

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended **December 31, 2021**

or

TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from [ ] to [ ]

Commission file number **001-40932**

**CYNGN INC.**

(Exact name of registrant as specified in its charter)

**Delaware**

**46-2007094**

State or other jurisdiction of  
incorporation or organization

(I.R.S. Employer  
Identification No.)

**1015 O'Brien Dr., Menlo Park, CA**

**94025**

(Address of principal executive offices)

(Zip Code)

Registrant's Telephone number, including area code: **(650) 924-5905**

Securities registered pursuant to Section 12(b) of the Act:

Title of Class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, Par Value \$0.00001	CYN	NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act:

Title of Each Class	Name of Each Exchange On Which Registered
N/A	N/A

Indicate by check mark if the registered is a well-known seasonal issuer, as defined in Rule 405 the Securities Act.

Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes  No

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the last 90 days.

Yes  No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-K (§229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by a check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

The registrant was not a public company at June 30, 2021, the last business day of the registrant's most recently completed second fiscal quarter, and therefore it cannot calculate the aggregate market value of its voting and non-voting common equity held by non-affiliates at such date. The registrant's Common Stock began trading on the Nasdaq Capital Market on October 20, 2021. The aggregate market value of the registrant's Common Stock outstanding, other than shares held by persons who may be deemed affiliates of the registrant, at December 31, 2021, computed by reference to the closing price for the Common Stock on such date (\$4.50), as reported on the NASDAQ Capital Market, was \$53,013,438.

The number of shares of Common Stock, \$0.00001 par value, outstanding on March 24, 2022 was 27,094,430 shares.

DOCUMENTS INCORPORATED BY REFERENCE

None.

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## FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements. These statements are based on our management's beliefs and assumptions and on information currently available to our management. The forward-looking statements are contained principally under the headings "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Business." Forward-looking statements include statements concerning:

- our possible or assumed future results of operations;
- our business strategies;
- our ability to attract and retain customers;
- our ability to sell additional products and services to customers;
- our cash needs and financing plans;
- our competitive position;
- our industry environment;
- our potential growth opportunities;
- expected technological advances by us or by third parties and our ability to integrate and commercialize them;
- the effects of future regulation; and
- the effects of competition.

All statements in this Annual Report that are not historical facts are forward-looking statements. We may, in some cases, use terms such as "anticipates," "believes," "could," "estimates," "expects," "intends," "may," "plans," "potential," "predicts," "projects," "should," "will," "would" or similar expressions that convey uncertainty of future events or outcomes to identify forward-looking statements.

The outcome of the events described in these forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. These important factors include our financial performance and the other important factors we discuss in greater detail in "Risk Factors." You should read these factors and the other cautionary statements made in this Annual Report as applying to all related forward-looking statements wherever they appear in this Annual Report. Given these factors, you should not place undue reliance on these forward-looking statements. Also, forward-looking statements represent our management's beliefs and assumptions only as of the date on which the statements are made. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements.

*Unless the context requires otherwise, references in this Annual Report on Form 10-K to "we," "us," and "our" refer to Cyngn Inc. and its consolidated subsidiaries.*

## PART 1

### Item 1. Business

#### General

Research of the industrial vehicle market (utility vehicles, trucks, and tractors utilized heavily in the manufacturing, distribution and logistics, mining, and construction industries) projects the demand of such vehicles to reach as high as \$80 billion by 2023, according to findings from the “Global Material Handling Equipment” report by Freedonia Focus Reports. This growth will be propelled by the projected rise in global manufacturing, construction, and e-commerce activity. Yet, according to the “Trends in Supporting and Scaling Modern Automation” report by Ricoh & ABI Research Report, historically, less than 1% of industrial vehicle equipment shipped by top manufacturers has been automated. Despite these low penetration rates, the benefits of industrial vehicle automation can produce operational efficiency gains of upwards of 50%, according to the “Industry 4.0: Reimagining manufacturing operations after COVID 19” article by McKinsey & Company. As automation proliferates, these industries will gradually shift to service-based models that will decrease upfront capital expenditures and create new revenue streams while unlocking new value in the supply chain. Our autonomous vehicle (AV) technology is uniquely positioned to capitalize upon these changes by offering a heterogeneous autonomy solution that can deliver self-driving capabilities and data insights to nearly every industrial vehicle on the market.

We integrate our full-stack autonomous driving software, DriveMod, onto vehicles manufactured by Original Equipment Manufacturer (OEM) customers either via retrofit of existing vehicles or by integration directly into vehicle assembly. We design the Enterprise Autonomy Suite (“EAS”) to be compatible with sensors and components from leading hardware technology providers and integrate our proprietary AV software to produce differentiated autonomous vehicles.

