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Radar Revolution. Delivered.

The Time is Now:
Ultra-High Resolution Imaging
Radar for True Road Safety
and Autonomy

Disclaimer

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These risks and uncertainties include, but are not limited to: (i) unanticipated delays or difficulties in connection with the evaluation of Arbe's products in evaluation and test programs; (ii) the success of road pilot programs for Arbe's products, (iii) Arbe's ability to develop significant revenue as a result of the test programs involving its radar system and from customers who purchased Imaging Radar samples; (iv) Arbe's ability to leverage its existing relationships and secure test programs and orders resulting from the test programs; (v) Arbe's ability to meet its projected revenue level and its ability to operate profitably; (vi) Arbe's ability to meet is timetable for full production; (vii) Arbe's expectation that it will be engaging with Tier 1 suppliers and OEMs which would be building the radars based on its Chipset solution, eliminating expenses associated with system completion, requirement for undertaking significant capital expenditures associated with developing mass production manufacturing and the expenses of operating any such manufacturing capability; (viii) the effect of inflation and supply chain issues on Arbe's cost and its development schedule, including Arbe's ability to obtain semiconductor products when needed and at a reasonable price; (ix) Arbe's expectation that radars are crucial to the automotive industry and will be deployed in nearly all new vehicles as a long range, cost-effective sensor with the fewest environmental limitations; (x) Arbe's belief that the Arbe Radar Chipset heralds a breakthrough in radar technology that will enable Tier 1 manufacturers and OEMs to replace the current radars with an advanced solution that meets the safety requirements of Euro-NCAP and NHTSA for autonomous vehicles at all levels of autonomous driving; (xi) Arbe's ability to develop or have access to the latest developments relating to radar and autonomous driving vehicles; (xii) Arbe's ability to have products manufactured for it by third parties that meet Arbe's and its customers quality standards and delivery requirements; (xiii) Arbe's ability to attract and retain highly skilled personnel and senior management, including research and development, sales and marketing personnel; (xiv) Arbe's ability to develop and market products based on its radar technology for uses outside of the automotive industry; (xv) accidents or bad press resulting from accidents involving autonomous driving vehicles, even those using radar products from other companies or based on other technology; and the effect of any accidents with vehicles using Arbe's radar system; (xvi) the failure of the markets for Arbe's current or new technologies and products to materialize to the extent or at the rate that Arbe expects; (xvii) unexpected delays or difficulties related to the development of Arbe's technologies and products; (xviii) the effect of laws and changes in laws that have an effect on the market for or the requirement for autonomous vehicles; (xix) the effect of COVID-19 and any new variants or any pandemics or multinational epidemics and actions taken by governments and industry to address the effects of the pandemic and the corresponding macroeconomic uncertainty; (xvii) risks related to the potential impact of new accounting standards on Arbe's financial position, results of operations or cash flows; (xx) changes or inaccuracies in market projections; (xxi) changes in Arbe's business strategy; and (xxii) the risk and uncertainties described in "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Cautionary Note Regarding Forward-Looking Statements" and the additional risk described in Arbe's prospectus dated November 2, 2021, which was filed by Arbe with the Securities and Exchange Commission on November 4, 2021, as well as the other documents filed by Arbe with the SEC. Accordingly, you are cautioned not to place undue reliance on these forward-looking statements. Forward-looking statements relate only to the date they were made, and Arbe does not undertake any obligation to update forward-looking statements to reflect events or circumstances after the date they were made except as required by law or applicable regulation.

Autonomous Cars Are Not Yet Here...

- In 2020, you'll be a **"permanent backseat driver"**, claimed The Guardian (2015)

- **"10 million self-driving cars will be on the road by 2020",** read a Business Insider headline (2016)

- General Motors, Waymo, Toyota, and Honda expected to be **making self-driving cars by 2020**

- Elon Musk forecast that **Tesla would do it by 2018** — and when that failed, by 2020

