Founder, such Founder’s Permitted Transferees, such Founder’s estate or such Founder’s heirs, effective either (A) upon the death of such Founder or (B) during or following any Incapacity of such Founder, including the exercise of such proxy by such Person; or

(ix) granting a proxy by a Founder or such Founder’s Permitted Transferees to the other Founder to exercise dispositive power and/or Voting Control of shares of Class B Common Stock owned directly or indirectly, beneficially and of record, by such Founder, such Founder’s Permitted Transferees, such Founder’s estate or such Founder’s heirs, effective either (A) upon the death of such Founder or (B) during or following any Incapacity of such Founder, including the exercise of such proxy by the other Founder.

A Transfer shall also be deemed to have occurred with respect to a share of Class B Common Stock beneficially held by (i) an entity that is a Permitted Entity, if there occurs any act or circumstance that causes such entity to no longer be a Permitted Entity or (ii) an entity that is a Qualified Stockholder, if, in either case, there occurs a Transfer on a cumulative basis, from and after the Effective Date, of a majority of the voting power of the voting securities of such entity or any direct or indirect Parent of such entity, other than a Transfer to parties that are, as of the Effective Date, holders of voting securities of any such entity or Parent of such entity.

(s) “**Voting Control**” shall mean, with respect to a share of Class B Common Stock, the power (whether exclusive or shared) to vote or direct the voting of such share by proxy, voting agreement or otherwise.

(t) “**Voting Threshold Date**” shall mean 11:59 p.m. Pacific Time on the first day following the Corporation’s 2022 Annual Meeting of Stockholders falling on or after the date on which the outstanding shares of Class B Common Stock represent less than forty percent (40%) of the total voting power of the then-outstanding shares of the Corporation then entitled to vote generally in the election of directors.

6. Immediate Effect and Status of Converted Stock. In the event of a conversion of shares of Class B Common Stock into shares of Class A Common Stock pursuant

to Section 3 of this Article V, or upon the date of the Final Automatic Conversion, such conversion(s) shall be deemed to have been made at the time that the Transfer of shares occurred or immediately at 11:59 p.m. Pacific Time on the date of the Final Automatic Conversion, as applicable. In the event any shares of Class B Common Stock are converted into shares of Class A Common Stock pursuant to this Article V, the shares of Class B Common Stock so converted shall be retired and shall not be reissued by the Corporation.

7. **Effect of Conversion on Payment of Dividends.** Notwithstanding anything to the contrary in Sections 1, 2 or 3 of this Article V, if the date on which any share of Class B Common Stock is converted into Class A Common Stock pursuant to the provisions of Sections 1, 2 or 3 of this Article V occurs after the record date for the determination of the holders of Class B Common Stock entitled to receive any dividend or distribution to be paid on the shares of Class B Common Stock, the holder of such shares of Class B Common Stock as of such record date will be entitled to receive such dividend or distribution on such payment date; provided, that, notwithstanding any other provision of this Restated Certificate of Incorporation, to the extent that any such dividend or distribution is payable in shares of Class B Common Stock, such dividend or distribution shall be deemed to have been declared, and shall be payable in, shares of Class A Common Stock and no shares of Class B Common Stock shall be issued in payment thereof.

8. **Reservation.** The Corporation shall at all times reserve and keep available, out of its authorized and unissued shares of Class A Common Stock, solely for the purpose of effecting conversions of shares of Class B Common Stock into Class A Common Stock, such number of duly authorized shares of Class A Common Stock as shall from time to time be sufficient to effect the conversion of all then-outstanding shares of Class B Common Stock. If at any time the number of authorized and unissued shares of Class A Common Stock shall not be sufficient to effect the conversion of all then-outstanding shares of Class B Common Stock, the Corporation shall promptly take such corporate action as may be necessary to increase its authorized but unissued shares of Class A Common Stock to such number of shares as shall be sufficient for such purpose, including, without limitation, obtaining the requisite stockholder approval of any necessary amendment to this Restated Certificate of Incorporation. All shares of Class A Common Stock which are so issuable shall, when issued, be duly and validly issued, fully paid and non-assessable shares. The Corporation shall take all such action as may be necessary to ensure that all such shares of Class A Common Stock may be so issued without violation of any applicable law or regulation.

9. **No Further Issuances.** Except for the issuance of Class B Common Stock issuable upon exercise of Rights outstanding at the Effective Time or a dividend payable in accordance with Article IV, Section 3.3, the Corporation shall not at any time after the Effective Time issue any additional shares of Class B Common Stock, unless such issuance is approved by the affirmative vote of the holders of a majority of the outstanding shares of Class B Common Stock. After the date of the Final Automatic Conversion, the Corporation shall not issue any additional shares of Class B Common Stock.

**ARTICLE VI:
AMENDMENT OF BYLAWS**

The Board of Directors shall have the power to adopt, amend or repeal the Bylaws. Any adoption, amendment or repeal of the Bylaws by the Board of Directors shall require the approval of a majority of the Whole Board. For purposes of this Restated Certificate of Incorporation, the term “**Whole Board**” shall mean the total number of authorized directors whether or not there exist any vacancies in previously authorized directorships. The stockholders shall also have power to adopt, amend or repeal the Bylaws; provided, however, that, notwithstanding any other provision of this Restated Certificate of Incorporation or any provision of law that might otherwise permit a lesser or no vote, but in addition to any vote of the holders of any class or series of stock of the Corporation required by applicable law or by this Restated Certificate of Incorporation, the affirmative vote (or written consent if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation) of the holders of at least two-thirds (2/3) of the voting power of all of the then-outstanding shares of the capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required for the stockholders to adopt, amend or repeal any provision of the Bylaws; provided, further, however, that, in the case of any proposed adoption, amendment or repeal of any provisions of the Bylaws that is approved by the Board of Directors and submitted to the stockholders for adoption thereby, if directors representing two-thirds (2/3) of the Whole Board have approved such adoption, amendment or repeal of any provisions of the Bylaws, then, in addition to any vote of the holders of any class or series of stock of the Corporation required by applicable law or by this Restated Certificate of Incorporation, only the affirmative vote (or written consent if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation) of the holders of at least a majority of the voting power of all of the then-outstanding shares of the capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required to adopt, amend or repeal such provision of the Bylaws.

**ARTICLE VII:
MATTERS RELATING TO THE BOARD OF DIRECTORS**

1. **Director Powers.** Except as otherwise provided by the General Corporation Law or this Certificate of Incorporation, the business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

2. **Number of Directors.** Subject to the special rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, the total number of directors constituting the Whole Board shall be fixed from time to time exclusively by resolution adopted by a majority of the Whole Board.

3. **Classified Board.** Subject to the special rights of the holders of one or more series of Preferred Stock to elect directors, immediately following the Voting Threshold Date, the directors shall be divided, with respect to the time for which they severally hold office, into three classes designated as Class I, Class II and Class III, respectively (the “**Classified Board**”). The Board of Directors is authorized to assign members of the Board of Directors already in office immediately prior to the Voting Threshold Date to such classes of the Classified Board. The

number of directors in each class shall be divided as nearly equal as is practicable. The initial term of office of the Class I directors shall expire at the Corporation's first annual meeting of stockholders following the Voting Threshold Date, the initial term of office of the Class II directors shall expire at the Corporation's second annual meeting of stockholders following the Voting Threshold Date, and the initial term of office of the Class III directors shall expire at the Corporation's third annual meeting of stockholders following the Voting Threshold Date. At each annual meeting of stockholders following the Voting Threshold Date, directors elected to succeed those directors of the class whose terms then expire shall be elected for a term of office expiring at the third succeeding annual meeting of stockholders after their election.

4. **Term and Removal.** Each director shall hold office until the annual meeting at which such director's term expires and until such director's successor is duly elected and qualified, or until such director's earlier death, resignation, disqualification or removal. Any director may resign at any time upon notice to the Corporation given in writing or by any electronic transmission. Prior to the Voting Threshold Date, subject to the special rights of the holders of any series of Preferred Stock to elect directors, directors may be removed with or without cause by the affirmative vote (or written consent if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation) of the holders of a majority of the voting power of the then-outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class. From and after the Voting Threshold Date, subject to the special rights of the holders of any series of Preferred Stock to elect directors, no director may be removed from the Board of Directors except for cause and only by the affirmative vote of the holders of at least two-thirds (2/3) of the voting power of the then-outstanding shares of capital stock of the Corporation entitled to vote thereon, voting together as a single class. Subject to the special rights of the holders of any series of Preferred Stock to elect directors, in the event of any increase or decrease in the authorized number of directors occurring after the Voting Threshold Date, (a) each director then serving as such shall nevertheless continue as a director of the class of which he or she is a member and (b) the newly created or eliminated directorships resulting from such increase or decrease shall be apportioned by the Board of Directors among the classes of directors so as to make all classes as nearly equal in number as is practicable. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

5. **Vacancies and Newly Created Directorships.** Subject to the special rights of the holders of any series of Preferred Stock to elect directors, any vacancy occurring in the Board of Directors for any cause, and any newly created directorship resulting from any increase in the authorized number of directors, shall be filled only by the affirmative vote of a majority of the directors then in office, even if less than a quorum, or by a sole remaining director, and shall not be filled by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for a term expiring at the annual meeting of stockholders at which the term of office of the class, if any, to which the director has been assigned expires and until such director's successor shall have been duly elected and qualified, or until such director's earlier death, resignation, disqualification or removal.

6. **Additional Directors Elected by the Preferred Stock.** During any period when the holders of any series of Preferred Stock have the right to elect additional directors as provided for or fixed pursuant to the provisions of Article IV hereof (including any Certificate of

Designation) (any such director, a “**Preferred Stock Director**”), and upon commencement and for the duration of the period during which such right continues: (i) the then otherwise total authorized number of directors of the Corporation shall automatically be increased by such number of Preferred Stock Directors that the holders of any series of Preferred Stock have a right to elect, and the holders of such Preferred Stock shall be entitled to elect the additional Preferred Stock Directors so provided for or fixed pursuant to said provisions; and (ii) each such Preferred Stock Director shall serve until his or her successor shall have been duly elected and qualified, or until his or her right to hold such office terminates pursuant to said provisions, whichever occurs earlier, subject to his or her earlier death, disqualification, resignation or removal. In case any vacancy shall occur among the Preferred Stock Directors, a successor Preferred Stock Director may be elected by the holders of Preferred Stock pursuant to said provisions. Except as otherwise provided for or fixed pursuant to the provisions of Article IV hereof (including any Preferred Stock Designation), whenever the holders of any series of Preferred Stock having such right to elect an additional Preferred Stock Director are divested of such right pursuant to said provisions, the terms of office of such Preferred Stock Director elected by the holders of such Preferred Stock, or elected to fill any vacancies resulting from the death, resignation, disqualification or removal of such additional Preferred Stock Director, shall forthwith terminate (in which case such person shall cease to be qualified as a director and shall cease to be a director) and the total authorized number of directors of the Corporation shall be automatically reduced accordingly.

