



Autonomous vehicle solutions for industrial and commercial enterprises

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 product launches and corresponding revenue generation, 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.

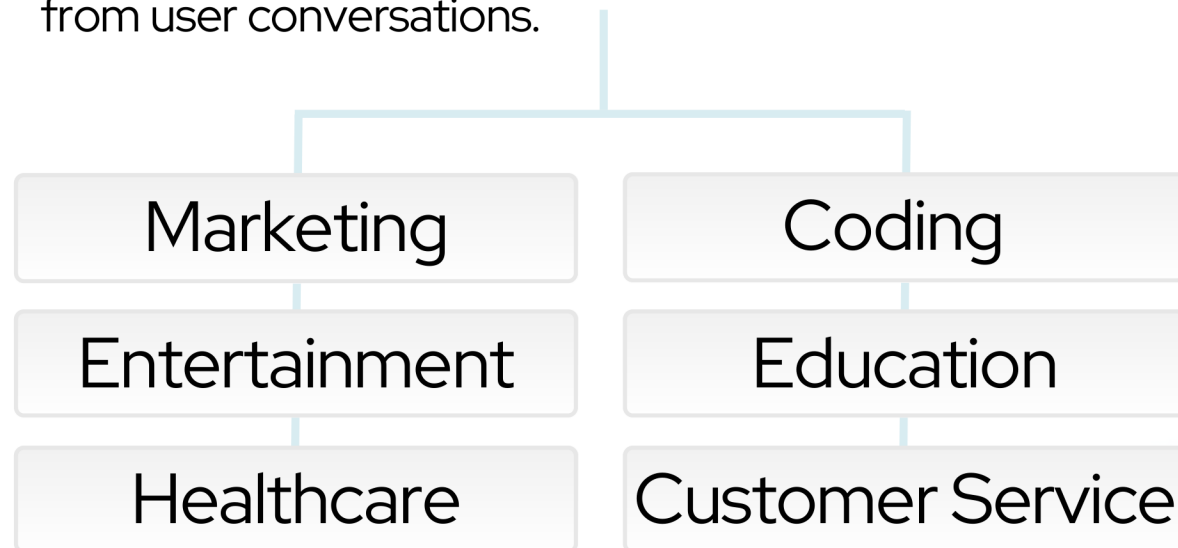
There can be no assurance that management's expectations, beliefs and projections will be achieved, and actual results may differ materially from what is expressed or indicated by the forward-looking statements. Forward-looking statements are subject to risks and uncertainties that could cause actual 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 Company's Annual Report on Form 10-K for the year ended December 31, 2022, and any subsequent quarterly filings on Form 10-Q.

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.

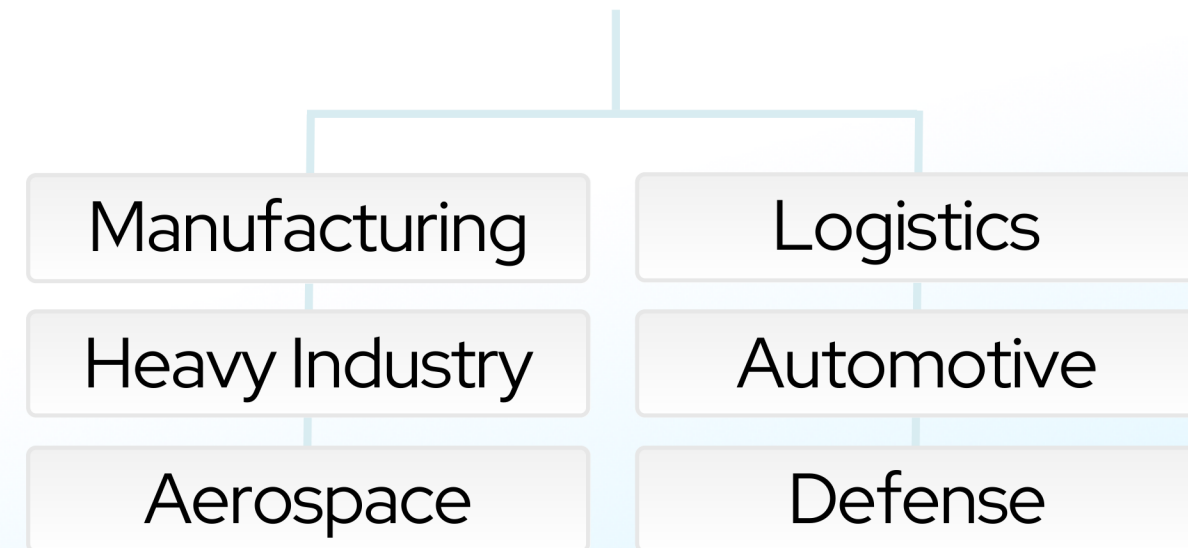
Artificial Intelligence Is Transforming How People Work



