

# Safe Harbor

Before we begin let me remind everyone that during the presentation, we may refer to GAAP and non-GAAP measures. Today's discussion also contains forward-looking statements based on the environment as we currently see it; and as such, does include risks and uncertainties. Please refer to our press release and business update presentation for more information on the specific risk factors that could cause actual results to differ materially, as well as a reconciliation of GAAP to non-GAAP measures.

# Austin Russell

Founder and CEO





**~1.3  
million**

annual fatalities from  
vehicle collisions globally

**1 in 100  
of us**

Will tragically lose our  
life in a car accident



**50**  
**million**

injuries from vehicle  
collisions globally

**4**  
**Collisions**

average number of accidents over  
the life of US drivers

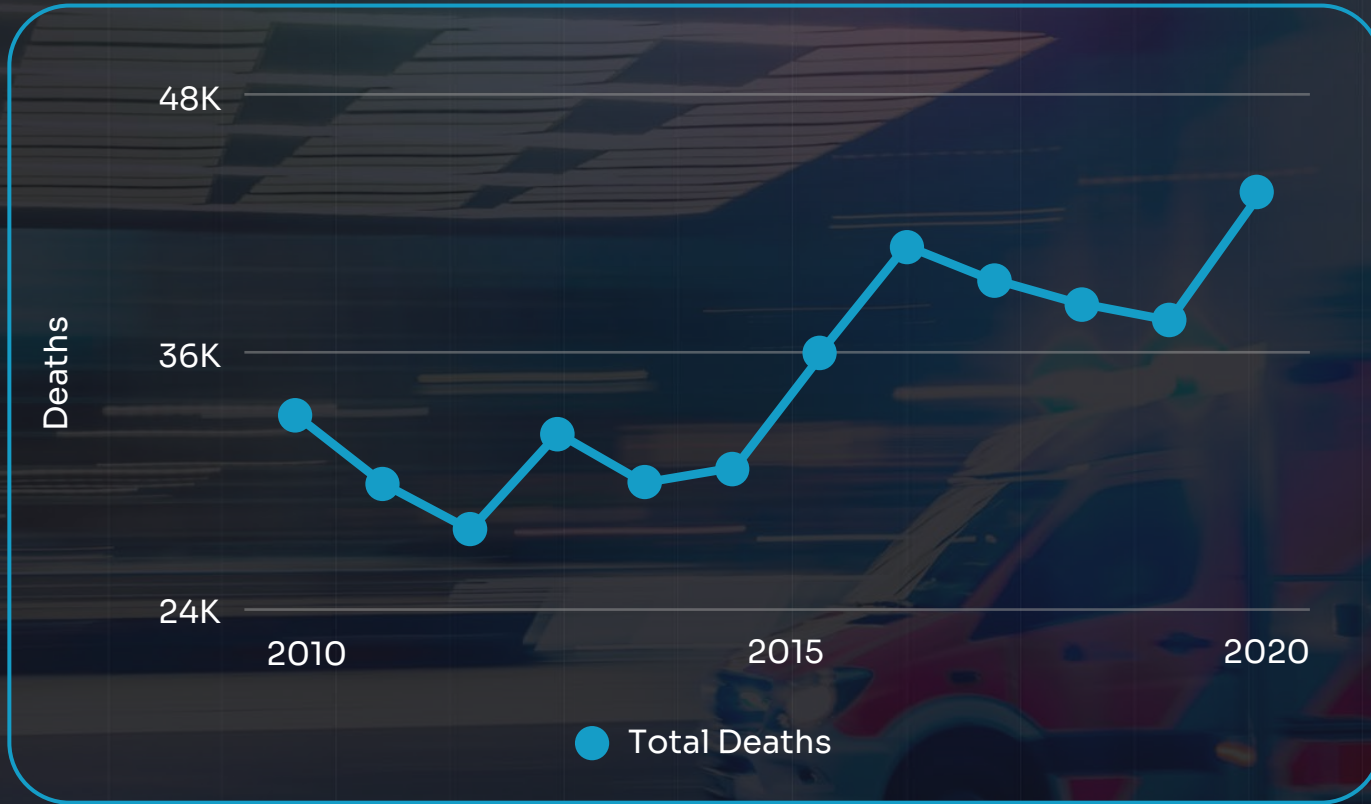




# \$1 Trillion

Paid Annually to Auto Insurance Companies By '27

# US Annual Vehicle Fatalities, Past Decade





Vehicles with current camera and radar-based ADAS systems experienced collisions in

**70%**

of pedestrian AEB scenarios.

We need a **step-change** in ADAS technology to make a true impact and save lives.



# Democratizing Safety



# Autonomous Vehicles: What Happened?

## Stuck in R&D; Trying to Replace the Driver





# Next-Generation Safety and Autonomy

Luminar is enhancing, not replacing, the driver.



**SAVING 100** MILLION LIVES  
TRILLION HOURS

***WITHIN 100 YEARS***





# The Master Plan

- 1** | Create the **world's best lidar** for production cars and trucks
- 2** | **Launch and enable** the safest and most advanced cars/trucks on the road, starting with **high-end models**
- 3** | Launch and enable Proactive Safety™ & highway autonomy on **mainstream models**
- 4** | Democratize advanced **safety for all**, while monetizing upgrades for autonomy, software, and services



**Luminar Now Planned Into**

**20+**

**Production Vehicle  
Models<sup>1</sup>**



Uniquely positioned to deliver **real revenue, scalable profits, and exponential growth** from its multi-billion order book over the near-term and long-term

Expecting **Triple-Digit Revenue Growth** Every Year for the next 5 years (32X)





# Industrialization at Global Scale

## UNITED STATES

**Palo Alto, CA**  
Software & AI

**Orlando, FL**  
Hardware Engineering,  
R&D, Manufacturing

**Santa Barbara, CA**  
High Performance Lasers

**Detroit, MI**  
Business Development  
Program Management

**Colorado Springs, CO**  
Processing Chip Design

**Washington, DC**  
Government Affairs

**Boston, MA**  
Receiver Chip

## SWEDEN

Business Development  
Program Support  
Customer Integration

## GERMANY

Autonomy Software,  
Customer Integration  
Program Management

## ISRAEL

Business  
Development

## CHINA

Business Development,  
Program Management  
Customer Integration

## JAPAN

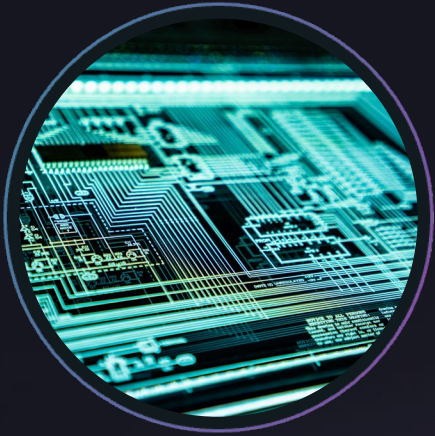
Business Development,  
Program Management  
Customer Integration

## THAILAND

Transceiver  
Assembly

## MEXICO

**Monterrey**  
High-Volume Highly  
Automated Production  
Facility



Tech



Automotive



LUMINAR







# End-To-End Vertical Ecosystem



# Monetizing the Ecosystem



**Swiss Re**

# What's on the table?



**~\$1,750 / yr**

Average cost of Auto  
insurance in US:

**>\$20,000**

Total Cost of Auto Insurance over  
Average 12-yr Vehicle Lifespan



# Our Guest Speakers



# A word from...



**Jim Rowan**  
CEO & President



**Markus Schäfer**  
CTO & Board of Mgmt



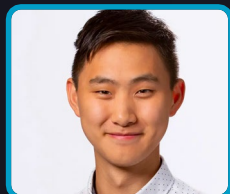
**Thomas Ingenlath**  
CEO



**Martin Daum**  
CEO



**Gary Hicok**  
SVP, Automotive



**Alexandr Wang**  
CEO



**Russell Higginbotham**  
CEO, Swiss Re Solutions



**Ziyu Shen**  
CEO



**James Peng**  
CEO



**Tetsuya Iijima**  
GM AD/ADAS





# DAIMLER

## DAIMLER TRUCK

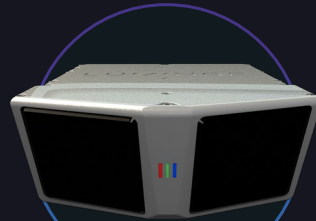


# Polestar

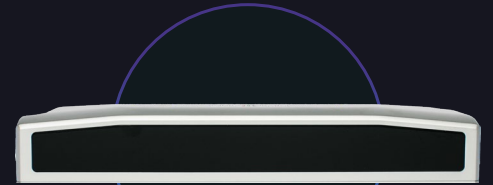




'Model G'



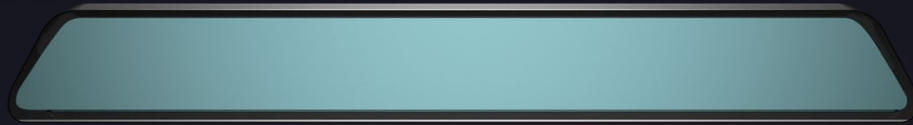
Hydra



Iris



# Iris+





# 3X

Performance  
(Range X Resolution)

# 20%

Slimmer Profile

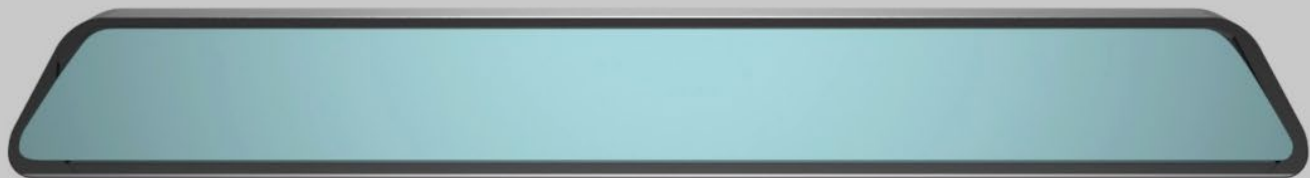
# Safety

from cities to the Autobahn

# Millions

Of Iris+ Equipped Vehicles by 2027







LUMINAR



SEAGATE



LUMINAR

# Aaron Jefferson

Vice President of Product





## Consumer Vehicles



## Trucking



## Robo-Taxi



## Adjacent Markets





## Sentinel™

Software platform for automotive series production enabling Proactive Safety™ and Highway Autonomy

## HD Maps

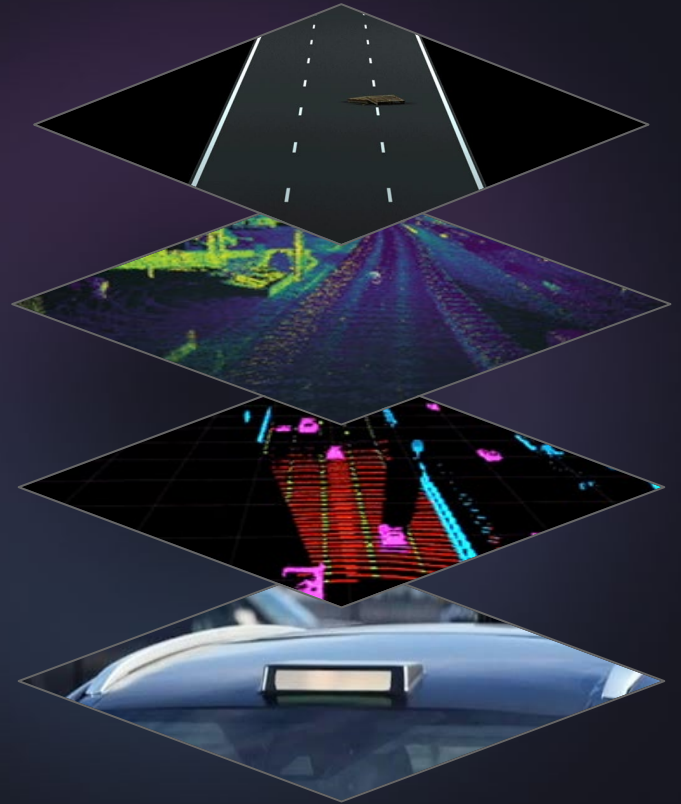
Light-weight, highly accurate, automatically updating high definition 3D maps

## Perception

Perception and localization software purpose-built to unlock the full capabilities of Luminar's Iris lidar

## Iris

Only long-range, 1550nm lidar meeting OEM specs for advanced safety & autonomy





**SENTINEL**  
(Beta)

# Enabling Proactive Safety™ and Highway Autonomy





Good Company is Always in Season

CONK

LET THE GAMES BE PLAYED

DRI 360



LUMINAR

DRI 360

McDonald's

OPEN LATE

CON

Deactivate

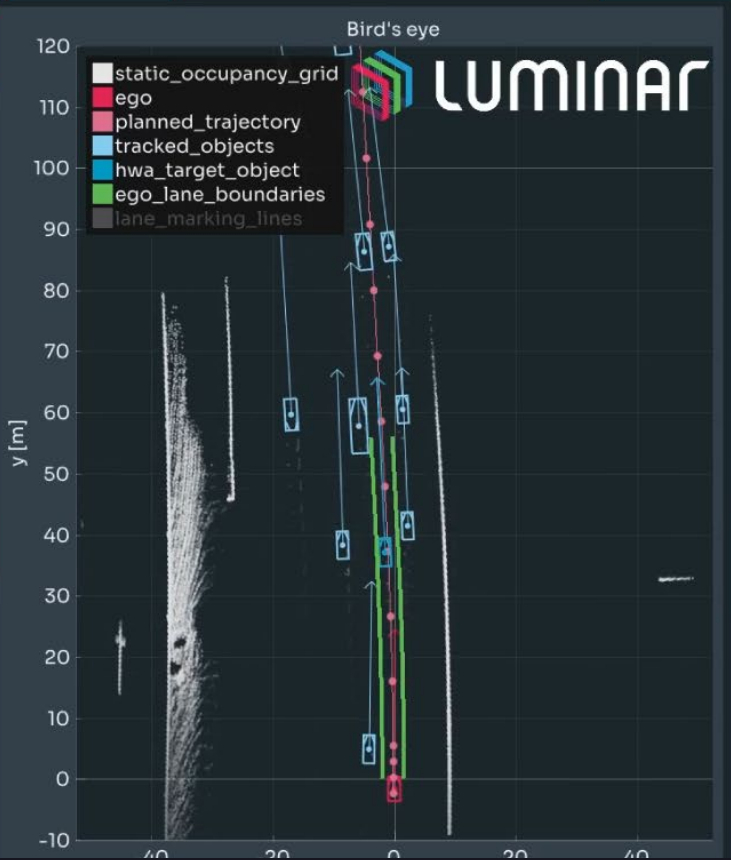
Recording

Lat: ON Current Speed: 58.6mp  
Lon: ON Set Speed: 68.0mph  
Time Gap: 1.8s

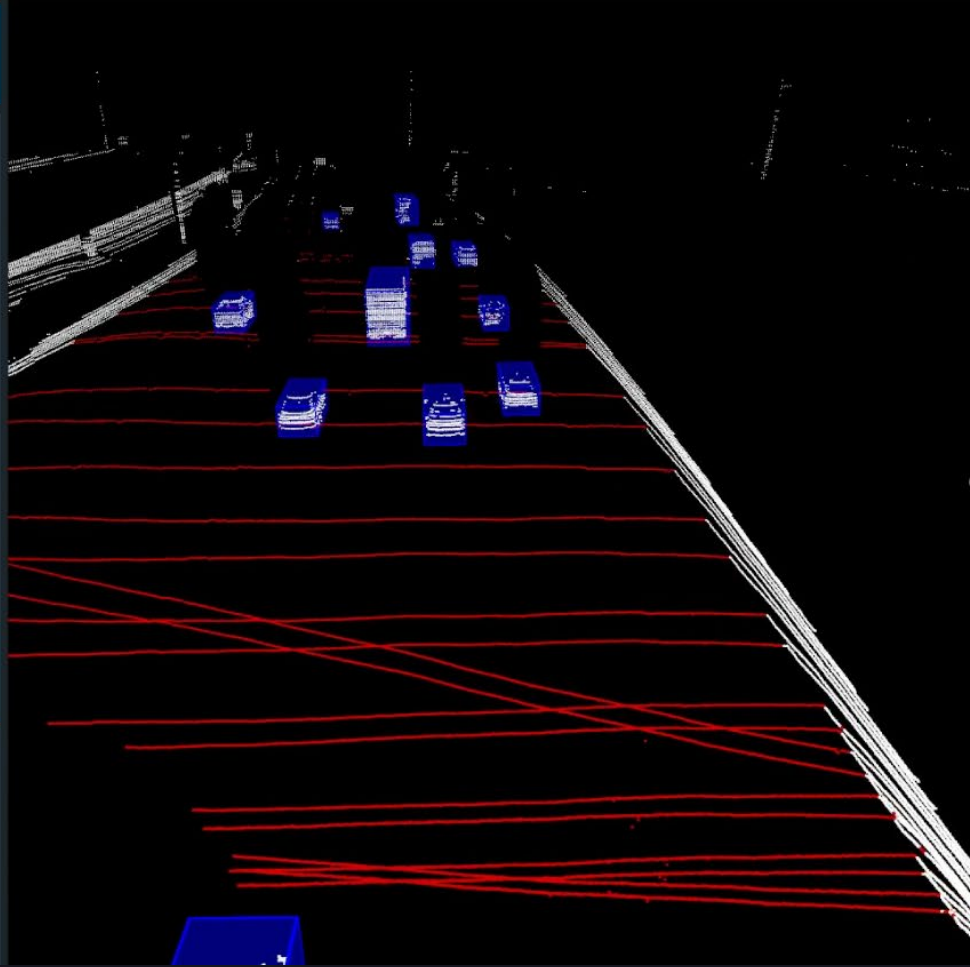
Select View ...