Autonomous driving has common technological building blocks that remain similar across vehicles and applications. By tapping into these building blocks, DriveMod is designed to deliver autonomy to new vehicles via streamlined hardware/software integration. This vehicle-agnostic approach enables DriveMod to expand to new vehicles and novel operational design domains (ODD). In short, almost every industrial vehicle, regardless of use case, can move autonomously using our technology.

Our approach accomplishes several primary value propositions:

1. Brings autonomous capabilities to vehicles built by proven manufacturers that are already trusted by customers.
2. Generates continual customer value by leveraging the synergistic relationship of autonomous vehicles and data.
3. Creates consistent autonomous vehicle operation and interfaces for diverse fleets.
4. Complements the core competencies of existing industry players by introducing leading-edge technologies like Artificial Intelligence (AI) & Machine Learning (ML), cloud/connectivity, sensor fusion, high-definition mapping, and real-time dynamic path planning & decision making.

We believe our market positioning as a technology partner to vehicle manufacturers creates a synergy with incumbent suppliers that already have established sales, distribution, and service/maintenance channels. By focusing on industrial use cases and partnering with the incumbent OEMs in these spaces, we believe we can source and execute revenue-generating opportunities more quickly.

Our long-term vision is for EAS to become a universal autonomous driving solution with minimal marginal cost for companies to adopt new vehicles and expand their autonomous fleets across new deployments. We have already deployed DriveMod software on nine different vehicle form factors that range from stockchasers and stand-on floor scrubbers to 14-seat shuttles and 5-meter-long cargo vehicles as part of prototypes and proof of concept projects, demonstrating the extensibility of our AV building blocks.

Our recent progress contributes to the validation of EAS with OEM partners and end customers. We also continue to build upon our ability to scale our products and generate novel technological developments. See figure below for recent highlights:



**Figure 0: Summary of recent Cyngn milestones**

We believe that the adaptability of our technology will enable us to incrementally expand into new AV verticals and grow our total addressable market (TAM) from the billions of dollars we are currently targeting in the industrial markets to the trillions of dollars that self-driving vehicles can capture across all industries.

We believe that the ubiquity of our technology will combine with our deep AV experience and enable us to incrementally expand into new AV verticals. Thus, we could grow our TAM from the billions of dollars we are currently targeting in the commercial and industrial markets to the trillions of dollars that self-driving vehicles can capture across industries (Source: Ark Invest. "Mobility-As-A-Service: Why Self-Driving Cars Could Change Everything.").

### **Automation and Autonomy in the Industrial Equipment Market**

#### **Overview**

Automation has long played a role in industrial sectors. More recently, the larger industrial automation market has grown significantly by riding the wave of new technology and innovation focused on addressing the needs of what is known as *Industry 4.0*, the outcome of the fourth industrial revolution (Source: <https://www2.deloitte.com/us/en/insights/focus/industry-4-0.html>). According to the "Industrial Automation Market by Component, Mode of Operation, and End User" report by Meticulous Market Research Pvt. Ltd., in 2020, the industrial automation industry was valued at US\$164.2 billion and is expected to grow at 9.3% compound annual growth rate (CAGR), ultimately reaching a market value of US\$306.2 billion by 2027. Autonomous vehicles represent fundamental technology that will enable the fourth industrial revolution.



**Figure 1: Illustration of the progression from Industry 1.0 to Industry 4.0.**

Industrial automation is broadly understood to consist of a wide range of technology solutions that provide varying levels of automation for critical software control systems and industrial equipment. These components are essential to the operations and growth of global markets such as manufacturing, distribution, transportation, construction, and mining. The relatively controlled and pre-defined operational environments industrial companies operate in are what make them such a strong opportunity for companies looking to develop automation solutions, but enhanced product capabilities will be required to achieve the promise of Industry 4.0 — capabilities that will be created by technological advancements in AI/ML, robotics, connectivity, mapping, and interoperability.

### **Automation Solutions for Industrial Equipment**

The Industrial Equipment market covers a broad range of use cases and product categories, with automation solutions targeting Material Transport Equipment (MTE) heavily utilized by the majority of industry market sectors. For our purposes, we can think of MTE to include all material handling equipment directly related to material transit (this includes conveying equipment, monorail, hoists, storage & retrieval, and industrial vehicles). According to the “Global Material Handling Equipment’ report by Freedonia Focus Reports, the MTE market is characterized by steady growth, and the increase in global e-commerce activity and industry mechanization over the past decade are projected to grow the industry to \$160 billion in 2023, representing a 3.9% 5-year CAGR. Our belief is that these strong growth indicators will drive increased need for more advanced technology that will address gaps in the current capabilities of automated MTE solutions.

