

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

☐ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934****For the fiscal year ended December 31, 2020**

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 001-38791

LUMINAR TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

2603 Discovery Drive**Suite 100****Orlando****Florida**

(Address of Principal Executive Offices)

83-1804317

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

32826

(Zip Code)

(407) 900-5259

Registrant's telephone number, including area code

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 of \$0.0001 per share	LAZR	The Nasdaq Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: **None**Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☐Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒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 ☐Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

Large accelerated filer

☐

Accelerated filer

☐

Non-accelerated filer

☐

Smaller reporting company

☐

Emerging growth company

☐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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of the voting stock held by non-affiliates of the registrant was approximately \$359.4 million as of June 30, 2020 (the last business day of the registrant's most recently completed second fiscal quarter) based upon the closing sale price on The Nasdaq Stock Market reported for such date. Shares of Common Stock held by each officer and director and by each person who may be deemed to be an affiliate have been excluded. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 23, 2021, the registrant had 234,573,372 shares of Class A common stock and 105,118,203 shares of Class B common stock, par value \$0.0001 per share, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Part III incorporates by reference certain information from the registrant's definitive proxy statement (the "Proxy Statement") relating to its 2021 Annual Meeting of Stockholders. The Proxy Statement will be filed with the U.S. Securities and Exchange Commission within 120 days after the end of the fiscal year to which this report relates.

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PART I

CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS

This Annual Report on Form 10-K (this “Form 10-K”) includes forward-looking statements in addition to historical information. These forward-looking statements are included throughout this Form 10-K, including in the sections entitled “Business,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and in other sections of this Form 10-K. In some cases, you can identify these statements by forward-looking words such as “outlook,” “believes,” “expects,” “potential,” “continues,” “may,” “will,” “should,” “could,” “seeks,” “approximately,” “predicts,” “intends,” “plans,” “estimates,” “anticipates” or the negative version of these words or other comparable words or phrases, may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. These forward-looking statements, which are subject to risks, uncertainties and assumptions about us, may include projections of our future financial performance, our anticipated growth strategies and anticipated trends in our business.

These statements are only predictions based on our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by the forward-looking statements, including those factors discussed in the section entitled “Risk Factors” in this Form 10-K. You should specifically consider the numerous risks outlined in the section of this Form 10-K entitled “Risk Factors.” Although we believe the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, level of activity, performance or achievements. We undertake no obligation to update any forward-looking statements made in this Form 10-K to reflect events or circumstances after the date of this Form 10-K or to reflect new information or the occurrence of unanticipated events, except as required by law.

ITEM 1. BUSINESS.

Overview

Our vision is to make autonomous transportation safe and ubiquitous. As a global leader in lidar autonomous driving technology, we are enabling the world’s first autonomous solutions for automotive series production in passenger cars and commercial trucks.

Founded in 2012 by President and Chief Executive Officer Austin Russell, Luminar built a new type of lidar from the chip-level up, with technological breakthroughs across all core components. As a result, we have created what we believe is the only lidar sensor that meets the demanding performance, safety, and cost requirements for Level 3 through Level 5 autonomous vehicles in production, bypassing the traditional limitations of legacy lidar technology, while also enabling Level 0 through Level 2 (Advanced Driving Assistance Systems (“ADAS”) and/or Luminar Proactive Safety) with our Proactive Safety solution. Integrating this advanced hardware with our custom developed software stack enables a turn-key autonomous solution to accelerate widespread adoption across automakers at series production scale.

Our lidar hardware and software products help set the standard for safety in the industry, and are designed to enable accurate and reliable detections of some of the most challenging “edge cases” autonomous vehicles can encounter on a regular basis. This is achieved by advancing existing lidar range and resolution to new levels, ensuring hard-to-see objects like a tire on the road ahead or a child that runs into the street are not missed, as well as by developing our software to interpret the data needed to inform autonomous and assisted driving decisions.

Our full-stack hardware and software autonomy solution for cars and trucks as well as our standalone lidar technology offerings have made us one of the leading partners for the world’s top OEMs. We are currently partnering with eight of the top-ten global automakers, by sales, and have the goal of being the first lidar company to produce highway self-driving and next-generation Proactive Safety systems for series production. With approximately 400 employees across eight global locations, we have scaled to over 50 partners in the last two years, including the first industry-wide automotive series production award in the autonomous space, awarded by Volvo Cars in May 2020, with series production expected to commence in 2022. We subsequently entered into a strategic partnership with Daimler Truck AG in October 2020 and with Mobileye Vision Technologies Ltd (“Mobileye”) in November 2020.

The Luminar Difference

We have established ourselves as a global leader in lidar autonomous driving technology, and these are the strengths that not only set us apart today, but we believe will continue to differentiate us in the future:

Breakthrough Technology Delivering What We Believe is the World’s First Auto-Grade Compliant Solution. Reflecting roughly nine years of development at this stage (the first five of which were in stealth), Luminar offers a unique lidar architecture and proprietary component-level innovation (built from the chip-level up), resulting in superior range and resolution capabilities, ensuring confidence in perception across a broad set of operational domains and unlocking the next

generation of vehicle safety. Our lidar and perception software are built upon a longer wavelength lidar design, which has been widely embraced as necessary to broadly deploy truly autonomous vehicles. As a result, we believe that we are the only provider of lidar for automotive autonomy applications that achieves the industry's stringent requirements and perception capabilities. Our technological prowess and differentiated approach is supported by an extensive intellectual property portfolio of 93 issued patents, in addition to 84 pending or allowed patents as of February 2021.

Highway Autonomy. By developing and deploying the industry's first lidar technology to meet the stringent requirements required to enable highway autonomy, Luminar will provide its key customers with a dramatic step-function in performance and help enable the first wave of autonomous vehicles—hands-off, eyes-off autonomy for highway-related use cases—which we envision to be rolled out beginning late next year.

Proactive Safety. In addition to enabling hands-off, eyes-off autonomy for highway-related use cases, we see a significant opportunity for our lidar sensing system and software to enhance current ADAS functionality and safety; and reduce collisions across a variety of other operating domains in a proactive rather than reactive capacity. As a result, we foresee insurance-related opportunities, which may either accelerate the adoption of our integrated solution and help to cross-subsidize the implied cost of our system, aided in part through improved economies of scale.

Deeply Integrated Hardware/Software Solution. We believe our Sentinel software offering provides our customers with a turnkey solution that accelerates the ability for OEMs to deliver high-speed highway autonomy and Proactive Safety at commercial series production scale. With over-the-air software updates, the product will be continually refined to ensure continued solution reliance and enhanced performance.

Volvo Series Production Contract. In May 2020, we announced a landmark deal with Volvo Cars for the first automotive series production award for autonomy in the industry. As a result, our hardware and software could power Volvo's next-generation vehicle platform, called SPA2, on which its future consumer vehicle models will be based. The intent of the program is primarily to enable highway autonomous drive capability as an option on production consumer vehicles, with series production expected to start in 2022. Additionally, the program presents an opportunity to simultaneously enable next-generation Proactive Safety systems in a more widespread capacity at lower cost than autonomous drive upgrades.

Additional Commercial Success with Daimler Truck AG and Mobileye In October 2020, we announced a strategic partnership with Daimler Truck AG, the world's largest commercial vehicle manufacturer, to enable highly automated trucking, starting on highways. Our teams work closely together in order to enhance lidar sensing, perception, and system-level performance for Daimler trucks moving at highway speeds. To strengthen the partnership, Daimler Trucks has acquired a minority stake in Luminar. In November 2020, we executed a contract with Mobileye, an Intel company, to supply Luminar lidar for use in Mobileye's first generation of its Level 4 Mobility-as-a-Service (MaaS) pilot and driverless fleet in key markets around the world.

Compelling Growth, Margin, and Cash Flow Profile. We believe that our robust customer base and growing list of commercial partnerships creates a compelling growth profile. This is further enhanced by the visibility to series production from existing and developing agreements that would enable rapid growth. Our product cost structure includes exclusive supply agreements for all three of our key lidar components (receiver, ASIC, and laser), enabling us to achieve significant material cost reductions as volume increases for such key hardware components. As we scale production and grow our revenue, we believe our strategy of low capital intensity provides the potential for high shareholder return.

Deep Bench of Industry Leaders. We have a visionary leadership team with a track record of innovation and execution, led by our President and Chief Executive Officer, Austin Russell, to develop a new kind of sensing technology to make autonomous vehicles both safe and ubiquitous. With approximately 400 employees across 8 global locations (including a millennia of man and woman years of lidar-related experience), Luminar has built a deeply experienced team of industry leaders from across the lidar, automotive, technology and autonomy sectors, including senior members from automotive companies such as Daimler-Benz, ZF, VW and Harman and technology companies such as Google, Uber, Motorola and Ocean Optics.

Our Market Position and Leadership

We were founded with the vision of making autonomous transportation safe and ubiquitous. As a global leader in lidar autonomous driving technology, we are enabling the world's first autonomous solutions for automotive series production in passenger cars and commercial trucks.

The automotive industry is among the largest in the world and features an estimated total addressable market opportunity ("TAM") for ADAS and autonomous solutions (Level 0 through Level 5) expected to exceed \$150 billion by 2030. Our model to capture this opportunity is to directly partner with top established automotive companies in order to power their autonomous future. Correspondingly, we have successfully established partnerships with over 50 companies across three primary application verticals: passenger vehicles, commercial trucks, and robo-taxis. More than 75% of the companies listed in the target ecosystem

chart below are working with Luminar customers. Although not our primary focus, adjacent markets such as aerospace, defense and smart cities offer use cases uniquely suited for and potentially served by our technology.

An important benefit of our engagements with commercial partners is to have our products generally incorporated into our commercial partners' development programs at the earliest stages. By securing these development wins in a competitive landscape, there is greater increased forward visibility into the long-term development cycle towards series production. This awards us with a significant competitive advantage by positioning us to convert existing development engagements with key automakers into series production awards in the near term, as we have with Volvo Cars and others we expect to finalize in the future.

We have a number of OEM, trucking and robo-taxi-related partners currently in the process of validating our technology, principally using our Hydra lidar sensors (described further below), which is geared toward research and development fleets. We also have a significant number of advanced development partners, in which we see an opportunity to convert into series production awards through 2022. We expect that all series production partners will use our Iris lidar sensors (described further below) for upwards of one million or more vehicles, building on the work already completed with Hydra.

A majority of autonomous vehicle companies have been primarily focused on robo-taxi research and development for urban low speed ridesharing applications (of which we work with many). We are, by comparison, focused for the time being on the highway autonomy use case for production vehicles and are powering the substantial majority of autonomous trucking programs. This presents a unique opportunity for us to enable near-term production deployments over the next few years, while it is expected that higher levels of autonomy for urban robo-taxi applications will take substantially longer to reach scale.

Driving further volume beyond highway autonomy is our Proactive Safety solution, with the goal of ultimately preventing the majority of forward collisions that occur on roads today. With over one million fatalities globally each year from vehicle accidents, there is a clear opportunity to set a new baseline standard for vehicle safety industry-wide.

Current industry ADAS capabilities are enabled primarily by camera and/or radar sensing technologies. Data from both sensor types are commonly merged to provide the vehicle system with some understanding of its driving environment. These systems, however, fall short of delivering substantial safety gains. Today's ADAS works well under ideal circumstances—at low speed, in ideal weather conditions, and on a test track—however with our Proactive Safety solution, we believe we can decrease the reported collisions occurrence rates by up to seven times.

Launching this bold vision forward, we entered into a landmark deal with Volvo Cars for the first automotive series production award for autonomy in the industry, which was announced in May 2020. Our hardware and software is being integrated into Volvo's global consumer vehicle platform to power autonomous highway driving and Proactive Safety features, with series production scheduled to take place in 2022. Volvo has historically been a leader in deploying new breakthrough safety-centric technologies into the automotive industry, ranging from the invention of the modern three-point seat belt to the launch of Mobileye's vision-based ADAS product.

In October 2020, we also announced a strategic partnership with Daimler Truck AG, the world's largest commercial vehicle manufacturer (through its Freightliner and Western Star Brands), to enable highly automated trucking, starting on highways. Experts at Daimler Truck AG, along with its U.S. subsidiary, Daimler Trucks North America (DTNA) and Torc Robotics, part of Daimler Trucks' Autonomous Technology Group, are collaboratively pursuing with Luminar a common goal of bringing series-produced highly automated trucks (Level 4) to roads globally. Our teams work closely together in order to enhance lidar sensing, perception, and system-level performance for Daimler trucks moving at highway speeds. To strengthen the partnership, Daimler Trucks has acquired a minority stake in Luminar.

In November 2020, we executed a contract with Mobileye, an Intel company, to supply Luminar lidar for the company's Autonomous Vehicle Series solution in its next phase of driverless car development and testing, in production volumes at sub-\$1,000 cost. As part of the agreement, Mobileye will collaborate with us to use our lidar for the first generation of its Level 4 MaaS pilot and driverless fleet in key markets around the world. Our technology will be used to enable Mobileye's TRUE REDUNDANCY capability, with multiple self-contained sensor systems to enable uncompromised safety and validation for Level 4 driving.

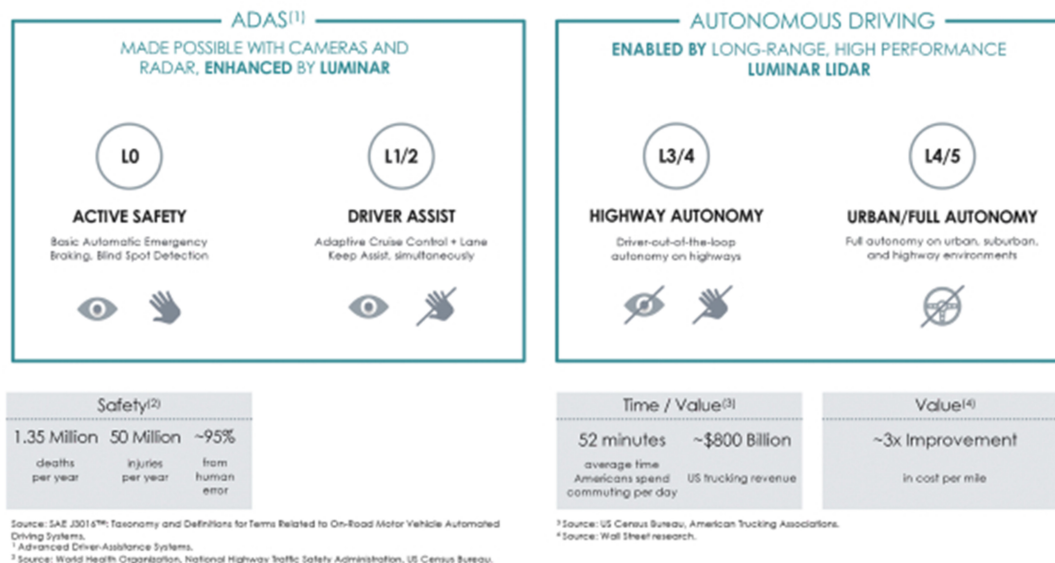
In March 2021, we announced a partnership with Zenseact to deliver autonomous software for series production vehicles. Volvo Cars is the first launch customer, representing both Luminar's and Zenseact's first production design win for software. Luminar's new product suite, Sentinel, is the first full-stack autonomous solution for series production in the industry. It deeply integrates Zenseact's OnePilot autonomous driving software solution alongside Luminar's Iris lidar, perception software, and other components as a foundation, enabling every automaker to offer Highway Autonomy and Proactive Safety™ capabilities on their production vehicles. While the wider autonomous industry largely focuses on robo-taxi applications, Luminar and Zenseact collectively remain focused on delivering systems into series production vehicles.

In March 2021, we entered into a relationship with SAIC Motor Corporation, the largest automaker in China, pursuant to which Luminar is expected to power the autonomous capabilities and advanced safety features in SAIC's new R brand vehicles for series production with its industry-leading lidar as well as components of its Sentinel software system. The R brand program is expected to begin series production with Luminar starting in 2022, with the parties' longer-term goal being widespread standardization across all vehicle lines. As part of the close collaboration, we will also be establishing an office in China to be located in Shanghai alongside SAIC Motor, where SAIC would also be providing local support. The parties expect to deliver the first autonomous production vehicles in China, establishing SAIC's technology leadership position and Luminar's production launch in the region.

Market Outlook

There is a worldwide trend towards mobility and e-mobility and a renewed focus on autonomy, specifically highway autonomy for passenger and commercial vehicles. As the market shifts toward electric and hydrogen drivetrains, along with software-defined vehicles delivering a new user experience and data capability, we see the potential of autonomy enabled by the sensing and computing technologies on vehicles and under advanced development today. The roadmap from existing driver assistance and comfort features all the way to self-driving value can be built through improved vehicle situational awareness.

Our products provide this situational awareness in a broad range of driving environments and allow for confident detection and planning at all vehicle speeds. Our portfolio encompasses sensor hardware, and perception and decision-making software that improve existing vehicle features and enable new levels of vehicle automation for consumer and commercial applications. To understand the ADAS and autonomy markets addressed by our products, it is important to understand the levels of automation as defined by The Society of Automotive Engineers ("SAE").



Although SAE has clearly defined these levels, there continues to be inaccuracies and misuse of the levels leading to consumer misconceptions about the true capability of the vehicle which they purchase. We believe our lidar greatly enhances the lowest levels of autonomy and enables the deployment of the highest levels of autonomy to both the consumer and commercial markets. Below is a more detailed description of the levels of automation.

- **Level 0—Active Safety:** In this level, the human is fully responsible for all driving functions at all times. “L0” is defined as driver support features that are limited to warnings or momentary driving assistance. Examples of warnings include blind spot warning or lane departure warnings. Examples of features with momentary assistance include automated emergency braking (“AEB”) and lane keep assist (“LKA”). These features are viewed as the basis of active safety, with AEB designed to reduce and/or mitigate the severity of low speed accidents, and LKA designed to prevent vehicles from crossing over into neighboring lanes or even worse, oncoming traffic. These features apply to both passenger and commercial vehicles and are growing as standard features globally and represent the majority of the ADAS market today.

- **Luminar value-add:** Our lidar's long range and high resolution capability enables the detection and classification of objects (vehicles, pedestrians, cyclists) in all lighting conditions and inclement weather. We expect this to greatly improve upon today's systems, and to be much more effective at taking proactive measures to avoid accidents and extending the AEB capability to higher speed driving scenarios. Additionally, the ability to detect lanes out to 150 meters and do so in these same adverse environmental conditions adds to the robustness of LKA systems and helps prevent temporary loss of lanes or lack of detection altogether as often seen in today's systems.
- **Levels 1 and 2—Driver Assist:** These levels represent the last levels in which the driver is still fully responsible for all driving functions at all times. "L1" is defined as driver support features that provide steering or braking/acceleration assistance, but not both simultaneously. Examples include lane centering support ("LCS") or the more widely adopted adaptive cruise control ("ACC"). These features are viewed as comfort features, easing the driving load from the driver during extended highway drives. "L2" captures multiple driving tasks, for example both ACC and LCS simultaneously. In the near future, we expect an increased adoption of these systems as safety protocols begin to require head-on collision assistance which will require simultaneous braking and steering control.

The term L2+ is often used for today's higher capability systems, many of which add a driver monitoring camera to ensure the human driver remains engaged, but allow them to remove their hands from the wheel completely (eyes must remain on the road). These systems are currently restricted in Europe, but allowed in the United States and other regions of the world in the restricted operational design domain ("ODD") of divided expressways, high-ways, and typically only in systems with onboard high-definition maps of those expressways. The ramp up of these systems has been slower on the market, mainly due to the additional sensing and compute costs for marginal value-add to the end consumer.

- **Luminar value-add:** Similar to L0, we expect to greatly improve upon today's L1 and L2 in performance, robustness and availability. With the ability to detect lanes and precisely measure the distance to a lead vehicle in a single lidar sensor, we can independently give lane assignments to objects ahead. This helps prevent false braking events while driving in ACC mode, making the consumer experience safer and more enjoyable. Add this to the ability to detect lanes independent of lighting conditions, and we add confidence and robustness to nighttime driver support systems as well. As driver confidence in these features grows, we expect the utilization and adoption of such features to increase, leading to higher impact of vehicle safety systems.
- **Levels 3 and 4—Highway Autonomy:** In these levels, the vehicle can still be operated in normal driving mode. However, when the automated driving function is engaged, the human is no longer responsible for the driving function. "L3" requires that the human driver must take back complete control of the vehicle when requested. "L4" assures the vehicle will continue to function without any human driver intervention, even if in a degraded state. Terms such as "chauffeur" are used for L3, while terms like "pilot" are used for L4, sometimes incorrectly. Further, robo-taxis today are aspiring to L4 but still rely on safety drivers behind the wheel making them L3 systems – including leaders like Waymo. To better quantify a vehicle's autonomous capabilities, the market has started to assign an ODD and while many are trying to enable L4 for the urban environment, the most logical ODD for L3 and L4 driving is divided expressway or highway.

Subsequently, a vehicle may not have L4 capability from the garage or the docking facility to the highway, but from highway entrance to highway exit, the vehicle can provide L4 functionality for that specific ODD. In 2020, the L3 and L4 markets only exist in development platforms and there are no serial production automotive L3 or L4 systems available. We believe, however, this segment represents significant growth potential and when correctly implemented, will prove valuable to both the consumer and society.

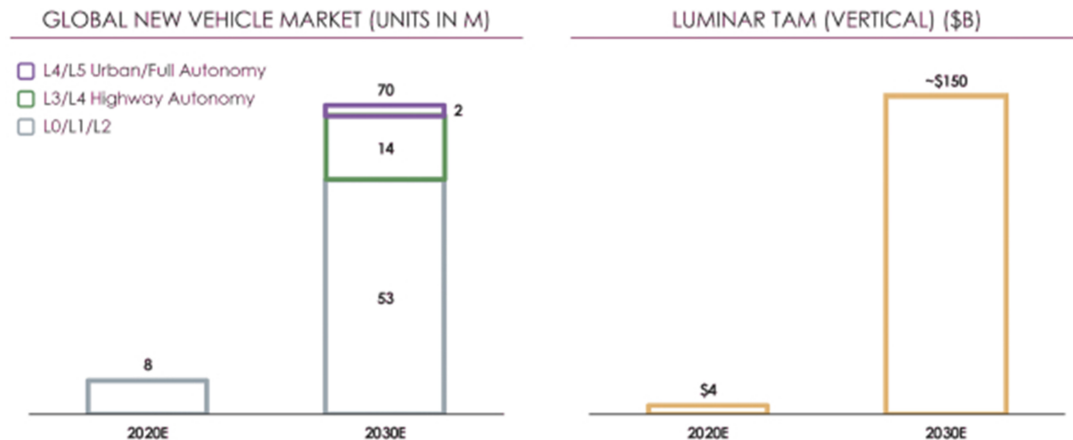
- **Luminar value-add:** Adding our lidar to these systems improves their robustness and availability, allows sensing redundancy to cameras and radar, and therefore enables true hands-off and eyes-off operation. This allows the driver to utilize their time for something other than supervising the driving function, which is the ultimate product purpose of autonomy.
- **Levels 4 and 5—Urban/Full Autonomy:** "L5" is essentially the same as L4, but without the ODD restriction. It is the designation for vehicles that when placed in automated driving mode, can drive everywhere and in all conditions without human intervention or even occupants. We group this L4/L5 functionality due to the current focus on urban and suburban driving in the form of robo-taxis. Commercial trucking also aspires to L5 capability but is focusing its L4 efforts on highways as this yields the highest benefit. An urban L4 is extremely complicated compared with highway L4. We do expect that robo-taxis and automated people movers will be a strong growth market, but the timeline is more uncertain and we expect this market growth to be limited while technology for both vehicles and infrastructure matures.

- **Luminar value-add:** Similar to L3 and L4, we believe lidar is required to deliver L5 sensing and perception needs. Sensing redundancy and multiple modalities are required and perhaps more important since the environment is the most complex, and our lidar’s sensing and perception capability supports the needs of detection and classification in dense, congested, and difficult environments at all hours of the day and night.

While these SAE levels are important to technology developers, we believe the market is currently segmented in two distinct categories: (1) ADAS or driver-assistance, where a human is in the driving loop and responsible, at minimum, to be a safety fallback and in most circumstances directly control part or all of driving tasks; and (2) autonomous driving, where a human is “out-of-the-loop” (colloquially, “hands off” the steering wheel and “eyes off” the road), which generates real value propositions to consumers, such as allowing the driver to recover time, as opposed to mere comfort or novelty features.

Within these two segments, we believe the largest business opportunities exist in the areas of active safety and highway autonomy due to trends in safety technology standardization and consumer pain-point priority. These two applications have well aligned technology requirements that allow us to remain focused on a single product/solution that will allow OEM partners to achieve both. The broader autonomy market segment, specifically robo-taxis, represents strong long-term opportunity, but lidar technology must be seeded now during development even though high-volume production and deployment remains many years away.

These trends and safety needs apply to both the passenger and commercial vehicle markets. The autonomy use case and business case for commercial vehicles are simple: reduce operational costs and increase efficiencies. Passenger vehicles are more complex since the ability to deliver autonomy is more focused on the consumer’s comfort and convenience. We are working to help OEMs and consumers achieve these goals, but with the proper level of safety included. Our lidar is also making traction in other markets, including defense and smart cities, that require high resolution and long-range sensing in uncontrolled operating conditions.



Source: Our estimates, incorporating data from IHS Markit and Wall Street research. Includes passenger and commercial vehicles (including robo-taxi) as well as hardware and software.

The charts above represent today’s market in 2020 for which scanning lidar is limited. The market, however, is expected to grow substantially by 2030 and our technology has the potential to improve or enable capability across the full spectrum of the market. Our initial focus for lidar technology is L3/L4, and we aim to offer the sensing, perception, and function turn-key system that will truly add value and give driving time back to the end consumer. This market is still developing, but represents significant growth, and we are the technology leader with the first L4 highway production platform win with Volvo. In addition, vehicles enabled with our lidar will be capable of proactive safety in which accidents are potentially completely avoided, which can benefit other autonomy solutions such as L1/L2.

Passenger Vehicles

The passenger vehicle market is very large. We expect that more than approximately 100 million new passenger vehicles will continue to be manufactured year-over-year through 2030 and beyond. It is very difficult to replicate this volume in other markets, but it is also important to recognize that highway autonomy is not yet standard equipment. In order to realize a vehicle feature’s maximum societal benefits, the ultimate goal in the automotive industry is to achieve widespread adoption of the highway autonomous feature in all vehicles. We expect a technology adoption ramp-up over time as automated functionality

matures, costs and pricing are reduced, and consumers become more familiar with the full benefits and capabilities of a safe autonomy system. We believe there is a substantial market opportunity for our products when proactive safety is coupled with autonomy due to the public benefit of the overall anticipated safety increase.

ADAS

ADAS volumes are primarily driven by both the European and North American markets. The European New Car Assessment Program (“NCAP”) requires a minimum level of crash mitigation functionality such as AEB (for vehicles, pedestrians, and cyclists), LKA, speed alert systems and other ADAS features for a vehicle to have a 5-star rating. Furthermore, the European Union is moving toward mandates of these advanced functions.

The U.S. is less focused on mandates at this time and instead allows the U.S. NCAP (known as the “Stars on Cars” program) and designations such as the Insurance Institute for Highway Safety “Top Safety Pick” and “Top Safety Pick+” to drive adoption and provide consumers with an understanding of the vehicle’s advanced crash avoidance capability. Additionally, in working with the National Highway Traffic Safety Administration (“NHTSA”), 20 automakers pledged to voluntarily equip virtually all new passenger vehicles by September 1, 2022 with a low-speed AEB system that includes forward-collision warning. With global safety rating programs and the OEMs competing to deliver more safety and comfort features to their customers, it is reasonable to expect near complete adoption of ADAS functionalities in new vehicles produced by Europe, U.S., Japan, and South Korea by 2026. We expect adoption rates to increase significantly in China as well.

Tesla’s “Autopilot” is an example of establishing a driver support (as defined by SAE) platform as standard equipment. They developed a vehicle around the promise of future functionality which supports the production volume and cost reduction needed to spread technology beyond premium, low volume platforms. We expect more OEMs to demand proactive safety and limited autonomy with the ability to upgrade functionality over time without hardware change. This expectation aligns well with the increasing number of OEMs developing new vehicle platforms that span their lineups.

Proactive Safety

While the increased application of existing ADAS technology should help lessen the number of accidents and fatalities, we believe there is significant room for improvement concerning standard ADAS and crash avoidance. Today, the ADAS systems are designed to mitigate or lessen the severity of accidents and only avoid them under certain low-speed or ideal environmental conditions. Recent data suggests that the number of automotive fatalities globally still exceeds one million annually and the social costs of accidents continue to exceed \$500 billion in the United States alone. As the autonomy market matures, we expect that OEMs and global NCAP programs will extend the functionality to intersection and crossing scenarios, which requires wider fields-of-view and faster detection. Global safety rating programs are also considering night and low-light performance in the future, further pushing the existing technology’s limits. We believe there is a significant opportunity to be able to reduce collisions with a capable lidar sensing system and software which can enable an understanding of the environment, which can help to avoid collisions by taking over the steering wheel and braking systems proactively. Our lidar is capable of significantly increasing the effectiveness of these active safety systems and supports proactive safety and greater crash avoidance measures using our long-range, high resolution, wide Field-of-view, and perception software to be able to detect pedestrians and cyclists in the most challenging and complicated environmental sensing conditions. Furthermore, high-speed safety performance, specifically AEB, is increasingly important as hands-free highway driving assist systems are further delivered to the market, and the vehicles take on more of the driving responsibility.

Highway Autonomy

Since inception, our focus has been to enable safe and ubiquitous autonomy and we view highway autonomy, in combination with proactive safety, as providing the most value to the end consumer for the foreseeable future. The market is also trending in this direction, targeting hands-off and eyes-off operations in a more controlled setting than the urban environment. While there is a significant focus on investment and development of robo-taxi solutions, passenger vehicles continue to be a voluminous market, and we expect the growth rate of highway automated functions to have a compound annual growth rate (CAGR) of nearly 40% from 2020 until 2030.

Commercial Trucking Market Outlook

The amount of goods transported by trucking globally continues to rise year-over-year. While the number of newly manufactured trucks has declined in recent years, the application of ADAS technology continues to grow and the interest in autonomy for transport is at an all-time high. The business case for trucking highway autonomy is simple: lower operating costs and increased availability of the vehicles and time spent on the road (trucking and fleet companies do not get paid to park at rest stops).

The application of AEB has been in the market for many years, with the first mandate for vehicle AEB in Europe in 2013, and growing application of the functionality since. Similar to passenger vehicles, Europe leads the market in a unified safety direction and has put mandates in place to drive lane keeping functions and expand the AEB functionality to include

pedestrians and cyclists. This leadership is also a result of a market driven by the trucking manufacturers who set the technology distribution of vehicles and the ADAS vehicles and systems architectures. Unfortunately, the trucking market in North America is heavily driven by the fleet operators' specifications and is heavily fragmented. The lack of mandates from governing bodies has resulted in a market for ADAS that is very difficult to quantify and gain economies of scale across a small set of partners as is the case in Europe. As in passenger vehicles, our lidar technology and sensing capability could greatly improve the L0 and L1 functionality for the trucking market as well. However, our focus and the value add seen globally by the OEMs and fleet operators is L4 highway autonomous driving.

L4 highway autonomy is the target ODD for trucking because that is where their money is earned and where the majority of the physical truck's time is spent. The sensing needs between Europe, North America, South Korea, Japan, and other regions globally all differ slightly, but have similarities in the requirement for (i) long range detection to aid in extra braking time, (ii) farther detection of lanes to aid in proper lane centering and placement of potential obstacles in the correct lanes, and (iii) the vertical field of view and high placement on the cab to support close proximity detection in front of the vehicle, as well as overhead obstacles (such as bridges and overhead signs).

Robo-Taxi and Delivery Market Outlook

The press announcements of large robo-taxi investment and partnerships between technology companies, both established and startup, and mainstays from the automotive industry dominate the industry's attention. This application is, however, the most difficult vehicle autonomy feature to solve for technically. It requires the ability to detect and classify hundreds of objects and predict motion for many of those objects, including pedestrians, electric scooters, and bicycles—all of which present as pedestrians, but move in very different ways. The environment consists of dynamic weather, steam from manholes and exhaust pipes, and oftentimes construction equipment causing dust and debris. Given the economic benefit an automated robo-taxi driving system could unlock, billions of dollars in funding and engineering efforts have been focused on developing solutions. The majority of the autonomous vehicle companies are operating in this space, awaiting a market that requires complex governmental support, funding for infrastructure, and a sensing and compute solution that must anticipate every possible mixed-traffic scenario.

Additionally, the initial ODD only requires low to medium speed operation, which can be met with less capable sensors. We expect that ultimately, the ODD will need to expand to the highway as robo-taxis and automated shuttle services move people from city centers to the airport and back, in particular. We expect limited robo-taxi R&D programs will continue to operate in varying levels of development and testing the rest of this decade.

Adjacent Markets

Although not our primary focus, the adjacent markets below offer use cases uniquely suited for and potentially served by our technology. Our goal is to scale our core markets and utilize our robust solutions to best serve these adjacent markets where it makes sense for us and our partners.

- **Smart Cities.** Many government agencies are motivated to invest in smart cities solutions such as "Smart" intersections and "Intelligent" tolling systems due to macroeconomic trends such as usage of electric vehicles (and the subsequent reduction in fuel taxes) and growing city populations (and the subsequent need to manage assets more efficiently). As discussed above with trends of urban living and the need to manage traffic flow and congestion, not only is there a market for the vehicles themselves but also for the infrastructure to support such automation. Today, many global cities have a defined Smart City initiative to be delivered over the coming years, with over 50% of these initiatives being in Europe and North America. The market is broken up into segments: smart buildings, transportation, infrastructure, healthcare, energy, security, and education. We will focus on infrastructure and security: traffic flow and intersection management, tolling and traffic management, smart parking and security, pedestrian and crowd flow management and security, and large venue security.
- **Aerospace and Defense.** The aerospace and defense markets are intent on increasing their autonomous capability and lidar is a key component to enabling such automation, including for items such as an automated convoy for resupply or an automated refueling mission. These markets represent a small volume, but with very specific requirements that only certain technologies will be able to meet. We will utilize our sensing and system architecture from our core automotive system and provide solutions in this space and/or partner with companies who can help deliver specific solutions licensing our high performance technology.

Our Solution Overview

We bring opportunity and inspiration to an automotive industry that requires continuous technological and performance innovation, and play a critical role in making the future of mobility safer. The hope for autonomy is not just novelty – it is the critical feature required to transform the way people and goods move throughout the world transportation ecosystem. Autonomy presents an opportunity to save lives through enhanced safety, liberate those who struggle with transportation access,

and reoptimize value chains of logistics and vehicle ownership. We seize this opportunity by delivering what we believe is the world's first autonomous solution for series production, powering highway autonomy and proactive safety.

High-performance lidar is not just another sensor. While it is true that lidar is a sensor, its value is more than just hardware and delivering a point cloud "image." It is similar to radar and cameras in that these devices provide no direct value without the signal processing, detection, tracking, and perception software that gives an understanding of the vehicle's surroundings. The next product offering levels are to provide route planning and command the steering, braking, and engine actuators to control the vehicle. This will require lidar producers to follow the precedents set by camera and radar, where sensor providers supply perception software (they are, after all, the experts in that sensor's data).

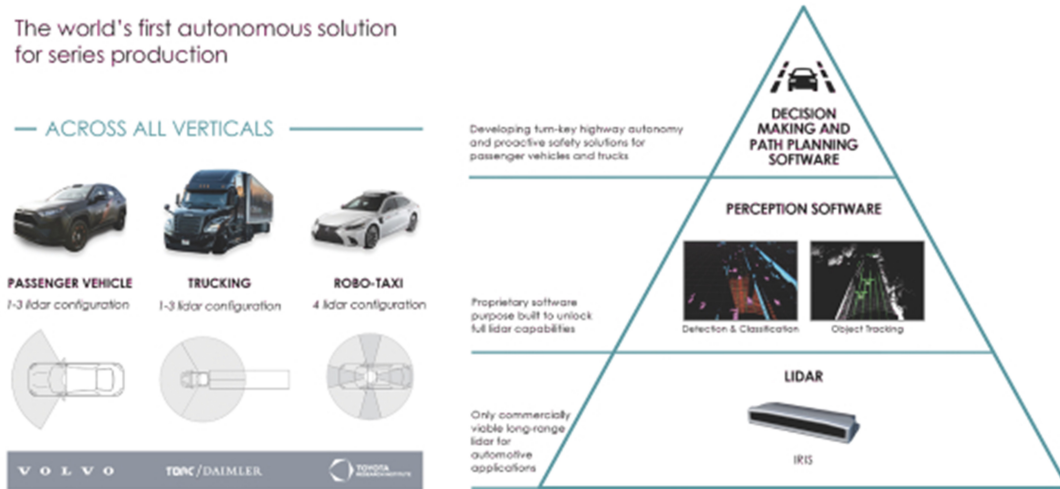
Many companies have developed lidar sensors, but not all have developed lidar systems. A lidar product offering can be broken down as follows:

Lidar: For customers with a full complement of vehicle system software development, this product enables their development of vehicle functions through a sensor hardware product.

Highway Autonomy: A full vehicle function product combining hardware and software for driver out-of-the-loop on highways.

Proactive Safety: A full vehicle function product combining hardware and software that continuously monitors, but only momentarily acts to avoid collisions on all road types.


































As the requirements of a lidar system increase, the number of competitors tends to quickly decrease. We were founded with the understanding that the most effective lidar solution will have perception that can deliver the complete desired solution through the OEM to the end consumer. Many OEMs, via their camera experience, have outsourced everything to the supply base, except function development. Many have outsourced even this functionality and are starting to weigh the benefit of having a proprietary solution to using a more standardized, off-the-shelf product that saves them time and money.



Commercial Overview

We partner with the majority of key OEMs focused across three verticals: passenger vehicles, trucking, and robo-taxi. More than 75% of the companies listed in the target ecosystem chart below are Luminar customers. Furthermore, we have strong demand for our products in multiple adjacent market verticals.

50 current commercial partners represent ~75% of target passenger vehicle, trucking and robo-taxi ecosystem

	PASSENGER VEHICLE	TRUCKING	ROBO-TAXI	ADJACENT MARKETS
LUMINAR Partners	8 of Top 10 OEMs	Most Major Programs	Most Major Programs	Diverse Cross-Section
Target Ecosystem	 TOYOTA  DAIMLER  Audi  Ford  BMW  SAIC  HYUNDAI  HONDA  VOLVO  NISSAN  GM  FCA  JAGUAR LAND ROVER  RIVIAN  NIO	 Ike  TORC / DAIMLER  NIKOLA  VOLVO TRUCKS  Kodiak  simple  PACCAR  EMBARK	 TOYOTA RESEARCH INSTITUTE  cruise  mobileye  NVIDIA  Uber  ARGO  Motional  Tier IV  Weirid  ZOOX	Aerospace/Defense Construction/Mining Agriculture Smart City

An important benefit of our engagements with commercial partners is to have our products generally incorporated into our commercial partners' development programs at the earliest stages. By securing these development wins in a competitive landscape, there is greater increased forward visibility into the long-term development cycle towards series production. This awards us with a significant competitive advantage by positioning us to convert existing development engagements with key automakers into series production awards in the near term, as we have with Volvo Cars and others we expect to finalize in the future.

We have a number of OEM, trucking and robo-taxi-related partners currently in the process of validating our technology, principally using our Hydra lidar sensors (described further below), which is geared toward research and development fleets. We also have a significant number of advanced development partners, in which we see an opportunity to convert into series production awards through 2022. We expect that all series production partners will use our Iris lidar sensors (described further below) for upwards of one million or more vehicles, building on the work already completed with Hydra.

In the near term, we are focused on the passenger vehicle and trucking markets, which we believe will drive our ability to increase market share and achieve economies of scale.

Passenger Vehicles

Due to the complexity and challenging environment of urban driving, we believe that the industry will focus on highway autonomy in the near future. Our series production award with Volvo, a global leader in automotive safety, is a key example. Our lidar technology will power Volvo's first fully self-driving technology for highways in their next-generation production passenger vehicles, enabling true driver out-of-the-loop functionality, which we expect will set new standards of safety for the industry.

By 2030, we anticipate we will have approximately 4% vehicle penetration rate across the industry. Today, a majority of our current partners have a highway autonomy program in development with an anticipated start of production year ranging from 2023 to 2025. Leveraging our hardware and software for series production also paves the way for future proactive safety use cases in vehicles. We believe our lidar unlocks greater crash avoidance capability than today's active safety systems and will help deliver what it calls "proactive safety" to the consumer – higher speed emergency braking, enhanced lane keeping functionality, and significantly improved performance and availability in inclement weather and low-visibility conditions. Given our performance-differentiated products and Volvo's safety DNA, Volvo is considering making our lidar standard on all vehicles in the future, which would further enable and accelerate the adoption of our technology to several automotive partners.

This, in turn, increases our ability to scale incorporation of our products into additional passenger vehicles relative to our competitors, which we believe is a significant advantage. With production expected to start with Volvo in 2022, we will have an industrialized, automotive-grade product ready to deploy and the ability to leverage existing capacity with an efficient use of capital to support our commercial partners globally.

Commercial Trucking

We work with a significant majority of self-driving truck start-ups and traditional truck OEMs. Our commercial partners greatly value the long perception range that our sensors enable while operating on highways. Our technology enables the detection of road debris such as tire remnants or stalled traffic at ranges greater than 250 meters, as well as motorcycles darting through traffic at highway speeds. We believe the short-range performance of the vast majority of lidar providers is insufficient against those and other scenarios and inadequate to provide the level of safety required by commercial trucking companies operating on public motorways.

We work directly with our commercial partners to optimize our products for their applications. A few highlights of this optimization include our developments of unique scan patterns for maximized point density in specific areas of interest and models for sensor placement that minimize blind spots around the cab. Our commercial partners use between one to four lidar sensors per truck, and we expect that all will eventually integrate three or four if they move forward to series production.

We enable our commercial trucking partners to consider three and four sensor configurations because of our expected unit economics. While the trucking market has less price sensitivity than the passenger vehicle market to support a multiple sensor configuration, it still benefits from the economies of scale achieved in the higher volume passenger vehicle market. Our commercial trucking development partners also appreciate that our passenger vehicle development comes with automotive-grade standards implemented in our product design and manufacturing processes. This enables our commercial trucking development partners to leverage our success with passenger vehicles and access the technology required to deploy much sooner than if they had worked with our competitors. We believe this is significant to them as the economic incentive for self-driving trucks is more compelling than for passenger vehicles since truckload carriers in North America and Western Europe aggressively compete for freight down to a difference of tens of dollars. Self-driving technology will enable truckload carriers to eliminate drivers on their terminal to terminal lanes and subsequently eliminate 25% to 30% of their costs for hauling freight. They will use that savings to win more desirable freight business. Adding to truckload carriers' sense of urgency to deploy self-driving truck technologies is the chronic shortage of drivers. For these reasons, we believe self-driving trucks will start to operate on highways as early as 2023 and steadily ramp up through the remainder of the decade.

Autonomy is a true economic enabler for the logistics market, including terminal to terminal, drayage and even last-mile delivery. The benefits of proactive safety discussed as part of our consumer vehicle products also apply to trucking.

Robo-Taxi and Delivery Vehicle Market

While robo-taxi and self-driving shuttle development primarily focus on low-speed urban environments today, their full value will only be met if they can also operate at higher speeds to expand their operating area, such as highways leading to airports. Our technology helps them achieve those goals by expanding this operating area to include roadways with speeds greater than 45 mph. Moreover, by using our perception software, our commercial partners can utilize their limited engineering resources more efficiently and enable them to focus on solving issues associated with vehicle system integration and driving in complex, urban environments. Our technology complements their work and will enable them to deploy their fleets sooner.

We expect there will be a number of locally dedicated robo-taxi R&D fleets continuing to launch through the next decade, which will begin with human safety drivers monitoring operation at all times and then transition to no human monitor as the fleet gains confidence in the safety of the system.

Adjacent Markets

The on-road vehicle markets are what drive our product development decision-making, especially in sensor hardware development, but the need for nearly identical performance exists in other markets as well. These markets commonly cannot match the economies of scale that automotive markets offer, but together they represent strong business opportunities. Therefore, we take an opportunistic approach to the broader lidar and perception markets, with particular near-term focus on the following.

- **Smart Cities.** We are working with our partners to integrate our sensors and perception software into existing solutions to make those solutions perform at high levels. Our technology enables those systems to detect and respond to vehicles at much greater ranges than legacy technology, and its perception software enables more reliable classification and prediction of objects within the area of interest. For example, cities will be able to reduce accidents at troublesome intersections and avoid expensive redesign projects, and tolling agencies can reduce the number of missed vehicles and increase their revenue yield. Many other applications benefit from our technologies' superior performance, and we are working with partners to enable new benefits for their customers.

- **Aerospace & Defense.** Aligned with our mission of enabling the autonomous movement of people and goods, we work with large aerospace/defense contractors on applications that extend off-road. While our products are used in many different applications, most involve enabling some form of autonomous drive capability. We anticipate entering into multi-year supply agreements with our defense contractor partners in this market to generate a significant number of sensor sales in the future. We also expect that most of our defense contractor partners will integrate our perception software into their solutions.

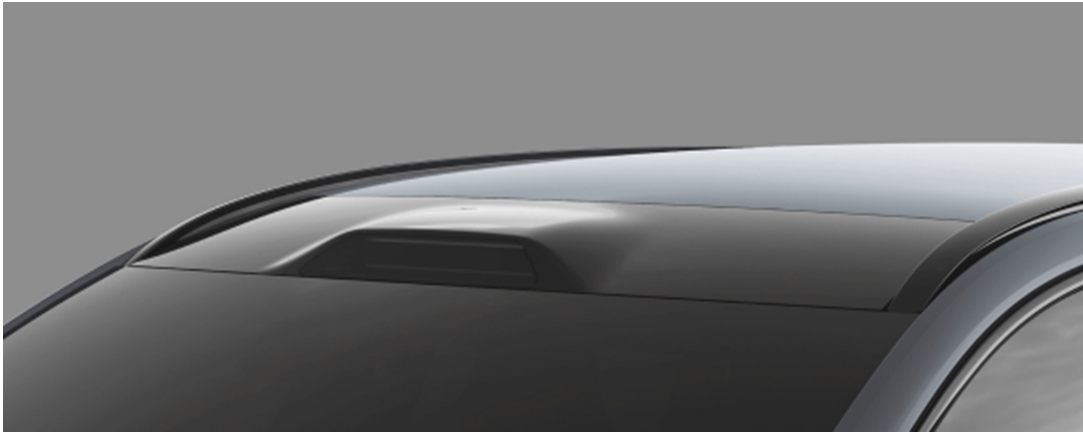
There is a significant difference between a development platform project and automotive-grade production. Many lidar companies have created development products. These products are used for multiple applications, including environmental mapping for autonomous driving perception. Some of these development products began with huge spinning lidar sensors placed on top of vehicles that were ideal for viewing 360° around the vehicle, in order to better understand the challenges associated with autonomy and help solve those challenges. They were deployed in robo-taxi and autonomous trucking applications, and a myriad of off-road applications to scope the role of 3D sensing. While relatively successful to date at establishing incumbent positions in all applicable markets, almost none of these products have transitioned to automotive-qualification or military standardization specification, which is required for series production. Many lidar companies have elected to shift their focus from automotive to other adjacent markets due to the deficiencies in their technical approach to lidar or the sheer organizational difficulty and cost in delivering automotive-grade products. Many of those adjacent markets are looking to leverage scale and reuse from the automotive market, with the understanding that it is very difficult to replicate a potential market of approximately 100 million units per year (passenger vehicles and commercial vehicles combined worldwide). With a clear roadmap and a development platform that seamlessly transitions into the production platform, we believe we are well-positioned to establish the mass-scale market for lidar as the key markets' leadership position.