+ +

68 [mph] 1.8 [s]



120 [m]





# HD Maps





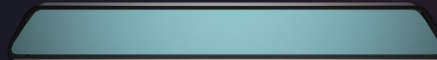


# Our Lidar Roadmap



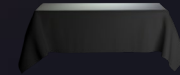
**Iris**

SOP 2022



**Iris+**

SOP 2025



**Next Gen**

*Advanced development*

Future



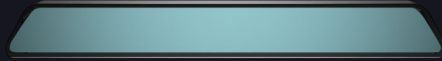


**Iris**

1st automotive grade 3D lidar  
for global markets

1st to enable high speed  
highway autonomy

Pioneered roofline integration,  
emphasizing functional optimization

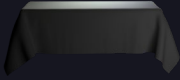


## Iris+

Detection of small objects at up to 40% further distance enables safe and comfortable autonomy

20% slimmer profile

Designed for higher volume production capacity



# Next Gen Lidar

Advanced Development

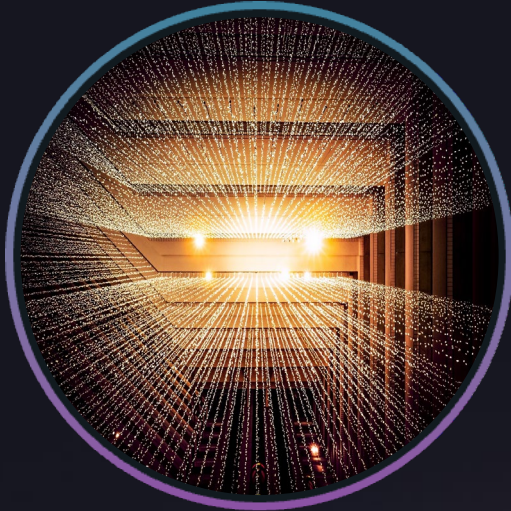
## Enabling Broad Adoption:

- Drive value through cost-down and performance-up
- Enable vehicle design through size reduction
- One step closer to net-zero cost of ownership

# Dr. Matthew Weed

Senior Director of Product





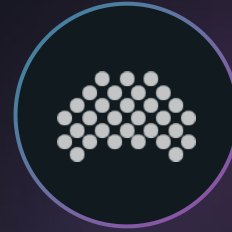
Future Proof  
the Vehicle



Enabling Broad Lidar  
Adoption



# Future Proofing the Vehicle



**Object Detection  
& Tracking**



**Collision Threat  
Assessment**

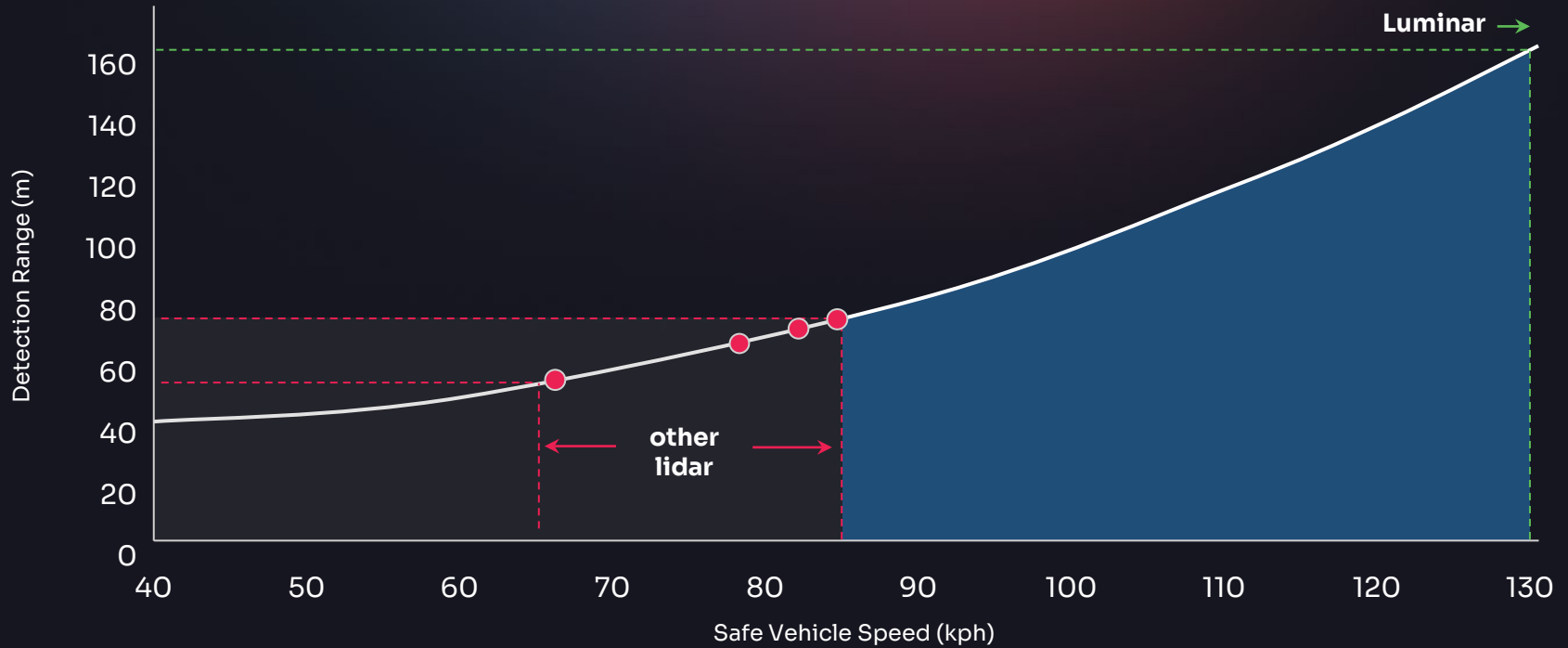


**Enabled Everywhere,  
All the Time & In All Conditions**



Static Evidence Grid

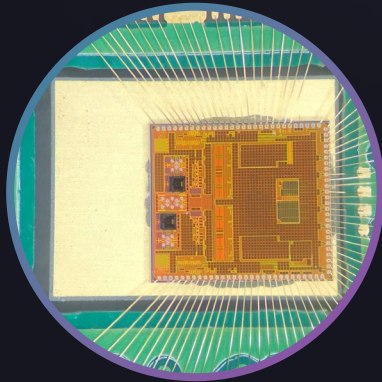








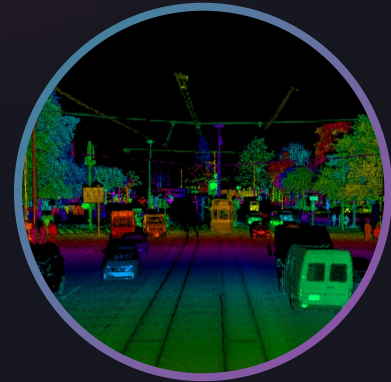
# Enabling Broad Lidar Adoption



**Lidar Chip  
Components**



**Lidar Hardware  
Integration**



**Software & AI  
Development**

# Software Components





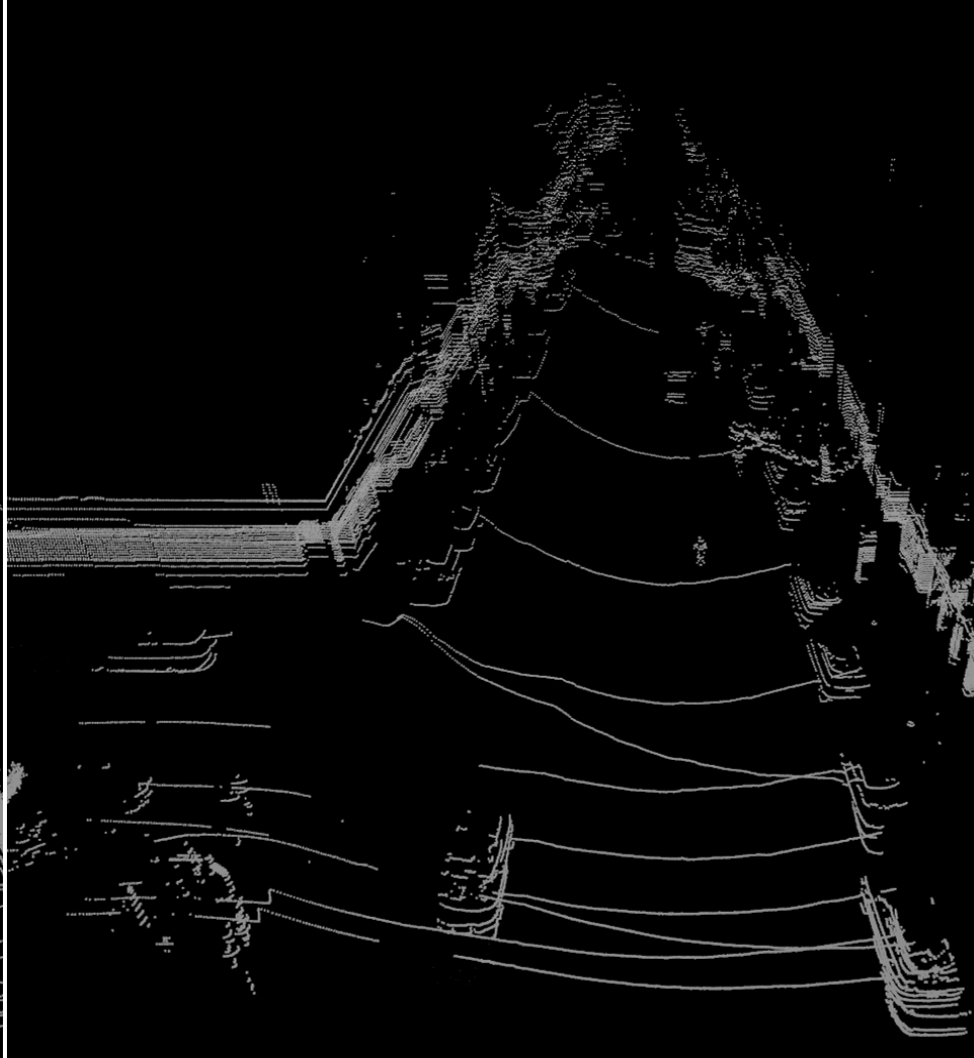
# Luminar AI Engine

# Annie Guan

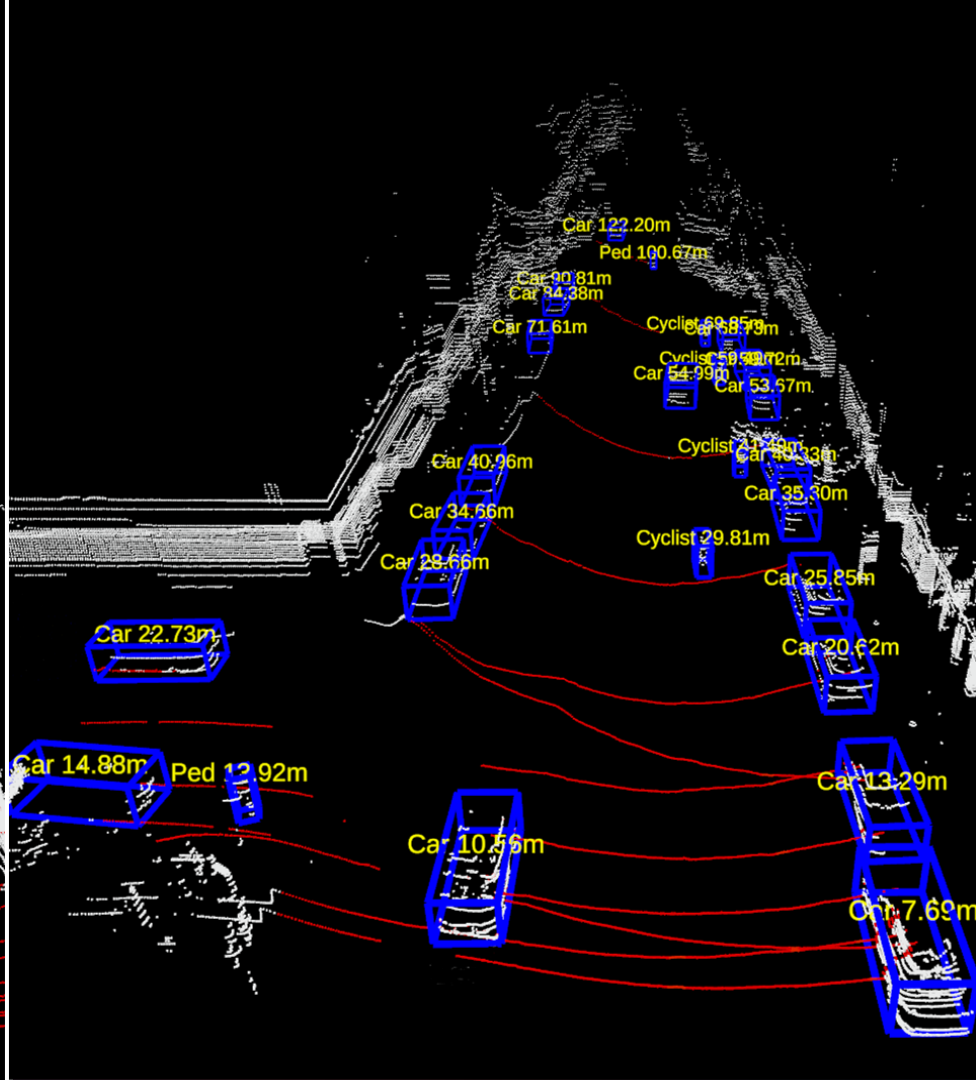
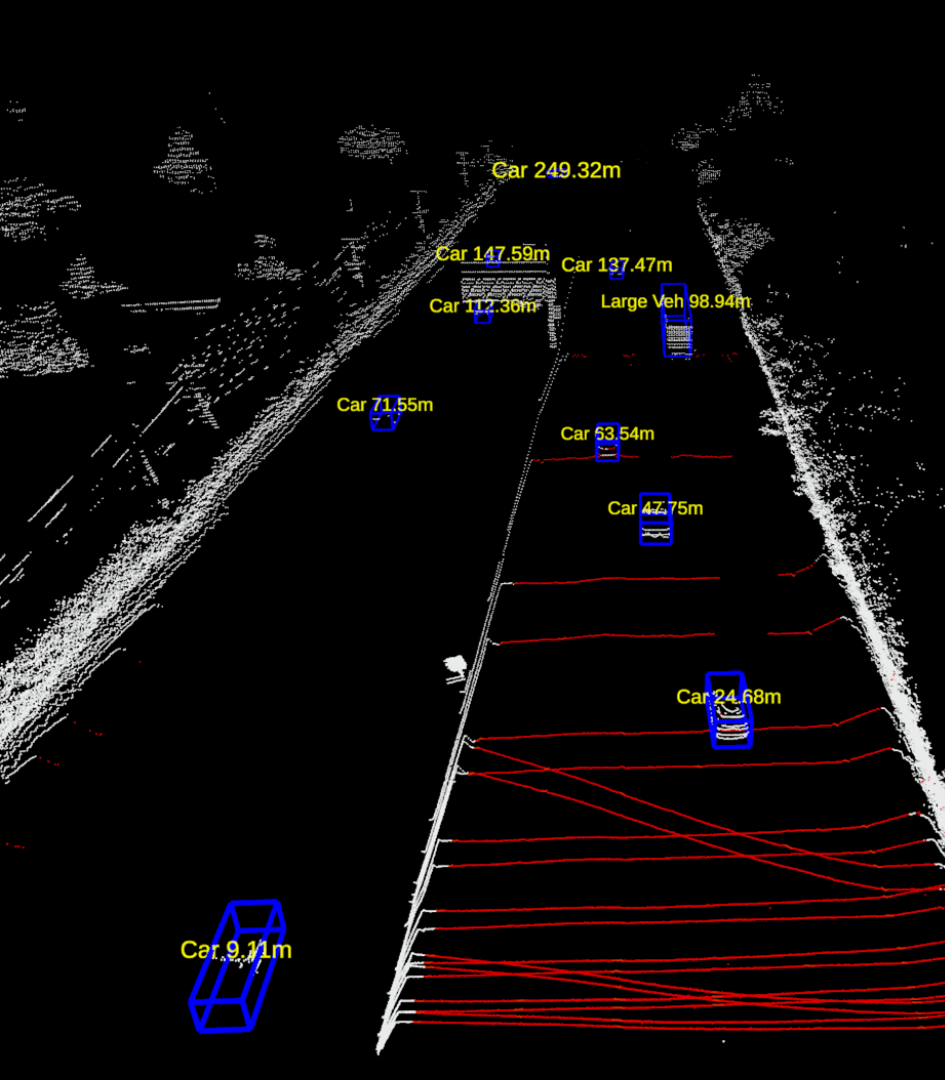
Director of AI and ML