7. **Vote by Ballot.** Election of directors need not be by written ballot unless the Bylaws shall so provide.
8. **No Cumulative Voting.** No stockholder will be permitted to cumulate votes at any election of directors.

ARTICLE VIII: DIRECTOR LIABILITY

1. **Limitation of Liability.** To the fullest extent permitted by law, no director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. Without limiting the effect of the preceding sentence, if the General Corporation Law is hereafter amended to authorize the further elimination or limitation of the liability of a director, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law, as so amended.

2. **Change in Rights.** Neither any amendment nor repeal of this Article VIII, nor the adoption of any provision of this Restated Certificate of Incorporation inconsistent with this Article VIII, shall eliminate, reduce or otherwise adversely affect any limitation on the personal liability of a director of the Corporation or any rights or protections of any officer or director of the Corporation under this Article VIII with respect to acts or omissions occurring prior to the time of such amendment, repeal or adoption of such an inconsistent provision.

**ARTICLE IX:
MATTERS RELATING TO STOCKHOLDERS**

1. **No Action by Written Consent of Stockholders.** Subject to the rights of any series of Preferred Stock then outstanding, from and after the Voting Threshold Date, (i) no action shall be taken by the stockholders of the Corporation except at a duly called annual or special meeting of stockholders and (ii) no action shall be taken by the stockholders of the Corporation by written consent in lieu of a meeting.

2. **Special Meeting of Stockholders.** Special meetings of the stockholders of the Corporation may be called only by the Chairperson of the Board, the Executive Chairman, Chief Executive Officer (as defined in the Bylaws) or the Board of Directors acting pursuant to a resolution adopted by a majority of the Whole Board, and may not be called by the stockholders or any other person or persons.

3. **Advance Notice of Stockholder Nominations and Business Transacted at Special Meetings.** Advance notice of stockholder nominations for the election of directors of the Corporation and of business to be brought by stockholders before any meeting of stockholders of the Corporation shall be given in the manner provided in the Bylaws. Business transacted at special meetings of stockholders shall be limited to the purpose or purposes stated in the notice of meeting.

**ARTICLE X:
SEVERABILITY**

If any provision of this Restated Certificate of Incorporation shall be held to be invalid, illegal, or unenforceable, then such provision shall nonetheless be enforced to the maximum extent possible consistent with such holding and the remaining provisions of this Restated Certificate of Incorporation (including without limitation, all portions of any section of this Restated Certificate of Incorporation containing any such provision held to be invalid, illegal, or unenforceable, which is not invalid, illegal, or unenforceable) shall remain in full force and effect.

**ARTICLE XI:
AMENDMENT OF RESTATED CERTIFICATE OF INCORPORATION**

1. **General.** The Corporation reserves the right to amend or repeal any provision contained in this Restated Certificate of Incorporation in the manner prescribed by the laws of the State of Delaware and all rights conferred upon stockholders are granted subject to this reservation; provided, however, that, notwithstanding any provision of this Restated Certificate of Incorporation (including any Certificate of Designation) or any provision of law that might otherwise permit a lesser vote or no vote (other than Sections 1.2 and 2.1 of Article IV hereof), but in addition to any vote of the holders of any class or series of the stock of the Corporation required by applicable law or by this Restated Certificate of Incorporation (including any Certificate of Designation), and subject to Sections 1.2 and 2.1 of Article IV, the affirmative vote (or written consent if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation) of the holders of at least two-thirds (2/3) of the voting power of all of the then-outstanding shares of the capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required to amend or repeal, or adopt any provision inconsistent with, this Section 1 of this Article XI, Sections 1.2 and 2 of Article IV, or Article V, Article VI, Article VII, Article VIII, Article IX, Article X or Article XII (the "***Specified Provisions***"); provided, further, that if directors representing two-thirds (2/3) of the Whole Board have approved such amendment or repeal of, or any provision inconsistent with, the Specified Provisions, then only the affirmative vote (or written consent if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation) of the holders of at least a majority of the voting power of all of the then-outstanding shares of the capital stock of the Corporation entitled to vote generally in the

election of directors, voting together as a single class (in addition to any other vote of the holders of any class or series of stock of the Corporation required by applicable law or by this Certificate of Incorporation), shall be required to approve such amendment or repeal of, or the adoption of such provision inconsistent with, the Specified Provisions.

2. **Changes to or Inconsistent with Section 3 of Article IV.** Notwithstanding any other provision of this Restated Certificate of Incorporation (including any Certificate of Designation) or any provision of law that might otherwise permit a lesser vote or no vote, but in addition to any vote of the holders of any class or series of the stock of the Corporation required by law or by this Restated Certificate of Incorporation (including any Certificate of Designation), the affirmative vote (or written consent if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation) of the holders of Class A Common Stock representing at least seventy-five percent (75%) of the voting power of the then-outstanding shares of Class A Common Stock, voting separately as a single class, and the affirmative vote (or written consent if action by written consent of stockholders is permitted at such time under this Restated Certificate of Incorporation) of the holders of Class B Common Stock representing at least seventy-five percent (75%) of the voting power of the then-outstanding shares of Class B Common Stock, each voting separately as single classes, shall be required to amend or repeal, or to adopt any provision inconsistent with, Section 3 of Article IV or this Section 2 of this Article XI.

ARTICLE XII: CHOICE OF FORUM

Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, the federal district court for the District of Delaware) shall, to the fullest extent permitted by law, be the sole and exclusive forum for: (a) any derivative action or proceeding brought on behalf of the Corporation; (b) any action asserting a claim of breach of a fiduciary duty owed by any current or former director, officer, stockholder, employee or agent of the Corporation to the Corporation or the Corporation's stockholders; (c) any action asserting a claim against the Corporation arising pursuant to any provision of the General Corporation Law, this Restated Certificate of Incorporation or the Bylaws or as to which the General Corporation Law confers jurisdiction on the Court of Chancery of the State of Delaware; (d) any action to interpret, apply, enforce or determine the validity of this Restated Certificate of Incorporation or the Bylaws; or (e) any action asserting a claim against the Corporation governed by the internal affairs doctrine. This Article XII shall not apply to suits brought to enforce a duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction.

To the fullest extent permitted by law, unless the Corporation consents in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be 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 shares of capital stock of the Corporation shall be deemed to have notice of and to have consented to the provisions of this Article XII.

ARTICLE XIII

CERTAIN STOCK REPURCHASES

In connection with repurchases by the Corporation of shares of Common Stock from employees, officers, directors, advisors, consultants or other persons performing services for this corporation or any subsidiary pursuant to agreements under which the Corporation has the option to repurchase such shares at cost upon the occurrence of certain events, such as the termination of employment, Section 500 of the California Corporations Code shall not apply in all or in part with respect to such repurchases. In the case of any such repurchases, distributions by the Corporation may be made without regard to the “preferential dividends arrears amount” or any “preferential rights amount,” as such terms are defined in Section 500(b) of the California Corporations Code.

TUSIMPLE HOLDINGS INC.
(a Delaware corporation)

AMENDED AND RESTATED BYLAWS

As Adopted March 4, 2021 and
As Effective April 14, 2021

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TUSIMPLE HOLDINGS INC.
(a Delaware corporation)

AMENDED AND RESTATED BYLAWS

As Adopted March 4, 2021 and
As Effective April 14, 2021

ARTICLE I
STOCKHOLDERS

Section 1.1 **Annual Meetings.** If required by applicable law, an annual meeting of stockholders shall be held for the election of directors at such date and time as the Board of Directors (the “**Board**”) of TuSimple Holdings Inc. (the “**Corporation**”) shall each year fix. The meeting may be held either at a place, within or without the State of Delaware as permitted by the Delaware General Corporation Law (the “**DGCL**”), or by means of remote communication as the Board in its sole discretion may determine. Any other proper business may be transacted at the annual meeting. The Corporation may postpone, reschedule or cancel any annual meeting of stockholders previously scheduled by the Board.

Section 1.2 **Special Meetings.** Special meetings of stockholders for any purpose or purposes shall be called in the manner set forth in the Restated Certificate of Incorporation of the Corporation (as the same may be amended and/or restated from time to time, the “**Certificate of Incorporation**”). The special meeting may be held either at a place, within or without the State of Delaware, or by means of remote communication as the Board in its sole discretion may determine. Business transacted at any special meeting of stockholders shall be limited to matters relating to the purpose or purposes stated in the notice of the meeting. The Corporation may postpone, reschedule or cancel any special meeting of stockholders previously scheduled by the Board.

Section 1.3 **Notice of Meetings.** Notice of all meetings of stockholders shall be given in writing or by electronic transmission in the manner provided by applicable law (including, without limitation, as set forth in Section 7.1.1 of these Bylaws) stating the date, time and place, if any, of the meeting, the means of remote communication, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, and the record date for determining the stockholders entitled to vote at the meeting (if such date is different from the record date for stockholders entitled to notice of the meeting). In the case of a special meeting, such notice shall also set forth the purpose or purposes for which the meeting is called. Unless otherwise required by applicable law or the Certificate of Incorporation, notice of any meeting of stockholders shall be given not less than ten (10), nor more than sixty (60), days before the date of the meeting to each stockholder of record entitled to vote at such meeting as of the record date for determining the stockholders entitled to notice of the meeting.

Section 1.4 **Adjournments.** Notwithstanding Section 1.5 of these Bylaws, the chairperson of the meeting shall have the power to recess or adjourn any meeting of stockholders, annual or special, to another time, date and place (if any) regardless of whether a quorum is present,

at any time and for any reason. Any meeting of stockholders, annual or special, may be adjourned from time to time, and notice need not be given of any such adjourned meeting if the time, date and place (if any) thereof and the means of remote communication (if any) by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken; *provided, however*, that if (x) the adjournment is for more than thirty (30) days, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting or (y) after the adjournment, a new record date for determination of stockholders entitled to vote is fixed for the adjourned meeting, the Board shall fix as the record date for determining stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote at the adjourned meeting, and shall give notice of the adjourned meeting to each stockholder of record as of the record date so fixed for notice of such adjourned meeting. At the adjourned meeting, the Corporation may transact any business that might have been transacted at the original meeting. If a quorum is present at the original meeting, it shall also be deemed present at the adjourned meeting. To the fullest extent permitted by law, the Board may postpone, reschedule or cancel at any time and for any reason any previously scheduled special or annual meeting of stockholders before it is to be held, regardless of whether any notice or public disclosure with respect to any such meeting has been sent or made pursuant to Section 1.3 hereof or otherwise, in which case notice shall be provided to the stockholders of the new date, time and place, if any, of the meeting as provided in Section 1.3 above.