Our Products

We believe we have established a dominant position in a crowded lidar market for three critical reasons: product, thought leadership, and deployment. Our products are designed and built from the ground up for the automotive market, and our performance exceeds those of our competitors. Our lidar and perception software forges a path for consumer 1550nm technology, which has been widely embraced as the long-range wavelength region necessary to widely deploy truly autonomous vehicles. We believe we are the only lidar company with deeply integrated hardware and software products, and this depth is supported by an extensive intellectual property portfolio of 93 issued patents, in addition to 84 pending or allowed patents as of February 2021.

We believe our products meet or exceed the requirements to enable safe autonomy at all levels, and we have turned this capability into a position of thought leadership in the market. From small technology companies to global OEMs, our over 50 commercial partners look to us for guidance on how to specify, test, and integrate lidar into their products. Our broad technical competency spans hardware, software, and system safety disciplines. This leadership role often begins with our product as a reference sensor in validating lesser performing sensors, including other lidar, radar, and cameras. From this, we have been successful in converting to platform deployments as our roadmap to series production has become more immediate.

Vehicle platform deployments determine the scope and design of a partner's series production vehicle system, and are therefore our anchor for future growth. Sensor changes in these development platforms are not taken lightly by the industry, and the closer these test vehicles get to feature demonstration, the more difficult it will become to displace our technology. Our products have won platform development positions in most of the world's top automakers and autonomous trucking programs, in both cases often displacing legacy lidar providers. Broad deployments in a host of different vehicles and countries provide us with a global fleet multiplier, which will unlock future capabilities as we seek to broaden automation capabilities. With a clear roadmap to an automotive-qualified product expected by 2022 as part of Volvo's next generation consumer vehicles based on Volvo's SPA2 platform, the rest of the market now has direct line of sight to our first wave of driver out-of-the loop vehicle features and services. Once partners scope their series production vehicle system based on their development platforms with us embedded, we believe there is a higher likelihood of successfully closing a design win for the series production.



Our Iris lidar sensor integrated into Volvo SPA2 platform with expected production in 2022

ADAS has commoditized the idea of vehicle safety, but has not delivered the full promise of this technology, as discussed further in the section entitled *Technology Comparison*” located below. Therefore, a large opportunity exists to build on this foundation of vehicle features. We plan to use our market position and technology leadership to create a new class of vehicle features aimed at maximizing the safety impacts of high-performance sensory perception. Given more than 90% of motor vehicle accidents in the U.S. are due to driver perception or action failure, our proactive safety initiative addresses crash avoidance features instead of merely severity mitigation features. To support and accelerate the delivery of a complete lidar-based ADAS and Level 4 highway autonomy program, we are expanding our software team. This expansion began with the addition of former members of Samsung’s Munich-based DRVLIN platform team previously responsible for delivering ADAS functionality for its mobility enterprise.

Whole-Products for Growth

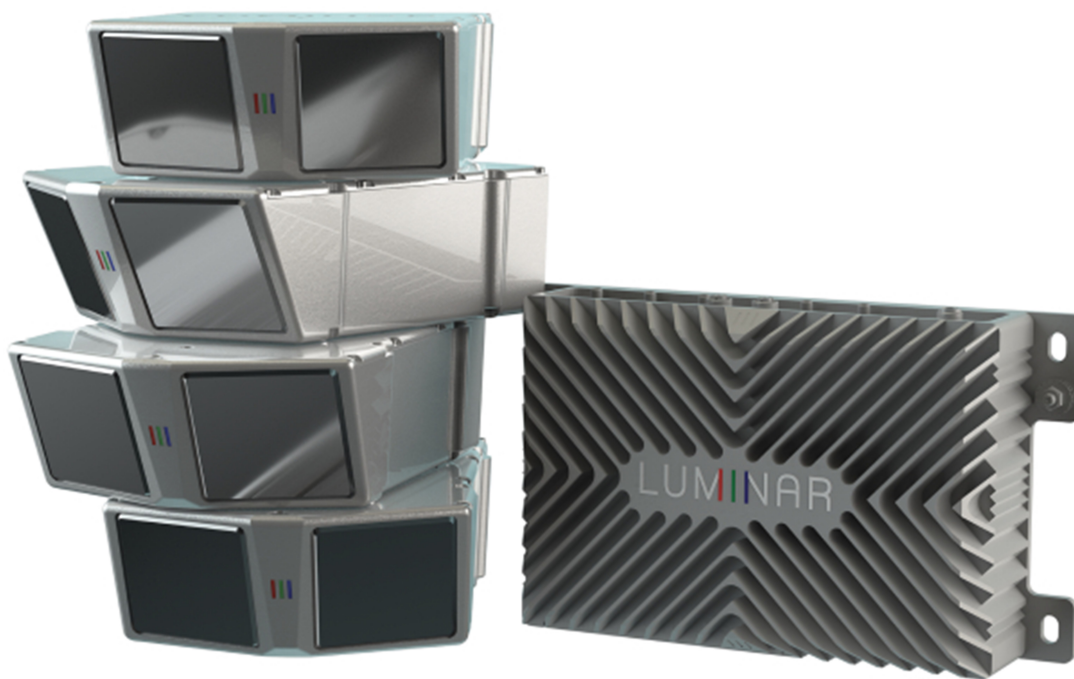
A whole-product is everything that is required to ensure that targeted end customers can fulfill their compelling reason to buy. For us, this means doing more than delivering the best possible lidar sensor. It means we will:

- maintain sensing superiority through advanced sensor development;
- provide actionable data through continual perception software refinement; and
- drive vehicle feature delivery through internal and external investment.

Sensing Superiority

We have successfully delivered on our roadmap to date for lidar and software technologies to enable autonomy programs like those envisaged for Volvo’s SPA2 platform expected to begin in late 2022. Following nearly five years in stealth developing our core architecture, key components and filing associated patents, in 2017, we introduced a prototype product, known as Model G, which brought custom technologies together to demonstrate what was possible from long-range, high-resolution lidar. In 2018, we launched Hydra, our product for testing and development programs, and in mid-2019 we launched Iris, our commercial volume-production product. In January 2020, we launched our perception stack, which we believe will lead to smarter sensing over time. Our Hydra, Iris and other products are described in further detail below:

Luminar’s Hydra lidar sensors are dynamically configurable dual-axis scan sensors that detect objects up to 500 meters away over a horizontal field of view of 120° and a software configurable vertical field of view of up to 30°. High point densities in excess of 200 points per square degree enable long-range detection, tracking, and classification over the whole field of view.



Hydra lidar sensors and electronic compute unit

Luminar's Iris lidar sensors leverage the same core technology components in Hydra, but Iris is refined to meet the size, weight, cost, power, and reliability requirements of automotive qualified series production. Iris features two fully custom integrated circuits – driving both laser transmitter and receiver. The sophistication of the Iris lidar data outputs comes from four generations of deployed integrated circuit design, and supports our ability to stay ahead of market demands for data.

Currently commercialized vehicle autonomy technology only incorporates Level 1 and Level 2 ADAS, or partial automation made possible with cameras and radar, and enhanced by lidar. We expect to become a commercially viable long-range lidar for automotive applications in Level 3 through Level 5 of vehicle autonomy, including full highway autonomy and urban and suburban autonomous driving. We believe Iris will be an efficient, automotive-grade, and affordable solution for series-production programs starting production in 2022.



Iris lidar sensor

With camera-like resolution of more than 300 points per square degree and high data fidelity, Iris reliably sees where objects are and understands what they are, even at long distances and in inclement weather. Combined with ongoing software updates, Iris becomes more capable over time, unlocking the roadmap to autonomy and broadening driver assistance.

Sensing More

We selected lidar as our primary sensing architecture in part because it is an effective active sensor, meaning it has its own source of light (laser) that it emits to detect targets, rather than a passive sensor which depends on reflected sunlight to measure targets. When designed appropriately, the sensor can capture large amounts of information about the targets – well beyond three dimensions (3D). Even today, as it only scratches the surface of what we expect lidar can bring to autonomy, we provide more than a 3D scene. Through a pipeline of signal processing in each point-cloud point, common surfaces can be identified, moving objects can be better understood, and target reflectance provides grey scale contrast to the scene. All these pieces of information are called point attributes, and they feed perception algorithms that ultimately discern what the targets are within a scene. The more information perception algorithms are given, the faster and more reliable the results become.

Looking forward, we are exploring ways to extract environmental information of things people can intuit, but machines must measure. For example, understanding air motion would allow software to estimate objects' weight and assess the danger to vehicles. The optics and photonics community has produced countless capabilities like these for metrology applications. We are developing this deep understanding of what is possible with the market's mobility needs to create products that deliver continually increasing value.

Our Software

If a vehicle is to take an action on the road (e.g., accelerate, brake or steer) without human control, or even override human control, it must have an understanding of the driving environment. This understanding is called perception. The requirements for perception, and subsequently for the sensors providing necessary information underlying it, ultimately come from questions the vehicle system needs to have answered continuously to execute driving maneuvers safely in the real world. These questions are the same ones the human brain must continually assess to drive:

- Where is the road, how is it organized into lanes, and which is the proper lane?
- What driving rules apply to these lanes (e.g., lane change permission, speed, direction, traffic type)?
- How is the vehicle moving now (speed, direction)?
- What obstacles and other fellow travelers are in or near the roadway?
- Where are these external objects (which lane, sidewalk, etc.), and how are they moving?

With a confident and continuous understanding of the driving environment from our perception software, routes can be planned, risks can be assessed and actions can be sent to the vehicle's control system. We, working closely with our partners, expect to deliver this full vehicle system capability.

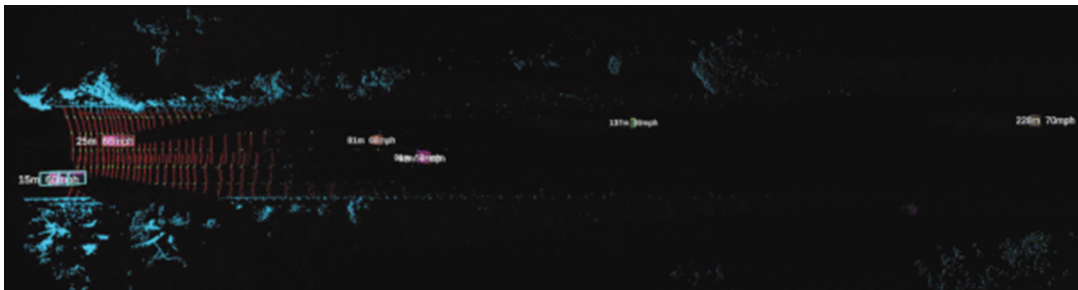
Core Sensor Software: Our lidar sensors are highly configurable and capture valuable information extracted from the raw point-cloud to promote the development and performance of perception software. Therefore, core sensor software features help our commercial partners to integrate, control, and enrich the sensor data stream before perception processing. These features include:

- Automatic sensor discovery to expedite system startup time;
- Extrinsic calibration to automate multi-lidar geometrical alignment;
- Proprietary middleware to streamline advanced user interaction with both our hardware and software;
- Horizon tracking to automate region-of-interest scanning focused where it matters most, the road ahead;
- Normal vector point attributes to associate common surfaces like drivable space quickly and accurately assess object headings without multiple frames; and
- Velocity vector point attribute to provide both radial and crossing velocities, point-by-point within each frame.

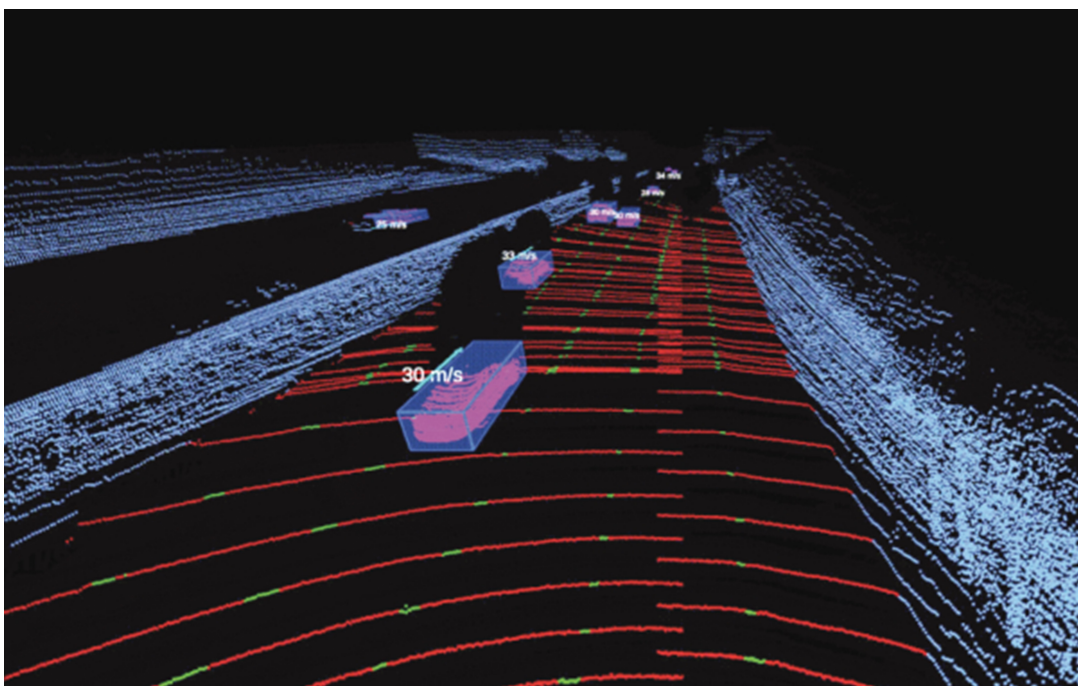
Sentinel Software Tools: In March 2021, we introduced our new software product suite, Sentinel. Sentinel is the first full-stack autonomous solution for series production and deeply integrates Zenseact's OnePilot autonomous driving software solution alongside Luminar's Iris, lidar, perception software and other components as a foundation, enabling every automaker to offer Highway Autonomy and Proactive Safety capabilities. We plan to sell Sentinel both as a complete "turn-key" software solution to our customers to enable Highway Autonomy or just with our Perception Software or other specific software capabilities.

Perception Software: Our advanced perception software builds on the core sensor software features and transforms lidar point-cloud data into actionable information about the integrated vehicle (ego) and its environment. These features include:

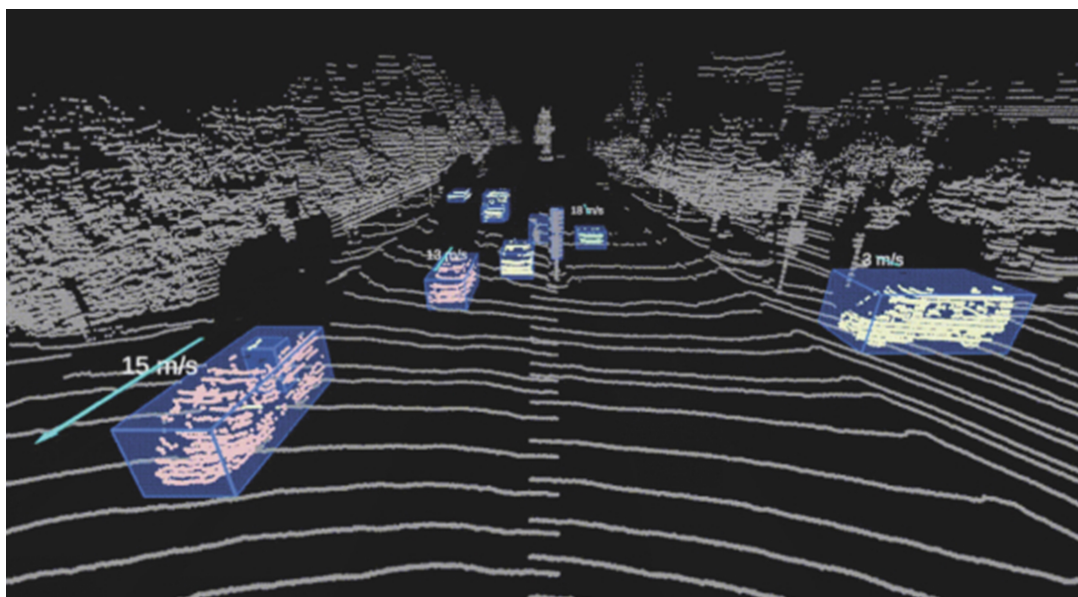
- **Semantic Segmentation**—Each measured point contains an object class attribute. This feature enables smart detection and tracking algorithms as well as intelligent vehicle reactions to different types of objects.
- **Instance detection and Tracking**—Frame-level instance detection of objects, lane markings as well as road surfaces and free space combined with our highway-focused tracking algorithms provide reliable, safe and stable data for decision-making algorithms.
- **State Estimation**—Continually predicting and correcting an object's location, velocity, and orientation through lidar odometry, real-time mapping, and localization.



Our perception software detecting, tracking, and classifying vehicles, lanes, objects, and drivable free-space, up to 250 meter away, in real-time.



We provide velocity point cloud attributes at both the point and object level.



Our velocity attribute measures objects moving both laterally and longitudinally.

High-level Vehicle Function Software

- **Highway Autonomy:** In order to deliver highway autonomy to OEMs like Volvo, we leverage Zenseact and other ecosystem partners and strong internal understanding of the full autonomy system. Highway autonomy will enable exit to exit functionality that takes full responsibility of the driving task even if the driver does not resume control in edge case emergencies. Early roll outs will be in limited highways, in limited environmental conditions and broaden as validation activities ensure safe ODD expansion. This capability is meant to allow passenger vehicles and commercial trucks alike to take occupants out of the driving loop so that they can utilize their time on other tasks. Further, highway autonomy systems will leverage over the air updates allowing them to grow even safer over time and expand their ODD through the life of the vehicle.
- **Proactive Safety:** Our proactive safety capabilities in development are expected to represent a new generation of vehicle safety, meant to enable accident avoidance instead of merely mitigating crash severity. It is expected to serve as a continuously monitoring system that assesses risk to the vehicle and recommends corrective actions and more importantly intercedes proactively when a crash is imminent. This feature utilizes our extended range of confident situational awareness to broaden the ODD of legacy ADAS features, new safety features, and driver out-of-the-loop autonomous features.

Autonomy Compute: Our electronic compute unit (“ECU”) is designed to accelerate the development of perception systems. Raw point-cloud inputs via ethernet, from up to four lidar sensors, are sent through a pipeline of processing layers to provide automated field coverage, enriched point-clouds, and ultimately, the perception outputs required for fusion and path planning.

Hydra currently features a reference ECU that can run the full software pipeline described below on four sensors covering 360° with under 40 watts of power consumption. The software pipeline is built modularly and is compute-hardware agnostic, allowing us to integrate algorithms into any OEM domain controller regardless of chip provider preference.



Hydra electronic compute unit for testing and development programs

Iris is an advanced lidar perception solution for series-production autonomy that we believe solves the fundamental problem of reliable, long-range sensory perception for real-world self-driving vehicles. From autonomous highway driving to full autonomy in urban areas, Iris is configurable with one or multiple perception enhanced lidar sensors to fit consumer and commercial application needs. It is an efficient, automotive-grade, and affordable solution for series-production programs starting production in 2022. In order to deliver Iris, and build beyond perception into vehicle functions, we plan to leverage partners in both processing chips and vehicle system controllers to deliver the hardware necessary to meet the performance and cost goals necessary to enable proactive safety and highway autonomy for broad adoption.

Accelerating Delivery

We intend to enable autonomy and invent next-generation safety through continually identifying gating technologies required for progress and creating paths to deliver innovation through both internal development and partnering.

Looking beyond sensory perception into vehicle functions, the mission of proactive safety requires technologies to optimize driver engagement and take control of driving functions when necessary. Finally, we believe that, while vehicle connectivity will not reduce the need for on-vehicle sensory perception, there is value in collaborative perception from all vehicles. Allowing vehicles to effectively see around corners and through traffic is expected to increase collision avoidance by a substantial amount. Therefore, we will seek to continue to collaborate with industry participants as these connectivity systems emerge, ultimately giving each Luminar enabled vehicle the collective understanding of all Luminar enabled vehicles in the driving environment.

Remaining Focused

From the beginning, we have taken a whole product mindset to product development leading to growth beyond sensor development. Balancing this mindset, however, is our desire to accelerate the time to market of these whole-products. Therefore, we focus relentlessly on products aligned with our targeted markets, partners where possible, and innovate where necessary to best serve complete solutions to those markets. As a result, we offer no short range only lidar products due to existing camera, radar, and ultrasonic capabilities that adequately serve this demand in automotive. We do not dilute our portfolio in hopes of finding a niche – we have identified the root requirements for large scale applications and deliver products to make them successful as efficiently as possible.

For us to continue winning series production contracts, great sensors and perception alone are not sufficient, as other technologies are required to deliver the expected whole-product (including other sensors, higher levels of software, electronics infrastructure, and compute). We have, therefore, constructed an ecosystem of partners to streamline both the vision for and delivery of whole vehicle system products. Healthy ecosystems for cameras, radar, and their associated perception exist to serve the automotive market, and supporting infrastructure exists to support current features such as electronic stability control and LKA. Computer hardware is evolving, and progress is required before achieving the cost and power targets for broad consumer vehicle adoption. However, the path to achieving these targets continues to develop as companies execute on platform development programs and scope their series production targets, driving large enough demand to justify development and tooling.

Technology Comparison

There are two primary methods to compare our technology with the market:

- How we perform against and complement entrenched, non-lidar sensing technologies currently in-use; and
- How we perform against potential lidar competitors.

Below is a discussion of today's technology (ADAS) and the sensors that support it (camera, radar), followed by an explanation of lidar performance and specifically how our lidar fares within the competitive landscape.

Legacy Sensing Technologies

Current industry ADAS capabilities are enabled primarily by camera and/or radar sensing technologies. Data from both sensor types are commonly merged to provide the vehicle system with some understanding of its driving environment. These systems, however, fall short of delivering substantial safety gains.

ADAS aims to assist the driver in identifying specific dangerous situations and acting on their behalf in certain cases. Currently, the most advanced ADAS will brake and steer the vehicle when the human driver does not respond, but the features do not consistently react to a dangerous situation ahead. Today's ADAS works well under ideal circumstances – at low speed, in ideal weather conditions, and on a test track. However, in adverse environmental conditions, the performance sharply deteriorates. We believe that with our Proactive Safety solution, we can decrease the reported collisions occurrence rates by up to seven times.

As we continue to evaluate available technologies for lidar and develop our roadmap to complete vehicle features, we seek to continue to actively monitor all other technologies, such as radar and camera sensing. Many of these technologies complement lidar (discussed below) and have pre-existing platform positions with automakers.

Commodity Components in Automotive

Camera. Cameras can be categorized into two important capabilities, monocular (2D, commonly referred to as mono cameras) and binocular (3D, commonly referred to as stereo cameras). Mono camera perception is the primary ADAS sensing component today and moving toward near complete adoption in new vehicles in Europe, the U.S., South Korea, and Japan. China also shows significant adoption increase, albeit far from standard equipment. It delivers a large set of perception capability which enables many functions that are widely offered to consumers: LKA; LCS; automatic high beam control; traffic sign recognition; and, in some cases, ACC. Mono cameras also support a wide range of ADAS safety cases whereby the detection and classification of objects enable crash mitigation. For instance, AEB for vehicles, cyclists, pedestrians, and animals is largely enabled by camera perception technology. The main benefit of mono cameras is their low cost. However, with this low cost comes limitation. Beyond performance degradation in poor environmental conditions, the distance measurement to an object is just an estimation based on the object scale and not a true measurement. This limits the mono cameras' ability to robustly measure the distance and understand the trajectory of an object and, therefore, has limited ability to safely control the vehicle.

To combat the range measurement deficiencies of mono cameras, some OEMs and Tier-1 suppliers have decided to develop stereo cameras which use two separate cameras, set apart by a particular distance, to deliver the same functions as mono cameras but with a much better depth estimation. While this works well at short range depth estimation, extending to longer ranges requires wide separations, sensitive optical alignment, and very high resolution – all things that eliminate the commodity pricing benefit of cameras. Furthermore, like mono cameras, stereo cameras are limited in inclement weather, and performance is heavily dependent on optical alignment and lighting.

Radar. When it comes to ADAS technology, radar has been viewed as the pioneer. The first application of radar in passenger vehicles dates back to approximately 1998, where ACC was first offered to consumers. Adopted from military applications, long-range radar and mid-range radar were placed at the front of the vehicle to specifically detect lead car distance and speed. There have been many technological advancements in radar, but the functionality delivered is largely the same: a

very accurate distance and speed measurement of objects, but little to no understanding of what they are, or precisely where they are horizontally or vertically. The volume driver of radar has been the AEB function as OEMs use camera and radar fusion to increase the robustness of their low-speed ADAS offerings and deliver NCAP 5-star vehicles that mitigate the severity of accidents.

Radar is usable in nearly all weather and environmental conditions (except for heavy snow) and works at all times of the day. Given the benefits radar brings to fusion systems, its robustness and its cost (significant commoditization of radar has occurred in the past decade), it is likely to remain a staple for today's ADAS systems and we see radar adoption growing towards near complete adoption by 2026, including surround sensing for functions such as blind spot detection, cross traffic alert, and lane-change merge assistance.

Lidar wavelengths around 1,550 nanometers (such as ours) are approximately 2,000 times shorter than radar wavelengths ($>3\text{mm}$); this allows for resolution capabilities approaching that of cameras. Radar can theoretically achieve $<1.0^\circ$ resolution, but the device's physical size must become very large in order to achieve this, and delivering $<0.1^\circ$ (like lidar) approaches physical impossibility. Therefore even "imaging radar" can, at best, only approach the performance of very low performance lidar, which does not unlock any new valuable features for the automotive industry. Furthermore, the maturity of these advanced radar technologies is less commercially mature than lidar and thus these advanced radar technologies may never find a price/value fit in the automotive industry until they become as low cost as today's commodity radar. As such, there is minimal growth potential for radar technology in terms of added functionality. Rather, there is likely a market for 1550 nanometer lidar for replacement of forward-looking applications given the large perception capability gains that unlock next-generation features.

Sensors to enable autonomy

Given their performance in ADAS, there is little confidence that radar and cameras alone will enable autonomous driving, as evidenced by the vast majority of autonomous driving development efforts globally. There are many views about the difficulty of achieving fully autonomous driving and the sensing technology required to get there. However, with every fatal crash due to camera and/or radar perception failure in semi-automated vehicles in the market today, the need for better 3D sensing and processing becomes more apparent. Lidar has the potential to be that key sensor, and our lidar leads the way with proprietary technology and perception systems to unlock this next generation roadmap of vehicle features.

Lidar Purpose and Requirements. We believe lidar is a necessary complement to existing cameras and radar in systems pursuing proactive safety and fully autonomous driving. High performance lidar combines the classification capabilities of cameras, the direct object distance measurement capability of radar, and adds a direct 3D drivable space assessment that neither method can deliver, and which is critical to AD.

Intelligently combining these three sensing modalities provides high confidence perception in a broad set of operational domains, unlocking the next generation of vehicle safety.

We believe a vehicle's vision must be strong for all use cases-there is no compelling long-term use case for short-range lidar alone.

These top-level requirements are met as a single operating mode, not just one at a time, by our lidar, which is a critical reason our partners see rapid progress after integration. The key, top-level requirements are:

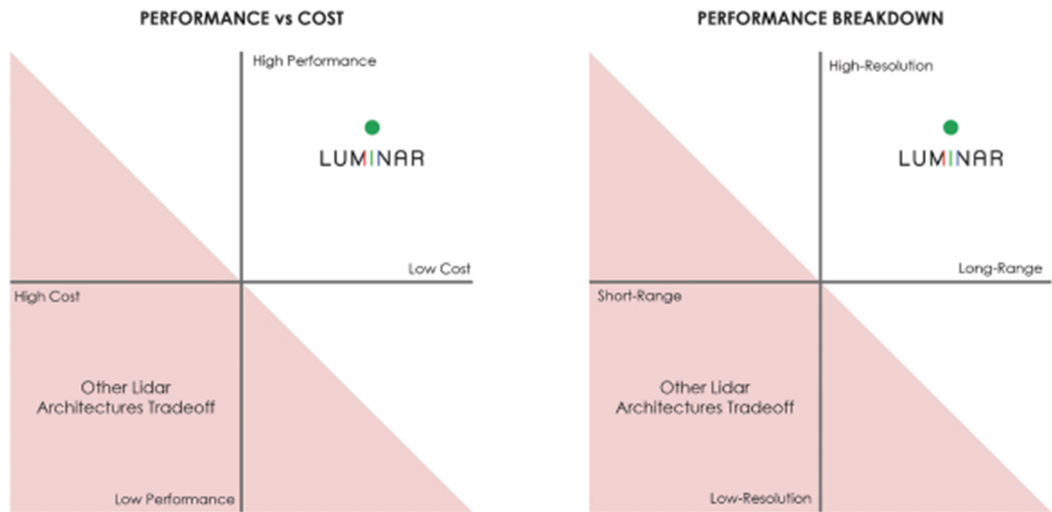
- Range
- Resolution
- Field-of-view
- Fidelity
- Frame rate.

We believe that to provide long-term value through the necessary use cases, no single performance metric should be sacrificed for another. All are critical and must be met simultaneously. Additionally, safety and safe autonomy are not only needed during clear weather and good lighting conditions, but rather they must perform in all conditions a person would drive in, and hopefully more. Therefore, the sensing technology must perform in all weather and all lighting conditions and it must be uninfluenced by interference from the sun and other lidar signals that may be present in the environment.

Top-Level Requirements:



Iris lidar sensors are designed to meet all of these requirements in one streamlined package. Every aspect of our lidar was intended to be designed to safely meet the functional performance needed to unlock highway autonomy. The chart below shows a comparison of the technical design selections made by the rest of the market and how they fare compared to the technical design selections made by us based on our internal assessments.



All data sourced from Luminar and other lidar company spec sheets and physics.

The “Ranging” category captures how a sensor measures each pixel’s range, and the “Field Coverage” category captures how a sensor collects all those pixels from around the scene. While there are many differentiation points covered below, it is critical to focus on wavelength (light “color”) choice as it is a matter of eye safety. Near-visible infrared wavelengths, such as 905nm, are more hazardous to eyes than longer wavelengths because even though not visible, their energy is still focused onto the retina. 905nm is the most common lidar wavelength, and it is indeed very close to visible for humans (850nm light can commonly be seen as a dim red). Therefore, these sensors are severely limited in how much light they can safely send into the world for measurements. This is why we, very early on, committed to a longer wavelength lidar design – something that began as controversial and has become the market expectation for long-range lidar.

Design Area	Common Lidar Architectures	Luminar Lidar Architecture
Wavelength	905nm <ul style="list-style-type: none"> • Range limited by eye-safety • Resolution limited by eye-safety 	1550nm <ul style="list-style-type: none"> • Low cost with single pixel Ingas • Allows for long range, high resolution • Allows for deeper weather penetration
Ranging	FMCW <ul style="list-style-type: none"> • Range/Resolution limited by continuous wave measurement • Costly due to high transceiver count Single Photon Detection <ul style="list-style-type: none"> • Range/Resolution limited by continuous wave measurement • Costly due to large, complex detector array 	Single-pulse time of flight <ul style="list-style-type: none"> • Low complexity, low part-count • High rate measurements with high confidence
Scanning	Flash <ul style="list-style-type: none"> • Range limited by eye-safety • Costly due to large, complex detector array Spinning 1D Array <ul style="list-style-type: none"> • Lifetime limited due to massive mechanical motor • Software reliability limited by noise and artifacts • Costly due to high alignment burden and component count MEMS <ul style="list-style-type: none"> • Range/Resolution limited by high noise • Angular precision limited by fragile, non-micro scanner • Software reliability limited by noise and artifacts Optical Phased Array <ul style="list-style-type: none"> • Range limited due to transmit loss • Resolution limited due to poor beam control and quality • Low reliability due to side-lobe illumination 	Low-mass, encoded mirror scanning <ul style="list-style-type: none"> • Scanning of an isolated, field of view • Low noise and rejection of uncontrolled light (sun, headlights, other lidar)

Whether the design decision is based on achieving the lowest possible price or utilizing an existing technology or supplier, these selections have tradeoffs that impact performance and lessen the sensor's usefulness in the vehicle market. Our analysis here is focused on what is required for vehicular safety and autonomy. Our lidar endeavors to minimize such tradeoffs and, through innovation, delivers a product to enable robust safety and true autonomy.

Multiple Sensors and Fusion. Much of what we see in the vehicle market today is fusion of camera and radar, which typically addresses medium and high-speed applications at low levels of autonomy (hands-on, eyes-on). As radar provides a significantly more robust distance measurement than stereo cameras, the industry has generally elected to use mono camera technology and radar together with only a few customers continuing to use the stereo-camera technology. We see this as an interim technology as mono camera capability improves with increases in the number of pixels, and as lidar capability increases and pricing reaches a level that can be implemented affordably for all vehicle segments. These sensors work independently from one another, have different sensing modalities, so are not typically subject to the same failures, and work reasonably well in identifying obstacles and avoiding them. Ultrasonic sensors are another sensor type used for detection and ranging and usually used at low speed (less than 8 km per hour) and parking applications. These sensors are sometimes also fused with cameras to enable more automated parking functions. They are also used for blind spot detection functions, but the detection range is limited to no more than 10 meters, and radar is the more common sensor.

As technology advances up the autonomy levels to allow hands-off and eyes-off driving, the requirement for sensing robustness, redundancy, precision, and accuracy become more and more critical. As noted in the “*Legacy Sensing Technologies*” section above, radar and camera alone can help mitigate accidents. The fusion of these two provides a reasonably good sensing solution, but typically only in ideal weather conditions. Today this solution set serves a majority of the market for ADAS to help achieve NCAP 5-star ratings globally and by 2026, will push the application of this technology toward standard equipment. From there, the ADAS market growth levels off, as does the effectiveness and benefit of just camera/radar fusion alone. Safety is essential at all times of the day, in many different weather and lighting conditions. To achieve the objective of zero fatalities, a lidar that meets all of the requirements outlined above is necessary.

For highway autonomy, safety is paramount to allow the consumer to utilize more of their driving time to handle other tasks. A lidar that meets all of the requirements outlined here must be implemented for AEB (vehicles, pedestrians, cyclists, crossing cyclist, intersection, left turn across the path), head-on collision avoidance, and all other critical safety functions that should operate at lower and higher speeds to drive down the nearly 35,000 U.S. deaths per year still caused by auto accidents.

Competition

The market for lidar-enabled vehicle features, on and off road, is an emerging one with many potential applications in the development stage. As a result, we face competition for lidar hardware business from a range of companies seeking to have their products incorporated into these applications. We hold a strong position based on both product performance and maturity, but also in our ability to develop beyond the sensor itself into software functions.

Although we believe that we are the only provider of lidar for automotive autonomy applications that achieves the industry’s requirements and perception capabilities to enable safe hand-off, eyes-off driving, we face potential competition from Tier 1 companies, and other technology companies. It will take these new emerging technologies a substantial period of time to achieve new levels of lidar capabilities. We believe many of our competitors offer more limited solutions for niche applications and are often non-automotive. In the meantime, our software development will differentiate our product offerings away from “lidar only” making it more difficult for lidar competitors to become broadly adopted.

Some lidar competitors are currently selling solutions that offer lower levels of sensor performance in ADAS, a demand we do not see substantiated in the market due to low cost competition from camera and radar-based perception solutions for low levels of autonomy. While lidar competitors will continue to emerge and recede, our high performance lidar with a strong intellectual property portfolio and software products establish barriers to those who follow.

Beyond automotive, the adjacent markets, including delivery bots and mapping, among others, for lidar are highly competitive. There are entrenched incumbents and competition, including from China, particularly on ultra-low cost products that are widely available.

Within the automotive autonomy software space, the competitive landscape is still nascent and primarily focused on developing robo-taxi technologies rather than automotive-grade autonomy for highway applications. Their software technology generally depends on legacy sensing suites that are ubiquitous across the industry and lacking in performance capabilities to enable safe autonomy.

We believe our technology and continuing innovation will support our position as a leader in advancing lidar technology in the market based on several market differentiators.

Intellectual Property

Our success and competitive advantage depend in part upon our ability to develop and protect our core technology and intellectual property. We own a portfolio of intellectual property, including patents and registered trademarks, confidential technical information, and expertise in the development of lidar technology and software for autonomous vehicles.

We have filed patent and trademark applications in order to further secure these rights and strengthen our ability to defend against third parties who may infringe on our rights. We also rely on trade secrets, design and manufacturing know-how, continuing technological innovations, and licensing and exclusivity opportunities to maintain and improve our competitive position. Additionally, we protect our proprietary rights through agreements with our commercial partners, supply-chain vendors, employees, and consultants, as well as close monitoring of the developments and products in the industry.

As of February 2021, we owned 93 issued patents and have 84 pending or allowed patent applications, including U.S. and foreign. In addition, we have three registered U.S. trademarks, 16 registered foreign trademarks and five pending trademark applications. Our patents and patent applications cover a broad range of system level and component level aspects of our key technology including, among other things, lidar system, laser, scanner, receiver, and perception technology.

Scalable Manufacturing Process

We have internally developed the manufacturing and testing processes, including capturing any related intellectual property, necessary to develop our products. Building or designing critical components in-house rather than using off-the-shelf commodity components provides for protectable and sustainable technology differentiation from lidar competitors or alternative technologies. We believe significant barriers to entry for automotive lidar are the processes and know-how to manufacture a compact and intricate sensing product. Our manufacturing processes and knowledge are a key differentiator for us in the market. The product concept and design-for-manufacturing were considered as part of the product development process from the beginning of our product development.

Instead of relying on external resources to develop our product solutions, we have developed these skills and capabilities in-house, leveraging key hires' expertise in the industry and establishing an advanced engineering team. We have developed solutions for optical alignment, high precision placement of silicon within the required tolerance to deliver the specified performance, and worked with suppliers on end-of-line testing for a cost-effective long-range detection system.

Iris Product Industrialization and Manufacturing Globalization

Iris is the third commercial generation lidar platform to be developed by us (after Model G and Hydra). In Iris's development, we have leveraged two prior cycles of learning and shipping for faster time-to-market as it is being developed and prototyped in the same facilities by the same teams as its predecessor generations. Both the operations and engineering teams are co-located to ensure that our manufacturing and engineering teams work hand-in-hand.

We expect Iris will first launch as a North American-built product with the first sensor assembly expected to be in an International Automotive Task Force ("IATF")-certified plant in Mexico at our anticipated lead contract manufacturer. We expect the supply chain will include critical technology suppliers from around the world.

This anticipated lead contract manufacturer also has IATF-certified locations in Europe and Asia. These factories would be brought online as volume dictates, and as we achieve scale and supplier localization in specific regions to best support our global commercial partners.

Material Agreements

Volvo Series Production Contract

In March 2020, we entered into a series production contract with Volvo Car Corporation ("Volvo") to equip our products into its next-generation vehicle platform, called SPA2, for which its future consumer vehicle models will be based. The intent of the program is primarily to enable highway autonomous drive capability as an option on production consumer vehicles, with series production expected to start in 2022. Additionally, the program presents an opportunity to simultaneously enable next-generation proactive safety systems in a more widespread capacity at lower cost than autonomous drive upgrades.

Pursuant to the agreement, we are currently collaborating with Volvo in an agile framework that is relatively novel to the automotive industry and traditionally associated with software development. This agile method allows for close interactions between our and Volvo's teams to produce high quality work products on faster paced timelines than is traditionally associated with automotive companies.

Under the agreement, Volvo and we have each agreed to make certain relevant investments to enable the greatest possible success of the program. As part of this, Volvo is currently compensating us for certain work products as the program progresses to Start of Production (SOP) in 2022.

The agreement contains certain minimum volume targets for several geographies for specified periods for specific vehicle models. The production volumes will ultimately be highly dependent on numerous factors including end consumer feature take rate, larger automotive industry demand, and the speed at which we are able to scale to meet such demand, all of which are not binding for either party.

Following an automotive grade production audit and qualification of our advanced manufacturing factory in Orlando, Florida, under the agreement Volvo has certified us to produce lidar sensors for them out of our internal facility, with the opportunity to outsource series production to a third party pending Volvo's automotive quality certification.

The agreement is a long-term, multi-year contract that terminates fifteen years following the end of Volvo's series production involving our products. Volvo or we may terminate the agreement for cause under certain conditions, including if we undergo a change of control, at an earlier time.

Research and Development

Our research and development activities occur in Orlando, Palo Alto, and Colorado Springs in the United States, and in Munich, Germany. Orlando is primarily focused on developing sensor hardware, firmware, and controllers, and Palo Alto

develops perception software. We are also expanding software development with a new team in Germany. The Colorado Springs location creates the custom ASIC chips used in our lidar sensors.

Our research and development team is responsible for creating new technology and expanding lidar and perception software functionality. The team also designs the physical product, ensures it is designed for manufacturability and performs testing. The team also partners with our operations and supply chain functions to develop scalable commercial and reliable manufacturing processes and direct production material procurement.

Sales and Marketing

We take an insight-driven, account-based marketing approach to build and expand our relationships with commercial partners. We collect feedback directly from commercial partners to garner insights that help drive the business and product. We also work with analysts and higher education institutions to conduct studies, test and validate technology performance, providing key proof points for commercial partners considering our products. In parallel, marketing and communications drive our brand equity and narrative through ongoing announcements, campaigns, events, speaking opportunities, and public relations efforts.

Government Regulation

At both the federal and state level, the U.S. has provided a positive legal environment to permit safe testing and development of autonomous functionality. We do not anticipate any near-term federal standards that would impede the foreseeable deployments of our lidar technology. Some states, however, particularly California and New York, still enforce certain operational or registration requirements for certain autonomous functions. We believe such hurdles will be removed as state regulators gain better experience with the technology. U.S. federal regulations, however, remain largely permissive of deployments of higher levels of safe and responsible autonomous functionality.

Foreign markets such as the EU and China also continue to develop their respective standards to define deployment requirements for higher levels of autonomy. Given the intense work in these areas, we expect a workable path forward in the near-term.

As vehicles equipped with our sensors are deployed on public roads, we will be subject to the legal and regulatory authorities of principally the NHTSA. The obligations of motor vehicle equipment manufacturers include regular reporting under the Transportation Recall Enhancement, Accountability and Documentation Act process as well as strict recall and reporting requirements for any defects related to highway safety or any non-compliance with a Federal Motor Vehicle Safety Standard. Similar such reporting and recall requirements exist in foreign markets. As the development of federal, state and foreign legal frameworks around autonomous vehicles continue to evolve, we may be subject to additional regulatory schemes.

As a lidar technology company, we are subject to the Electronic Product Radiation Control Provisions of the Federal Food, Drug, and Cosmetic Act. These requirements are enforced by the U.S. Food and Drug Administration (“FDA”). Electronic product radiation includes laser technology. Regulations governing these products are intended to protect the public from hazardous or unnecessary exposure. Manufacturers are required to certify in product labeling and reports to the FDA that their products comply with applicable performance standards as well as maintain manufacturing, testing, and distribution records for their products.

Similarly, as a global company deploying cutting-edge technology, we are also subject to trade, customs product classification and sourcing regulations. Finally, our operations are subject to various federal, state and local laws and regulations governing the occupational health and safety of our employees and wage regulations. We are subject to the requirements of the federal Occupational Safety and Health Act, as amended, and comparable state laws that protect and regulate employee health and safety.

Like all companies operating in similar industries, we are subject to environmental regulation, including water use; air emissions; use of recycled materials; energy sources; the storage, handling, treatment, transportation and disposal of hazardous materials; and the remediation of environmental contamination. Compliance with these rules may include permits, licenses and inspections of our facilities and products.

Employees

We have always prioritized the team’s importance, with values-based hiring that encompasses competency, ingenuity, and culture. Through multiple growth phases, we have drawn talent and leadership from the automotive, aerospace, and consumer electronics industries to achieve its vision. As of December 31, 2020, excluding contractors, we had 368 full-time employees and four part-time employees worldwide consisting of 17 in Europe, 81 in California, 243 in Florida, 24 in Colorado and seven in other locations. None of our employees are represented by a labor union, and we consider our employee relations to be in good standing. To date, we have not experienced any work stoppages.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and new employees, advisors and consultants. The principal purposes of our equity and cash incentive plans are to attract, retain and reward personnel through the granting of stock-based and cash-based compensation awards, in order to increase stockholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

Facilities

Our corporate headquarters is located in Orlando, Florida, where we lease a complex of three buildings with 120,716 square feet pursuant to leases that expire between October 2022 and September 2024. The Orlando facilities contain manufacturing, engineering, research and development, and administrative functions. We also lease 36,419 square feet of office and engineering space in two facilities in Palo Alto, California and 12,900 square feet of office and engineering space in a facility in Colorado Springs, Colorado. The Company believes its existing facilities are adequate for its current requirements.

Legal Proceedings

From time to time, we may become involved in actions, claims, suits, and other legal proceedings arising in the ordinary course of our business, including assertions by third parties relating to intellectual property infringement, breaches of contract or warranties or employment-related matters. We are not currently a party to any actions, claims, suits or other legal proceedings the outcome of which, if determined adversely to us, would individually or in the aggregate have a material adverse effect on our business, financial condition, and results of operations.

Corporate Social Responsibilities and Sustainability

We are committed to active and responsible corporate citizenship. In the second quarter of 2020, we formalized our Corporate Social Responsibility (“CSR”) program to streamline the existing compliance and social justice activities within the company. The CSR program is divided into seven elements (diversity and inclusion; human resources; finance/accounting; responsible sourcing; environmental, health and safety; trade compliance; and business ethics), each spearheaded by company leaders and subject matter experts in their respective areas. The CSR team will act to support, advise, and provide mutual oversight for each element and drive reasonable and measurable advancement.