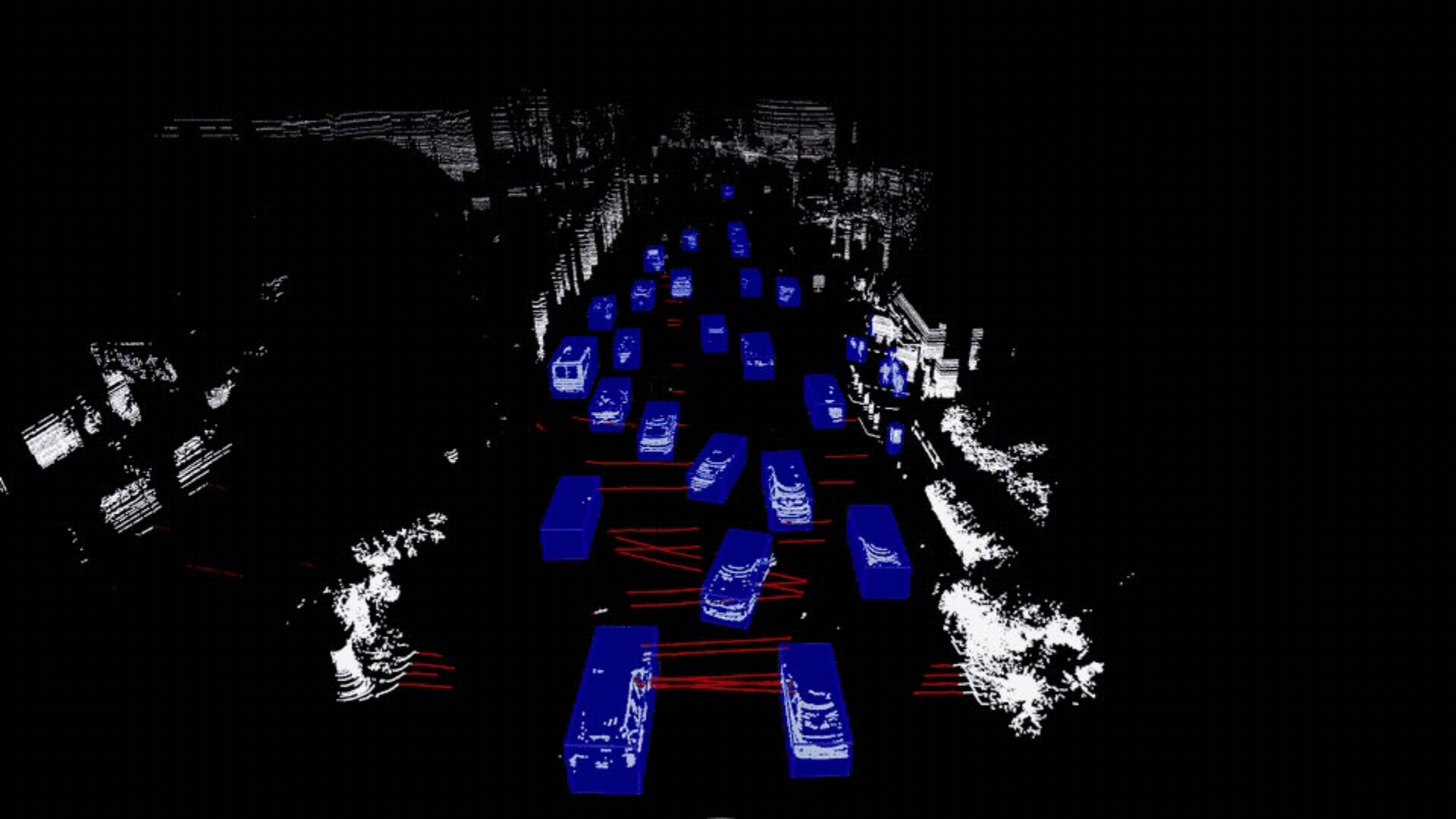




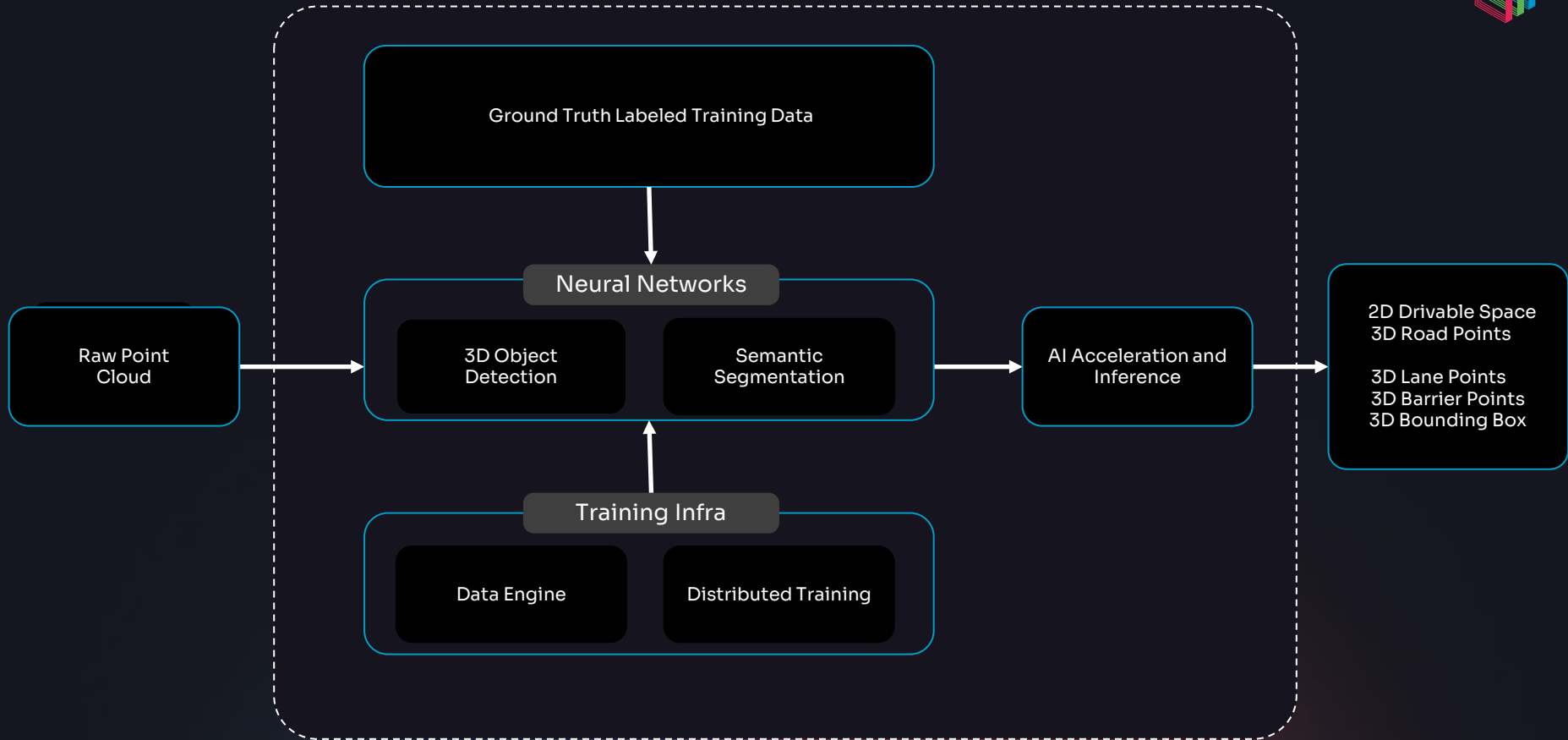




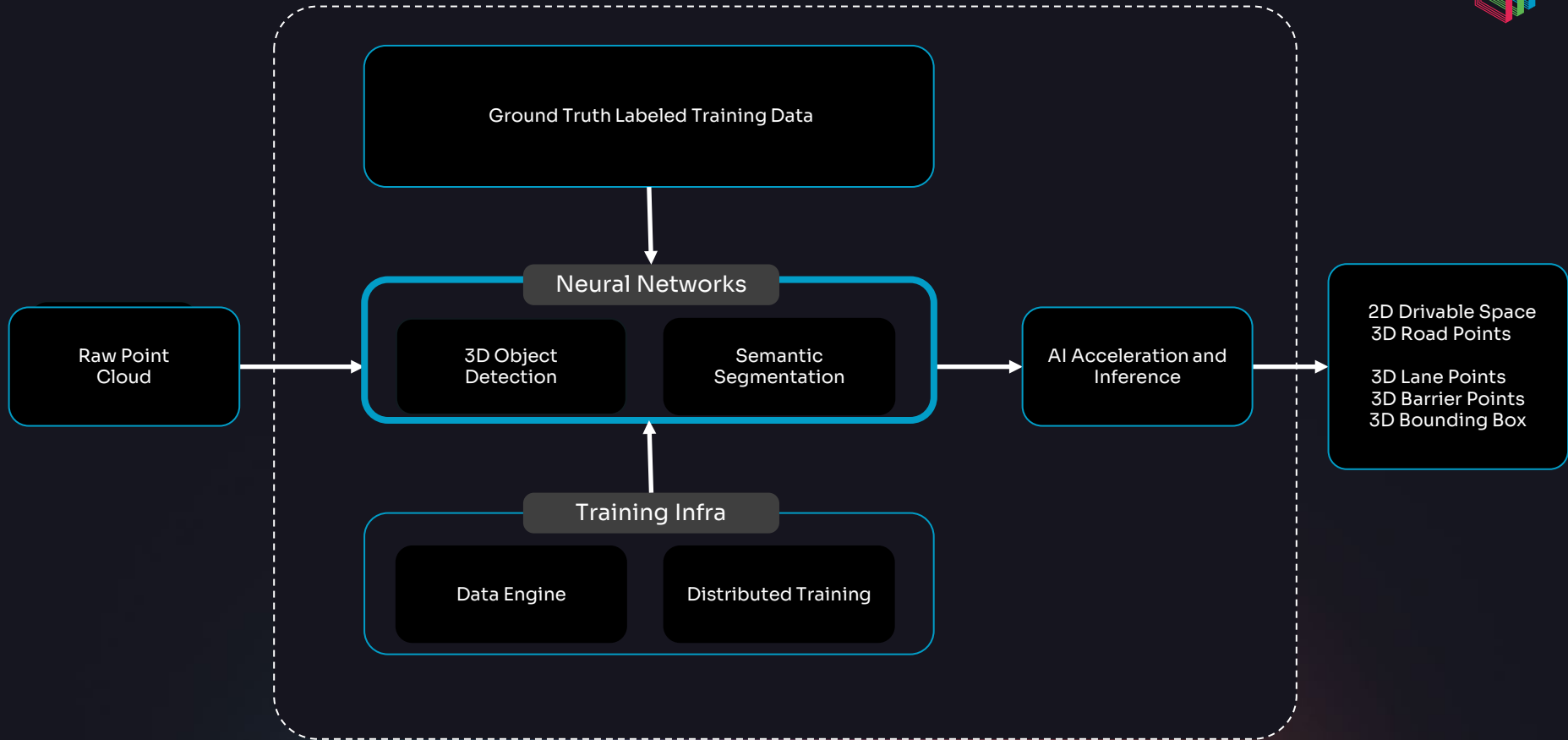




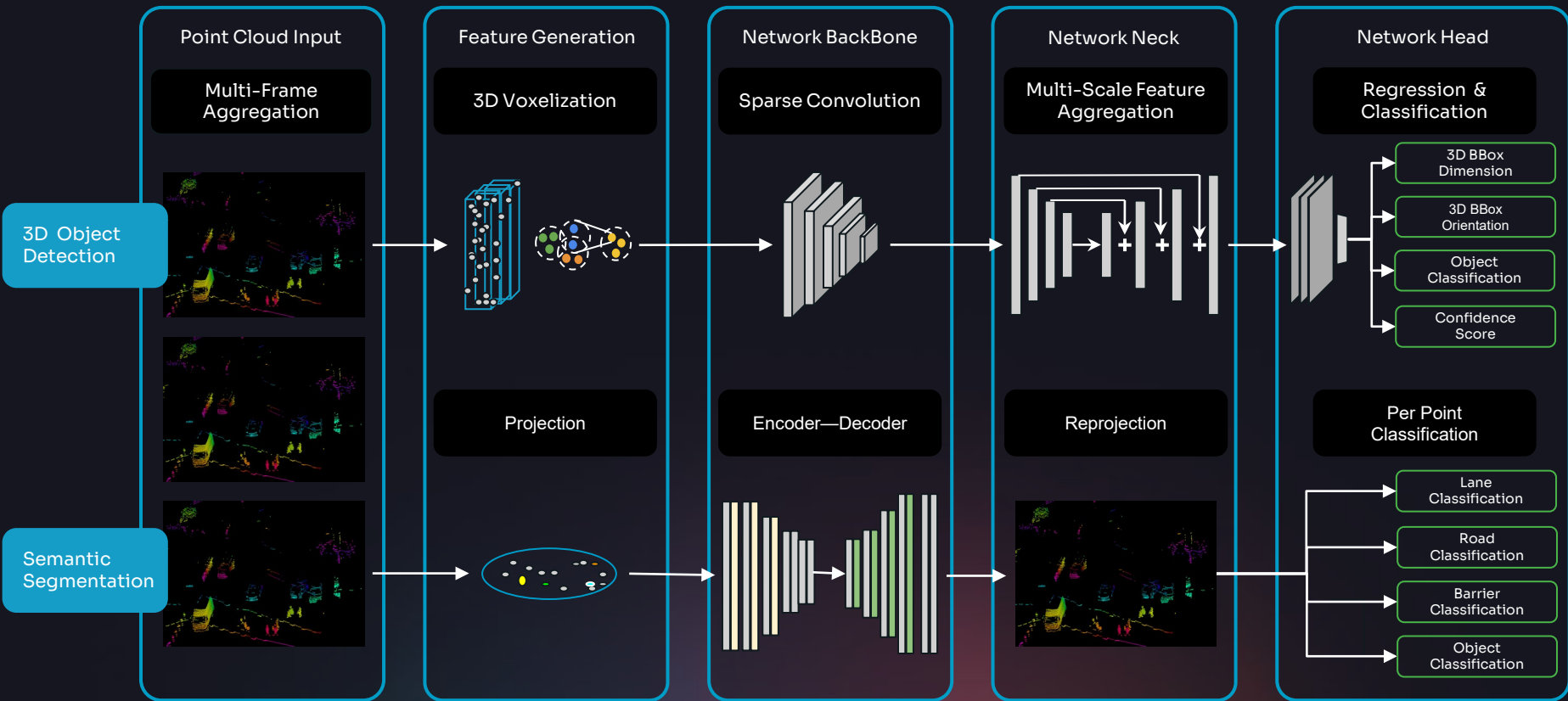
# Luminar AI Engine



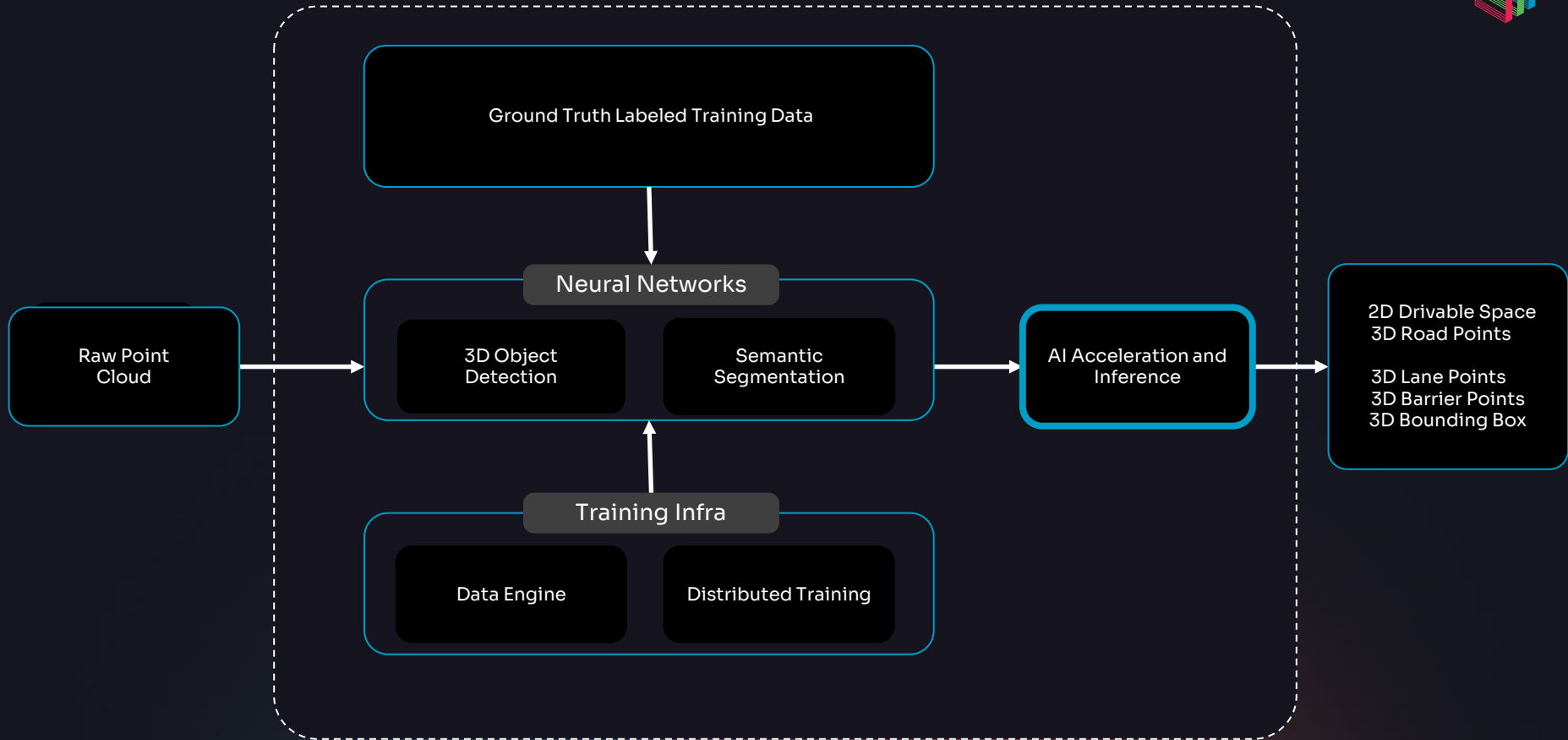
# Luminar AI Engine



# Neural Networks



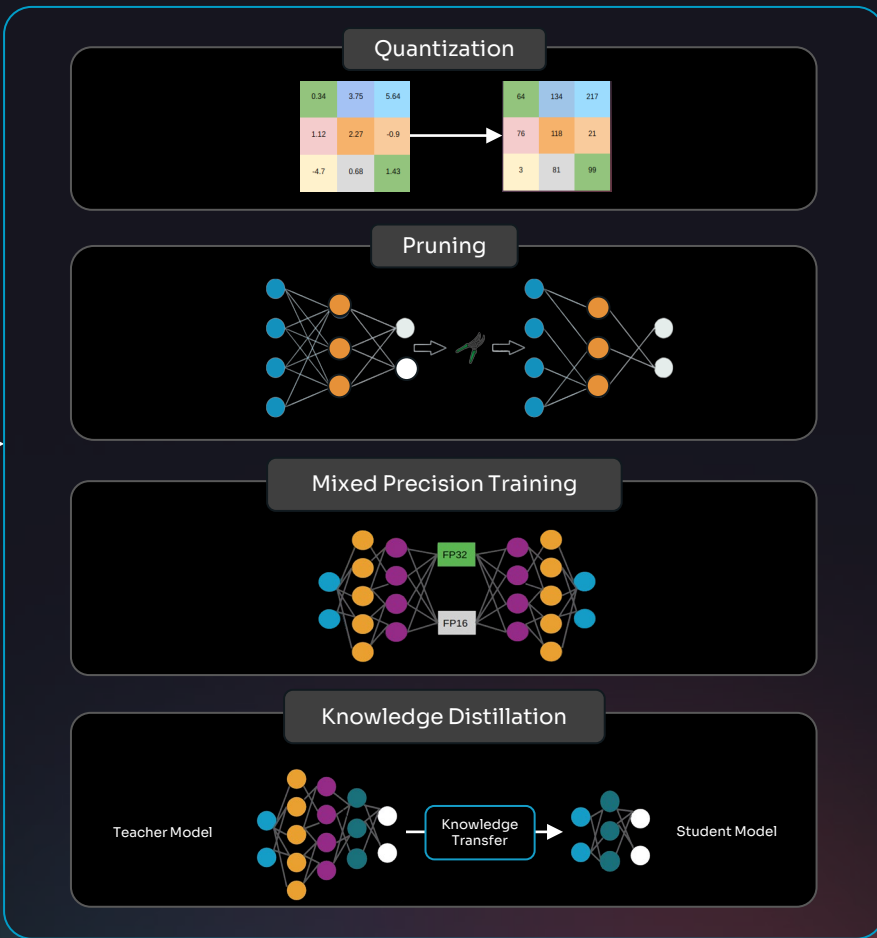
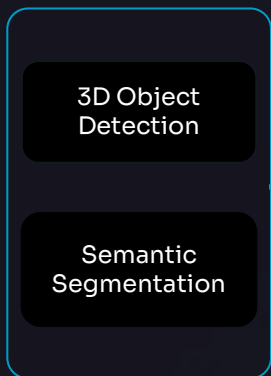
# Luminar AI Engine