Section 1.5 **Quorum.** Except as otherwise provided by applicable law, the Certificate of Incorporation or these Bylaws, at each meeting of stockholders the holders of a majority of the voting power of the shares of stock issued and outstanding and entitled to vote at the meeting, present in person or represented by proxy, shall constitute a quorum for the transaction of business; *provided, however*, that where a separate vote by a class or classes or series of stock is required by applicable law or the Certificate of Incorporation, the holders of a majority of the voting power of the shares of such class or classes or series of the stock issued and outstanding and entitled to vote on such matter, present in person or represented by proxy at the meeting, shall constitute a quorum entitled to take action with respect to the vote on such matter. If a quorum shall fail to attend any meeting, the chairperson of the meeting or, if directed to be voted on by the chairperson of the meeting, the holders of a majority of the voting power of the shares entitled to vote who are present in person or represented by proxy at the meeting may adjourn the meeting. Shares of the Corporation's stock belonging to the Corporation (or to another corporation, if a majority of the shares entitled to vote in the election of directors of such other corporation are held, directly or indirectly, by the Corporation), shall neither be entitled to vote nor be counted for quorum purposes; *provided, however*, that the foregoing shall not limit the right of the Corporation or any other corporation to vote any shares of the Corporation's stock held by it in a fiduciary capacity and to count such shares for purposes of determining a quorum. A quorum, once established at a meeting, shall not be broken by the withdrawal of enough votes to leave less than a quorum.

Section 1.6 **Organization.** Meetings of stockholders shall be presided over by (a) such person as the Board may designate, or (b) in the absence of such a person, the Chairperson of the Board, or (c) in the absence of such person, the Lead Independent Director, or, (d) in the absence of such person, the Chief Executive Officer of the Corporation, or (e) in the absence of such person, the President of the Corporation, or (f) in the absence of such person, by a Vice President. The

Secretary of the Corporation shall act as secretary of the meeting, but in such person's absence the chairperson of the meeting may appoint any person to act as secretary of the meeting.

Section 1.7 **Voting; Proxies.** Each stockholder of record entitled to vote at a meeting of stockholders, or to take corporate action by written consent without a meeting, may authorize another person or persons to act for such stockholder by proxy, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. Such a proxy may be prepared, transmitted and delivered in any manner permitted by applicable law. Except as may be required in the Certificate of Incorporation, at all meetings of stockholders for the election of directors at which a quorum is present, directors shall be elected by a plurality of the votes of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors. At all meetings of stockholders at which a quorum is present, unless a different or minimum vote is required by applicable law, rule or regulation applicable to the Corporation or its securities, the rules or regulations of any stock exchange applicable to the Corporation, the Certificate of Incorporation or these Bylaws, in which case such different or minimum vote shall be the applicable vote on the matter, every matter other than the election of directors shall be decided by the affirmative vote of the holders of a majority of the voting power of the shares of stock entitled to vote on such matter that are present in person or represented by proxy at the meeting and are voted for or against the matter (or if there are two or more classes or series of stock entitled to vote as separate classes, then in the case of each class or series, the holders of a majority of the voting power of the shares of stock of that class or series present in person or represented by proxy at the meeting voting for or against such matter).

Section 1.8 **Fixing Date for Determination of Stockholders of Record.**

1.8.1 **Meetings.** In order that the Corporation may determine the stockholders entitled to notice of any meeting of stockholders or any adjournment thereof, the Board may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board, and which record date shall, unless otherwise required by law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If the Board so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the Board determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for making such determination. If no record date is fixed by the Board, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided, however*, that the Board may fix a new record date for determination of stockholders entitled to vote at the adjourned meeting, and in such case shall also fix as the record date for stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote in accordance herewith at the adjourned meeting.

1.8.2 **Stockholder Action by Written Consent.** If stockholders are permitted to act by written consent pursuant to the Certificate of Incorporation, in order that the Corporation may determine the stockholders entitled to consent to corporate action in writing without a meeting, the Board may fix a record date, which record date shall not precede the date upon which the resolution

fixing the record date is adopted by the Board, and which date shall not be more than ten (10) days after the date upon which the resolution fixing the record date is adopted by the Board. If no record date has been fixed by the Board pursuant to the first sentence of this Section 1.8.2, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting (if stockholders are permitted to act by written consent pursuant to the Certificate of Incorporation), when no prior action by the Board is required by applicable law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business, or to any officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders are recorded. If no record date has been fixed by the Board pursuant to the first sentence of this Section 1.8.2, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting if prior action by the Board is required by applicable law shall be at the close of business on the date on which the Board adopts the resolution taking such prior action.

1.8.3 **Meetings.** In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board may fix, in advance, a record date, which shall not precede the date upon which the resolution fixing the record date is adopted by the Board and which shall not be more than sixty (60) days prior to such action. If no such record date is fixed by the Board, then the record date for determining stockholders for any such purpose shall be at 5:00 p.m. Pacific Time on the day on which the Board adopts the resolution relating thereto.

Section 1.9 **List of Stockholders Entitled to Vote.** The Corporation shall prepare, at least ten (10) days before every meeting of stockholders, a complete list of stockholders entitled to vote at the meeting (*provided, however*, if the record date for determining the stockholders entitled to vote is less than ten (10) days before the date of the meeting, the list shall reflect the stockholders entitled to vote as of the tenth (10th) day before the meeting date), arranged in alphabetical order and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, for a period of at least ten (10) days prior to the meeting, (a) on a reasonably accessible electronic network as permitted by applicable law (*provided* that the information required to gain access to the list is provided with the notice of the meeting), or (b) during ordinary business hours, at the principal place of business of the Corporation. If the meeting is held at a location where stockholders may attend in person, a list of stockholders entitled to vote at the meeting shall also be produced and kept at the time and place of the meeting during the whole time thereof and may be inspected by any stockholder who is present at the meeting. If the meeting is held solely by means of remote communication, then the list shall be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access the list shall be provided with the notice of the meeting. Except as otherwise provided by law, the stock ledger shall be the only evidence as to who are the stockholders entitled to examine the list of stockholders required by this Section 1.9 or to vote in person or by proxy at any meeting of stockholders.

Section 1.10 **Inspectors of Elections.**

1.10.1 **Applicability.** Unless otherwise required by the Certificate of Incorporation or by applicable law, the following provisions of this Section 1.10 shall apply only if and when the Corporation has a class of voting stock that is: (a) listed on a national securities exchange; (b) authorized for quotation on an interdealer quotation system of a registered national securities association; or (c) held of record by more than two thousand (2,000) stockholders. In all other cases, observance of the provisions of this Section 1.10 shall be optional, and at the discretion of the Board.

1.10.2 **Appointment.** The Corporation shall, in advance of any meeting of stockholders, appoint one or more inspectors of election to act at the meeting and make a written report thereof. The Corporation may designate one or more persons as alternate inspectors to replace any inspector who fails to act. If no inspector or alternate is able to act at a meeting of stockholders, the person presiding at the meeting shall appoint one or more inspectors to act at the meeting.

1.10.3 **Inspector's Oath.** Each inspector of election, before entering upon the discharge of his duties, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of such inspector's ability.

1.10.4 **Duties of Inspectors.** At a meeting of stockholders, the inspectors of election shall (a) ascertain the number of shares outstanding and the voting power of each share, (b) determine the shares represented at a meeting and the validity of proxies and ballots, (c) count all votes and ballots, (d) determine and retain for a reasonable period of time a record of the disposition of any challenges made to any determination by the inspectors, and (e) certify their determination of the number of shares represented at the meeting, and their count of all votes and ballots. The inspectors may appoint or retain other persons or entities to assist the inspectors in the performance of the duties of the inspectors.

1.10.5 **Opening and Closing of Polls.** The date and time of the opening and the closing of the polls for each matter upon which the stockholders will vote at a meeting shall be announced by the chairperson of the meeting at the meeting. No ballot, proxies or votes, nor any revocations thereof or changes thereto, shall be accepted by the inspectors after the closing of the polls unless the Court of Chancery upon application by a stockholder shall determine otherwise.

1.10.6 **Determinations.** In determining the validity and counting of proxies and ballots, the inspectors shall be limited to an examination of the proxies, any envelopes submitted with those proxies, any information provided in connection with proxies pursuant to Section 211(a)(2)b.(i) of the DGCL, or in accordance with Sections 211(e) or 212(c)(2) of the DGCL, ballots and the regular books and records of the Corporation, except that the inspectors may consider other reliable information for the limited purpose of reconciling proxies and ballots submitted by or on behalf of banks, brokers, their nominees or similar persons which represent more votes than the holder of a proxy is authorized by the record owner to cast or more votes than the stockholder holds of record. If the inspectors consider other reliable information for the limited purpose permitted herein, the inspectors at the time they make their certification of their determinations pursuant to this Section 1.10 shall specify the precise information considered by

them, including the person or persons from whom they obtained the information, when the information was obtained, the means by which the information was obtained and the basis for the inspectors' belief that such information is accurate and reliable.