ITEM 1A. RISK FACTORS.

Risk Factor Summary

Investing in our securities involves a high degree of risk. You should carefully consider all information in this Annual Report on Form 10-K, including our consolidated financial statements and related notes appearing elsewhere in this prospectus and “Management’s discussion and analysis of financial condition and results of operations,” before purchasing our securities. These risks are discussed more fully in the section titled “Risk Factors.” These risks and uncertainties include, but are not limited to, the following:

- general economic uncertainty and the effect of general economic conditions on our industry in particular, including the level of demand and financial performance of the autonomous vehicle industry and market adoption of lidar;
- our history of losses and whether we will continue to incur significant expenses and continuing losses for the foreseeable future;
- the effect of continued pricing pressures, automotive original equipment manufacturers (“OEMs”) cost reduction initiatives and the ability of automotive OEMs to re-source or cancel vehicle or technology programs which may result in lower than anticipated margins, or losses, which may adversely affect our business;
- our ability to protect and enforce its intellectual property rights;
- whether our lidar products are selected for inclusion in autonomous driving or ADAS systems by automotive OEMs or their suppliers;
- our inability to reduce and control the cost of the inputs on which we rely, which could negatively impact the adoption of our products and our profitability;
- changes in personnel and availability of qualified personnel;
- the effects of the ongoing coronavirus (COVID-19) pandemic or other infectious diseases, health epidemics, pandemics and natural disasters on Luminar’s business;
- our ability to remediate the material weakness in its internal controls over financial reporting;
- our ability to transition to an outsourced manufacturing business model;
- our anticipated investments in and results from sales and marketing and research and development (“R&D”);
- the success of our customers in developing and commercializing products using our solutions;
- our estimated total addressable market;
- the amount and timing of future sales;
- whether the complexity of our products results in undetected defects and reliability issues which could reduce market adoption of our new products, damage our reputation and expose us to product liability and other claims;
- strict government regulation that is subject to amendment, repeal or new interpretation and our ability to comply with modified or new laws and regulations applying to our business;
- our ability to recognize the anticipated benefits of the recently consummated Business Combination, which may be affected by, among other things, competition, and our ability to manage our growth and expand our business operations effectively;
- whether the concentration of our stock ownership and voting power limits the stockholders of our ability to influence corporate matters; and
- the increasingly competitive environment in which we operate.

Risk Factors

Risks Related to Our Business and Industry

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

We have incurred net losses on an annual basis since our inception. We incurred net losses of \$362.3 million and \$94.7 million for the years ended December 31, 2020 and 2019, respectively. We believe that we will continue to incur operating and net losses each quarter until at least the time we begin commercial deliveries of our lidar-based products, which are not expected to begin until 2022 and may occur later or not at all. Even if we are able to successfully develop and sell our lidar solutions, there can be no assurance that they will be commercially successful. Our potential profitability is dependent upon the successful development and successful commercial introduction and acceptance of our lidar solutions, which may not occur.

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

- continue to utilize our third-party partners for design, testing and commercialization;
- expand our production capabilities to produce our lidar solutions, including costs associated with outsourcing the production of our lidar solutions;

- expand our design, development, installation and servicing capabilities;
- build up inventories of parts and components for our lidar solutions;
- produce an inventory of our lidar solutions; and
- increase our sales and marketing activities and develop our distribution infrastructure.

Because we will incur the costs and expenses from these efforts before we receive incremental revenues with respect thereto, 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 revenues, which would further increase our losses.

Our limited operating history makes it difficult to evaluate our future prospects and the risks and challenges we may encounter.

We have been focused on developing lidar products for autonomous driving systems since 2012. This relatively limited operating history makes it difficult to evaluate our future prospects and the risks and challenges we may encounter. Risks and challenges we have faced or expect to face include our ability to:

- produce and deliver lidar and software products of acceptable performance;
- forecast our revenue and budget for and manage our expenses;
- attract new customers and retain existing customers;
- comply with existing and new or modified laws and regulations applicable to our business;
- plan for and manage capital expenditures for our current and future products, and manage our supply chain and supplier relationships related to our current and future products;
- anticipate and respond to macroeconomic changes and changes in the markets in which we operate;
- maintain and enhance the value of our reputation and brand;
- effectively manage our growth and business operations, including the impacts of the COVID-19 pandemic on our business;
- develop and protect intellectual property;
- hire, integrate and retain talented people at all levels of its organization; and
- successfully develop new solutions to enhance the experience of customers.

If we fail to address the risks and difficulties that we face, including those associated with the challenges listed above as well as those described elsewhere in this *Risk Factors* section, our business, financial condition and results of operations could be adversely affected. Further, because we have limited historical financial data and operate in a rapidly evolving market, any predictions about our future revenue and expenses may not be as accurate as they would be if we had a longer operating history or operated in a more predictable market. We have encountered in the past, and will encounter in the future, risks and uncertainties frequently experienced by growing companies with limited operating histories in rapidly changing industries. If our assumptions regarding these risks and uncertainties, which we use to plan and operate our business, are incorrect or change, or if we do not address these risks successfully, our results of operations could differ materially from our expectations and our business, financial condition and results of operations could be adversely affected.

We continue to implement strategic initiatives designed to grow our business. These initiatives may prove more costly than we currently anticipate and we may not succeed in increasing our revenue in an amount sufficient to offset the costs of these initiatives and to achieve and maintain profitability.

We continue to make investments and implement initiatives designed to grow our business, including:

- investing in R&D;
- expanding our sales and marketing efforts to attract new customers;
- investing in new applications and markets for our products;
- further enhancing our manufacturing processes and partnerships;
- pursuing litigation to protect our intellectual property; and
- investing in legal, accounting, and other administrative functions necessary to support our operations as a public company.

These initiatives may prove more expensive than we currently anticipate, and we may not succeed in increasing our revenue, if at all, in an amount sufficient to offset these higher expenses and to achieve and maintain profitability. The market opportunities we are pursuing are at an early stage of development, and it may be many years before the end markets we expect to serve generate demand for our products at scale, if at all. Our revenue may be adversely affected for a number of reasons, including the development and/or market acceptance of new technology that competes with our lidar products, if certain automotive OEMs or other market participants change their autonomous vehicle technology, failure of our customers to commercialize autonomous systems that include our solutions, our inability to effectively manage our inventory or manufacture products at scale, our inability to enter new markets or help our customers adapt our products for new applications or our failure to attract new customers or expand orders from existing customers or increasing competition. Furthermore, it is difficult to predict the size and growth rate of our target markets, customer demand for our products, commercialization timelines, developments in autonomous sensing and related technology, the entry of competitive products, or the success of existing competitive products and services. For these reasons, we do not expect to achieve profitability over the near term. If our revenue does not grow over the long term, our ability to achieve and maintain profitability may be adversely affected, and the value of our business may significantly decrease.

If our lidar products are not selected for inclusion in autonomous driving systems or ADAS by automotive OEMs or their suppliers, our business will be materially and adversely affected.

Automotive OEMs and their suppliers design and develop autonomous driving and ADAS technology over several years. These automotive OEMs and suppliers undertake extensive testing or qualification processes prior to placing orders for large quantities of products such as our lidar products, because such products will function as part of a larger system or platform and must meet certain other specifications. We spend significant time and resources to have our products selected by automotive OEMs and their suppliers, which is known as a “design win.” In the case of autonomous driving and ADAS technology, a design win means our lidar product has been selected for use in a particular vehicle model. If we do not achieve a design win with respect to a particular vehicle model, we may not have an opportunity to supply our products to the automotive OEM for that vehicle model for a period of many years. In many cases, this period can be as long as five to seven or more years. If our products are not selected by an automotive OEM or its suppliers for one vehicle model or if our products are not successful in that vehicle model, it is unlikely that our product will be deployed in other vehicle models of that OEM. If we fail to win a significant number of vehicle models from one or more of automotive OEMs or their suppliers, our business, results of operations and financial condition will be materially and adversely affected. For more information about certain risks related to product selection, see the Risk Factor captioned “*The period of time from a design win to implementation is long and we are subject to the risks of cancellation or postponement of the contract or unsuccessful implementation.*”

Our forward looking estimates of certain financial metrics may prove inaccurate.

We use various estimates in formulating our business plans. We base our estimates upon a number of assumptions that are inherently subject to significant business and economic uncertainties and contingencies, many of which are beyond our control. Our estimates therefore may prove inaccurate, causing the actual amount to differ from our estimates. These factors include, without limitation:

- the extent to which customers who have selected Luminar for a program win commercially launch vehicles which include our hardware and software products;
- the extent to which Luminar meets contractual terms and conditions;
- the extent to which our technology is successfully integrated into our customers’ vehicles;
- the timing of when our customers adopt our technology into their vehicles on a commercial basis which could be delayed for regulatory, safety or reliability issues unrelated to our technology;
- undetected or unknown errors, defects or reliability issues in our hardware or software which could reduce the market adoption of our new products;
- loss of business with respect to, the failure or lack of commercial success of a vehicle model for which we are a significant supplier for reasons unrelated to our technology; For more information about certain risks related to discontinuation or loss of business, see the Risk Factor captioned “*The discontinuation, lack of commercial success, or loss of business with respect to a particular vehicle model or technology package for which we are a significant supplier could reduce our sales and adversely affect our profitability;*”
- a decline, for any reason, in the production levels of our customers, particularly with respect to models which incorporate our technology;
- customer cancellations of their contracts;

- if Luminar's products are included as part of a vehicle option package, the extent to which end customers select it; and
- other risk factors set forth in this Annual Report.

Information concerning our future cost of goods sold (COGS) and bill of materials (BOM) estimates may prove inaccurate.

We periodically provide estimates of future cost of goods sold and bill of materials, which by necessity, are projections based on anticipated rates of future production of our customers and the timing of related expenditures, and there are uncertainties inherent in the creation and interpretation of such data.

While we have successfully locked in an estimated sub \$100 hardware cost (assuming certain volume estimates are met) in the supply agreements for all three of our key lidar components (receiver, ASIC and laser), which is a subset of our BOM, most of our components are manufactured using technologies that are highly complex and consequently, estimates of BOM and cost of goods sold may fluctuate due to many variable factors and assumptions, including but not limited to the following:

- meeting certain volume estimates;
- our reliance on key inputs and our inability to reduce and control the cost of such inputs;
- our dependence on producing or sourcing certain key components and raw materials at acceptable price levels and our ability to adequately reduce and control the costs of such key components; For more information about certain risks related to our reliance on key inputs and our inability to reduce and control the costs of such inputs, see the Risk Factor captioned *"We are reliant on key inputs and our ability to reduce and control the cost of such inputs could negatively impact the adoption of our products and our profitability;"*
- the risk of shortages and long lead times in the supply of key components and the risk that our suppliers discontinue or modify components used in its products; For more information about certain risks related to reliance on third party suppliers, see the Risk Factor captioned *"We rely on third-party suppliers and because some of the raw materials and key components in our products come from limited or single source suppliers, 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 customers;"*
- lack of consistency and adequate quality and quantity of piece parts, other raw materials and other bill of materials items;
- contract negotiations and the execution of firm supply agreements;
- future versions of our product design incorporating new components meeting our customers' requirements and specifications. For more information about certain risks related to product selection, see the Risk Factor captioned *"The period of time from a design win to implementation is long and we are subject to the risks of cancellation or postponement of the contract or unsuccessful implementation;"*
- the qualification of new versions of our key components. For more information about certain risks related to qualification, see the Risk Factor captioned *"If our lidar products are not selected for inclusion in autonomous driving systems or ADAS by automotive OEMs or their suppliers, our business will be materially and adversely affected;"*
- defects in production processes (including system assembly) either within our facilities or at our suppliers;
- any transitions or changes in our production process, planned or unplanned; and
- other risk factors set forth in this Annual Report.

We are reliant on key inputs and our inability to reduce and control the cost of such inputs could negatively impact the adoption of our products and our profitability.

The production of our sensors is dependent on producing or sourcing certain key components and raw materials at acceptable price levels. If we are unable to adequately reduce and control the costs of such key components, we will be unable to realize manufacturing costs targets, which could reduce the market adoption of our products, damage our reputation with current or prospective customers, and harm our brand, business, prospects, financial condition and operating results.

Continued pricing pressures, automotive OEM cost reduction initiatives and the ability of automotive OEMs to re-source or cancel vehicle or technology programs may result in lower than anticipated margins, or losses, which may adversely affect our business.

Cost-cutting initiatives adopted by our customers often result in increased downward pressure on pricing. We expect that our agreements with automotive OEMs may require step-downs in pricing over the term of the agreement or, if

commercialized, over the period of production. In addition, our automotive OEM customers often reserve the right to terminate their supply contracts for convenience, which enhances their ability to obtain price reductions. Automotive OEMs also possess significant leverage over their suppliers, including us, because the automotive component supply industry is highly competitive, serves a limited number of customers and has a high fixed cost base.

Accordingly, we expect to be subject to substantial continuing pressure from automotive OEMs and Tier 1 suppliers to reduce the price of our products. It is possible that pricing pressures beyond our expectations could intensify as automotive OEMs pursue restructuring, consolidation and cost-cutting initiatives. If we are unable to generate sufficient production cost savings in the future to offset price reductions, our gross margin and profitability would be adversely affected.

We expect to incur substantial R&D costs and devote significant resources to identifying and commercializing new products, which could significantly reduce our profitability and may never result in revenue to us.

Our future growth depends on penetrating new markets, adapting existing products to new applications and customer requirements, and introducing new products that achieve market acceptance. We plan to incur substantial, and potentially increasing, R&D costs as part of our efforts to design, develop, manufacture and commercialize new products and enhance existing products. Our R&D expenses were \$38.7 million and \$37.0 million for the years ended December 31, 2020 and 2019, respectively, and are likely to grow in the future. Because we account for R&D as an operating expense, these expenditures will adversely affect our results of 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.

Although we believe that lidar is the industry standard for autonomous vehicles and other emerging markets, market adoption of lidar is uncertain. If market adoption of lidar does not continue to develop, or develops more slowly than we expect, our business will be adversely affected.

While our lidar-based smart vision solutions can be applied to different use cases across end markets, nearly all of our revenue is generated from automotive applications with a few customers in the aerospace and defense, construction, mining and aviation sectors. Despite the fact that the automotive industry has engaged in considerable effort to research and test lidar products for ADAS and autonomous driving applications, the automotive industry may not introduce lidar products in commercially available vehicles. We continually study emerging and competing sensing technologies and methodologies and we may add new sensing technologies. However, lidar products remain relatively new and it is possible that other sensing modalities, or a new disruptive modality based on new or existing technology, including a combination of technology, will achieve acceptance or leadership in the ADAS and autonomous driving industries. Even if lidar products are used in initial generations of autonomous driving technology and certain ADAS products, we cannot guarantee that lidar products will be designed into or included in subsequent generations of such commercialized technology. In addition, we expect that initial generations of autonomous vehicles will be focused on limited applications, such as robo-taxis, and that mass market adoption of autonomous technology may lag behind these initial applications significantly. The speed of market growth for ADAS or autonomous vehicles is difficult if not impossible to predict, and it is more difficult to predict this market's future growth in light of the economic consequences of the COVID-19 pandemic. Although we currently believe we are a leader in lidar-based systems for the autonomous vehicle market, by the time mass market adoption of autonomous vehicle technology is achieved, we expect competition among providers of sensing technology based on lidar and other modalities to increase substantially. If commercialization of lidar products is not successful, or not as successful as we or the market expects, or if other sensing modalities gain acceptance by developers of autonomous driving systems or ADAS, automotive OEMs, regulators and safety organizations or other market participants by the time autonomous vehicle technology achieves mass market adoption, our business, results of operations and financial condition will be materially and adversely affected.

We are investing in and pursuing market opportunities outside of the automotive markets, including in the aerospace and defense, aviation, construction, mining, security and city infrastructure sectors. We believe that our future revenue growth, if any, will depend in part on our ability to expand within new markets such as these and to enter new markets as they emerge. Each of these markets presents distinct risks and, in many cases, requires us to address the particular requirements of that market.

Addressing these requirements can be time-consuming and costly. The market for lidar technology outside of automotive applications is relatively new, rapidly developing and unproven in many markets or industries. Many of our customers outside of the automotive industry are still in the testing and development phases and we cannot be certain that they will commercialize products or systems with our lidar products or at all. We cannot be certain that lidar will be sold into these markets, or any market outside of automotive market, at scale. Adoption of lidar products, including our products, outside of the automotive industry will depend on numerous factors, including: whether the technological capabilities of lidar and lidar-based products meet users' current or anticipated needs, whether the benefits of designing lidar into larger sensing systems outweigh the costs, complexity and time needed to deploy such technology or replace or modify existing systems that may have used other modalities such as cameras and radar, whether users in other applications can move beyond the testing and development phases and proceed to commercializing systems supported by lidar technology and whether lidar developers such as us can keep pace

with rapid technological change in certain developing markets and the global response to the COVID-19 pandemic and the length of any associated work stoppages. If lidar technology does not achieve commercial success outside of the automotive industry, or if the market develops at a pace slower than we expect, our business, results of operation and financial condition will be materially and adversely affected.

We may experience difficulties in managing our growth and expanding our operations.

We expect to experience significant growth in the scope and nature of our operations. Our ability to manage our operations and future growth will require us to continue to improve our operational, financial and management controls, compliance programs and reporting systems. We are currently in the process of strengthening our compliance programs, including our compliance programs related to export controls, privacy and cybersecurity and anti-corruption. We may not be able to implement improvements in an efficient or timely manner and may discover deficiencies in existing controls, programs, systems and procedures, which could have an adverse effect on our business, reputation and financial results.

We rely on third-party suppliers and because some of the raw materials and key components in our products come from limited or single source suppliers, 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 customers.

Some of the components that go into the manufacture of our solutions are sourced from third-party suppliers. To date, we have produced our products in relatively limited quantities for use in R&D programs. Although we do not have any experience in managing our supply chain to manufacture and deliver our products at scale, our future success will depend on our ability to manage our supply chain to manufacture and deliver our products at scale. Some of the key components used to manufacture our products come from limited or single source suppliers. 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 its products. We have a global supply chain and the COVID-19 pandemic and other health epidemics and outbreaks may adversely affect our ability to source components in a timely or cost effective manner from our third-party suppliers due to, among other things, work stoppages or interruptions. For example, our products depend on lasers and we currently consume a substantial portion of the available market. Any shortage of these lasers could materially and adversely affect our ability to manufacture our solutions. In addition, the lead times associated with certain components are lengthy and preclude rapid changes in quantities and delivery schedules. We have in the past experienced and 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 customer 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 our scheduled product deliveries to our customers. This could adversely affect our relationships with our customers and channel partners and could cause delays in shipment of our products and adversely affect our operating results. In addition, increased component costs could result in lower gross margins. Even where we are able to pass increased component costs along to our customers, there may be a lapse of time before we are able to do so such that we must absorb the increased cost. 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 deliver products to our customers, which may result in such customers using competitive products instead of ours.

Because our sales have been primarily to customers making purchases for R&D projects and our orders are project-based, we expect our results of operations to fluctuate on a quarterly and annual basis, which could cause our stock price to fluctuate or decline.

Our quarterly results of operations have fluctuated in the past and may vary significantly in the future. As such, historical comparisons of our operating results may not be meaningful. In particular, because our sales to date have primarily been to customers making purchases for R&D, sales in any given quarter can fluctuate based on the timing and success of our customers' development projects. Accordingly, the results of any one quarter should not be relied upon as an indication of future performance. Our quarterly financial results may fluctuate as a result of a variety of factors, many of which are outside of our control and may not fully reflect the underlying performance of our business. These fluctuations could adversely affect our ability to meet our expectations or those of securities analysts, ratings agencies or investors. If we do not meet these expectations for any period, the value of our business and our securities could decline significantly. Factors that may cause these quarterly fluctuations include, without limitation, those listed below:

- the timing and magnitude of orders and shipments of our products in any quarter;
- pricing changes we may adopt to drive market adoption or in response to competitive pressure;

- our ability to retain our existing customers and attract new customers;
- our ability to develop, introduce, manufacture and ship in a timely manner products that meet customer requirements;
- disruptions in our sales channels or termination of its relationship with important channel partners;
- delays in customers' purchasing cycles or deferments of customers' purchases in anticipation of new products or up-dates from us or our competitors;
- fluctuations in demand pressures for our products;
- the mix of products sold in any quarter;
- the duration of the global COVID-19 pandemic and the time it takes for economic recovery;
- the timing and rate of broader market adoption of autonomous systems utilizing our solutions across the automotive and other market sectors;
- market acceptance of lidar and further technological advancements by our competitors and other market participants;
- the ability of our customers to commercialize systems that incorporate our products;
- any change in the competitive dynamics of our markets, including consolidation of competitors, regulatory developments and new market entrants;
- our ability to effectively manage our inventory;
- changes in the source, cost, availability of and regulations pertaining to materials we use;
- adverse litigation, judgments, settlements or other litigation-related costs, or claims that may give rise to such costs; and
- general economic, industry and market conditions, including trade disputes.

Our transition to an outsourced manufacturing business model may not be successful, which could harm our ability to deliver products and recognize revenue.

We are in the initial stages of transitioning from a manufacturing model in which we primarily manufactured and assembled our products at our Orlando, Florida location, to one where we rely on third-party manufacturers in Mexico, California and potentially other foreign and domestic locations. We currently have an agreement with one such manufacturer of a key component and are in negotiations with other third parties to provide contract manufacturing of certain of our products. We believe the use of third-party manufacturers will have benefits, but in the near term, while we are beginning manufacturing with new partners, we may lose revenue, incur increased costs and potentially harm our customer relationships.

Reliance on third-party manufacturers reduces our control over the manufacturing process, including reduced control over quality, product costs and product supply and timing. We may experience delays in shipments or issues concerning product quality from our third-party manufacturers. If any of our third-party manufacturers experience interruptions, delays or disruptions in supplying our products, including by natural disasters, the global COVID-19 pandemic, other health epidemics and outbreaks, or work stoppages or capacity constraints, our ability to ship products to distributors and customers would be delayed. In addition, unfavorable economic conditions could result in financial distress among third-party manufacturers upon which we rely, thereby increasing the risk of disruption of supplies necessary to fulfill our production requirements and meet customer demands. Additionally, if any of our third-party manufacturers experience quality control problems in their manufacturing operations and our products do not meet customer or regulatory requirements, we could be required to cover the cost of repair or replacement of any defective products. These delays or product quality issues could have an immediate and material adverse effect on our ability to fulfill orders and could have a negative effect on our operating results. In addition, such delays or issues with product quality could adversely affect our reputation and our relationship with our channel partners. If third-party manufacturers experience financial, operational, manufacturing capacity or other difficulties, or experience shortages in required components, or if they are otherwise unable or unwilling to continue to manufacture our products in required volumes or at all, our supply may be disrupted, we may be required to seek alternate manufacturers and we may be required to re-design our products. It would be time-consuming, and could be costly and impracticable, to begin to use new manufacturers and designs, and such changes could cause significant interruptions in supply and could have an adverse effect on our ability to meet our scheduled product deliveries and may subsequently lead to the loss of sales. While we take measures to protect our trade secrets, the use of third-party manufacturers may also risk disclosure of our innovative and proprietary manufacturing methodologies, which could adversely affect our business.

If we commence international manufacturing operations, we may face risks associated with manufacturing operations outside the United States.

Manufacturing outside the United States is subject to several inherent risks, including:

- foreign currency fluctuations;
- local economic conditions;
- political instability;
- import or export requirements;
- foreign government regulatory requirements;
- reduced protection for intellectual property rights in some countries;
- tariffs and other trade barriers and restrictions; and
- potentially adverse tax consequences.

If we commence manufacturing operations outside the United States, we may be subject to these risks. Such risks could increase our costs and decrease our profit margins.

We, our outsourcing partners and our suppliers may rely on complex machinery for our production, which involves a significant degree of risk and uncertainty in terms of operational performance and costs.

We, our outsourcing partners and our suppliers may rely on complex machinery for the production, assembly and installation of our lidar solutions, which will involve a significant degree of uncertainty and risk in terms of operational performance and costs. Our production facilities and the facilities of our outsourcing partners and suppliers consist of large-scale machinery combining many components. These components may suffer unexpected malfunctions from time to time and will depend on repairs and spare parts to resume operations, which may not be available when needed. Unexpected malfunctions of these components may significantly affect the intended operational efficiency. Operational performance and costs can be difficult to predict and are often influenced by factors outside of our control, such as, but not limited to, scarcity of natural resources, environmental hazards and remediation, costs associated with decommissioning of machines, labor disputes and strikes, difficulty or delays in obtaining governmental permits, damages or defects in electronic systems, industrial accidents, fire, seismic activity and natural disasters. Should operational risks materialize, it may result in the personal injury to or death of workers, the loss of production equipment, damage to production facilities, monetary losses, delays and unanticipated fluctuations in production, environmental damage, administrative fines, increased insurance costs and potential legal liabilities, all which could have a material adverse effect on our business, prospects, financial condition or operating results.

As part of growing our business, we may make acquisitions. If we fail to successfully select, execute or integrate our acquisitions, then our business, results of operations and financial condition could be materially adversely affected, and our stock price could decline.

From time to time, we may undertake acquisitions to add new products and technologies, acquire talent, gain new sales channels or enter into new markets or sales territories. In addition to possible stockholder approval, we may need approvals and licenses from relevant government authorities for the acquisitions and to comply with any applicable laws and regulations, which could result in increased delay and costs, and may disrupt our business strategy if we fail to do so. Furthermore, acquisitions and the subsequent integration of new assets, businesses, key personnel, customers, vendors and suppliers 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. 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, the occurrence of 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.

To date, we have limited experience with acquisitions and the integration of acquired technology and personnel. Failure to successfully identify, complete, manage and integrate acquisitions could materially and adversely affect our business, financial condition and results of operations and could cause our stock price to decline.

Our sales and operations in international markets expose us to operational, financial and regulatory risks.

International sales comprise a significant amount of our overall revenue. Sales to international customers accounted for 71% and 17% of our revenue in 2020 and 2019, respectively. We are committed to growing our international sales. While we have committed resources, and are working closely with OEMs and other collaborators outside the United States, to expand our

international operations and sales channels, these efforts may not be successful. International operations are subject to a number of other risks, including:

- exchange rate fluctuations;
- political and economic instability, international terrorism and anti-American sentiment, particularly in emerging markets;
- global or regional health crises, such as the COVID-19 pandemic or other health epidemics and outbreaks;
- potential for violations of anti-corruption laws and regulations, such as those related to bribery and fraud;
- preference for locally branded products, and laws and business practices favoring local competition;
- potential consequences of, and uncertainty related to, the “Brexit” process in the United Kingdom, which could lead to additional expense and complexity in doing business there;
- increased difficulty in managing inventory;
- delayed revenue recognition;
- less effective protection of intellectual property;
- stringent regulation of the autonomous or other systems or products using our products and stringent consumer protection and product compliance regulations, including but not limited to General Data Protection Regulation in the European Union, European competition law, the Restriction of Hazardous Substances Directive, the Waste Electrical and Electronic Equipment Directive and the European Ecodesign Directive that are costly to comply with and may vary from country to country;
- difficulties and costs of staffing and managing foreign operations;
- import and export laws and the impact of tariffs;
- changes in local tax and customs duty laws or changes in the enforcement, application or interpretation of such laws; and
- U.S. government’s restrictions on certain technology transfer to certain countries of concern.

The occurrence of any of these risks could negatively affect our international business and consequently our business, operating results and financial condition.

Any failure to grow our relationship with SAIC and our proposed international expansion into China could expose us to substantial business, regulatory, political, financial and economic risks.

We have entered into a relationship with SAIC Motor Corporation Limited pursuant to which we plan to establish a presence in China to support the collaboration between the parties and enable series production of autonomous vehicles utilizing our technology in 2022. Any failure in our ability to grow our relationship with SAIC or to realize the anticipated benefits of our relationship with SAIC could harm our brand, prospects, financial condition and operating results and have an adverse effect on our business. Our proposed expansion into China could also expose us to substantial risks associated with doing business in China, such as, taxation, inflation, manufacturing, environmental and other regulations, foreign currency exchange rates, political risks, the labor market and property and financial regulations. Additionally, we would need to maintain compliance with the market’s ongoing development of standards to define deployment requirements for higher levels of autonomy. Our ability to operate in China may be adversely affected by changes in, or our failure to comply with, Chinese laws, regulations and standards. As we hire personnel to maintain our operations in China, we would also be exposed to risks associated with any changes to the employment and labor laws in China, which could increase our operating costs in China. There is also significant uncertainty about the future relationship between the United States and China with respect to political risks, including but not limited to, trade policies, treaties, government regulations and tariffs.

The complexity of our products could result in unforeseen delays or expenses from undetected defects, errors or reliability issues in hardware or software which could reduce the market adoption of our new products, damage our reputation with current or prospective customers, expose us to product liability and other claims and adversely affect our operating costs.

Our products are highly technical and very complex and require high standards to manufacture and have in the past and will likely in the future experience defects, errors or reliability issues at various stages of development. We may be unable to timely release new products, manufacture existing products, correct problems that have arisen or correct such problems to our customers’ satisfaction. Additionally, undetected errors, defects or security vulnerabilities, especially as new products are introduced or as new versions are released, could result in serious injury to the end users of technology incorporating our

products, or those in the surrounding area, our customers never being able to commercialize technology incorporating our products, litigation against us, negative publicity and other consequences. These risks are particularly prevalent in the highly competitive autonomous driving and ADAS markets. Some errors or defects in our products may only be discovered after they have been tested, commercialized and deployed by customers. If that is the case, we may incur significant additional development costs and product recall, repair or replacement costs. These problems may also result in claims, including class actions, against us by our customers or others. Our reputation or brand may be damaged as a result of these problems and customers may be reluctant to buy our products, which could adversely affect our ability to retain existing customers and attract new customers and could adversely affect our financial results.

In addition, we could face material legal claims for breach of contract, product liability, fraud, tort or breach of warranty as a result of these problems. 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 products. 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 adversely affected.

We may be subject to product liability or warranty claims that could result in significant direct or indirect costs, which could adversely affect our business and operating results.

Our customers use our solutions in autonomous driving and ADAS applications, which present the risk of significant injury, including fatalities. We may be subject to claims if a product using our lidar technology is involved in an accident and persons are injured or purport to be injured. Any insurance that we carry may not be sufficient or it may not apply to all situations. Similarly, our customers could be subjected to claims as a result of such accidents and bring legal claims against us to attempt to hold us liable. In addition, if lawmakers or governmental agencies were to determine that the use of our products or autonomous driving or certain ADAS applications increased the risk of injury to all or a subset of our customers, they may pass laws or adopt regulations that limit the use of our products or increase our liability associated with the use of our products or that regulate the use of or delay the deployment of autonomous driving and ADAS technology. Any of these events could adversely affect our brand, relationships with customers, operating results or financial condition.

We typically provide a limited-time warranty on our products. The occurrence of any material defects in our products could make us liable for damages and warranty claims. In addition, we could incur significant costs to correct any defects, warranty claims or other problems, including costs related to product recalls. Any negative publicity related to the perceived quality of our products could affect our brand image, partner and customer demand, and adversely affect our operating results and financial condition. Also, warranty, recall and product liability claims may result in litigation, including class actions, the occurrence of which could be costly, lengthy and distracting and adversely affect our business and operating results.

If we do not maintain sufficient inventory or if we do not adequately manage our inventory, we could lose sales or incur higher inventory-related expenses, which could negatively affect our operating results.

To ensure adequate inventory supply, we must forecast inventory needs and expenses, place orders sufficiently in advance with our suppliers and manufacturing partners and manufacture products based on our estimates of future demand for particular products. Fluctuations in the adoption of lidar products may affect our ability to forecast our future operating results, including revenue, gross margins, cash flows and profitability. Our ability to accurately forecast demand for our products could be affected by many factors, including the rapidly changing nature of the autonomous driving and ADAS markets in which we operate, the uncertainty surrounding the market acceptance and commercialization of lidar technology, the emergence of new markets, an increase or decrease in customer demand for our products or for products and services of our competitors, product introductions by competitors, the COVID-19 pandemic, other health epidemics and outbreaks, and any associated work stoppages or interruptions, unanticipated changes in general market conditions and the weakening of economic conditions or consumer confidence in future economic conditions. If our lidar products are commercialized in autonomous driving and ADAS applications, both of which are experiencing rapid growth in demand, we may face challenges acquiring adequate supplies to manufacture our products and/or we and our manufacturing partners may not be able to manufacture our products at a rate necessary to satisfy the levels of demand, which would negatively affect our revenue. This risk may be exacerbated by the fact that we may not carry or be able to obtain for our manufacturers a significant amount of inventory to satisfy short-term demand increases. If we fail to accurately forecast customer demand, we may experience excess inventory levels or a shortage of products available for sale.

Inventory levels in excess of customer demand may result in inventory write-downs or write-offs and the sale of excess inventory at discounted prices, which would adversely affect our financial results, including our gross margin, and have a negative effect on our brand. Conversely, if we underestimate customer demand for our products, we, or our manufacturing partners, may not be able to deliver products to meet our requirements, and this could result in damage to our brand and customer relationships and adversely affect our revenue and operating results.

The average selling prices of our products could decrease rapidly over the life of the product, which may negatively affect our revenue and gross margin.

We may experience declines in the average selling prices of our products generally as our customers seek to commercialize autonomous systems at prices low enough to achieve market acceptance. In order to sell products that have a falling average unit selling price and maintain margins at the same time, we will need to continually reduce product and manufacturing costs. To manage manufacturing costs, we must engineer the most cost-effective design for our products. In addition, we continuously drive initiatives to reduce labor cost, improve worker efficiency, reduce the cost of materials, use fewer materials and further lower overall product costs by carefully managing component prices, inventory and shipping cost. We also need to continually introduce new products with higher sales prices and gross margin in order to maintain our overall gross margin. If we are unable to manage the cost of older products or successfully introduce new products with higher gross margin, our revenue and overall gross margin would likely decline.

Adverse conditions in the automotive industry or the global economy more generally could have adverse effects on our results of operations.

While we make our strategic planning decisions based on the assumption that the markets we are targeting will grow, our business is dependent, in large part on, and directly affected by, business cycles and other factors affecting the global automobile industry and global economy generally. Automotive production and sales are highly cyclical and depend on general economic conditions and other factors, including consumer spending and preferences, changes in interest rates and credit availability, consumer confidence, fuel costs, fuel availability, environmental impact, governmental incentives and regulatory requirements, and political volatility, especially in energy-producing countries and growth markets. In addition, automotive production and sales can be affected by our automotive OEM customers' ability to continue operating in response to challenging economic conditions and in response to labor relations issues, regulatory requirements, trade agreements and other factors. The volume of automotive production in North America, Europe and the rest of the world has fluctuated, sometimes significantly, from year to year, and we expect such fluctuations to give rise to fluctuations in the demand for our products. Any significant adverse change in any of these factors may result in a reduction in automotive sales and production by our automotive OEM customers and could have a material adverse effect on our business, results of operations and financial condition.

The discontinuation, lack of commercial success, or loss of business with respect to a particular vehicle model or technology package for which we are a significant supplier could reduce our sales and adversely affect our profitability.

If we are able to secure design wins and our solutions are included in these autonomous driving and ADAS products, we expect to enter into supply agreements with the relevant customer. Market practice dictates that these supply agreements typically require us to supply a customer's requirements for a particular vehicle model or autonomous driving or ADAS product, rather than supply a set number of products. These contracts can have short terms and/or can be subject to renegotiation, sometimes as frequently as annually, all of which may affect product pricing, and may be terminated by our customers at any time. Therefore, even if we are successful in obtaining design wins and the systems into which our products are built are commercialized, the discontinuation of, the loss of business with respect to, or a lack of commercial success of a particular vehicle model or technology package for which we are a significant supplier could mean that the expected sales of our products will not materialize, materially and adversely affecting our business.

Since many of the markets in which we compete are new and rapidly evolving, it is difficult to forecast long-term end-customer adoption rates and demand for our products.

We are pursuing opportunities in markets that are undergoing rapid changes, including technological and regulatory changes, and it is difficult to predict the timing and size of the opportunities. For example, autonomous driving and lidar-based ADAS applications require complex technology. Because these automotive systems depend on technology from many companies, commercialization of autonomous driving or ADAS products could be delayed or impaired on account of certain technological components of our or others not being ready to be deployed in vehicles. Although we currently have contracts with over 50 commercial partners, these companies may not be able to commercialize our technology immediately, or at all. Regulatory, safety or reliability developments, many of which are outside of our control, could also cause delays or otherwise impair commercial adoption of these new technologies, which will adversely affect our growth. Our future financial performance will depend on our ability to make timely investments in the correct market opportunities. If one or more of these markets experience a shift in customer or prospective customer demand, our products may not compete as effectively, if at all, and they may not be designed into commercialized products. Given the evolving nature of the markets in which we operate, it is difficult to predict customer demand or adoption rates for our products or the future growth of the markets in which we operate. As a result, the financial projections in this Annual Report necessarily reflect various estimates and assumptions that may not prove accurate and these projections could differ materially from actual results due to the risks included in this "Risk Factors" section, among others. If demand does not develop or if we cannot accurately forecast customer demand, the size of

our markets, inventory requirements or our future financial results, our business, results of operations and financial condition will be adversely affected.

We currently have and target many customers that are large corporations with substantial negotiating power, exacting product standards and potentially competitive internal solutions. If we are unable to sell our products to these customers, our prospects and results of operations will be adversely affected.

Many of our customers and potential customers are large, multinational corporations with substantial negotiating power relative to us and, in some instances, may have internal solutions that are competitive to our products. These large, multinational corporations also have significant development resources, which may allow them to acquire or develop independently, or in partnership with others, competitive technologies. Meeting the technical requirements and securing design wins with any of these companies will require a substantial investment of our time and resources. We cannot assure you that our products will secure design wins from these or other companies or that we will generate meaningful revenue from the sales of our products to these key potential customers. If our products are not selected by these large corporations or if these corporations develop or acquire competitive technology, it will have an adverse effect on our business.

Our business could be materially and adversely affected if we lost any of our largest customers or if we were unable to pay our invoices.

Although we have and continue to pursue a broad customer base, we are dependent on a collection of large customers with strong purchasing power. In 2020 and 2019, our top 10 customers represented 94% and 79% of our revenue, respectively. In 2020, Volvo and in 2019, Volvo, Toyota and Northrop Grumman accounted for more than 10% of our annual revenue. The loss of business from any of our major customers (whether by lower overall demand for our products, cancellation of existing contracts or product orders or the failure to design in our products or award us new business) could have a material adverse effect on our business.

To the extent autonomous vehicle and ADAS systems become accepted by major automotive OEMs, we expect that we will rely increasingly for our revenue on Tier 1 suppliers through which automotive OEMs procure components. We expect that these Tier 1 suppliers will be responsible for certain hardpoint and software configuration activities specific to each OEM, and they may not exclusively carry our solutions.

There is also a risk that one or more of our major customers could be unable to pay our invoices as they become due or that a customer will simply refuse to make such payments if it experiences financial difficulties. If a major customer were to enter into bankruptcy proceedings or similar proceedings whereby contractual commitments are subject to stay of execution and the possibility of legal or other modification, we could be forced to record a substantial loss.

We are substantially dependent on our partnership with Volvo, and our business could be materially and adversely affected if our partnership with Volvo were terminated.

Our business is substantially dependent on our partnership with Volvo. For the years ended December 31, 2020 and 2019, Volvo accounted for \$8.9 million, or 64% and \$0.6 million, or 4.7%, respectively, of our total revenue. There can be no assurance that we will be able to maintain our relationship with Volvo and secure orders for our products. If we are unable to maintain our relationship with Volvo, or if our arrangement is modified so that the economic terms become less favorable to us, then our business would be materially adversely affected.

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

Customers may be less likely to purchase our lidar solutions 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 customers, suppliers, analysts, ratings agencies and other parties in our products, 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, customer unfamiliarity with our lidar solutions, any delays in scaling production, delivery and service operations to meet demand, competition and uncertainty regarding the future of autonomous vehicles or our other services and our production and sales performance compared with market expectations.

Our investments in educating our customers and potential customers about the advantages of lidar and its applications may not result in sales of our products.

Educating our prospective customers, and to a lesser extent, our existing customers, about lidar, its advantages over other sensing technologies and lidar's ability to convey value in different industries and deployments is an integral part of developing new business and the lidar market generally. If prospective customers have a negative perception of, or experience with, lidar or a competitor's lidar products they may be reluctant to adopt lidar in general or specifically our products. Adverse statements about lidar by influential market participants may also deter adoption. Some of our competitors have significant financial or marketing resources that may allow them to engage in public marketing campaigns about their alternative technology, lidar or our solutions. Our efforts to educate potential customers and the market generally and to counter any adverse statements made by competitors or other market participants will require significant financial and personnel resources. These educational efforts may not be successful and we may not offset the costs of such efforts with revenue from the new customers. If we are unable to acquire new customers to offset these expenses or if the market accepts such adverse statements, our financial condition will be adversely affected.

The period of time from a design win to implementation is long and we are subject to the risks of cancellation or postponement of the contract or unsuccessful implementation.

Prospective customers, including those in the automotive industry, generally must make significant commitments of resources to test and validate our products and confirm that they can integrate with other technologies before including them in any particular system, product or model. The development cycles of our products with new customers varies widely depending on the application, market, customer and the complexity of the product. In the automotive market, for example, this development cycle can be five to seven or more years. The development cycle in certain other markets can be months to one or two years. These development cycles result in us investing our resources prior to realizing any revenue from the commercialization. Further, we are subject to the risk that customers cancel or postpone implementation of our technology, as well as that we will not be able to integrate our technology successfully into a larger system with other sensing modalities. Further, our revenue could be less than forecasted if the system, product or vehicle model that includes our lidar products is unsuccessful, including for reasons unrelated to our technology. Long development cycles and product cancellations or postponements may adversely affect our business, results of operations and financial condition.

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

The markets for sensing technology applicable to autonomous solutions in the automobile industry are highly competitive. Our future success will depend on our ability to remain a leader in our targeted markets by continuing to develop and protect from infringement advanced lidar technology in a timely manner and to stay ahead of existing and new competitors. Our competitors are numerous and they compete with us directly by offering lidar products and indirectly by attempting to solve some of the same challenges with different technology. We face competition from camera and radar companies, other developers of lidar products, Tier 1 suppliers and other technology and automotive supply companies, some of which have significantly greater resources than we do. In the automotive market, our competitors have commercialized both lidar and non-lidar-based ADAS technology that has achieved market adoption, strong brand recognition and may continue to improve. Other competitors are working towards commercializing autonomous driving technology and either by themselves, or with a publicly announced partner, have substantial financial, marketing, R&D and other resources. Some of our customers in the autonomous vehicle and ADAS markets have announced development efforts or made acquisitions directed at creating their own lidar-based or other sensing technologies, which would compete with our solutions. We do not know how close these competitors are to commercializing autonomous driving systems or novel ADAS applications. In markets outside of the automotive industry, our competitors, like us, seek to develop new sensing applications across industries. Even in these emerging markets, we face substantial competition from numerous competitors seeking to prove the value of their technology.

Additionally, increased competition may result in pricing pressure and reduced margins and may impede our ability to increase the sales of our products or cause us to lose market share, any of which will adversely affect our business, results of operations and financial condition.

The markets in which we compete are characterized by rapid technological change, which requires us to continue to develop new products and product innovations and could adversely affect market adoption of our products.

While we intend to invest substantial resources to remain on the forefront of technological development, continuing technological changes in sensing technology, lidar and the markets for these products, including the ADAS and autonomous driving industries, could adversely affect adoption of lidar and/or our products, either generally or for particular applications. Our future success will depend upon our ability to develop and introduce a variety of new capabilities and innovations to our existing product offerings, as well as introduce a variety of new product offerings, to address the changing needs of the markets in which we offer our products. For example, we are currently working on developing perception software products. We cannot

guarantee that such software or other new products will be released in a timely manner, or at all, or achieve market acceptance. Delays in delivering new products that meet customer requirements could damage our relationships with customers and lead them to seek alternative sources of supply. In addition, our success to date has been based on the delivery of our solutions to R&D programs in which developers are investing substantial capital to develop new systems. Our continued success relies on the success of the R&D phase of these customers as they expand into commercialized projects. As autonomous technology reaches the stage of large-scale commercialization, we will be required to develop and deliver solutions at price points that enable wider and ultimately mass-market adoption. Delays in introducing products and innovations, the failure to choose correctly among technical alternatives or the failure to offer innovative products or configurations at competitive prices may cause existing and potential customers to purchase our competitors' products or turn to alternative sensing technology.

If we are unable to devote adequate resources to develop products or cannot otherwise successfully develop products or system configurations that meet customer requirements on a timely basis or that remain competitive with technological alternatives, our products could lose market share, our revenue will decline, we may experience operating losses and our business and prospects will be adversely affected.

Developments in alternative technology may adversely affect the demand for our lidar technology.

Significant developments in alternative technologies, such as cameras and radar, may materially and adversely affect our business, prospects, financial condition and operating results in ways we do not currently anticipate. Existing and other camera and radar technologies may emerge as customers' preferred alternative to our solutions. Any failure by us to develop new or enhanced technologies or processes, or to react to changes in existing technologies, could materially delay our development and introduction of new and enhanced products in the autonomous vehicle industry, which could result in the loss of competitiveness of our lidar solutions, decreased revenue and a loss of market share to competitors. Our R&D efforts may not be sufficient to adapt to changes in technology. As technologies change, we plan to upgrade or adapt our lidar solutions with the latest technology. However, our solutions may not compete effectively with alternative systems if we are not able to source and integrate the latest technology into our existing lidar solutions.

Because lidar is new in most of the markets we are seeking to enter, forecasts of market growth in this Annual Report may not be accurate.

Market opportunity estimates and growth forecasts included in this Annual Report are subject to significant uncertainty and are based on assumptions and estimates that may not prove to be accurate. The forecasts and estimates in this Annual Report relating to the expected size and growth of the markets for lidar-based technology may prove to be inaccurate. Even if these markets experience the forecasted growth described in this Annual Report, we may not grow our business at similar rates, or at all. Our future growth is subject to many factors, including market adoption of our products, which is subject to many risks and uncertainties. Accordingly, the forecasts and estimates of market size and growth described in this Annual Report, including our estimates that the size of our total addressable market is expected to grow from approximately \$5 billion currently to \$150 billion by 2030, should not be taken as indicative of our future growth. In addition, these forecasts do not take into account the impact of the current global COVID-19 pandemic, and we cannot assure you that these forecasts will not be materially and adversely affected as a result.