Historically, MTE automation has been heavily weighted in solutions related to storage/retrieval systems and conveyors because more rigid and repetitive environments are better suited for the limited capability of existing automation solutions. By contrast, the vehicles in the MTE category, referred to here as *industrial vehicles*, are largely still driven manually. As an example, automated guided vehicles (AGVs) and autonomous mobile robots (AMRs) have illustrated the applicability of automated industrial vehicles for the manufacturing and distribution industries, yet adoption rates of these technologies are lagging Industry 4.0 growth rates by as much as 4.5%, according to the “Global Material Handling Equipment’ report by Freedonia Focus Reports.

Analysis in the “Trends in Supporting and Scaling Modern Automation” report by Ricoh & ABI Research Report estimates that the top 10 manufacturers of industrial vehicles for manufacturing and distribution shipped approximately 883,000 units in 2019. However, fewer than 1% of material handling vehicles shipped every year are automated, presenting a significant opportunity to automate industrial vehicles. The cost to operate a non-autonomous material transport vehicle is reported to be \$32.42 per hour, according to the U.S. Bureau of Labor Statistics compensation data for transportation and material moving full-time employees. Further, it is estimated that each non-autonomous vehicle is in operation for approximately 4,174 hours per year based on 16-hour per workday operation. The labor costs associated with humans operating 883,000 non-autonomous vehicles for manufacturing and distribution yield our current market potential of \$119B. The ability to deliver more consistent operations, reduce accidents, and mitigate personnel issues like attrition and truancy through the use of AVs could create additional market opportunity. Other relevant statistics we consider when evaluating our market potential are that there are an estimated 20,000 warehouses in the US (50,000 globally) with an average of 175 employees per warehouse, according to Statista, and there are an estimated 900,000 employees moving material within these US warehouses, according to “Industries at a Glance: Warehousing and Storage: NAICS 493.” We believe that technological innovation is needed to enable adoption of autonomous MTE that will address the substantial industry challenges that exist today.

These challenges include:

*Labor shortages* — The hiring and retention of qualified workers is a critical concern for the markets that material transport vehicles operate within. In fact, Deloitte’s 2020 and 2021 Material Handling Industry Report showed that over 50% of the 1,000 supply chain and manufacturing leaders surveyed rated hiring and employee retention as their biggest challenge (source: MHI Deloitte Industry Report). Additionally, in a survey completed in late 2019 prior to the start of the COVID 19 pandemic, 73% of survey respondents indicated that it takes more than 30 days for their companies to fill open positions. By 2030, the impact of unfilled open jobs in manufacturing could cost the US economy more than \$1 trillion. Compounding the issue further is the industry’s projected increase in labor demand and cost. According to IBISWorld’s 2020 US Industrial Machinery & Equipment Industry Report, US industry labor needs are expected to increase at an annualized rate of 3.7% to over 375,000 workers through 2025, driven by higher US industrial and manufacturing activity. Average cost of manufacturing labor in the US has also increased by 20% since 2010 according to McKinsey.

*Difficulty in scaling* — The traditional approaches to vehicle automation make scaling vehicle automation solutions difficult due to strains caused by service lifecycle management and issues with dynamic deployability. Industrial automation customers are forced to coordinate operational components from a variety of different vendors and lack a unifying architecture that allows the technology to scale effectively within and across sites. Significant costs are also associated with expanding the scope of existing automation solutions as they are tightly coupled to specific vehicles and often require an overhaul of the site infrastructure to overcome shortcomings in the automation technology. This can be especially true in niche environments like mines, where the deployability challenges are compounded by unique sites that require heterogeneous fleets. Furthermore, customer service, workforce training, and repair fall under service lifecycle management and must be taken into account along with the technology in order to scale efficiently, according to the “Trends in Supporting and Scaling Modern Automation” report by Ricoh & ABI Research Report.

*Lagging technological advancement* — Manufacturers of material transport vehicles have core competencies in mechanical, electrical, and control systems while the end users of the vehicles typically specialize in logistics, manufacturing, and material moving. There is limited expertise throughout the material handling value chain in software algorithms, sensing, and high-performance computing. Considering the incumbents’ gaps in leading-edge AV and AI technologies and the pressure existing suppliers face to ship manually-operated vehicles that address the multi-billion dollar demand that already exists, we believe it is unlikely that existing stakeholders will be able to invest in the technological advancements that will solve the industry’s fundamental challenges. Deloitte’s 2020 Material Handling Industry Report indicates that, through 2023, only 42% of survey respondents would invest in automation equipment at all, with just 20% reporting that they would invest in either AVs or predictive analytics.