Section 1.11 **Conduct of Meetings.** The Board may adopt by resolution such rules and regulations for the conduct of the meeting of stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board, the person presiding over any meeting of stockholders shall have the right and authority to convene and (for any or no reason) to recess and/or adjourn the meeting, to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such presiding person, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board or prescribed by the presiding person of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) rules and procedures for maintaining order at the meeting and the safety of those present; (iii) limitations on attendance at or participation in the meeting to stockholders entitled to vote at the meeting, their duly authorized and constituted proxies or such other persons as the presiding person of the meeting shall determine; (iv) restrictions on entry to the meeting after the time fixed for the commencement thereof; (v) limitations on the time allotted to questions or comments by participants; (vi) restricting the use of audio/video recording devices and cell phones; and (vii) complying with any state and local laws and regulations concerning safety and security. The presiding person at any meeting of stockholders, in addition to making any other determinations that may be appropriate to the conduct of the meeting, shall, if the facts warrant, determine and declare to the meeting that a matter or business was not properly brought before the meeting and if such presiding person should so determine, such presiding person shall so declare to the meeting and any such matter or business not properly brought before the meeting shall not be transacted or considered. Unless and to the extent determined by the Board or the person presiding over the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

Section 1.12 **Notice of Stockholder Business; Nominations.**

1.12.1 **Annual Meeting of Stockholders.**

(a) Nominations of persons for election to the Board and the proposal of other business to be considered by the stockholders may be made at an annual meeting of stockholders only: (i) pursuant to the Corporation's notice of such meeting (or any supplement thereto), (ii) by or at the direction of the Board or any committee thereof or (iii) by any stockholder of the Corporation who was a stockholder of record at the time of giving of the notice provided for in this Section 1.12 (the "**Record Stockholder**"), who is entitled to vote at such meeting and who complies with the notice and other procedures set forth in this Section 1.12 in all applicable respects. For the avoidance of doubt, the foregoing clause (iii) shall be the exclusive means for a stockholder to make nominations or propose business (other than business included in the Corporation's proxy materials pursuant to Rule 14a-8 under the Securities Exchange Act of 1934, as amended (such act, and the rules and regulations promulgated thereunder, the "**Exchange Act**")), at an annual meeting of stockholders, and such stockholder must fully comply with the notice and other procedures set forth in this Section 1.12 to make such nominations or propose business before an annual meeting.

(b) For nominations or other business to be properly brought before an annual meeting by a Record Stockholder pursuant to Section 1.12.1(a) of these Bylaws:

(i) the Record Stockholder must have given timely notice thereof in writing to the Secretary of the Corporation and provide any updates or supplements to such notice at the times and in the forms required by this Section 1.12;

(ii) such other business (other than the nomination of persons for election to the Board) must otherwise be a proper matter for stockholder action;

(iii) if the Proposing Person (as defined below) has provided the Corporation with a Solicitation Notice (as defined below), such Proposing Person must, in the case of a proposal other than the nomination of persons for election to the Board, have delivered a proxy statement and form of proxy to holders of at least the percentage of the Corporation's voting shares required under applicable law to carry any such proposal, or, in the case of a nomination or nominations, have delivered a proxy statement and form of proxy to holders of a percentage of the Corporation's voting shares reasonably believed by such Proposing Person to be sufficient to elect the nominee or nominees proposed to be nominated by such Record Stockholder, and must, in either case, have included in such materials the Solicitation Notice; and

(iv) if no Solicitation Notice relating thereto has been timely provided pursuant to this Section 1.12, the Proposing Person proposing such business or nomination must not have solicited a number of proxies sufficient to have required the delivery of such a Solicitation Notice under this Section 1.12. To be timely, a Record Stockholder's notice must be delivered to the Secretary at the principal executive offices of the Corporation not later than 5:00 p.m. Pacific Time on the ninetieth (90th) day nor earlier than 5:00 p.m. Pacific Time on the one hundred and twentieth (120th) day prior to the first anniversary of the preceding year's annual meeting (which date shall, for purposes of the Corporation's first annual meeting of stockholders after its shares of Common Stock (as defined in the Restated Certificate of Incorporation) are first publicly traded, be deemed to have occurred on May 15, 2021); *provided, however*, that in the event that the date of the annual meeting is more than thirty (30) days before or more than seventy (70) days after such anniversary date, notice by the Record Stockholder to be timely must be so delivered (A) no earlier than 5:00 p.m. Pacific Time on the one hundred and twentieth (120th) day prior to such annual meeting and (B) no later than 5:00 p.m. Pacific Time on the later of the ninetieth (90th) day prior to such annual meeting or 5:00 p.m. Pacific Time on the tenth (10th) day following the day on which Public Announcement (as defined below) of the date of such meeting is first made by the Corporation. In no event shall an adjournment or postponement of an annual meeting commence a new time period (or extend any time period) for providing the Record Stockholder's notice.

(c) As to each person whom the Record Stockholder proposes to nominate for election or reelection as a director, in addition to the matters set forth in paragraph (e) below, such Record Stockholder's notice shall set forth:

(i) the name, age, business address and residence address of such person;

- (ii) the principal occupation or employment of such nominee;
 - (iii) the class, series and number of any shares of stock of the Corporation that are beneficially owned or owned of record by such person or any Associated Person (as defined in Section 1.12.4(c));
 - (iv) the date or dates such shares were acquired and the investment intent of such acquisition;
 - (v) all other information relating to such person that would be required to be disclosed in solicitations of proxies for election of directors in an election contest (even if an election contest is not involved), or would be otherwise required, in each case pursuant to and in accordance with Section 14(a) (or any successor provision) under the Exchange Act and the rules and regulations thereunder;
 - (vi) such person's written consent to being named in the Corporation's proxy statement as a nominee, to the public disclosure of information regarding or related to such person provided to the Corporation by such person or otherwise pursuant to this Section 1.12 and to serving as a director if elected;
 - (vii) whether such person meets the independence requirements of the stock exchange upon which the Corporation's Class A Common Stock (or Common Stock) is primarily traded;
 - (viii) a description of all direct and indirect compensation and other material monetary agreements, arrangements and understandings during the past three (3) years, and any other material relationships, between or among such Proposing Person or any of its respective affiliates and associates, on the one hand, and each proposed nominee, and his or her respective affiliates and associates, on the other hand, including all information that would be required to be disclosed pursuant to Rule 404 promulgated under Regulation S-K if the Proposing Person or any of its respective affiliates and associates were the "registrant" for purposes of such rule and the nominee were a director or executive officer of such registrant; and
 - (ix) a completed and signed questionnaire, representation and agreement required by Section 1.12.2 of these Bylaws.
- (d) As to any business other than the nomination of a director or directors that the Record Stockholder proposes to bring before the meeting, in addition to the matters set forth in paragraph (e) below, such Record Stockholder's notice shall set forth:
- (i) brief description of the business desired to be brought before the meeting, the text of the proposal or business (including the text of any resolutions proposed for consideration and in the event that such business includes a proposal to amend the Bylaws, the text of the proposed amendment), the reasons for conducting such business at the meeting and any material interest in such business of such Proposing Person, including any anticipated benefit to any Proposing Person therefrom; and

(ii) description of all agreements, arrangements and understandings between or among any such Proposing Person and any of its respective affiliates or associates, on the one hand, and any other person or persons, on the other hand, (including their names) in connection with the proposal of such business by such Proposing Person;

(e) As to each Proposing Person giving the notice, such Record Stockholder's notice shall set forth:

(i) the current name and address of such Proposing Person, including, if applicable, their name and address as they appear on the Corporation's stock ledger, if different;

(ii) the class or series and number of shares of stock of the Corporation that are directly or indirectly owned of record or beneficially owned by such Proposing Person, including any shares of any class or series of the Corporation as to which such Proposing Person has a right to acquire beneficial ownership at any time in the future;

(iii) whether and the extent to which any derivative interest in the Corporation's equity securities (including without limitation any option, warrant, convertible security, stock appreciation right, or similar right with an exercise or conversion privilege or a settlement payment or mechanism at a price related to any class or series of shares of the Corporation or with a value derived in whole or in part from the value of any class or series of shares of the Corporation, whether or not such instrument or right shall be subject to settlement in the underlying class or series of shares of the Corporation or otherwise, and any cash-settled equity swap, total return swap, synthetic equity position or similar derivative arrangement (any of the foregoing, a "**Derivative Instrument**"), as well as any rights to dividends on the shares of any class or series of shares of the Corporation that are separated or separable from the underlying shares of the Corporation) or any short interest in any security of the Corporation (for purposes of this Bylaw a person shall be deemed to have a short interest in a security if such person directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has the opportunity to profit or share in any profit derived from any increase or decrease in the value of the subject security, including through performance-related fees) is held directly or indirectly by or for the benefit of such Proposing Person, including without limitation whether and the extent to which any ongoing hedging or other transaction or series of transactions has been entered into by or on behalf of, or any other agreement, arrangement or understanding (including without limitation any short position or any borrowing or lending of shares) has been made, the effect or intent of which is to mitigate loss to or manage risk or benefit of share price changes for, or to increase or decrease the voting power of, such Proposing Person with respect to any share of stock of the Corporation (any of the foregoing, a "**Short Interest**");

(iv) any proportionate interest in shares of the Corporation or Derivative Instruments held, directly or indirectly, by a general or limited partnership in which such Proposing Person or any of its respective affiliates or associates is a general partner or, directly or indirectly, beneficially owns an interest in a general partner of such general or limited partnership;

(v) any direct or indirect material interest in any material contract or agreement with the Corporation, any affiliate of the Corporation or any Competitor (as defined below) (including, in any such case, any employment agreement, collective bargaining agreement or consulting agreement);

(vi) any significant equity interests or any Derivative Instruments or Short Interests in any Competitor held by such Proposing Person and/or any of its respective affiliates or associates;

(vii) any other material relationship between such Proposing Person, on the one hand, and the Corporation, any affiliate of the Corporation or any Competitor, on the other hand;

(viii) all information that would be required to be set forth in a Schedule 13D filed pursuant to Rule 13d-1(a) or an amendment pursuant to Rule 13d-2(a) if such a statement were required to be filed under the Exchange Act and the rules and regulations promulgated thereunder by such Proposing Person and/or any of its respective affiliates or associates;

(ix) any other information relating to such Proposing Person that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies or consents by such Proposing Person in support of the business proposed to be brought before the meeting pursuant to Section 14(a) (or any successor provision) under the Exchange Act and the rules and regulations thereunder;

(x) such Proposing Person's written consent to the public disclosure of information provided to the Corporation pursuant to this Section 1.12;

(xi) a complete written description of any agreement, arrangement or understanding (whether oral or in writing) (including any knowledge that another person or entity is Acting in Concert (as defined in Section 1.12.4(c)) with such Proposing Person) between or among such Proposing Person, any of its respective affiliates or associates and any other person Acting in Concert with any of the foregoing persons;

(xii) a representation that the Record Stockholder is a holder of record of stock of the Corporation entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to propose such business or nomination;

(xiii) a representation whether such Proposing Person intends (or is part of a group that intends) to deliver a proxy statement or form of proxy to holders of, in the case of a proposal, at least the percentage of the Corporation's voting shares required under applicable law to carry the proposal or, in the case of a nomination or nominations, a sufficient number of holders of the Corporation's voting shares to elect such nominee or nominees (an affirmative statement of such intent being a "**Solicitation Notice**"); and

(xiv) any proxy, contract, arrangement, or relationship pursuant to which the Proposing Person has a right to vote, directly or indirectly, any shares of any security of the Corporation.