ChatGPT: AI chatbot that uses natural language processing to create humanlike conversational dialogue while creating a flywheel for additional data collection from user conversations.



DriveMod: Autonomous driving system that uses AI to create humanlike driving while creating a flywheel for additional data collection from vehicle sensors.





Cyngn Transforms Material Handling Vehicles Into Autonomous Fleets

Scalable, cost effective solutions for automating tuggers, forklifts, stock chasers and many more.

Supports indoor and outdoor facilities across manufacturing, logistics, automotive, defense and other major industries.

Delivers humanlike operation, through a continuously evolving AI platform.

Addressing a \$200B+ market, our innovative approach gives customers solutions to labor shortages, safety enhancement, and rising costs.

Industrial Vehicles Move the World

All major industries, from manufacturing, fulfillment, and logistics to mining and construction, rely on industrial vehicle fleets to operate.

Millions of vehicles operated by multiple shifts of drivers, do the hard work, moving heavier loads at higher speeds than humans can.

With the growth of ecommerce, the demand for skilled labor to operate these vehicles has accelerated.



The Real Problem: Manual Labor Comes at a Very High Cost

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"

Ever increasing cost of labor

- 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

\$140 billion

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.

\$1 Trillion

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

\$171 billion

The Solution is Automation

Forward-looking enterprises that harness automation benefit from:



Lower Variability and
Cost of Labor



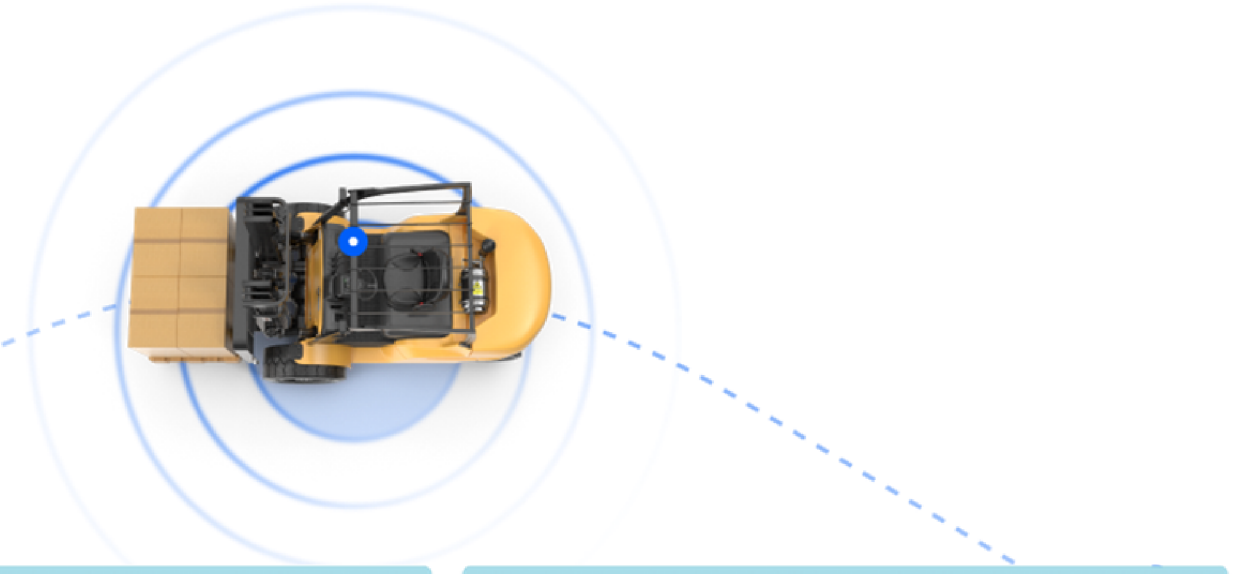
Enhanced
Safety



Increased
Productivity



Reduced Dependence
on Labor



Automation enables new forms of competitive advantage
Evolve or be disrupted

Cyngn's Opportunity Today

\$208+ BILLION¹

annual driver labor costs for material handling vehicles



5,138,190

Relevant material handling industrial vehicle units based on Class 1-5 truck shipments assuming a seven-year useful life and a 45% utilization rate.²

3



\$40,487

Global weighted average total annual labor costs for transportation and material moving employees.