It's 2022 and self-driving cars still aren't here.
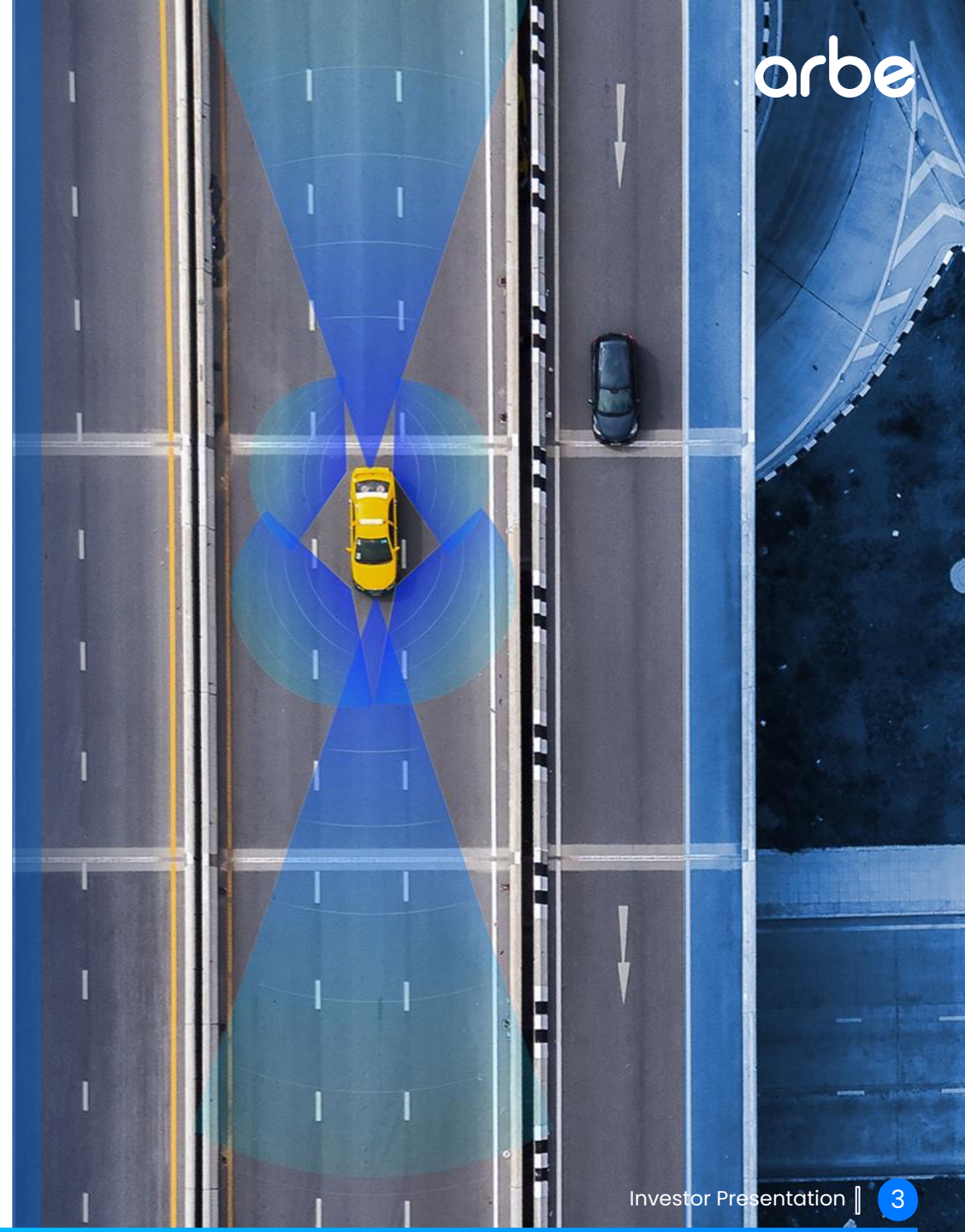
Vehicles are still missing **machine perception:** The ability to sense and interpret the world around them.

We expect autonomous vehicles to be **better than human.**

We cannot accept failures!

AUTOPILOT ANXIETY

DASHCAM VIDEO SHOWS DANGEROUS TESLA CRASH

It's The Sensing, Stupid!

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Cameras:

Issues with everyday use cases, not just corner cases!

- Limited by weather and lighting
- At risk of blinding
- Cannot measure velocity
- Lack depth perception
- Limited in range

Current Radars are a Hazard

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Radars:

Not advanced enough for L2+ and NCAP safety!

- Extremely limited resolution
- No elevation
- Cannot reliably detect stationary objects
- High false alarm rate
- Unable to track multiple targets

Bottom line:

Current radars are irrelevant for perception.

An Industry-Wide Challenge

The automotive industry is shifting to autopilot and full autonomy.

If that shift is **based on current sensors,** we'll end the decade with **more accidents** instead of fewer.

This will be a **widespread** issue, we need to address <u>it now.</u>

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Supercharging mature radar technology with high resolution addresses the causes of autopilot accidents.

Mapping environment -> avoiding dynamic and static obstacles

Eliminating false alarms -> Eliminating phantom braking

Higher sensitivity and resolution- detecting boundaries of objects-> Detecting pedestrians

Finding the Sensor Suite Solution For All Use Cases

Any sensor gap is unacceptable.

Even if cameras were able to cover 99% of use cases, another sensor that gives real redundancy is still necessary.

