



CYNGN

Autonomous vehicle software
for industrial and commercial enterprises



FREE WRITING PROSPECTUS STATEMENT

This presentation highlights basic information about us and the offering to which this presentation relates. Because it is a summary, it does not contain all of the information that you should consider before investing in our securities. The Company has filed a Registration Statement (including a prospectus, which currently is in preliminary form) with the Securities and Exchange Commission (the "SEC") for the offering to which this presentation relates. The Registration Statement has not yet become effective. Before you invest, you should read the preliminary prospectus in the Registration Statement (including the risk factors described therein) and other documents the Company has filed with the SEC for more complete information about the Company and this offering.

You may access these documents for free by visiting the SEC's website at www.sec.gov. The preliminary prospectus, dated September 30, 2021, is available on the SEC's website at https://www.sec.gov/Archives/edgar/data/0001874097/000121390021050661/fs12021a1_cyngninc.htm

Alternatively, the Company or the underwriter participating in the offering will arrange to send you the preliminary prospectus and, when available, the final prospectus and/or any supplements thereto if you contact Aegis Capital Corp., Attention: Syndicate Department, 810 7th Avenue, 18th Floor, New York, NY 10019, by email at syndicate@aegiscap.com, or by telephone at (212) 813-1010.

This presentation includes market and industry data that has been obtained from third party sources, including industry publications, as well as industry data prepared by our management on the basis of its knowledge of and experience in the industries in which we operate (including our management's estimates and assumptions relating to those industries based on that knowledge). Management's knowledge of such industries has been developed through its experience and participation in those industries. Although our management believes such information to be reliable, neither we nor our management have independently verified any of the data from third party sources referred to in this presentation or ascertained the underlying economic assumptions relied upon by such sources. Furthermore, references in this prospectus to any publications, reports, surveys or articles prepared by third parties should not be construed as depicting the complete findings of the entire publication, report, survey or article. The information in any such publication, report survey or article is not incorporated by reference in this prospectus.



CAUTIONARY NOTE ON FORWARD-LOOKING STATEMENTS

This presentation of Cyngn, Inc. ("the Company") contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act and other securities law. Words such as "expects," "intends," "plans," "believes," "seeks," "estimates," and similar expressions or variations of such words are intended to identify forward-looking statements. For example, the Company is using forward-looking statements when it discusses its vision, the potential of its product, its strategy, market potential for its product(s), its paradigm, commercialization of its product(s), the benefits and use of its product(s), its product roadmap and anticipated adoption of its solutions by customers, anticipated pricing, the development of its solutions and product(s) in the manner and schedule anticipated by management, its ability to generate revenue, its ability to attract and retain customers, competition and its future growth. Forward-looking statements are not historical facts, and are based upon management's current expectations, beliefs and projections, many of which, by their nature, are inherently uncertain. Such expectations, beliefs and projections are expressed in good faith.

However, there can be no assurance that management's expectations, beliefs and projections will be achieved, and actual results may differ materially from what is expressed or indicated by the forward-looking statements. Forward-looking statements are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in the forward-looking statements. For a more detailed description of the risks and uncertainties affecting the Company, reference is made to the Company's reports filed from time to time with the Securities and Exchange Commission (the "SEC"), including, but not limited to, the risks detailed in the Company's preliminary prospectus dated September 30, 2021, filed with the SEC as part of the Company's Registration Statement on Form S-1 (File No. 333-259278), and documents incorporated by reference therein. Forward-looking statements speak only as of the date the statements are made. The Company undertakes no obligation to update forward-looking statements to reflect actual results, subsequent events or circumstances, changes in assumptions or changes in other factors affecting forward-looking information except to the extent required by applicable securities laws.



TRANSACTION OVERVIEW



- **ISSUER:** CYNGN, INC.
- **OFFERING TYPE:** IPO
- **EXCHANGE:** NASDAQ
- **PROPOSED TICKER:** CYN
- **SHARES OFFERED:** 3,529,412 SHARES OF COMMON STOCK,
ASSUMING AN OFFERING PRICE OF \$8.50 PER SHARE
(4,058,824 SHARES IF THE UNDERWRITER EXERCISES ITS OVER-ALLOTMENT OPTION)
- **GROSS PROCEEDS:** \$30 MILLION
- **PROPOSED PRICE PER SHARE:** \$7.50 - \$9.50
- **USE OF PROCEEDS:** WORKING CAPITAL AND OTHER GENERAL CORPORATE PURPOSES, INCLUDING FUNDING OUR OPERATING NEEDS.
- **BOOK RUNNING MANAGER:** AEGIS CAPITAL CORP.



OUR MISSION AND VISION

Our mission is to develop and deploy **autonomous driving software**, built to serve a broad spectrum of industrial applications, from logistics to mining.

Our solutions will give our customers a **competitive advantage** in the race to efficiency, safety, and productivity.

Our vision is to be the leading advanced autonomy software solution for **industrial and commercial** enterprises.

We are applied autonomy.