We may need to raise additional capital in the future in order to execute our business plan, which may not be available on terms acceptable to us, or at all.

In the future, we may require additional capital to respond to technological advancements, competitive dynamics or technologies, customer demands, business opportunities, challenges, acquisitions or unforeseen circumstances and we may determine to engage in equity or debt financings or enter into credit facilities for other reasons. In order to further business relationships with current or potential customers or partners, we may issue equity or equity-linked securities to such current or potential customers or partners. We may not be able to timely secure additional debt or equity financing on favorable terms, or at all. If we raise additional funds through the issuance of equity or convertible debt or other equity-linked securities or if we issue equity or equity-linked securities to current or potential customers to further business relationships, our existing stockholders could experience significant dilution. Any debt financing obtained by us in the future could involve restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. If we are unable to obtain adequate financing or financing on terms satisfactory to us, when we require it, our ability to continue to grow or support our business and to respond to business challenges could be significantly limited.

We have identified material weaknesses in our internal control over financial reporting as of December 31, 2020 and 2019. If we are unable to develop and maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results in a timely manner, which may adversely affect investor confidence in us and materially and adversely affect our business and operating results.

We are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act and the rules and regulations of Nasdaq. We expect that the requirements of these rules and regulations will continue to increase our legal, accounting and financial compliance costs and place significant strain on our personnel, systems and resources.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. We are continuing to develop and refine our disclosure controls, internal control over financial reporting and other procedures that are designed to ensure that information required to be disclosed by us in the reports that we will file with the SEC is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that information required to be disclosed in reports under the Exchange Act is accumulated and communicated to our principal executive and financial officers.

Any failure to implement and maintain effective internal controls could increase our operating costs and could materially and adversely affect our business and operating results.

In connection with our financial statement close process for the years ended December 31, 2020 and 2019, we identified a material weakness in the design and operating effectiveness of our internal control over financial reporting. The material weakness we identified resulted from a lack of sufficient number of qualified personnel within our accounting function who possessed an appropriate level of expertise to effectively perform the following functions:

- identify, select and apply GAAP sufficiently to provide reasonable assurance that transactions were being appropriately recorded; and
- assess risk and design appropriate control activities over information technology systems and financial and reporting processes necessary to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements.

A material weakness is a deficiency or combination of deficiencies in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our financial statements would not be prevented or detected on a timely basis. These deficiencies could result in additional material misstatements to our consolidated financial statements that could not be prevented or detected on a timely basis.

Our management is in the process of developing a remediation plan which shall include, without limitation, the hiring of additional accounting and finance personnel with technical public company accounting and financial reporting experience. The material weaknesses will not be considered remediated until management designs and implements effective controls that operate for a sufficient period of time and management has concluded, through testing, that these controls are effective. Our management will monitor the effectiveness of our remediation plans and will make changes management determines to be appropriate.

If not remediated, these material weaknesses could result in material misstatements to our annual or interim consolidated financial statements that might not be prevented or detected on a timely basis, or in delayed filing of required periodic reports. If we are unable to assert that our internal control over financial reporting is effective, or when required in the future, if our independent registered public accounting firm is unable to express an unqualified opinion as to the effectiveness of the internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of the Common Stock could be adversely affected and we could become subject to litigation or investigations by Nasdaq, the SEC, or other regulatory authorities, which could require additional financial and management resources.

Further, additional weaknesses in our internal controls may be discovered in the future. Any failure to develop or maintain effective controls, or any difficulties encountered in our implementation or improvement, could adversely affect our operating results or cause us to fail to meet our reporting obligations and may result in a restatement of our financial statements for prior periods.

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. 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 controls are documented, designed or operating.

Changes in tax laws or exposure to additional income tax liabilities could affect our future profitability.

Factors that could materially affect our future effective tax rates include but are not limited to:

- changes in tax laws or the regulatory environment;
- changes in accounting and tax standards or practices;
- changes in the composition of operating income by tax jurisdiction; and
- our operating results before taxes.

Because we do not have a long history of operating at our present scale and we have significant expansion plans, our effective tax rate may fluctuate in the future. Future effective tax rates could be affected by operating losses in jurisdictions where no tax benefit can be recorded under GAAP, changes in the composition of earnings in countries with differing tax rates, changes in deferred tax assets and liabilities, or changes in tax laws.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the “Tax Act”) was signed into law making significant changes to the U.S. Tax Code. In particular, sweeping changes were made to the U.S. taxation of foreign operations. Changes include, but are not limited to, a reduction to the corporate income tax rate, limiting interest deductions, adopting elements of a territorial tax system, assessing a repatriation tax or “toll-charge” on undistributed earnings and profits of U.S.-owned foreign corporations, and introducing certain anti-base erosion provisions, including a new minimum tax on global intangible low-taxed income (“GILTI”) and base erosion and anti-abuse tax (“BEAT”). The new legislation had no effect on our provision for income taxes for 2020 and 2019, because we generated net tax losses and offset our deferred tax assets on the balance sheet with a full valuation allowance due to our current loss position and forecasted losses for the near future. The overall impact of this tax reform is uncertain, and our business and financial condition, including with respect to our non-U.S. operations, could be adversely affected.

In addition to the impact of the Tax Act on our federal taxes, the Tax Act may impact our taxation in other jurisdictions, including with respect to state income taxes. State legislatures have not had sufficient time to respond to the Tax Act. Accordingly, there is uncertainty as to how the laws will apply in the various state jurisdictions. Additionally, other foreign governing bodies may enact changes to their tax laws in reaction to the Tax Act that could result in changes to our global tax position and materially adversely affect our business, results of operations and financial condition. Additionally, the Internal Revenue Service, (the “IRS”) and several foreign tax authorities have increasingly focused attention on intercompany transfer pricing with respect to sales of products and services and the use of intangibles. Tax authorities could disagree with our future intercompany charges, cross-jurisdictional transfer pricing or other matters and assess additional taxes. If we do not prevail in any such disagreements, our profitability may be affected.

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

As of December 31, 2020, we had \$241.6 million of U.S. federal and \$240.0 million of state net operating loss carryforwards available to reduce future taxable income. Of the \$241.6 million in U.S. federal operating loss carryforwards, \$198.9 million will be carried forward indefinitely for U.S. federal tax purposes and \$42.7 million will expire between 2035 and 2037. The \$240.0 million of our U.S. state net operating loss carryforwards will expire between 2035 and 2037. It is possible that we will not generate taxable income in time to use these net operating loss carryforwards before their expiration or at all. Under legislative changes made in December 2017, U.S. federal net operating losses incurred in 2018 and in future years may be carried forward indefinitely, but the deductibility of such net operating losses is limited. It is uncertain if and to what extent various states will conform to the newly enacted federal tax law. In addition, the federal and state net operating loss carryforwards and certain tax credits may be subject to significant limitations under Section 382 and Section 383 of the U.S. Tax Code, respectively, and similar provisions of state law. Under those sections of the U.S. Tax Code, if a corporation undergoes an “ownership change,” the corporation’s ability to use its pre-change net operating loss carryforwards and other pre-change attributes, such as research tax credits, to offset its post-change income or tax may be limited. In general, an “ownership change” will occur if there is a cumulative change in our ownership by “5-percent shareholders” that exceeds 50 percentage points over a rolling three-year period. Similar rules may apply under state tax laws. We have not yet undertaken an analysis of whether the Business Combination constitutes an “ownership change” for purposes of Section 382 and Section 383 of the U.S. Tax Code.

We are highly dependent on the services of Austin Russell, our Founder, President and Chief Executive Officer.

We are highly dependent on Austin Russell, our Founder, President and Chief Executive Officer. Mr. Russell created our first lidar product and he remains deeply involved in all aspects of our business, including product development. The loss of Mr. Russell would adversely affect our business because his loss could make it more difficult to, among other things, compete with other market participants, manage our R&D activities and retain existing customers or cultivate new ones. Negative public perception of, or negative news related to, Mr. Russell may adversely affect our brand, relationship with customers or standing in the industry.

Our business depends substantially on the efforts of our executive officers and highly skilled personnel, and our operations may be severely disrupted if we lost their services.

Competition for highly-skilled personnel is often intense, especially in Orlando, Florida and the San Francisco Bay Area, where two of our offices are located, and we may incur significant costs to attract highly-skilled personnel. We may not be successful in attracting, integrating, or retaining qualified personnel to fulfill our current or future needs. We have, from time to time, experienced, and we expect to continue to experience, difficulty in hiring and retaining highly skilled employees with appropriate qualifications. In addition, job candidates and existing employees often consider the value of the equity awards they receive in connection with their employment. If the perceived value of our equity or equity awards declines, it may adversely affect our ability to retain highly skilled employees. If we fail to attract new personnel or fail to retain and motivate our current personnel, our business and future growth prospects could be adversely affected.

Our business could be materially and adversely affected by the current global COVID-19 pandemic or other health epidemics and outbreaks.

The ongoing COVID-19 pandemic as well as other possible health epidemics and outbreaks could result in a material adverse impact on our or our customers' business operations including reduction or suspension of operations in the U.S. or certain parts of the world. Our engineering and manufacturing operations, among others, cannot all be conducted in a remote working structure and often require on-site access to materials and equipment. We have customers with international operations in varying industries. We also depend on suppliers and manufacturers worldwide. Depending upon the duration of the ongoing COVID-19 pandemic and the associated business interruptions, our customers, suppliers, manufacturers and partners may suspend or delay their engagement with us, which could result in a material adverse effect on our financial condition. Our response to the ongoing COVID-19 pandemic may prove to be inadequate and we may be unable to continue our operations in the manner we had prior to the outbreak, and may endure interruptions, reputational harm, delays in our product development and shipments, all of which could have an adverse effect on our business, operating results, and financial condition. In addition, when the pandemic subsides, we cannot assure you as to the timing of any economic recovery, which could continue to have a material adverse effect on our target markets and our business.

Our business is subject to the risks of earthquakes, fire, floods and other natural catastrophic events, global pandemics, and interruptions by man-made problems, such as terrorism. Material disruptions of our business or information systems resulting from these events could adversely affect our operating results.

A significant natural disaster, such as an earthquake, fire, flood, hurricane or significant power outage or other similar events, such as infectious disease outbreaks or pandemic events, including the ongoing COVID-19 pandemic, could have an adverse effect on our business and operating results. The ongoing COVID-19 pandemic may have the effect of heightening many of the other risks described in this "Risk Factors" section, such as the demand for our products, our ability to achieve or maintain profitability and our ability to raise additional capital in the future. Our corporate headquarters and R&D and manufacturing base are located in Florida, which currently has a high number of COVID-19 pandemic cases. One of our offices is located in the San Francisco Bay Area, a region known for seismic activity. In addition, natural disasters, acts of terrorism or war could cause disruptions in our remaining manufacturing operations, our or our customers' or channel partners' businesses, our suppliers' or the economy as a whole. We also rely on information technology systems to communicate among our workforce and with third parties. Any disruption to our communications, whether caused by a natural disaster or by man made problems, such as power disruptions, could adversely affect our business. We do not have a formal disaster recovery plan or policy in place and do not currently require that our suppliers' partners have such plans or policies in place. To the extent that any such disruptions result in delays or cancellations of orders or impede our suppliers' ability to timely deliver product components, or the deployment of our products, our business, operating results and financial condition would be adversely affected.

Interruption or failure of our information technology and communications systems could impact our ability to effectively provide our services.

We plan to include in-vehicle services and functionality that utilize data connectivity to monitor performance and timely capture opportunities to enhance performance and functionality. The availability and effectiveness of our services depend on the continued operation of information technology and communications systems. Our systems will be vulnerable to damage or

interruption from, among others, physical theft, fire, terrorist attacks, natural disasters, power loss, war, telecommunications failures, viruses, denial or degradation of service attacks, ransomware, social engineering schemes, insider theft or misuse or other attempts to harm our systems. We utilize reputable third-party service providers or vendors for all of our data other than our source code, and these providers could also be vulnerable to harms similar to those that could damage our systems, including sabotage and intentional acts of vandalism causing potential disruptions. Some of our systems will not be fully redundant, and our disaster recovery planning cannot account for all eventualities. Any problems with our third-party cloud hosting providers could result in lengthy interruptions in our business. In addition, our in-vehicle services and functionality are highly technical and complex technology which may contain errors or vulnerabilities that could result in interruptions in our business or the failure of our systems.

We are subject to cybersecurity risks to operational systems, security systems, infrastructure, integrated software in our lidar solutions and customer data processed by us or third-party vendors or suppliers and any material failure, weakness, interruption, cyber event, incident or breach of security could prevent us from effectively operating our business.

We are at risk for interruptions, outages and breaches of: operational systems, including business, financial, accounting, product development, data processing or production processes, owned by us or our third-party vendors or suppliers; facility security systems, owned by us or our third-party vendors or suppliers; in-product technology owned by us or our third-party vendors or suppliers; the integrated software in our lidar solutions; or customer or driver data that we process or our third-party vendors or suppliers process on our behalf. Such cyber incidents could materially disrupt operational systems; result in loss of intellectual property, trade secrets or other proprietary or competitively sensitive information; compromise certain information of customers, employees, suppliers, drivers or others; jeopardize the security of our facilities; or affect the performance of in-product technology and the integrated software in our lidar solutions. A cyber incident could be caused by disasters, insiders (through inadvertence or with malicious intent) or malicious third parties (including nation-states or nation-state supported actors) using sophisticated, targeted methods to circumvent firewalls, encryption and other security defenses, including hacking, fraud, trickery or other forms of deception. The techniques used by cyber attackers change frequently and may be difficult to detect for long periods of time. Although we maintain information technology measures designed to protect us against intellectual property theft, data breaches and other cyber incidents, such measures will require updates and improvements, and we cannot guarantee that such measures will be adequate to detect, prevent or mitigate cyber incidents. The implementation, maintenance, segregation and improvement of these systems requires significant management time, support and cost. Moreover, there are inherent risks associated with developing, improving, expanding and updating current systems, including the disruption of our data management, procurement, production execution, finance, supply chain and sales and service processes. These risks may affect our ability to manage our data and inventory, procure parts or supplies or produce, sell, deliver and service our solutions, adequately protect our intellectual property or achieve and maintain compliance with, or realize available benefits under, applicable laws, regulations and contracts. We cannot be sure that the systems upon which we rely, including those of our third-party vendors or suppliers, will be effectively implemented, maintained or expanded as planned. If we do not successfully implement, maintain or expand these systems as planned, our operations may be disrupted, our ability to accurately and timely report our financial results could be impaired, and deficiencies may arise in our internal control over financial reporting, which may impact our ability to certify our financial results. Moreover, our proprietary information or intellectual property could be compromised or misappropriated and our reputation may be adversely affected. If these systems do not operate as we expect them to, we may be required to expend significant resources to make corrections or find alternative sources for performing these functions.

A significant cyber incident could impact production capability, harm our reputation, cause us to breach our contracts with other parties or subject us to regulatory actions or litigation, any of which could materially affect our business, prospects, financial condition and operating results. In addition, our insurance coverage for cyber-attacks may not be sufficient to cover all the losses we may experience as a result of a cyber incident.

Legal and Regulatory Risks Related to Our Business

We are subject to governmental export and import control laws and regulations. Our failure to comply with these laws and regulations could have an adverse effect on our business, prospects, financial condition and results of operations.

Our products and solutions are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations and various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls. U.S. export control laws and regulations and economic sanctions prohibit the shipment of certain products and services to U.S. embargoed or sanctioned countries, governments and persons. In addition, complying with export control and sanctions regulations for a particular sale may be time-consuming and result in the delay or loss of sales opportunities. Exports of our products and technology must be made in compliance with these laws and regulations. If we fail to comply with these laws and regulations, we and certain of our employees could be subject to substantial civil or criminal penalties, including the possible loss of export or import privileges, fines, which may be imposed on us and responsible employees or managers and, in extreme cases, the incarceration of responsible employees or managers.

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 our components, sell our products or conduct our business could adversely affect our business. The U.S. 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 U.S., economic sanctions on individuals, corporations or countries, and other government regulations affecting trade between the U.S. and other countries where we conduct our business. 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 or raw materials needed to manufacture our products (including, but not limited to, rare-earth metals), our ability to sell our products to customers outside of the U.S. and the demand for our products. 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 our business, financial condition and results of operations.

We have in the past and may become involved in legal and regulatory proceedings and commercial or contractual disputes, which could have an adverse effect on our profitability and consolidated financial position.

We may be, from time to time, involved in litigation, regulatory proceedings and commercial or contractual disputes that may be significant. These matters may include, without limitation, disputes with our suppliers and customers, intellectual property claims, stockholder litigation, government investigations, class action lawsuits, personal injury claims, environmental issues, customs and value-added tax disputes and employment and tax issues. In addition, we have in the past and could face in the future a variety of labor and employment claims against us, which could include but is not limited to general discrimination, wage and hour, privacy, ERISA or disability claims. In such matters, government agencies or private parties may seek to recover from us very large, indeterminate amounts in penalties or monetary damages (including, in some cases, treble or punitive damages) or seek to limit our operations in some way. These types of lawsuits could require significant management time and attention or could involve substantial legal liability, adverse regulatory outcomes, and/or substantial expenses to defend. Often these cases raise complex factual and legal issues and create risks and uncertainties. No assurances can be given that any proceedings and claims will not have a material adverse impact on our operating results and consolidated financial position or that our established reserves or our available insurance will mitigate this impact.

We are subject to, and must remain in compliance with, numerous laws and governmental regulations concerning the manufacturing, use, distribution and sale of our products. Some of our customers also require that we comply with their own unique requirements relating to these matters.

We manufacture and sell products that contain electronic components, and such components may contain materials that are subject to government regulation in both the locations where we manufacture and assemble our products, as well as the locations where we sell our products. For example, certain regulations limit the use of lead in electronic components. Since we operate on a global basis, this is a complex process which requires continual monitoring of regulations and an ongoing compliance process to ensure that we and our suppliers are in compliance with existing regulations in each market where we operate. If there is an unanticipated new regulation that significantly impacts our use and sourcing of various components or requires more expensive components, that regulation could materially adversely affect our business, results of operations and financial condition.

Our products are used for autonomous driving and ADAS applications, which are subject to complicated regulatory schemes that vary from jurisdiction to jurisdiction. These are rapidly evolving areas where new regulations could impose limitations on the use of lidar generally or our products specifically. If we fail to adhere to these new regulations or fail to continually monitor the updates, we may be subject to litigation, loss of customers or negative publicity and our business, results of operations and financial condition will be adversely affected.

We are subject to various environmental laws and regulations that could impose substantial costs upon us and cause delays in building our production facilities.

Concerns over environmental pollution and climate change have produced significant legislative and regulatory efforts on a global basis, and we believe this will continue both in scope and in the number of countries participating. In addition, as climate change issues become more prevalent, foreign, federal, state and local governments and our customers have been responding to these issues. The increased focus on environmental sustainability may result in new regulations and customer requirements, or changes in current regulations and customer requirements, which could materially adversely impact our business, results of operations and financial condition. If we are unable to effectively manage real or perceived issues, including

concerns about environmental impacts or similar matters, sentiments toward us or our products could be negatively impacted, and our business, results of operations or financial condition could suffer.

Our operations are and will be subject to international, federal, state and local environmental laws and regulations, and such laws and regulations could directly increase the cost of energy, which may have an effect on the way we manufacture products or utilize energy to produce our products. In addition, any new regulations or laws in the environmental area might increase the cost of raw materials or key components we use in our products. Environmental regulations require us to reduce product energy usage, monitor and exclude an expanding list of restricted substances and to participate in required recovery and recycling of our products. Environmental and health and safety laws and regulations can be complex, and we have limited experience complying with them. Capital and operating expenses needed to comply with environmental laws and regulations can be significant, and violations may result in substantial fines and penalties, third-party damages, suspension of production or a cessation of our operations. Contamination at properties we operate, we formerly operated or to which hazardous substances were sent by us, may result in liability for us under environmental laws and regulations, including, but not limited to, the Comprehensive Environmental Response, Compensation and Liability Act, which can impose liability for the full amount of remediation-related costs without regard to fault, for the investigation and cleanup of contaminated soil and ground water, for building contamination and impacts to human health and for damages to natural resources. The costs of complying with environmental laws and regulations and any claims concerning noncompliance, or liability with respect to contamination in the future, could have a material adverse effect on our financial condition or operating results. We may face unexpected delays in obtaining the required permits and approvals in connection with our planned production facilities that could require significant time and financial resources and delay our ability to operate these facilities, which would adversely impact our business, prospects, financial condition and operating results.

We are subject to U.S. and foreign anti-corruption and anti-money laundering laws and regulations. We can face criminal liability and other serious consequences for violations, which can harm our business.

We are subject to the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act and possibly other anti-bribery and anti-money laundering laws in countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, contractors and other collaborators from authorizing, promising, offering or providing, directly or indirectly, improper payments or anything else of value to recipients in the public or private sector. We can be held liable for the corrupt or other illegal activities of our employees, agents, contractors and other collaborators, even if we do not explicitly authorize or have actual knowledge of such activities. Any violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm and other consequences.

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

Government product safety regulations are an important factor for our business. Historically, these regulations have imposed ever-more stringent safety regulations for vehicles and laser products. These safety regulations often require, or customers demand that, vehicles have more safety features per vehicle and more advanced safety products.

While we believe increasing automotive and laser safety standards will present a market opportunity for our products, 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 the industry recalls and safety risks of autonomous driving and ADAS, accidents involving our products, domestic and foreign political developments or considerations, and litigation relating to our products and our competitors' products. Changes in government regulations, especially in the autonomous driving and ADAS industries, 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.

Federal and local regulators impose more stringent compliance and reporting requirements in response to product recalls and safety issues in the automotive and laser industry. As cars that carry our sensors go into production, the obligations of complying with safety regulations and reporting requirements could increase and it could require increased resources and adversely affect our business.

Autonomous and ADAS features may be delayed in adoption by OEMs, and our business impacted, as additional emissions and safety requirements are imposed on vehicle manufacturers.

Vehicle regulators globally continue to consider new and enhanced emissions requirements, including electrification, to meet environmental and economic needs as well as pursue new safety standards to address emerging traffic risks. To control new vehicle prices, among other concerns, OEMs may need to dedicate technology and cost additions to new vehicle designs to meet these emissions and safety requirements and postpone the consumer cost pressures of new autonomous and ADAS features.

Our business may be adversely affected if we fail to comply with the regulatory requirements under the Federal Food, Drug, and Cosmetic or the Food and Drug Administration (the “FDA”).

As a lidar technology company, we are subject to the Electronic Product Radiation Control Provisions of the Federal Food, Drug, and Cosmetic Act. These requirements are enforced by the FDA. Electronic product radiation includes laser technology. Regulations governing these products are intended to protect the public from hazardous or unnecessary exposure. Manufacturers are required to certify in product labeling and reports to the FDA that their products comply with applicable performance standards as well as maintain manufacturing, testing, and distribution records for their products. Failure to comply with these requirements could result in enforcement action by the FDA, which could require us to cease distribution of our products, recall or remediate products already distributed to customers, or subject us to FDA enforcement.

Failures, or perceived failures, to comply with privacy, data protection, and information security requirements in the variety of jurisdictions in which we operate may adversely impact our business, and such legal requirements are evolving, uncertain and may require improvements in, or changes to, our policies and operations.

Our current and potential future operations and sales subject us to laws and regulations addressing privacy and the collection, use, storage, disclosure, transfer and protection of a variety of types of data. For example, the European Commission has adopted the General Data Protection Regulation and California recently enacted the California Consumer Privacy Act of 2018, both of which provide for potentially material penalties for non-compliance. These regimes may, among other things, impose data security requirements, disclosure requirements, and restrictions on data collection, uses, and sharing that may impact our operations and the development of our business. While, generally, we do not have access to, collect, store, process, or share information collected by our solutions unless our customers choose to proactively provide such information to us, our products may evolve both to address potential customer requirements or to add new features and functionality. Therefore, the full impact of these privacy regimes on our business is rapidly evolving across jurisdictions and remains uncertain at this time.

We may also be affected by cyber-attacks and other means of gaining unauthorized access to our products, systems, and data. For instance, cyber criminals or insiders may target us or third parties with which we have business relationships to obtain data, or in a manner that disrupts our operations or compromises our products or the systems into which our products are integrated.

We are assessing the continually evolving privacy and data security regimes and measures we believe are appropriate in response. Since these data security regimes are evolving, uncertain and complex, especially for a global business like ours, we may need to update or enhance our compliance measures as our products, markets and customer demands further develop, and these updates or enhancements may require implementation costs. In addition, we may not be able to monitor and react to all developments in a timely manner. The compliance measures we do adopt may prove ineffective. Any failure, or perceived failure, by us to comply with current and future regulatory or customer-driven privacy, data protection, and information security requirements, or to prevent or mitigate security breaches, cyber-attacks, or improper access to, use of, or disclosure of data, or any security issues or cyber-attacks affecting us, could result in significant liability, costs (including the costs of mitigation and recovery), and a material loss of revenue resulting from the adverse impact on our reputation and brand, loss of proprietary information and data, disruption to our business and relationships, and diminished ability to retain or attract customers and business partners. Such events may result in governmental enforcement actions and prosecutions, private litigation, fines and penalties or adverse publicity, and could cause customers and business partners to lose trust in us, which could have an adverse effect on our reputation and business.

Regulations related to conflict minerals may cause us to incur additional expenses and could limit the supply and increase the costs of certain metals used in the manufacturing of our products.

We are subject to the requirements under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, or the Dodd-Frank Act, that will require us to determine, disclose and report whether our products contain conflict minerals. The implementation of these requirements could adversely affect the sourcing, availability and pricing of the materials used in the manufacture of components used in our products. In addition, we will incur additional costs to comply with the disclosure requirements, including costs related to conducting diligence procedures to determine the sources of conflict minerals that may be used in or necessary to the production of our products and, if applicable, potential changes to products, processes or sources of supply as a consequence of such verification activities. It is also possible that our reputation may be adversely affected if we determine that certain of our products contain minerals not determined to be conflict-free or if we are unable to alter our products, processes or sources of supply to avoid use of such materials.

Risks Related to Our Intellectual Property

Despite the actions we are taking to defend and protect our intellectual property, we may not be able to adequately protect or enforce our intellectual property rights or prevent unauthorized parties from copying or reverse engineering our solutions. Our efforts to protect and enforce our intellectual property rights and prevent third parties from violating our rights may be costly.

The success of our products and our business depends in part on our ability to obtain patents and other intellectual property rights and maintain adequate legal protection for our products in the United States and other international jurisdictions. We rely on a combination of patent, service mark, trademark and trade secret laws, as well as confidentiality procedures and contractual restrictions, to establish and protect our proprietary rights, all of which provide only limited protection.

We cannot assure you that any patents will be issued with respect to our currently pending patent applications or that any trademarks will be registered with respect to our currently pending applications in a manner that gives us adequate defensive protection or competitive advantages, if at all, or that any patents issued to us or any trademarks registered by us will not be challenged, invalidated or circumvented. We have filed for patents and trademarks in the United States and in certain international jurisdictions, but such protections may not be available in all countries in which we operate or in which we seek to enforce our intellectual property rights, or may be difficult to enforce in practice. Our currently-issued patents and trademarks and any patents and trademarks that may be issued or registered, as applicable, in the future with respect to pending or future applications may not provide sufficiently broad protection or may not prove to be enforceable in actions against alleged infringers. We cannot be certain that the steps we have taken will prevent unauthorized use of our technology or the reverse engineering of our technology. Moreover, others may independently develop technologies that are competitive to us or infringe our intellectual property.

Protecting against the unauthorized use of our intellectual property, products and other proprietary rights is expensive and difficult, particularly internationally. We believe that our patents are foundational in the area of lidar products and intends to enforce the intellectual property portfolio we have built over the years. Unauthorized parties may attempt to copy or reverse engineer our lidar technology or certain aspects of our solutions that we consider proprietary. Litigation may be necessary in the future to enforce or defend our intellectual property rights, to prevent unauthorized parties from copying or reverse engineering our solutions, to determine the validity and scope of the proprietary rights of others or to block the importation of infringing products into the United States.

Any such litigation, whether initiated by us or a third party, could result in substantial costs and diversion of management resources, either of which could adversely affect our business, operating results and financial condition. Even if we obtain favorable outcomes in litigation, we may not be able to obtain adequate remedies, especially in the context of unauthorized parties copying or reverse engineering our solutions.

Further, many of our current and potential competitors have the ability to dedicate substantially greater resources to defending intellectual property infringement claims and to enforcing their intellectual property rights than we have. Attempts to enforce our rights against third parties could also provoke these third parties to assert their own intellectual property or other rights against us or result in a holding that invalidates or narrows the scope of our rights, in whole or in part. Effective patent, trademark, service mark, copyright and trade secret protection may not be available in every country in which our products are available and competitors based in other countries may sell infringing products in one or more markets. Failure to adequately protect our intellectual property rights could result in our competitors offering similar products, potentially resulting in the loss of some of our competitive advantage and a decrease in our revenue, which would adversely affect our business, operating results, financial condition and prospects.

Third-party claims that we are infringing intellectual property, whether successful or not, could subject us to costly and time-consuming litigation or expensive licenses, and our business could be adversely affected.

Although we hold key patents related to our products, a number of companies, both within and outside of the lidar industry, hold other patents covering aspects of lidar products. In addition to these patents, participants in this industry typically also protect their technology, especially embedded software, through copyrights and trade secrets. As a result, there is frequent litigation based on allegations of infringement, misappropriation or other violations of intellectual property rights. We have received, and in the future may receive, inquiries from other intellectual property holders and may become subject to claims that we infringe their intellectual property rights, particularly as we expand our presence in the market, expand to new use cases and face increasing competition. In addition, parties may claim that the names and branding of our products infringe their trademark rights in certain countries or territories. If such a claim were to prevail, we may have to change the names and branding of our products in the affected territories and we could incur other costs.

We currently have a number of agreements in effect pursuant to which we have agreed to defend, indemnify and hold harmless our customers, suppliers, and channel partners and other partners from damages and costs which may arise from the infringement by our products of third-party patents or other intellectual property rights. The scope of these indemnity

obligations varies, but may, in some instances, include indemnification for damages and expenses, including attorneys' fees. Our insurance may not cover all intellectual property infringement claims. A claim that our products infringe a third party's intellectual property rights, even if untrue, could adversely affect our relationships with our customers, may deter future customers from purchasing our products and could expose us to costly litigation and settlement expenses. Even if we are not a party to any litigation between a customer and a third party relating to infringement by our products, an adverse outcome in any such litigation could make it more difficult for us to defend our products against intellectual property infringement claims in any subsequent litigation in which we are a named party. Any of these results could adversely affect our brand and operating results.

Our defense of intellectual property rights claims brought against us or our customers, suppliers and channel partners, with or without merit, could be time-consuming, expensive to litigate or settle, divert management resources and attention and force us to acquire intellectual property rights and licenses, which may involve substantial royalty or other payments and may not be available on acceptable terms or at all. Further, a party making such a claim, if successful, could secure a judgment that requires us to pay substantial damages or obtain an injunction. An adverse determination also could invalidate our intellectual property rights and adversely affect our ability to offer our products to our customers and may require that we procure or develop substitute products that do not infringe, which could require significant effort and expense. Any of these events could adversely affect our business, operating results, financial condition and prospects.

Our intellectual property applications for registration may not issue or be registered, 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. We also cannot be certain whether the claims included in a patent application will ultimately be allowed in the applicable issued patent. 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 afford protection against competitors with similar technology. In addition, our competitors may design around our issued patents, which may adversely affect our business, prospects, financial condition and operating results.

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 subject to copyright, trademark, trade dress or service mark protection, 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 and third parties. However, we may fail to enter into the necessary agreements, 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 current or future manufacturing partners 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, advisors 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.

We also rely on physical and electronic security measures to protect our proprietary information, but we cannot provide assurance that these security measures will not be breached or provide adequate protection for our property. There is a risk that third parties may obtain and improperly utilize our proprietary information to our competitive disadvantage. We may not be able to detect or prevent the unauthorized use of such information or take appropriate and timely steps to enforce our intellectual property rights.

We may be subject to damages resulting from claims that we or our employees have wrongfully used or disclosed alleged trade secrets of our employees' former employers.

We may be subject to claims that we or our employees have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of an employee's former employers. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights

or personnel. A loss of key personnel or their work product could hamper or prevent our ability to commercialize our products, which could severely harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and demand on management resources.

Risks Related to Being a Public Company

We will incur increased costs as a result of operating as a public company, and our management will devote substantial time to new compliance initiatives.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company, and these expenses may increase even more after we are no longer an emerging growth company, as defined in Section 2(a) of the Securities Act. As a public company, we are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act and the Dodd-Frank Act, as well as rules adopted, and to be adopted, by the SEC and Nasdaq. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, we expect these rules and regulations to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly. The increased costs will increase our net loss. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be forced to accept reduced policy limits or incur substantially higher costs to maintain the same or similar coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our Board, our Board committees or as executive officers.

Our management team has limited experience managing a public company.

Most of the members of our management team have limited experience managing a publicly traded company, interacting with public company investors, and complying with the increasingly complex laws pertaining to public companies. Additionally, some members of our management team were recently hired. Our management team may not successfully or efficiently manage their new roles and responsibilities. Our transition to being a public company subjects us to significant regulatory oversight and 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.

Unanticipated changes in effective tax rates or adverse outcomes resulting from examination of our income or other tax returns could adversely affect our financial condition and results of operations.

We will be subject to income taxes in the United States and other jurisdictions, and our tax liabilities will be subject to the allocation of expenses in differing jurisdictions. Our future effective tax rates could be subject to volatility or adversely affected by a number of factors, including:

- changes in the valuation of our deferred tax assets and liabilities;
- expected timing and amount of the release of any tax valuation allowances;
- tax effects of stock-based compensation;
- costs related to intercompany restructurings;
- changes in tax laws, regulations or interpretations thereof; or
- lower than anticipated future earnings in jurisdictions where we have lower statutory tax rates and higher than anticipated future earnings in jurisdictions where we have higher statutory tax rates.

In addition, we may be subject to audits of our income, sales and other transaction taxes by taxing authorities. Outcomes from these audits could have an adverse effect on our financial condition and results of operations.

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

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

Risks Related to Ownership of Our Shares

Our Second Amended and Restated Certificate of Incorporation provides, subject to limited exceptions, that the Court of Chancery of the State of Delaware (the “Chancery Court”) will be the sole and exclusive forum for certain stockholder litigation matters, which could limit our stockholders’ ability to obtain a chosen judicial forum for disputes with us or our directors, officers, employees or stockholders.

Our Second Amended and Restated Certificate of Incorporation requires, to the fullest extent permitted by law, that derivative actions brought in our name, actions against directors, officers and employees for breach of fiduciary duty and other similar actions may be brought in the Chancery Court or, if that court lacks subject matter jurisdiction, another federal or state court situated in the State of Delaware. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and consented to the forum provisions in our Second Amended and Restated Certificate of Incorporation. In addition, our Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws provide that the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action under the Securities Act and the Exchange Act.

In March 2020, the Delaware Supreme Court issued a decision in *Salzburg et al. v. Sciabacucchi* which found that an exclusive forum provision providing for claims under the Securities Act to be brought in federal court is facially valid under Delaware law. It is unclear whether this decision will be appealed, or what the final outcome of this case will be. We intend to enforce this provision, but we do not know whether courts in other jurisdictions will agree with this decision or enforce it.

This choice of forum provision may limit a stockholder’s ability to bring a claim in a judicial forum of its choosing for disputes with us or any of our directors, officers, other employees or stockholders, which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provision contained in our Second Amended and Restated Certificate of Incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, operating results and financial condition.

Our charter documents and Delaware law could prevent a takeover that stockholders consider favorable and could also reduce the market price of our stock.

Our Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws contain provisions that could delay or prevent a change in control. These provisions could also make it more difficult for stockholders to elect directors and take other corporate actions. These provisions include:

- providing for a classified board of directors with staggered, three-year terms;
- authorizing our Board to issue Preferred Stock with voting or other rights or preferences that could discourage a takeover attempt or delay changes in control;
- prohibiting cumulative voting in the election of directors;
- providing that vacancies on our Board may be filled only by a majority of directors then in office, even though less than a quorum;
- prohibiting the adoption, amendment or repeal of the Amended and Restated Bylaws or the repeal of the provisions of our Second Amended and Restated Certificate of Incorporation regarding the election and removal of directors without the required approval of at least two-thirds of the shares entitled to vote at an election of directors;
- prohibiting stockholder action by written consent;
- limiting the persons who may call special meetings of stockholders; and
- requiring advance notification of stockholder nominations and proposals.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our Board, which is responsible for appointing the members of our management. In addition, we are governed by the provisions of Section 203 of the Delaware General Corporation Law (the “DGCL”). These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a certain period of time without the consent of our Board.

These and other provisions in our Second Amended and Restated Certificate of Incorporation and our Amended and Restated Bylaws and under Delaware law could discourage potential takeover attempts, reduce the price investors might be willing to pay in the future for shares of Class A common stock and result in the market price of Class A common stock being lower than it would be without these provisions.

Claims for indemnification by our directors and officers may reduce our available funds to satisfy successful third-party claims against us and may reduce the amount of money available to us.

Our Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws provide that we will indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law.

In addition, as permitted by Section 145 of the DGCL, the Amended and Restated Bylaws and the indemnification agreements that we have entered into with our directors and officers provide that:

- we will indemnify our directors and officers for serving us in those capacities or for serving other business enterprises at our request, to the fullest extent permitted by Delaware law. Delaware law provides that a corporation may indemnify such person if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the registrant and, with respect to any criminal proceeding, had no reasonable cause to believe such person's conduct was unlawful;
- we may, in our discretion, indemnify employees and agents in those circumstances where indemnification is permitted by applicable law;
- we will be required to advance expenses, as incurred, to our directors and officers in connection with defending a proceeding, except that such directors or officers shall undertake to repay such advances if we are ultimately determined that such person is not entitled to indemnification;
- we will not be obligated pursuant to our Amended and Restated Bylaws to indemnify a person with respect to proceedings initiated by that person against us or our other indemnitees, except with respect to proceedings authorized by our Board or brought to enforce a right to indemnification;
- the rights conferred in the Amended and Restated Bylaws are not exclusive, and we are authorized to enter into indemnification agreements with our directors, officers, employees and agents and to obtain insurance to indemnify such persons; and
- we may not retroactively amend our Amended and Restated Bylaw provisions to reduce our indemnification obligations to directors, officers, employees and agents.

The dual class structure of our Common Stock has the effect of concentrating voting control with Austin Russell, our Founder, President and Chief Executive Officer. This will limit or preclude your ability to influence corporate matters, including the outcome of important transactions, including a change in control.

Shares of our Class B common stock, \$0.0001 par value per share ("Class B common stock"), have 10 votes per share, while shares of Class A common stock have one vote per share. Austin Russell, our Founder, President and Chief Executive Officer, holds all of the issued and outstanding shares of Class B common stock. Accordingly, Mr. Russell held approximately 82.8% of the voting power of our outstanding capital stock as of December 31, 2020 and will be able to control matters submitted to our stockholders for approval, including the election of directors, amendments of our organizational documents and any merger, consolidation, sale of all or substantially all of our assets or other major corporate transactions. Mr. Russell may have interests that differ from yours and may vote in a way with which you disagree and which may be adverse to your interests. This concentrated control may have the effect of delaying, preventing or deterring a change in control of us, could deprive our stockholders of an opportunity to receive a premium for their capital stock as part of a sale of us, and might ultimately affect the market price of shares of Class A common stock.

In connection with the execution of the Merger Agreement, Austin Russell entered into a voting agreement, dated as of August 24, 2020, with Gores (the "Voting Agreement"). Under the Voting Agreement, Mr. Russell agreed that, following the consummation of the Business Combination, solely if he is involuntarily terminated from his position as the Chief Executive Officer of the Company and as a result of his conviction of, or pleading guilty or nolo contendere to, a felony that has a material negative impact on the Company, at any meeting of the stockholders of the Company at which directors are to be elected following the consummation of the Business Combination, Mr. Russell, or any of his permitted successors or assigns, will not vote more than 10% of the Class B common stock he or they beneficially own in any director election.

We are a controlled company within the meaning of The Nasdaq Stock Market listing standards, and, as a result, qualify for exemptions from certain corporate governance requirements that provide protection to stockholders of other companies. To the extent we utilize any of these exemptions, you will not have the same protections afforded to stockholders of companies that are subject to such requirements. We do not currently intend to rely on the exemptions afforded to controlled companies at this time.

So long as more than 50% of the voting power for the election of our directors is held by an individual, a group or another company, we will qualify as a "controlled company" under The Nasdaq Stock Market listing requirements. Austin Russell controls a majority of the voting power of our outstanding capital stock. As a result, we are a "controlled company"

under the Nasdaq Stock Market rules. As a controlled company, we are exempt from certain Nasdaq corporate governance requirements, including those that would otherwise require our Board to have a majority of independent directors and require that we establish a compensation committee comprised entirely of independent directors, or otherwise ensure that the compensation of our executive officers and nominees for directors are determined or recommended to our Board by the independent members of our Board. While we do not currently intend to rely on any of these exemptions, we will be entitled to do so for as long as we are considered a “controlled company,” and to the extent we rely on one or more of these exemptions, holders of our capital stock will not have the same protections afforded to stockholders of companies that are subject to all of Nasdaq’s corporate governance requirements.

Our dual class structure may depress the trading price of the Class A common stock.

We cannot predict whether our dual class structure will result in a lower or more volatile market price of the 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 share structures in certain of their indexes. S&P Dow Jones and FTSE Russell have announced changes to their eligibility criteria for inclusion of shares of public companies on certain indices, including the S&P 500, pursuant to which companies with multiple classes of shares of common stock are excluded. In addition, several stockholder advisory firms have announced their opposition to the use of multiple class structures. As a result, the dual class structure of our Common Stock may cause stockholder advisory firms to publish negative commentary about our corporate governance practices or otherwise seek to cause us to change our capital structure. Any such exclusion from indices or any actions or publications by stockholder advisory firms critical of our corporate governance practices or capital structure could adversely affect the value and trading market of the Class A common stock.

Sales of shares of Class A common stock in the public market or the perception that these sales or conversions might occur may depress the market price of Class A common stock and could impair our ability to raise capital through the sale of additional equity securities. It is difficult to predict the effect that such sales or conversions may have on the prevailing market price of the Class A common stock.

We do not intend to pay dividends for the foreseeable future.

We have never declared or paid any cash dividends on our capital stock and do not intend to pay any cash dividends in the foreseeable future. We expect to retain future earnings, if any, to fund the development and growth of our business. Any future determination to pay dividends on our capital stock will be at the discretion of our Board. Accordingly, investors must rely on sales of our Class A common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

The market price and trading volume of Class A common stock may be volatile and could decline significantly.

The stock markets, including Nasdaq on which we list our shares of Class A common stock, have from time to time experienced significant price and volume fluctuations. Even if an active, liquid and orderly trading market develops and is sustained for the Class A common stock, the market price of Class A common stock may be volatile and could decline significantly. In addition, the trading volume in Class A common stock may fluctuate and cause significant price variations to occur. If the market price of Class A common stock declines significantly, you may be unable to resell your shares at an attractive price (or at all). We cannot assure you that the market price of Class A common stock will not fluctuate widely or decline significantly in the future in response to a number of factors, including, among others, the following:

- the realization of any of the risk factors presented in this Annual Report;
- actual or anticipated differences in our estimates, or in the estimates of analysts, for our revenues, Adjusted EBITDA, results of operations, level of indebtedness, liquidity or financial condition;
- additions and departures of key personnel;
- failure to comply with the requirements of Nasdaq;
- failure to comply with the Sarbanes-Oxley Act or other laws or regulations;
- future issuances, sales, resales or repurchases or anticipated issuances, sales, resales or repurchases, of our securities;
- publication of research reports about us;
- the performance and market valuations of other similar companies;
- commencement of, or involvement in, litigation involving us;
- broad disruptions in the financial markets, including sudden disruptions in the credit markets;

- speculation in the press or investment community;
- actual, potential or perceived control, accounting or reporting problems;
- changes in accounting principles, policies and guidelines; and
- other events or factors, including those resulting from infectious diseases, health epidemics and pandemics (including the ongoing COVID-19 public health emergency), natural disasters, war, acts of terrorism or responses to these events.

In the past, securities class-action litigation has often been instituted against companies following periods of volatility in the market price of their shares. This type of litigation could result in substantial costs and divert our management's attention and resources, which could have a material adverse effect on us.

The exercise of warrants for our Class A common stock would increase the number of shares eligible for future resale in the public market and result in dilution to our stockholders.

As of December 31, 2020, we had warrants to purchase an aggregate of 24.1 million shares of our Class A common stock outstanding. On February 3, 2021, we announced that holders of our 13,333,309 outstanding public warrants to purchase shares of our Class A common stock (the "Public Warrants"), will have until March 5, 2021 to exercise their Public Warrants. The Public Warrants were exercisable for an aggregate of 13,333,309 shares of Class A common stock at a price of \$11.50 per share. On March 10, 2021, we changed the previously announced redemption date of March 5, 2021 to a new redemption date of March 16, 2021 for the redemption of our outstanding public warrants. As of March 16, 2021, 3,589,645 Private Warrants and 13,128,671 Public Warrants were exercised. To the extent remaining warrants are exercised, additional shares of Class A common stock will be issued, which will result in dilution to the then-existing holders of Class A common stock and increase the number of shares eligible for resale in the public market. Sales of substantial numbers of such shares in the public market or the fact that such warrants may be exercised could adversely affect the market price of our Class A common stock.

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

The trading market for our Class A common stock will be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market, or our competitors. Securities and industry analysts do not currently, and may never, publish research on us. If no securities or industry analysts commence coverage of us, our stock price and trading volume would likely be negatively impacted. If any of the analysts who may cover us change their recommendation regarding our stock adversely, or provide more favorable relative recommendations about our competitors, the price of our Class A common stock would likely decline. If any analyst who may cover us were to cease coverage of us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline.

Future issuances of debt securities and equity securities may adversely affect us, including the market price of the Class A common stock and may be dilutive to existing stockholders.

In the future, we may incur debt or issue equity ranking senior to the Class A common stock. Those securities will generally have priority upon liquidation. Such securities also may be governed by an indenture or other instrument containing covenants restricting its operating flexibility. Additionally, any convertible or exchangeable securities that we issue in the future may have rights, preferences and privileges more favorable than those of the Class A common stock. Because our decision to issue debt or equity in the future will depend on market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing, nature or success of our future capital raising efforts. As a result, future capital raising efforts may reduce the market price of Class A common stock and be dilutive to existing stockholders.

Our failure to meet the continued listing requirements of Nasdaq could result in a delisting of our securities.