The disclosures to be made pursuant to the foregoing clauses (ii), (iii), (iv) and (vi) shall not include any information with respect to the ordinary course business activities of any broker, dealer, commercial bank, trust company or other nominee who is a Proposing Person solely as a result of being the stockholder directed to prepare and submit the notice required by these Bylaws on behalf of a beneficial owner.

(f) A stockholder providing written notice required by this Section 1.12 shall update such notice in writing, if necessary, so that the information provided or required to be provided in such notice is true and correct in all material respects as of (i) the record date for determining the stockholders entitled to notice of the meeting and (ii) 5:00 p.m. Pacific Time on the tenth (10th) business day prior to the meeting or any adjournment or postponement thereof. In the case of an update pursuant to clause (i) of the foregoing sentence, such update shall be received by the Secretary of the Corporation at the principal executive office of the Corporation not later than five (5) business days after the record date for determining the stockholders entitled to notice of the meeting, and in the case of an update and supplement pursuant to clause (ii) of the foregoing sentence, such update and supplement shall be received by the Secretary of the Corporation at the principal executive office of the Corporation not later than eight (8) business days prior to the date for the meeting, and, if practicable, any adjournment or postponement thereof (and, if not practicable, on the first practicable date prior to the date to which the meeting has been adjourned or postponed). For the avoidance of doubt, the obligation to update as set forth in this paragraph shall not limit the Corporation's rights with respect to any deficiencies in any notice provided by a stockholder, extend any applicable deadlines hereunder or enable or be deemed to permit a stockholder who has previously submitted notice hereunder to amend or update any proposal or nomination or to submit any new proposal, including by changing or adding nominees, matters, business and/or resolutions proposed to be brought before a meeting of the stockholders.

(g) Notwithstanding anything in Section 1.12 or any other provision of the Bylaws to the contrary, any person who has been determined by a majority of the Whole Board to have violated Section 2.11 of these Bylaws or a Board Confidentiality Policy (as defined below) while serving as a director of the Corporation in the preceding five (5) years shall be ineligible to be nominated or be qualified to serve as a member of the Board, absent a prior waiver for such nomination or qualification approved by two-thirds of the Whole Board.

1.12.2 Submission of Questionnaire, Representation and Agreement. To be eligible to be a nominee of any stockholder for election or reelection as a director of the Corporation, the person proposed to be nominated must deliver (in accordance with the time periods prescribed for delivery of notice under Section 1.12 of these Bylaws) to the Secretary at the principal executive offices of the Corporation a completed and signed questionnaire in the form required by the Corporation (which form the stockholder shall request in writing from the Secretary of the Corporation and which the Secretary shall provide to such stockholder within ten days of receiving such request) with respect to the background and qualification of such person to serve as a director of the Corporation and the background of any other person or entity on whose behalf, directly or indirectly, the nomination is being made and a signed representation and agreement (in the form available from the Secretary upon written request) that such person: (a) is not and will not become a party to (i) any agreement, arrangement or understanding with, and has not given any commitment or assurance to, any person or entity as to how such person, if elected as a director of the Corporation, will act or vote on any issue or question (a "**Voting Commitment**")

that has not been disclosed to the Corporation or (ii) any Voting Commitment that could limit or interfere with such person's ability to comply, if elected as a director of the Corporation, with such person's fiduciary duties under applicable law, (b) is not and will not become a party to any Compensation Arrangement (as defined below) that has not been disclosed therein, (c) if elected as a director of the Corporation, will comply with all informational and similar requirements of applicable insurance policies and laws and regulations in connection with service or action as a director of the Corporation, (d) if elected as a director of the Corporation, will comply with all corporate governance, conflict of interest, stock ownership requirements, confidentiality and trading policies and guidelines of the Corporation publicly disclosed from time to time, (e) if elected as a director of the Corporation, will act in the best interests of the Corporation and its stockholders and not in the interests of individual constituencies, (f) consents to being named as a nominee in the Corporation's proxy statement pursuant to Rule 14a-4(d) under the Exchange Act and any associated proxy card of the Corporation and agrees to serve if elected as a director and (g) intends to serve as a director for the full term for which such individual is to stand for election.

1.12.3 Special Meetings of Stockholders. Only such business shall be conducted at a special meeting of stockholders as shall have been brought before the meeting pursuant to the Corporation's notice of such meeting. Nominations of persons for election to the Board may be made at a special meeting of stockholders at which directors are to be elected pursuant to the Corporation's notice of such meeting (a) by or at the direction of the Board or any committee thereof or (b) provided that the Board has determined that directors shall be elected at such meeting, by any stockholder of the Corporation who is a stockholder of record at the time of giving of notice of the special meeting, who shall be entitled to vote at the meeting and who complies with the notice and other procedures set forth in this Section 1.12 in all applicable respects. In the event the Corporation calls a special meeting of stockholders for the purpose of electing one or more directors to the Board, any such stockholder may nominate a person or persons (as the case may be), for election to such position(s) as specified in the Corporation's notice of meeting, if the stockholder's notice required by Section 1.12.1(b) of these Bylaws shall be delivered to the Secretary of the Corporation at the principal executive offices of the Corporation (i) no earlier than the one hundred and twentieth (120th) day prior to such special meeting and (ii) no later than 5:00 p.m. Pacific Time on the later of the ninetieth (90th) day prior to such special meeting or the tenth (10th) day following the day on which Public Announcement is first made of the date of the special meeting and of the nominees proposed by the Board to be elected at such meeting. In no event shall an adjournment or postponement of a special meeting commence a new time period (or extend any time period) for providing such notice.

1.12.4 General.

(a) Except as otherwise expressly provided in any applicable rule or regulation promulgated under the Exchange Act, only such persons who are nominated in accordance with the procedures set forth in this Section 1.12 shall be eligible to be elected at a meeting of stockholders and serve as directors and only such business shall be conducted at a meeting of stockholders as shall have been brought before the meeting in accordance with the procedures set forth in this Section 1.12. Except as otherwise provided by law or these Bylaws, the chairperson of the meeting shall have the power and duty to determine whether a nomination or any other business proposed to be brought before the meeting was made or proposed, as the case may be, in accordance with the procedures set forth in this Section 1.12 and, if any proposed

nomination or business is not in compliance herewith, to declare that such defective proposal or nomination shall be disregarded. Notwithstanding the foregoing provisions of this Section 1.12, unless otherwise required by law, if the stockholder (or a Qualified Representative of the stockholder (as defined below)) does not appear at the annual or special meeting of stockholders of the Corporation to present a nomination or proposed business, such nomination shall be disregarded and such proposed business shall not be transacted, notwithstanding that proxies in respect of such vote may have been received by the Corporation.

(b) Notwithstanding the foregoing provisions of this Section 1.12, a stockholder shall also comply with all applicable requirements of the Exchange Act and the rules and regulations thereunder with respect to the matters set forth herein. Nothing in this Section 1.12 shall be deemed to affect any rights of (a) stockholders to request inclusion of proposals in the Corporation's proxy statement pursuant to Rule 14a-8 under the Exchange Act or (b) the holders of any series of Preferred Stock to elect directors pursuant to any applicable provisions of the Certificate of Incorporation.

1.12.5 For purposes of these Bylaws the following definitions shall apply:

(A) a person shall be deemed to be "**Acting in Concert**" with another person if such person knowingly acts (whether or not pursuant to an express agreement, arrangement or understanding) in concert with, or toward a common goal relating to the management, governance or control of the Corporation in substantial parallel with, such other person where (1) each person is conscious of the other person's conduct or intent and this awareness is an element in their decision-making processes and (2) at least one additional factor suggests that such persons intend to act in concert or in substantial parallel, which such additional factors may include, without limitation, exchanging information (whether publicly or privately), attending meetings, conducting discussions or making or soliciting invitations to act in concert or in substantial parallel; provided that a person shall not be deemed to be Acting in Concert with any other person solely as a result of the solicitation or receipt of revocable proxies or consents from such other person in response to a solicitation made pursuant to, and in accordance with, Section 14(a) (or any successor provision) of the Exchange Act by way of a proxy or consent solicitation statement filed on Schedule 14A. A person Acting in Concert with another person shall be deemed to be Acting in Concert with any third party who is also Acting in Concert with such other person;

(B) "**affiliate**" and "**associate**" shall have the meanings ascribed thereto in Rule 405 under the Securities Act of 1933, as amended (the "**Securities Act**"); provided, however, that the term "partner" as used in the definition of "associate" shall not include any limited partner that is not involved in the management of the relevant partnership;

(C) "**Associated Person**" shall mean with respect to any subject stockholder or other person (including any proposed nominee) (1) any person directly or indirectly controlling, controlled by or under common control with such stockholder or other person, (2) any beneficial owner of shares of stock of the Corporation owned of record or beneficially by such stockholder or other person, (3) any associate of such stockholder or other person, and (4) any person directly or indirectly controlling, controlled by or under common control or Acting in Concert with any such Associated Person;

(D) “**Compensation Arrangement**” shall mean any direct or indirect compensatory payment or other financial agreement, arrangement or understanding with any person or entity other than the Corporation, including any agreement, arrangement or understanding with respect to any direct or indirect compensation, reimbursement or indemnification in connection with candidacy, nomination, service or action as a nominee or as a director of the Corporation;

(E) “**Competitor**” shall mean any entity that provides products or services that compete with or are alternatives to the principal products produced or services provided by the Corporation or its affiliates;

(F) “**Proposing Person**” shall mean (1) the Record Stockholder providing the notice of business proposed to be brought before an annual meeting or nomination of persons for election to the Board at a stockholder meeting, (2) the beneficial owner or beneficial owners, if different, on whose behalf the notice of business proposed to be brought before the annual meeting or nomination of persons for election to the Board at a stockholder meeting is made, and (3) any Associated Person on whose behalf the notice of business proposed to be brought before the annual meeting or nomination of persons for election to the Board at a stockholder meeting is made;

(G) “**Public Announcement**” shall mean disclosure in a press release reported by a national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act; and

(H) to be considered a “**Qualified Representative**” of a stockholder, a person must be a duly authorized officer, manager, trustee or partner of such stockholder or must be authorized by a writing executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as a proxy at the meeting of stockholders and such person must produce such writing or electronic transmission, or a reliable reproduction thereof, at the meeting. The Secretary of the Corporation, or any other person who shall be appointed to serve as secretary of the meeting, may require, on behalf of the Corporation, reasonable and appropriate documentation to verify the status of a person purporting to be a “Qualified Representative” for purposes hereof.