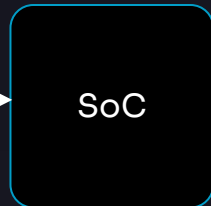
# AI Acceleration and Inference



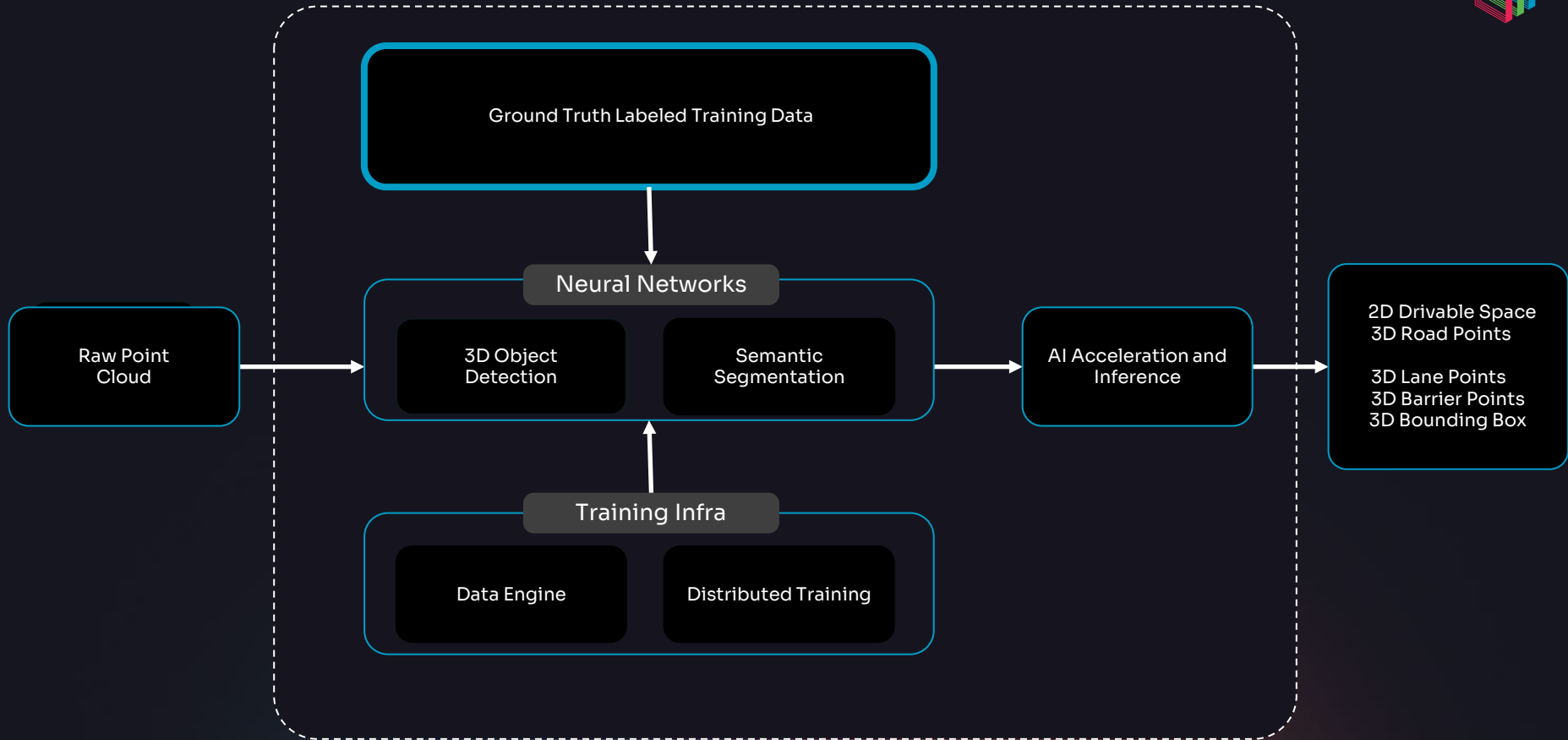
Goal: Optimize for inference speed with little accuracy drop



FP16, INT8



# Luminar AI Engine





# Ground Truth Labeled Training Data



scale



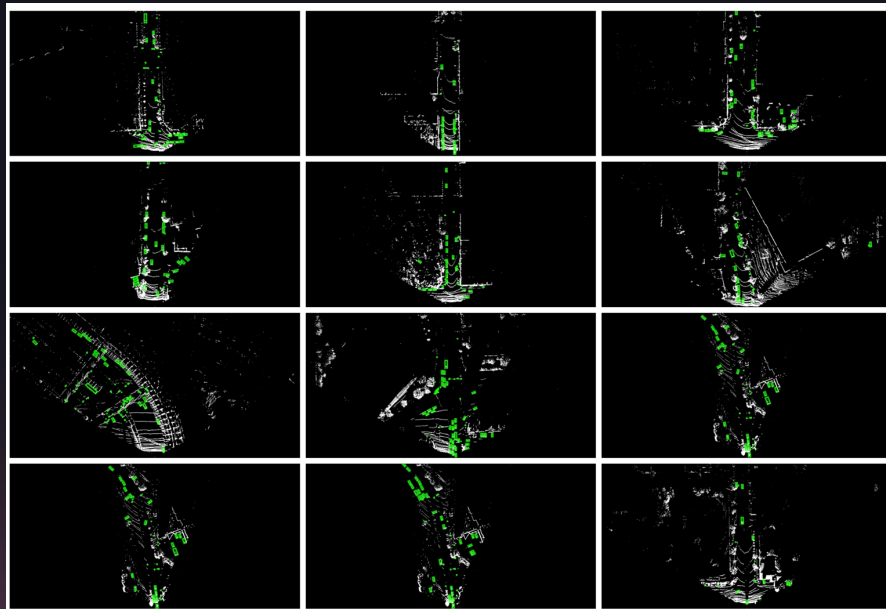
Human-in-the-Loop Labeling



Targeted Updates and Redos



Scale Nucleus





LUMINAR

# Alexandr Wang

Founder and CEO  
Scale.ai



scale

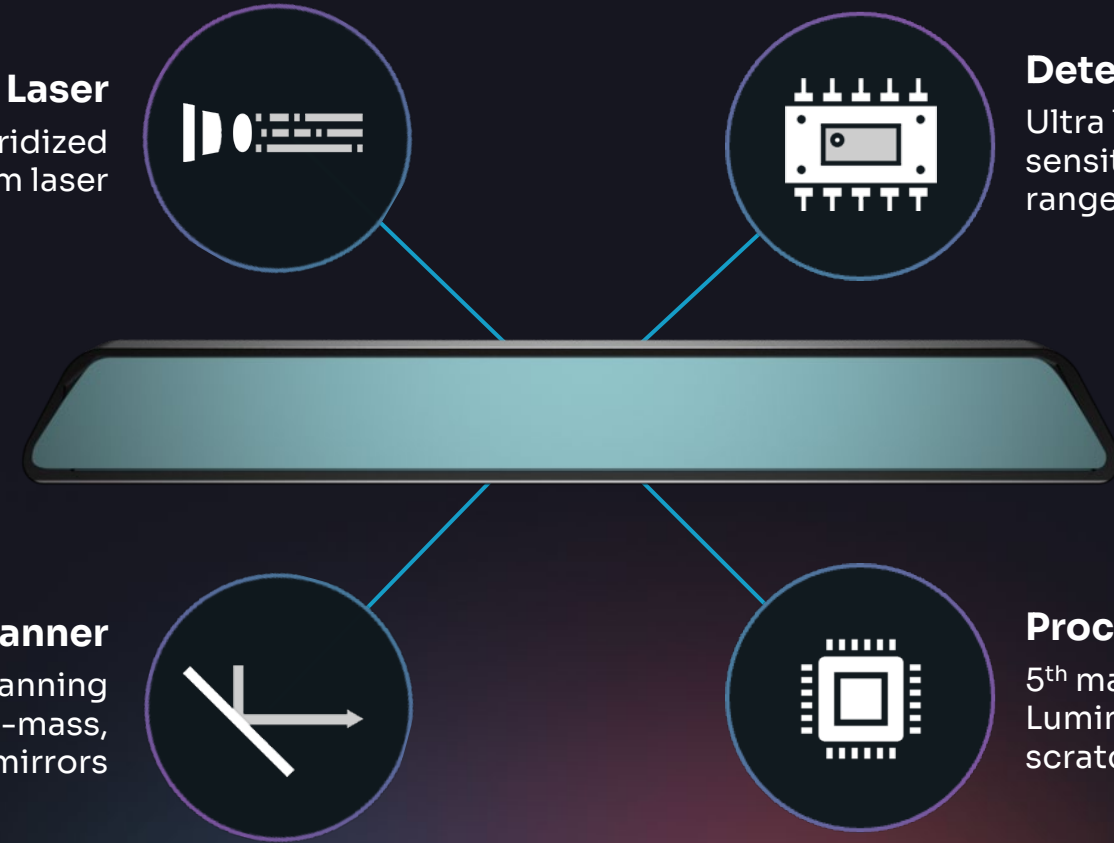


LUMINAR

# Dr. Jason Eichenholz

Co-Founder and CTO





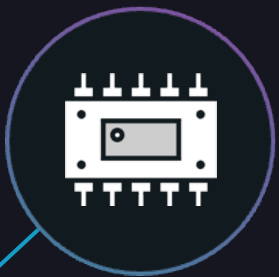
### Laser

Proprietary hybridized low-cost 1550nm laser



### Detector

Ultra low noise, high sensitivity, unlocked long range & economics



### Scanner

Dynamic scanning with low-mass, auto-grade mirrors

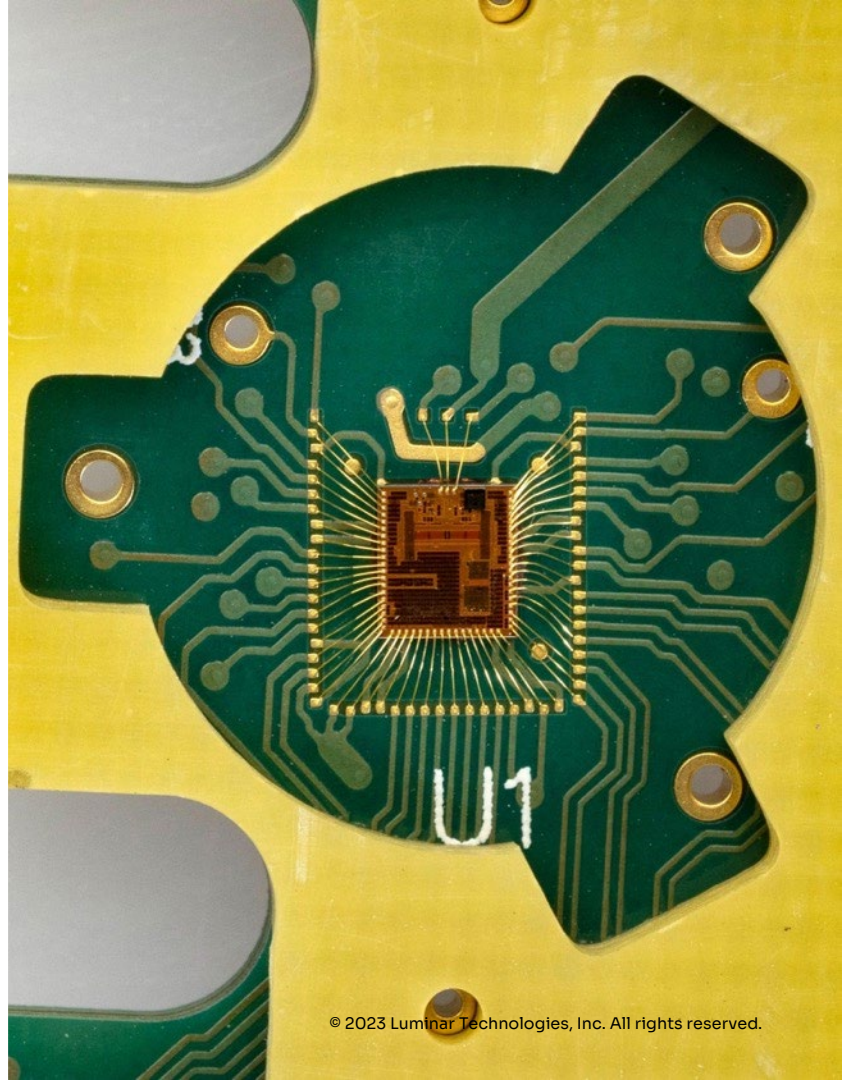
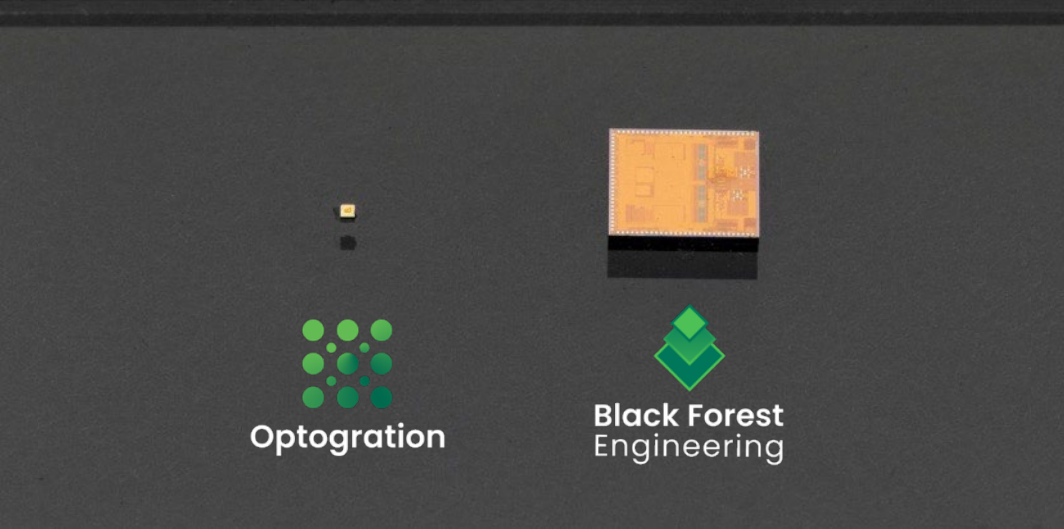


### Processor

5<sup>th</sup> major generation Luminar ICs, designed from scratch in-house









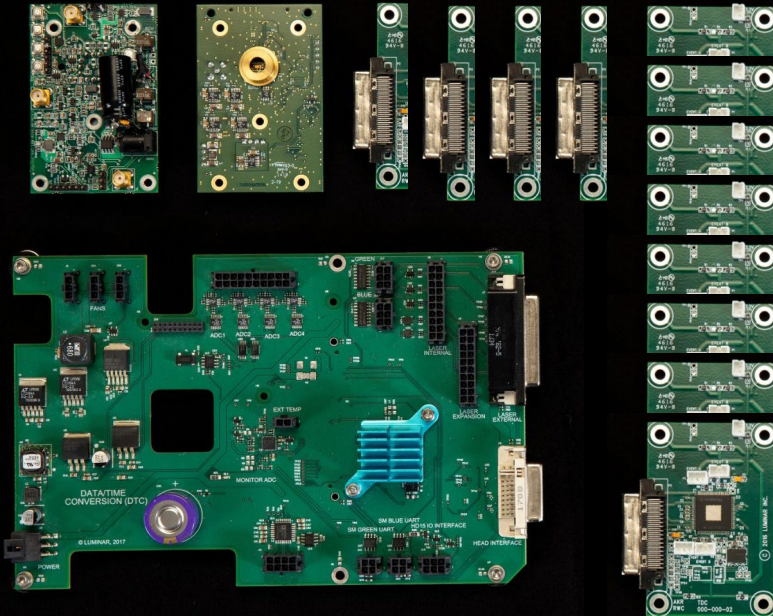


Black Forest  
Engineering



Optogration

## 'Model G'



## Hydra



## Iris





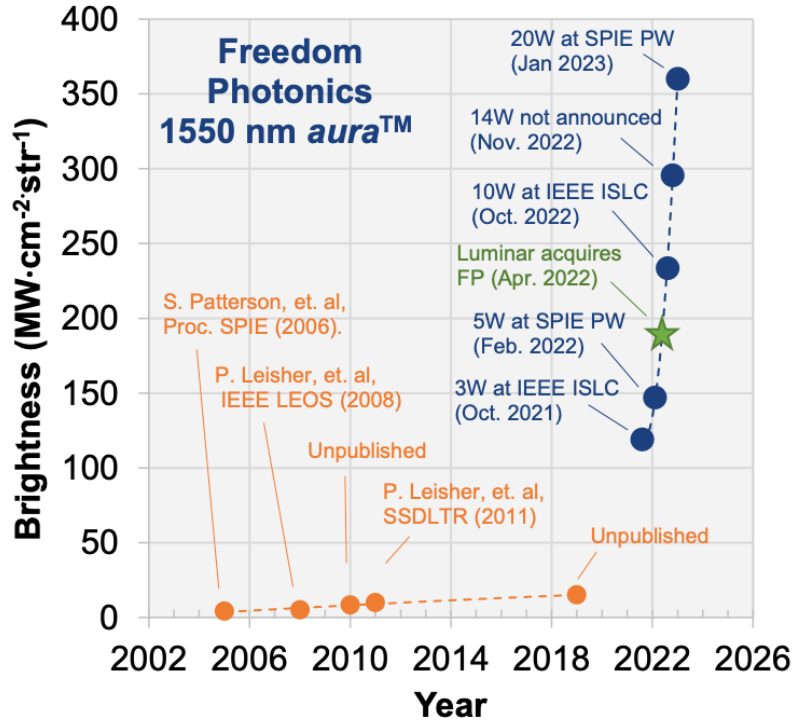
**Black Forest  
Engineering**





# World-Record Laser Performance

Freedom Photonics aura™ provides a disruptive leap in semiconductor laser amplifiers