Camera + Lidar
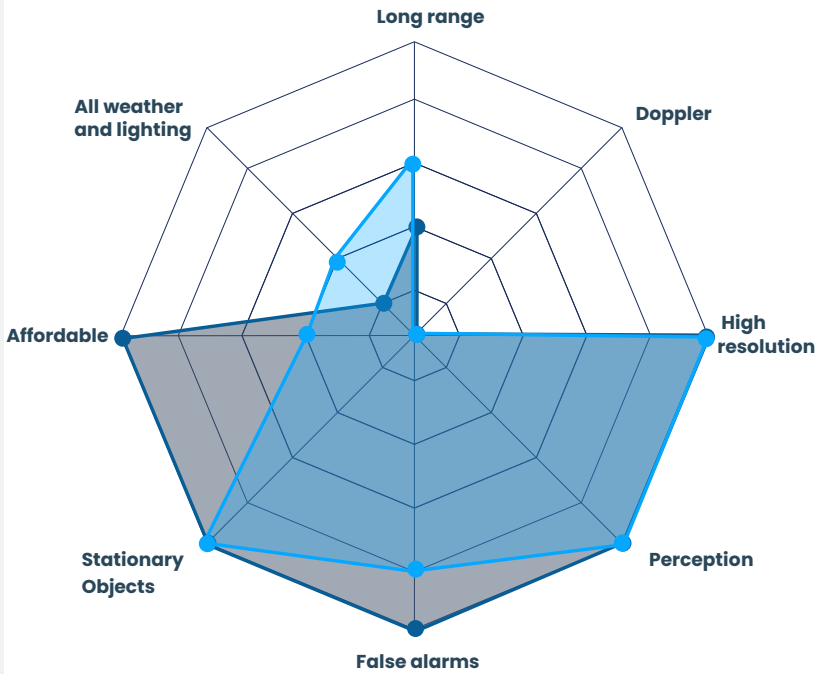
Camera + Traditional Radar
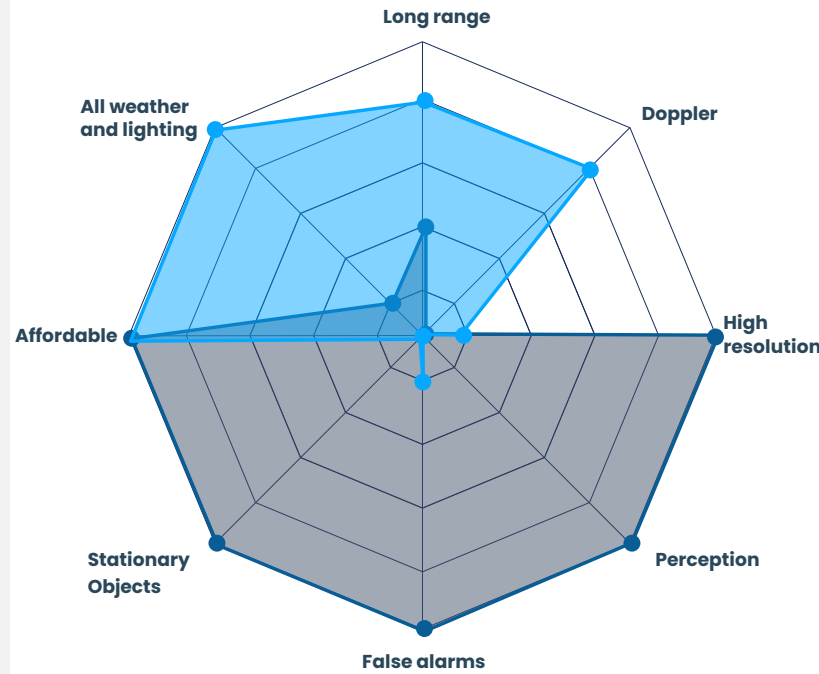
Camera + Imaging Radar
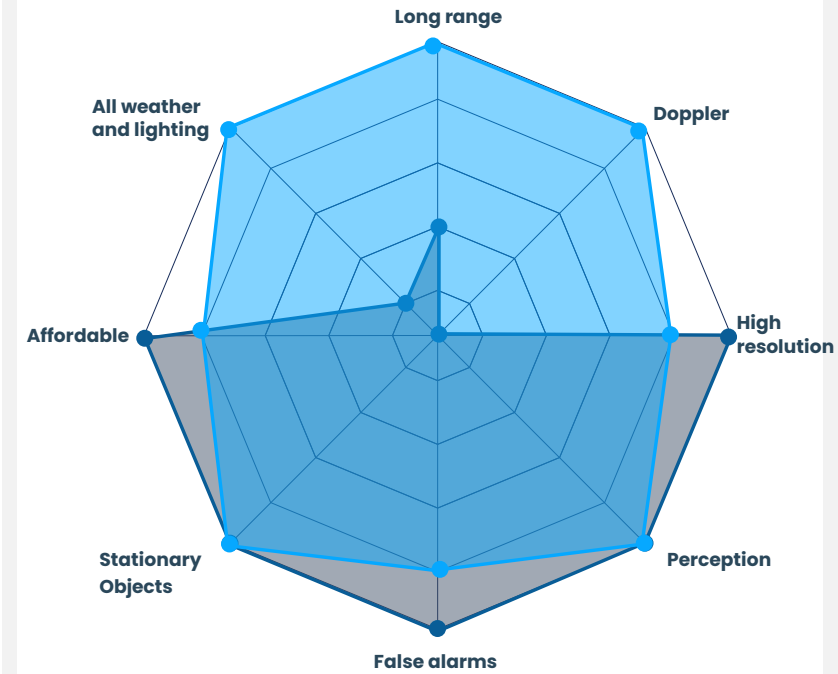
Introducing Level 2+ Autonomy