45%

Utilized production rate of global industrial vehicle units.

1,513,190 vehicles x \$40,487/year=\$208B

2. WITS- World Industrial Truck Shipments data; Q2-2022

3. Bureau of Labor Statistics: "Employer costs for employee compensation- March 2023; Glassdoor; Salaryexpert."



\$80.1B

39% ROW
(Rest of the World)

\$52.3B

25% Americas

\$75.6B

36% Europe



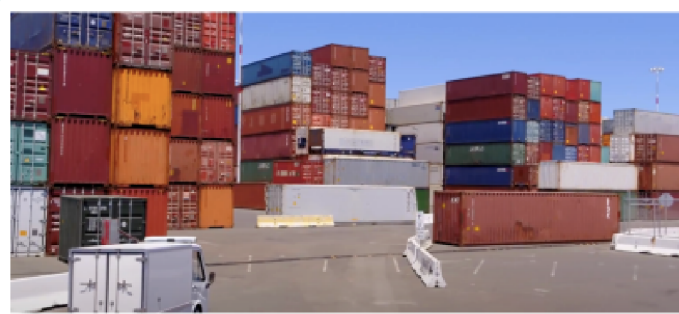
“ **EVERYTHING THAT MOVES WILL BECOME AUTONOMOUS**

– Nvidia CEO, Jensen Huang



Wide Adoption of Autonomous Vehicles Starts with Industrial Applications

Compared to open road uses (robotaxi & trucking), industrial applications involve:



More structured operation



Less complex routes



Lower speed requirements



Lower regulatory hurdles



More commonality from site to site



Predictable workflows



Controlled interactions with trained humans

CynGN's AI Platform: The Enterprise Autonomy Suite (EAS)