# Luminar Semiconductor



**Optogration**



**Black Forest  
Engineering**



LUMINAR

# Mike McAuliffe

CEO, Luminar Semiconductor



# Luminar Semiconductor

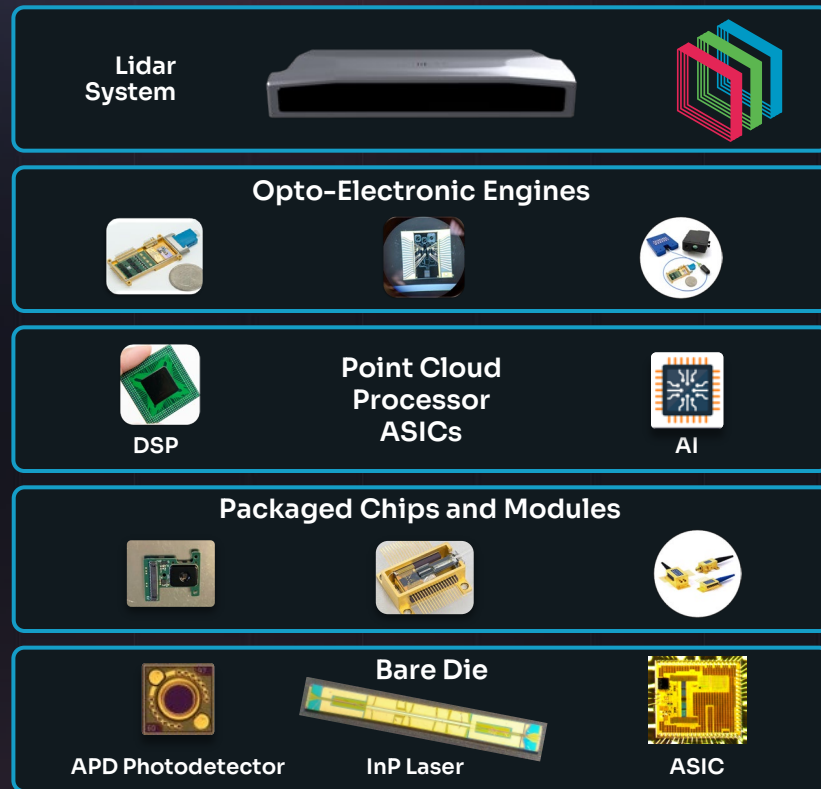
Builds breakthrough photonics  
and opto-electronic engines

Enables industry-leading  
customers to solve impactful  
problems for our world

Enables Luminar to fulfill its  
mission

# Our **Photons** to **Decisions** technology stack

## Leveraging into **new** markets







# Common Platforms Drive Scale

Industrialization

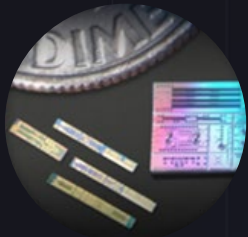
Miniaturization

**Common Needs** – Hardest photon generation, detection and processing problems

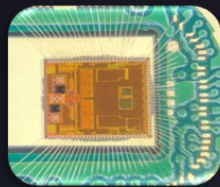
**Leverage scale** across markets

**We solve 1550** – Architecture, Packaging & Scale

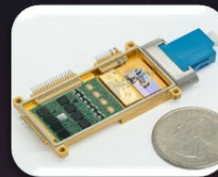
**Shift gears** to @ Scale @ Auto Quality



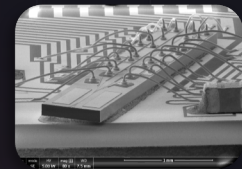
Chip die level



Hybrid  
Integration



OptoElectronic  
Engines



Photonic Integrated  
Circuits

# We win through Technology, Team and Focus



## Our Platforms

Indium Gallium Arsenide  
(InGaAS)

Indium Phosphide  
(InP)

Silicon Germanium  
(SiGe)

Gallium Arsenide  
(GaAs)

Silicon CMOS

Silicon Photonics  
Silicon Nitride (SiN)

## Our Team

> 85% Engineers

> 35% PhD, M.Eng



Laser



ASIC



Receiver

Leading Ecosystem of Fab, Packaging & Test partners

# Market Opportunity TAM > \$50B



**Optical Communications  
Datacom/Telecom**



**Aerospace**



**Precision Manufacturing**



**Life Sciences**



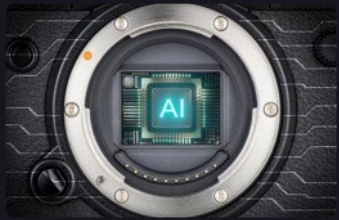
**Emerging - Quantum,  
Optical Sensing**



**3D Vision  
Non-Auto Lidar**

# Market Pull from Industry Leaders

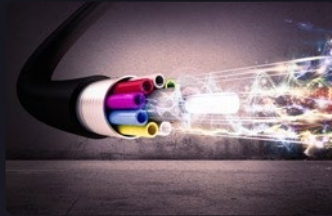
> 60 current programs  
> 500K product units shipped



**Optical I/O  
AI Datacenter**



**Free Space Optics  
Communications**



**Broadband Fiber  
5G; GPON; FTTx**



**Optical Sensing  
& Quantum**



**AeroSpace**



# Industry Landscape Shifting Gears

**Photonics @**  
inflection

**Industrializing**  
Opto-electronics  
**Supply Chain**

Aura + Full stack  
**Our Beachhead**  
**Opportunity**

**Building Stack**  
= our Moat

# Luminar Semiconductor

1

Drive productization,  
scaling and chip-level  
roadmap for Luminar

2

Build foundations  
Build beachheads

**Build. Disrupt. Deliver. Scale.**



LUMINAR



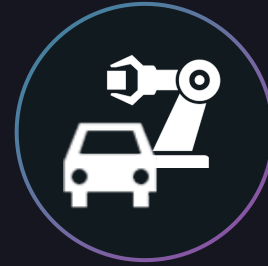
# Taner Ozcelik

Executive Vice President  
and General Manager





**Innovation &  
Velocity**



**Built to  
Scale**



**Elegant  
Architecture**



**Automotive  
Grade**



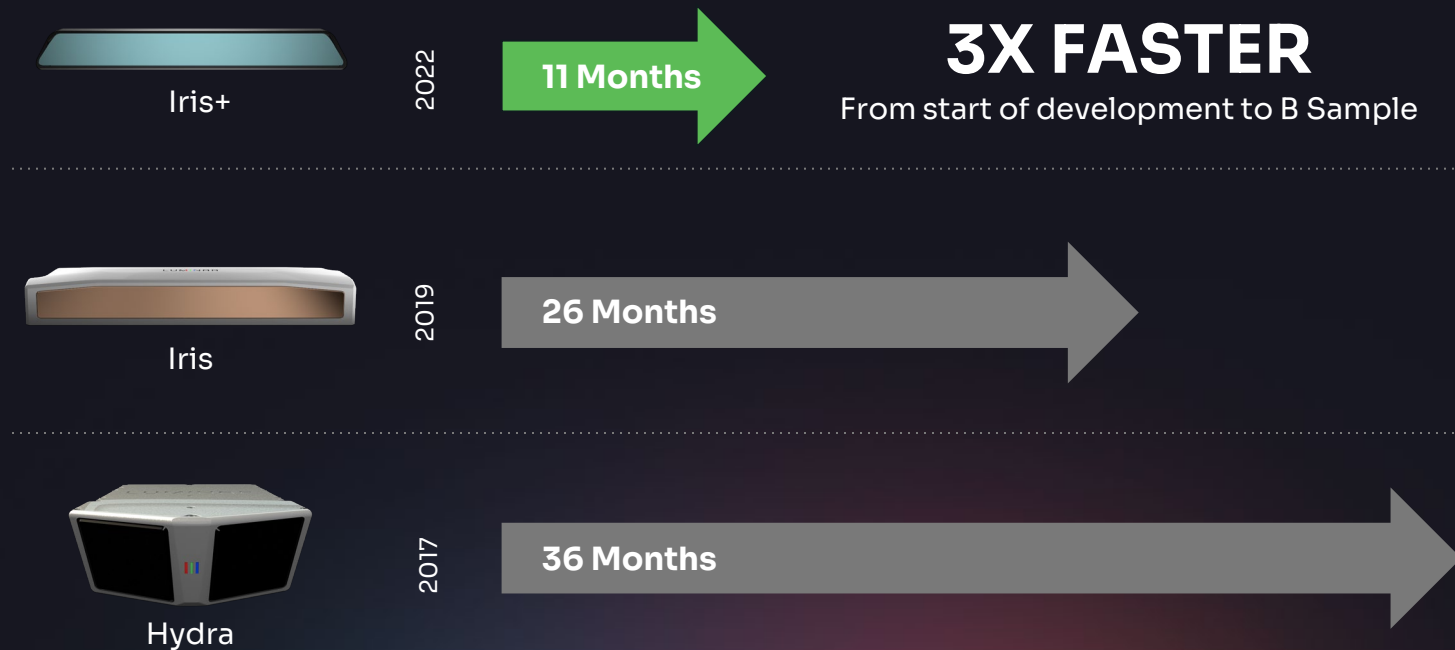
**Automotive &  
Tech Talent**

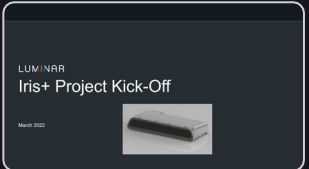


**Innovation &  
Velocity**

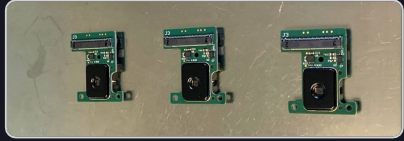
**Not only have we proven  
we can deliver, we are  
gaining velocity**

# Improved Innovation Velocity with Each Generation

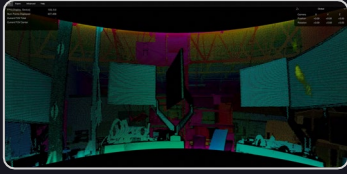




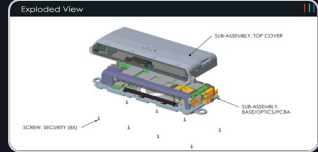
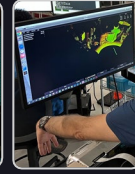
Mar. 2022 - Kickoff



Aug. 2022 - 1st Receiver



Nov. 2022 - 1st Point Cloud



Apr. 2022 - ME Design



Oct 2022 - EV Sample



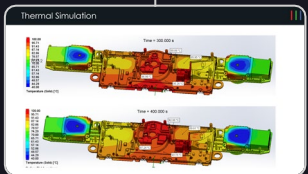
Jan. 2023 - First B Sample on Orlando Pilot Line



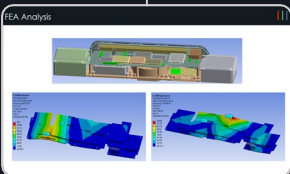
Kickoff

EV

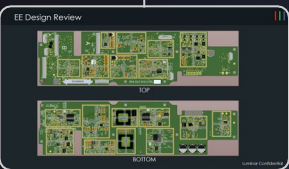
B-sample



May. 2022 - Thermal Analysis



Jun. 2022 - FEA Simulation



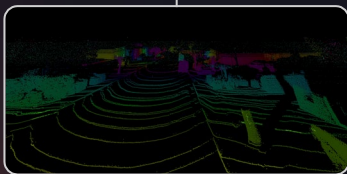
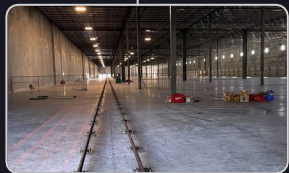
May. 2022 - EE Design



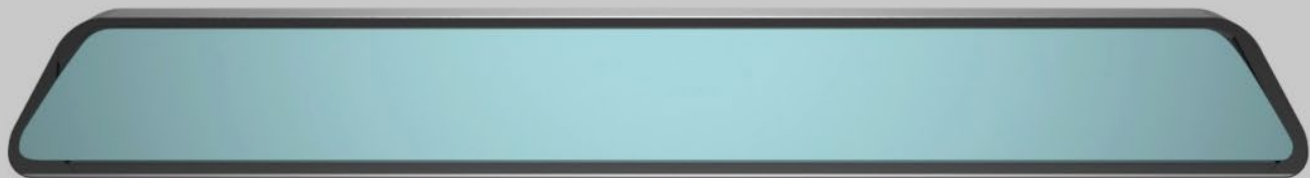
Sep. 2022 -1st Transceiver



Jan. 2023 - B Sample



Feb. 2023 - B Sample



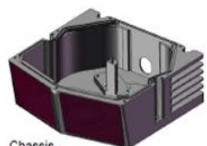
# Expanding Our Next-Gen Lidar Development Team



LUMINAR



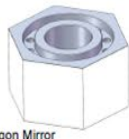
SEAGATE



Chassis



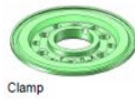
Motor



Polygon Mirror



Galvos



Clamp



Balance Plug



Cowling



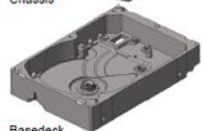
FIG Cover



Torx™ Screws



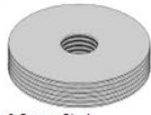
ASIC-GL



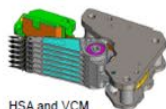
Basedeck



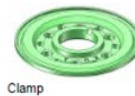
Motor



Disc & Spacer Stack



HSA and VCM



Clamp



Balance Plug



Air Diverter

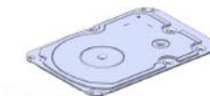


FIG Cover

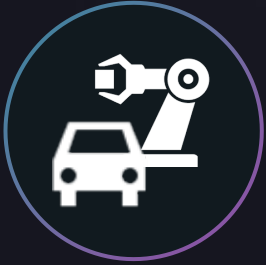


Torx™ Screws



ASIC-GL

Excellent alignment of Technology and Manufacturing  
80% leverage between hard disk drives and lidar



**Built to  
Scale**

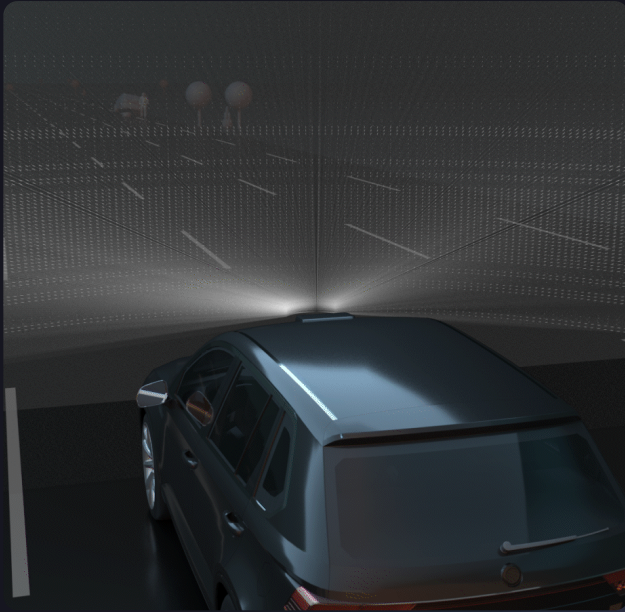
# Platformization & Design for Manufacturing at Scale



# Platform Architecture

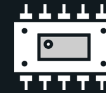


## ARCHITECTURE DELIVERS PERFORMANCE



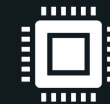
## MODULAR SUB-SYSTEMS

Receiver  
Ultra high  
efficiency, low-cost  
architecture



Emitter  
Proprietary hybridized  
low-cost 1550nm laser

Scanner  
Dynamic scanning  
with low-mass,  
auto-grade  
mirrors

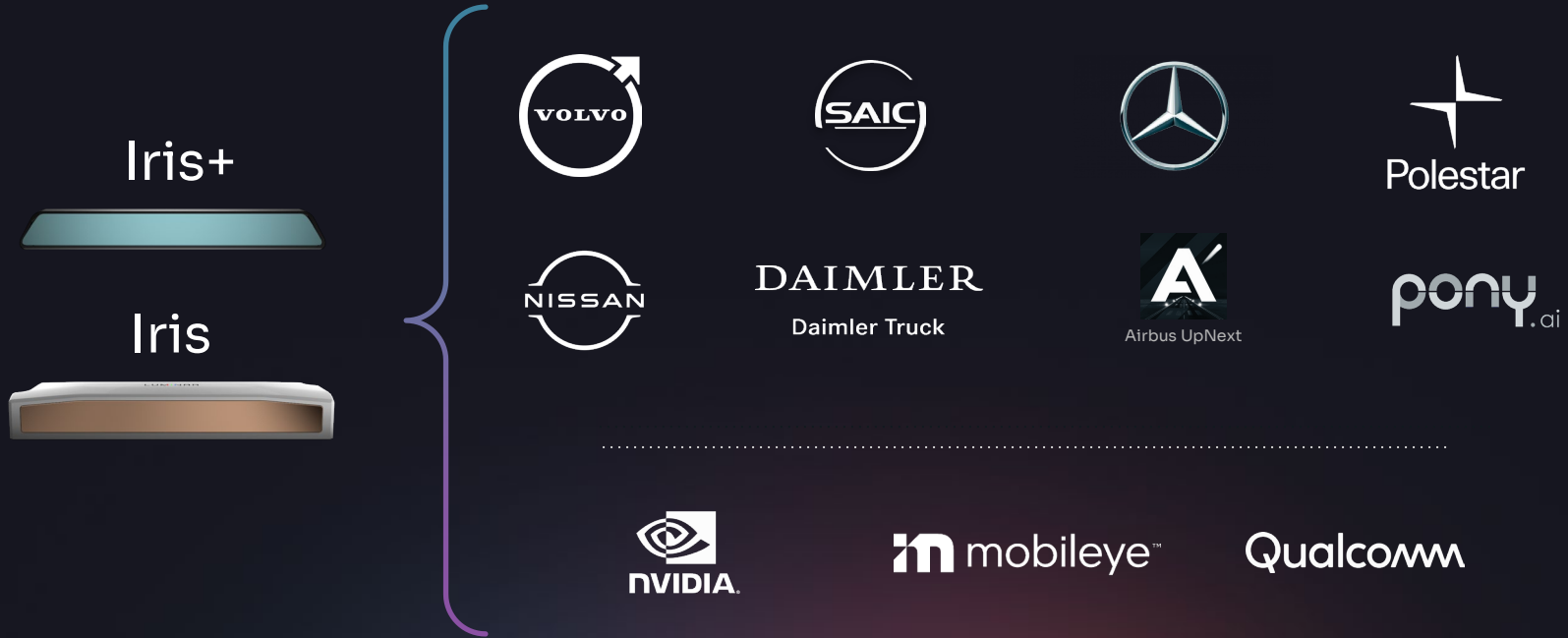


Processor  
5th major  
generation Luminar  
ASICs, designed  
from scratch in-  
house