INVESTMENT HIGHLIGHTS



Proprietary software for operating industrial autonomous vehicles

- Cyngn's Enterprise Autonomy Suite (EAS) is a proprietary, full-stack software solution for operating fleets of autonomous vehicles in various industrial applications (Beta stage).
- Cyngn's technology is capable of operating a wide range of vehicle types, creating unique opportunities for productivity and scalability across sites.



Large market opportunity fueled by the need to increase productivity

- 883,000 units shipped by the top 10 material handling vehicle manufacturers in 2019.¹ The labor cost to drive these vehicles for two shifts per day is >\$119B.²
- Cyngn has developed the fundamental building blocks that enable autonomous operation across diverse vehicles, which could open additional market opportunities in the future.



Experienced leadership supported by global partnerships

- The executive team has 20+ years of combined experience in AI/ML and mobility at companies such as Facebook, Baidu, and Maxim Integrated, including leadership roles at startups acquired by Tesla and Facebook.
- Renowned partners include Columbia Vehicle Group, First Transit, Here Maps, Formel D, and more.

Funded by:

ANDREESSEN
HOROWITZ

BENCHMARK

Index Ventures

Redpoint

Qualcomm
ventures

1. ABI Research Whitepaper: "Trends In Supporting And Scaling Modern Automation"

2. Bureau of Labor Statistics: "Employer Costs For Employee Compensation - June 2021", and management estimates



THE PROBLEM: HUMAN ERROR

HUMANS ARE CREATIVE

People are great at handling unpredictable situations and performing tasks requiring **creativity**.

But people get bored, tired, and distracted when given tasks that require **repetitive accuracy** over an extended time.

People make mistakes.

IT'S HUMAN NATURE.



BUT COMPANIES NEED CONSISTENCY

Industrial tasks involve **repetitive physical activities** that require **accuracy at high rates**.

This applies to a wide range of industries, including warehouse logistics, manufacturing and assembly, construction, mining, and air/seaports.

Vehicles such as tuggers, stock chasers, forklifts, haulers, and various utility vehicles are the tools used to execute these industrial tasks.



HIGH COSTS ASSOCIATED WITH HUMAN LABOR

Massive workforce

- 900,000 material handlers, stock pickers, and industrial vehicle drivers in the United States.¹
- Estimated **\$140 billion** spent on human labor across 20,000 warehouses in the US alone.²

Widespread labor shortages³

- Over 50% of supply chain & manufacturing leaders rated hiring and employee retention as their biggest challenge.
- 73% said it takes 30+ days to fill open positions.
- By 2030, the impact of unfilled manufacturing jobs could cost the US economy more than **\$1 trillion**.

Significant losses due to accidents

- An industrial vehicle accident, on average, costs \$42,000 not including cost due to lost production.⁴
- The average American warehouse experiences 9 accidents per year.⁵
- The total cost of preventable workplace injuries in the US in 2019 was **\$171 billion**.⁴

1. Bureau of Labor Statistics: "Employer Costs For Employee Compensation - June 2021"
2. Statista: "Number of Warehouses in U.S."

3. MHI Deloitte industry report

4. National Safety Council: "Work Injury Costs - Injury Facts"
5. Bureau of Labor Statistics: "Warehousing and Storage: NAICS 493"



THE SOLUTION IS AUTOMATION

FORWARD-LOOKING ENTERPRISES THAT
HARNESS AUTOMATION BENEFIT FROM:



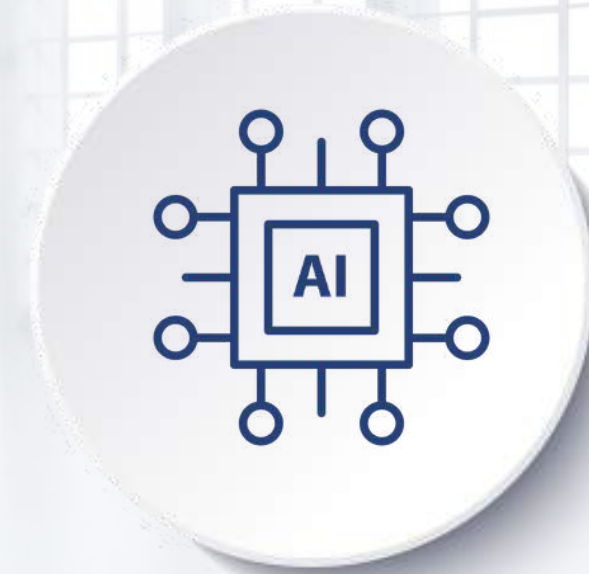
**INCREASED
PRODUCTIVITY**



**INCREASED
SAFETY**



**LOWER COST
OF LABOR**



**REDUCED
DEPENDENCE
ON LABOR**

Automation enables new forms of competitive advantage
EVOLVE OR BE DISRUPTED



AUTONOMOUS VEHICLES DRIVE ESG IMPACT



SUSTAINABILITY

- Our fleet is comprised of all electric vehicles
- Autonomous vehicles can be programmed to drive with more conservative throttling and braking



PRODUCTIVITY

Centre of economic performance study found:

- Investment in robots contributed 10% of growth in GDP per capita in OECD countries from 1993 to 2016.¹
- The impact of adding robots to industrial productivity is assessed to be higher than introducing steam technology was in the 19th century.²



1. Information Technology & Innovation Foundation: "Robotics and the Future of Production and Work"
2. Center for Economic Performance: "Robots at Work"



DISRUPTIVE ENTERPRISES ARE SURGING AHEAD

Announced plans to replace 1.2M human workforce with 1m robots.²

2011

CASE STUDY: FOXCONN

Reduced human workforce at iPhone 6 plant by 50+% (110k to 50k).³

2016

Foxconn market cap ~\$55B, 50%+ higher than 2011. Two closest competitors (Jabil & Flex) each <\$10B.