If we fail to satisfy the continued listing requirements of Nasdaq such as the corporate governance requirements or the minimum closing bid price requirement, Nasdaq may take steps to delist our securities. Such a delisting would likely have a negative effect on the price of the securities and would impair your ability to sell or purchase the securities when you wish to do so. In the event of a delisting, we can provide no assurance that any action taken by us to restore compliance with listing requirements would allow our securities to become listed again, stabilize the market price or improve the liquidity of our securities, prevent our securities from dropping below the Nasdaq minimum bid price requirement or prevent future non-compliance with Nasdaq's listing requirements. Additionally, if our securities are not listed on, or become delisted from, Nasdaq for any reason, and are quoted on the OTC Bulletin Board, an inter-dealer automated quotation system for equity securities that is not a national securities exchange, the liquidity and price of our securities may be more limited than if we were

quoted or listed on Nasdaq or another national securities exchange. You may be unable to sell your securities unless a market can be established or sustained.

We are an emerging growth company as well as a smaller reporting company within the meaning of the Securities Act, and if we take advantage of certain exemptions from disclosure requirements available to emerging growth companies or smaller reporting companies, this could make our securities less attractive to investors and may make it more difficult to compare our performance with other public companies.

We are an “emerging growth company” within the meaning of the Securities Act, as modified by the JOBS Act, and may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies for as long as we continue to be an emerging growth company, including, but not limited to, 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 nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. As a result, our stockholders may not have access to certain information they may deem important. We will remain an emerging growth company until the earliest of (i) the last day of the fiscal year in which the market value of Common Stock that is held by non-affiliates exceeds \$700 million as of the end of that year’s second fiscal quarter, (ii) the last day of the fiscal year in which we have total annual gross revenue of \$1.07 billion or more during such fiscal year (as indexed for inflation), (iii) the date on which we have issued more than \$1 billion in non-convertible debt in the prior three-year period or (iv) December 31, 2024. Investors may find our securities less attractive because we will rely on these exemptions. If some investors find our securities less attractive as a result of our reliance on these exemptions, the trading prices of our securities may be lower than they otherwise would be, there may be a less active trading market for our securities and the trading prices of our securities may be more volatile.

In addition, Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the exemption from complying with new or revised accounting standards provided in Section 7(a)(2)(B) of the Securities Act as long as we are an emerging growth company. An emerging growth company can therefore delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected not to opt out of such extended transition period and, therefore, we may not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. This may make comparison of our financial statements with another public company which is neither an emerging growth company nor an emerging growth company which has opted out of using the extended transition period difficult or impossible because of the potential differences in accountant standards used.

Additionally, we are a “smaller reporting company” as defined in Item 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We will remain a smaller reporting company until the last day of the fiscal year in which (i) the market value of Common Stock held by non-affiliates exceeds \$250 million as of the end of that year’s second fiscal quarter, or (ii) our annual revenues exceeded \$100 million during such completed fiscal year and the market value of Common Stock held by non-affiliates exceeds \$700 million as of the end of that year’s second fiscal quarter. To the extent we take advantage of such reduced disclosure obligations, it may also make comparison of our financial statements with other public companies difficult or impossible.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

None.

ITEM 2. PROPERTIES.

Our corporate headquarters is located in Orlando, Florida, where we lease a complex of three buildings with 120,716 square feet pursuant to leases that expire between October 2022 and September 2024. The Orlando facilities contain manufacturing, engineering, research and development, and administrative functions. We also lease 36,419 square feet of office and engineering space in two facilities in Palo Alto, California and 12,900 square feet of office and engineering space in a facility in Colorado Springs, Colorado. The Company believes its existing facilities are adequate for its current requirements.

ITEM 3. LEGAL PROCEEDINGS.

From time to time, we may become involved in actions, claims, suits, and other legal proceedings arising in the ordinary course of our business, including assertions by third parties relating to intellectual property infringement, breaches of contract or warranties or employment-related matters. We are not currently a party to any actions, claims, suits or other legal proceedings the outcome of which, if determined adversely to us, would individually or in the aggregate have a material adverse effect on our business, financial condition, and results of operations.

ITEM 4. MINE SAFETY DISCLOSURES.

Not applicable.

PART II

ITEM 5. MARKET FOR THE REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our Class A common stock trade on Nasdaq Global Select Market under the symbol “LAZR,” since December 3, 2020. Prior to that date, our common stock traded under the symbol “GMHI,” since March 25, 2019.

Holders

As of March 23, 2021, there were 422 holders of record of our Class A common stock. The number of record holders is based upon the actual number of holders registered on our books at such date and does not include holders of shares in street name or persons, partnerships, associations, corporations or other entities identified in security position listings maintained by depository trust companies.

Dividend Policy

We have never declared or paid any cash dividends on our common stock. We currently intend to retain any future earnings and do not expect to pay any dividends in the foreseeable future. Any future determination to declare cash dividends will be made at the discretion of our board of directors, subject to applicable laws, and will depend on a number of factors, including our financial condition, results of operations, capital requirements, contractual restrictions, including under any future loan facilities, general business conditions and other factors that our board of directors may deem relevant.

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

ITEM 6. SELECTED FINANCIAL DATA.

Information required by this Item 6. is not included as we are electing to exclude this information pursuant to Regulation S-K Item 301, as amended.

For financial data and discussion of our results of operations and financial position, refer to Part II, Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and Part II, Item 8. “Financial Statements and Supplementary Data” contained in this Annual Report on Form 10-K.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

The following discussion and analysis provides information that Luminar's management believes is relevant to an assessment and understanding of Luminar's consolidated results of operations and financial condition. The discussion should be read together with "Selected Historical Consolidated Financial and Operating Data of Luminar" and the historical audited annual consolidated financial statements as of and for the years ended December 31, 2020 and 2019, and the related notes thereto, included elsewhere in this Annual Report on Form 10-K. This discussion may contain forward-looking statements based upon Luminar's current expectations, estimates and projections that involve risks and uncertainties. Actual results could differ materially from those anticipated in these forward-looking statements due to, among other considerations, the matters discussed under "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements." Unless the context otherwise requires, all references in this subsection to "Luminar" refer to the business of Luminar Technologies, Inc., a Delaware corporation, and its subsidiaries prior to the consummation of the Business Combination, which will be the business of the Post-Combination Company and its subsidiaries following the consummation of the Business Combination.

Overview

Our vision is to make autonomous transportation safe and ubiquitous. As a global leader in lidar autonomous driving technology, we are enabling the world's first autonomous solutions for automotive series production in passenger cars and commercial trucks.

Founded in 2012 by President and Chief Executive Officer Austin Russell, we built a new type of lidar from the chip-level up, with technological breakthroughs across all core components. As a result, we have created what we believe is the only lidar sensor that meets the demanding performance, safety, and cost requirements for Level 3 through Level 5 autonomous vehicles in production, bypassing the traditional limitations of legacy lidar technology, while also enabling Level 0 through Level 2 (Advanced Driving Assistance Systems ("ADAS") and/or Luminar Proactive Safety) with our Proactive Safety solution. Integrating this advanced hardware with our custom developed software stack enables a turn-key autonomous solution to accelerate widespread adoption across automakers at series production scale.

Our lidar hardware and software products help set the standard for safety in the industry, and are designed to enable accurate and reliable detections of some of the most challenging "edge cases" that autonomous vehicles can encounter on a regular basis. This is achieved by advancing existing lidar range and resolution to new levels, ensuring hard-to-see objects like a tire on the road ahead or a child that runs into the street are not missed, as well as our software to interpret the data and inform autonomous and assisted driving decisions.

Our full-stack hardware and software autonomy solution for cars and trucks as well as our standalone lidar technology offerings have made us one of the leading partners for the world's top OEMs. We are currently partnering with eight of the top-ten global automakers, by sales, and have the goal of being the first lidar company to produce highway self-driving and next-generation Proactive Safety systems for series production. With approximately 400 employees across eight global locations, we have scaled to over 50 partners in the last two years, including the first industry-wide automotive series production award in the autonomous space, awarded by Volvo Cars in May 2020, with series production expected to commence in 2022. We subsequently entered into a strategic partnership with Daimler Truck AG in October 2020 and with Mobileye Vision Technologies Ltd ("Mobileye") in November 2020.

The automotive industry is among the largest in the world and features an estimated total addressable market opportunity ("TAM") for ADAS and autonomous solutions (Level 0 through Level 5) expected to exceed \$150 billion by 2030. Our model to capture this opportunity is to directly partner with top established automotive companies in order to power their autonomous future. Correspondingly, we have successfully established partnerships with over 50 companies across three primary application verticals: passenger vehicles, commercial trucks, and robo-taxis. We have multiple levers for sustained growth, including significant industry tailwinds, a strong five-year product roadmap in production and development, a robust series production and standardization pipeline with anticipated long-term contracts and substantial new, adjacent market opportunities. Powered by breakthrough technology, our solutions are ready to enable autonomous vehicles to be safe and ubiquitous.

Business Combination and Public Company Costs

On August 24, 2020, we entered into certain Agreement and Plan of Merger (the "Merger Agreement") with Gores Metropoulos, Inc. ("Gores"). On December 2, 2020 (the "Closing Date"), the previously announced business combination was consummated. Upon the consummation of the business combination, First Merger Sub, a newly formed subsidiary of Gores, merged with and into Luminar, with Luminar surviving (the "First Merger"). Immediately following the consummation of the First Merger and as part of the same overall transaction as the First Merger, Luminar, as the surviving corporation, merged with and into Second Merger Sub, a newly formed subsidiary of Gores, with Second Merger Sub continuing as the surviving entity (the "Second Merger" and, in combination with the First Merger and the other transactions contemplated by the Merger Agreement, the "Business Combination"). Luminar is deemed the accounting predecessor and the post-combination Company

is the successor SEC registrant, which means that Luminar's financial statements for previous periods will be disclosed in the registrant's future periodic reports filed with the SEC.

The Business Combination was accounted for as a reverse recapitalization. Under this method of accounting, Gores was treated as the acquired company for financial statement reporting purposes. The most significant change in the post-combination Company's reported financial position and results was an increase in cash of \$380.6 million. We paid \$17.2 million in transaction costs relating to the merger with Gores. We recorded a liability related to the Public and Private Warrants of \$102.4 million in the consolidated balance sheet on Closing Date.

As a consequence of the Business Combination, we became the successor to an SEC-registered and Nasdaq-listed company which requires us to hire additional personnel and implement procedures and processes to address public company regulatory requirements and customary practices. We expect to incur additional annual expenses as a public company for, among other things, directors' and officers' liability insurance, director fees and additional internal and external accounting and legal and administrative resources, including increased audit and legal fees.

COVID-19 Impact

The coronavirus (COVID-19) pandemic has adversely affected some of our customers' business operations, which has impacted our revenue in 2020 as well as resulted in the impairment of inventory. The extent of the continued impact of the coronavirus pandemic on our operational and financial performance will depend on various future developments, including the duration and spread of the outbreak and impact on our customers, suppliers, and employees, all of which is uncertain at this time. We expect the coronavirus (COVID-19) pandemic to adversely impact our revenue and results of operations, but we are unable to predict at this time the size and duration of this adverse impact. During this pandemic, we are observing a larger trend of automakers shifting course in "make vs. buy" decisions as it relates to autonomous solutions and software systems. As cash flows tighten, more automakers are looking to limit the potentially massive investments required to develop autonomous software and systems for which they do not necessarily have substantial expertise. As a result, several are more open to and accepting of a model to incorporate full-stack hardware and software solutions from suppliers, which for autonomy is particularly relevant for us. For more information on our operations and risks related to health epidemics, including the COVID-19 pandemic, see Item 1A. Risk Factors in this Form 10-K.

Key Factors Affecting Luminar's Operating Results

We believe that our future performance and success depends to a substantial extent on our ability to capitalize on the following opportunities, which in turn is subject to significant risks and challenges, including those discussed in Item 1A. Risk Factors in this Form 10-K.

Technologically Advanced Product Portfolio

Our Iris sensing and software platform was architected to exceed all performance requirements of OEMs needed to safely unlock Level 0 through Level 5 autonomous driving, with an initial focus on Level 3/4 highway autonomy. Currently commercialized vehicle autonomy technology only incorporates basic Level 0, 1 and 2 ADAS, or partial automation made possible with cameras and radar, and enhanced by lidar. Iris is expected to become a commercially viable long-range lidar for automotive applications in all levels of vehicle autonomy, including full highway autonomy and urban and suburban autonomous driving. Our lidar is built from the chip-level up with a differentiated lidar architecture and a full stack hardware and software autonomy solution for cars and trucks, protected by 93 issued and 84 pending or allowed patents as of February 2021. This integration of the lidar technology allows for quality control throughout the development phase of production and continued innovation at each component level while maintaining the flexibility necessary to position us as the lidar partner of choice for the world's top OEMs. Building certain critical components in-house or through exclusive supplier arrangements rather than using off-the-shelf commodity components more commonly used in Level 0, 1 and 2 lidar technology provides for protectable and sustainable technology differentiation from lidar competitors or alternative technologies not yet pushing into Level 3 through Level 5 technology solutions. We anticipate driving deeper integration with OEM partners through our development of best-in-class perception software. This integration will generate greater content value which will ultimately lead to more widespread adoption of autonomous programs.

Future success will be dependent on our ability to continue to execute against our product roadmap, which includes milestones to put Iris into series production.

While we believe it is best positioned to address advanced autonomous solutions in series production for consumer vehicles and commercial trucks, potential competition may exist for the ADAS market from other lower-performance providers of lidar technology, which could impact sales of products. We expect to tap into the ADAS market and differentiate ourselves from camera, radar, and lower performing lidar solutions by providing the same high-performance lidar hardware used for autonomy, but paired with proactive safety software to provide the necessary faster and longer distance high confidence

detections of objects. This can enable an effective automated emergency braking response and proactive collision avoidance at all speeds, with the goal of ultimately preventing the majority of forward collisions.

Commercialization and Partnerships

We have over 50 partner engagements, including with eight of the top-ten global automakers, by sales, and most major autonomous trucking and robo-taxi programs currently in development, reflecting the significant commercial interest in lidar. Currently, we have entered into a contract with Volvo to integrate our lidar hardware and software for autonomy in Volvo's SPA2 vehicle platform. In October 2020, we entered into a strategic partnership with Daimler Truck AG related to Daimler's production program to deliver autonomous commercial trucks globally and in November 2020, we entered into an agreement with Intel's Mobileye to integrate our product into Mobileye's Autonomous Vehicle (AV) Series solution.

Our ability to achieve profitability is dependent upon progression of existing partnerships and production programs, in order to meet required volumes and economies of scale to cover overhead. Delays of autonomy programs from OEMs that we are currently or will be working with could result in us being unable to achieve our revenue targets and profitability in the time frame we anticipate. Having a lead series production program substantially de-risks future OEM autonomy programs and better enables our technology to successfully realize economies of scale that have yet to be achieved in the industry. We also have a significant number of advanced development partners, in which we see an opportunity to convert into series production awards through 2022. The successful progression of such customers to series production is expected to result in multi-year series production programs that scale each year after start of production. Should our assumptions about the commercialization of our lidar platform prove overly optimistic or if we are unable to develop, obtain or progress partnerships into series production, we may fail to generate operating cash flow and may incur delays in our ability to achieve profitability. This may also lead us to make changes in our commercialization plans, which could result in unanticipated production delays or cost overruns, which could in turn adversely impact margins and cash flows.

We believe that our business model will also considerably reduce the execution risk typically associated with the scaling of lidar manufacturing. Our 50-plus partner engagements are expected to provide us with a robust series production and standardization pipeline. We employ an advanced manufacturing team in Orlando, Florida, that develops blueprints for how to successfully manufacture our products to scale. Prior to series production, we anticipate efficiently scaling by transferring our internally developed sensor manufacturing blueprint and final sensor assembly for series production to an International Automotive Task Force-certified plant in Mexico in order to reduce costs and risk. This strategy leverages the best of insource advanced manufacturing and outsource series production manufacturing. The realization of reduced overhead and lower unit pricing utilizing a contract manufacturing partner is still subject to successfully selecting and transitioning the processes and procedures to manufacture our sensors at commercial production levels.

Market Trends and Uncertainties

We anticipate robust demand for our Iris platform. We estimate the TAM for ADAS and autonomous driving technology, to grow from less than \$5 billion currently to \$150 billion or more in 2030. Further, we have multiple levers for sustained growth and adjacent market opportunities, with a core strategy to focus on attractive markets with significant growth and profitability potential. Specifically, the markets of focus include passenger cars, commercial trucks, and robo-taxi fleets. Each such market is potentially a significant global opportunity, and these markets have historically been underserved by inferior technology or not served at all. We are positioned as the only company with deeply integrated hardware and software products that currently meet the OEM specification requirements for safe Level 0 to Level 5 autonomy, which constitutes a significant portion of the TAM.

Changes in suppliers of products embedded in development programs as well as series production platforms that meet the OEM requirements are not common in the automotive industry. Our future growth and financial performance is highly dependent on integrating into customer development programs and vehicle platforms with a lead time of two to three years before series production. We see our existing partner base as a substantial competitive advantage, as we can leverage the same solution expected to be produced for Volvo in 2022 and similar production arrangements with other partners, such as Daimler Trucks and Mobileye.

Our most immediate market focus is on passenger and commercial vehicle autonomy on highways and ADAS applications. We believe there is significant room for improvement with regard to standard ADAS and crash avoidance. ADAS volumes are primarily driven by both the European and North American markets which have increasingly stringent safety regulations and consumer preference for safety. We are well positioned to capitalize on the increased ADAS demand in response to these increased safety regulations as our proactive safety software could increase the current reported collision avoidance rates by up to seven times. Although increasing automotive performance requirements may generate higher demand, we may not be able to take advantage of demand if we are unable to anticipate regulatory changes and adapt quickly enough to meet new regulatory standards or requirements. Market acceptance of active safety technology depends upon many factors,

including driver preference and perception, safety performance, cost and regulatory requirements related to such technologies. These factors may impact the market acceptance of ADAS and autonomous driving technologies.

We view international expansion as an important element of the strategy to profitability and continue to position ourselves in geographic markets that will serve as important sources of future growth. With an existing presence in the United States, Israel, Sweden, Japan and Germany through internal resources and partnerships, we anticipate robust demand for our Iris platform. We intend to expand our presence in these regions as well as into other countries in the coming years.

Expanded global reach may expose us to additional foreign currency risk, legal obligations and potentially additional operational costs, risks and challenges that may impact the ability to meet projected sales volumes and margins.

Margin Improvements

We believe we have the opportunity to establish high margin unit economics when operating at scale. Our future performance will depend on our ability to deliver on these economies of scale with lower product costs to enable widespread industry adoption. We believe our business model is positioned for scalability due to the ability to leverage the same product platform across our partner base, reduced labor and other costs from contract manufacturing, and operating leverage from a predominantly fixed cost base and overhead structure. Further, by utilizing contract manufacturing for the assembly of our product, we can leverage available capacity and greatly reduce our upfront capital investment. Exponential improvements from scale are expected to decrease the core Iris bill of materials per unit and assuming achievement of the reduction of bill of materials to the targeted threshold per unit, we anticipate having positive operating cash flow and operating income around 2024. Achievement of cash flow generation is dependent on order volume, which will dictate pricing and margin. Achieving this scale is further dependent on converting partnerships into series production contracts.

Starting in 2023, substantially all of our revenue is expected to be generated from series production programs via three solutions offered to customers: (1) a lidar hardware-only solution, (2) an integrated lidar hardware and software solution for proactive safety systems, and (3) an integrated hardware and software solution for highway autonomy systems. With higher margin expected on software solutions, changes to the relative share of overall revenue from each of the solutions may impact our overall margin and profitability.

While we expect to achieve and maintain high margins on hardware and software sold for highway autonomy applications, emergence of competition in advanced assisted driving sensing and software technologies may negatively impact pricing, margins, and market share. Although pricing pressure and lower margins are typically associated with commodity hardware products in the automotive industry, we believe our unique technology provides a compelling value proposition for favorable margins and unit economics in the industry. We expect our gross margin to improve in the near term as fixed manufacturing, supplier tooling, and other overhead costs are absorbed over larger production volumes and other economies of scale are achieved. If we do not generate the margins we expect upon commercialization of our lidar platform, we may be required to raise additional debt or equity capital, which may not be available or may only be available on terms that are onerous and adverse to our existing stockholders.

Basis of Presentation

We currently conduct our business through two operating segments: (i) Autonomy Solutions and (ii) Component Sales.

Components of Results of Operations

Revenue

Our revenue producing activities can be viewed as two separate and distinct operating segments: (i) Autonomy Solutions and (ii) Component Sales.

The Autonomy Solutions segment is engaged in design, manufacturing and sale of lidar sensors as well as related perception and autonomy enabling software solutions catering mainly to the original equipment manufacturers in the automobile, commercial vehicle, robo-taxi and adjacent industries. The Autonomy Solutions segment has historically entered into Strategic Partner Programs (“SPP”) with leading automotive partners and other customers. An SPP is a contract under which we deliver our product to a specified customer at a fixed price under customary terms and conditions, usually in collaboration on an autonomous vehicle development program. With many major automakers having signed SPP contracts, we are shifting our focus from entering into SPPs with new partners to converting existing SPPs and relationships with our partners into series production programs. Once Volvo’s series production is launched, the primary sources of revenue are expected to shift from prototype sales and services revenue to sales of lidar hardware, perception software and autonomy enabling software for series production vehicles.

The Component Sales segment provides designing, testing and consulting services for non-standard integrated circuits to U.S. customers, including government agencies and defense contractors generally for purposes unrelated to autonomous vehicles. Fixed fee arrangements are satisfied over time and utilize the input method based on costs incurred. Accordingly,

revenue is recognized on a percentage of completion basis. Contracts are also structured as time and materials and billed at cost of time incurred plus a markup. We anticipate more closely aligning and integrating our Component Sales segment operations with portions of our Autonomy Solutions segment, specifically in relation to lidar solutions for the defense and other adjacent markets.

Cost of sales and gross profit (loss)

Cost of sales of the Autonomy Solutions segment includes the fixed and variable manufacturing cost of our lidar sensors, which primarily consists of personnel-related costs (including certain engineering personnel), including stock-based compensation, directly associated with our manufacturing organization, and material purchases from third-party contract manufacturers and suppliers. Cost of sales also includes depreciation and amortization for manufacturing fixed assets or equipment, cost of component inventory, product testing costs, costs of providing services, an allocated portion of overhead, facility and IT costs, excess and obsolete inventory and shipping costs.

Cost of sales of the Component Sales segment includes the cost of providing products and services as well as an allocated portion of overhead, facility and IT costs.

Gross profit (loss) equals revenue less cost of sales. Our cost of sales is expected to increase as our revenue continues to grow.

Operating Expenses

Research and Development (R&D)

Our R&D efforts are focused on enhancing and developing additional functionality for our existing products and on new product development, including new releases and upgrades to our lidar sensors and integrated software solutions. R&D expenses consist primarily of:

- Personnel-related expenses, including salaries, benefits, and stock-based compensation expense, for personnel in our research and engineering functions;
- Expenses related to materials, software licenses, supplies and third-party services;
- Prototype expenses;
- An allocated portion of facility and IT costs and depreciation; and
- Component Sales services provided to Luminar are accounted for as R&D by Luminar.

R&D costs are expensed as incurred. We expect our R&D costs to increase for the foreseeable future as we continue to invest in research and development activities to achieve our product roadmap.

Sales and Marketing Expenses

Sales and marketing expenses consist of personnel and personnel-related expenses, including stock-based compensation of our business development team as well as advertising and marketing expenses. These include the cost of marketing programs, trade shows, promotional materials, demonstration equipment, an allocated portion of facility and IT costs and depreciation. We expect to increase our sales and marketing activities, mainly in order to continue to build out our geographic presence to be closer to our partners and better serve them. We also expect that our sales and marketing expenses will increase over time as we continue to hire additional personnel to scale our business.

General and Administrative Expenses

General and administrative expenses consist of personnel and personnel-related expenses, including stock-based compensation of our executive, finance, human resources, information systems and legal departments as well as legal and accounting fees for professional and contract services. We expect our general and administrative expenses to increase for the foreseeable future as we scale headcount with the growth of our business, and as a result of operating as a public company, including compliance with the rules and regulations of the SEC, legal, audit, additional insurance expenses, investor relations activities, and other administrative and professional services.

Change in Fair Value of SAFEs and Warrants

Change in fair value of Simple Agreements for Future Equity (the "SAFES") and warrants are non-cash changes and primarily consists of changes in fair value related to the SAFES and warrant liabilities. The SAFES and warrant liabilities are classified as marked-to-market liabilities pursuant to ASC 480 and the corresponding increase or decrease in value impacts our net loss.

Loss on Extinguishment of Debt

Loss on extinguishment of debt primarily consists of the settlement of the repayment of venture debt as we transitioned to a public company on December 2, 2020.

Interest Income and other, and Interest Expense

Interest income and other consists primarily of income earned on our cash equivalents and marketable securities. These amounts will vary based on our cash, cash equivalents and marketable securities balances, and also with market rates. It also includes realized gains and losses related to the marketable securities, as well as impact of gains and losses related to foreign exchange transactions. Interest expense consisted primarily of interest on our senior secured term loan facility, which was repaid upon consummation of the Business Combination.

Results of Operations

Comparison of the Years Ended December 31, 2020 and 2019

The results of operations presented below should be reviewed in conjunction with the consolidated financial statements and notes included elsewhere in this report. The following table sets forth Luminar's consolidated results of operations data for the periods presented (in thousands):

	Year Ended December 31,		Change	Change
	2020	2019	\$	%
Revenue	\$ 13,951	\$ 12,602	\$ 1,349	11 %
Cost of sales	24,952	16,655	8,297	50 %
Gross loss	(11,001)	(4,053)	(6,948)	171 %
Operating Expenses:				
Research and development	38,651	36,971	1,680	5 %
Sales and marketing	7,948	4,730	3,218	68 %
General and administrative	29,275	16,861	12,414	74 %
Total operating expenses	75,874	58,562	17,312	30 %
Loss from operations	(86,875)	(62,615)	(24,260)	39 %
Other income (expense), net:				
Change in fair value of SAFE notes	—	(24,215)	24,215	(100)%
Change in fair value of warrants	(268,266)	(256)	(268,010)	104691 %
Loss on extinguishment of debt	(3,996)	(6,124)	2,128	(35)%
Interest expense	(2,885)	(2,239)	(646)	29 %
Interest income and other	(276)	731	(1,007)	(138)%
Total other income (expense), net	(275,423)	(32,103)	(243,320)	758 %
Net loss	\$ (362,298)	\$ (94,718)	\$ (267,580)	283 %

Revenue

The increase in revenue for 2020 compared to 2019 was driven by increased revenue from our Autonomy Solutions segment offset by a decrease in revenue from our Component Sales segment. The breakdown of our revenue by these segments for the periods presented was as follows (in thousands):

	Year Ended December 31,		Change	Change
	2020	2019	\$	%
Revenue:				
Autonomy Solutions	\$ 11,387	\$ 9,666	\$ 1,721	18 %
Component Sales	2,564	2,936	(372)	(13) %
Total	\$ 13,951	\$ 12,602	\$ 1,349	11 %

The increase in revenue of our Autonomy Solutions segment in 2020 compared to 2019 was primarily driven by \$8.9 million in sales to a customer related to customization of our sensor and software for future series production, offset by fewer sensor sales related to our test and development programs.

The decrease in revenue of our Component Sales segment in 2020 compared to 2019 was primarily due to a timing delay in the fabrication schedule on two projects.

Cost of Sales and Gross Loss

The increase in cost of sales was primarily due to increased costs to execute a won contract and increased inventory obsolescence costs associated with the transition to a new, upgraded sensor platform. The total cost of completing the requirements of the won contract in 2020 was \$9.7 million. The expenses were primarily employee-related and subcontractor costs. The expenses associated with the contract were not incurred as cost of sales for the year ended December 31, 2019 but were instead included as an R&D expense because a formal agreement was not executed in 2019 and the primary focus of our efforts was on developing our products and solutions. Additionally, there was an increase in inventory write-downs of \$3 million. Cost of sales for 2020 also included a \$1.1 million charge to obtain a release from our purchase commitment from a supplier. These increases in cost of sales were offset by lower product cost driven by lower revenue.

The increase in gross loss in 2020 compared to 2019 was primarily due to the reasons discussed above.

Operating Expenses

Research and Development

The increase in research and development expenses for 2020 compared to 2019 was primarily due to an increase in personnel-related costs resulting from increased headcount and consultancy fees in relation to new products that are being developed of \$8.5 million. Additionally, infrastructure related costs increased by \$1.0 million. These increases were offset by \$7.8 million related to a shift in focus of internal resources that were previously focused on research and development to fulfill a customer contract in 2020, which resulted in the costs of those resources being recorded to cost of sales in 2020, as discussed in the “Cost of Sales and Gross Loss” section above. We anticipate continued investment in research and development activities to develop future models as well as customize our solutions under future partner contracts.

Sales and Marketing

The increase in sales and marketing expenses in 2020 compared to 2019 was primarily due to a \$1.2 million increase in personnel-related costs including stock-based compensation costs, driven mainly by increased headcount and a higher fair value of equity awards, a \$1.7 million increase outside services for marketing of our products, a \$0.8 million increase in facilities and related costs. These increases were offset by a \$0.5 million reduction in travel related costs.

General and Administrative

The increase in general and administrative expenses was primarily due to a \$7.1 million increase in professional services due to increased spending on legal, accounting and auditing services in connection with our preparation to become a public company, including \$1.1 million of expenses related to regulatory filings and a \$4.6 million increase in personnel-related costs including stock-based compensation costs, driven mainly by increased headcount and a higher fair value of equity awards. The \$4.6 million increase in personnel-related costs included \$3.0 million of charge resulting from the conversion of certain shares from Class A common stock to Class B common stock. Additionally, infrastructure related costs increased by \$0.7 million.

Change in Fair Value of SAFE Notes

The change in fair value of SAFE notes in 2019 related to the increase in the fair value prior to the settlement of SAFE notes in cash and convertible preferred stock in June 2019.

Change in Fair Value of Warrant Liabilities

The change in fair value of warrant liabilities was due to the increase in the estimated fair value of 2017 Warrants, 2018 Warrants, 2020 Warrants, and Public and Private Warrants.

Pursuant to the Business Combination, the 2017 Warrants, 2018 Warrants and 2020 Warrants were exercised on December 2, 2020. Prior to the exercise, the fair value of the warrants was calculated using the closing stock price on December 2, 2020, and the increase in the fair value was recorded.

Further, subsequent to the Business Combination, we had 13,333,309 Public Warrants and 6,666,666 Private Warrants outstanding as of December 31, 2020. The increase in the fair value of the Public and Private Warrants was \$241.0 million during the year ended December 31, 2020.

Loss on Extinguishment of Debt

The \$4.0 million loss on extinguishment of debt in 2020 related to the termination and prepayment of the senior secured term loan. The \$6.1 million loss on extinguishment of debt in 2019 related to the settlement of the Bridge Note into Series A-11 convertible preferred stock.

Segment Operating Profit or Loss

Segment profit or loss is defined as income or loss before taxes. Our segment profit or loss breakdown is as follows (in thousands):

	Year Ended December 31,		Change	Change
	2020	2019	\$	%
Segment operating profit (loss)				
Autonomy Solutions	\$ (86,661)	\$ (62,874)	\$ (23,787)	38 %
Component Sales	(316)	259	(575)	(222 %)

Liquidity and Capital Resources**Sources of Liquidity**

Our capital requirements will depend on many factors, including lidar and software sales volume, the timing and extent of spending to support R&D efforts, investments in information technology systems, the expansion of sales and marketing activities, and market adoption of new and enhanced products and features. Until we can generate sufficient revenue from lidar sensors and software to cover our operating expenses, working capital and capital expenditures, we expect the funds raised in the Series X Financing and the Business Combination, net of the repayment of our senior secured term loan facility (required by the terms of the merger agreement), to fund cash needs. If we are required to raise additional funds by issuing equity securities, dilution to stockholders would result. Any equity securities issued may also provide for rights, preferences or privileges senior to those of holders of our common stock. If we raise funds by issuing debt securities, these debt securities may have rights, preferences and privileges senior to those of holders of our common stock. The terms of debt securities or borrowings could impose significant restrictions on our operations. The credit market and financial services industry have in the past, and may in the future, experience periods of uncertainty that could impact the availability and cost of equity and debt financing.

As of December 31, 2020, we had cash and cash equivalents totaling \$208.9 million and marketable securities of \$276.7 million. To date, our principal sources of liquidity have been proceeds received from issuances of debt and equity.

On April 22, 2020, we received \$7.8 million in aggregate loan proceeds pursuant to the Paycheck Protection Program established under the CARES Act (the Coronavirus Aid, Relief, and Economic Security Act) of 2020. The loan accrued interest at 1%. The loan was completely repaid, including interest, on August 20, 2020.

In August, September and October 2020, we received \$183.9 million of gross proceeds as consideration for the issuance of Series X Preferred Stock.

On December 2, 2020, the Business Combination with Gores was consummated. The Business Combination was accounted for as a reverse recapitalization. Under this method of accounting, Gores was treated as the acquired company for financial statement reporting purposes. The most significant change in the post-combination Company's reported financial position and results was increase in cash of \$380.6 million. We paid \$17.2 million in transaction costs relating to the merger with Gores.

We had obtained a senior secured term loan facility pursuant to which amounts were funded from August 2017 through December 2018, which was refinanced with a new senior secured term loan facility pursuant to which an aggregate principal amount of \$30.0 million was funded from March through June 2020. Pursuant to the terms of the Merger Agreement, the full balance of the senior secured term loan was repaid at the closing of the Business Combination.

We have not generated positive cash flows from operating activities and have incurred significant losses from operations in the past as reflected in its accumulated deficit of \$584.5 million as of December 31, 2020. We expect to continue to incur operating losses for at least the foreseeable future due to continued R&D investments that we intend to make in our business and, as a result, we may require additional capital resources to grow our business. We believe that current cash, cash equivalents, and the net proceeds from the Business Combination will be sufficient to continue to execute our business strategy over the next two years and until we expect to begin series production.

Cash Flow Summary

The following table summarizes Luminar's cash flows for the periods presented:

	Year ended December 31,	
	2020	2019
Net cash provided by (used in):		
Operating activities	\$ (75,642)	\$ (60,201)
Investing activities	\$ (271,794)	\$ (7,778)
Financing activities	\$ 529,850	\$ 85,457

Operating Activities

Net cash used in operating activities was \$75.6 million during the year ended December 31, 2020. Net cash used in operating activities was due to our net loss of \$362.3 million adjusted for non-cash items of \$288.6 million, primarily consisting of \$268.3 million of change in fair value of warrant liabilities, \$8.7 million of stock-based compensation, \$4.4 million of inventory write-down, \$4.0 million of loss on extinguishment of debt and \$2.5 million of depreciation and amortization, offset by use of cash for operating assets and liabilities of \$1.9 million due to the timing of cash payments to vendors and cash receipts from customers.

Net cash used in operating activities was \$60.2 million during the year ended December 31, 2019. Net cash used in operating activities was due to our net loss of \$94.7 million adjusted for non-cash items of \$37.0 million, primarily consisting of \$24.5 million of change in fair value of SAFE liabilities, \$6.1 million of loss on extinguishment of debt, \$2.7 million of stock-based compensation, \$2.3 million of depreciation and amortization and \$1.4 million of inventory write-down, offset by use of cash for operating assets and liabilities of \$2.5 million due to the timing of cash payments to vendors and cash receipts from customers.

Investing Activities

Net cash used in investing activities in 2020 was \$271.8 million compared to \$7.8 million in 2019. Net cash used in investing activities in 2020 was comprised of \$315.9 million related to purchases of marketable investments and \$2.2 million in capital expenditures, offset by \$29.0 million and \$16.8 million, respectively, of cash proceeds from sale and maturities of marketable investments, and \$0.6 million of proceeds from refundable security deposits.

Net cash used in investing activities in 2019 was comprised of \$6.9 million related to purchases of marketable investments and \$1.5 million in capital expenditures, offset by \$0.4 million of cash proceeds from disposal of property and equipment and \$0.2 million of cash proceeds from sales of marketable securities.

Financing Activities

Net cash provided by financing activities in the year ended December 31, 2020 was \$529.9 million, compared to \$85.5 million for the year ended December 31, 2019. Net cash provided by financing activities of \$529.9 million primarily related to \$363.4 million of net cash received from merger with Gores, \$178.1 million of cash received from the issuance of Series X convertible preferred stock, offset by \$11.4 million of net cash paid for repayment of debt.

Net cash provided by financing activities in the year ended December 31, 2019 of \$85.5 million related to cash proceeds of \$68.7 million and \$37.4 million, respectively, from the issuance of Series A convertible preferred stock and SAFE notes, offset by cash payments of \$14.9 million of cash paid for repayment of debt and \$5.6 million repayment of SAFEs not converted to our convertible preferred stock.

Off-Balance Sheet Arrangements

As of December 31, 2020, we did not have any off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of SEC Regulation S-K, such as the use of unconsolidated subsidiaries, structured finance, special purpose entities or variable interest entities.

Critical Accounting Policies and Estimates

We prepare our consolidated financial statements in accordance with GAAP. The preparation of these consolidated financial statements requires us to make estimates, assumptions and judgments that can significantly impact the amounts we report as assets, liabilities, revenue, costs and expenses and the related disclosures. 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. We believe that the accounting policies discussed below are critical to understanding our historical and future performance as these policies involve a greater degree of judgment and complexity.

Stock-Based Compensation

We recognize the cost of stock-based awards granted to our employees and directors based on the estimated grant-date fair value of the awards. Cost is recognized on a straight-line basis over the service period, which is generally the vesting period of the award. We have elected to recognize the effect of forfeitures in the period they occur. We determine the fair value of stock options using the Black-Scholes option pricing model, which is impacted by the following assumptions:

- Expected Term—We use the simplified method when calculating the expected term due to insufficient historical exercise data.
- Expected Volatility—Our stock was not publicly traded prior to December 3, 2020. The volatility used in stock grants made prior to that date was based on a benchmark of comparable companies within the automotive and energy storage industries.
- Expected Dividend Yield—The dividend rate used is zero as we have never paid any cash dividends on our common stock and do not anticipate doing so in the foreseeable future.
- Risk-Free Interest Rate—The interest rates used are based on the implied yield available on U.S. Treasury zero-coupon issues with an equivalent remaining term equal to the expected life of the award.

The grant date fair value of our common stock issued prior to December 3, 2020, was determined with the assistance of an independent third-party valuation specialist. The grant date fair value of our common stock was determined using valuation methodologies which utilized certain assumptions, including probability weighting of events, volatility, time to liquidation, a risk-free interest rate, and an assumption for a discount for lack of marketability (Level 3 inputs).

Based on our early stage of development and other relevant factors, we determined that an Option Pricing Model (*OPM*) was the most appropriate method for allocating our enterprise value to determine the estimated fair value of our common stock. Application of the OPM involves the use of estimates, judgment, and assumptions that are highly complex and subjective, such as those regarding our expected future revenue, expenses, and cash flows, discount rates, market multiples, the selection of comparable companies, and the probability of future events. Specifically, we have historically used the OPM back solve analysis to estimate the fair value of our common stock, which derives the implied equity value for one type of equity security from a contemporaneous transaction involving another type of security, shares of our convertible preferred stock in this instance.

Revenue

We adopted the requirements of the new revenue recognition standard, known as ASC 606, effective January 1, 2019, utilizing the modified retrospective method of transition. Revenue from product sales is recognized upon transfer of control of promised products. Revenue is recognized in an amount that reflects the consideration that we expect to receive in exchange for those products and services. For service projects, revenue is recognized as services are performed and amounts are earned in accordance with the terms of a contract at estimated collectible amounts.

Revenues related to custom products are recognized over time using the cost input method. In using this input method, we generally apply the cost-to-cost method of accounting where sales and profits are recorded based on the ratio of costs incurred to estimated total costs at completion. Recognition of profit on these contracts requires estimates of the total contract value, the total cost at completion, and the measurement of progress towards completion. Significant judgment is required when estimating total contract costs and progress to completion on the arrangements, as well as whether a loss is expected to be incurred on the contract. If circumstances arise that change the original estimates of revenues, costs, or extent of progress toward completion, revisions to the estimates are made. These revisions may result in increases or decreases in estimated revenues or costs, and such revisions are reflected in income in the period in which the circumstances that gave rise to the revision become known to us. We perform ongoing profitability analysis of our contracts accounted for under this method in order to determine whether the latest estimates of revenues, costs, and profits require updating. If at any time these estimates indicate that the contract will be unprofitable, the entire estimated loss for the remainder of the contract is recorded immediately.

We enter into contracts that can include various combinations of products and services, which are generally capable of being distinct and accounted for as separate performance obligations; however, determining whether products or services are considered distinct performance obligations that should be accounted for separately versus together may sometimes require significant judgment. Transaction price is allocated to each performance obligation on a relative standalone selling price (SSP) basis. Judgment is required to determine SSP for each distinct performance obligation. We use a range of amounts to estimate SSP when products and services are sold separately. In instances where SSP is not directly observable, we determine SSP using information that may include other observable inputs available to it.

Changes in judgments with respect to these assumptions and estimates could impact the timing or amount of revenue recognition.

Public and Private Warrants

As part of Gores' initial public offering on February 5, 2019, Gores issued to third party investors 40.0 million units, consisting of one share of Class A common stock of Gores and one-third of one warrant, at a price of \$10.00 per unit. Each whole warrant entitles the holder to purchase one share of Class A common stock at an exercise price of \$11.50 per share (the "Public Warrants"). Simultaneously with the closing of the IPO, Gores completed the private sale of 6.667 million warrants to Gore's sponsor at a purchase price of \$1.50 per warrant (the "Private Warrants"). Each Private Warrant allows the sponsor to purchase one share of Class A common stock at \$11.50 per share. Subsequent to the Business Combination, 13,333,309 Public Warrants and 6,666,666 Private Warrants remained outstanding as of December 31, 2020.

The Private Warrants and the shares of common stock issuable upon the exercise of the Private Warrants are not transferable, assignable or salable until after the completion of a Business Combination, subject to certain limited exceptions. Additionally, the Private Warrants are exercisable for cash or on a cashless basis, at the holder's option, and are non-redeemable so long as they are held by the initial purchasers or their permitted transferees. If the Private Warrants are held by someone other than the initial purchasers or their permitted transferees, the Private Warrants will be redeemable by us and exercisable by such holders on the same basis as the Public Warrant.

We evaluated the Public and Private Warrants under ASC 815-40, *Derivatives and Hedging—Contracts in Entity's Own Equity*, and concluded that they do not meet the criteria to be classified in stockholders' equity. Specifically, the exercise of the Public and Private Warrants may be settled in cash upon the occurrence of a tender offer or exchange that involves 50% or more of our Class A shareholders. Because not all of the shareholders need to participate in such tender offer or exchange to trigger the potential cash settlement and we do not control the occurrence of such an event, we concluded that the Public Warrants and Private Warrants do not meet the conditions to be classified in equity. Since the Public and Private Warrants meet the definition of a derivative under ASC 815, we recorded these warrants as liabilities on the balance sheet at fair value, with subsequent changes in their respective fair values recognized in the consolidated statement of operations and comprehensive income (loss) at each reporting date. Because the Public Warrants were publicly traded and thus had an observable market price, and the Private Warrants were effectively valued similar to the Public Warrants, as described in Note 10 to the consolidated financial statements, while the changes in the fair value of the Public Warrants and Private Warrants may be material to our future operating results, there is no significant judgment involved in measuring the fair value of such Warrants.

Emerging Growth Company Status

Section 102(b)(1) of the Jumpstart Our Business Startups Act of 2012 ("JOBS Act") exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies are required to comply with the new or revised financial accounting standards. The JOBS Act provides that a company can choose not to take advantage of the extended transition period and comply with the requirements that apply to non-emerging growth companies, and any such election to not take advantage of the extended transition period is irrevocable.

We are an "emerging growth company" as defined in Section 2(a) of the Securities Act, and have elected to take advantage of the benefits of the extended transition period for new or revised financial accounting standards. Following the consummation of the Business Combination, our Post-Combination Company will remain an emerging growth company until the earliest of (i) the last day of the fiscal year in which the market value of our common stock that held by non-affiliates exceeds \$700 million as of the end of that year's second fiscal quarter, (ii) the last day of the fiscal year in which we achieve total annual gross revenue of \$1.07 billion or more during such fiscal year (as indexed for inflation), (iii) the date on which we issue more than \$1 billion in non-convertible debt in the prior three-year period or (iv) December 31, 2024. We expect to continue to take advantage of the benefits of the extended transition period, although we may decide to early adopt such new or revised accounting standards to the extent permitted by such standards. This may make it difficult or impossible to compare our financial results with the financial results of another public company that is either not an emerging growth company or is an emerging growth company that has chosen not to take advantage of the extended transition period exemptions because of the potential differences in accounting standards used.

Recent Accounting Pronouncements

See Note 2 in Item 8. of this Form 10-K for information related to recent accounting pronouncements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

We are exposed to various market risks, which may result in potential losses arising from adverse changes in market rates, such as interest rates and foreign exchange rates. We do not enter into derivatives or other financial instruments for trading or speculative purposes and do not believe we are exposed to material market risk with respect to our cash and cash equivalents and/or our marketable investments.

Interest Rate Risk. We had cash and cash equivalents of \$208.9 million as of December 31, 2020, which consisted of funds held in general checking, money market funds, U.S. treasury securities and commercial paper. In addition, we had marketable investments of \$276.7 million, which consisted primarily of commercial paper, corporate bonds, U.S. agency and government sponsored securities, asset-backed securities and U.S. Treasury securities. Our investment policy is focused on the preservation of capital and supporting our liquidity needs. Under the policy, we invest in highly rated securities, while limiting the amount of credit exposure to any one issuer other than the U.S. government. We do not invest in financial instruments for trading or speculative purposes, nor do we use leveraged financial instruments. We utilize external investment managers who adhere to the guidelines of our investment policy. A hypothetical 100 basis point change in interest rates would not have a material impact on the value of our cash and cash equivalents or marketable investments.

Foreign Currency Exchange Risk. Our results of operations and cash flows are subject to fluctuations due to changes in foreign currency exchange rates. Currently, all of our revenue is generated in U.S. dollars. Our expenses are generally denominated in the currencies of the jurisdictions in which we conduct our operations, which are primarily in the U.S. and to a small extent in Europe. Luminar's results of operations and cash flows in the future may be adversely affected due to an expansion of non-U.S. dollar denominated contracts, growth of its international entities, and changes in foreign exchange rates. The effect of a hypothetical 10% change in foreign currency exchange rates applicable to our business would not have a material impact on our historical or current consolidated financial statements. To date, we have not engaged in any hedging strategies. As our international operations grow, we will continue to reassess our approach to manage the risk relating to fluctuations in currency rates.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

LUMINAR TECHNOLOGIES, INC.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Luminar Technologies, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Luminar Technologies, Inc. and subsidiaries (the “Company”) as of December 31, 2020 and 2019, the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders’ equity (deficit), and cash flows, for each of the two years in the period ended December 31, 2020, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ DELOITTE & TOUCHE LLP

San Jose, California

April 14, 2021

We have served as the Company’s auditor since 2020.