Software  
Firmware, Core SW  
Perception & mapping  
SW enable proactive  
safety and highway  
autonomy



Services  
Luminar partners with  
Swiss Re to develop  
insurance solutions for  
Proactive Safety™  
solutions





# Platform Partnerships





**nVIDIA**®



**Elegant  
Architecture**

# Driving high performance and efficiency

# World Class Innovation Ingredients



Internally Developed

Externally Sourced



LUMINAR



Laser

Assembly  
Seed Laser



Detector

APD



Processor

Receiver ASIC  
Laser ASIC  
FPGA



Software Stack

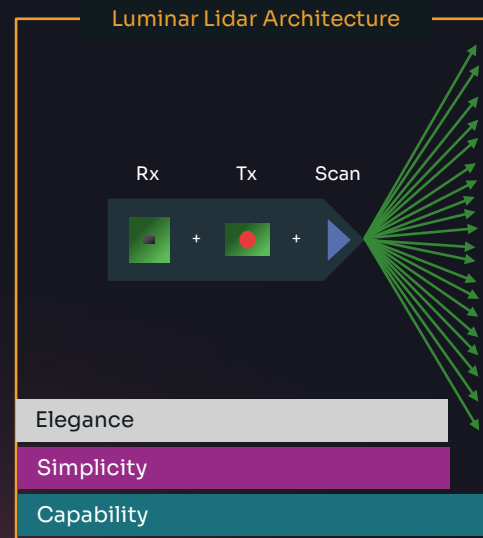
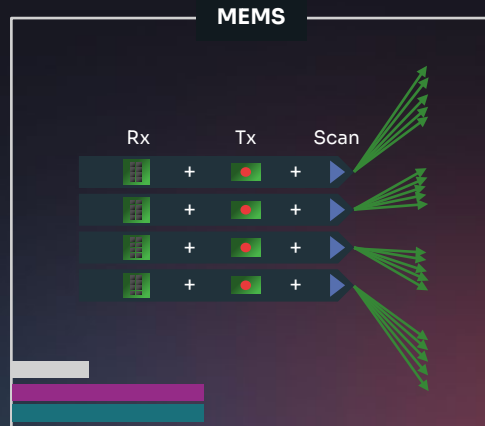
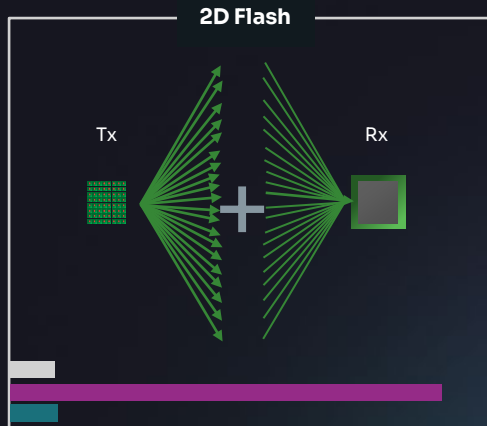
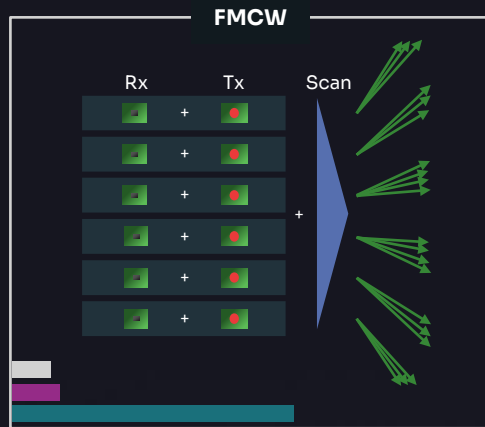
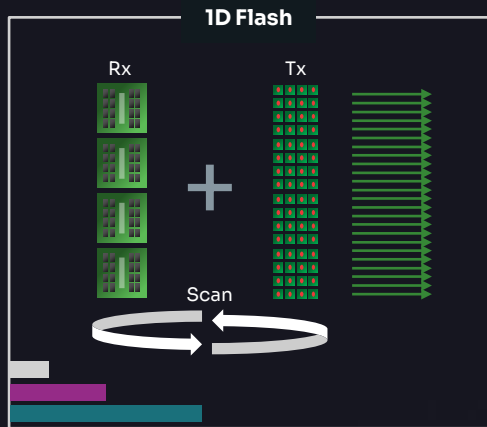
Firmware  
Core SW  
Perception SW  
Path Planning & Control



Scanner

Scanning System

# Elegance = Simplicity x Capability





**Automotive  
Grade**

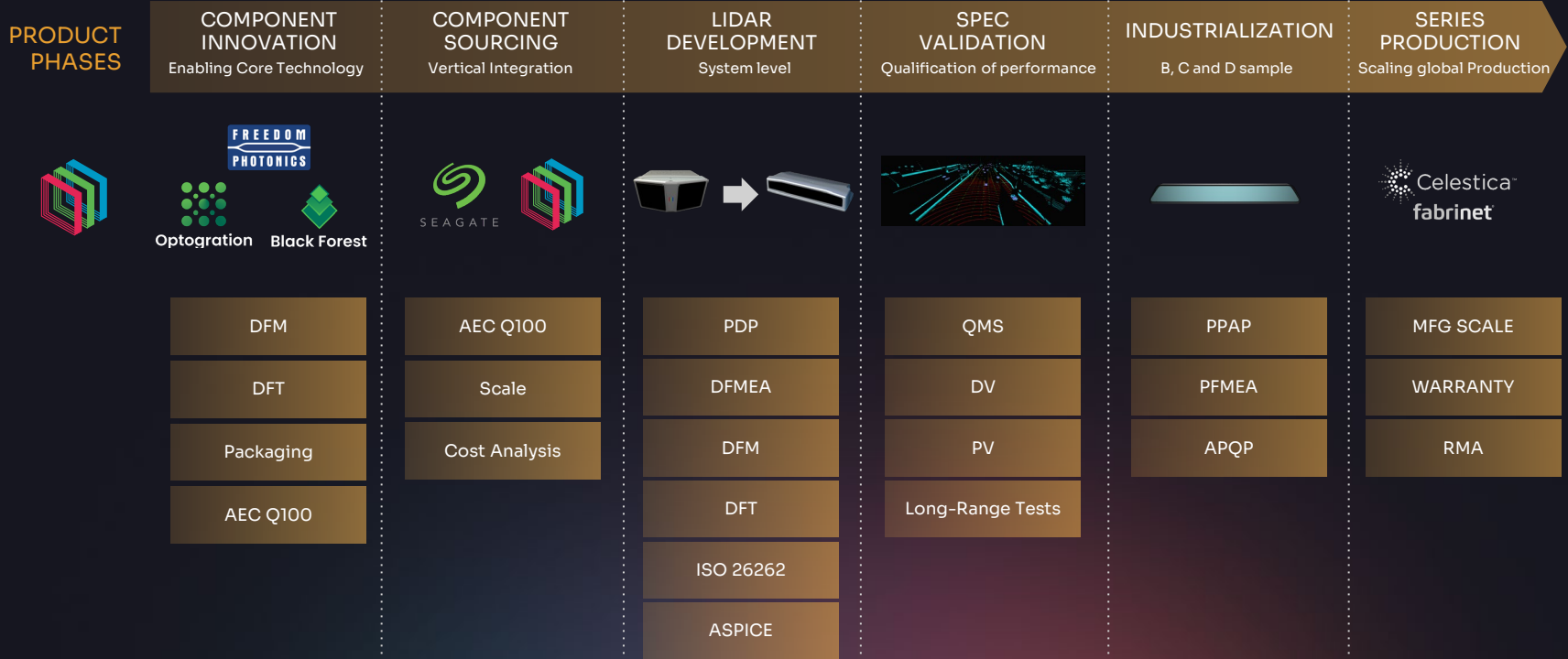
# Reliability and Robustness are Paramount for Automotive



# What it Means to be Automotive Grade



Success in the automotive industry requires not just great product performance, but a complete understanding of the automotive industry and associated processes & qualifications







LUMINAR

# Debbie Poppas

Vice President

Quality and Industrialization





**Advancing  
Industry Standards**



**Commitment  
to Quality**



**Implementing Key  
Quality Initiatives**





**Advancing  
Industry Standards**

Leading the industry to  
raise the bar for safety and  
autonomy with standards  
organizations



**Commitment  
to Quality**

Quality throughout our  
business and supply chain

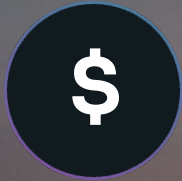


**Implementing Key  
Quality Initiatives**

# Embracing zero defect strategies as a mindset



# Supplier Partnership Model



Investment



Quality  
Leadership



Product &  
Process Innovation



Global capabilities,  
local support



Long-Term  
Partnerships



Highest  
Delivered Value



89

Suppliers

16

Countries

100%

Scalable & Automotive-grade



# Transforming Our Supply Chain For Automotive Grade Certification

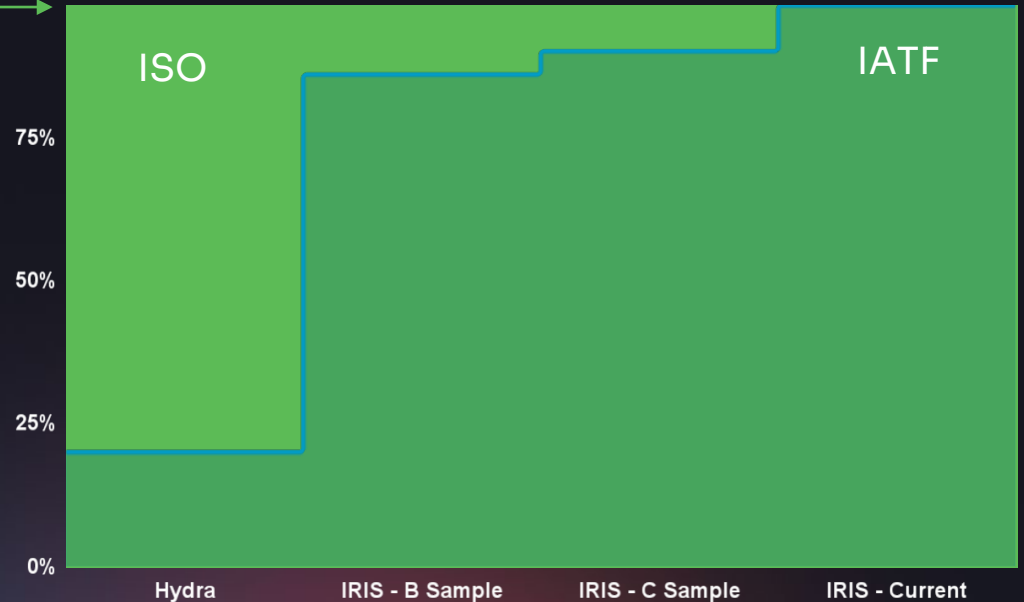
100%

ISO Certified

98%

ISO certified AND IATF compliant today

Full Certification this year





HIGHLY AUTOMATED HIGH VOLUME FACILITY ONLINE

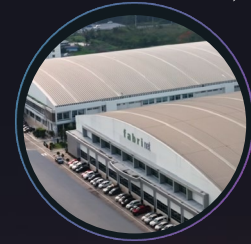


## Exponential Scale

**Luminar Dedicated w/ Mfg Partners:**  
Building new highly-automated, high-volume dedicated facility in Mexico; initial line adds build capacity



IRIS SOP FOR SAIC'S RISING AUTO R7



## Series Production (SOP)

**Celestica & FabriNet:**  
Series production launch w/ mfg partners in Monterrey, Mexico and Thailand



## Advanced Manufacturing

**Orlando + Minneapolis**  
Manufacturing R&D and Pilot Lines

2016-18

2019

2020

2021

2022

2023

2024

2025 +



# Jeff Jaisle

Vice President, Manufacturing





LUMINAR



**New Highly-Automated,  
High Volume Facility  
Now Expected **Online in Q2'23****







**250K+**

Capacity  
by end of 2023

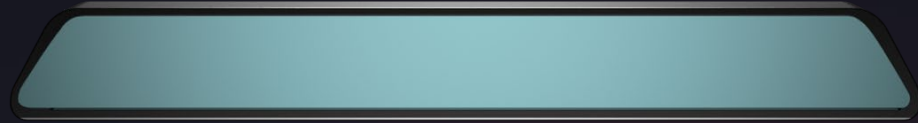
Scalable to  
**500k+**

An aerial photograph of a large industrial facility, likely a factory or assembly plant. The main building is a long, white structure with a grey, corrugated metal roof. The word "fabrind" is visible on the side of the building. The facility is surrounded by several parking lots filled with cars. In the background, there are other buildings, including a multi-story residential or office building, and some greenery. The overall scene depicts a large-scale industrial operation.

# Scaling up Transceiver Assembly in Thailand



# Iris+



# Global manufacturing footprint today, next site planned for Asia

Minnesota 

Mexico  Florida 

 Thailand



HIGHLY AUTOMATED HIGH VOLUME FACILITY ONLINE

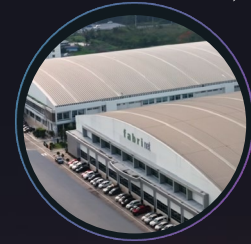


### Exponential Scale

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### Advanced Manufacturing

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Manufacturing R&D and Pilot Lines





LUMINAR

**Tom Fennimore**

CFO





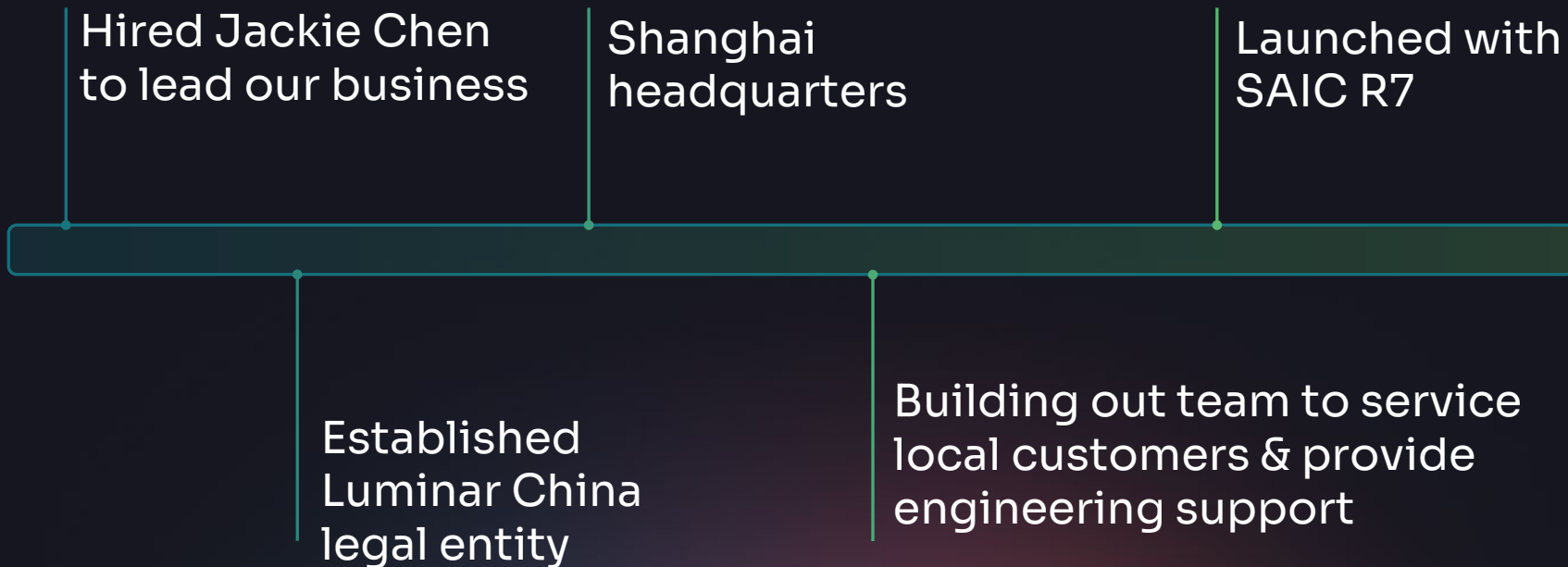
LUMINAR



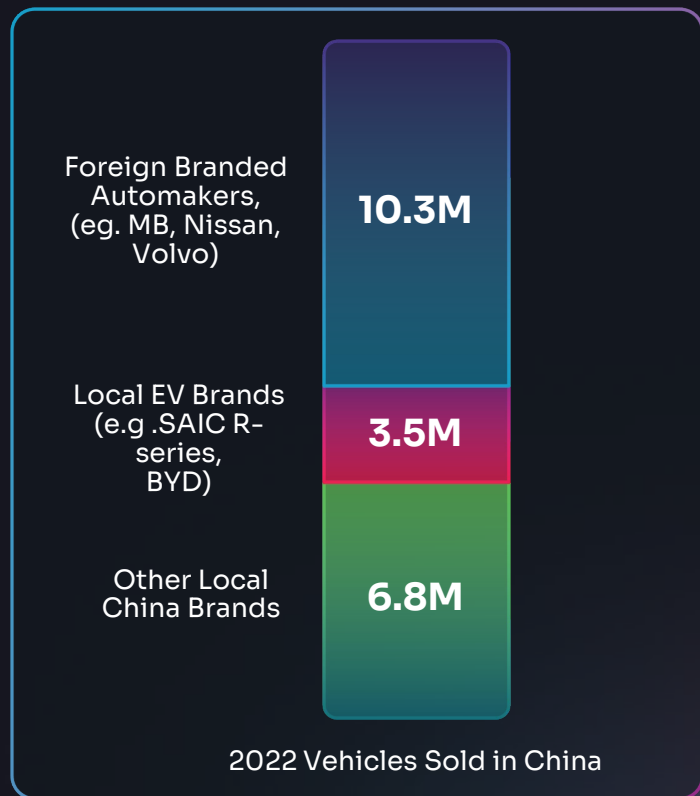


# Our China Business

# Luminar China: Key Actions In 2022



# Passenger Vehicle Automotive Market in China



**~50%**  
Foreign Brands

**~50%**  
China Brands

Luminar naturally positioned with foreign brands given global OEM relationships

**~1/3 of 3.5M**  
At Price Point >RMB 250k

# Our China Strategy



1

## Focused Customer Strategy

Support global customers in China

Local EV & technology leaders

Commercial trucking

2

## Expand China Footprint

Grow local engineering team

Establish software infrastructure

Asia manufacturing capabilities

3

## Strategic Partners

Pony.ai: autonomous leader

Utilize ECARX strategic partnership to develop local solution for China market

Explore other potential partnerships



pony.ai



eccarX



# Luminar Insurance Strategy



# The Insurance Opportunity Enabled By Luminar

**80%** of forward collisions fall into three categories



**35%**

Reaction Time & Unsafe Distance



**25%**

Sudden Objects



**20%**

Low-Velocity Collision

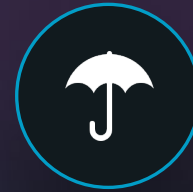
Our technology reduces & mitigates these collision scenarios