2021

4,000,000

commercial robots estimated to be working in 50,000 warehouses globally by 2025.¹



1. ABI Research - "50,000 Warehouses to Use Robots by 2025 as Barriers to Entry Fall and AI Innovation Accelerates"

2. IEEE Spectrum - "Foxconn To Replace Human Workers With One Million Robots"

3. 9to5Mac - "iPhone maker Foxconn has replaced more than half its workforce with robots since iPhone 6 launch"



CYNGN'S OPPORTUNITY TODAY

\$119+ BILLION¹

annual driver labor costs for material handling vehicles



883,000

units shipped in 2019 by the top 10 material handling vehicle manufacturers²



\$32

average cost per hour for transportation and material moving employees in the US³



4,174

hours a vehicle is used per year, based on typical two-shift per day operation



"EVERYTHING THAT MOVES WILL BECOME AUTONOMOUS"

– Nvidia CEO, Jensen Huang

1. 883,000 vehicles x 4,174 hours/yr x \$32.34/hr = \$119B

2. ABI Research Whitepaper: "Trends In Supporting And Scaling Modern Automation"

3. Bureau of Labor Statistics: "Employer Costs For Employee Compensation – June 2021"

WIDE ADOPTION OF AUTONOMOUS VEHICLES STARTS WITH INDUSTRIAL APPLICATIONS

Compared to Passenger Vehicles, Industrial Vehicles Offer:



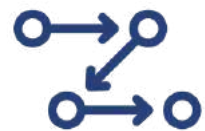
MORE STRUCTURED OPERATION



LOWER SPEED REQUIREMENTS



LOWER REGULATORY HURDLES



PREDICTABLE WORKFLOWS



LESS COMPLEX ROUTES



MORE COMMONALITY FROM SITE TO SITE



CONTROLLED INTERACTIONS WITH TRAINED HUMANS



CYNGN'S ENTERPRISE AUTONOMY SUITE (EAS)*

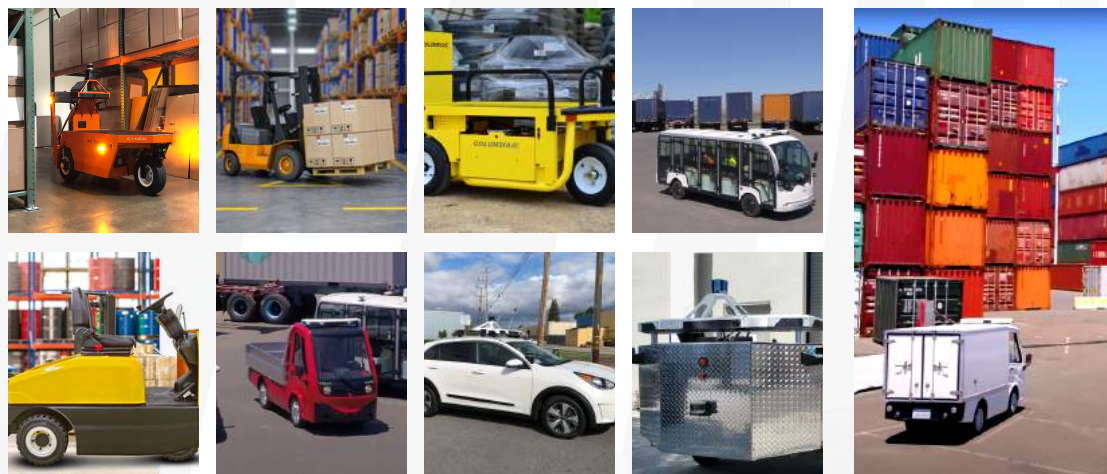
CUSTOMER-FACING PRODUCTS

INTERNAL TOOLKIT



DRIVEMOD

Full-Stack
Autonomous Driving
Software System



Successfully tested on 9 different
vehicle types



CYNGN INSIGHT

Data Optimization
Tools

- Fleet management system
- Human-machine interfaces:
web, mobile, on-vehicle
- Operational analytics
- Teleoperation
- Real-time diagnostics



CYNGN EVOLVE

Intelligent
Control Center

- Data pipeline
- Performance analytics
- Simulation
- Machine learning
infrastructure