LUMINAR TECHNOLOGIES, INC. AND SUBSIDIARIES
Consolidated Balance Sheets
(In thousands, except share and per share data)

	December 31,	
	2020	2019
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 208,944	\$ 27,080
Restricted cash	775	225
Marketable securities	276,710	6,659
Accounts receivable	5,971	1,677
Inventories, net	3,613	4,002
Prepaid expenses and other current assets	4,797	1,824
Total current assets	500,810	41,467
Property and equipment, net	7,689	7,867
Goodwill	701	701
Other non-current assets	1,151	1,829
Total assets	\$ 510,351	\$ 51,864
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable	\$ 6,039	\$ 3,456
Accrued and other current liabilities	10,452	3,526
Debt, current	99	7,791
Total current liabilities	16,590	14,773
Warrant liabilities	343,400	1,122
Debt, non-current	302	1,555
Other non-current liabilities	1,318	1,401
Total liabilities	361,610	18,851
Commitments and contingencies (Note 17)		
Convertible preferred stock:		
Series A convertible preferred stock, \$0.00001 par value; None authorized, issued and outstanding as of December 31, 2020; 102,740,023 shares authorized, 94,818,151 shares issued and outstanding as of December 31, 2019	—	244,743
Stockholders' equity (deficit):		
Founders' preferred stock, \$0.00001 par value; None authorized, issued and outstanding as of December 31, 2020; 26,206,837 shares authorized, 26,206,837 shares issued and outstanding as of December 31, 2019	—	3
Preferred stock, \$0.0001 par value; 10,000,000 shares authorized, none issued and outstanding as of December 31, 2020; None authorized, issued and outstanding as of December 31, 2019	—	—
Class A common stock, \$0.0001 par value; 715,000,000 shares authorized, 218,818,037 shares issued and outstanding as of December 31, 2020; 283,523,459 shares authorized, 139,635,890 shares issued, 134,677,419 shares outstanding as of December 31, 2019	22	14
Class B common stock, \$0.0001 par value; 121,000,000 shares authorized, 105,118,203 shares issued and outstanding as of December 31, 2020; None authorized, issued and outstanding as of December 31, 2019	11	—
Additional paid-in capital	733,175	10,457
Accumulated other comprehensive income (loss)	34	(1)
Treasury stock, at cost, 0 and 4,958,471 shares as of December 31, 2020 and 2019, respectively	—	—
Accumulated deficit	(584,501)	(222,203)
Total stockholders' equity (deficit)	148,741	(211,730)
Total liabilities, convertible preferred stock and stockholders' equity	\$ 510,351	\$ 51,864

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

LUMINAR TECHNOLOGIES, INC. AND SUBSIDIARIES
Consolidated Statements of Operations and Comprehensive Loss
(In thousands, except share and per share data)

	Year Ended December 31,	
	2020	2019
Revenue	\$ 13,951	\$ 12,602
Cost of sales	24,952	16,655
Gross loss	(11,001)	(4,053)
Operating expenses:		
Research and development	38,651	36,971
Sales and marketing	7,948	4,730
General and administrative	29,275	16,861
Total operating expenses	75,874	58,562
Loss from operations	(86,875)	(62,615)
Other income (expense), net:		
Change in fair value of SAFE notes	—	(24,215)
Change in fair value of warrant liabilities	(268,266)	(256)
Loss on extinguishment of debt	(3,996)	(6,124)
Interest expense	(2,885)	(2,239)
Interest income and other	(276)	731
Total other income (expense), net	(275,423)	(32,103)
Net loss	\$ (362,298)	\$ (94,718)
Net loss attributable to common stockholders	\$ (369,055)	\$ (100,000)
Net loss per share attributable to common stockholders:		
Basic and diluted	\$ (2.54)	\$ (0.84)
Shares used in computing net loss per share attributable to common stockholders:		
Basic and diluted	145,096,996	118,835,912
Comprehensive Loss:		
Net loss	\$ (362,298)	\$ (94,718)
Net unrealized gains (losses) on available-for-sale debt securities	35	(1)
Comprehensive loss	\$ (362,263)	\$ (94,719)

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

LUMINAR TECHNOLOGIES, INC. AND SUBSIDIARIES
Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)
(In thousands, except share data)

	Series A Convertible Preferred Stock		Series X Convertible Preferred Stock		Founders Convertible Preferred Stock		Class A Common Stock		Class B Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income Loss	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
Balance as of December 31, 2018	—	\$ —	—	\$ —	26,206,837	\$ 3	134,337,450	\$ 13	—	\$ —	\$ 2,802	\$ —	\$ (127,485)	\$ (124,667)
Conversion of SAFE into Series A convertible preferred stock for cash, net of issuance costs of \$3,775	68,877,417	169,951	—	—	—	—	—	—	—	—	—	—	—	—
Conversion of debt into Series A convertible preferred stock	4,326,514	7,719	—	—	—	—	—	—	—	—	—	—	—	—
Issuance of Series A convertible preferred stock for cash, net of issuance costs of \$1,592	21,614,220	67,073	—	—	—	—	—	—	—	—	—	—	—	—
Conversion of SAFE into Series A common stock	—	—	—	—	—	—	3,612,062	1	—	—	4,924	—	—	4,925
Issuance of restricted common stock	—	—	—	—	—	—	1,686,378	—	—	—	29	—	—	29
Share-based compensation	—	—	—	—	—	—	—	—	—	—	2,702	—	—	2,702
Other comprehensive Income	—	—	—	—	—	—	—	—	—	—	—	(1)	—	(1)
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	(94,718)	(94,718)
Balance as of December 31, 2019	94,818,151	244,743	—	—	26,206,837	3	139,635,890	14	—	—	10,457	(1)	(222,203)	(211,730)
Issuance of Series X convertible preferred stock for cash, net of issuance costs of \$5,790	—	—	18,457,230	178,074	—	—	—	—	—	—	—	—	—	—
Retirement of Class A shares	—	—	—	—	—	—	(6,629,372)	(1)	—	—	—	—	—	(1)
Conversion of certain shares into Class B common stock	—	—	—	—	(22,935,413)	(3)	(82,182,790)	(8)	105,118,203	11	3,000	—	—	3,000
Merger recapitalization—Class A	(94,818,151)	(244,743)	(18,457,230)	(178,074)	(3,271,424)	—	116,546,805	12	—	—	422,802	—	—	422,814
Public and Private Warrants	—	—	—	—	—	—	—	—	—	—	(102,396)	—	—	(102,396)
Issuance of Class A common stock upon exercise of warrants	—	—	—	—	—	—	1,466,155	—	—	—	30,112	—	—	30,112
Gores shares recapitalized, net of redemptions and equity issuance costs of \$17,226	—	—	—	—	—	—	49,981,349	5	—	—	363,455	—	—	363,460
Share-based compensation	—	—	—	—	—	—	—	—	—	—	5,745	—	—	5,745
Other comprehensive Income	—	—	—	—	—	—	—	—	—	—	—	35	—	35
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	(362,298)	(362,298)
Balance as of December 31, 2020	—	\$ —	—	\$ —	—	\$ —	218,818,037	\$ 22	105,118,203	\$ 11	\$ 733,175	\$ 34	\$ (584,501)	\$ 148,741

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

LUMINAR TECHNOLOGIES, INC. AND SUBSIDIARIES
Consolidated Statements of Cash Flows
(In thousands)

	Year Ended December 31,	
	2020	2019
Cash flows from operating activities:		
Net loss	\$ (362,298)	\$ (94,718)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	2,517	2,316
Amortization of premium on marketable securities	175	—
Change in fair value of warrants and SAFE liabilities	268,266	24,471
Impairment of inventories	4,407	1,378
Loss on disposal of property and equipment	525	37
Loss on extinguishment of debt	3,996	6,124
Share-based compensation	8,711	2,702
Changes in operating assets and liabilities:		
Accounts receivable	(4,294)	805
Inventories	(4,018)	(2,454)
Prepaid expenses and other current assets	(2,805)	179
Other non-current assets	165	(2)
Accounts payable	2,620	(431)
Accrued and other current liabilities	6,693	(448)
Other non-current liabilities	(302)	(160)
Net cash used in operating activities	(75,642)	(60,201)
Cash flows from investing activities:		
Purchases of marketable securities	(315,920)	(6,908)
Proceeds from maturities of marketable securities	16,755	—
Proceeds from sales of marketable securities	28,974	249
Proceeds from refundable security deposits	581	—
Purchases of property and equipment	(2,202)	(1,487)
Disposal of property and equipment	18	368
Net cash used in investing activities	(271,794)	(7,778)
Cash flows from financing activities:		
Cash received from Gores on recapitalization	380,601	—
Transaction costs related to merger with Gores	(17,226)	—
Proceeds from issuance of Series X convertible preferred stock	183,865	—
Issuance cost paid for Series X convertible preferred stock	(5,790)	—
Proceeds from the issuance of debt	32,101	—
Repayment of debt	(41,190)	(9,540)
Debt prepayment charges	(1,918)	—
Debt issuance costs	(361)	(5,367)
Settlement of SAFE notes	—	(5,609)
Principal payments on capital leases	(222)	(118)
Proceeds from issuance of Series A convertible preferred stock	—	68,666
Proceeds from issuance of SAFE notes	—	37,377
Proceeds from issuance of restricted common stock	—	61
Repurchase of common stock	(10)	(13)
Net cash provided by financing activities	529,850	85,457
Net increase in cash and cash equivalents, and restricted cash and cash equivalents	182,414	17,478
Beginning cash and cash equivalents, and restricted cash and cash equivalents	27,305	9,827
Ending cash and cash equivalents, and restricted cash and cash equivalents	\$ 209,719	\$ 27,305
Supplemental disclosures of cash flow information:		
Cash paid for interest	\$ 2,789	\$ 2,018
Supplemental disclosures of noncash investing and financing activities:		
Conversion of Bridge Note into Series A convertible preferred stock	—	7,719
Conversion of SAFE notes into common stock	—	4,925
Conversion of SAFE notes into Series A convertible preferred stock	—	173,726
Issuance of Class A common stock upon exercise of warrants	30,112	—
Conversion of Series A, Series X and Founders' convertible preferred stock into Class A and Class B common stock	422,813	—
Assets acquired on capital leases	318	397
Purchases of property and equipment recorded in accounts payable and accrued liabilities	319	150

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

LUMINAR TECHNOLOGIES, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1. Organization and Description of Business

Luminar Technologies, Inc. and its wholly-owned subsidiaries (the “Company” or “Luminar”) was originally incorporated in Delaware on August 28, 2018 under the name Gores Metropoulos, Inc (“Gores”). The Company was formed for the purpose of effecting a merger, capital stock exchange, asset acquisition, stock purchase, reorganization or similar business combination with one or more businesses. On December 2, 2020 (the “Closing Date”), the Company (at such time named Gores Metropoulos, Inc.) consummated the business combination (the “Business Combination”) pursuant to the Agreement and Plan of Merger, dated August 24, 2020 with the pre-Business Combination Luminar Technologies, Inc. (“Legacy Luminar”). In connection with the consummation of the Business Combination, the Company changed its name from Gores Metropoulos, Inc. to Luminar Technologies, Inc. The Company’s common stock is listed on the NASDAQ under the symbol “LAZR.” The Company’s warrants to purchase shares of Class A common stock were listed on the NASDAQ under the symbol “LAZRW,” until they were delisted on March 5, 2021 upon exercise and redemption.

Unless the context otherwise requires, the “Company” refers to the combined company and its subsidiary following the Business Combination, “Gores” refers to the Company prior to the Business Combination and “Legacy Luminar” refers to Luminar Technologies Inc prior to the Business Combination. Refer to Note 3 for further discussion of the Business Combination.

The Company is a developer of advanced sensor technologies for the autonomous vehicle industry, encompassing the latest in Laser Imaging, Detection and Ranging (lidar) technology. The Company manufactures and distributes commercial lidar sensors. In addition, the Company develops ultra-sensitive pixel-based sensors and designs, tests and provides consulting services for non-standard integrated circuits that are essential for systems to meet the requirement of customers. Legacy Luminar was incorporated in Delaware on March 31, 2015. The Company has research and manufacturing facilities located in Palo Alto, California and Orlando, Florida, which is also the Company’s headquarters.

Note 2. Basis of Presentation and Summary of Significant Accounting Policies**Basis of Presentation and Consolidation**

The accompanying consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States (“GAAP”) and applicable rules and regulations of the Securities and Exchange Commission (“SEC”) regarding annual financial reporting. All intercompany transactions and balances have been eliminated in consolidation.

Certain prior period amounts included in the consolidated financial statements have been reclassified to conform to current period presentation.

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make judgments, estimates and assumptions that affect the reported amounts of assets, liabilities, equity, revenues and expenses, and related disclosures. The significant estimates made by management include inventory reserves, warranty reserves, valuation allowance for deferred tax assets, valuation of warrants, revenue, stock-based compensation expense and other loss contingencies. Management periodically evaluates such estimates and they are adjusted prospectively based upon such periodic evaluation. Actual results could differ from those estimates.

Segment Information

The Company has determined its operating segments on the same basis that it uses to evaluate its performance internally. The Company has two business activities: (i) manufacturing and distribution of lidar sensors that measure distance using laser light to generate a highly accurate 3D map for automotive mobility applications and (ii) development of ultra-sensitive pixel-based sensors and designing, testing and providing consulting services for non-standard integrated circuits that are essential for systems to meet the requirement of customers. The Company’s operating segments are (i) Autonomy Solutions and (ii) Component Sales. The Company’s chief operating decision maker (“CODM”), its Chief Executive Office, reviews the operating results of these segments for the purpose of allocating resources and evaluating financial performance.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk, consist primarily of cash and cash equivalents, marketable investments and accounts receivable. A significant portion of the Company’s cash and cash equivalents is held at high-quality domestic financial institutions. Deposits held with the financial institutions may, at

LUMINAR TECHNOLOGIES, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

times, exceed the amount of insurance provided on such deposits. The Company held cash in foreign entities of \$0.6 million and \$0 as of December 31, 2020 and 2019, respectively.

The Company's revenue is derived from customers located in the United States and international markets. The Company mitigates its credit risks by performing ongoing credit evaluations of its customers' financial conditions and requires advance payment from customers in certain circumstances. The Company generally does not require collateral.

One customer accounted for 86% of the Company's accounts receivable at December 31, 2020 and three customers accounted for 31%, 15%, and 11%, respectively, of the Company's accounts receivable at December 31, 2019.

Cash and Cash Equivalents

The Company's cash and cash equivalents consist of highly liquid investments with maturities of three months or less at the time of purchase. The Company's cash equivalents consist of investments in money market funds, U.S. treasury securities, U.S. agency securities, corporate bonds and commercial paper.

Restricted Cash

Restricted cash consists of funds that are contractually restricted as to usage or withdrawal due to legal agreements. The Company determines current or non-current classification of restricted cash based on the expected duration of the restriction.

Debt Securities

The Company's debt securities consist of U.S. agency securities and government sponsored securities, U.S. treasury securities, corporate bonds, commercial paper and asset-backed securities. The Company classifies its debt securities as available-for-sale at the time of purchase and reevaluates such designation as of each balance sheet date. The Company considers all debt securities as available for use to support current operations, including those with maturity dates beyond one year and are classified as current assets under marketable securities in the accompanying consolidated balance sheets. Debt securities included in marketable securities on the consolidated balance sheets consist of securities with original maturities greater than three months at the time of purchase. Debt securities are carried at fair value, with the unrealized gains and losses reported as a component of accumulated other comprehensive loss. Any realized gains or losses on the sale of debt securities are determined on a specific identification method, and such gains and losses are reflected as a component of other income (expense), net.

Accounts Receivable

Accounts receivables are recorded at the invoiced amount and do not bear interest. The Company reviews the need for an allowance for doubtful accounts quarterly based on historical experience with each customer and the specifics of each customer arrangement. The Company did not have material write-offs in any period presented, and as of December 31, 2020 and 2019 did not record an allowance for doubtful accounts.

Inventories

Inventories are valued at the lower of cost or net realizable value. The Company determines the cost of inventory using the standard-cost method, which approximates actual costs based on a first-in, first-out method. Net realizable value is determined as estimated selling prices in the ordinary course of business, less reasonably predictable costs of disposal and transportation. The Company assesses inventories quarterly for slow moving products and potential impairment, and records write-downs of inventories to cost of sales.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation and amortization, and is depreciated using the straight-line method over the estimated useful lives of the assets as follows:

Asset Category	Estimated useful lives
Computer hardware and software	3 to 5 years
Demonstration units and fleet	2 to 5 years
Machinery and equipment	5 to 7 years
Furniture and fixtures	7 years
Vehicles	5 years
Leasehold improvements	Shorter of useful life or lease term

LUMINAR TECHNOLOGIES, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Maintenance and repairs are charged to expense as incurred, and improvements and betterments are capitalized. When assets are retired or otherwise disposed of, the cost and accumulated depreciation and amortization are removed from the consolidated balance sheet and any resulting gain or loss is reflected in the consolidated statements of operations and comprehensive loss in the period realized.

Goodwill

The Company records goodwill when the consideration paid in a business combination exceeds the fair value of the net tangible assets and the identified intangible assets acquired. Goodwill is not amortized, but instead is required to be tested for impairment annually and whenever events or changes in circumstances indicate that the carrying value of goodwill may exceed its fair value.

The Company reviews goodwill for impairment annually in its fourth quarter by initially considering qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill, as a basis for determining whether it is necessary to perform a quantitative analysis. If it is determined that it is more likely than not that the fair value of reporting unit is less than its carrying amount, a quantitative analysis is performed to identify goodwill impairment.

Impairment of Long-Lived Assets

The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. When such an event occurs, management determines whether there has been impairment by comparing the anticipated undiscounted future net cash flows to the related asset group's carrying value. If an asset is considered impaired, the asset is written down to fair value, which is determined based either on discounted cash flows or appraised value, depending on the nature of the asset. There was no impairment of long-lived assets during the years ended December 31, 2020 or 2019.

Product Warranties

The Company typically provides a one-year warranty on its products. Estimated future warranty costs are accrued and charged to cost of sales in the period that the related revenue is recognized. These estimates are based on historical warranty experience and any known or expected changes in warranty exposure, such as trends of product reliability and costs of repairing and replacing defective products. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary. Provision for product warranties were immaterial in all periods presented.

Debt

The Company accounts for promissory notes payable using an amortized cost model pursuant to Accounting Standards Codification ("ASC") 835^{Interest}. Debt issuance costs are amortized using the effective interest method over the contractual term of the note into interest expense. Debt discounts are presented on the consolidated balance sheets as a direct deduction from the carrying amount of that related debt. Debt modifications are evaluated using the guidance in ASC 470, *Debt*, to determine the treatment of the existing debt as well as costs and fees incurred in the modification based on the significance of changes in present value of cash flows for term debt and changes in borrowing capacity for revolving credit arrangements.

Public and Private Warrants

As part of Gores' initial public offering on February 5, 2019, Gores issued to third party investors 40.0 million units, consisting of one share of Class A common stock of Gores and one-third of one warrant, at a price of \$10.00 per unit. Each whole warrant entitles the holder to purchase one share of Class A common stock at an exercise price of \$11.50 per share (the "Public Warrants"). Simultaneously with the closing of the IPO, Gores completed the private sale of 6.667 million warrants to Gore's sponsor at a purchase price of \$1.50 per warrant (the "Private Warrants"). Each Private Warrant allows the sponsor to purchase one share of Class A common stock at \$1.50 per share. Subsequent to the Business Combination, 13,333,309 Public Warrants and 6,666,666 Private Warrants remained outstanding as of December 31, 2020.

The Private Warrants and the shares of common stock issuable upon the exercise of the Private Warrants are not transferable, assignable or salable until after the completion of a Business Combination, subject to certain limited exceptions. Additionally, the Private Warrants are exercisable for cash or on a cashless basis, at the holder's option, and are non-redeemable so long as they are held by the initial purchasers or their permitted transferees. If the Private Warrants are held by someone other than the initial purchasers or their permitted transferees, the Private Warrants will be redeemable by the Company and exercisable by such holders on the same basis as the Public Warrant.

LUMINAR TECHNOLOGIES, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Company evaluated the Public and Private Warrants under ASC 815-40, *Derivatives and Hedging—Contracts in Entity's Own Equity*, and concluded that they do not meet the criteria to be classified in stockholders' equity. Specifically, the exercise of the Public and Private Warrants may be settled in cash upon the occurrence of a tender offer or exchange that involves 50% or more of the Company's Class A shareholders. Because not all of the Company's shareholders need to participate in such tender offer or exchange to trigger the potential cash settlement and the Company does not control the occurrence of such an event, the Company concluded that the Public Warrants and Private Warrants do not meet the conditions to be classified in equity. Since the Public and Private Warrants meet the definition of a derivative under ASC 815, the Company recorded these warrants as liabilities on the balance sheet at fair value upon the closing of the Business Combination, with subsequent changes in their respective fair values recognized in the consolidated statement of operations and comprehensive income (loss) at each reporting date.

Convertible Preferred Stock

The Company classified its Series A and Series X convertible preferred stock outside of permanent equity as it contained terms that could force the Company to redeem the shares of such convertible preferred stock for cash or other assets upon the occurrence of an event not solely within the Company's control. The shares of Series A and Series X convertible preferred stock were converted into Class A common stock upon consummation of the Business Combination.

Revenue Recognition

In 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, Revenue from Contracts with Customers (ASC 606) ("New Revenue Standard"). The New Revenue Standard requires companies to recognize revenue in a way that depicts the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In addition, the New Revenue Standard requires disclosures of the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. The Company adopted the New Revenue Standard effective January 1, 2019 using the modified retrospective method and the cumulative effect was immaterial to the consolidated financial statements. The Company has elected to apply the transition method to contracts that are not completed as of January 1, 2019 ("open contracts"). See Note 4, Revenue, for additional information related to the adoption of ASC 606. There was no material impact of adopting ASC 606 on the financial results for the year ended December 31, 2019.

Under ASC 606, the Company determines revenue recognition through the following steps:

- Identifying the contract, or contracts, with the customer;
- Identifying the performance obligations in the contract;
- Determining the transaction price;
- Allocating the transaction price to performance obligations in the contract; and
- Recognizing revenue when, or as, the Company satisfies performance obligations by transferring the promised good or services.

Nature of Products and Services and Revenue Recognition

The Company's revenue primarily comes from product sales of lidar sensors to direct customers and distributors and services to integrate Luminar lidar hardware and software for autonomy in vehicle platforms. Revenue from product sales is recognized at a point in time when control of the goods is transferred to the customer, generally occurring upon shipment or delivery dependent upon the terms of the underlying contract.

For custom products that require engineering and development based on customer requirements, the Company recognizes revenue over time using an input method based on contract cost incurred to date compared to total estimated contract cost (cost-to-cost). Amounts billed to customers for shipping and handling are included in revenue. Some of Company's arrangements provide either software embedded in hardware or occasionally, licenses to certain software products which are typically recognized at the time of transfer of control of either the underlying hardware or at the time when the licensing rights are provided. The obligations associated with any performance obligation to update the Company's software were immaterial. Taxes collected from customers and remitted to governmental authorities are excluded from revenue on the net basis of accounting.

For service projects, the Company generally contracts with customers based on hourly rates. Revenue is recognized as services are performed and amounts are earned in accordance with the terms of a contract at estimated collectible amounts. Expenses associated with performance of work may be reimbursed with a markup depending on contractual terms and are

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included in revenues. Reimbursements include billings for travel and other out-of-pocket expenses and third-party costs, such as equipment rentals, materials and subcontractor costs, which are included in cost of sales in the accompanying combined statement of operations.

Arrangements with Multiple Performance Obligations

When a contract involves multiple performance obligations, the Company accounts for individual products and services separately if the customer can benefit from the product or service on its own or with other resources that are readily available to the customer and the product or service is separately identifiable from other promises in the arrangement. The consideration is allocated between separate performance obligations in proportion to their estimated standalone selling price. The transactions to which the Company had to estimate standalone selling prices and allocate the arrangement consideration to multiple performance obligations were immaterial.

The Company provides standard product warranties for a term of typically one year to ensure that its products comply with agreed-upon specifications. Standard warranties are considered to be assurance type warranties and are not accounted for as separate performance obligations. See Product Warranties for accounting policy on standard warranties.

Other Policies, Judgments and Practical Expedients

Contract balances. Contract assets and liabilities represent the differences in the timing of revenue recognition from the receipt of cash from the Company's customers and billings. Contract assets reflect revenue recognized and performance obligations satisfied in advance of customer billing. Contract liabilities relates to payments received in advance of the satisfaction of performance under the contract. Receivable represents right to consideration that is unconditional. Such rights are considered unconditional if only the passage of time is required before payment of that consideration is due.

Remaining performance obligations. Revenue allocated to remaining performance obligations represents the transaction price allocated to the performance obligations that are unsatisfied, or partially unsatisfied. It includes unearned revenue and amounts that will be invoiced and recognized as revenue in future periods and does not include contracts where the customer is not committed. The customer is not considered committed where they are able to terminate for convenience without payment of a substantive penalty under the contract. The Company has elected the optional exemption, which allows for the exclusion of the amounts for remaining performance obligations that are part of contracts with an original expected duration of one year or less.

Significant financing component. In certain arrangements, the Company receives payment from a customer either before or after the performance obligation has been satisfied. The expected timing difference between the payment and satisfaction of performance obligations for the vast majority of the Company's contracts is one year or less; therefore, the Company applies a practical expedient and does not consider the effects of the time value of money. The Company's contracts with customer prepayment terms do not include a significant financing component because the primary purpose is not to receive financing from the customers.

Contract modifications. The Company may modify contracts to offer customers additional products or services. Each of the additional products and services are generally considered distinct from those products or services transferred to the customer before the modification. The Company evaluates whether the contract price for the additional products and services reflects the standalone selling price as adjusted for facts and circumstances applicable to that contract. In these cases, the Company accounts for the additional products or services as a separate contract. In other cases where the pricing in the modification does not reflect the standalone selling price as adjusted for facts and circumstances applicable to that contract, the Company accounts on a prospective basis where the remaining goods and services are distinct from the original items and on a cumulative catch-up basis when the remaining goods and services are not distinct from the original items.

Judgments and estimates. Accounting for contracts recognized over time under ASC 606 involves the use of various techniques to estimate total contract revenue and costs. Due to uncertainties inherent in the estimation process, it is possible that estimates of costs to complete a performance obligation will be revised in the near-term. The Company reviews and updates its contract-related estimates regularly, and records adjustments as needed. For those performance obligations for which revenue is recognized using a cost-to-cost input method, changes in total estimated costs, and related progress towards complete satisfaction of the performance obligation, are recognized on a cumulative catch-up basis in the period in which the revisions to the estimates are made. The impact of application of catch-up adjustments resulted in recognition of \$0.9 million and \$0 of contract loss in the years ended December 31, 2020 and 2019, respectively.

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Cost of Sales

The Company includes all manufacturing and sourcing costs incurred prior to the receipt of finished goods at its distribution facility in cost of sales. The cost of sales principally includes personnel-related costs (including certain engineering personnel), including stock-based compensation, directly associated with the Company's manufacturing organization, direct costs, product costs, purchasing costs, allocation of overhead costs associated with manufacturing operations, inbound freight charges, insurance, inventory write-downs, warranty cost and depreciation and amortization expense associated with the manufacturing and sourcing operations. Cost of sales also includes the direct cost and appropriate allocation of overhead costs involved in execution of service contracts.

Research and Development (R&D)

R&D expenses consist primarily of personnel-related expenses, consulting and contractor expenses, tooling and prototype materials to the extent no future benefit is expected and allocated overhead costs. Substantially all of the Company's R&D expenses are related to developing new products and services and improving existing products and services. To date, R&D expenses have been expensed as incurred and included in the consolidated statements of operations.

Stock-based Compensation*Employees*

The Company measures the cost of share-based awards granted to employees and directors based on the grant-date fair value of the awards. The grant-date fair value of the stock options is calculated using a Black-Scholes option pricing model. The grant-date fair value of restricted stock is calculated based on the fair value of the underlying common stock less cash proceeds paid by the recipient to acquire the restricted stock. The fair value of the stock-based compensation is recognized on a straight-line basis over the requisite service period, which is generally the vesting period of the award. The Company elected to recognize the effect of forfeitures in the period they occur.

Non-Employees

On January 1, 2019, the Company adopted Accounting Standards Update (ASU) 2018-07, *Compensation—Stock Compensation (ASC 718): Improvements to Nonemployee Share-Based Payment Accounting*. Under ASU 2018-07, the newly granted equity-classified non-employee awards are measured on the grant date using a fair-value based measure. Any outstanding non-employee awards that have not achieved a performance completion date as of the adoption of ASU 2018-07 are measured at the adoption date and not subsequently remeasured. Consistent with the intent of ASU 2018-07 to better align the accounting for employee and non-employee awards, the Company has recognized the compensation cost for non-employee awards on a straight-line basis after adoption of ASU 2018-07. There was no impact to equity or retained earnings upon adopting ASU 2018-07.

On January 1, 2019, the Company adopted ASU 2019-08, *Compensation—Stock Compensation (ASC 718)*. Following the adoption of ASU 2018-07, the Company measures any share-based payment awards to customers in accordance with ASC 718. Any equity classified awards are measured on the grant dates. The Company had no such outstanding awards as of the date of adoption of ASU 2019-08.

Income Taxes

Income taxes are accounted under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined on the basis of the differences between the financial statement and tax bases of assets and liabilities by using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

The Company recognizes deferred tax assets to the extent that these assets are more likely than not to be realized. In making such a determination, all available positive and negative evidence are considered, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. If it is determined that deferred tax assets would be realized in the future, in excess of their net recorded amount, an adjustment would be made to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

The Company records uncertain tax positions in accordance with ASC 740, *Income Taxes*, on the basis of a two-step process which includes (1) determining whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position, and (2) for those tax positions that meet the more-likely-than-not recognition

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threshold. Recognized income tax positions are measured at the largest amount of tax benefit that is more than 50% likely to be realized upon ultimate settlement with the related tax authority.

The Company recognizes interest and penalties related to unrecognized tax benefits on the income tax expense line in the accompanying consolidated statement of operations. Accrued interest and penalties are included on the related tax liability line in the consolidated balance sheet.

The Tax Cuts and Jobs Act ("TCJA") subjects a U.S. shareholder to tax on global intangible low-taxed income ("GILTI") earned by certain foreign subsidiaries. Under GAAP, the Company can make an accounting policy election to either treat taxes due on the GILTI inclusion as a current period expense or factor such amounts into the Company's measurement of deferred taxes. The Company elected to treat the GILTI inclusion as a period expense.

Recent Accounting Pronouncements Not Yet Effective

In February 2016, the Financial Accounting Standards Board (FASB) issued ASU 2016-02, *Leases (ASC 842)*, and since that date has issued subsequent amendments to the initial guidance intended to clarify certain aspects of the guidance and to provide certain practical expedients entities can elect upon adoption. The principle of ASU 2016-02 is that a lessee should recognize assets and liabilities that arise from leases. Lessees will need to recognize a right-of-use asset and a lease liability for all leases (other than leases that meet the definition of a short-term lease). The lease liability will be equal to the present value of lease payments. The right-of-use asset will be based on the liability. ASU 2016-02 requires leases to be classified as either operating or finance. Operating leases will result in a straight-line expense pattern while finance leases will result in a front-loaded expense pattern. ASU 2016-02 is effective for the Company beginning January 1, 2021. The Company will adopt ASC 842 using the modified retrospective approach and as a result will not restate prior periods. Based on the Company's current lease portfolio, the Company preliminarily expects ASC 842 to have a material impact on its consolidated balance sheets primarily related to the recognition of operating lease assets and liabilities. The Company does not expect the adoption to have a material impact on the Company's consolidated statement of operations. As the impact of this standard is noncash in nature, the Company does not anticipate its adoption having an impact on the Company's consolidated statement of cash flows.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments—Credit Losses (ASC 326)*: Measurement of Credit Losses of Financial Instruments, which, together with subsequent amendments, amends the requirement on the measurement and recognition of expected credit losses for financial assets held. ASU 2016-13 will be effective for the Company beginning January 1, 2023, with early adoption permitted. The Company is currently in the process of evaluating the effects of this pronouncement on the Company's financial statements and does not expect it to have a material impact on the consolidated financial statements.

Note 3. Business Combination

On December 2, 2020, Gores consummated the "Business Combination" pursuant to that certain Agreement and Plan of Merger, dated August 24, 2020 (the "Merger Agreement"), by and among Gores, Dawn Merger Sub, Inc. ("First Merger Sub"), a wholly owned subsidiary of Gores, Dawn Merger Sub II, LLC ("Second Merger Sub"), a wholly owned subsidiary of Gores, and Legacy Luminar. In connection with the consummation of the Business Combination (the "Closing"), the registrant changed its name from Gores Metropoulos, Inc. to Luminar Technologies, Inc.

Immediately following the business combination, there were 323,936,240 shares of common stock, consisting of 218,818,037 shares of Class A common stock and 105,118,203 shares of Class B common stock with a par value of \$0.0001 issued and outstanding, options to purchase an aggregate of 16,224,474 shares of Class A common stock and warrants to purchase, 4,089,280 shares of Class A common stock.

Pursuant to the Merger Agreement, the Company's stockholders are entitled to receive an aggregate of up to 25,818,744 earn-out shares in the form of common stock (with respect to the Company's Class A stockholders' shares of Class A common stock and with respect to the Company's Class B stockholders' shares of Class B common stock). There are six different triggering events that affect the number of earn-out shares that will be issued based upon the per share price of Class A common stock ranging from \$13.00 to \$28.00 per share. The Company accounts for the potential earn-out shares as a component of stockholders' equity in accordance with the guidance in ASC 480, *Distinguishing Liabilities from Equity*, and ASC 815, *Derivatives and Hedging*. On December 2, 2020, the Company estimated the fair value of the potential earn-out shares to be \$587.7 million, which was estimated using a Monte Carlo Model and Level 3 fair value inputs including volatility of 58.5% and a contractual term of 5.5 years. This was recorded as an increase in additional paid-in capital with an offsetting amount recorded in the same account, due to the absence of retained earnings.

The Business Combination was accounted for as a reverse recapitalization in accordance with GAAP as Luminar has been determined to be the accounting acquirer, primarily due to the fact that Legacy Luminar stockholders continue to control

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the Post-Combination Company. Under this method of accounting, while Gores was the legal acquirer, it has been be treated as the “acquired” company for financial reporting purposes. Accordingly, the Business Combination was treated as the equivalent of Luminar issuing stock for the net assets of Gores, accompanied by a recapitalization. The net assets of Gores were stated at historical cost, with no goodwill or other intangible assets recorded. Operations prior to the Business Combination are those of Legacy Luminar. Reported shares and earnings per share available to holders of the Company’s common stock, prior to the business combination, have been retroactively restated as shares reflecting the exchange ratio established in the Business Combination (approximately 1 Gores shares to 13.63094 Luminar shares).

The most significant change in the post-combination Company’s reported financial position and results was an increase in cash of \$80.6 million. The Company incurred \$17.2 million in transaction costs relating to the merger with Gores, which has been offset against additional paid-in capital in the Consolidated Statements of Convertible Preferred Stock and Stockholders’ Equity (Deficit). On the date of the Business Combination, the Company recorded a liability related to the Public and Private Warrants of \$102.4 million, with an offsetting entry to additional paid-in capital. During the period from December 2, 2020 to December 31, 2020, the fair value of the Public and Private Warrants increased to \$343.4 million, resulting in a charge of \$241.0 million in the consolidated statement of operations for the year ended December 31, 2020.

Upon closing of the Business Combination, the shareholders’ of Gores were issued 49,981,349 shares of Class A common stock. In connection with the Closing, holders of 18,651 shares of common stock of Gores were redeemed at a price per share of \$0.16.

Note 4. Revenue

Disaggregation of Revenues

The Company disaggregates its revenue from contracts with customers by geographic region based on the primary locations where the customer is situated, type of good or service and timing of transfer of goods or services to customers (point-in-time or over time), as it believes it best depicts how the nature, amount, timing and uncertainty of its revenue and cash flows are affected by economic factors. Total revenue based on the disaggregation criteria described above are as follows (in thousands):

	Year Ended December 31,			
	2020		2019	
	Revenue	% of Revenue	Revenue	% of Revenue
Revenue by primary geographical market:				
North America	\$ 4,010	29 %	\$ 10,453	83 %
Asia Pacific	906	6 %	469	4 %
Europe and Middle East	9,035	65 %	1,680	13 %
Total	13,951	100 %	12,602	100 %
Revenue by timing of recognition:				
Recognized at a point in time	2,639	19 %	9,666	77 %
Recognized over time	11,312	81 %	2,936	23 %
Total	13,951	100 %	12,602	100 %
Revenue by segment:				
Autonomy Solutions	11,387	82 %	9,666	77 %
Component Sales	2,564	18 %	2,936	23 %
Total	13,951	100 %	12,602	100 %

Volvo Stock Purchase Warrant

In March 2020, the Company issued a stock purchase warrant to Volvo Car Technology Fund AB (“VCTF”) in connection to the engineering services contract. VCTF is entitled to purchase from the Company up to 4,089,280 shares of Class A common stock, at a price of \$3.1769 per share. The warrants vest and become exercisable in two tranches based on satisfaction of certain commercial milestones. The fair value of warrants aggregating \$2.9 million represent consideration payable to a customer and would be recognized as reduction in revenue consistent with the revenue recognition pattern when these warrants become probable of vesting. The Company’s management determined that the vesting of these warrants was not probable as of December 31, 2020.

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Contract assets and liabilities

Contract assets primarily represent revenues recognized for performance obligations that have been satisfied but for which amounts have not been billed. The Company's contract assets as of December 31, 2020 were not material. The Company did not have any contract assets as of December 31, 2019. Contract liabilities consist of deferred revenue and customer advanced payments. Deferred revenue includes billings in excess of revenue recognized related to product sales and other services revenue and is recognized as revenue when the Company performs under the contract. Customer advanced payments represent required customer payments in advance of product shipments according to customer's payment term. Customer advance payments are recognized as revenue when control of the performance obligation is transferred to the customer. The Company's contract liabilities were \$2.3 million and \$0.2 million as of December 31, 2020 and 2019, respectively, and were included in accrued and other current liabilities in the consolidated balance sheets.

The significant changes in contract liabilities balances consisted of the following (in thousands):

	December 31,	
	2020	2019
Beginning balance	\$ 225	\$ —
Revenue recognized that was included in the contract liabilities beginning balance	(225)	—
Increase due to cash received and not recognized as revenue and billings in excess of revenue recognized during the period	2,284	225
Ending balance	<u>\$ 2,284</u>	<u>\$ 225</u>

Note 5. Investments

The Company's investments in debt securities consisted of the following as of December 31, 2020 and 2019 (in thousands):

	December 31, 2020			
	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury	\$ 155,339	\$ 14	\$ (6)	\$ 155,347
U.S. agency and government sponsored securities	19,996	—	—	19,996
Commercial paper	182,218	6	(4)	182,220
Corporate bonds	45,431	21	(2)	45,450
Asset-backed securities	7,012	6	—	7,018
Total debt securities	<u>\$ 409,996</u>	<u>\$ 47</u>	<u>\$ (12)</u>	<u>\$ 410,031</u>
Included in cash and cash equivalents	\$ 133,319	4	(2)	\$ 133,321
Included in marketable securities	\$ 276,677	43	(10)	\$ 276,710

	December 31, 2019			
	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury	\$ 749	\$ —	\$ —	\$ 749
U.S. agency and government sponsored securities	1,398	—	—	1,398
Commercial paper	20,183	1	(1)	20,183
Corporate bonds	3,474	—	(1)	3,473
Total debt securities	<u>\$ 25,804</u>	<u>\$ 1</u>	<u>\$ (2)</u>	<u>\$ 25,803</u>
Included in cash and cash equivalents	\$ 19,144	1	(1)	\$ 19,144
Included in marketable securities	\$ 6,660	—	(1)	\$ 6,659

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The following table presents the gross unrealized losses and the fair value for those debt securities that were in an unrealized loss position for less than 12 months as of December 31, 2020 and 2019 (in thousands):

	December 31, 2020		December 31, 2019	
	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value
U.S. Treasury	\$ (6)	\$ 65,298	\$ —	\$ —
Commercial paper	(4)	47,629	(1)	13,422
Corporate bonds	(2)	15,575	(1)	2,872
Total	<u>\$ (12)</u>	<u>\$ 128,502</u>	<u>\$ (2)</u>	<u>\$ 16,294</u>

Note 6. Financial Statement Components

Cash and Cash Equivalents

Cash and cash equivalents consisted of the following (in thousands):

	December 31,	
	2020	2019
Cash	\$ 10,652	\$ 5,676
Money market funds	64,971	2,260
U.S. Treasury	24,999	—
U.S. agency securities	—	1,398
Commercial paper	108,322	16,971
Corporate bonds	—	775
Total cash and cash equivalents	<u>\$ 208,944</u>	<u>\$ 27,080</u>

Inventories

Inventories consisted of the following (in thousands):

	December 31,	
	2020	2019
Raw materials	\$ 625	\$ 1,998
Work-in-process	52	1,376
Finished goods	2,936	628
Total inventories, net	<u>\$ 3,613</u>	<u>\$ 4,002</u>

The Company recorded inventory write-downs of \$4.4 million and \$1.4 million during the years ended December 31, 2020 and 2019, respectively.

Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consisted of the following (in thousands):

	December 31,	
	2020	2019
Prepaid expenses	\$ 1,073	\$ 817
Advance payments to vendors	961	666
Prepaid rent and other	503	12
Other receivables	2,260	329
Total prepaid expenses and other current assets	<u>\$ 4,797</u>	<u>\$ 1,824</u>

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Property and Equipment

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

	December 31,	
	2020	2019
Computer hardware and software	\$ 2,450	\$ 2,992
Demonstration fleet and demonstration units	1,821	1,603
Machinery and equipment	5,940	5,321
Furniture and fixtures	293	325
Vehicles	835	902
Leasehold improvements	791	821
Construction in progress	1,410	465
Total property and equipment	13,540	12,429
Accumulated depreciation and amortization	(5,851)	(4,562)
Total property and equipment, net	<u>\$ 7,689</u>	<u>\$ 7,867</u>

Depreciation and amortization associated with property and equipment was \$2.5 million and \$2.3 million for the years ended December 31, 2020 and 2019, respectively.

Property and equipment capitalized under capital lease obligations consisted of the following (in thousands):

	December 31,	
	2020	2019
Computer hardware and software	\$ 88	\$ 88
Machinery and equipment	838	491
Total property and equipment capitalized under capital lease obligations	926	579
Less: accumulated depreciation and amortization	(219)	(71)
Total	<u>\$ 707</u>	<u>\$ 508</u>

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Goodwill

The carrying amount of goodwill allocated to the Company's reportable segments was as follows (in thousands):

	Autonomy Solutions	Other Component Sales	Total
As of December 31, 2020	\$ 687	\$ 14	\$ 701
As of December 31, 2019	\$ 687	\$ 14	\$ 701

Other Non-Current Assets

Other non-current assets consisted of the following (in thousands):

	December 31,	
	2020	2019
Security deposits	\$ 1,106	\$ 1,793
Other non-current assets	45	36
Total other non-current assets	\$ 1,151	\$ 1,829

Accrued and Other Current Liabilities

Accrued and other current liabilities consisted of the following (in thousands):

	December 31,	
	2020	2019
Accrued expenses	\$ 3,998	\$ 2,049
Warranty liabilities	259	267
Contract liabilities	2,284	225
Accrued compensation and benefits	3,071	823
Contract losses	558	—
Capital lease liabilities and other, current	282	162
Total accrued and other current liabilities	\$ 10,452	\$ 3,526

Other Non-Current Liabilities

Other non-current liabilities consisted of the following (in thousands):

	December 31,	
	2020	2019
Deferred rent	\$ 826	\$ 1,106
Capital lease liabilities, non-current	492	295
Total other non-current liabilities	\$ 1,318	\$ 1,401

Note 7. Simple Agreements for Future Equity (SAFE)

Between April 2016 and May 2019, the Company issued SAFEs that allowed the investors to participate in future equity financings through a share-settled redemption of the amount invested (such notional being the "invested amount"). Alternatively, upon the occurrence of a change of control or an initial public offering (other than a qualified financing), the investors had the option to receive either (i) cash payment equal to the invested amount under such SAFE, or (ii) a number of shares of common stock equal to the invested amount divided by the liquidity price set forth in the applicable SAFE.

The Company issued two types of SAFEs, that each contain the change of control and initial public offering settlement alternatives described above, but settled differently upon a next round financing as follows:

(a) SAFEs that allowed the investors to participate in future equity financings through share-settled redemption at a discounted price to the price paid by other investors. That is, upon a future equity financing involving preferred shares, the SAFE settled into a number of preferred shares equal to the invested amount of the SAFE divided by a percentage of the discounted price investors pay to purchase preferred shares in the financing, with such discounted price calculated as a percentage of the price investors pay to purchase preferred shares in the financing or by reference to a valuation ceiling and

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(b) SAFEs that, instead of allowing the holder to receive a number of shares at a discounted settlement price, accrued noncash paid-in-kind interest at 8% per annum of the invested amount of the SAFE. Upon a future equity financing, the SAFE settled into a number of preferred shares equal to the invested amount of the SAFE divided by the price for which cash investors paid to purchase the preferred shares in the financing.

The Company determined that the SAFEs were not legal form debt (i.e., no creditors' rights). The SAFEs included a provision allowing for cash redemption upon the occurrence of a change of control, the occurrence of which is outside the control of the Company. Therefore, the SAFEs are classified as marked-to-market liabilities pursuant to ASC 480, *Distinguishing Liability from Equity*.

On June 24, 2019 in connection with the sale of the Series A preferred stock, the SAFEs were settled into 68,877,417 shares of Series A preferred stock and 3,612,062 shares of common stock, and there were no SAFEs issued and outstanding as of December 31, 2020 or 2019. The SAFEs were marked to fair value as of the settlement date, resulting in a charge for the increase in fair value of \$24.2 million during the year ended December 31, 2019. One SAFE note was settled in cash for \$5.6 million, resulting in an immaterial loss on settlement.