Customer-Facing Products

Internal Toolkit



DriveMod

Full-Stack
Autonomous Driving
Software System



COLUMBIA



MOTREC



CynGN Insight

Intelligent Control
Center

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



CynGN Evolve

Data Optimization
Tools

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

EAS is Offered as a Subscription License per Vehicle

Pricing Factors



Target Vehicle



Utilization



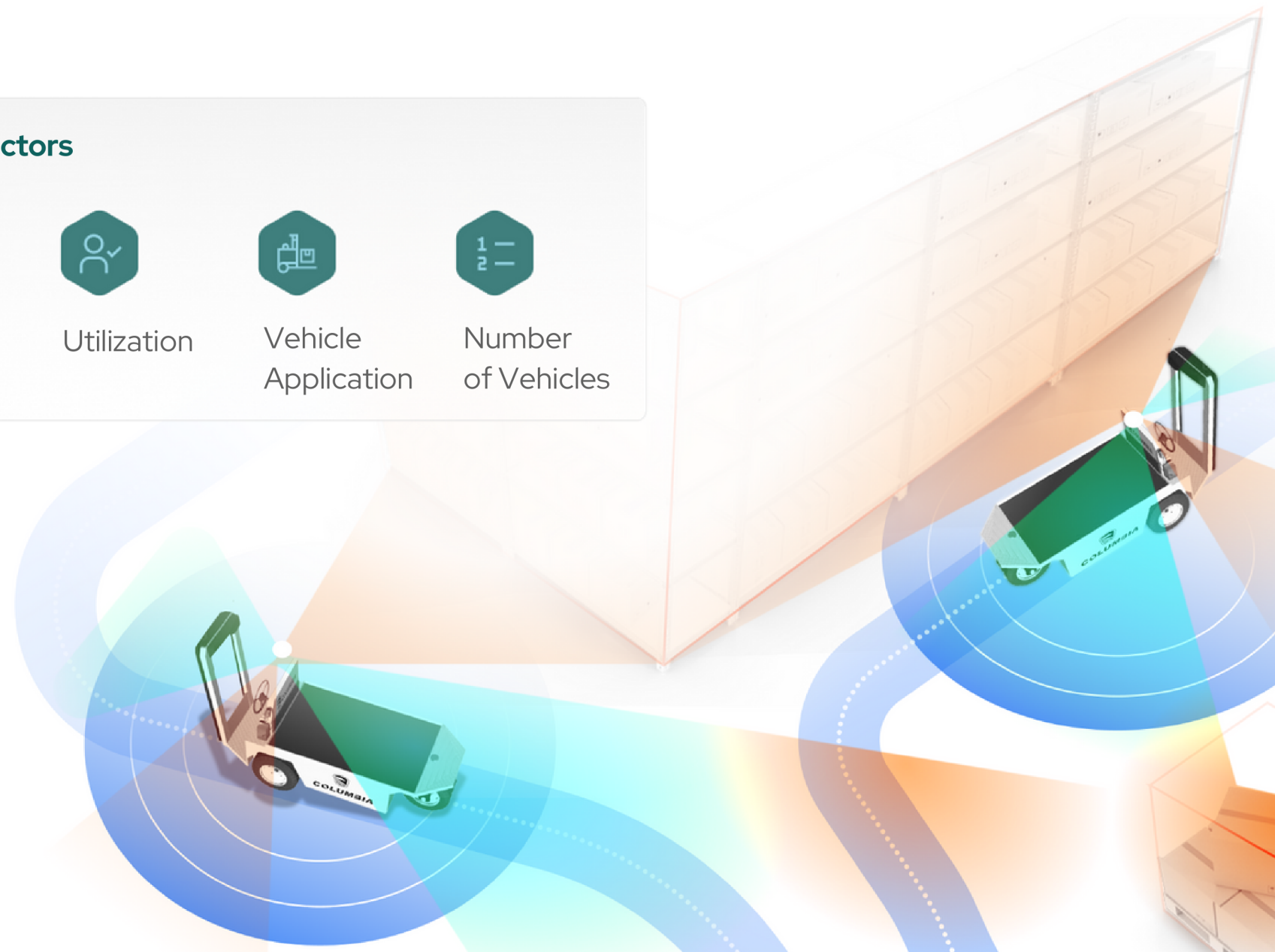
Vehicle Application



Number of Vehicles

Priced at the cost of a single driver.

Customers benefit from cost savings, productivity gains and increased safety.



AI-Powered DriveMod Stockchaser (Available Now)

CynGN and Columbia Vehicle Group partnered to introduce the DriveMod Stockchaser.

New Deployment: CynGN signed an agreement with a Fortune 100 Heavy Equipment Manufacturer to deploy DriveMod Stockchasers in its North American manufacturing facility.

This initial order, with a potential to grow to more vehicles at this and other facilities, marks another significant milestone for CynGN's DriveMod Stockchaser.



AI-Powered DriveMod Tuggers (Coming Soon)

Cyngn has partnered with Motrec International, a globally recognized manufacturer of industrial electric vehicles, to integrate DriveMod into their line of electric tuggers.

The partnership expands DriveMod to another vehicle type, offering more customer choice and demonstrating the flexibility of Cyngn's EAS software solution.

The global tow tractor market was valued at almost \$2 billion¹ in 2022 and Motrec has large global customers including Tesla, GM and FedEx.

1. Research and Markets Tow Tractor Market: Global Outlook and Forecast 2023 - 2028 - March 2023



AI-Powered DriveMod Forklift (Coming 2024)

Cyngn has partnered with BYD, a renowned global EV brand, to integrate DriveMod into their fleet of lift trucks.

Cyngn, Arauco and BYD have been developing the autonomous forklift since late 2022. It is expected to be commercially available in 2024.

• OEM partnership with BYD offers industry-leading load capacity of 10,000 lbs. and to a height of 14 ft.

• AV capabilities can be scaled to forklifts of all sizes.

• Pallet pocket detection works with pallets of any size.



Arauco Pre-Orders 100 Electric DriveMod Forklifts

The order from Arauco, an established wood products supplier with over \$7 billion in revenue in 2022, refers to less than 10% of Arauco's existing forklift fleet but already represents up to \$5 Million in annual recurring EAS revenues once deployed.

The 100 DriveMod Forklift pre-order follows a successfully executed paid project in which Cyngn developed new autonomous forklift capabilities to address Arauco's application requirements that were previously unmet by other industrial automation solutions.