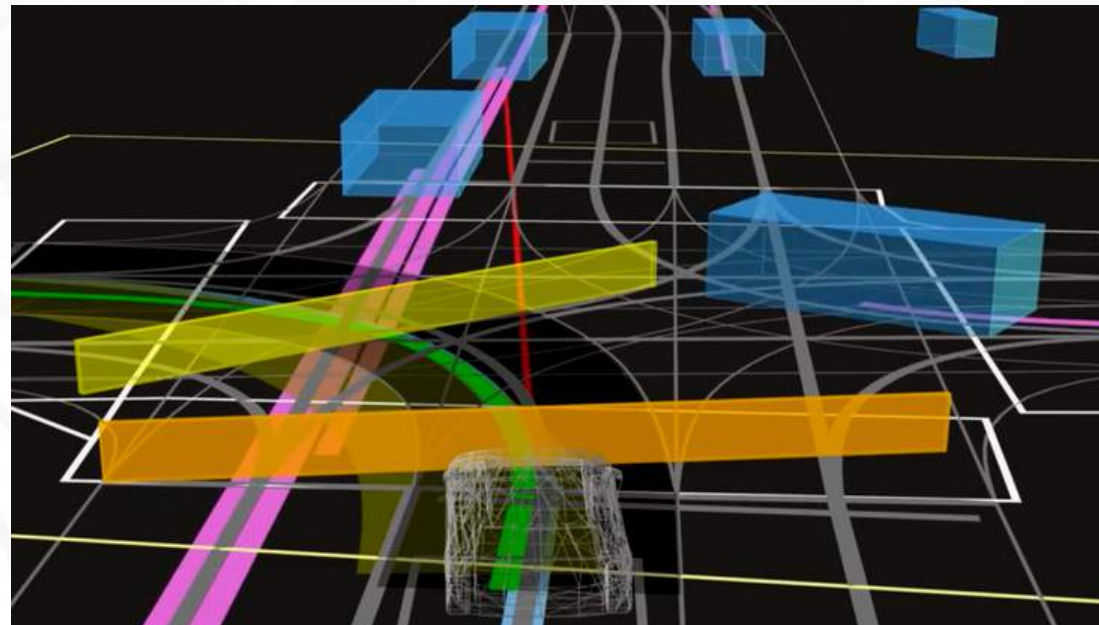
*EAS is currently available as a private beta release to select customers

DRIVEMOD

Robotaxi Brain in an Industrial Vehicle

The result is superhuman capability:

- 360° perception around the vehicle
- detect 1,000+ objects/obstacles per second
- 1,000+ candidate paths per second
- navigate optimal detailed path



SEE

- Multi-modal sensor fusion
- AI/ML powered perception
- Existence-based virtual bumper
- High-definition semantic maps
- Laser-accurate localization

DECIDE

- Abstracted behavioral decision framework
- Context-aware prediction
- Thousands of candidate paths proposed per second
- Dynamic routing and motion planning system

ACT

Adaptive, intelligent control that is capable of operating a wide range of vehicle types and sizes.



CYNGN INSIGHT

Fleet monitoring and management to maximize asset utilization: operate, observe, and analyze