*High barriers to adoption* — Many solutions for automated material transport require an all-or-nothing commitment from customers: either make a major upfront investment to overhaul operations for automation, or postpone automation at the risk of falling behind competition. This all-or-nothing approach to unlocking future return on investment (ROI) can be problematic for risk-averse companies that seek to adopt automation solutions. Depending on fleet size, traditional automation solutions such as “robot-in-a-box” may command ROI horizons of up to 4 years. Factoring in ancillary costs like installation, maintenance, on-site testing, integration, and deployment, can also represent a significant annual cost burden, according to findings by Ricoh & ABI Research Report. According to a PwC 2016 Digital Operations survey, “cost advantage” was the most prevalent prompt cited (86% of responses) for adopting advanced industrial mobility technologies, but in conjunction, “costs are prohibitive” was the most prevalent barrier (58% of responses) to adoption of semi-autonomous/autonomous vehicles.

To combat these challenges, we have built an Enterprise Autonomy Suite for industrial vehicles that leverages advanced in-vehicle autonomous driving technology and incorporates leading supporting technologies like data analytics, fleet management, cloud, and connectivity. EAS provides a differentiated solution that we believe will drive pervasive adoption of industrial autonomy and create value for customers at every stage of their automation growth.

### The Enterprise Autonomy Suite for Industrial Vehicles

Our unique value proposition stems from the concept that the growth of industrial autonomy requires an approach that deploys applied AV solutions within a system of supportive resources rather than a technology feature that is tuned to a specific industrial vehicle.

Some companies manufacture standard industrial vehicles then integrate industrial automation software for rigid tasks. Others develop new vehicle platforms to enable more advanced automation capabilities, limiting the AV technology to a narrow use case. We develop an advanced autonomous vehicle software, DriveMod, for industrial vehicles. DriveMod is a component of EAS that is operationally expansive, vehicle agnostic, and compatible with indoor and outdoor environments. EAS centers around DriveMod's on-vehicle AV software and is supported by our Cyngn Insight and Cyngn Evolve technology and tools.



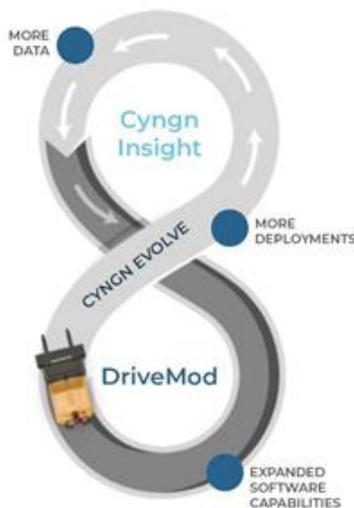
**Figure 2: The core components that make up our EAS product offering. EAS is currently available as a private beta release to select customers.**

*Our approach drives value at every stage of a company's autonomy journey*

EAS provides extensible industrial autonomy solutions that can include data-driven actionable insights, partial autonomy to augment existing workflows and support human drivers, and fully autonomous vehicle mobility. By offering flexible data and autonomous services through subscription-based business models, we assuage the industry's existing challenge of all-or-nothing adoption for autonomous vehicles. Installing DriveMod onto any vehicle unlocks a collection of valuable product offerings that customers can activate over the air, creating lower barriers to entry and enabling customers to benefit from novel data insights while adopting industrial AVs at their own pace.

*EAS galvanizes the relationship between AVs and data*

Our EAS combines core autonomous vehicle technology with a suite of tools and products that strengthen the ties between industrial business operations and the positive network effects that underpin the relationship between data and AVs. DriveMod uses data from advanced sensors to navigate AVs, creating a de facto mechanism for rich data collection. Vehicles equipped with DriveMod provide the means for us to collect data then organize, analyze, and expose customers to novel insights. This makes the data collected during vehicle operation a new type of asset that adopters of AV technology can take advantage of. Data can be stored in cloud or on-premises servers, according to customer requirements. We intend to have our customers own the data collected at their facilities and for Cyngn to have the rights to use that data for certain purposes, such as testing simulation and development. These data assets present a new opportunity to reveal previously unknown insights about day-to-day operational processes that impact safety, efficiency, vehicle maintenance, and growth.



**Figure 3: The EAS product flywheel**

As the deployment of industrial vehicles with DriveMod scales up, the amount and diversity of data flowing through Cyngn Insight expands, creating an accelerated feedback loop and powers our ability to use Cyngn Evolve to further enhance DriveMod, and update the on-vehicle software over-the-air.