Section 1.13 Action by Written Consent of Stockholders. Until the Voting Threshold Date (as defined in the Certificate of Incorporation) and subject to any other restrictions in the Certificate of Incorporation, any action required or permitted to be taken at any annual or special meeting of the stockholders may be taken without a meeting, without prior notice and without a vote, if a consent or consents setting forth the action so taken shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which minutes of proceedings of stockholders are recorded. Delivery made to the Corporation’s registered office shall be by hand or by certified or registered mail, return receipt requested. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall, to the extent required by law, be given to those stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for notice of such meeting had been the

date that written consents signed by a sufficient number of holders to take the action were delivered to the Corporation.

Section 1.14 **Delivery to the Corporation.** Whenever this Article I requires one or more persons (including a record or beneficial owner of stock) to deliver a document or information to the Corporation or any officer, employee or agent thereof (including any notice, request, questionnaire, revocation, representation or other document or agreement), unless the Corporation elects otherwise, such document or information shall be in writing exclusively (and not in an electronic transmission) and shall be delivered exclusively by hand (including, without limitation, overnight courier service) or by certified or registered mail, return receipt requested, and the Corporation shall not be required to accept delivery of any document not in such written form or so delivered.

ARTICLE II BOARD OF DIRECTORS

Section 2.1 **Number; Qualifications.** The total number of directors constituting the Whole Board shall be fixed from time to time in the manner set forth in the Certificate of Incorporation and the term “Whole Board” shall have the meaning specified in the Certificate of Incorporation. No decrease in the authorized number of directors constituting the Whole Board shall shorten the term of any incumbent director. Directors need not be stockholders of the Corporation.

Section 2.2 **Election; Resignation; Removal; Vacancies.** Election of directors need not be by written ballot. Unless otherwise provided by the Certificate of Incorporation and subject to the special rights of holders of any series of Preferred Stock to elect directors, immediately following the Voting Threshold Date (as defined in the Certificate of Incorporation), the Board shall be divided into three classes, designated as Class I, Class II and Class III. The number of directors in each class shall be divided as nearly equal as is practicable. Each director shall hold office until the annual meeting at which such director’s term expires and until such director’s successor is elected and qualified or until such director’s earlier death, resignation, disqualification or removal. Any director may resign by delivering a resignation in writing or by electronic transmission to the Corporation at its principal office or to the Chairperson of the Board, the Chief Executive Officer, or the Secretary. Such resignation shall be effective upon delivery unless it is specified to be effective at a later time or upon the happening of an event. Subject to the special rights of holders of any series of Preferred Stock to elect directors, directors may be removed only as provided by the Certificate of Incorporation and applicable law. All vacancies occurring in the Board and any newly created directorships resulting from any increase in the authorized number of directors shall be filled in the manner set forth in the Certificate of Incorporation.

Section 2.3 **Regular Meetings.** Regular meetings of the Board may be held at such places, within or without the State of Delaware, and at such times as the Board may from time to time determine. Notice of regular meetings need not be given if the date, times and places thereof are fixed by resolution of the Board.

Section 2.4 **Special Meetings.** Special meetings of the Board may be called by the Chairperson of the Board, the Chief Executive Officer, the Lead Independent Director or a majority

of the members of the Board then in office and may be held at any time, date or place, within or without the State of Delaware, as the person or persons calling the meeting shall fix. Notice of the time, date and place of such meeting shall be given, orally, in writing or by electronic transmission (including electronic mail), by the person or persons calling the meeting to all directors at least four (4) days before the meeting if the notice is mailed, or at least twenty-four (24) hours before the meeting if such notice is given by telephone, hand delivery, telegram, telex, mailgram, facsimile, electronic mail or other means of electronic transmission; *provided, however*, that if, under the circumstances, the Chairperson of the Board, the Lead Independent Director or the Chief Executive Officer calling a special meeting deems that more immediate action is necessary or appropriate, notice may be delivered on the day of such special meeting. Unless otherwise indicated in the notice, any and all business may be transacted at a special meeting.

Section 2.5 **Remote Meetings Permitted.** Members of the Board, or any committee of the Board, may participate in a meeting of the Board or such committee by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to conference telephone or other communications equipment shall constitute presence in person at such meeting.

Section 2.6 **Quorum; Vote Required for Action.** At all meetings of the Board, directors representing a majority of the Whole Board shall constitute a quorum for the transaction of business. If a quorum shall fail to attend any meeting, a majority of those present may adjourn the meeting to another place, date or time. Except as otherwise provided herein or in the Certificate of Incorporation, or required by law, the vote of a majority of the directors present at a meeting at which a quorum is present shall be the act of the Board.

Section 2.7 **Organization.** Meetings of the Board shall be presided over by (a) the Chairperson of the Board, or (b) in the absence of such person, the Lead Independent Director, or (c) in such person's absence, by the Chief Executive Officer, or (d) in such person's absence, by a chairperson chosen by the Board at the meeting. Unless otherwise determined by the Board, the Secretary shall act as secretary of the meeting, but in such person's absence the chairperson of the meeting may appoint any person to act as secretary of the meeting.

Section 2.8 **Unanimous Action by Directors in Lieu of a Meeting.** Any action required or permitted to be taken at any meeting of the Board, or of any committee thereof, may be taken without a meeting if all members of the Board or such committee, as the case may be, consent thereto in writing or by electronic transmission, and any consent may be documented, signed and delivered in any manner permitted by Section 116 of the DGCL. After an action is taken, the consent or consents relating thereto shall be filed with the minutes of proceedings of the Board or committee, as applicable. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

Section 2.9 **Powers.** Except as otherwise provided by the Certificate of Incorporation or the DGCL, the business and affairs of the Corporation shall be managed by or under the direction of the Board.

Section 2.10 Compensation of Directors. Members of the Board, as such, may receive, pursuant to a resolution of the Board, fees and other compensation for their services as directors, including without limitation their services as members of committees of the Board.

Section 2.11 Confidentiality. Each director shall maintain the confidentiality of, and shall not share with any third party person or entity (including third parties that originally sponsored, nominated or designated such director (the “**Sponsoring Party**”)), any non-public information learned in their capacities as directors, including communications among Board members in their capacities as directors. The Board may adopt a board confidentiality policy further implementing and interpreting this bylaw (a “**Board Confidentiality Policy**”). All directors are required to comply with this bylaw and any such Board Confidentiality Policy unless such director or the Sponsoring Party for such director has entered into a specific written agreement with the Corporation, in either case as approved by the Board, providing otherwise with respect to such confidential information.

ARTICLE III COMMITTEES

Section 3.1 Committees. The Board may designate one or more committees, each committee to consist of one or more of the directors of the Corporation. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of the committee, the member or members thereof present at any meeting of such committee who are not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board to act at the meeting in place of any such absent or disqualified member. Any such committee, to the extent provided in a resolution of the Board, shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation and may authorize the seal of the Corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority in reference to the following matters: (a) approving, adopting, or recommending to the stockholders any action or matter (other than the election or removal of members of the Board) expressly required by the DGCL to be submitted to stockholders for approval or (b) adopting, amending or repealing any bylaw of the Corporation.

Section 3.2 Committee Rules. Each committee shall keep records of its proceedings and make such reports as the Board may from time to time request. Unless the Board otherwise provides, each committee designated by the Board may make, alter and repeal rules for the conduct of its business. In the absence of such rules, each committee shall conduct its business in the same manner as the Board conducts its business pursuant to Article II of these Bylaws. Except as otherwise provided in the Certificate of Incorporation, these Bylaws or the resolution of the Board designating the committee, any committee may create one or more subcommittees, each subcommittee to consist of one or more members of the committee, and may delegate to any such subcommittee any or all of the powers and authority of the committee.

ARTICLE IV
OFFICERS; CHAIRPERSON; LEAD INDEPENDENT DIRECTOR

Section 4.1 **Generally.** The officers of the Corporation shall consist of a Chief Executive Officer (who may be the Chairperson of the Board or the President), a President, a Secretary and a Treasurer and may consist of such other officers, including, without limitation, an Executive Chairperson, a Chief Financial Officer, and one or more Vice Presidents, as may from time to time be appointed by the Board. All officers shall be elected by the Board; *provided, however*, that the Board may empower the Chief Executive Officer of the Corporation to appoint any officer other than the Chief Executive Officer, the President, the Chief Financial Officer or the Treasurer. Except as otherwise provided by law, by the Certificate of Incorporation or these Bylaws, each officer shall hold office until such officer's successor is duly elected and qualified or until such officer's earlier resignation, death, disqualification or removal. Any number of offices may be held by the same person. Any officer may resign by delivering a resignation in writing or by electronic transmission to the Corporation at its principal office or to the Chairperson of the Board, the Chief Executive Officer, or the Secretary. Such resignation shall be effective upon delivery unless it is specified to be effective at some later time or upon the happening of some later event. Any vacancy occurring in any office of the Corporation by death, resignation, removal or otherwise may be filled by the Board and the Board may, in its discretion, leave unfilled, for such period as it may determine, any offices. Each such successor shall hold office for the unexpired term of such officer's predecessor and until a successor is duly elected and qualified or until such officer's earlier resignation, death, disqualification or removal.

Section 4.2 **Chief Executive Officer.** Subject to the control of the Board and such supervisory powers, if any, as may be given by the Board, the powers and duties of the Chief Executive Officer of the Corporation are:

- (a) to act as the general manager and, subject to the control of the Board, to have general supervision, direction and control of the business and affairs of the Corporation;
- (b) subject to Section 1.6 of these Bylaws, to preside at all meetings of the stockholders;
- (c) subject to Section 1.2 of these Bylaws, to call special meetings of the stockholders to be held at such times and, subject to the limitations prescribed by law or by these Bylaws, at such places as he or she shall deem proper; and
- (d) to affix the signature of the Corporation to all deeds, conveyances, mortgages, guarantees, leases, obligations, bonds, certificates and other papers and instruments in writing which have been authorized by the Board or which, in the judgment of the Chief Executive Officer, should be executed on behalf of the Corporation; to sign certificates for shares of stock of the Corporation (if any); and, subject to the direction of the Board, to have general charge of the property of the Corporation and to supervise and control all officers, agents and employees of the Corporation.