Remote Support and Teleoperation



Business and Operational Insight

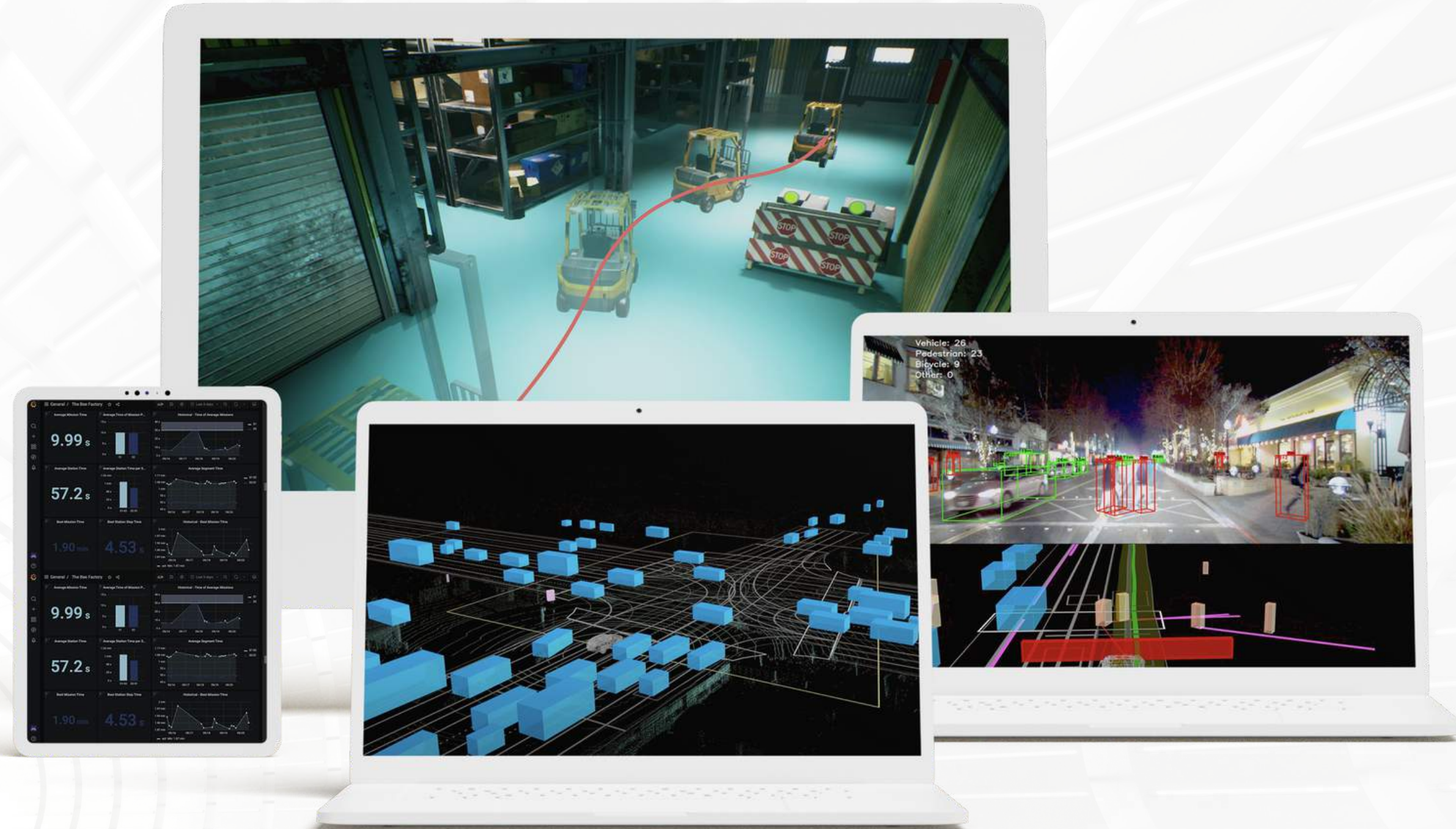


Fleet Management and Diagnostics



CYNGN EVOLVE

How Cyngn expands its autonomous vehicle capabilities



Hybrid Simulation & Automatic Grading Frameworks



Machine Learning Infrastructure & Data Pipeline



Autonomous Vehicle Performance Analytics



THE COMPETITIVE LANDSCAPE

A FRAGMENTED SOLUTION SPACE



BASIC AUTOMATION

- Single-frame, record and rerun or free-space navigation robotic systems.
- Existence-based obstacle avoidance
- Limited or no situational awareness and prediction.
- Produces slow systems with minimal ability to react to real-time changes.



SINGLE APPLICATION

- Supports a single use case, but industrial customers have diverse vehicle fleets.
- Narrow focus limits opportunity for data collection to advance and expand AI and V2V capabilities.
- Results in duplicate bring up and support cost to the customer.



VERTICALLY INTEGRATED

- Doesn't integrate with existing vehicles. Requires customers to purchase a brand new fleet.
- Carry the burden of both hardware and software development.
- Difficult to compete with incumbent players across cost, reliability, and service.

