

Autonomous vehicle solutions for industrial and commercial enterprises

Investor Presentation/ April 2023

STOCKCHASER



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.

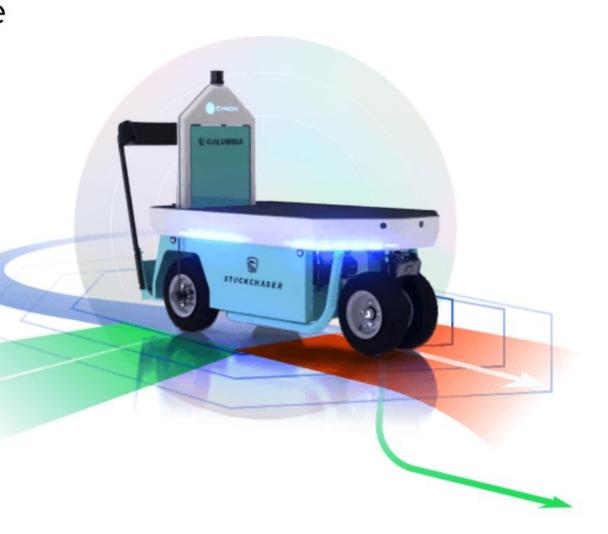
Forward-looking statements speak only as of the date the statements are made. The Company undertakes no obligation to update forward-looking statements to reflect actual results, subsequent events or circumstances, changes in assumptions or changes in other factors affecting forward-looking information except to the extent required by applicable securities laws.



Cyngn develops autonomous vehicle (AV) technology to enable industrial automation

We embed our software into time-tested industrial vehicles by designing AV hardware systems that are built and integrated by partners into new vehicles and retrofits

Addressing a \$208B market, Cyngn offers an innovative approach that applies leading Al/robotics and lowers the barrier of adoption for customers to take their business to the next level





Industrial Vehicles Move the World

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

Vehicles 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. Vehicles have never been able to do this work without a human operator.

Until now...





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

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.

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.
- The total cost of preventable workplace injuries in the US in 2019 was \$171 billion.⁴



The Solution is Automation

Forward-looking enterprises that harness automation benefit from:









Automation enables new forms of competitive advantage Evolve or be disrupted



This is Where Cyngn Comes In

We develop autonomous driving software, built to serve a broad spectrum of industrial applications, from manufacturing to mining.

Billions of dollars in funding and years of research have focused on robotaxis, trucking, and highway automation, which are not being built to address industrial needs.

Our AV software stack brings robotaxi capabilities to industrial domains:

360° perception that is capable of detecting hundreds of people and vehicles per second at centimeter-level accuracy while never getting distracted.





Cyngn's Enterprise Autonomy Suite (EAS)

Customer-Facing Products



DriveMod

Full-Stack Autonomous Driving Software System



Successfully tested on multiple different vehicle types



Cyngn Insight

Intelligent Control Center

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

Internal Toolkit



Cyngn Evolve

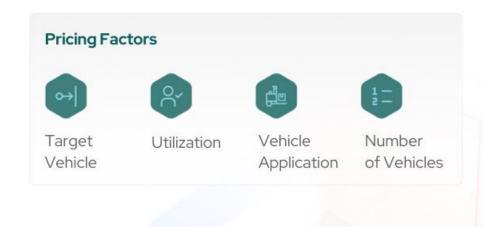
Data Optimization
Tools

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





EAS is Offered as a Subscription License per Vehicle



Traditional material handling vehicles that typically cost <u>under</u> \$20,000 will cost <u>over</u> \$500,000 in wages to operate for two shifts over their 7-year lifetime.



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



\$40,487

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

(1)

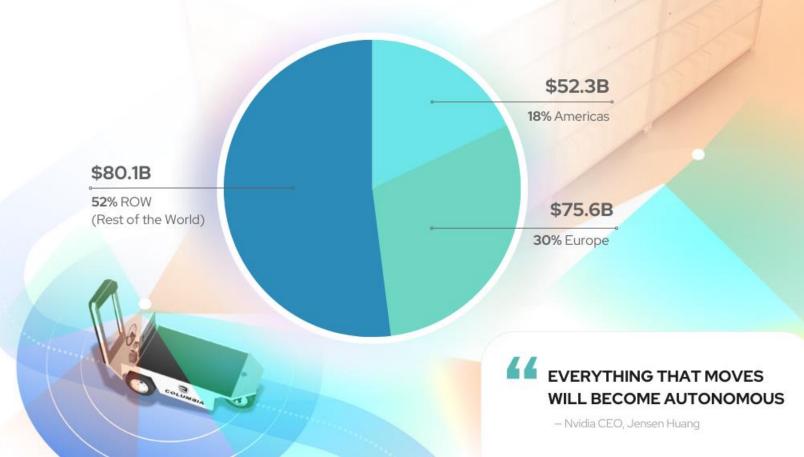
45%

Utilized production rate of global industrial vehicle units.