Start of delivery is aimed for mid-2024.



Strong Commercial & Technological Momentum

Commercial Progress

- Commercial deployment of DriveMod Stockchasers went live in Southern California with U.S. Continental, Inc.
- Deal signed with Fortune 100 heavy machinery company for DriveMod Stockchaser Deployment
- Pre-order from Arauco for 100 DriveMod Forklifts
- Kicked off Autonomous Vehicle Roadshow

Technology Progress

- Cyngn released its Enterprise Autonomy Suite (EAS) 9.0
- Cyngn reaches milestone of 10 granted patents, with 15 more submitted
- Continued R&D and strategically hired top talent across the globe, including two engineering Vice Presidents with experience scaling thousands of robots to customers



Case Study: Increased Productivity for Global Logistics and Fulfillment (GL&F)

Deployment of the DriveMod Stockchaser at a Las Vegas 3PL facility yielded big results

64%

A 64% reduction in human labor costs when using CynGN's Autonomous Stockchaser vs. using a forklift.

33%

A 33% increase in efficiency when using CynGN's Autonomous Stockchaser vs. using an electric pallet jack ([link](#)).



Compound Value of EAS Adoption

Our vehicle-agnostic solution stacks more value for customers with each DriveMod vehicle, compounding benefits as EAS expands across vehicles and sites.