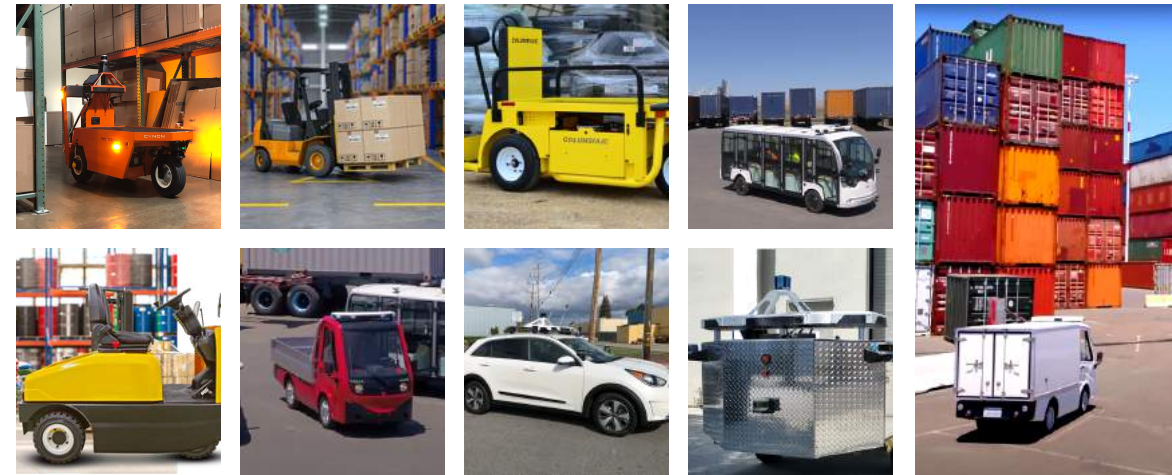


OUR COMPETITIVE ADVANTAGE



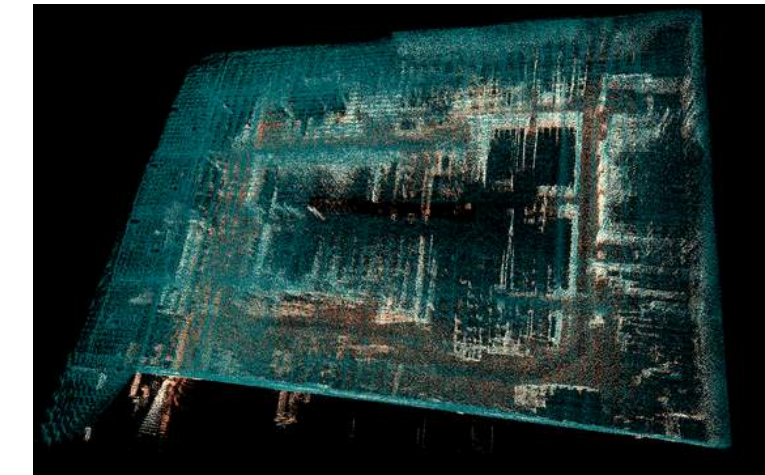
ADVANCED AUTONOMY

- Developed for robotaxi capability by using leading technology like AI, sensor fusion, and abstract decision making.
- Takes advantage of sensor and compute advancements that are driven by high-volume, high-quality automotive industry.



MULTIPLE APPLICATIONS

- DriveMod can be deployed on a wide range of vehicles, creating a unique offering to support multiple applications across sites.
- EAS collects data that can expand capabilities within the application and grow into adjacent applications.



YOUR VEHICLE POWERED BY OUR SOFTWARE

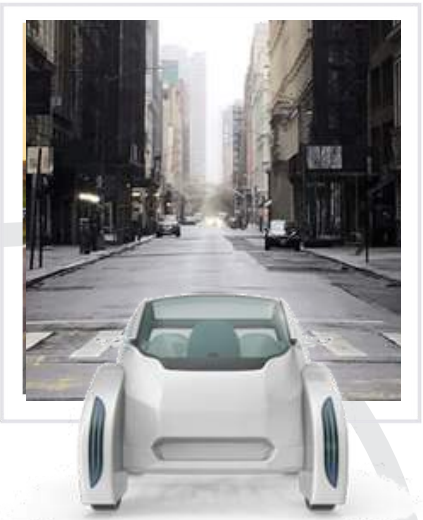
- DriveMod can be retrofitted onto existing vehicles to accelerate adoption, and vehicles can still be driven manually.
- We partner with vehicle manufacturers that are trusted incumbents.
- Customers can take advantage of established distribution and support networks.



WE BRING THE BEST OF AUTONOMOUS DRIVING TECHNOLOGY TO INDUSTRIAL APPLICATIONS

Billions of dollars in funding and long years of research have focused on robotaxis, trucking, and highway automation, which are not being built to address industrial needs. We apply best practices and domain knowledge from public road solutions, and bring advanced autonomy to industrial vehicles and applications.

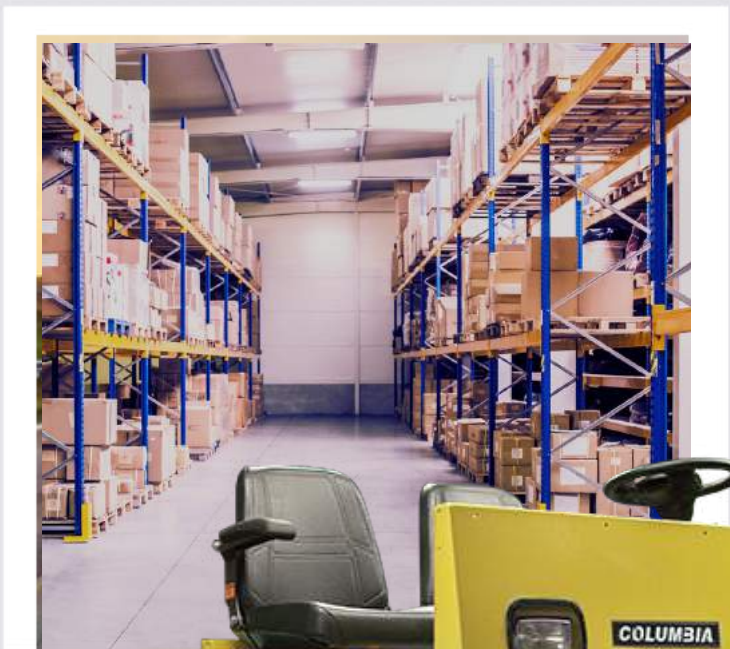
Long Haul Trucking



Robotaxis



Highway Automation



TRAIN HARD, DRIVE EASY

STRESS TESTED UNDER EXTREME CONDITIONS TO ENSURE COMMERCIAL READINESS



2017

Autonomous electric utility vehicles at an International Container Terminals Services (ICTSI) container port in the Philippines.



2019

Autonomous electric shuttle busses at the Loblaw corporate headquarters in Canada.