*Continual Improvement Drives Technology Advancement*

DriveMod’s building blocks enable a more consistent cadence of upgrades, improvements, and customer-specific feature development that can be deployed via over-the-air updates. These capabilities ensure that the deployed system stays in sync with the changing application demands while allowing customers to focus on monetary and operational ROI. Our EAS plugs into business operations by creating and collecting real-time data and aggregating it into configurable analytics dashboards that inform customer operations as well as future DriveMod releases, creating a data set specific to each customer from high-resolution data collected during their operations.

## Our Approach Augments and Upskills Workforces

Industrial vehicle autonomy represents an opportunity to minimize the adverse impact that talent shortages, employee health, and safety have on a company's core operations. Autonomous vehicles can be relied upon to fill the voids that commonly create human resource issues like executing repetitive tasks, working during undesirable hours, and operating in uncomfortable or hazardous environments. One Deloitte case study inspected a parts manufacturing and fulfillment facility that utilized Autonomous Mobile Robots ("AMRs") to pick products from the back of their expansive distribution center. Introducing the AMRs saved employee time, provided respite from unstimulating tasks, and improved both morale and productivity overall (Source: Deloitte industry report, 2020).

Furthermore, existing employees can be exposed to cutting-edge technology and develop new valuable career development opportunities. For instance, a manufacturing community in Wisconsin successfully retrained their employees to be skilled in AMR maintenance after AMRs were introduced to replace traditional conveyors, according to the article "Are Autonomous Mobile Robots at the Tipping Point" by AutomationWorld.

## We Designed for Scale

EAS provides a powerful solution to scalability issues, especially for dynamic deployability and service lifecycle management. DriveMod's modular capability to deploy AV technology on diverse vehicle fleets has been proven through its deployment on nine different vehicle form factors that we have operated autonomously. These vehicles were deployed as prototypes or as a part of proof-of-concept project. Of these deployments, two were at customer sites. For one deployment we were paid \$166,000 and the other was part of our normal R&D activities. Our AV development and testing have included road vehicles that navigate complex dynamic environments. DriveMod is capable of perceiving more than 100 dynamic objects per second and then using that perception information to navigate autonomously. This capability has been proven via road testing in difficult driving settings like urban streets. In contrast, the industrial settings of our target market rarely encounter 100 dynamic actors per minute, let alone per second. Scalability is further strengthened by EAS creating common interfaces and experiences that unify customer data and AV operations within and across sites. Thus, proliferating our solutions with customers will be achieved by iteratively adding onto an existing EAS, which minimizes the marginal cost associated with expanding AV operations. Additionally, the deployment of EAS allows for all of the on-going administration, services, and vendors associated with managing the lifecycle of the system to be integrated.



Figure 4: Illustration of DriveMod's ability to utilize key subsystems across multiple environments and vehicle platforms (left: off-road utility vehicle; right: indoor material handling vehicle).

## Our Products

EAS is a suite of technology and tools that we divide into three complementary categories: DriveMod, Cyngn Insight, and Cyngn Evolve.

### *DriveMod: Industrial Autonomous Vehicle System*

We built DriveMod as a modular software product that is compatible with various sensor and computer hardware components that are widely used throughout the autonomous vehicle industry. Our software combined with sensors and components from industry leading technology providers covers the end-to-end requirements that enable vehicles to operate autonomously with leading-edge technology. The modularity of DriveMod allows our AV technology to be compatible across vehicle platforms as well as indoor and outdoor environments. DriveMod can be retrofitted to existing vehicle assets or integrated into a manufacturing partner's vehicles at assembly, providing accessible options for our customers to integrate leading-edge technology whether their AV adoption strategies are evolutionary or revolutionary.



**Figure 5: The major subsystems that make up Cyngn's autonomous vehicle technology (DriveMod)**

DriveMod's flexibility combines with our network of manufacturing and service partners to support customers at different stages of autonomous technology integration. This allows customers to grow the complexity and scope of their industrial autonomy deployments as their business transforms while continually capturing returns throughout their transition to full autonomy. EAS will also grant customers access to over-the-air software upgrades, ad hoc customer support, and flexible consumption based on usage and scale of operations. By lessening both the commercial and technical burdens of traditional vehicle automation and industrial robotics investments, industrial AVs can become universally available to the market, even reaching small and medium-sized businesses that may otherwise struggle to adopt Industry 4.0 technology.