The higher the autonomy level:
- the greater the demands placed on the sensor suite
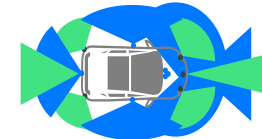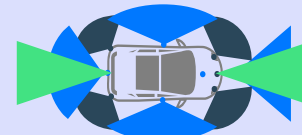- the more sensors required

	Level 1	Level 2	Level 2+	Level 3	Level 4-5
Autonomy Level					
# of Sensors per Vehicle[1]					
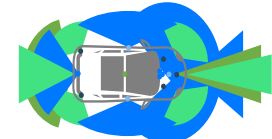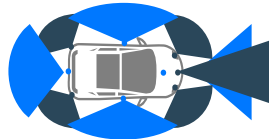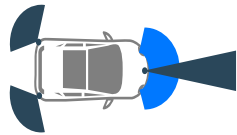
Perception is needed

	Level 1	Level 2	Level 2+	Level 3	Level 4-5
Imaging Radar		0-1	2-7	4-7	6-10
Radar	3	3-5	0-4	0-4	0-4
Camera	2	≤4	≤6	6-8	14
LIDAR	0	0	0-1	0-1	4

A Comprehensive Industry Shift

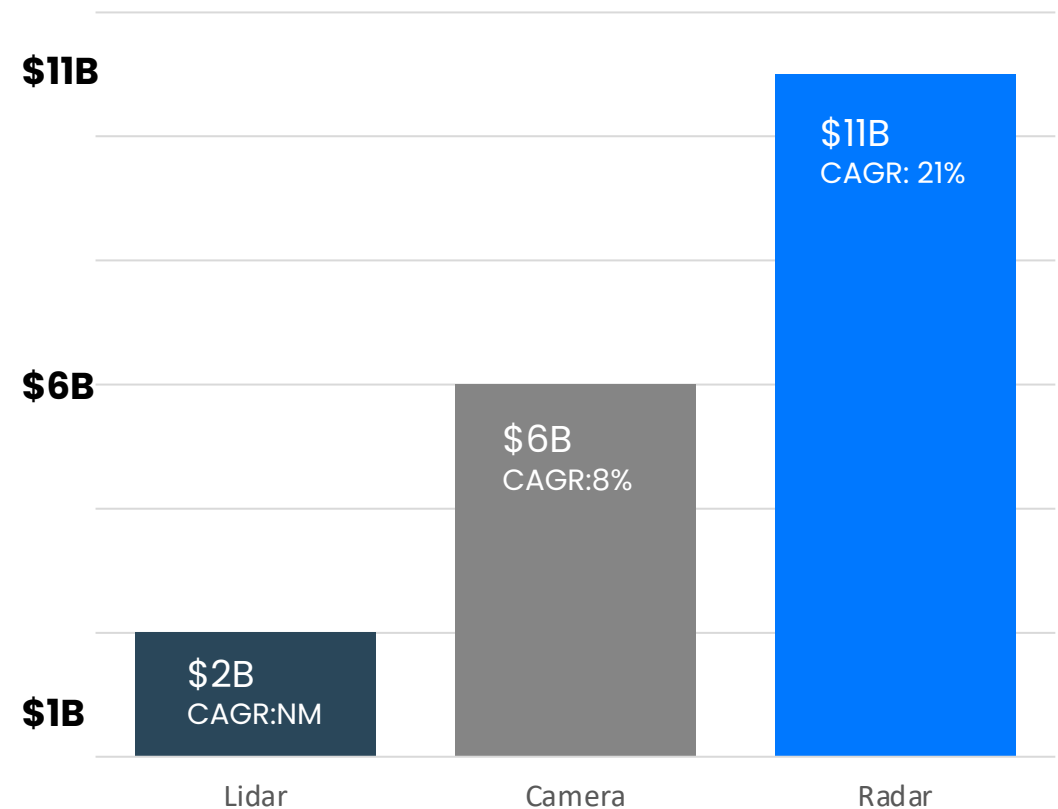Over the next decade, L2+ and L3 autonomy will become standard mass market vehicle features.