# Luminar: Willing to Bet On Our Technology

Luminar is willing to underwrite  
expected  
insurance savings  
to subsidize the cost  
of our technology  
to the consumer and OEM



Average US annual  
vehicle insurance  
premium is

**~\$1,750**



# Building a **Scalable & Asset Light** Insurance Product & Infrastructure

Forming digital MGA<sup>1</sup> to operate insurance business

Will utilize technology & reputable third party partners

Forming own insurance captive to manage insurance risk



Initial focus is to launch in the US, with goal to scale globally

Goal is to partner with OEM customers to enable scale

Serving passenger vehicle & commercial vehicle markets

**Our insurance product is expected to be available to consumers of Luminar-equipped production vehicles in initial geographies in 2024**

<sup>1</sup>Managing General Agent

# Our Luminar Insurance Team and Strategic Partner



Luminar's insurance platform construction & launch will be overseen by **Alex Tsetsenkos**, who constructed and launched Tesla Insurance



## Swiss Re

Partnering with **Swiss Re**, a leading global reinsurance company



# Financials, Milestones & Outlook



# Met or Exceeded

## All 4 2022 Milestones



Series  
Production



Sentinel  
Progress



60% More Commercial  
Program Wins



60% Forward-looking  
Order Book<sup>1</sup> Growth

<sup>1</sup>Please refer to Order book definition in the appendix

# Q4/FY'22 Summary Results



## **FY'22 Revenue \$40.7M; Q4 Revenue \$11.1M**

Q4 & FY'22 Revenue at lower end of guidance range primarily due to timing of program and service revenue recognition

## **Q4'22 GAAP EPS loss ~\$0.40; Non-GAAP EPS loss ~\$0.26**

Slightly higher loss than expectations as we invested additional capital in industrialization & ongoing software development

## **Year-end Cash position<sup>1</sup> of \$489M**

Q4 Free Cash Flow<sup>2</sup> of (\$79.5M) lower sequentially from Q3 (\$52.5M) driven primarily by operating loss from industrialization & ongoing software development

<sup>1</sup>Includes cash, cash equivalents and marketable securities. <sup>2</sup>Defined as operating cash flow less capex. Refer to appendix for reconciliations between GAAP measures & Non GAAP measures



# 2023 Milestones & Financial Guidance

## Top 3 Business Milestones for 2023



### Scale

High Volume, Automated Mexico Facility Online & Meets Volvo SOP Requirements



### Technology & Product Roadmap

Enter Iris+ C-phase  
Next-Gen LiDAR Prototype  
Software Completed for Volvo & Mercedes SOP



### Growth

Grow Order Book<sup>1</sup> by at least \$1 Billion

## 2023 Financial Guidance

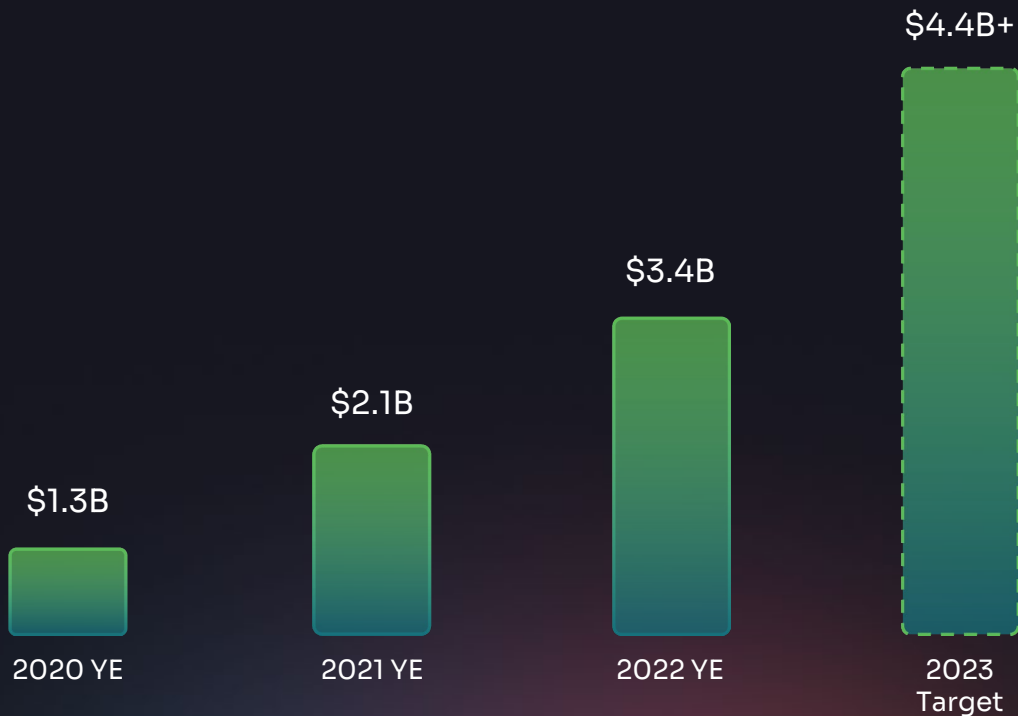
**>2x FY'22**  
2023 Revenue

**Gross Margin**  
Positive by Q4'23

**>\$300M**  
2023 Year-End Cash / Liquidity

<sup>1</sup>Please refer to Order Book definition in the appendix

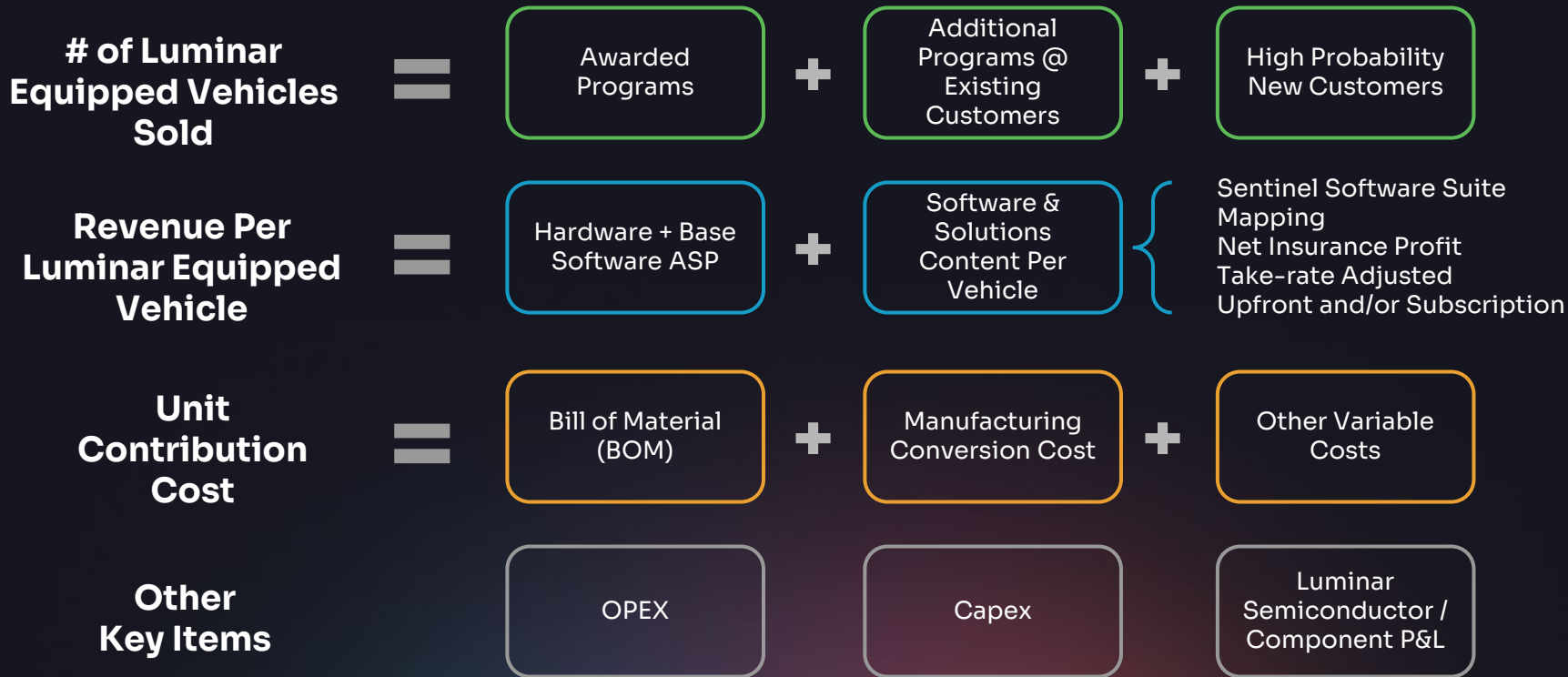
# Forward Looking Order Book<sup>1</sup> Update



<sup>1</sup>Please refer to Order Book definition in the appendix



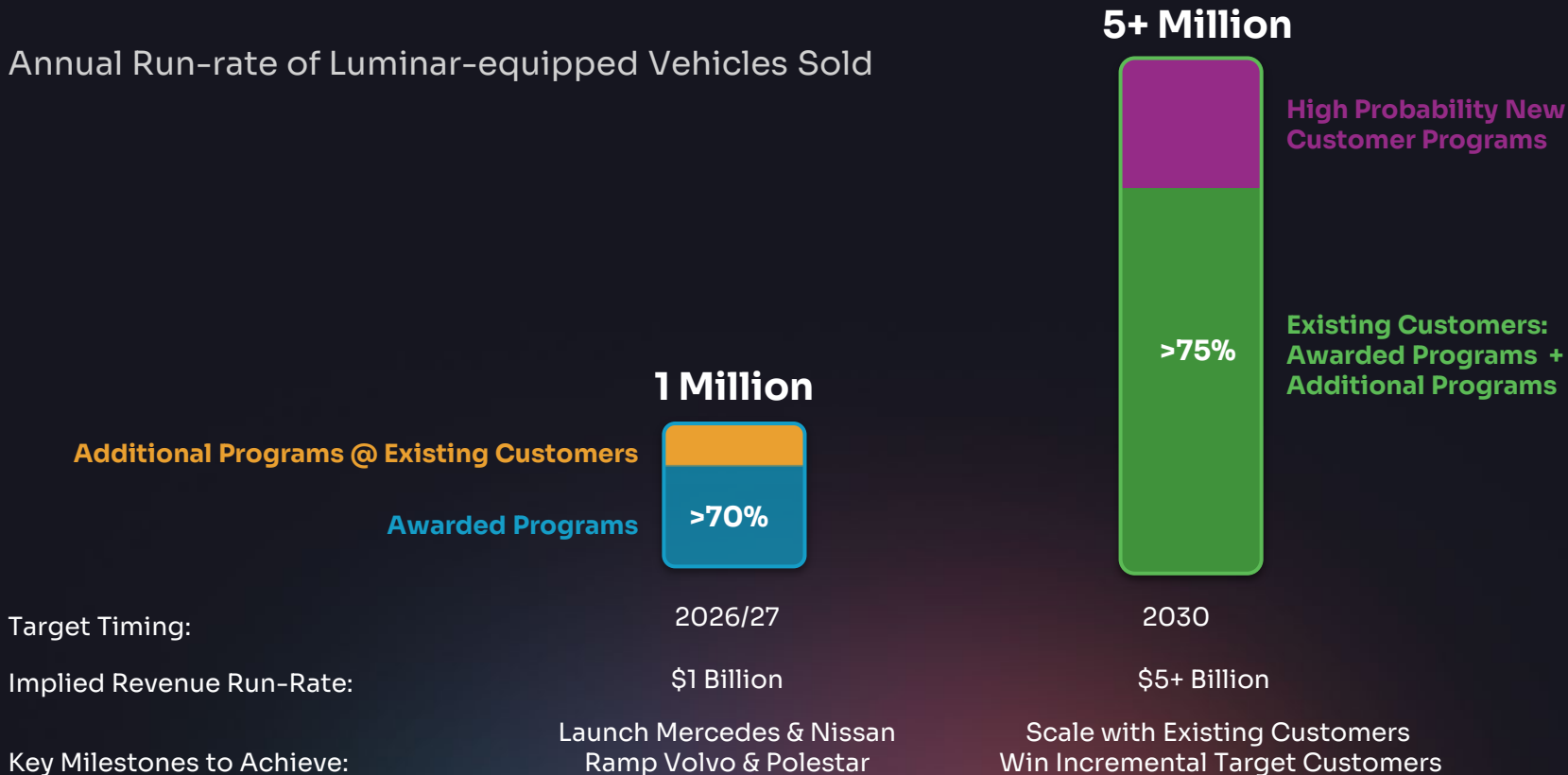
# Key Building Blocks of Our Long-Term Model



# Exponential Scale: Run-Rate of Luminar-equipped Vehicles



Annual Run-rate of Luminar-equipped Vehicles Sold



Target Timing:

2026/27

2030

Implied Revenue Run-Rate:

\$1 Billion

\$5+ Billion

Key Milestones to Achieve:

Launch Mercedes & Nissan  
Ramp Volvo & Polestar

Scale with Existing Customers  
Win Incremental Target Customers

# Luminar Unit Economics Roadmap



<sup>1</sup>2025 target is primarily from Hardware and Base Software ASP. 2030 target includes Hardware and Base Software ASP plus estimated lifetime revenue from Software & Solutions (e.g. Sentinel software suite solutions plus net insurance profit, all of which are take-rate adjusted).

<sup>2</sup>2025 Unit Contribution Cost target primarily includes BOM, manufacturing conversion costs and other variable COGs for producing a Lidar sensor. 2030 target includes the same items plus the incremental cost of services for providing Software and Solutions services

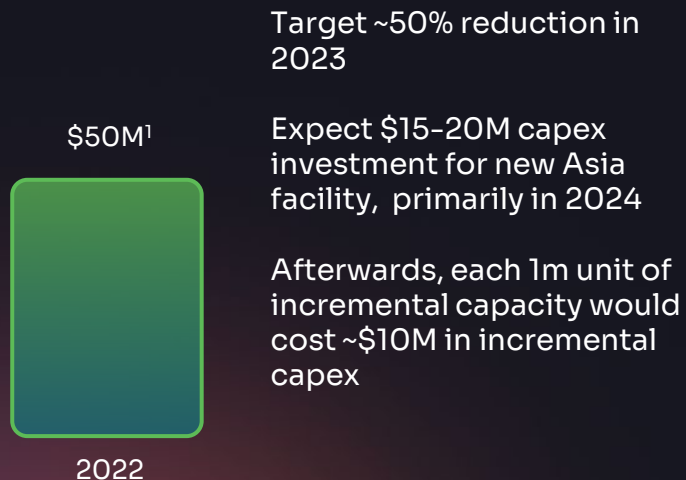
# Scalable OPEX & Capex



## Opex



## Capex<sup>1</sup>

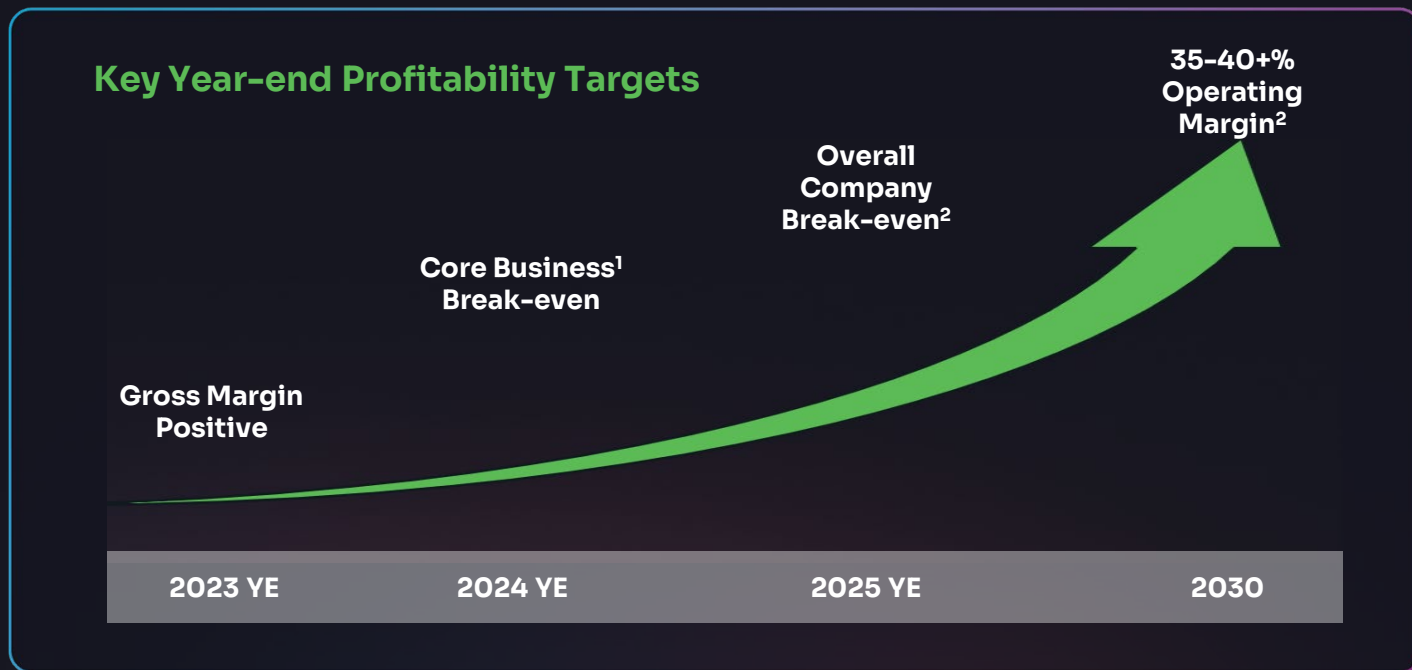


<sup>1</sup>\$50M in Capex includes \$18M in cash, \$28M in stock payments to vendors, and \$4M not yet paid. Refer to appendix for reconciliations between GAAP measures & Non GAAP measures