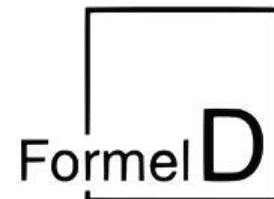
2021

Coming soon: Autonomous stock chasers with our vehicle partner Columbia at a fulfillment center in the US.



COLLABORATIVE GO-TO-MARKET APPROACH

An ecosystem designed to support scaled,
high-quality autonomous fleet deployments



CYNGN EAS SAAS ANTICIPATED PRICING \$60,000 – \$120,000 ANNUAL LICENSE PER VEHICLE*

*Estimated, excluding vehicle, hardware, site setup, and engineering services



Pricing Factors:

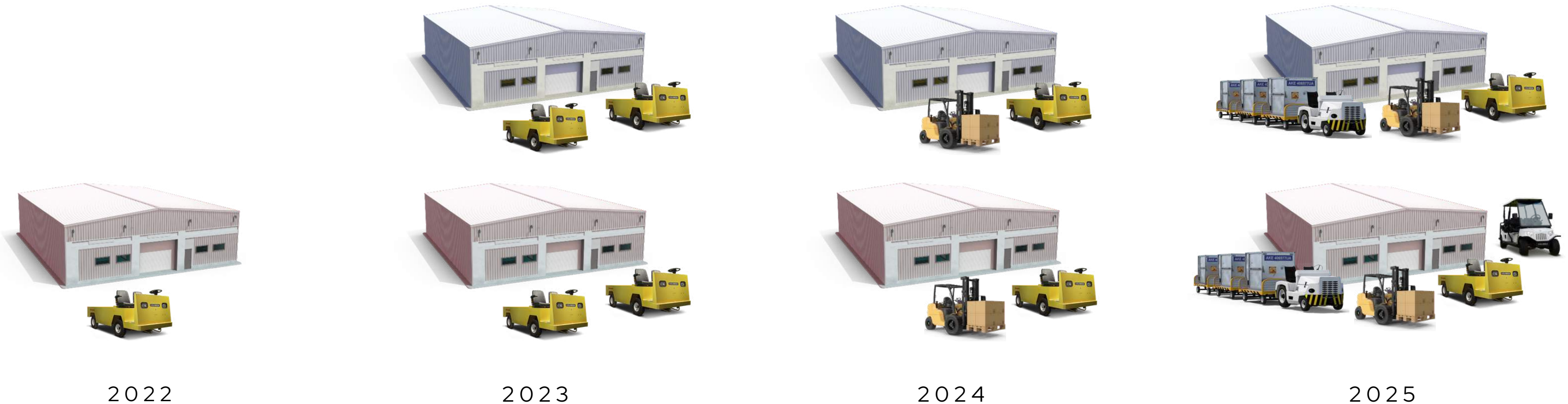
- Target Vehicle
- Utilization
- End Application
- Number of Vehicles

Remember: the top 10 material handling manufacturers shipped 883,000 units in 2019.



LAND & EXPAND

The path to multi-million dollar accounts



PHASE 1

- 1 Site
- 1 Vehicle Type
- <10 Vehicles

PHASE 2

- Multiple Sites
- 1 Vehicle Type
- 10s of Vehicles

PHASE 3

- Multiple Sites
- Multiple Vehicle Types
- 100s of Vehicles

PHASE 4

- Many Sites
- Many Vehicle Types
- 1,000s of Vehicles

Real-world Example: One of our potential customers, a building solutions company, has 400+ sites that use 20+ different forklift models from 5 different manufacturers.



MATERIAL HANDLING IS JUST THE BEGINNING

Industrial and commercial autonomous applications share fundamental technological building blocks.

We developed these building blocks and integrate them across diverse autonomous driving solutions.

Our current focus

\$119B¹



annual driver costs for vehicles sold by the top-10 material handling OEMs

Our technology already applies to additional industrial applications



In the future, we can expand our offering to public roadway:



1. Management estimate from Bureau of Labor Statistics data. See slide 11.

EXECUTIVE TEAM



Lior Tal

CEO SINCE 2016

Previously: Director of international growth and partnerships at Facebook, co-founder and VP of business development at Snaptu (acquired by Facebook), partner at Barzam, Tal, Lerer Attorneys at Law and Patent Attorneys. Held leadership roles at Actimize (acquired by NICE), DiskSites (acquired by EMC), Odigo (acquired by Comverse).



Donald Alvarez

CFO SINCE 2021

Previously: VP of Finance of the International Council of Shopping Centers, VP of Finance of QuVa Pharma, Inc., National managing partner, COO and CFO of Tatum, a Randstad Company. Has held several other senior financial and operational roles in both private and public companies.



Biao Ma

VP OF ENGINEERING SINCE 2017

Previously: Software architect for autonomous driving and senior software engineer at Baidu, software engineer at Carnegie Mellon University. MS Computer Science at Carnegie Mellon.