Autonomy Levels

L0 – L2

L2+ – L3

L4 – L5

2020   2025   2030   2035   2040

A Staggering Total Addressable Market (TAM)

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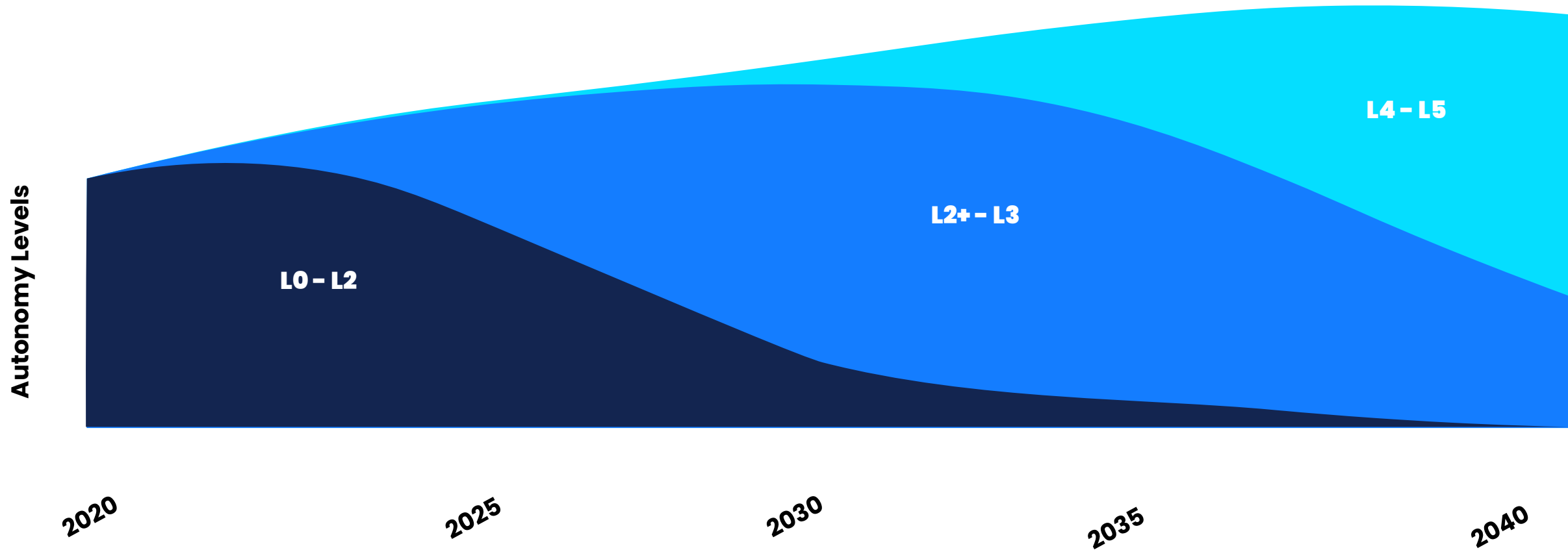
A GROWING NUMBER OF VEHICLES +

MULTIPLE RADAR SENSORS IN EACH SENSOR SUITE

= <u>HUGE POTENTIAL</u>

2025 TAM Opportunity[1]

$11B

$6B

$1B

| Lidar | Camera | Radar |

- Lidar: $2B, CAGR: NM
- Camera: $6B, CAGR: 8%
- Radar: $11B, CAGR: 21%

[1] Industry and Wall Street research estimates

Imaging Radar Markets

OEMs
- 2025 and up
- Level 2.5 / Level 3
- High volume
- Innovation and safety

Trucks
- 2023 and up
- Level 2.5 / Level 3
- Low volume, high price
- Safety and efficiency