The person holding the office of President shall be the Chief Executive Officer of the Corporation unless the Board shall designate another officer to be the Chief Executive Officer.

Section 4.3 **Chairperson of the Board.** Subject to the provisions of Section 2.7 of these Bylaws, the Chairperson of the Board shall have the power to preside at all meetings of the Board and shall have such other powers and duties as provided in these Bylaws and as the Board may from time to time prescribe. The Chairperson of the Board may or may not be an officer of the Corporation. If the Chairperson of the Board is an officer of the Corporation, he or she may be designated by the Board the Executive Chairperson, Executive Chairman or Executive Chairwoman, as applicable.

Section 4.4 **Lead Independent Director.** The Board may, in its discretion, elect a lead independent director from among its members that are Independent Directors (as defined below) (such director, the “***Lead Independent Director***”). The Lead Independent Director shall preside at all meetings at which the Chairperson of the Board is not present and shall exercise such other powers and duties as may from time to time be assigned to him or her by the Board or as prescribed by these Bylaws. For purposes of these Bylaws, “***Independent Director***” has the meaning ascribed to such term under the rules of the exchange upon which the Corporation’s Class A Common Stock is primarily traded.

Section 4.5 **President.** The person holding the office of Chief Executive Officer shall be the President of the Corporation unless the Board shall have designated one individual as the President and a different individual as the Chief Executive Officer of the Corporation. Subject to the provisions of these Bylaws and to the direction of the Board, and subject to the supervisory powers of the Chief Executive Officer (if the Chief Executive Officer is an officer other than the President), and subject to such supervisory powers and authority as may be given by the Board to the Chairperson of the Board, and/or to any other officer, the President shall have the responsibility for the general management and control of the business and affairs of the Corporation and the general supervision and direction of all of the officers, employees and agents of the Corporation (other than the Chairperson of the Board, if an officer, and the Chief Executive Officer, if the Chief Executive Officer is an officer other than the President) and shall perform all duties and have all powers that are commonly incident to the office of President or that are delegated to the President by the Board.

Section 4.6 **Chief Financial Officer.** The person holding the office of Chief Financial Officer shall be the Treasurer of the Corporation unless the Board shall have designated another officer as the Treasurer of the Corporation. Subject to the direction of the Board and the Chief Executive Officer, the Chief Financial Officer shall perform all duties and have all powers that are commonly incident to the office of Chief Financial Officer, or as the Board or the Chief Executive Officer may from time to time prescribe.

Section 4.7 **Treasurer.** The person holding the office of Treasurer shall have custody of all monies and securities of the Corporation. The Treasurer shall make such disbursements of the funds of the Corporation as are authorized and shall render from time to time an account of all such transactions. The Treasurer shall also perform such other duties and have such other powers as are commonly incident to the office of Treasurer, or as the Board or the Chief Executive Officer may from time to time prescribe.

Section 4.8 **Vice President.** Each Vice President shall have all such powers and duties as are commonly incident to the office of Vice President or that are delegated to him or her by the

Board or the Chief Executive Officer. A Vice President may be designated by the Board to perform the duties and exercise the powers of the Chief Executive Officer or President in the event of the Chief Executive Officer's or President's absence or disability.

Section 4.9 **Secretary.** The Secretary shall issue or cause to be issued all authorized notices for, and shall keep, or cause to be kept, minutes of all meetings of the stockholders and the Board. The Secretary shall have charge of the corporate minute books and similar records and shall perform such other duties and have such other powers as are commonly incident to the office of Secretary, or as the Board or the Chief Executive Officer may from time to time prescribe.

Section 4.10 **Delegation of Authority.** The Board may from time to time delegate the powers or duties of any officer of the Corporation to any other officers or agents of the Corporation, notwithstanding any provision hereof.

Section 4.11 **Removal.** Any officer of the Corporation shall serve at the pleasure of the Board and may be removed at any time, with or without cause, by the Board; *provided* that if the Board has empowered the Chief Executive Officer to appoint any officer of the Corporation, then such officer may also be removed by the Chief Executive Officer. Such removal shall be without prejudice to the contractual rights of such officer, if any, with the Corporation.

Section 4.12 **Voting Shares in Other Business Entities.** The Chairperson, the CEO, the President, if any is appointed, any vice president, the CFO, the Secretary or assistant secretary of the Corporation, or any other person authorized by the Board of Directors may vote, and otherwise exercise on behalf of the Corporation any and all rights and powers incident to the ownership of, any and all shares of stock or other equity interest held by the Corporation in any other corporation or other business entity. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by the person having such authority.

Section 4.13 **Execution of Corporate Contracts and Instruments.** The Board of Directors, except as otherwise provided in these Bylaws, shall designate the officers, employees and agents of the Corporation who shall have power to enter into any contract or execute any instrument in the name of and on behalf of the Corporation. Such delegation may be by resolution or otherwise and the authority granted shall be general or confined to specific matters, all as the Board of Directors or any such committee may determine. In the absence of such designation referred to in the first sentence of this Section 4.13, the officers of the Corporation shall have such power so referred to, to the extent incident to the normal performance of their duties.

ARTICLE V STOCK

Section 5.1 **Certificates; Uncertificated Shares.** The shares of capital stock of the Corporation shall be uncertificated shares; *provided, however*, that the resolution of the Board that the shares of capital stock of the Corporation shall be uncertificated shares shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation (or the transfer agent or registrar, as the case may be). Notwithstanding the foregoing, the Board may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be

certificated shares. Every holder of stock represented by certificates shall be entitled to have a certificate signed by, or in the name of the Corporation, by any two authorized officers of the Corporation (it being understood that each of the Chairperson of the Board, the Vice-Chairperson of the Board, the Chief Executive Officer, the President, any Vice President, the Treasurer, any Assistant Treasurer, the Secretary, and any Assistant Secretary shall be an authorized officer for such purpose), representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if such person were an officer, transfer agent or registrar at the date of issue.

Section 5.2 **Lost, Stolen or Destroyed Stock Certificates; Issuance of New Certificates or Uncertificated Shares.** The Corporation may issue a new certificate of stock or uncertificated shares in the place of any certificate previously issued by it, alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed, and the Corporation may require the owner of the lost, stolen or destroyed certificate, or such owner's legal representative, to agree to indemnify the Corporation and/or to give the Corporation a bond sufficient to indemnify it, against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

Section 5.3 **Other Regulations.** Subject to applicable law, the Certificate of Incorporation and these Bylaws, the issue, transfer, conversion and registration of shares represented by certificates and of uncertificated shares shall be governed by such other regulations as the Board may establish.

ARTICLE VI INDEMNIFICATION

Section 6.1 **Indemnification of Officers and Directors.** Each person who was or is made a party to, or is threatened to be made a party to, or is involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative, legislative or any other type whatsoever (a "***Proceeding***"), by reason of the fact that such person (or a person of whom such person is the legal representative), is or was a director or officer of the Corporation or, while serving as a director or officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee, agent or trustee of another corporation, or of a partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans (for purposes of this Article VI, an "***Indemnitee***"), shall be indemnified and held harmless by the Corporation to the fullest extent permitted by the DGCL as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than such law permitted the Corporation to provide prior to such amendment), against all expenses, liability and loss (including attorneys' fees, judgments, fines, ERISA excise taxes and penalties and amounts paid or to be paid in settlement) reasonably incurred or suffered by such Indemnitee in connection therewith, provided such Indemnitee acted in good faith and in a manner that the Indemnitee reasonably believed to be in or not opposed to the best interests of the Corporation, and, with

respect to any criminal Proceeding, had no reasonable cause to believe the Indemnitee's conduct was unlawful. Such indemnification shall continue as to an Indemnitee who has ceased to be a director or officer of the Corporation and shall inure to the benefit of such Indemnitees' heirs, executors and administrators. Notwithstanding the foregoing, subject to Section 6.5 of these Bylaws, the Corporation shall indemnify any such Indemnitee seeking indemnity in connection with a Proceeding (or part thereof) initiated by such Indemnitee only if such Proceeding (or part thereof) was authorized by the Board or such indemnification is authorized by an agreement approved by the Board.

Section 6.2 **Advance of Expenses.** The Corporation shall pay all expenses (including attorneys' fees) incurred by an Indemnitee in defending any Proceeding in advance of its final disposition; *provided, however*, that if the DGCL then so requires, the advancement of such expenses shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such Indemnitee, to repay such amounts if it shall ultimately be determined that such Indemnitee is not entitled to be indemnified under this Article VI or otherwise.

Section 6.3 **Non-Exclusivity of Rights.** The rights conferred on any person in this Article VI shall not be exclusive of any other right that such person may have or hereafter acquire under any statute, provision of the Certificate of Incorporation, Bylaws, agreement, vote or consent of stockholders or disinterested directors, or otherwise. Additionally, nothing in this Article VI shall limit the ability of the Corporation, in its discretion, to indemnify or advance expenses to persons whom the Corporation is not obligated to indemnify or advance expenses pursuant to this Article VI.

Section 6.4 **Indemnification Contracts.** The Board is authorized to cause the Corporation to enter into indemnification contracts with any director, officer, employee or agent of the Corporation, or any person serving at the request of the Corporation as a director, officer, employee, agent or trustee of another corporation, partnership, joint venture, trust or other enterprise, including employee benefit plans, providing indemnification or advancement rights to such person. Such rights may be greater than those provided in this Article VI.

Section 6.5 **Right of Indemnitee to Bring Suit.** The following shall apply to the extent not in conflict with any indemnification contract provided for in Section 6.4 of these Bylaws.

6.5.1 **Right to Bring Suit.** If a claim under Section 6.1 or 6.2 of these Bylaws is not paid in full by the Corporation within sixty (60) days after a written claim has been received by the Corporation, except in the case of a claim for an advancement of expenses, in which case the applicable period shall be twenty (20) days, the Indemnitee may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim. If successful in whole or in part in any such suit, or in a suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Indemnitee shall be entitled to be paid, to the fullest extent permitted by law, the expense of prosecuting or defending such suit. In any suit brought by the Indemnitee to enforce a right to indemnification hereunder (but not in a suit brought by the Indemnitee to enforce a right to an advancement of expenses) it shall be a defense that the Indemnitee has not met any applicable standard of conduct which makes it permissible under the DGCL (or other applicable law) for the Corporation to indemnify the Indemnitee for the amount claimed.