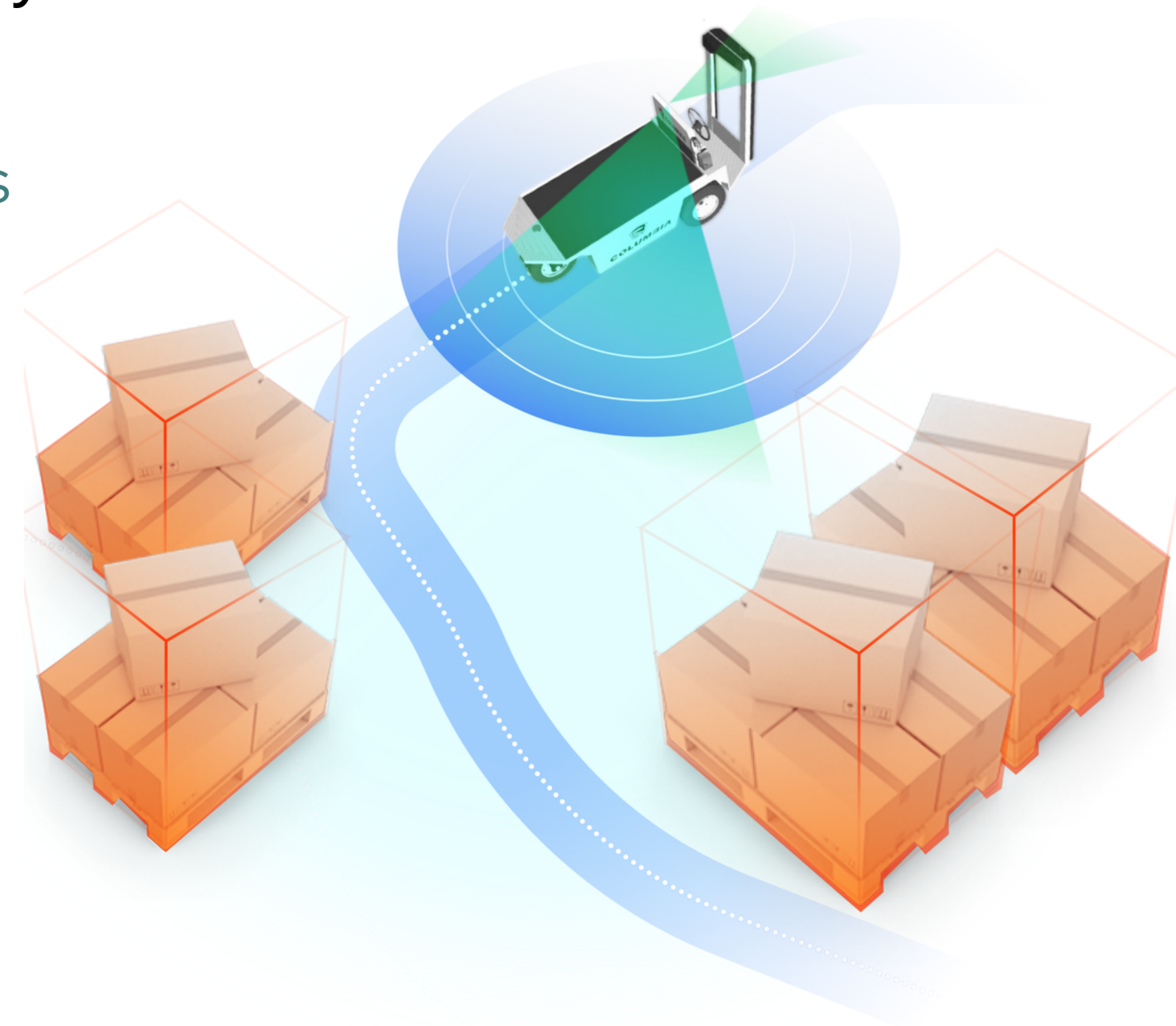
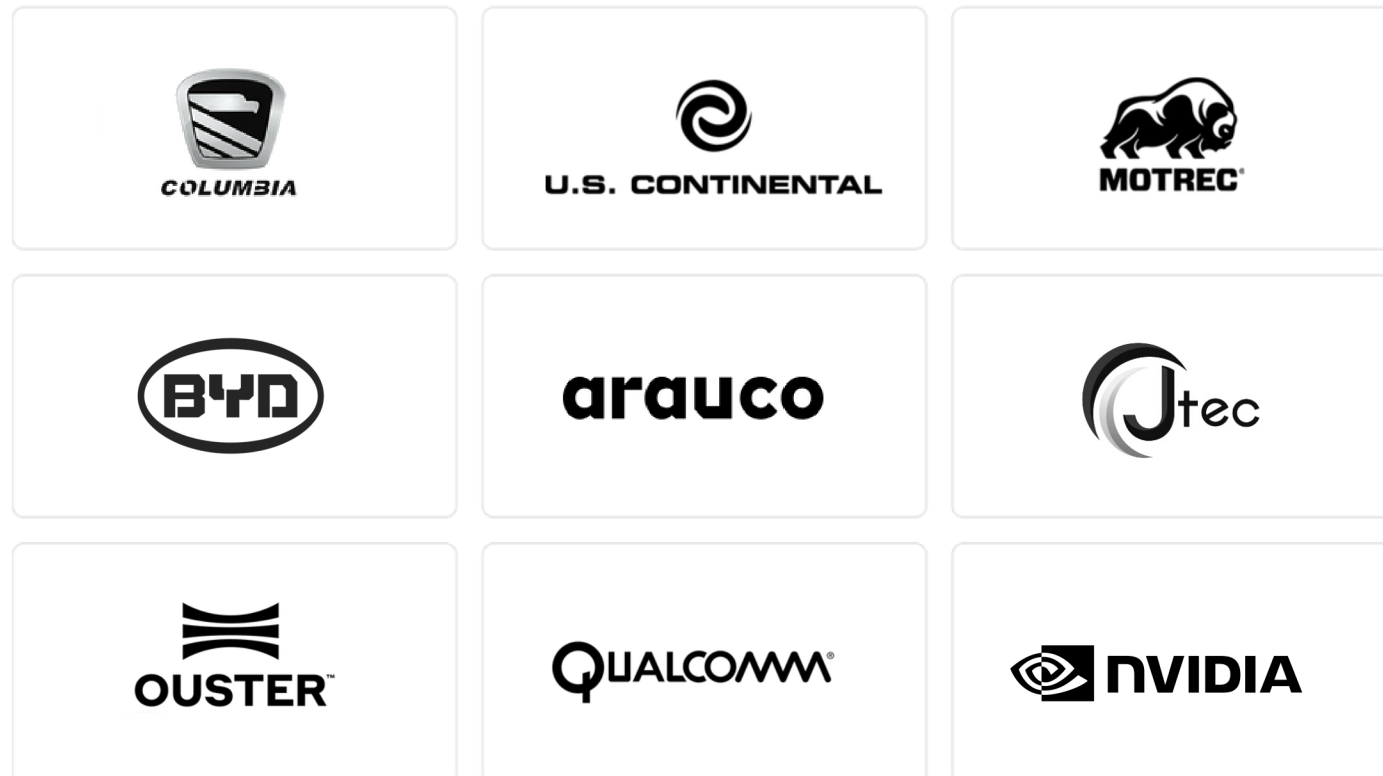
- Labor cost savings
- Improved consistency
- Enhanced safety