Delivery Robots
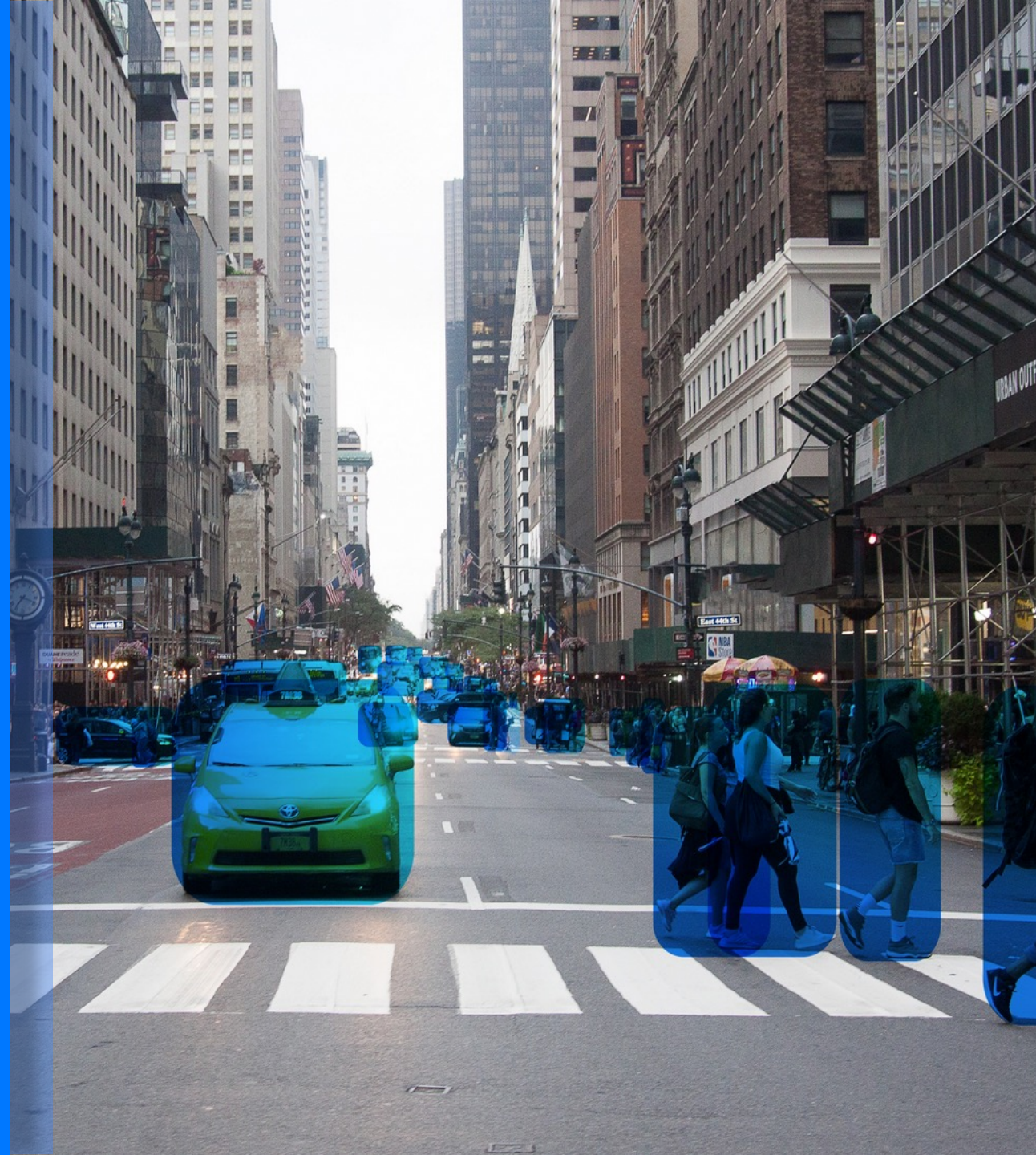- 2023 and up
- Level 4
- Mid volume
- Efficiency

RoboTaxi
- 2024 and up
- Level 4
- Low volume , high price
- Efficiency

Significant opportunities exist both within and beyond these markets.
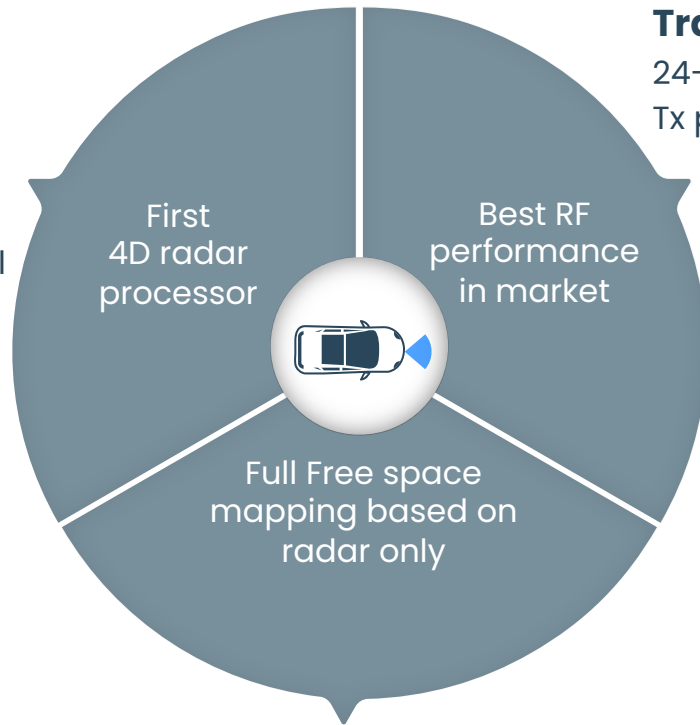
Arbe's Radar Revolution