# Profitability Roadmap



**Sufficient Cash on hand (plus cushion) to reach profitability**



1. Core Business Break-Even refers to the target of reaching operating profit break-even for our core Lidar hardware and component businesses and excludes investments in software, insurance and our future product roadmap

2. Refer to appendix for reconciliations between GAAP measures & Non GAAP measures



# Our M&A Strategy

Be positioned to act opportunistically in current environment

## Strong strategic fit

- Software & Solutions
- Vertical integration
- R&D acceleration
- Acqui-hires
- Strategic partnership investments

Focus on small/mid-sized deals

## Primarily use stock as acquisition currency

Will file equity registration statements only for M&A & Strategic partnerships for opportunistic flexibility

## M&A Deals Last 2 Years

<b>Optogration</b>	Vertical Integration
<b>Freedom Photonics</b>	Vertical Integration
<b>Civil Maps</b>	Software & Solutions
<b>Seagate Lidar</b>	R&D acceleration



# Concluding Remarks

## **Customers Wins in-place to Exponentially Scale Sensor & Revenue Growth**

Credible path to 100k+, 1M and 5M production run-rate; expected to at least double revenue each year for the next several years; \$5bn+ 2030 revenue target

## **Credible Path to Profitability**

2023YE: Gross Margin Profitable; 2024YE: Core Business Break-even; 2025YE Company Break-even

## **Investing in Product Roadmap to Drive Growth, Addtl Content & Margins**

Next generation sensor plus software, solutions, and ecosystem products enable mass-market penetration and higher margins

## **Team in-place & Cash on-hand to Succeed**

Luminar has the team today + sufficient cash (and a cushion) reach profitability and execute our business plan



LUMINAR



# DISCLAIMER AND CAUTIONARY NOTE



## FORWARD-LOOKING STATEMENTS

This presentation of Luminar Technologies, Inc. (“Luminar” or the “Company”) includes “forward-looking statements” within the meaning of the “safe harbor” provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by the use of words such as “future,” “growth,” “opportunity,” “well-positioned,” “forecast,” “intend,” “seek,” “target,” “anticipate,” “believe,” “expect,” “estimate,” “plan,” “outlook,” and “project” and other similar expressions that predict or indicate future events or trends or that are not statements of historical matters. These forward-looking statements include, but are not limited to, statements regarding the expected achievement of series production readiness and production scaling for Iris lidar, the expected vehicle delivery timing by the automaker, the expected timing and impact of the new, high-volume manufacturing facility, the expected timing of a software beta, the expected growth in 2022 of Luminar’s forward-looking order book and major commercial wins, and expectations for 2022 revenue growth and cash expenditure. Such forward-looking statements with respect to revenues, earnings, performance, strategies, prospects and other aspects of the business of Luminar are based on current expectations that are subject to risks and uncertainties. These statements are based on various assumptions, whether or not identified in this presentation, and on the current expectations of Luminar’s management and are not predictions of actual performance. These forward-looking statements are provided for illustrative purposes only and are not intended to serve as, and must not be relied on by any investor as, a guarantee, an assurance, a prediction or a definitive statement of fact or probability.

A number of factors could cause actual results or outcomes to differ materially from those indicated by such forward-looking statements. These factors include, but are not limited to: Luminar’s history of losses, significant continuing expenses and limited operating history; the cost of Luminar’s strategic initiatives and the potential failure to increase revenue to offset these initiatives; whether Luminar’s lidar products are selected for inclusion in autonomous driving or ADAS systems by automotive OEMs or their suppliers, and whether Luminar will be de-selected by any customers; the lengthy period of time from a major commercial win to implementation and the risks of cancellation or postponement of the contract or unsuccessful implementation; potential inaccuracies in Luminar’s forward looking estimates of certain metrics and future cost of goods sold (COGS) and bill of materials (BOM) and total addressable market; the discontinuation, lack of success of Luminar’s customers in developing and commercializing products using Luminar’s solutions; Luminar’s inability to reduce and control the cost of the inputs on which Luminar relies; the effect of continued pricing pressures, competition from other lidar manufacturers, automotive original equipment manufacturers (“OEMs”) cost reduction initiatives and the ability of automotive OEMs to re-source or cancel vehicle or technology programs; general economic uncertainty and the effect of general economic conditions on Luminar’s industry in particular, including the level of demand and financial performance of the autonomous vehicle industry and market adoption of lidar as well as developments in alternative technology and the increasingly competitive environment in which Luminar operates; Luminar’s ability to manage its growth and expand its business operations effectively, including into international markets, such as China, which exposes Luminar to operational, financial and regulatory risks; adverse impacts due to limited availability and quality of materials, supplies, and capital equipment, or dependency on third-party service providers; whether Luminar will be able to successfully transition its engineering designs into high volume manufacturing, including the Company’s ability to transition to an outsourced manufacturing business model and whether the Company and its outsourcing partners and suppliers can successfully operate complex machinery; whether Luminar can successfully select, execute or integrate its acquisitions; whether the complexity of Luminar’s products results in undetected defects and reliability issues which could reduce market adoption of its new products, limit its ability to manufacture, damage its reputation and expose it to product liability, warranty and other claims; Luminar’s ability to maintain and adequately manage its inventory; Luminar’s ability to remediate the material weakness in its internal controls over financial reporting; Luminar’s ability to protect and enforce its intellectual property rights; changes in personnel and availability of qualified personnel and dependence on Austin Russell, Luminar’s Founder, President and Chief Executive Officer; the amount and timing of future sales and whether the average selling prices of Luminar’s products could decrease rapidly over the life of the product as well as dependence on key customers, who are often large corporations with substantial negotiating power; the effects of the ongoing coronavirus (COVID-19) pandemic or other infectious diseases, health epidemics, pandemics, or natural disasters on Luminar’s business; interruption or failure of Luminar’s information technology and communications systems and cybersecurity risks to operational systems, security systems, infrastructure, integrated software in its lidar solutions; strict government regulation that is subject to amendment, repeal or new interpretation and Luminar’s ability to comply with modified or new laws and regulations applying to its business; whether the concentration of Luminar’s stock ownership and voting power limits the ability of its stockholders to influence corporate matters; and risks related to Luminar’s indebtedness; and other risks and uncertainties discussed from time to time in the Company’s periodic reports on Form 10-K or Form 10-Q filed with the Securities and Exchange Commission (the “SEC”), including in the “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” sections of such reports, as well as other documents filed or to be filed with the SEC. There may be additional risks that Luminar presently knows or that Luminar currently believes are immaterial that could also cause actual results to differ from those contained in the forward-looking statements.

You are cautioned not to place undue reliance upon any forward-looking statements, including the projections, which speak only as of the date made. Luminar does not undertake any commitment to update or revise the forward-looking statements, whether as a result of new information, future events or otherwise.

Accordingly, forward-looking statements, including any projections or analysis, should not be viewed as factual and should not be relied upon as an accurate prediction of future results. The forward-looking statements contained in this presentation are based on the Company’s current expectations and beliefs concerning future developments and their potential effects on Luminar. These forward-looking statements involve a number of risks, uncertainties (some of which are beyond our control), or other assumptions that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements.

Should one or more of these risks or uncertainties materialize, or should any of management’s assumptions prove incorrect, actual results may vary in material respects from those projected in these forward-looking statements. Luminar does not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws. Accordingly, you should not put undue reliance on these statements.

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This presentation contains financial forecasts with respect to certain financial measurements of Luminar, including, but not limited to Luminar's projected Revenue, free cash flow, year end cash, and order book. Such projected financial information constitutes forward-looking information, and is for illustrative purposes only and should not be relied upon as necessarily being indicative of future results. Luminar's independent registered public accounting firm did not audit, review, compile, or perform any procedures with respect to the projections for the purpose of their inclusion in this presentation, and accordingly, it did not express an opinion or provide any other form of assurance with respect thereto for the purpose of this presentation. These projections should not be relied upon as being necessarily indicative of future results. Luminar does not undertake any commitment to update or revise the projections, whether as a result of new information, future events or otherwise.

In this presentation, certain of the above-mentioned projected information has been repeated (in each case, with an indication that the information is an estimate and is subject to the qualifications presented herein), for purposes of providing comparisons with historical data. The assumptions and estimates, including Order Book numbers underlying the prospective financial information are inherently uncertain and are subject to a wide variety of significant business, economic and competitive risks and uncertainties that could cause actual results to differ materially from those contained in the prospective financial information. See "Forward-Looking Statements" paragraph above. Accordingly, there can be no assurance that the prospective results are indicative of the future performance of Luminar or that actual results will not differ materially from those presented in the prospective financial information. Inclusion of the prospective financial information in this presentation should not be regarded as a representation by any person that the results contained in the prospective financial information will be achieved.

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In this presentation, Luminar relies on and refers to information and statistics regarding the sectors in which Luminar competes and other industry data. Luminar obtained this information and statistics from third-party sources, including reports by market research firms. Although Luminar believes these sources are reliable, the Company has not independently verified the information and does not guarantee its accuracy and completeness. Luminar has supplemented this information where necessary with information from discussions with Luminar customers and Luminar's own internal estimates, taking into account publicly available information about other industry participants and Luminar's management's best view as to information that is not publicly available.

## USE OF NON-GAAP FINANCIAL MEASURES

The financial information and data contained in this presentation is unaudited and does not conform to Regulation S-X promulgated under the Securities Act of 1933, as amended. Accordingly, such information and data may not be included in, may be adjusted in or may be presented differently in, any filing Luminar makes with the SEC.

In addition to disclosing financial measures prepared in accordance with U.S. generally accepted accounting principles (GAAP), this presentation contains certain non-GAAP financial measures and certain other metrics. Non-GAAP financial measures and these other metrics do not have any standardized meaning and are therefore unlikely to be comparable to similarly titled measures and metrics presented by other companies. Luminar considers these non-GAAP financial measures and metrics to be important because they provide useful measures of the operating performance of the Company, exclusive of factors that do not directly affect what we consider to be our core operating performance, as well as unusual events. The Company's management uses these measures and metrics to (i) illustrate underlying trends in the Company's business that could otherwise be masked by the effect of income or expenses that are excluded from non-GAAP measures, and (ii) establish budgets and operational goals for managing the Company's business and evaluating its performance. In addition, investors often use similar measures to evaluate the operating performance of a company. Non-GAAP financial measures and metrics are presented only as supplemental information for purposes of understanding the Company's operating results. The non-GAAP financial measures and metrics should not be considered a substitute for financial information presented in accordance with GAAP. This presentation includes non-GAAP financial measures, including non-GAAP net loss and Free Cash Flow. Non-GAAP net loss is defined as GAAP net loss plus stock-based compensation expense, plus amortization of intangible assets, plus legal reserve related to employee matters, plus transaction costs relating to acquisition activities, plus expenses related to registration statement on Form S-1 or Form S-3 on behalf of selling stockholders, plus change in fair value of warrant liabilities, plus provision for (benefit from) income taxes. Free Cash Flow is defined as operating cash flow less capital expenditures. Order Book is defined later in this presentation. Major commercial win is defined as a written agreement or public announcement with a major industry player, including based on their past experience in high volume production, leadership in autonomy, or market leadership, that selects our technology for what is expected to be a significant commercial program, including OEM series production programs. We only include major commercial wins, disclosed or undisclosed, in our forward looking orderbook calculation, which are subject to the risks set forth in the "Forward-Looking Statements" section above.

## TRADEMARKS AND TRADE NAMES

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# ORDER BOOK DEFINITION



“We use “Order Book” as a metric to measure performance against anticipated achievement of planned key milestones of our business. Order Book is defined as the forward-looking cumulative billings estimate of Luminar’s hardware and software products over the lifetime of given vehicle production programs which Luminar’s technology is expected to be integrated into or provided for, based primarily on projected / actual contractual pricing terms and our good faith estimates of “take rate” of Luminar’s technology on vehicles. “Take rates” are the anticipated percentage of new vehicles to be equipped with Luminar’s technology based on a combination of original equipment manufacturer (“OEM”) product offering decisions and predicted end consumer purchasing decisions. We include programs in our Order Book when (a) we have obtained a written agreement (e.g. non-binding expression of interest arrangement or an agreement for non-recurring engineering project) or public announcement with a major industry player, and (b) we expect to ultimately be awarded a significant commercial program.

We believe Order Book provides useful information to investors as a supplemental performance metric as our products are currently in a pre-production stage and therefore there are currently no billings or revenues from commercial grade product sales. OEMs customarily place non-cancelable purchase orders with their automotive component suppliers only shortly before or during production. Consequently, we use Order Book to inform investors about the progress of expected adoption of our technologies by OEMs because there is, in our view, no other better metric available at our stage. The Order Book estimate may be impacted by various factors, as described in “Risk Factors” in Item 1A of Part I of our Annual Report on Form 10-K for the fiscal year ended December 31, 2021 and subsequent filings with the Securities and Exchange Commission, including, but not limited to the following:

- (i) None of our customers make contractual commitments to use our lidar sensors and software until all test and validation activities have been completed, they have finalized plans for integrating our systems, have a positive expectation of the market demand for our features, and unrelated to us, have determined that their vehicle is ready for market and there is appropriate consumer demand. Consequently, there is no assurance or guarantee that any of our customers, including any programs which we included in our Order Book estimates will ever complete such testing and validation or enter into a definitive volume production agreement with us or that we will receive any billings or revenues forecasted in connection with such programs.
- (ii) The development cycles of our products with new customers vary widely depending on the application, market, customer and the complexity of the product. In the automotive market, for example, this development cycle can be as long as seven or more years. Variability in development cycles make it difficult to reliably estimate the pricing, volume or timing of purchases of our products by our customers.
- (iii) Customers cancel or postpone implementation of our technology.
- (iv) We may not be able to integrate our technology successfully into a larger system with other sensing modalities.
- (v) The product or vehicle model that is expected to include our lidar products may be unsuccessful, including for reasons unrelated to our technology. These risks and uncertainties may cause our future actual sales to be materially different than that implied by the Order Book metric.



# Q4'22 Selected Financials

	Dec 31	Sep 30
(\$M)	2022	2022
Cash and cash equivalents	\$69.6	\$56.1
Marketable securities	\$419.3	\$497.0
Cash, cash equivalents & marketable securities	\$488.9	\$553.1
Total Assets	\$687.3	\$742.5

	Three months ended Dec 31	
(\$M)	2022	2021
Free cash flow <sup>(1)</sup>	\$(79.5)	\$(56.4)

(\$M)	GAAP Three months ended Dec 31		NON-GAAP <sup>(2)</sup> Three months ended Dec 31	
	2022	2021	2022	2021
Revenue	\$11.1	\$12.3	\$11.1	\$12.3
Cost of sales	\$27.7	\$19.8	\$34.1	\$16.2
Gross loss	\$(16.6)	\$(7.5)	\$(23.0)	\$(3.9)
Operating expenses	\$124.1	\$63.5	\$71.2	\$39.2

Notes: (1) Defined as operating cash flow less capex (2) Please refer to the next slide for a reconciliation of Non-GAAP measures including Free cash flow, to the most directly comparable GAAP financial measure



# Reconciliation of GAAP to Non-GAAP Actuals

	Three months ended Dec 31		Three months ended Dec 31		
(In Millions)	2022	2021	(In Millions)	2022	2021
Revenue	\$11.1	\$12.3	Operating cash flow	\$(74.7)	\$(54.2)
GAAP cost of sales	\$27.7	\$19.8	Capex (Incl. advances) <sup>1</sup>	\$(4.8)	\$(2.3)
Stock-based compensation	\$(6.5)	\$3.6	Free Cash Flow	\$(79.5)	\$(56.4)
Amortization of intangibles	\$0.2	\$0.0			
Non-GAAP cost of sales	\$34.1	\$16.2			
Non-GAAP gross loss	\$(23.0)	\$(3.9)			
GAAP operating expenses	\$124.1	\$63.5			
Stock-based compensation	\$51.1	\$24.2			
Amortization of intangibles	\$0.5	\$0.0			
Legal, regulatory filing and M&A transaction expenses	\$1.3	\$-			
Non-GAAP operating expenses	\$71.2	\$39.2			

1. Excludes Vendor stock-in-lieu of cash program—purchases & advances for capital projects and equipment of \$7.4M in Q4'22



# FY'22 Selected Financials

(\$M)	<u>GAAP</u> Twelve months ended Dec 31		<u>NON-GAAP<sup>(2)</sup></u> Twelve months ended Dec 31	
	2022	2021	2022	2021
Revenue	\$40.7	\$31.9	\$40.7	\$31.9
Cost of sales	\$101.0	\$46.1	\$92.7	\$39.7
Gross loss	\$(60.3)	\$(14.2)	\$(52.0)	\$(7.7)
Operating expenses	\$382.1	\$200.4	\$220.7	\$126.9

(\$M)	Twelve months ended Dec 31	
	2022	2021
Free cash flow <sup>(1)</sup>	\$(226.3)	\$(154.9)

Notes: (1) Defined as operating cash flow less capex (2) Please refer to the next slide for a reconciliation of Non-GAAP measures including Free cash flow, to the most directly comparable GAAP financial measure



# Reconciliation of GAAP to Non-GAAP Actuals

	Twelve months ended Dec 31		Twelve months ended Dec 31		
(In Millions)	2022	2021	(In Millions)	2022	2021
Revenue	\$40.7	\$31.9	Operating cash flow	\$(208.2)	\$(148.4)
GAAP cost of sales	\$101.0	\$46.1	Capex (Incl. advances) <sup>1</sup>	\$(18.1)	\$(6.4)
Stock-based compensation	\$7.7	\$6.4	Free Cash Flow	\$(226.3)	\$(154.9)
Amortization of intangibles	\$0.6	\$0.0			
Non-GAAP cost of sales	\$92.7	\$39.6			
Non-GAAP gross loss	\$(52.0)	\$(7.7)			
GAAP operating expenses	\$382.1	\$200.4			
Stock-based compensation	\$154.7	\$71.3			
Amortization of intangibles	\$1.6	\$0.2			
Legal, regulatory filing and M&A transaction expenses	\$5.1	\$2.0			
Non-GAAP operating expenses	\$220.7	\$126.9			

1. Excludes Vendor stock-in-lieu of cash program—purchases & advances for capital projects and equipment of \$28.4M in FY'22



# Reconciliation of GAAP to Non-GAAP Outlook

(In % of Revenue)	Q4'2025F
GAAP Net Loss Margin	Greater than -26%
SBC	25-30%
Amortization of Intangibles	~1%
<b>Non-GAAP Net Profit Margin</b>	<b>Greater than 0%</b>

(In % of Revenue)	2030F
GAAP Operating Margin	25% - 35%
SBC	5-10%
<b>Non-GAAP Operating Margin</b>	<b>35-40%</b>





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