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

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













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



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. Management estimate from Bureau of Labor Statistics data. See slide 12.

Our current focus



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





Our technology



Our technology already applies to additional industrial applications



In the future



In the future, we can expand our offering to public roadways





Cyngn Brings Increased Safety and Efficiency to the Mining Industry

Cyngn has signed a multi-phase contract to implement autonomous vehicle technology into the vehicles of a **global company in** the heavy machinery industry.

Cyngn introduces leading-edge tech and AI to nearly any industrial vehicle – in a wide range of mining applications.

DriveMod is designed to be vehicle-agnostic, which means it can be integrated into the highly specialized vehicles that are already commonly used in mining.





The Autonomous Forklift

In the coming months, we expect to bring DriveMod to a global building materials manufacturer.

In 2024, the forklift is expected to be available to more lead customers before progressing towards a wider release in the general market.

An 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.





Land & Expand

Our vehicle-agnostic AV capability opens more opportunities and creates competitive moats

2022



2023









Phase 1

• 1Site

- 1 Vehicle Type
- <10 Vehicles</p>



Phase 2

Multiple Sites

- 1 Vehicle Type
- 10s Vehicles



Phase 3

2024

- Multiple Sites
- Multiple Vehicle Types
- 100s Vehicles



Phase 4

Many Sites

- Many Vehicle Types
- 1,000s Vehicles



2022 Achievements



Building with an OEM

 Columbia Vehicle Group announces it is building a fleet of autonomous industrial vehicles that use Cyngn's AV technology (<u>link</u>).



Contract Win for Stockchaser Commercial Deployment

 Cyngn signed with U.S. Continental, a leading manufacturer of quality leather and fabric care products, to provide selfdriving stockchasers (link).



Launch of DriveMod Kit

 Cyngn begins to build patent-pending AV hardware module, DriveMod Kit, designed to retrofit existing vehicles or integrate onto newly manufactured ones (<u>link</u>).



Contract Win for Expansion to Electric Forklifts

 Cyngn signed a multi-phase contract with a global building materials manufacturer, expanding DriveMod to electric forklifts (link).



Release of EAS 8.0

 This latest release of EAS includes 138 new features, a 33% reduction in component complexity, and a 75% reduction in cloud computing costs (<u>link</u>).



Contract Win for Heavy Industrial Vehicles

 Cyngn signed a multi-phase contract to implement autonomous vehicle technology into the vehicles of a Global 1000 industrial company (link).



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

Deployment of a DriveMod-enabled Autonomous Stockchaser at a Las Vegas 3PL facility yielded big results



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



A 33% increase in efficiency when using Cyngn's Autonomous Stockchaser vs. using an electric pallet jack (<u>link</u>).





Our Competitive Advantages



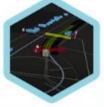
Advanced autonomy

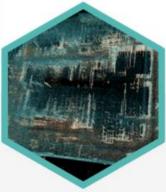
- Developed for robotaxi capability by using leading technology like Al, sensor fusion, and abstract decision making.
- Takes advantage of sensor and computing advancements that are driven by high-volume, high-quality automotive industry.



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, 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.

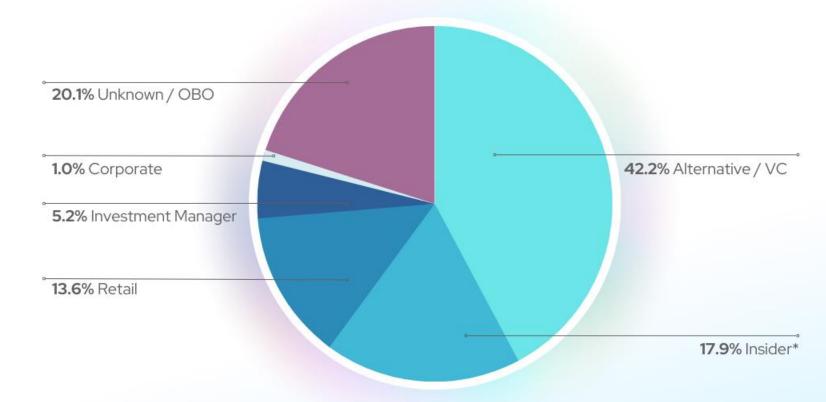


Ownership Breakdown

Alternative Investment Firms Include:

- 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 that are exercisable within 60 days of March 15, 2023.







Key Takeaways

\$208+ 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

Differentiated Technology and Approach

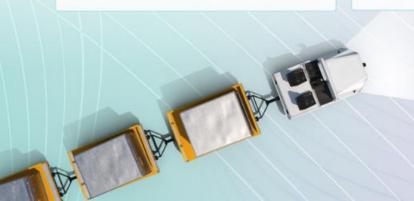
Proprietary, innovative technologies for operating various industrial vehicles autonomously within a flexible, scalable framework

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







Lior Tal

Chairman and CEO



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