Note 8. Debt

Senior Secured Loan

In August 2017, the Company issued a Senior Secured Promissory Note with an aggregate principal of \$15.0 million (the "2017 Note"). The 2017 Note bore interest at 12.50% per annum, with an effective interest rate of 15.68% due to upfront fees of \$382,000 and allocated proceeds to warrants of \$480,000 and had a final maturity date of September 18, 2020. Principal and interest were paid according to a schedule of 28 monthly installments beginning June 18, 2018 until final maturity.

On December 18, 2018, the Company entered into the First Amendment to Senior Secured Promissory Note with the lenders which provided for an incremental advance with an aggregate principal amount of \$3.0 million (the "2018 Note" and together with the 2017 Note, the "Notes"). The 2018 Note accrued interest at 12.50% per annum, with an effective interest rate of 15.58% due to upfront fees of \$108,000 and allocated proceeds to warrants of \$46,000. Principal and interest were paid pursuant to a schedule of 27 monthly installment payments with a final maturity date on December 18, 2021. The Notes permitted prepayment with an interest make-whole premium. The Notes included standard non-financial covenants and were secured by a first priority perfected security interest in substantially all of the Company's assets. The Company was required to maintain liquidity of at least \$2.0 million. As of December 31, 2019, the Company was not in default on any covenants.

In connection with the issuance of the Notes, the Company issued warrants (see Note 9, 2017, 2018 and 2020 Warrants). Proceeds were allocated to the warrants at their full fair value, with the residual allocated to the Notes. From January 1, 2019 through December 31, 2019, \$317,000 of non-cash interest was amortized. From January 1, 2020 until settlement in the debt refinancing described below, \$55,000 of non-cash interest was amortized on the Notes.

On March 31, 2020, the Company refinanced the Notes. The \$3.6 million principal of the 2017 Note and \$2.4 million principal of the 2018 Note were repaid with a portion of the proceeds from the new Senior Secured Promissory Note ("New Notes"), which provided for \$20.0 million of initial advance, drawn in an amount of \$17.0 million on April 8, 2020 and \$3.0 million on May 26, 2020. The remaining \$10.0 million of New Notes were issued on June 6, 2020. The New Notes bore interest at 12.5% and were maturing 48 months after the initial funding date, with 32 equal monthly installments commencing on the 16th monthly payment date. The New Notes contained the same covenants as the 2017 Note and 2018 Note and required the Company to maintain liquidity of at least \$5.0 million.

Upon issuing the New Notes, the Company paid the lenders a non-refundable fee equal to 1.5% of the amount of each advance and a warrant for a number of shares of Series A convertible preferred stock equal to 10% of the principal amount of each advance divided by the exercise price of \$43.3039. The redemption of the 2017 Note and the 2018 Note was an extinguishment, resulting in an extinguishment loss of \$866,000, comprised of \$86,000 in unamortized financing costs and discount on the 2017 Note and the 2018 Note, \$255,000 of lender fee, and \$525,000 being the fair value of the newly issued warrants. Third party financing costs of \$361,000 and \$1.2 million of fair value of newly issued warrants were deferred as discount on the New Notes and \$329,000 was amortized as non-cash interest expense through December 2, 2020.

Pursuant to the terms of the merger agreement, the Company was required to repay the full outstanding balance of the senior secured term loan \$0.0 million. In connection with the repayment, the Company incurred a prepayment penalty of \$1.9 million, legal costs associated with the repayment of \$56,000 and wrote off loan origination fees of \$1.2 million. This resulted in an aggregate loss of \$3.1 million due to early extinguishment of the New Notes during the year ended December 31, 2020.

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The table below summarizes the outstanding balances recorded for the Notes (in thousands):

	December 31,	
	2020	2019
2017 Notes Principal Outstanding	\$ —	\$ 5,304
Unamortized discount (2017 Notes)	—	(56)
2018 Notes	—	2,707
Unamortized discount (2018 Notes)	—	(81)
Net carrying amount	—	7,874
Less: current portion	—	6,459
Non-current portion	\$ —	\$ 1,415

Equipment Loan

On July 31, 2017, the Company entered into an Equipment and Loan Agreement (“the agreement”) for total committed amount of \$4.0 million for the purpose of acquiring equipment. On March 29, 2018, the commitment amount was increased by \$1.4 million to a total of \$5.4 million. Under the agreement, the Company issued three promissory notes totaling \$3.2 million in the period starting from July 31, 2017 through December 15, 2017 and three promissory notes totaling \$2.2 million in the period starting from March 29, 2018 to October 16, 2018. The promissory notes bore interest at 10.35% per annum with effective rate of interest ranging from 10.37% to 13.96%. The interest only period ended on June 30, 2018 and principal and interest were paid based on the monthly schedule until final maturity on July 1, 2020.

Paycheck Protection Program Loan

On April 22, 2020 (the “Origination Date”), the Company received \$7.8 million in aggregate loan proceeds (the “PPP Loan”) from Silicon Valley Bank (the “Lender”) pursuant to the Paycheck Protection Program established under the CARES (the Coronavirus Aid, Relief, and Economic Security) Act of 2020. Payments of principal and interest were deferred for the first six months following the Origination Date, and the PPP Loan was maturing in two years after the Origination Date. Following the deferral period, the Company was required to make payments of principal and interest accrued under the PPP Loan in monthly installments based upon an amortization schedule to be determined by the Lender based on the principal balance of the PPP Loan outstanding following the deferral period and taking into consideration any portion of the PPP Loan that may be forgiven prior to that time. The PPP Loan bore interest at 1%. The Company repaid the loan in full on August 20, 2020 for \$7.84 million comprised of \$7.82 million of principal and accrued interest of \$26,000.

Bridge Note

In August 2015, the Company entered into a Convertible Promissory Note (the “Bridge Note”) with an investor (the “Investor”) with a principal amount of \$5.5 million and an interest rate of 3.00% per annum. The Bridge Note had an original maturity date of August 11, 2016, however the Company and Investors agreed to allow the Bridge Note to remain outstanding after maturity. On February 21, 2019, the Company and the Investor entered into an amendment to the Bridge Note (the “Amended Bridge Note”), which revised the Bridge Note’s settlement provisions.

In June 2019, the Company and the Investor agreed to settle the Amended Bridge Note into Series A-11 Preferred Stock at a price equal to (i) \$8.0 million divided by (ii) the Company’s fully diluted share count. The settlement of the Amended Bridge Note was accounted for as an extinguishment of debt, wherein the carrying amount of the Bridge Note was derecognized and the fair value of the Series A-11 Preferred Stock issued was recorded in equity. The difference between the carrying amount of the Note and the fair value of the Preferred Stock was recorded as a loss on extinguishment of \$6.0 million.

Others

Revolving credit facility

On November 19, 2018, the Company entered into revolving line of credit agreement for total amount of \$500,000. The revolving line of credit carried a variable interest rate which changed from time to time based on the wall street journal prime rate (Index). The credit facility matured in 2019 and the then outstanding balance of \$0.5 million was repaid in full.

Vehicle loan

In October 2017, the Company entered into a vehicle loan agreement with an aggregate principal of \$73,000 (the “Vehicle Loan”). The Vehicle Loan bears interest at 5.99% per annum and has a final maturity date of November 10, 2022.

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Principal and interest are paid according to a schedule of 60 monthly installments beginning December 10, 2017 until final maturity.

In December 2020, the Company refinanced a leased vehicle and entered into a vehicle loan agreement with an aggregate principal of \$1,000 (the "Vehicle Loan"). The Vehicle Loan bears interest at 6.29% per annum and has a final maturity date of November 1, 2025. Principal and interest are paid according to a schedule of 60 monthly installments beginning December 1, 2020 until final maturity.

Additional Equipment Loan

The Company also entered into an equipment loan agreement for its subsidiary with an aggregate principal of \$82,000 (the "Additional Equipment Loan") in December 2018. The Additional Equipment Loan carries an interest of 5.89% per annum maturing on November 14, 2023. Principal and interest are paid according to a schedule of 60 monthly installments beginning November 14, 2018 until final maturity.

The Company additionally entered into three additional equipment loan agreements during September 2020 to December 2020 for the amounts of \$60,000, \$170,000 and \$16,000 respectively. The aggregate principal amount of the loans resulted in \$246,000 (the "New Equipment Loan"). The New Equipment Loan carries interest rate varying from 6.29%, 7.64% and 8.91%, respectively. The principal and interest of the loans are to be paid in 60 monthly installments until final maturity at October 2, 2025, October 2, 2025, and October 12, 2025, respectively.

The following table summarizes the outstanding balances recorded for other debt (in thousands):

	December 31,	
	2020	2019
Vehicle loan	\$ 52	\$ 45
Additional Equipment Loan	349	146
Total	401	191
Less: current portion	99	51
Non-current portion	\$ 302	\$ 140

Following is the principal maturity schedule for long-term debt outstanding as of December 31, 2020 (in thousands):

	Amount
2021	\$ 99
2022	101
2023	91
2024	58
2025	52
Total	401
Less unamortized debt cost	—
Long-term debt	\$ 401

Note 9. 2017, 2018 and 2020 Warrants

In connection with the issuance of the 2017 Note, the Company issued warrants (the "2017 Warrants"). The 2017 Warrants allowed the holder to purchase a number of shares in a future round of preferred stock financing equal to 10% of the principal advances under the 2017 Note, divided by 70% of the price per share paid for the equity securities issued in the financing. In the event that a financing did not occur within two years from issuance, the 2017 Warrants would become exercisable for a SAFE with an invested amount equal to 10% of the advances under the 2017 Note. However, upon the issuance of Series A convertible preferred stock in June 2019, the underlying shares were determined to be Series A convertible preferred stock. Upon issuance of the 2018 Note, the Company amended the 2017 Warrants to provide additional warrant coverage for advances issued under the 2018 Note (the "2018 Warrants"). Upon the issuance of New Notes in April through September of 2020, 10% warrant coverage resulted in the issuance of additional warrants to purchase Series A convertible preferred stock (the "2020 Warrants").

The Company classified these warrants as liabilities because the holder of the warrants were entitled to settle the warrants for SAFE instruments if the Company did not consummate a qualified financing within two years of the issuance date of the warrants, and following the issuance of Series A convertible preferred stock, the underlying shares were redeemable.

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outside the Company's control through deemed liquidation provisions. The warrants were recorded at fair value with subsequent changes in fair value reflected in earnings. The change in fair value resulted in a loss of \$27.3 million and \$256,000 during the years ended December 31, 2020 and 2019, respectively. Upon closing of the Business Combination, the Warrants were exercised for 1,466,155 shares of Class A common stock and there were no warrants outstanding as of December 31, 2020.

The Company determined the following fair values for the outstanding warrants (in thousands):

	December 31,	
	2020	2019
2017 Warrants	\$ —	\$ 1,035
2018 Warrants	—	87
Total	\$ —	\$ 1,122

Note 10. Fair Value Measurements

The Company carries cash equivalents, marketable investments, Public and Private Warrants, 2017 Warrants and 2018 Warrants at fair value. Fair value is based on the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is estimated by applying the following hierarchy, which prioritizes the inputs used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement:

Level 1 — Observable inputs, which include unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2 — Observable inputs other than Level 1 inputs, such as quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 — Unobservable inputs that are supported by little or no market activity and that are based on management's assumptions, including fair value measurements determined by using pricing models, discounted cash flow methodologies or similar techniques.

The Company determined the fair value of its Level 1 financial instruments, which are traded in active markets, using quoted market prices for identical instruments.

Marketable investments classified within Level 2 of the fair value hierarchy are valued based on other observable inputs, including broker or dealer quotations, alternative pricing sources or U.S. Government Treasury yield of appropriate term. When quoted prices in active markets for identical assets or liabilities are not available, the Company relies on non-binding quotes from its investment managers, which are based on proprietary valuation models of independent pricing services. These models generally use inputs such as observable market data, quoted market prices for similar instruments, historical pricing trends of a security as relative to its peers. To validate the fair value determination provided by its investment managers, the Company reviews the pricing movement in the context of overall market trends and trading information from its investment managers. The Company performs routine procedures such as comparing prices obtained from independent source to ensure that appropriate fair values are recorded. Because the transfer of Private Warrants to anyone outside of a small group of individuals constituting the sponsors of Gores Metropoulos, Inc. would result in the Private Warrants having substantially the same terms as the Public Warrants, management determined that the fair value of each Private Warrant is the same as that of a Public Warrant, with an insignificant adjustment for short-term marketability restrictions. Accordingly, the Private Warrants are classified as Level 2 financial instruments.

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The Company's financial assets and liabilities subject to fair value measurements on a recurring basis and the level of inputs used for such measurements were as follows (in thousands):

	Fair Value (in thousands) Measured as of December 31, 2020 Using:			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents:				
Money market funds	\$ 64,971	\$ —	\$ —	\$ 64,971
U.S. Treasury	24,999	—	—	24,999
Commercial paper	—	108,322	—	108,322
Total cash equivalents	<u>\$ 89,970</u>	<u>\$ 108,322</u>	<u>\$ —</u>	<u>\$ 198,292</u>
Marketable investments:				
U.S. Treasury	\$ 130,348	\$ —	\$ —	\$ 130,348
U.S. agency and government sponsored securities	—	19,996	—	19,996
Commercial paper	—	73,898	—	73,898
Corporate bonds	—	45,450	—	45,450
Asset-backed securities	—	7,018	—	7,018
Total marketable investments	<u>\$ 130,348</u>	<u>\$ 146,362</u>	<u>\$ —</u>	<u>\$ 276,710</u>
Liabilities:				
Public Warrants	\$ 228,933	\$ —	\$ —	\$ 228,933
Private Warrants	—	114,467	—	114,467
Total warrant liabilities	<u>\$ 228,933</u>	<u>\$ 114,467</u>	<u>\$ —</u>	<u>\$ 343,400</u>

	Fair Value (in thousands) Measured as of December 31, 2019 Using:			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents:				
Money market funds	\$ 2,260	\$ —	\$ —	\$ 2,260
U.S. agency securities	—	1,398	—	1,398
Commercial paper	—	16,971	—	16,971
Corporate bonds	—	775	—	775
Total cash equivalents	<u>\$ 2,260</u>	<u>\$ 19,144</u>	<u>\$ —</u>	<u>\$ 21,404</u>
Marketable investments:				
U.S. Treasury	\$ 749	\$ —	\$ —	\$ 749
Commercial paper	—	3,212	—	3,212
Corporate bonds	—	2,698	—	2,698
Total marketable investments	<u>\$ 749</u>	<u>\$ 5,910</u>	<u>\$ —</u>	<u>\$ 6,659</u>
Liabilities:				
2017 Warrants	\$ —	\$ —	\$ 1,035	\$ 1,035
2018 Warrants	—	—	87	87
Total warrant liabilities	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 1,122</u>	<u>\$ 1,122</u>

The Company measured the 2017 Warrants and 2018 Warrants liabilities at fair value based on significant inputs not observable in the market, which caused them to be classified as Level 3 measurements within the fair value hierarchy. The valuation of the 2017 Warrants and 2018 Warrants used assumptions and estimates the Company believed would be made by a market participant in making the same valuation. The Company assessed these assumptions and estimates on an on-going basis as additional data impacting the assumptions and estimates were obtained. Changes in the fair value of the 2017

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Warrants and 2018 Warrants related to updated assumptions and estimates were recognized within the consolidated statement of operations.

Level 3 Disclosures

The 2017 and 2018 Warrants outstanding as of December 31, 2019 were valued using an option pricing method (“OPM”), which employed an assumed total equity valuation of \$640 million, an option term of three years, volatility of 49.6% and a risk-free rate of 1.62%. Total equity value was estimated using a discounted cash flow analysis employing a long-term income forecast and a discount rate of 35%, giving consideration to additional risk in the Company’s forecast relative to the prior valuation.

The 2017, 2018 and 2020 Warrants outstanding on December 2, 2020, were valued using the closing stock price of \$8.00 per share, immediately prior to the consummation of the Business Combination in accordance with the terms of the warrant agreements.

13,647 warrants were exercised on a cashless basis with all previously held warrant shares being converted to closing warrant shares and 130,376 warrants were exercised to the extent such net issue exercise resulted in the issuance of shares based on the strike price and fair value. There were no Warrants outstanding as of December 31, 2020.

The fair value is classified as Level 3 in the fair value hierarchy due to the significant management judgment required for the assumptions underlying the calculation of value.

The following table presents changes in Level 3 liabilities measured at fair value for the years ended December 31, 2019 (in thousands):

	SAFEs	2017 Warrants	2018 Warrants
Balance-beginning of year	\$ 122,588	\$ 808	\$ 58
Additions	37,379	—	—
Exercise or conversion	(184,182)	—	—
Measurement adjustments	24,215	227	29
Balance-end of year	\$ —	\$ 1,035	\$ 87

The following table presents changes in Level 3 liabilities measured at fair value for the years ended December 31, 2020 (in thousands):

	2017 Warrants	2018 Warrants	2020 Warrants
Balance-beginning of year	\$ 1,035	\$ 87	\$ —
Additions	—	—	1,728
Exercise or conversion	(13,714)	(1,700)	(14,698)
Measurement adjustments	12,679	1,613	12,970
Balance-end of year	\$ —	\$ —	\$ —

The Company’s other financial instruments’ fair value, including accounts receivable, accounts payable and other current liabilities, approximate its carrying value due to the relatively short maturity of those instruments. The carrying amounts of the Company’s capital leases approximate their fair value, which is the present value of expected future cash payments based on assumptions about current interest rates and the creditworthiness of the Company.

Note 11. Convertible Preferred Stock

Preferred Stock

Series A

On June 24, 2019, the Company amended and restated its Certificate of Incorporation (“Certificate”), which authorized the issuance of up to 102,740,023 shares of Series A Preferred Stock with a par value of \$0.00001. On June 24, 2019, the Company entered into a Series A Convertible Preferred Stock Purchase Agreement to issue preferred stock to investors for cash and in settlement of outstanding SAFEs and Amended Bridge Note.

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Series X

On August 24, 2020, the Company entered into the Series X Preferred Stock Purchase Agreement to offer shares of the Company's Series X Preferred Stock. In August 2020 and September of 2020, the Company issued an aggregate of 17,065,536 preferred stock for cash at a purchase price of \$9.96 per share of preferred stock, which generated gross proceeds of \$170.0 million. In October 2020, the Company issued an additional 1,391,694 shares of preferred stock for gross proceeds of \$13.86 million. Accordingly, the Company amended and restated its certificate of incorporation ("Certificate"), which authorized the issuance of up to 20,077,073 shares of Series X Preferred Stock with a par value of \$0.00001.

Upon closing of the Business Combination on December 2, 2020, the outstanding shares of Series A and Series X Preferred Stock were automatically converted into 113,275,381 shares of Class A common stock. No shares of convertible preferred stock were authorized, issued or outstanding as of December 31, 2020.

The original issue price and the liquidation value, as of December 2, 2020, of each class of preferred stock were as follows:

	Shares Authorized	Shares Issued and Outstanding	Per Share Liquidation Preference
Series A	30,374,645	22,638,795	\$ 3.18
Series A-1	2,226,013	2,226,013	1.12
Series A-2	18,030,728	18,030,728	1.11
Series A-3	3,047,168	3,047,168	1.31
Series A-4	679,188	679,188	1.47
Series A-5	1,877,184	1,691,162	1.48
Series A-6	3,372,566	3,372,566	2.22
Series A-7	19,896,476	19,896,476	2.54
Series A-8	5,258,501	5,258,501	2.70
Series A-9	10,205,127	10,205,127	2.86
Series A-10	3,445,914	3,445,914	3.02
Series A-11	4,326,513	4,326,513	0.39
Series X	20,077,073	18,457,230	9.96

Dividends

Holders of both Series A and Series X Preferred Stock were entitled to receive non-cumulative dividends at a rate per annum equal to 6% of the applicable original issue price, if and when declared by the Company's Board of Directors. Preferred stockholders were entitled to receive dividends prior to and in preference to any dividends to common stockholders. No dividends were declared or paid during the year ended December 31, 2020 or 2019.

Liquidation

Holders of both Series A and Series X Preferred Stock were entitled to receive a liquidation preference prior to any distribution to holders of common stock. Upon the occurrence of a liquidation transaction, preferred stock was redeemable by the Company for the applicable original issue price. Moreover, if the holders of preferred stock would have received a greater amount of consideration had the preferred stock been converted immediately prior to such transaction, the preferred stock would have been deemed to be converted for purposes of the redemption.

Each of the Series A and Series X Preferred Stock were conditionally puttable by the holders upon "deemed liquidation events," which included a merger, consolidation, change of control, or a sale of substantially all of the Company's assets. The Company determined that triggering events that could result in a deemed liquidation were not solely within the control of the Company. Therefore, the preferred stock was classified outside of permanent (i.e., temporary equity). The preferred stock was not accreted to its liquidation preference, as it was not probable for the preferred stock to become redeemable. The Company, until the conversion of the preferred stock into Class A common stock, monitored the circumstances that could have caused the preferred stock to become probable of becoming redeemable.

Conversion

Both Series A and Series X Preferred Stock were convertible at any time, at the option of the holder, into common stock at a conversion rate of 1 initially, subject to adjustments. The conversion prices of each series of preferred stock were as

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follows:

	Conversion price
Series A	\$ 3.18
Series A-1	1.12
Series A-2	1.11
Series A-3	1.31
Series A-4	1.47
Series A-5	1.48
Series A-6	2.22
Series A-7	2.54
Series A-8	2.70
Series A-9	2.86
Series A-10	3.02
Series A-11	1.78
Series X	9.96

Additionally, all outstanding shares of the preferred stock were automatically convertible into shares of underlying common stock upon the Company's sale of its common stock in a firm commitment underwritten public offering pursuant to a registration statement under the Securities Act, the public offering price of which was not less than \$64.96 per share and which resulted in aggregate cash proceeds to the Company of not less than \$100.0 million, net of underwriting discounts and commissions (a "Qualified IPO").

Voting Rights

Holders of preferred stock were entitled to the same voting rights as the common stockholders and to notice of stockholders' meeting. The holders of common stock and preferred stock voted together as a single class (on an as-converted basis) on all matters. Each holder of preferred stock was entitled to the number of votes equal to the number of shares of common stock into which such shares of preferred stock would have been convertible.

Beneficial Conversion Features ("BCFs")

The Company assessed whether BCFs existed for the optional conversion rights that did not require bifurcation as derivatives. If the conversion option was in-the-money as of the commitment date, the preferred stock contained a BCF. The BCF was recognized as a deemed dividend against the carrying amount of the preferred stock. The Company monitored for the issuance of additional shares below the conversion price, which could have result in a contingent BCF.

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The following table summarizes the calculation of the BCF as of the commitment dates of the Preferred Stock:

Commitment Date	Series	Type of Consideration received (cash or settlement of other instruments)	Effective Conversion Price	Fair value of the Common Stock	Number of Shares Issuable upon Conversion	BCF
6/24/2019	A	Cash	\$ 3.18	\$ 1.36	8,833,786	\$ —
6/24/2019	A	Settlement of SAFEs	3.18	1.36	1,024,569	—
6/24/2019	A-1	Settlement of SAFEs	1.12	1.36	2,226,013	536,000
6/24/2019	A-2	Settlement of SAFEs	1.11	1.36	18,030,728	4,590,000
6/24/2019	A-3	Settlement of SAFEs	1.31	1.36	3,047,168	156,000
6/24/2019	A-4	Settlement of SAFEs	1.47	1.36	679,188	—
6/24/2019	A-5	Settlement of SAFEs	1.48	1.36	1,691,162	—
6/24/2019	A-6	Settlement of SAFEs	2.22	1.36	3,372,566	—
6/24/2019	A-7	Settlement of SAFEs	2.54	1.36	19,896,477	—
6/24/2019	A-8	Settlement of SAFEs	2.70	1.36	5,258,501	—
6/24/2019	A-9	Settlement of SAFEs	2.86	1.36	10,205,127	—
6/24/2019	A-10	Settlement of SAFEs	3.02	1.36	3,445,914	—
6/24/2019	A-11	Settlement of Note	1.78	1.36	4,326,513	—
6/26/2019	A	Cash	3.18	1.36	9,443,212	—
7/15/2019	A	Cash	3.18	1.36	157,382	—
8/24/2020 to 10/22/2020	X	Cash	9.96	10.33	18,457,230	6,757,000
						<u>\$ 12,039,000</u>

The Company recorded a total BCF of \$12.0 million from the issuance of preferred stock prior to the close of the Business Combination. Because the preferred stock is convertible at any time pursuant to the optional conversion feature, the Company recognized a dividend equal to the BCF at the applicable commitment date. As the Company had an accumulated deficit as of the end of all periods presented, the BCF resulted in an increase and decrease in additional paid-in capital by the same amount.

Furthermore, the preferred stock contained a down-round protection provision that reduced the conversion price if the Company issues shares at less than the conversion price or for no consideration. This provision was not triggered upon consummation of the Business Combination and no contingent BCF would be recorded during the year ended December 31, 2020.

Note 12. Stockholders' Equity (Deficit)

Class A and Class B Common Stock

The Company's Board of Directors has authorized two classes of common stock, Class A and Class B. As of December 31, 2020, the Company had authorized 715,000,000 and 121,000,000 shares of Class A and Class B common stock. As of December 31, 2020, the Company had 218,818,037 and 105,118,203 shares of Class A and Class B common stock issued and outstanding, respectively. Holders of the Class A and Class B common stock have identical rights, except that holders of the Class A common stock are entitled to one vote per share and holders of the Class B common stock are entitled to ten votes per share. Shares of Class B common stock can be converted to shares of Class A common stock at any time at the option of the stockholder and automatically convert upon sale or transfer, except for certain transfers specified in our amended and restated certificate of incorporation.

In connection with the merger with Gores, the Company's Chief Executive Officer exchanged 22,935,412 shares of Founders Preferred Stock and 82,182,791 shares of Class A common stock, which were entitled to one vote per share, into the same number of shares of Class B common stock, which are entitled to ten (10) votes per share. The Company recorded the incremental value of \$3.0 million associated with this transaction as stock-based compensation in general and administrative expenses.

Treasury Stock

As of December 31, 2020, and 2019, the Company had 0 and 4,958,471 shares of treasury stock outstanding, respectively.

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Founders Preferred Stock

26,206,837 shares of Founders Preferred Stock were issued in 2015. The compensation expense associated with the Founders Preferred Stock was immaterial to the financial statements. The Founders Preferred Stock was substantively the same as common stock, as they share identical rights and features. The Founders Preferred Stock was convertible into common stock on a one-to-one basis at any time. The Founders Preferred Stock is presented as a component of the Company's permanent equity. Upon closing of the Business Combination, Founders Preferred Stock was converted into shares of Class A and Class B common stock.

Note 13. Earnings (Loss) Per Share

Founders Preferred Stock, Series A and Series X Preferred Stock, and unvested Restricted Stock Awards ("RSA") are participating securities in periods of income, as the Founders Preferred Stock, Series A and Series X Preferred Stock, and unvested RSAs participate in undistributed earnings on an as-if-converted or as-vested basis. However, the Founders Preferred Stock, Series A and Series X Preferred Stock, and unvested RSAs do not share in losses. The Company computes earnings per share of Common Stock using the two-class method required for participating securities and does not apply the two-class method in periods of net loss. Earnings per share calculations for all periods prior to the Business Combination have been retrospectively restated to the equivalent number of shares reflecting the exchange ratio established in the reverse capitalization. Subsequent to the Business Combination, earnings per share was calculated based on weighted average number of shares of common stock then outstanding.

The following table sets forth the computation of basic and diluted loss for the years ended December 31, 2020 and 2019 as follows: (in thousands, except for share and per share amounts):

	December 31,	
	2020	2019
Numerator:		
Net loss	\$ (362,298)	\$ (94,718)
Deemed dividend attributable to BCF accretion	(6,757)	(5,282)
Net loss attributable to common shareholders	<u>\$ (369,055)</u>	<u>\$ (100,000)</u>
Denominator:		
Weighted average Common shares outstanding- Basic	145,096,996	118,835,912
Dilutive effect of potential common shares	—	—
Weighted average Common shares outstanding- Diluted	<u>145,096,996</u>	<u>118,835,912</u>
Net loss per shares attributable to Common shareholders- Basic and Diluted	<u>\$ (2.54)</u>	<u>\$ (0.84)</u>

The following table presents the potential shares of Common Stock outstanding that were excluded from the computation of diluted net loss per share of common stock as of the periods presented because including them would have been antidilutive:

	December 31,	
	2020	2019
Warrants	24,089,255	971,626
Stock Options	16,188,071	4,988,077
Restricted Stock	1,815,891	6,273,719
Series A Convertible Preferred Stock	—	94,818,151
Founders Preferred Stock	—	26,206,837
Earn-out Shares	25,818,744	—
Total	<u>67,911,961</u>	<u>133,258,410</u>

Note 14. Stock-based Compensation

The Company maintained the 2015 Stock Plan (the "2015 Plan") under which incentive stock options, non-qualified stock options, and restricted stock were granted to employees and non-employee consultants. In connection with the Business Combination, the Company assumed the 2015 Plan upon the Closing. The Company terminated the 2015 Plan, provided that the outstanding awards previously granted under the 2015 Plan continue to remain outstanding under the 2015 Plan. In December 2020, the Company's Board adopted and the Company's stockholders approved the 2020 Equity Incentive Plan (the "2020 Plan"). The 2020 Plan became effective upon the closing of the Business Combination. Under the 2020 Plan, as

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of December 31, 2020, the Company was authorized to issue a maximum number of 36,588,278 shares of Class A common stock. No grants were made in 2020 under the 2020 Plan.

Stock Options

Under the terms of the 2015 Plan, incentive stock options must have an exercise price at or above the fair market value of the stock on the date of the grant, while non-qualified stock options are permitted to be granted below fair market value of the stock on the date of grant. Stock options granted have service-based vesting conditions only. The service-based vesting conditions vary, though typically, stock options vest over four years with 25% of stock options vesting on the first anniversary of the grant and the remaining 75% vesting monthly over the remaining 36 months. Option holders have a 10-year period to exercise the options before they expire. Forfeitures are recognized in the period they occur.

The fair value of stock option awards in 2020 and 2019 was determined on the grant date using the Black-Scholes valuation model based on the following assumptions:

	2020	2019
Expected term (years) ⁽¹⁾	5.96 – 6.02	5.27 – 6.02
Current stock value	\$1.67 – \$5.64	\$1.28 – \$1.67
Expected volatility ⁽²⁾	49.3% – 51.9%	44.6% – 49.3%
Risk-free interest rate ⁽³⁾	0.4% – 1.8%	1.6% – 1.9%
Dividend yield ⁽⁴⁾	0 %	0 %

(1) *The expected term is the length of time the grant is expected to be outstanding before it is exercised or terminated. This number is calculated as the midpoint between the vesting term and the original contractual term (contractual period to exercise). If the option contains graded vesting, then the vesting term would be based on the vesting pattern.*

(2) *Volatility, or the standard deviation of annualized returns, was calculated based on comparable companies' reported volatilities.*

(3) *Risk free rate was obtained from US treasury notes for the expected terms noted as of the valuation date.*

(4) *The Company has assumed a dividend yield of zero as it has no plans to declare dividends in the foreseeable future.*

Prior to December 2, 2020, given the absence of a public trading market, the Board considered numerous objective and subjective factors to determine the fair value of the Company's Common Stock at each meeting at which awards were approved. These factors included, but were not limited to, (i) contemporaneous third-party valuations of Common Stock; (ii) the rights and preferences of Series A and Series X Preferred Stock relative to Common Stock; (iii) the lack of marketability of Common Stock; (iv) developments in the business; and (v) the likelihood of achieving a liquidity event, such as an IPO or sale of the Company, given prevailing market conditions.

A summary of the Company's stock option activity for the years ended December 31, 2020 and 2019 was as follows:

	Number of Common Stock Options	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value (In Thousands)
Outstanding as of December 31, 2018	—	\$ —		
Granted	5,002,390	1.67		
Forfeited	(14,313)	1.67		
Outstanding as of December 31, 2019	4,988,077	1.67		
Granted	12,904,692	1.67		
Forfeited	(1,704,698)	1.67		
Outstanding as of December 31, 2020	16,188,071	\$ 1.67	9.35	\$ 523,401
Vested and exercisable as of December 31, 2020	2,524,151	\$ 1.67	8.87	\$ 81,612
Vested and expected to vest as of December 31, 2020	16,188,071	\$ 1.67	9.35	\$ 523,401

The compensation cost recognized for options during the years ended December 31, 2020 and 2019 was \$0.2 million and \$0.2 million, respectively. The weighted-average grant date fair value per share of options granted during the year ended

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December 31, 2020 and 2019 was \$0.98 and \$0.68, respectively. The total fair value of options that vested during the year ended December 31, 2020 and 2019 was \$4.4 million and \$0.2 million.

As of December 31, 2020, the Company had \$11.2 million of unrecognized stock-based compensation expense related to the stock options. This cost is expected to be recognized over a weighted-average period of 2.04 years.

Restricted Stock

Prior to June 30, 2019, the Company granted restricted stock awards to employees. Recipients purchased the restricted stock on the grant date and the Company has the right to repurchase the restricted shares at the same price recipients paid to obtain those shares. The restrictions lapse solely based on continued service, and generally lapse over 4 years —25% on the first anniversary of the date of issuance, and the remaining 75% monthly over the remaining 36 months. At the grant date of the award, recipients of restricted stock are granted voting rights and receive dividends on unvested shares. No restricted stock awards have been granted after June 30, 2019.

Employee restricted stock activity for the years ended December 31, 2020 and 2019 was as follows:

	Shares	Weighted Average Grant Date Fair Value per Share
Outstanding as of December 31, 2018	22,849,169	\$ 0.22
Granted	2,055,545	1.29
Forfeited	(1,324,245)	0.53
Vested	(17,333,998)	0.14
Outstanding as of December 31, 2019	6,246,471	0.80
Granted	—	—
Forfeited	(1,667,349)	0.86
Vested	(2,770,458)	0.74
Outstanding as of December 31, 2020	1,808,664	1.15

The total fair value of restricted stock that vested during the year ended December 31, 2020 and 2019 was \$2.2 million and \$2.5 million, respectively. The compensation cost for restricted stock recognized for years ended December 31, 2020 and 2019 was \$2.4 million and \$2.4 million, respectively.

As of December 31, 2020, the Company had \$1.9 million of unrecognized stock-based compensation expense related to the restricted stock. This cost is expected to be recognized over a weighted-average period of 1.46 years.

Non-employee awards

The restricted stock disclosures above do not include non-employee awards. Non-employee awards vest over time based on service conditions similar to those of employees. Prior to adoption of ASU 2018-07 on January 1, 2019 the Company accounted for the non-employee awards in accordance with ASC 505, *Equity*, and remeasured the fair value of restricted stock each reporting period until the performance completion date. Total compensation cost for non-employee restricted stock for years ended December 31, 2020 and 2019 was \$124,000 and \$44,000, respectively. Unrecognized compensation cost for non-employee restricted stock as of December 31, 2020 is immaterial. This cost is expected to be recognized over a weighted average period of 1.29 years.

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Non-employee restricted stock activity for the years ended December 31, 2020 and 2019 was as follows:

	Shares	Weighted Average Grant Date Fair Value per Share
Outstanding as of December 31, 2018	234,697	\$ 0.11
Granted	—	—
Forfeited	—	—
Vested	(207,449)	1.29
Outstanding as of December 31, 2019	27,248	1.29
Granted	—	—
Forfeited	(3,123)	—
Vested	(16,898)	1.29
Outstanding as of December 31, 2020	7,227	1.29

Compensation expense

Stock-based compensation expense by function was as follows (in thousands):

	Year Ended December 31,	
	2020	2019
Cost of sales	\$ 309	\$ 92
Research and development	2,098	914
Sales and marketing	414	163
General and administrative	5,890	1,533
Total	\$ 8,711	\$ 2,702

Note 15. Retirement Plan

The Company's subsidiary, Black Forest Engineering ("BFE"), had a Simplified Employee Pension (SEP) defined-contribution savings plan. This plan covered all full-time employees of BFE that have been employed at least two of the immediately preceding five years and were over 21 years old. The Company provided contributions of up to 15% of each participant's gross salary, yearly. The Company discontinued the SEP in June 2019. During the year ended December 31, 2019, the Company's contribution to the SEP was \$135,000.

Note 16. Income Taxes

The following table presents components of loss before income taxes for the periods presented (in thousands):

	Year Ended December 31,	
	2020	2019
Domestic	\$ (362,338)	\$ (94,718)
Foreign	40	—
Loss before income taxes	\$ (362,298)	\$ (94,718)

The current and deferred provision for income taxes for 2020, and 2019 is zero due to the Company having a full valuation allowance.

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The reconciliation between the U.S. federal statutory income tax rate of 21% to the Company's effective tax for the periods presented is as follows:

	Year Ended December 31,	
	2020	2019
U.S. federal provision at statutory rate	21.0 %	21.0 %
State income taxes, net of federal benefit	0.7	2.9
Tax credits	0.6	1.9
Fair value of financial instruments	(15.6)	(6.8)
Stock-based compensation expense	(0.4)	(0.6)
Uncertain tax benefits	(0.3)	(0.9)
Change in valuation allowance	(6.0)	(17.5)
Effective tax rate	0.0 %	0.0 %

The Company's effective tax rates differ from the federal statutory rate primarily due to the change in valuation allowance, non-deductible stock-based compensation expense and the fair value on instruments treated as debt for GAAP and equity for tax purposes, which is not deductible for income tax purposes, for both 2020 and 2019.

The Company's deferred income tax assets and liabilities as of December 31, 2020 and 2019 were as follows (in thousands):

	Year Ended December 31,	
	2020	2019
Deferred tax assets:		
Net operating loss carry forward	\$ 62,346	\$ 43,971
Tax credits	3,975	2,397
Accruals and reserves	3,323	1,671
Stock-based compensation expense	267	23
Other	2	2
Total deferred tax assets	69,913	48,064
Valuation allowance	(69,222)	(46,998)
Total deferred tax asset	691	1,066
Deferred tax liabilities:		
Depreciation and amortization	691	1,066
Total deferred tax liabilities	691	1,066
Net deferred tax assets (liabilities)	\$ —	\$ —

The Company assesses the realizability of deferred tax assets based on the available evidence, including a history of taxable income and estimates of future taxable income. In assessing the realizability of deferred tax assets, the Company considers whether it is more likely than not that all or some portion of deferred tax assets will not be realized. Due to the history of losses incurred by the Company, management believes it is not more likely than not that all of the deferred tax assets can be realized. Accordingly, the Company established and recorded a full valuation allowance on its net deferred tax assets of \$69.2 million and \$47.0 million as of December 31, 2020 and 2019, respectively.

No deferred tax liabilities for foreign withholding taxes have been recorded relating to the earnings of the Company's foreign subsidiaries since all such earnings are intended to be indefinitely reinvested. The amount of the unrecognized deferred tax liability associated with these earnings is immaterial.

Utilization of the net operating loss and tax credit carryforwards is subject to a substantial annual limitation due to the "ownership change" limitations provided by Section 382 and 383 of the Internal Revenue Code of 1986, as amended, and other similar state provisions. Any annual limitation may result in the expiration of net operating loss and tax credit carryforwards before utilization. As of December 31, 2020, the Company had \$241.6 million of U.S. federal net operating loss carryforwards available to reduce future taxable income, of which \$198.9 million will be carried forward indefinitely for U.S. federal tax purposes and \$42.7 million will expire beginning in 2035 to 2037. The Company also has \$240.0 million of U.S. state net operating loss carryforwards that will expire beginning in 2035 to 2037.

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The Company also has federal and state research and development tax credit carryforwards of \$8.0 million and \$4.7 million as of December 31, 2020 and 2019, respectively. The federal and state research credit carryforwards will begin expiring in 2037.

Unrecognized Tax Benefits

The Company reports income tax related interest and penalties within its provision for income tax in its consolidated statements of operations. Similarly, the Company reports the reversal of income tax-related interest and penalties within its provision for income tax line item to the extent the Company resolves its liabilities for uncertain tax positions in a manner favorable to its accruals therefor. The Company had no interest and penalties accrued as of December 31, 2020 and 2019. The Company does not expect that the total amounts of unrecognized tax benefits will significantly increase or decrease within 12 months of the reporting date.

The following is a tabular reconciliation of the total amounts of unrecognized tax benefits (in thousands):

	Year Ended December 31,	
	2020	2019
Unrecognized tax benefits as of the beginning of the year	\$ 2,397	\$ 1,473
Increases related to prior year tax positions	327	—
Increase related to current year tax positions	1,251	924
Unrecognized tax benefits as of the end of the year	<u>\$ 3,975</u>	<u>\$ 2,397</u>

None of the Company's unrecognized tax benefits, if recognized, would affect the effective tax rate since the tax benefits would increase a deferred tax asset that is currently fully offset by a full valuation allowance. The Company and its subsidiaries file federal, state and foreign income tax returns. In the normal course of business, the Company is subject to examination by taxing authorities, for which the Company's major tax jurisdictions are the United States and various states. The Company's federal and state income tax returns from inception to December 31, 2020 remain subject to examination.

Note 17. Commitments and Contingencies

Leases

The Company leases manufacturing equipment under non-cancelable capital leases expiring at various dates through November 2025. Amortization expense for the capital lease assets was immaterial for the years ended December 31, 2020 and December 31, 2019, respectively, and was included in depreciation expense.

The Company also leases office and manufacturing facilities under non-cancelable operating leases expiring at various dates through September 2024. Rent expense related to operating leases was \$7.6 million and \$6.0 million for the years ended December 31, 2020 and 2019, respectively.

As of December 31, 2020, future minimum lease payments under all noncancelable capital and operating leases with an initial lease term in excess of one year were as follows (in thousands):

	Capital Leases	Operating Leases
2021	\$ 331	\$ 5,834
2022	240	6,172
2023	70	4,544
2024	28	746
2025	25	—
Thereafter	—	—
Total minimum lease payments	<u>694</u>	<u>17,296</u>
Less: amount representing interest	<u>80</u>	
Capital lease obligations as of December 31, 2020	<u>\$ 614</u>	

Purchase Obligations

The Company purchases goods and services from a variety of suppliers in the ordinary course of business. Purchase obligations are defined as agreements that are enforceable and legally binding and that specify all significant terms, including fixed or minimum quantities to be purchased, fixed, minimum, or variable price provisions, and the approximate timing of the

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transaction. The Company had purchase obligations primarily for purchases of inventory, R&D, and general and administrative activities totaling \$9.8 million as of December 31, 2020, which is expected to be received within a year.

General litigation

From time to time, the Company is involved in actions, claims, suits and other proceedings in the ordinary course of business, including assertions by third parties relating to intellectual property infringement, breaches of contract or warranties or employment-related matters. When it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimate, the Company records a liability for such loss contingencies. The Company's estimates regarding potential losses and materiality are based on the Company's judgment and assessment of the claims utilizing currently available information. Although the Company will continue to reassess its reserves and estimates based on future developments, the Company's objective assessment of the legal merits of such claims may not always be predictive of the outcome and actual results may vary from the Company's current estimates.

Dispute Settlement

On June 29, 2018, a lawsuit was filed against a Company employee and the Company, alleging trade secret misappropriation, breach of fiduciary duty and breach of certain agreements relating to the employee's departure from Plaintiff and joining the Company, and sought unspecified monetary damages. On July 13, 2020, the parties agreed to settle all outstanding litigation by entering into a settlement agreement. The terms of the agreement require the Company to pay \$1.5 million in tranches to the plaintiff, through October 2021. The Company accrued this amount as settlement liability and recorded the related expense in general and administrative expenses in 2018. The remaining balance of the settlement liability was \$1.0 million as of December 31, 2020.

Supplier Contract

On May 2, 2018, in order to manage manufacturer lead times and meet product forecasts, the Company committed to purchase certain components aggregating to \$2.6 million. On August 14, 2020, to avoid possible losses due to technological obsolescence, the Company negotiated with the supplier a release from its obligation to purchase its components by agreeing to pay \$1.1 million. The Company recognized this amount in cost of sales in the consolidated statement of operations for the year ended December 31, 2020.

Note 18. Segment and Customer Concentration Information

Reportable segments are (i) Autonomy Solutions and (ii) Component Sales. These segments reflect the way the CODM evaluates the Company's business performance and manages its operations. Each segment has distinct product offerings, customers, and market penetration. The Chief Executive Officer is the CODM of the Company.

Autonomy Solutions

This segment manufactures and distributes commercial lidar sensors that measures distance using laser light to generate a highly accurate 3D map for automotive mobility applications. This segment is impacted by trends in and the strength of the autonomous vehicles and associated infrastructure/technology sector.

Component Sales

This segment is in the business of development of ultra-sensitive pixel-based sensors. This segment also designs, tests and provides consulting services for non-standard integrated circuits that are essential for systems to meet the requirement of customers. This segment is impacted by trends in and the strength of automobile and aeronautics sector as well as government spending in military and defense activities.

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The accounting policies of the operating segments are the same as those described in Note 2. Segment operating results and reconciliations to the Company's consolidated balances are as follows (in thousands):

Year ended December 31, 2020					
	Autonomy Solutions	Component Sales	Total reportable segments	Eliminations (1)	Total Consolidated
Revenue:					
Revenues from external customers	\$ 11,387	\$ 2,564	\$ 13,951	\$ —	\$ 13,951
Revenues from internal customer	1,516	3,248	4,764	(4,764)	—
Total Revenue	<u>\$ 12,903</u>	<u>\$ 5,812</u>	<u>\$ 18,715</u>	<u>\$ (4,764)</u>	<u>\$ 13,951</u>
Depreciation and amortization	\$ 2,395	\$ 128	\$ 2,523	\$ (6)	\$ 2,517
Operating gain (loss)	(86,661)	(316)	(86,977)	102	(86,875)
Other significant items:					
Segment assets	511,676	2,975	514,651	(4,300)	510,351
Inventories, net	3,604	9	3,613	—	3,613
Year ended December 31, 2019					
	Autonomy Solutions	Component Sales	Total reportable segments	Eliminations (1)	Total Consolidated
Revenue:					
Revenues from external customers	\$ 9,666	\$ 2,936	\$ 12,602	\$ —	\$ 12,602
Revenues from internal customer	—	2,949	2,949	(2,949)	—
Total Revenue	<u>\$ 9,666</u>	<u>\$ 5,885</u>	<u>\$ 15,551</u>	<u>\$ (2,949)</u>	<u>\$ 12,602</u>
Depreciation and amortization	\$ 2,135	\$ 181	\$ 2,316	\$ —	\$ 2,316
Operating gain (loss)	(62,874)	259	(62,615)	—	(62,615)
Other significant items:					
Segment assets	52,171	2,218	54,389	(2,525)	51,864
Inventories, net	4,002	—	4,002	—	4,002

(1) Represent the eliminations of all intercompany balances and transactions during the period presented.

One customer accounted for 64% of the Company's revenue for the year ended December 31, 2020. One customer accounted for 43% of the Company's revenue for the year ended December 31, 2019.