- Consistent user experience
- Single set of training materials for workforce

- Minimal marginal costs for new/expanded deployments
- Global data aggregation for operational improvements

Aligning with a Solution-oriented Ecosystem

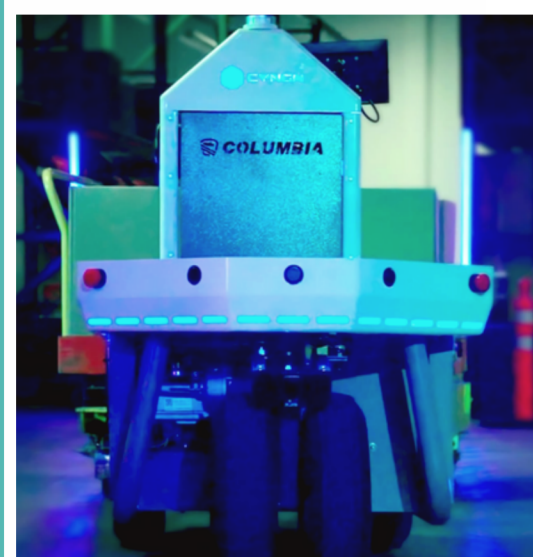
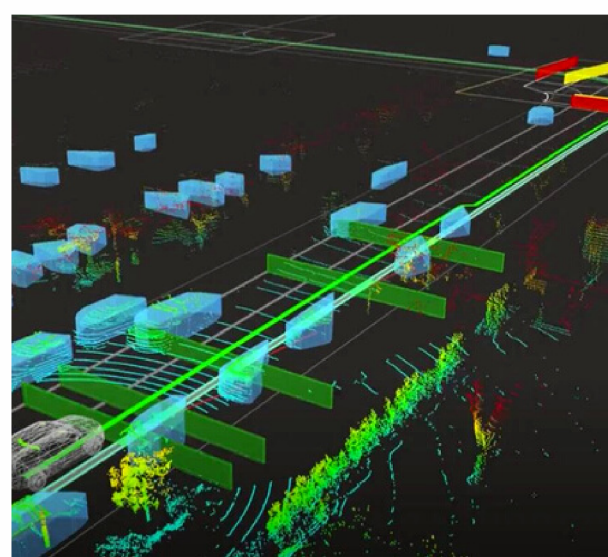
We don't reinvent the wheel. Our focus on software enables relationships and partnerships with manufacturers, technologists, consultants, and dealer networks.





CynGN Reaches Milestone of 14 Granted Patents for Pioneering AI-Powered AV Technologies for Industrial Vehicles

DriveMod and CynGN Insight are unique, proprietary solutions that have been developed by the CynGN team.



- Technology leadership that focuses on machine learning, modularity, and multiple use case enablement supported by family of patents granted by USPTO for Autonomous Vehicle Technologies.
- Since May 2023, 8 additional patents granted to CynGN, bringing total US patents granted to 14.
- 11 additional US patents and 20 international patents have been submitted.
- Proprietary technology stack consists of more than 80 elements that include trade secrets, ranging from sensor fusion to data processing pipelines that allow the company to provide self-driving solutions to a variety of industrial applications.