### *Cyngn Insight: Intelligent Control Center*

Cyngn Insight is the customer-facing tool suite for managing AV fleets and aggregating data to extract business insights. Analytics dashboards surface data about the system's status, vehicle telemetry, and performance metrics. Cyngn Insight also provides tools to switch between autonomous, manual, and remote operation when required. This flexibility allows customers to use the autonomous capabilities of the system in a way that is tailored to their own operational environment. Customers can choose when to operate their DriveMod-powered vehicles autonomously and when to have human operators operate the vehicles manually or remotely based on their own business needs. When combined, these capabilities and tools make up the Cyngn Insight intelligent control center that enables flexible fleet management from any location.

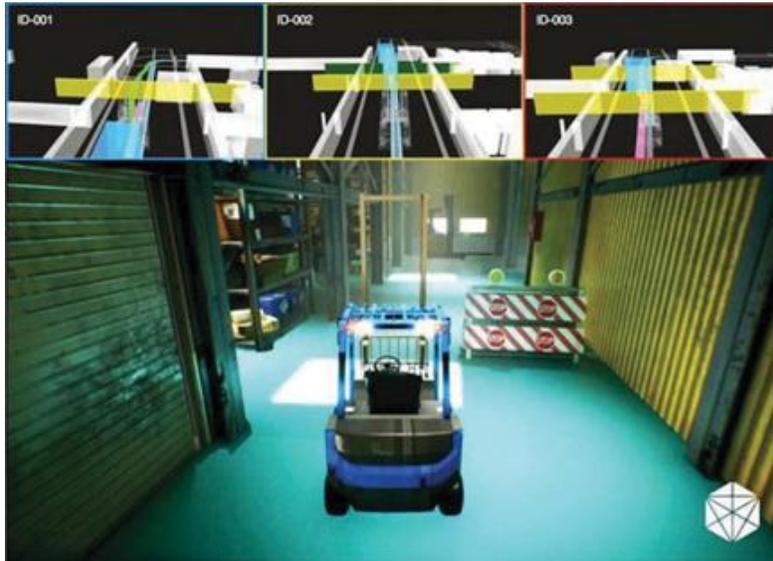


**Figure 6: An operator uses the Cyngn Insight control center to operate vehicles remotely**

Cyngn Insight’s tool suite includes configurable cloud dashboards that aggregate diverse data streams at several levels of granularity (i.e., site, fleet, vehicle, module, and component). We can collect data during “open loop” vehicle operation, meaning that the vehicles can be operated manually while still collecting the rich data enabled by the advanced on-vehicle sensors and computers. This data can be used for predictive maintenance, operational improvements, educating employees on digital transformation and more. For example, use cases for performance management analytics driven by automation have experienced productivity increases of 20 – 70% according to studies by Deloitte and McKinsey (source: MHI Deloitte Industry report: Industry 4.0: Reimagining Manufacturing Operations after COVID 19).

#### *Cyngn Evolve: Data Optimization Tools*

Cyngn Evolve is our internal tool suite that underpins the relationship between AVs and data. Through a unifying cloud-based data infrastructure, our proprietary data tools strengthen the positive network effects derived from the valuable new data created by AVs. Cyngn Evolve and its data pipelines facilitate AI/ML training and deployment, manage data sets, and support driving simulation and grading to test and validate new DriveMod releases, using both real-world and simulated data.



**Figure 7: The Cyngn “AnyDrive” simulation is part of the Cyngn Evolve toolchain. The simulation environment creates a digital version of the physical world. This allows for customer data sets to be leveraged and augmented to achieve testing and validation prior to releasing new AV features.**

As AV technology expertise matures globally, there may be opportunities to monetize the sophisticated AV-centric tools of Cyngn Evolve. Currently, we believe that AV development is confined to small groups of experts. Therefore, Cyngn Evolve is currently an internal EAS tool that we use to advance DriveMod and Cyngn Insight, our customer-facing EAS products.

## **Our Strategy**

### *360° Sales and Marketing*

We are building a go-to-market ecosystem that we believe will be highly leveraged by using our partners as the foundation of our growth strategy. We will utilize these relationships to generate and cultivate customer demand, acquire new customers, and deliver additional services to our customers.

Key elements of our market entry and expansion roadmap include:

*Focus: manufacturing and distribution material handling vehicles*

Manufacturing requires the shortest timeline for deployment and the market is expected to account for 52% of new material handling machinery demand by 2023, according to findings by Freedonia Focus Reports. We have already deployed DriveMod on multiple vehicles that are commonly used in these applications. These vehicles were deployed as prototypes or as a part of proof-of-concept project. Of these deployments, two were at customer sites and of which, one was paid.

*Broaden: address other industrial vehicle use cases*

The industries that utilize material transport vehicles share trends, challenges, and opportunities. DriveMod has been architected to be vehicle agnostic and allow for efficient expansion to industries such as mining, construction, yard operations, and agriculture.