The Only Automotive HD, 4D Imaging Radar Solution

Everest Radar Processing Unit
Advanced radar control supporting up to 48 Rx * 48 Tx channels

Transmitter
24-48 transmitters, Tx power control

Receiver
12-48 receivers, large Rx dynamic range

AI Algorithms
2-stage vision post-processing capabilities

First 4D radar processor

Best RF performance in market

Full Free space mapping based on radar only

Top Benefits

- Enabling free space mapping for safe L2.5 and L3 without LiDAR

- Functional in various weather and lighting conditions

- Long-range and wide field of view

- 4D ultra high-resolution – 12x better than the competition

- Mass production pricing of $100–$150

- Mutual interference avoidance patented technology

- Small size – optimal for concealed installation

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Expanded channel array

Industry
From 12
up to 192

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2,304
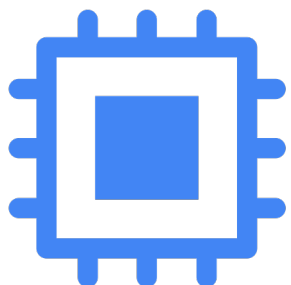
Dedicated Rf Chipset for massive channel count

Evolution in Processing Capabilities

Number of Channels	Processing Solution
• 12	• DSP
• 48	• High end processor
• 192	• FPGA
• 2,304	• A dedicated processor

Arbe is closing a 10x gap with a dedicated processor that can scale up in the future.

Mobileye, the #1 player in perception, announced that their 2025 radar system will include the same number of channels – 2,304

TI / NXP: 192 Virtual Channels
4 RF chips
Processor

Mobileye: 2304 Virtual Channels
14 RF chips
Processor

Oculi: 48 -> 192 Virtual Channels
SW that improves TI / NXP 6x8 to 16x12 level

Uhnder: 192 Virtual Channels
SoC: 16*12 & Processor

Arbe: 2304 Virtual Channels
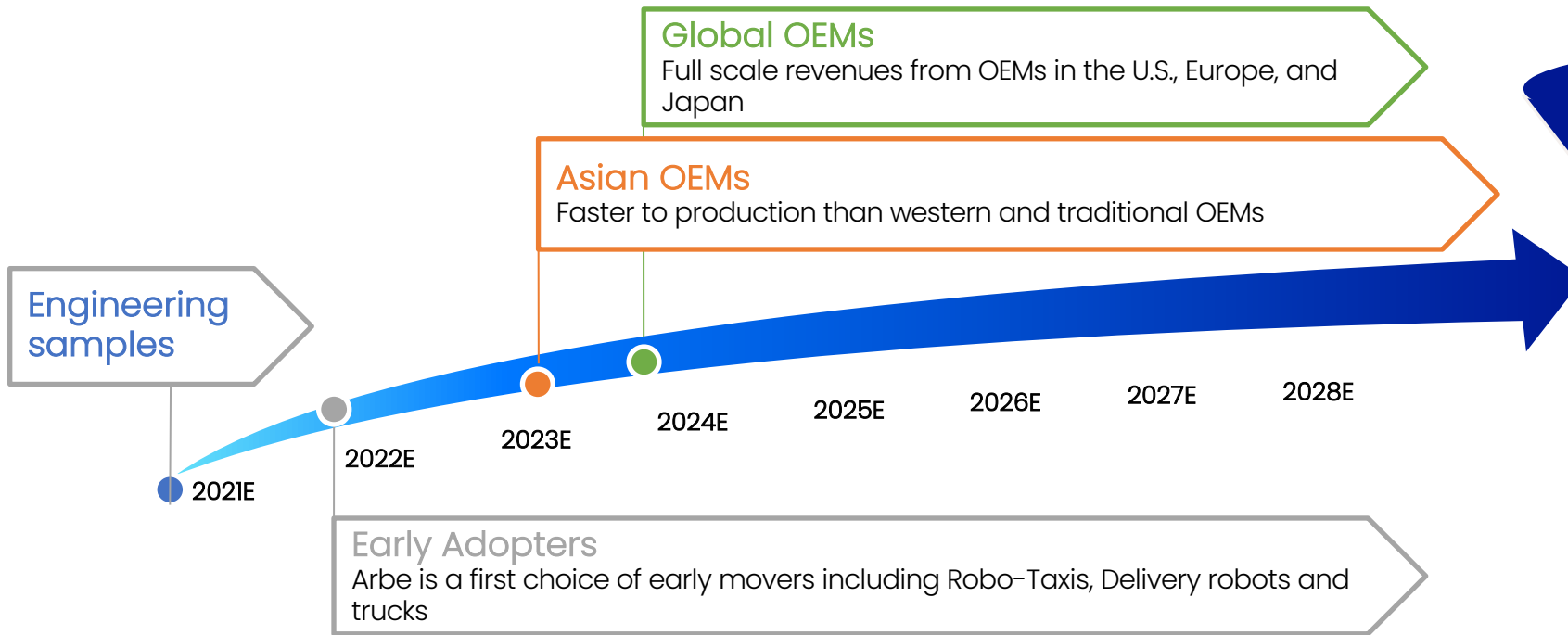6 RF chips
Processor