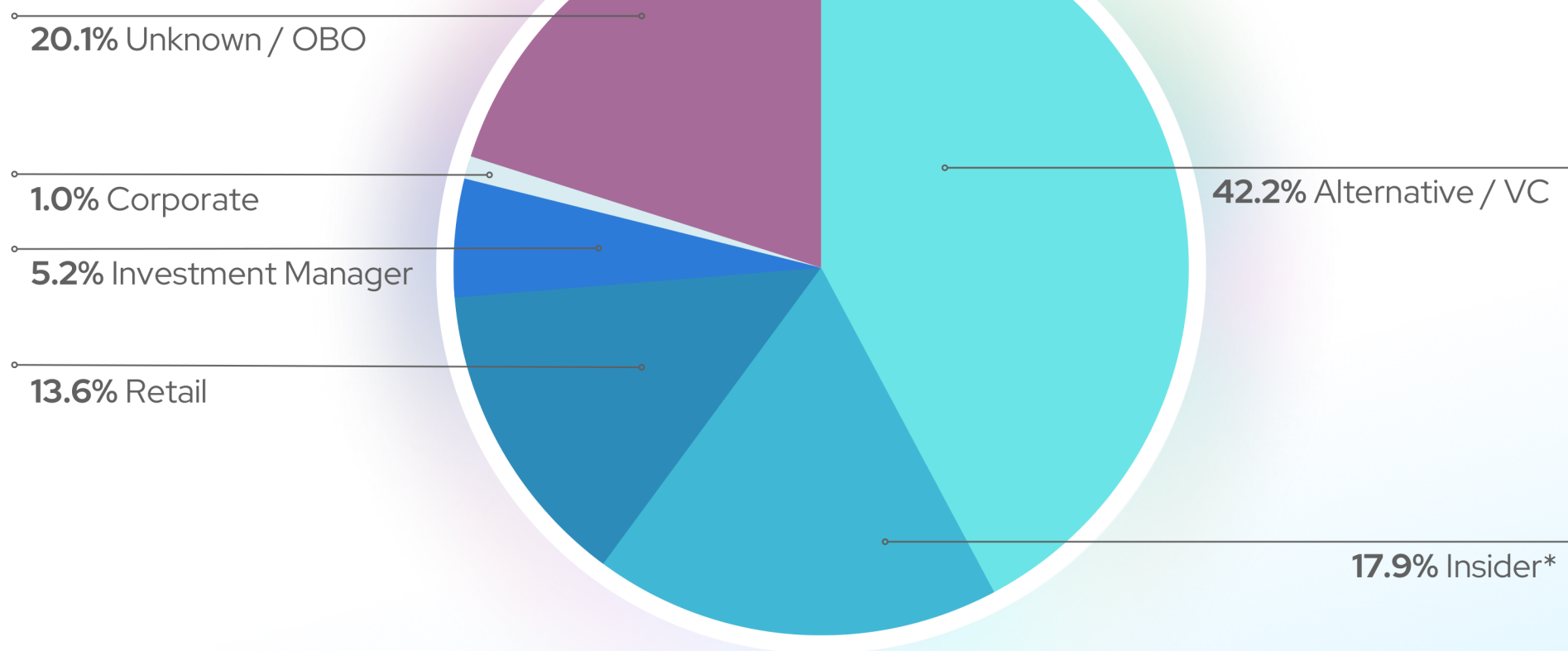
Ownership Breakdown

Alternative Investment Firms Include:

BENCHMARK

**andreessen.
horowitz**

 **Redpoint**



- Alternative investment funds breakdown based on public filings as at December 31, 2022.
- *Insider calculation includes shares of common stock issuable upon the exercise of stock options disclosed in Cyngn's 10-K issued March 17, 2023.



Management Team Experienced in Commercializing Innovative Technology

Management



Lior Tal

CEO & Chairman of the Board
Facebook, Snaptu



Don Alvarez

CFO
QuVa Pharma, Tatum



Ben Landen

VP of Business Development
DeepScale, Maxim Integrated



Chris Wright

Head of Sales
Brain Corp, Kärcher



Sean Stetson

VP of Engineering
Seegrid, Google



Felix Naveen Singh

VP of Engineering Services
Brain Corp, Qualcomm



Karen Macleod

Independent Director
Korn Ferry, Tatum



Colleen Cunningham

Independent Director
Zoetis, AT&T



James McDonnell

Independent Director
Vispero, Honeywell

Board of Directors

Our Competitive Advantages



Advanced autonomy

- Developed for robotaxi capability by using leading technology like AI, sensor fusion, and abstract decision making.
- Takes advantage of sensor and computing 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. Retrofitted 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.

Material Handling Is Just the Beginning

Industrial and commercial autonomous applications share fundamental technological building blocks.

Cyngn developed these building blocks and integrates them across diverse autonomous driving solutions.

Our current focus



Solutions for moving and towing materials are commercially available and deployed with customers

Our technology



Our technology already applies to additional industrial uses and vehicles, expanding to new actions like lifting

In the future



In the future, we can expand our offering to public roadways and additional outdoor domains

NASDAQ: CYN



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