6.5.2 **Effect of Determination.** The absence of a determination prior to the commencement of such suit that indemnification of the Indemnitee is proper in the circumstances because the Indemnitee has met the applicable standard of conduct set forth in applicable law shall not create a presumption that the Indemnitee has not met the applicable standard of conduct or, in the case of such a suit brought by the Indemnitee, be a defense to such suit.

6.5.3 **Burden of Proof.** In any suit brought by the Indemnitee to enforce a right to indemnification or to an advancement of expenses hereunder, or brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the burden of proving that the Indemnitee is not entitled to be indemnified, or to such advancement of expenses, under this Article VI, or otherwise, shall be on the Corporation.

Section 6.6 **Nature of Rights.** The rights conferred upon Indemnitees in this Article VI shall be contract rights and such rights shall continue as to an Indemnitee who has ceased to be a director, officer or trustee and shall inure to the benefit of the Indemnitee's heirs, executors and administrators. Any amendment, repeal or modification of any provision of this Article VI that adversely affects any right of an Indemnitee or an Indemnitee's successors shall be prospective only, and shall not adversely affect any right or protection conferred on a person pursuant to this Article VI with respect to any Proceeding involving any occurrence or alleged occurrence of any action or omission to act that took place prior to such amendment, repeal or modification. Any reference to an officer of the Corporation in this Article VI shall be deemed to refer exclusively to the Chief Executive Officer, President, Treasurer, Chief Financial Officer, and Secretary of the Corporation appointed pursuant to Article IV of these Bylaws, and to any Vice President, Assistant Secretary, Assistant Treasurer or other officer of the Corporation appointed by the Board of Directors or by the Chief Executive Officer pursuant to Article IV of these Bylaws, and any reference to an officer of any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall be deemed to refer exclusively to an officer appointed by the board of directors or equivalent governing body of such other entity pursuant to the certificate of incorporation and bylaws or equivalent organizational documents of such other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise. The fact that any person who is or was an employee of the Corporation or an employee of any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, but not an officer thereof as described in the preceding sentence, has been given or has used the title of "Vice President" or any other title that could be construed to suggest or imply that such person is or may be such an officer of the Corporation or of such other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall not result in such person being constituted as, or being deemed to be, such an officer of the Corporation or of such other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise for purposes of this Article VI.

Section 6.7 **Insurance.** The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust or other enterprise against any expense, liability or loss, whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the DGCL.

**ARTICLE VII
NOTICES**

Section 7.1 Notice.

7.1.1 Form and Delivery. Except as otherwise specifically required in these Bylaws (including, without limitation, Section 7.1.2 of these Bylaws) or by applicable law, all notices required to be given pursuant to these Bylaws may (a) in every instance in connection with any delivery to a member of the Board, be effectively given by hand delivery (including use of a delivery service), by depositing such notice in the mail, postage prepaid, or by sending such notice by overnight express courier, facsimile, electronic mail or other form of electronic transmission and (b) be effectively delivered to a stockholder when given by hand delivery, by depositing such notice in the mail, postage prepaid, or by courier service or electronic mail in the manner provided in Section 232 of the DGCL or, if specifically consented to by the stockholder as described in Section 7.1.2 of these Bylaws, by sending such notice by a form of electronic transmission other than electronic mail in the manner prescribed by Section 232 of the DGCL. Any such notice shall be addressed to the person to whom notice is to be given at such person's address as it appears on the records of the Corporation. The notice shall be deemed given (a) in the case of hand delivery, when received by the person to whom notice is to be given or by any person accepting such notice on behalf of such person, (b) in the case of delivery by mail, upon deposit in the mail, (c) in (i) the case of delivery by overnight express courier to a director, when dispatched or (ii) the case of delivery by courier service to a stockholder, the earlier of when the notice is received or left at such stockholder's address, and (d) in (i) the case of delivery by electronic mail, when directed to the director's or stockholder's electronic mail address unless, in the case of a stockholder, the stockholder has notified the corporation in writing or by electronic transmission of an objection to receiving notice by electronic mail or such notice is prohibited by the last sentence of Section 7.1.2 of these Bylaws or (ii) the case of delivery via facsimile or other form of electronic transmission (other than electronic mail) at the time provided in Section 7.1.2 of these Bylaws.

7.1.2 Electronic Transmission. Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the Corporation under any provision of the DGCL, the Certificate of Incorporation, or these Bylaws shall be effective if given by a form of electronic transmission (other than electronic mail) consented to by the stockholder to whom the notice is given in accordance with Section 232 of the DGCL. Notice given pursuant to this Section 7.1.2 shall be deemed given: (i) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive notice; (ii) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of such posting and the giving of such separate notice; and (iii) if by any other form of electronic transmission (other than electronic mail), when directed to the stockholder. Notwithstanding the foregoing, a notice may not be given to stockholders by an electronic transmission from and after the time that (a) the Corporation is unable to deliver by such electronic transmission two (2) consecutive notices given by the Corporation, (b) such inability becomes known to the Secretary or an Assistant Secretary or to the transfer agent, or other person responsible for the giving of notice; provided, however, the inadvertent failure to discover such inability shall not invalidate any meeting or other action.

7.1.3 **Affidavit of Giving Notice.** An affidavit of the Secretary or an Assistant Secretary or of the transfer agent or other agent of the Corporation that the notice has been given in writing or by a form of electronic transmission shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

Section 7.2 **Waiver of Notice.** Whenever notice is required to be given under any provision of the DGCL, the Certificate of Incorporation or these Bylaws, a written waiver of notice, signed by the person entitled to notice, or waiver by electronic transmission by such person, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or members of a committee of directors need be specified in any waiver of notice.

ARTICLE VIII INTERESTED DIRECTORS

Section 8.1 **Interested Directors.** No contract or transaction between the Corporation and one or more of its members of the Board or officers, or between the Corporation and any other corporation, partnership, association or other organization in which one or more of its directors or officers are members of the board of directors or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or committee thereof that authorizes the contract or transaction, or solely because his, her or their votes are counted for such purpose, if: (a) the material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; (b) the material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or (c) the contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board, a committee thereof, or the stockholders.

Section 8.2 **Quorum.** Interested directors may be counted in determining the presence of a quorum at a meeting of the Board or of a committee which authorizes the contract or transaction.

ARTICLE IX MISCELLANEOUS

Section 9.1 **Fiscal Year.** The fiscal year of the Corporation shall be determined by resolution of the Board.

Section 9.2 **Seal.** The Board may provide for a corporate seal, which may have the name of the Corporation inscribed thereon and shall otherwise be in such form as may be approved from time to time by the Board.

Section 9.3 **Form of Records.** Any records administered by or on behalf of the Corporation in the regular course of its business, including its stock ledger, books of account and minute books, may be kept on or by means of, or be in the form of any other information storage device, method or one or more electronic networks or databases (including one or more distributed electronic networks or databases), electronic or otherwise, *provided* that the records so kept can be converted into clearly legible paper form within a reasonable time and otherwise comply with the DGCL. The Corporation shall so convert any records so kept upon the request of any person entitled to inspect such records pursuant to any provision of the DGCL.

Section 9.4 **Reliance Upon Books and Records.** A member of the Board, or a member of any committee designated by the Board shall, in the performance of such person's duties, be fully protected in relying in good faith upon the books and records of the Corporation and upon such information, opinions, reports or statements presented to the Corporation by any of the Corporation's officers or employees, or committees of the Board, or by any other person as to matters the member reasonably believes are within such other person's professional or expert competence and who has been selected with reasonable care by or on behalf of the Corporation.

Section 9.5 **Certificate of Incorporation Governs.** In the event of any conflict between the provisions of the Certificate of Incorporation and Bylaws, the provisions of the Certificate of Incorporation shall govern.

Section 9.6 **Severability.** If any provision of these Bylaws shall be held to be invalid, illegal, unenforceable or in conflict with the provisions of the Certificate of Incorporation, then such provision shall nonetheless be enforced to the maximum extent possible consistent with such holding and the remaining provisions of these Bylaws (including without limitation, all portions of any section of these Bylaws containing any such provision held to be invalid, illegal, unenforceable or in conflict with the Certificate of Incorporation, that are not themselves invalid, illegal, unenforceable or in conflict with the Certificate of Incorporation) shall remain in full force and effect.

Section 9.7 **Time Periods.** In applying any provision of these Bylaws which requires that an act be done or not be done a specified number of days prior to an event or that an act be done during a period of a specified number of days prior to an event, calendar days shall be used, the day of the doing of the act shall be excluded, and the day of the event shall be included.

ARTICLE X AMENDMENT

Notwithstanding any other provision of these Bylaws, any alteration, amendment or repeal of these Bylaws, and any adoption of new Bylaws, shall require the approval of the Board or the stockholders of the Corporation as expressly provided in the Certificate of Incorporation.

**CERTIFICATION OF AMENDED AND RESTATED BYLAWS
OF
TUSIMPLE HOLDINGS INC.**

(a Delaware corporation)

I, James Mullen, certify that I am Secretary of TuSimple Holdings Inc., a Delaware corporation (the “**Corporation**”), that I am duly authorized to make and deliver this certification, that the attached Bylaws are a true and complete copy of the Amended and Restated Bylaws of the Corporation in effect as of the date of this certificate.

Dated: April 14, 2021

/s/ James Mullen

James Mullen
Secretary

**CERTIFICATION 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, Cheng Lu, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of TuSimple Holdings Inc.;
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(s) 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, including its consolidated subsidiaries, 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(s) 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: May 10, 2021

By: /s/ Cheng Lu
Cheng Lu
President and Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION 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, Patrick Dillon, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of TuSimple Holdings Inc.;
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(s) 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, including its consolidated subsidiaries, 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(s) 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: May 10, 2021

By: /s/ Patrick Dillon
Patrick Dillon
Chief Financial Officer
(Principal Financial Officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Cheng Lu, Chief Executive Officer of TuSimple Holdings Inc. (the "Company"), do hereby certify, to the best of my knowledge and pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Quarterly Report on Form 10-Q of the Company for the period ended March 31, 2021 (the "Report"), fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: May 10, 2021

By: /s/ Cheng Lu

Cheng Lu

President and Chief Executive Officer

(Principal Executive Officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Patrick Dillon, Chief Financial Officer of TuSimple Holdings Inc. (the "Company"), do hereby certify, to the best of my knowledge and pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Quarterly Report on Form 10-Q of the Company for the period ended March 31, 2021 (the "Report"), fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: May 10, 2021

By: /s/ Patrick Dillon
Patrick Dillon
Chief Financial Officer
(Principal Financial Officer)