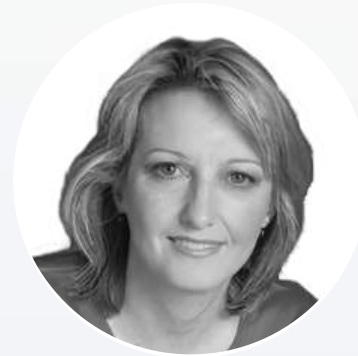
Ben Landen

VP OF BUSINESS DEVELOPMENT SINCE 2019

Previously: Company's Senior Director of Product & Partnerships, Head of Product & BD at DeepScale (acquired by Tesla), managed \$100M automotive semiconductor product line as Senior Business Manager of Maxim Integrated. MBA at UC Berkeley's Haas School of Business, and BS Electrical Engineering at California Polytechnic University SLO.



BOARD OF DIRECTORS



Colleen Cunningham

INDEPENDENT DIRECTOR

Previously: Member of board of AICPA. SVP-Controller of Zoetis, Inc., Global Managing Director-RGP, CEO of Financial Executives International, CFO Havas Advertising, Chief Accounting Officer AT&T. Prior member of FASB Advisory Committee (FASAC) and IASB Advisory Committee (IASC).



Jim McDonnell

INDEPENDENT DIRECTOR

Currently: SVP of Sales & Marketing at Vispero. Previously: VP of sales excellence HSM and Commercial Excellence for HSF at Honeywell, SVP Global Sales & Marketing at Intermec, and held several senior roles at Hewlett-Packard over more than 26 years. Prior member of Astek's board.



Karen MacLeod

INDEPENDENT DIRECTOR

Currently: Market Leader – Interim Solutions of Korn Ferry. Previously: CEO of the Arete Group. Board member FWA of New York, member and chair of Track Group Inc.'s audit committee. President of Tatum, Randstand Holdings NV Company, president of Resources Connection, Inc. North America. BOD member Resources Connection, Inc., audit committee of FWA.



Mitch Lasky

DIRECTOR

Currently: Partner of Benchmark Capital, co-owner of LA Football Club. Serves on BOD of various companies including: Discord, Manticore Games Inc., Ubiquity6 Inc., thatgamecompany. Previously: EVP, Mobile & Online of Electronic Arts, CEO and chairman of the board of JAMDAT Mobile, Inc. Member of board Snap, Inc., Inc., PlayFab, Inc., Engine Yard, etc.



Lior Tal

DIRECTOR & CHAIRMAN OF THE BOARD

Previously: Director of international growth and partnerships at Facebook, co-founder and VP of business development at Snaptu (acquired by Facebook), partner at Barzam, Tal, Lerer Attorneys at Law and Patent Attorneys. Held leadership roles at Actimize (acquired by NICE), DiskSites (acquired by EMC), Odigo (acquired by Converse).



KEY TAKEAWAYS

\$119 Billion
Market

An opportunity to invest in a company focused on **practical applications in the growing automation market** that addresses the very real problem of dependence on a human workforce, particularly in an ongoing pandemic environment.

Advanced
Autonomy

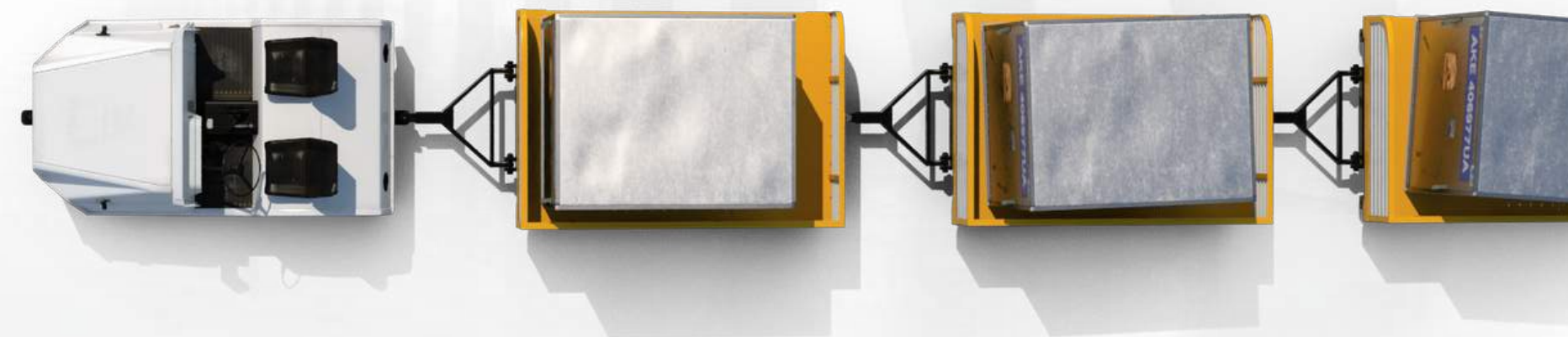
Proprietary, innovative technologies for operating various industrial vehicles autonomously within a flexible, scalable framework.

Key Strategic
Partnerships

Product and go-to-market strategies supported by **partnerships with reputable global firms** in mobility, logistics, and industrial markets.

Winning Team

Experienced leadership backed by **best-in-class R&D team**.



THANK YOU



CYNGN



www.cyngn.com