*Expand: develop autonomous vehicle technologies across other sectors*

According to a CB Insights report, “33 Industries Other Than Auto That Driverless Cars Could Turn Upside Down,” autonomous vehicle technology brings value to at least 33 industries. Because our core autonomous technology is universal, the Company has an opportunity to generate revenue across a variety of industries. We believe that developing the sales and marketing infrastructure to access these markets is an essential aspect of driving growth in these areas.

## **Revenue Sources**

Although, we currently have no paying customers, we anticipate that our technology will generate revenue through two main methods: deployment and EAS subscriptions.

### *Deployment*

Deploying our EAS requires us and our integration partners to work with a new client to map the job site, gather data, and install our AV technology within their fleet and site. New deployments yield project-based revenues that are assessed based on the scope of the deployment. Our major collaborators in this area are our OEM partners, and we reinforce our deployment capability with integration and services experts like Formel D. Formel D is a globally active service provider to the automotive industry and to manufacturing supply chains. Working directly with our OEM partners as well as with third party experts ensures that we can deploy our technology globally and at scale. These collaborative partnerships are established through mutually beneficial, non-binding memorandums of understanding or partnering agreements for the purpose of joint go-to-market efforts.

## *EAS Subscription*

According to ABI Research, the cloud robotics opportunity will grow from \$3.3 billion in 2019 to \$157.8 billion in 2030, accounting for 30% of the robotic industry's total worth (source: Cloud Robotics Market Predicted to Grow to \$157.8 billion by 2030, article by Robotics & Automation News). Sustained revenue growth will come largely from ongoing subscription revenues that enable companies to tap into an ever-expanding suite of AV and AI capabilities as organizations transition into full industrial autonomy.

Industrial operations are extremely rich with data. However, we believe this data is still being put to limited use, especially as it pertains to equipment transport and autonomy performance. EAS creates a foundation for extracting new and valuable enterprise data insights by the nature of the advanced sensors, electronic control units, and connectivity that supports DriveMod's functionality. We can monetize the data insights in a variety of ways by offering configurable cloud dashboards for fleet/asset management, operational performance data, and predictive analytics to customers. In parallel, exposing this fleet and vehicle data will be a boon for our OEM partners as they evolve to optimize their product roadmaps and better integrate our technology to serve the future needs of industrial autonomy.

## **Go-to-market**

Our go-to-market strategy hinges on strategic collaboration and is based on a set of three basic principles:

- Collaborate with industrial vehicle OEMs
- Land & expand with end customers
- Partner instead of compete on adjacent enabling technology

### *Collaborate — industrial vehicle OEMs*

Our focus is on acquiring new customers who are either (a) looking to embed our technology into their vehicle products or (b) upsell their existing clients with our vehicle retrofits. We follow a named account coverage approach. After establishing a customer relationship with an OEM, we seek to embed our technology into their product roadmap and expand our services to their many clients. We believe this category represents a substantial opportunity to generate revenue as a single relationship with an OEM can lead to revenue opportunities across the entire marketplace. For example, our partner, Columbia Vehicle Group with whom we have partnered through a non binding memorandum of understanding, provides over 70 years of vehicle manufacturing experience and customer insight.

### *Land & expand — end customers*

Our go-to-market strategy is to acquire new customers that use industrial vehicles in their mission-critical operations. We pursue this strategy by being hyper-focused on building a robust pipeline of prospective customers ("land") and utilizing strategic sales channels that will result in coordinated opportunities to accelerate growth ("expand"). Our archetypal customers are corporations that deploy fleets of heterogeneous industrial vehicles across many sites. DriveMod's flexibility is intertwined with the wide-ranging applicability of our EAS and creates the unique leveraged opportunity of expanding across vehicles and sites with these major customers. After an initial win for a first AV deployment with a customer, we can expand within the site to additional vehicle platforms, then expand the use of similar vehicles to other sites operated by the customer and finally repeat across new vehicles and sites.

### *Partner instead of compete — technology*

The scaling of Industrial Autonomy will benefit from an ecosystem made up of different enabling technologies and services, such as hardware manufacturing, connectivity, Internet of Things (IoT), and digital integration. Rather than trying to compete with other technology suppliers, we intend to rely on our strategic collaborations that give both partners access to new markets and capabilities. For example, partners like Arilou, Symbioticware, and Airbiquity respectively provide complementary solutions in technologies like cyber security, digital asset management, and connectivity while partners like Formel D and First Transit provide expertise that aids towards platform scale up and operational services. These collaborative partnerships are established through mutually beneficial, non-binding memorandums of understanding or partnering agreements for the purpose of joint go-to-market efforts.