Note 19. Related Party Transactions

Consulting Fees

In May 2017, the Company entered into a short-term lease agreement with a company controlled by the Chief Business Officer. Under the lease agreement, Luminar leases approximately 4,910 square feet of corporate housing. The Company incurred rent expense of \$0 and \$11,000 for December 2020 and December 31, 2019 respectively.

Related Party Payable

In February 2017, BFE entered into a five-year lease agreement with BFE Leasing LLC, a related party. Under the lease agreement, BFE leases approximately thirteen thousand square feet of office space in Colorado Springs, Colorado. As of December 31, 2020, future minimum lease payments total \$0.5 million related to this facility. Rent expense was \$0.3 million and \$0.3 million for the years ended December 31, 2020 and 2019, respectively.

During the year ended December 31, 2020, the former Chief Financial Officer separated from the Company and as per the terms of the release and separation agreement entered into with him, the unvested restricted stock granted are expected to be repurchased at the original purchase price which is immaterial.

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Note 20. Subsequent Events

In preparing the audited consolidated financial statements as of December 31, 2020, the Company has evaluated subsequent events through April 14, 2021.

Resale Prospectus

On February 2, 2021, the Company filed a prospectus relating to the resale by certain Selling Shareholders of up to 181,247,830 shares of Class A common stock, including shares of Class A common stock issuable pursuant to the exercise of 6,666,666 Private Warrants. The Company will not receive any of the proceeds from the sales of Class A common stock by the Selling Shareholders or exercise of Private Warrants (assuming cashless exercise). The Company is bearing all costs, expenses and fees in connection with registration of these securities.

Exercise and Redemption of Public Warrants

On February 3, 2021, the Company announced that holders of its 13,333,309 outstanding public warrants to purchase shares of its Class A common stock (the “Public Warrants”), will have until March 5, 2021 to exercise their Public Warrants. The Public Warrants were exercisable for an aggregate of 13,333,309 shares of Class A common stock at a price of \$11.50 per share. On March 10, 2021, the Company changed the previously announced redemption date of March 5, 2021 to a new redemption date of March 16, 2021 for the redemption of its outstanding Public Warrants. As of March 16, 2021, 3,589,645 Private Warrants and 13,128,671 Public Warrants were exercised, and the Company received \$153.9 million in cash proceeds from the exercise of these warrants. Pursuant to the terms of the agreements governing the rights of the holders of the Public Warrants, the Company redeemed the remaining unexercised and outstanding 204,638 Public Warrants after March 16, 2021 for a redemption price of \$0.01 per Public Warrant. As a result of the exercises of the Public and Private Warrants and the redemption of the remaining Public Warrants, \$290.6 million of the \$343.4 million recorded as warrant liabilities as of December 31, 2020 has been extinguished subsequent to December 31, 2020. The fair value as of December 31, 2020 of those warrants that have not yet been extinguished was \$52.8 million. The Company had 3,077,021 Private Warrants and no Public Warrants, outstanding as of April 14, 2021.

Filing of S-8 Registration Statement

On February 26, 2021, the Company filed a registration statement on Form S-8 under the Securities Act of 1933, as amended, with the SEC (the “S-8 Registration Statement”). The S-8 Registration Statement registered a total of 85,949,156 shares of Class A common stock, which includes all shares issued or reserved for issuance under the Company’s 2015 Stock Plan (the “2015 Plan”), 2020 Equity Incentive Plan (the “2020 Plan”), 2020 Employee Stock Purchase Plan (the “ESPP”), and the Management Longer Term Equity Incentive Plan (the “MLTEIP”). Shares registered under the S-8 Registration Statement will generally be available for sale in the open market after the 180-day lock-up period, which began on December 2, 2020, the closing date of Business Combination.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

None.

ITEM 9A. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

We have established disclosure controls and procedures that are designed to ensure that the information required to be disclosed by us in the reports that we file or submit under 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 management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we have evaluated the effectiveness of our disclosure controls and procedures as required under Rules 13a-15(e) and 15d-15(e) under the Exchange Act as of December 31, 2020. Based on this review, our principal executive officer and principal financial officer have concluded that these disclosure controls and procedures were not effective as of December 31, 2020 due to the material weakness in our internal control over financial reporting described below.

Management's Report on Internal Control Over Financial Reporting

As discussed elsewhere in this Annual Report on Form 10-K, we completed the Business Combination on December 2, 2020. Prior to the Business Combination, the Company was a special purpose acquisition company formed for the purpose of effecting a merger, capital stock exchange, asset acquisition, stock purchase, reorganization, or other similar business combination with one or more target businesses. As a result, previously existing internal controls are no longer applicable or comprehensive enough as of the assessment date as the Company's operations prior to the Business Combination were insignificant compared to those of the Post-Combination Company. The design and implementation of internal control over financial reporting for the Post-Combination Company has required and will continue to require significant time and resources from management and other personnel. Because of this, the design and ongoing development of our framework for implementation and evaluation of internal control over financial reporting is in its preliminary stages. As a result, management was unable, without incurring unreasonable effort or expense, to conduct an assessment of our internal control over financial reporting as of December 31, 2020. Accordingly, we are excluding management's report on internal control over financial reporting pursuant to Section 215.02 of the SEC Division of Corporation Finance's Regulation S-K Compliance & Disclosure Interpretations.

Based on an initial assessment, we concluded that our internal control over financial reporting was not effective as of December 31, 2020 because of the material weakness described below. 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 annual or interim financial statements will not be prevented or detected on a timely basis.

In connection with our financial statement close process for the year ended December 31, 2020, we identified a material weakness in our internal control over financial reporting resulting from a lack of sufficient number of qualified personnel within our accounting function who possessed an appropriate level of expertise to effectively perform the following functions:

- identify, select and apply GAAP sufficiently to provide reasonable assurance that transactions were being appropriately recorded; and
- assess risk and design appropriate control activities over information technology systems and financial and reporting processes necessary to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements.

Management continues to be actively engaged to take steps to remediate the material weakness, including the hiring of additional accounting and finance personnel with technical public company accounting and financial reporting experience. While we have made significant progress, the material weakness will not be considered remediated until management designs and implements effective controls that operate for a sufficient period of time and management has concluded, through testing, that these controls are effective.

This Annual Report on Form 10-K does not include an attestation report of the company's registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the company's registered public accounting firm pursuant to the rules of the SEC that permit emerging growth companies such as our company to provide only management's report in the Annual Report on Form 10-K.

Changes in Internal Control Over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarterly period ended December 31, 2020 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION.

2021 Annual Meeting Date

The Company currently plans to hold its 2021 Annual Meeting of Stockholders on June 9, 2021. Pursuant to the provisions of the Amended and Restated Bylaws, for any stockholder to propose business (other than pursuant to and in compliance with Exchange Act Rule 14a-8) or make a nomination before the annual meeting, the stockholder must deliver notice to the Secretary of the Company at the principal executive offices of the Company not later than the close of business on the 90th day nor earlier than the close of business on the 120th day before the anniversary date of the immediately preceding annual meeting of stockholders; provided, however, that in the event that the annual meeting is more than 30 days before or more than 60 days after such anniversary date, notice by the stockholder to be timely must be so received no earlier than the close of business on the 120th day before the annual meeting and not later than the later of (x) the close of business on the 90th day before the annual meeting or (y) the close of business on the 10th day following the day on which public announcement of the date of the annual meeting is first made by the Company. Because the Company did not hold an annual meeting last year, the Company has determined that the date by which stockholders must deliver such notice for the purposes of the 2021 Annual Meeting of Stockholders is April 24, 2021, which is 10 days after the filing of this Annual Report on Form 10-K. Pursuant to Rule 14a-8, for a stockholder to submit a proposal for inclusion in the Company's proxy materials for the 2021 Annual Meeting of Stockholders, the stockholder must comply with the requirements set forth in Rule 14a-8 including with respect to the subject matter of such proposal and must deliver the proposal and all required documentation to the Company a reasonable time before the Company begins to print and send its proxy materials for the meeting. For the purposes of the 2021 Annual Meeting of Stockholders, the Company has determined that April 24, 2021 is a reasonable time before the Company plans to begin printing and mailing its proxy materials. The public announcement of an adjournment or postponement of the 2021 Annual Meeting date will not commence a new time period (or extend any time period) for giving such notice under the Amended and Restated Bylaws or submitting a proposal pursuant to Rule 14a-8.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

The information required by this item is included under the captions “Board of Directors and Corporate Governance,” “Proposal One: Election of Directors” and “Executive Officers” included in our Proxy Statement for the 2021 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the year ended December 31, 2020 and is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION.

The information required by this item is included under the captions “Board of Directors and Corporate Governance” and “Executive Compensation” in our Proxy Statement for the 2021 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the year ended December 31, 2020 and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

The information required by this item is included under the captions “Equity Compensation Plan Information” and “Security Ownership of Certain Beneficial Owners and Management” in our Proxy Statement for the 2021 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the year ended December 31, 2020 and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE.

The information required by this item is included under the captions “Board of Directors and Corporate Governance” and “Certain Relationships and Related Party Transactions” in our Proxy Statement for the 2021 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the year ended December 31, 2020 and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES.

The information required by this item is included under the caption “Proposal Two: Ratification of Appointment of Independent Registered Public Accounting Firm” in our Proxy Statement for the 2021 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the year ended December 31, 2020 and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

The following documents are filed as part of this report:

1. *Financial Statements.* The financial statements included in “Index to the Consolidated Financial Statements” in Part II, Item 8 are filed as part of this Annual Report on Form 10-K.
2. *Financial Statement Schedules.* None.
3. *Exhibits.* Exhibits listed in the accompanying index to exhibits are filed or incorporated by reference as part of this Annual Report on Form 10-K.

EXHIBIT INDEX

Exhibit Number	Description	Incorporation by Reference				Filed Herewith
		Form	File Number	Exhibit/Appendix Reference	Filing Date	
2.1*	Agreement and Plan of Merger, dated as of August 24, 2020, by and among Gores Metropoulos, Inc., Dawn Merger Sub, Inc., Dawn Merger Sub II, LLC, and Luminar Technologies, Inc. (incorporated by reference to Exhibit 2.1 to the Company’s Current Report on Form 8-K, filed with the Securities and Exchange Commission on August 24, 2020).	8-K/A	001-38791	2.1	12/8/20	
3.1	Second Amended and Restated Certificate of Incorporation of the Company.	8-K/A	001-38791	3.1	12/8/20	
3.2	Amended and Restated By-Laws of the Company.	8-K/A	001-38791	3.2	12/8/20	
4.1	Specimen Class A Common Stock Certificate.	8-K/A	001-38791	4.1	12/8/20	
4.2	Warrant Agreement, dated January 31, 2019, between Continental Stock Transfer & Trust Company and Gores Metropoulos, Inc. (incorporated by reference to Exhibit 4.1 to the Company’s Report on Form 8-K, filed with the Securities and Exchange Commission on February 6, 2019).	8-K/A	001-38791	4.2	12/8/20	
4.3	Specimen Warrant Certificate (incorporated by reference to Exhibit 4.3 to the Company’s Registration Statement on Form S-1 (Registration No. 333-228739), filed with the Securities and Exchange Commission on December 11, 2018).	8-K/A	001-38791	4.3	12/8/20	
4.4	Description of Securities				12/8/20	
10.1	Amended and Restated Registration Rights Agreement, dated as of December 2, 2020, by and among the Company, Gores Metropoulos Sponsor LLC and certain other parties.	8-K/A	001-38791	10.1	12/8/20	X
10.2	Form of Insider Letter (incorporated by reference to Exhibit 10.5 to the Company’s Current Report on Form 8-K, filed with the Securities and Exchange Commission on February 6, 2019).	8-K/A	001-38791	10.2	12/8/20	
10.3	Form of Primary Lock-Up Agreement.	8-K/A	001-38791	10.3	12/8/20	
10.4	Form of Secondary Lock-Up Agreement.	8-K/A	001-38791	10.4	12/8/20	
10.5	Form of Indemnification Agreement.	8-K/A	001-38791	10.5	12/8/20	

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10.6†	Luminar Technologies, Inc. Management Longer Term Equity Incentive Plan.	8-K/A	001-38791	10.6	12/8/20	
10.7†	Luminar Technologies, Inc. 2020 Equity Incentive Plan and related forms of award agreements.	8-K/A	001-38791	10.7	12/8/20	
10.8†	Luminar Technologies, Inc. 2020 Employee Stock Purchase Plan.	8-K/A	001-38791	10.8	12/8/20	
10.9†	Luminar Technologies, Inc. Amended and Restated 2015 Stock Plan.	8-K/A	001-38791	10.9	12/8/20	
10.10	Voting Agreement, dated August 24, 2020, by and between Luminar Technologies, Inc. (f/k/a Gores Metropoulos, Inc.) and Austin Russell (incorporated by reference to Annex G to the Company's Registration Statement on Form S-4/A (Registration No. 333-248794), filed with the Securities and Exchange Commission on October 23, 2020).	8-K/A	001-38791	10.10	12/8/20	
10.11†	Offer Letter by and between Luminar Technologies, Inc. and M. Scott Faris dated February 22, 2017 (incorporated by reference to Exhibit 10.11 to the Company's Registration Statement on Form S-1/A, (Registration No. 333-251657) filed with the SEC on January 13, 2021).	S-1/A	333-251657	10.10	01/29/21	
10.12†*	Offer Letter by and between Luminar Technologies, Inc. and Jason Eichenholz dated May 4, 2020 (incorporated by reference to Exhibit 10.12 to the Company's Registration Statement on Form S-1, (Registration No. 333-251657) filed with the SEC on December 30, 2020).	S-1/A	333-251657	10.10	01/29/21	
10.13†	Offer Letter by and between Luminar Technologies, Inc. and Thomas J. Fennimore dated April 3, 2020 (incorporated by reference to Exhibit 10.13 to the Company's Registration Statement on Form S-1/A, (Registration No. 333-251657) filed with the SEC on January 13, 2021).	S-1/A	333-251657	10.10	01/29/21	
10.14†	Luminar Technologies, Inc. Director Compensation Policy.					X
16.1	Letter to the Securities and Exchange Commission from KPMG LLP, dated December 8, 2020.	8-K/A	001-38791	16.1	12/8/20	
21.1	List of Subsidiaries.	8-K/A	001-38791	21.1	12/8/20	
23.1	Consent of Deloitte & Touche LLP.					X
24.1	Power of Attorney (included on signature page).					X
31.1	Certification of Principal Executive Officer pursuant to Rules 13a-14(a) and 15(d)-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 15(d)-14(a) under the Securities Exchange Act of 1934, as adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X

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32.1	Certification of Principal Executive Officer and 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	XBRL Instance Document	X
101.SCH	XBRL Taxonomy Extension Schema Document	X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document	X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document	X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document	X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	X
104	Cover Page Interactive Data File (formatted as Inline XBRL).	X

* The schedules to this Exhibit have been omitted in accordance with Regulation S-K Item 601(b)(2). The Company agrees to furnish supplementally a copy of any omitted schedule to the Securities and Exchange Commission upon its request.

† Indicates a management contract or compensatory plan, contract or arrangement.

ITEM 16. FORM 10-K SUMMARY.

None provided.

SIGNATURES.

Pursuant to the requirements of Section 13 or 15(d) 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.

Date: April 14, 2021

Luminar Technologies, Inc.

By: /s/ Thomas J. Fennimore
 Thomas J. Fennimore
 Chief Financial Officer and Secretary
 (Principal Financial Officer)

POWER OF ATTORNEY.

KNOW ALL PERSONS BY THESE PRESENTS that each individual whose signature appears below constitutes and appoints Austin Russell and Thomas J. Fennimore, and each of them, severally, as his or her true and lawful attorneys-in-fact and agents with the power to act, with or without the other, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in his or her capacity as a director or officer or both, as the case may be, of the Company, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents, or his substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Austin Russell</u> Austin Russell	President, Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer)	April 14, 2021
<u>/s/ Thomas J. Fennimore</u> Thomas J. Fennimore	Chief Financial Officer and Secretary (Principal Financial and Accounting Officer)	April 14, 2021
<u>/s/ Alec E. Gores</u> Alec E. Gores	Director	April 14, 2021
<u>/s/ Mary Lou Jepsen, PhD</u> Mary Lou Jepsen, PhD	Director	April 14, 2021
<u>/s/ Benjamin J. Kortlang</u> Benjamin J. Kortlang	Director	April 13, 2021
<u>/s/ Katharine A. Martin</u> Katharine A. Martin	Director	April 13, 2021
<u>/s/ Scott A. McGregor</u> Scott A. McGregor	Director	April 13, 2021
<u>/s/ Matthew J. Simoncini</u> Matthew J. Simoncini	Director	April 13, 2021

**DESCRIPTION OF REGISTRANT'S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF
THE SECURITIES EXCHANGE ACT OF 1934**

The following summary of the material terms of our securities is not intended to be a complete summary of the rights and preferences of such securities, and is qualified by reference to Luminar Technologies, Inc.'s Second Amended and Restated Certificate of Incorporation, the Amended and Restated Bylaws and the warrant-related documents described herein, which are exhibits to Luminar Technologies, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2020. We encourage you to read each of the Second Amended and Restated Certificate of Incorporation, the Amended and Restated Bylaws, the warrant-related documents described herein and the applicable provisions of the Delaware General Corporation Law ("DGCL") in their entirety for a complete description of the rights and preferences of our securities.

On December 2, 2020 (the "Closing Date"), Gores Metropoulos, Inc., our predecessor company ("Gores"), consummated the previously announced mergers contemplated by the Agreement and Plan of Merger, dated as of August 24, 2020 (the "Merger Agreement"), by and among Gores, Dawn Merger Sub, Inc., a Delaware corporation and a direct, wholly-owned subsidiary of Gores ("First Merger Sub"), Dawn Merger Sub II, LLC, a Delaware limited liability company and a direct, wholly-owned subsidiary of Gores ("Second Merger Sub"), and Luminar Technologies, Inc., a Delaware corporation ("Legacy Luminar"). Pursuant to the terms of the Merger Agreement, First Merger Sub merged with and into Legacy Luminar (the "First Merger"), with Legacy Luminar being the surviving corporation of the First Merger, immediately followed by the surviving corporation merging with and into Second Merger Sub (the "Second Merger" and, collectively with the First Merger and the other transactions contemplated by the Merger Agreement, the "Business Combination"), with Second Merger Sub continuing as the surviving entity as a wholly owned subsidiary of Gores, under the name Luminar Holdco, LLC. On the Closing Date, and in connection with the closing of the Business Combination (the "Closing"), we changed our name from Gores Metropoulos, Inc. to Luminar Technologies, Inc.

Unless the context indicates otherwise, references herein to the "Company," "Luminar," "we," "us," "our" and similar terms refer to Luminar Technologies, Inc. (f/k/a Gores Metropoulos, Inc.) and its consolidated subsidiaries. References to "Gores" refer to our predecessor company prior to the consummation of the Business Combination. Terms not otherwise defined in herein are defined in the Company's registration statement on Form S-1 filed with the Securities and Exchange Commission (the "SEC") on January 29, 2021 (File Number 333-251657).

Authorized and Outstanding Stock

Pursuant to the terms of the Second Amended and Restated Certificate of Incorporation, the Company's authorized capital stock consists of:

- 715,000,000 shares of Class A common stock, \$0.0001 par value per share ("Class A Stock");
- 121,000,000 shares of Class B common stock, \$0.0001 par value per share ("Class B Stock");
- 0 shares of Class F common stock, \$0.0001 par value per share ("Class F Stock"); and
- 10,000,000 shares of undesignated Preferred Stock, \$0.0001 par value per share ("Preferred Stock").

As of December 31, 2020, there were (i) 218,818,037 shares of Class A Stock outstanding, held of record by 140 stockholders and (ii) 105,118,203 shares of Class B Stock outstanding, held of record by one stockholder. As of December 31, 2020, there were no outstanding shares of Preferred Stock.

Common Stock

Voting Power

Holders of Class A Stock are entitled to one vote per share and holders of Class B Stock are entitled to ten votes per share, on all matters submitted to a vote of stockholders. The holders of Class A Stock and Class B Stock will generally vote together as a single class on all matters submitted to a vote of stockholders, unless otherwise required by Delaware law or the Second Amended and Restated Certificate of Incorporation. Delaware law could require either holders of Class A Stock or Class B Stock to vote separately as a single class in the following circumstances:

- if the Company was to seek to amend the Second Amended and Restated Certificate of Incorporation to increase or decrease the par value of a class of the capital stock, then that class would be required to vote separately to approve the proposed amendment; and
- if the Company was to seek to amend the Second Amended and Restated Certificate of Incorporation in a manner that alters or changes the powers, preferences, or special rights of a class of capital stock in a manner that affected its holders adversely, then that class would be required to vote separately to approve the proposed amendment.

The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws established a classified board of directors that is divided into three classes with staggered three-year terms. Only the directors in one class will be subject to election by a plurality of the votes cast at each annual meeting of stockholders, with the directors in the other classes continuing for the remainder of their respective three-year terms. The Second Amended and Restated Certificate of Incorporation does not provide for cumulative voting for the election of directors.

Conversion

Each outstanding share of Class B Stock is convertible at any time at the option of the holder into one share of Class A Stock. In addition, each share of Class B Stock will convert automatically into one share of Class A Stock upon any transfer, whether or not for value, except for certain permitted transfers described in the paragraph that immediately follows this paragraph and further described in the Second Amended and Restated Certificate of Incorporation. Once converted into Class A Stock, the Class B Stock will not be reissued.

A transfer of Class B Stock will not trigger an automatic conversion of such stock to Class A Stock if it is a permitted transfer. A permitted transfer is a transfer by certain holders of Class B Stock to any of the persons or entities listed in clauses “(i)” through “(v)” below, each referred to herein as a Permitted Transferee, and from any such Permitted Transferee back to such holder of Class B Stock and/or any other Permitted Transferee established by or for such holder of Class B Stock: (i) to a trust for the benefit of the holder of Class B Stock and over which such holder of Class B Stock retains sole dispositive power and voting control, provided the holder of Class B Stock does not receive consideration in exchange for the transfer (other than as a settlor or beneficiary of such trust); (ii) to a trust for the benefit of persons other than the holder of Class B Stock so long as the holder of Class B Stock retains sole dispositive power and voting control, provided the holder of Class B Stock does not receive consideration in exchange for the transfer (other than as a settlor or beneficiary of such trust); (iii) to a trust under the terms of which such holder of Class B Stock has retained a “qualified interest” within the meaning of Section 2702(b)(1) of the U.S. Tax Code, and/or a reversionary interest so long as the holder of Class B Stock retains sole dispositive power and exclusive voting control with respect to the shares of Class B Stock held by such trust; (iv) to an Individual Retirement Account, as defined in Section 408(a) of the U.S. Tax Code, or a pension, profit sharing, stock bonus, or other type of plan or trust of which such holder of Class B Stock is a participant or beneficiary and which satisfies the requirements for qualification under Section 401 of the U.S. Tax Code, so long as such holder of Class B Stock retains sole dispositive power and exclusive voting control with respect to the shares of Class B Stock held in such account, plan, or trust; or (v) to a corporation, partnership, or limited liability company in which such holder of

Class B Stock directly, or indirectly, retains sole dispositive power and exclusive voting control with respect to the shares of Class B Stock held by such corporation, partnership, or limited liability company.

Each share of Class B Stock will convert automatically, without further action by the Company or the holder thereof, into one fully paid and nonassessable share of Class A Stock, upon: (a) the receipt by the Company of a written request for such conversion from the holders of a majority of the Class B Stock then outstanding, or, if later, the effective date for conversion specified in such request or (b) the occurrence of a transfer, other than a permitted transfer, of such share of Class B Stock.

Each outstanding share of Class B Stock held by a natural person or their Permitted Transferee will convert automatically into one share of Class A Stock upon the death or permanent disability of such holder.

Dividend Rights

Subject to preferences that may apply to any shares of Preferred Stock outstanding at the time, the holders of Class A Stock and Class B Stock are entitled to receive dividends out of funds legally available if the Board of Directors of the Company (the “Board”), in its discretion, determines to issue dividends and then only at the times and in the amounts that the Board may determine.

No Preemptive or Similar Rights

Class A Stock and Class B Stock will not be entitled to preemptive rights, and are not subject to conversion (except as noted above), redemption or sinking fund provisions.

Right to Receive Liquidation Distributions

If the Company becomes subject to a liquidation, dissolution or winding-up, the assets legally available for distribution to the stockholders would be distributable ratably among the holders of Class A Stock and Class B Stock and any participating Preferred Stock outstanding at that time, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights of and the payment of liquidation preferences, if any, on any outstanding shares of Preferred Stock.

Fully Paid and Non-Assessable

All of the outstanding shares of Class A Stock and Class B Stock will be fully paid and non-assessable.

Preferred Stock

The Board is authorized, subject to limitations prescribed by Delaware law, to issue Preferred Stock in one or more series, to establish from time to time the number of shares to be included in each series, and to fix the designation, vesting, powers, preferences, and rights of the shares of each series and any of its qualifications, limitations, or restrictions, in each case without further vote or action by the stockholders. The Board can also increase or decrease the number of shares of any series of Preferred Stock, but not below the number of shares of that series then outstanding, without any further vote or action by the stockholders.

The Board may authorize the issuance of Preferred Stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of Class A Stock and Class B Stock. The issuance of Preferred Stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring, or preventing a change in control of the Company and may adversely affect the market price of Class A Stock and the voting and other rights of the holders of Class A Stock and Class B Stock. There are no current plans to issue any shares of Preferred Stock.

Warrants

As of March 16, 2021, all outstanding Public Warrants have been exercised and/or redeemed. As of December 31, 2020, there were Public Warrants outstanding to purchase an aggregate of 13,333,309 shares of Class A Stock and Private Warrants outstanding to purchase an aggregate of 6,666,666 shares of Class A Stock. As of December 31, 2020 there were warrants to purchase 24,089,255 shares of Class A Stock at a \$10.09 weighted average exercise price.

Public Warrants

Redemption of Warrants for Cash. The Company gave notice that it would redeem, at 5:00 p.m. New York City time on March 16, 2021 (the “Redemption Date”), all of the Company’s Public Warrants to purchase shares of the Company’s Class A Stock, for a redemption price of \$0.01 per Public Warrant (the “Redemption Price”), that were issued under the Warrant Agreement, dated as of January 31, 2019 (the “Warrant Agreement”), by and between the Company (f/k/a Gores Metropoulos, Inc.) and Continental Stock Transfer & Trust Company, as warrant agent (the “Warrant Agent”), as part of the units sold in the Company’s initial public offering (the “IPO”). Each Public Warrant entitled the holder thereof to purchase one share of Class A Stock for a purchase price of \$11.50 per share, subject to adjustment. Any Public Warrants that remained unexercised at 5:00 p.m. New York City time on the Redemption Date are void and no longer exercisable and their holders have no rights with respect to those Public Warrants, except to receive the Redemption Price or as otherwise described in the notice for holders who hold their Public Warrants in “street name.”

Private Warrants

The Private Warrants (including the Class A Stock issuable upon exercise of the Private Warrants) will not be transferable, assignable or salable until 30 days after the Closing (except, among other limited exceptions, to the officers and directors of the Company and other persons or entities affiliated with the Sponsor) and they will not be redeemable by the Company so long as they are held by the Sponsor or its permitted transferees. Otherwise, the Private Warrants have terms and provisions that are identical to those of the Public Warrants sold as part of the public units in the IPO, including as to exercise price, exercisability and exercise period. If the Private Warrants are held by holders other than the Sponsor or its permitted transferees, the Private Warrants will be redeemable by the Company and exercisable by the holders on the same basis as the Public Warrants included in the public units sold in the IPO.

If holders of the Private Warrants elect to exercise them on a cashless basis, they would pay the exercise price by surrendering their Private Warrants for that number of shares of Class A Stock equal to the quotient obtained by dividing (x) the product of the number of shares of Class A Stock underlying the Private Warrants, multiplied by the difference between the exercise price of the Private Warrants and the “fair market value” (defined below) by (y) the fair market value. The “fair market value” shall mean the average reported last sale price of the Class A Stock for the 10 trading days ending on the third trading day prior to the date on which the notice of warrant exercise is sent to the warrant agent.

Anti-Takeover Provisions

Some provisions of Delaware law, the Second Amended and Restated Certificate of Incorporation, and Amended and Restated Bylaws contain provisions that could make the following transactions more difficult: an acquisition of the Company by means of a tender offer; an acquisition of the Company by means of a proxy contest or otherwise; or the removal of incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in the Company’s best interests, including transactions that provide for payment of a premium over the market price for the Company’s shares.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of the

Company to first negotiate with Board. The Company believes that the benefits of the increased protection of the Company's potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure the Company outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Delaware Law

The Company is subject to the provisions of Section 203 of the DGCL regulating corporate takeovers. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years following the date on which the person became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, *excluding* for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, (i) shares owned by persons who are directors and also officers and (ii) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to the date of the transaction, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of *at least* two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction or series of transactions together resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting stock. We expect the existence of this provision to have an anti-takeover effect with respect to transactions the Board does not approve in advance. We also anticipate that Section 203 may also discourage attempts that might result in a premium over the market price for the shares of common stock held by stockholders.

Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws provisions

The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws include a number of provisions that could deter hostile takeovers or delay or prevent changes in control of the Company's management team, including the following:

- *Dual Class Common Stock.* The Second Amended and Restated Certificate of Incorporation provides for a dual class common stock structure pursuant to which holders of Class B Stock will have the ability to control the outcome of matters requiring stockholder approval (even if they own significantly less than a majority of the shares of outstanding Class A Stock), including the election of directors and significant corporate transactions, such as a merger or other sale of the Company or its assets. Directors, executive officers, and employees, and their respective affiliates, may have the ability to exercise significant influence over those matters.
- *Board of Directors Vacancies.* The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws authorize only the Board to fill vacant directorships, including newly created seats. In addition, the number of directors constituting the Board is permitted to be set only by a resolution adopted by a majority vote of the Whole Board (as defined in the Second Amended and

Restated Certificate of Incorporation). These provisions prevent a stockholder from increasing the size of the Board and then gaining control of the Board by filling the resulting vacancies with its own nominees. This makes it more difficult to change the composition of the Board but promotes continuity of management.

- *Classified Board.* The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws provide that the Board is divided into three classes of directors. The existence of a classified board of directors could discourage a third-party from making a tender offer or otherwise attempting to obtain control of the Company as it is more difficult and time consuming for stockholders to replace a majority of the directors on a classified board of directors.
- *Directors Removed Only for Cause.* The Second Amended and Restated Certificate of Incorporation provides that stockholders may remove directors only for cause.
- *Supermajority Requirements for Amendments of The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws* The Second Amended and Restated Certificate of Incorporation further provides that the affirmative vote of holders of at least two-thirds of the voting power of all of the then-outstanding shares of voting stock will be required to amend certain provisions of the Second Amended and Restated Certificate of Incorporation, including provisions relating to the classified Board, the size of the Board, removal of directors, special meetings, actions by written consent, and designation of Preferred Stock. In addition, the affirmative vote of holders of 75% of the voting power of each of the then-outstanding Class A Stock and Class B Stock, voting separately by class, is required to amend the provisions of the Second Amended and Restated Certificate of Incorporation relating to the terms of the Class B Stock. The affirmative vote of holders of at least two-thirds of the voting power of all of the then-outstanding shares of voting stock is required to amend or repeal the Amended and Restated Bylaws, although the Amended and Restated Bylaws may be amended by a simple majority vote of the Board.
- *Stockholder Action; Special Meeting of Stockholders.* The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws provide that special meetings of stockholders may be called only by a majority of the Whole Board, the chairman of the Board, or the chief executive officer, thus prohibiting a stockholder from calling a special meeting. The Second Amended and Restated Certificate of Incorporation provides that the stockholders may not take action by written consent, but may only take action at annual or special meetings of stockholders. As a result, holders of capital stock are not able to amend the Amended and Restated Bylaws or remove directors without holding a meeting of stockholders called in accordance with the Amended and Restated Bylaws. These provisions might delay the ability of stockholders to force consideration of a proposal or for stockholders to take any action, including the removal of directors.
- *Notice Requirements for Stockholder Proposals and Director Nominations.* The Amended and Restated Bylaws provide advance notice procedures for stockholders seeking to bring business before the annual meeting of stockholders or to nominate candidates for election as directors at the annual meeting of stockholders. The Amended and Restated Bylaws also specify certain requirements regarding the form and content of a stockholder's notice. These provisions might preclude stockholders from bringing matters before the annual meeting of stockholders or from making nominations for directors at the annual meeting of stockholders if the proper procedures are not followed. We expect that these provisions might also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of the Company.
- *No Cumulative Voting.* The DGCL provides that stockholders are not entitled to the right to cumulate votes in the election of directors unless a corporation's certificate of incorporation provides otherwise. The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws do not provide for cumulative voting.

- *Issuance of Undesignated Preferred Stock* The Board will have the authority, without further action by the stockholders, to issue up to 10,000,000 shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by the Board. The existence of authorized but unissued shares of Preferred Stock will enable the Board to render more difficult or to discourage an attempt to obtain control of the Company by means of a merger, tender offer, proxy contest, or other means.
- *Choice of Forum.* The Second Amended and Restated Certificate of Incorporation provides that the Chancery Court (or, if and only if the Chancery Court lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: (1) any derivative action or proceeding brought on behalf of the Company; (2) any action or proceeding asserting a claim of breach of a fiduciary duty owed by any current or former director, officer, or other employee of the Company or any stockholder to the Company or the Company's stockholders; (3) any action or proceeding asserting a claim against the Company or any current or former director, officer or other employee of the Company or any stockholder in such stockholder's capacity as such arising out of or pursuant to any provision of the DGCL, the Second Amended and Restated Certificate of Incorporation or the Amended and Restated Bylaws; (4) any action or proceeding to interpret, apply, enforce or determine the validity of the Second Amended and Restated Certificate of Incorporation or the Amended and Restated Bylaws (including any right, obligation or remedy thereunder); (5) any action or proceeding as to which the DGCL confers jurisdiction to the Chancery Court; and (6) any action asserting a claim against the Company or any director, officer or other employee of the Company or any stockholder, governed by the internal affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants. The provisions would not apply to suits brought to enforce a duty or liability created by the Securities Act, the Exchange Act, or any other claim for which the U.S. federal courts have exclusive jurisdiction. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, the Second Amended and Restated Certificate of Incorporation provides that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions. In such instance, we would expect to vigorously assert the validity and enforceability of the exclusive forum provisions of the Second Amended and Restated Certificate of Incorporation. This may require significant additional costs associated with resolving such action in other jurisdictions and there can be no assurance that the provisions will be enforced by a court in those other jurisdictions.

Lock-Up Agreements

Certain of the Company's stockholders are subject to certain restrictions on transfer until the termination of applicable lock-up periods.

Amended and Restated Registration Rights

Pursuant to the terms of the Amended and Restated Registration Rights Agreement, (a) any (i) outstanding share of Class A Stock or any Private Warrants, (ii) shares of Class A Stock issued or issuable upon the exercise of any other equity security of the Company (including shares of Class A Stock issued or issuable upon the conversion of the Class F Stock or the Class B Stock and upon exercise of the Private Warrants), and (iii) shares of Class A Stock issued as Earn-Out Shares or issuable upon the conversion of any Earn-Out Shares, in each case, held by

Luminar Holders, and (b) any other equity security of the Company issued or issuable with respect to any such share of Class A Stock by way of a stock dividend or stock split or in connection with a combination of shares, recapitalization, merger, consolidation or other reorganization or otherwise, will be entitled to registration rights.

Voting Agreement

In August 2020, in connection with entering into the Merger Agreement, Mr. Austin Russell and Gores entered into the Voting Agreement.

Limitation of Liability and Indemnification

The Amended and Restated Bylaws provide that the Company will indemnify its directors and officers, and may indemnify its employees and other agents, to the fullest extent permitted by Delaware law.

Delaware law prohibits the Second Amended and Restated Certificate of Incorporation from limiting the liability of the Company's directors for the following:

- any breach of the director's duty of loyalty to the Company or to its stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or unlawful stock repurchases or redemptions; and
- any transaction from which the director derived an improper personal benefit.

If Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director, then the liability of the Company's directors will be eliminated or limited to the fullest extent permitted by Delaware law, as so amended. The Second Amended and Restated Certificate of Incorporation does not eliminate a director's duty of care and, in appropriate circumstances, equitable remedies, such as injunctive or other forms of non-monetary relief, remain available under Delaware law. This provision also does not affect a director's responsibilities under any other laws, such as the federal securities laws or other state or federal laws. Under the Amended and Restated Bylaws, the Company can purchase insurance on behalf of any person whom it is required or permitted to indemnify.

In addition to the indemnification required in the Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, the Company has entered into an indemnification agreement with each member of the Board and each of its officers. These agreements provide for the indemnification of the Company's directors and officers for certain expenses and liabilities incurred in connection with any action, suit, proceeding or alternative dispute resolution mechanism, or hearing, inquiry or investigation that may lead to the foregoing, to which they are a party or other participant, or are threatened to be made a party or other participant, by reason of the fact that they are or were a director, officer, employee, agent or fiduciary of the Company, by reason of any action or inaction by them while serving as an officer, director, agent or fiduciary, or by reason of the fact that they were serving at the Company's request as a director, officer, employee, agent or fiduciary of another entity. In the case of an action or proceeding by or in the right of the Company, no indemnification will be provided for any claim where a court determines that the indemnified party is prohibited from receiving indemnification. We believe that these charter and bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in the Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit the Company and its stockholders.

Moreover, a stockholder's investment may be harmed to the extent the Company pays the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

Listing of Securities

Class A Stock is listed on the Nasdaq Global Select Market under the symbol "LAZR."

Rule 144

Rule 144 is not available for the resale of securities initially issued by shell companies (other than business combination related shell companies) or issuers that have been at any time previously a shell company, such as the Company. However, Rule 144 also includes an important exception to this prohibition if the following conditions are met:

- the issuer of the securities that was formerly a shell company has ceased to be a shell company;
- the issuer of the securities is subject to the reporting requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act");
- the issuer of the securities has filed all Exchange Act reports and material required to be filed, as applicable, during the preceding 12 months (or such shorter period that the issuer was required to file such reports and materials), other than Form 8-K reports; and
- at least one year has elapsed from the time that the issuer filed current Form 10 type information with the SEC reflecting its status as an entity that is not a shell company.

Upon the Closing, the Company ceased to be a shell company.

When and if Rule 144 becomes available for the resale of the Company's securities, a person who has beneficially owned restricted shares of Common Stock or Warrants for at least six months would be entitled to sell their securities, provided that (i) such person is not deemed to have been one of the Company's affiliates at the time of, or at any time during the three months preceding, a sale and (ii) we are subject to the Exchange Act periodic reporting requirements for at least three months before the sale and have filed all required reports under Section 13 or 15(d) of the Exchange Act during the 12 months (or such shorter period as we were required to file reports) preceding the sale.

Persons who have beneficially owned restricted shares of the Company's Common Stock or Warrants for at least six months but who are affiliates at the time of, or at any time during the three months preceding, a sale, would be subject to additional restrictions, by which such person would be entitled to sell within any three-month period only a number of securities that does not exceed the greater of:

- one percent (1%) of the total number of shares of Common Stock then outstanding; or
- the average weekly reported trading volume of the Common Stock during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Sales by affiliates under Rule 144 will also be limited by manner of sale provisions and notice requirements and to the availability of current public information about the Company.

Transfer Agent and Registrar

The transfer agent for Class A Stock and warrant agent for the Company's warrants is Continental Stock Transfer & Trust Company. The transfer agent and warrant agent's telephone number and address is (212) 509-4000 and 1 State Street, 30th Floor, New York, NY 10004.

LUMINAR TECHNOLOGIES, INC.
DIRECTOR COMPENSATION POLICY

Adopted and approved on March 24, 2021

Each member of the Board of Directors (the “**Board**”) of Luminar Technologies, Inc. (the “**Company**”) who is not an employee of the Company (each such member, an “**Outside Director**”) will receive the compensation described in this Director Compensation Policy (the “**Director Compensation Policy**”) for his or her Board service following the Effective Date.

The Director Compensation Policy is effective as of the date first set forth above (the “**Effective Date**”). The Director Compensation Policy may be amended at any time in the sole discretion of the Board.

Annual Cash Compensation

Each Outside Director will receive the cash compensation set forth below for service on the Board. The annual cash compensation amounts will be payable in arrears, in equal quarterly installments following the end of each fiscal quarter of the Company in which the service occurred. Any amount payable for a partial quarter of service will be pro-rated by multiplying such amount by a fraction, the numerator of which will be the number of days of service that the Outside Director provided in such quarter and the denominator of which will be the number of days in such quarter inclusive. All annual cash fees are vested upon payment. For purposes of clarity, the first quarterly installment of the annual retainers set forth below shall be paid for the first quarter that ends on or after the Effective Date, with the amount of such payment equal to the full quarterly installment, pro-rated as applicable based on the days of service that the Outside Director provided in such quarter.

1. Annual Board Member Service Retainer:

- a. All Outside Directors: **\$50,000**.
- b. Outside Director serving as Lead Independent Director: **\$30,000** (in addition to above).

2. Annual Committee Member Service Retainer:

- a. Member of the Audit Committee: **\$12,500**.
 - b. Member of the Compensation Committee: **\$10,000**.
 - c. Member of the Nominating and Corporate Governance Committee: **\$5,000**.
-

3. **Annual Committee Chair Service Retainer (in lieu of Annual Committee Member Service Retainer):**

- a. Chairperson of the Audit Committee: **\$25,000**.
- b. Chairperson of the Compensation Committee: **\$20,000**.
- c. Chairperson of the Nominating and Corporate Governance Committee: **\$10,000**.

Equity Compensation

Equity awards will be granted under the Company's 2020 Equity Incentive Plan or any successor equity incentive plan adopted by the Board and the stockholders of the Company (the "**Plan**").

1. **Automatic Equity Grants**

- a. **Annual Grant for Continuing Outside Directors and Certain New Outside Directors.** Without any further action of the Board, at the close of business on the date of each annual meeting of the Company's stockholders (an "**Annual Meeting**") following the Effective Date, each continuing Outside Director and each new Outside Director who commenced such service prior to the date that is at least three (3) months prior to such Annual Meeting shall be granted restricted stock units under the Plan covering shares of the Company's Class A Common Stock ("**Shares**") having an RSU Value (as defined below) of **\$200,000** (an "**Annual RSU Award**"); provided that the number of Shares covered by each Annual RSU Award will be rounded down to the nearest whole Share. Each Annual RSU Award shall vest in full on the first to occur of (i) the 1-year anniversary of the grant date or (ii) the date of the next Annual Meeting, subject to the applicable Outside Director's continued service as a member of the Board through such vesting date.
- b. **Initial Grant for New Outside Directors.** Without any further action of the Board, each person who after the Effective Date is elected or appointed for the first time to be an Outside Director will in each case automatically, upon the first practicable date following their initial election or appointment to be an Outside Director, be granted, in addition to any grant pursuant to clause (a) above, restricted stock units under the Plan covering Shares having an RSU Value of **\$400,000** (an "**Initial RSU Award**"); provided that the number of Shares covered by each Initial RSU Award will be rounded down to the nearest whole Share. Each Initial RSU Award shall vest in equal annual installments over the 3-year period following the grant date, subject to the applicable Outside Director's continued service as a member of the Board through each such vesting date.
- c. **RSU Value.** The number of Shares that comprise the "**RSU Value**" of an Annual RSU Award or an Initial RSU Award shall equal the RSU Value divided by the average closing price of a Share on the stock exchange or a national market

system on which the Shares are listed over the 30 trading days preceding the grant date.

2. **Change in Control.** Notwithstanding the foregoing, for each Outside Director who remains in continuous service as a member of the Board until immediately prior to the closing of a “Change in Control” (as defined in the Plan), any unvested portion of any restricted stock unit award granted in consideration of such Outside Director’s service as a member of the Board shall vest in full immediately prior to, and contingent upon, the consummation of the Change in Control.
3. **Discretionary Grants.** In addition to the automatic grants described herein, the Board, in its sole discretion, may grant additional equity awards to certain Outside Directors for services to the Company that exceed the standard expectations of an Outside Director or for other circumstances determined to be appropriate by the Board, including, without limitation, an inducement for the Outside Director to remain on the Board.
4. **Remaining Terms.** The remaining terms and conditions of each restricted stock unit award granted under this policy will be as set forth in the Plan and the Company’s standard form of restricted stock unit award agreement, as amended from time to time by the Board or the Compensation Committee of the Board, as applicable.

Expenses

The Company will reimburse each Outside Director for ordinary, necessary and reasonable out-of-pocket travel expenses to cover in-person attendance at, and participation in, Board and Committee meetings; *provided*, that the Outside Director timely submits to the Company appropriate documentation substantiating such expenses in accordance with the Company’s travel and expense policy, as in effect from time to time.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-253658 on Form S-8 of our report dated April 14, 2021 relating to the financial statements of Luminar Technologies, Inc. appearing in this Annual Report on Form 10-K for the year ended December 31, 2020.

/s/ Deloitte & Touche LLP

San Jose, California
April 14, 2021

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**

I, Austin Russell, certify that:

1. I have reviewed this annual report on Form 10-K of Luminar Technologies, Inc. for the year ended December 31, 2020;
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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) 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
 - (d) 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: April 14, 2021

By: /s/ Austin Russell

Austin Russell
Chief Executive Officer
(Principal Executive Officer)

CERTIFICATION OF CHIEF 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

I, Thomas J. Fennimore, certify that:

1. I have reviewed this annual report on Form 10-K of Luminar Technologies, Inc. for the year ended December 31, 2020;
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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) 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
 - (d) 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: April 14, 2021

By: /s/ Thomas J. Fennimore

Thomas J. Fennimore
Chief Financial Officer
(Principal Financial and Accounting Officer)

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

I, Austin Russell, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Luminar Technologies, Inc. (the "Company") on Form 10-K for the fiscal year ended December 31, 2020 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that information contained in such Annual Report on Form 10-K fairly presents in all material respects the financial condition and results of operations of the Company.

Date: April 14, 2021

By: /s/ Austin Russell

Austin Russell
Chief Executive Officer
(Principal Executive Officer)

I, Thomas J. Fennimore, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Luminar Technologies, Inc. (the "Company") on Form 10-K for the fiscal year ended December 31, 2020 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that information contained in such Annual Report on Form 10-K fairly presents in all material respects the financial condition and results of operations of the Company.

Date: April 14, 2021

By: /s/ Thomas J. Fennimore

Thomas J. Fennimore
Chief Financial Officer
(Principal Financial and Accounting Officer)

This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Luminar Technologies, 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 the Form 10-K), irrespective of any general incorporation language contained in such filing.