Radar Market Solutions Overview

Business Achievements

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Engagements	Current Customers	Design-in

Engagements

15 Passenger vehicles	**5** RoboTaxi
5 Trucks	**5** Non-automotive
3 Delivery robots	**2** Perception

Current Customers

BAIC — OEM

TOP 10 OEM — AI-based radar tech for perception

autox — RoboTaxi

TOP 5 OEM — Pre-production

HYUNDAI MOBIS — Pilot Program

Smart mobility project

Design-in

Tier 1s Developing and Shipping Arbe-based Automotive Radar Systems

qamcom — Non-automotive 🇸🇪

Valeo — Top ADAS tier 1 🇩🇪

Leading radar player commenced design in Q4 🇪🇺 🇺🇸

WEIFU — Shipping samples, Production ready by Q4.22 🇨🇳

经纬恒润 JINGWEI HIRAIN — Won an OEM deal with BAIC 🇨🇳

Robust Partner Funnel
Supported by Long-Term Revenue Strategy
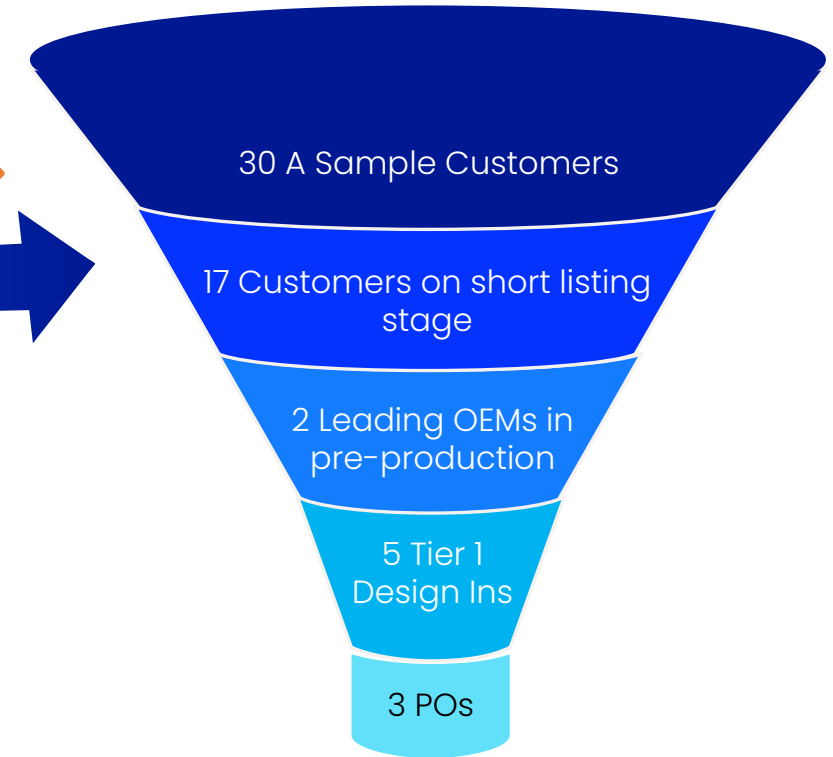
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Long-Term Revenue Strategy

Global OEMs
Full scale revenues from OEMs in the U.S., Europe, and Japan

Asian OEMs
Faster to production than western and traditional OEMs

Engineering samples

Early Adopters
Arbe is a first choice of early movers including Robo-Taxis, Delivery robots and trucks

2021E 2022E 2023E 2024E 2025E 2026E 2027E 2028E

Partner Funnel By Stage

30 A Sample Customers

17 Customers on short listing stage

2 Leading OEMs in pre-production

5 Tier 1 Design Ins

3 POs

On track to achieve our **$312 million** revenue goal for 2025

Arbe: First Mover & Market Leader in 4D Imaging Radar

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World's First

Ultra-high resolution radar solution

Proprietary chipset

Perception radar software

Paving the way for an autonomous future

Arbe Today

Founded in
2015

team members
130

R&D
80%

Nasdaq listed
ARBE

Mission: From safe roads to autonomous driving

35
Strategic Relationships with Global Tier 1s and Auto / Industrial OEMs

$312M
In 2025
Projected Revenue

$2.8B
in 2025E
Projected Order Book

$11B
in 2025E
Projected Automotive Radar TAM

END

We'd love to continue the discussion!

Contact us at:

investors@arberobotics.com