## **Our Technology**

Autonomous vehicles must integrate a suite of technologies to generate operational value. Our core competencies are in DriveMod, the on-vehicle AV technology stack that is underpinned by AI and robotics expertise and paramount to enabling autonomous mobility. With Cyngn Insight, EAS integrates analytics, visual dashboards, connectivity, cloud services, and other traditional software systems that allow customers to interact with and extract insights out of our advanced AV technology.

### *Mapping & localization*

Our proprietary system design abstracts mapping and localization data so that DriveMod can use a variety of high-accuracy solutions to create the optimal mapping and localization system for the given environment. Our mapping and localization system distills sensor data into contextually rich representations of the physical world and extracts common insights like required stops and navigation boundaries. These common insights help to create consistent AV operation across diverse sites, enabling our AVs to navigate both indoor and outdoor.

### *Perception*

Granular, efficient perception forms the basis of advanced AVs. Perception is one of the most complex sub-systems, requiring specialized data infrastructure and engineering expertise in AI/ML and high-performance computing. We have built a modular sensor fusion pipeline that runs on a low compute footprint and creates the flexibility to customize our perception stack according to application requirements. Our perception architecture streamlines DriveMod deployments on new vehicles. Our approach addresses common industry challenges like integrating different sensor modalities and accounting for different sensor mounting positions. We have now integrated DriveMod into nine different vehicle platforms, utilizing various combinations of Light Detecting and Ranging (“LiDAR”), camera, radar, and ultrasonic, and positioning sensors.

### *Path planning*

Our system’s ability to react and adjust to real-time changes creates a more efficient workflow than basic automation solutions that can only stop/go along a rigid path and require constant human hand-holding. The Cyngn path planning system provides thousands of trajectory candidates per second, enabling more complex paths to be navigated that may include advanced behavior like carefully nudging around obstacles or negotiating intersections.

### *Decision making*

The Cyngn decision engine holds the logic and decision-making rules that govern driving behavior. The decision engine pulls together insights from mapping, perception, and path planning to enable more complex vehicle maneuvers and automated conflict resolution. The system is extensible to introduce new capabilities with logic that is designed to achieve a high level of abstraction, which enables us to adopt new driving behaviors.

### *Actuation*

A subsystem of our software stack, Cyngn-by-Wire (CbW), addresses the basic requirements of mechanical vehicle components that must be met for DriveMod to make a vehicle operate autonomously. Legacy electronic control units (ECU) that do not use Drive-by-Wire (DbW) technology that enables software commands to electronically control vehicle actuation typically create a hurdle for integrating AV technology. CbW addresses this issue by decoupling the hardware and software components of DbW systems. For vehicles with legacy ECU’s, CbW allows customers to replace existing ECUs with DbW hardware that can be tuned to meet the needs of the selected vehicle platform using CbW software. When vehicles have DbW ECUs already installed, the CbW software layer is configured and applied without the need for replacing the hardware. Thus, CbW enables AV actuation across vehicle fleets with varying levels of vehicle age and sophistication.

## **Competitive Environment**

There is an increasing demand for autonomous vehicle solutions in an effort to increase safety, improve efficiency, and enhance productivity to meet the goals set out by Industry 4.0. Autonomous vehicles are an enabling technology that gives us the opportunity to add more value to customers.

For Industry 4.0 markets, the global management consulting firm McKinsey & Company has published reports indicating that the upswing in adoption will be dependent on the ability for technology to provide companies with solutions that give customers a pathway that balances cost constraints with short-term resilience and long-term growth (source: “Industry 4.0: Reimagining manufacturing operations after COVID 19,” by McKinsey & Company). As market participants develop their Industry 4.0 roadmap, technology partners that have an ability to adapt features to their changing needs will be required. As a result, we believe there will continue to be a need for technology companies to help push the industry 4.0 markets forward.

The market for automated vehicle solutions is burgeoning, and the advanced technology required to enable autonomous solutions in industrial environments is still developing. As a result, we face competition from a range of companies seeking to develop autonomous vehicle solutions. These competitors include traditional industrial vehicle manufacturers (such as Crown Equipment’s automated forklifts) robotics providers (such as Brain Corp for floor care and Outrider for yard operations), and software companies (such as Oxbotica), as well as large corporate competitors that provide a broad range of software, service, and logistics solutions across many markets. These competitors are also working to advance technology, reliability, and innovation in their development of new and improved solutions.

We will continue to face competition from existing competitors and new companies entering the industrial autonomy landscape. Many of our competitors either have technical or strategic barriers that limit their product offerings to specific deployment environments, operations protocols, or vehicle form factors. It is our belief that it will take a substantial period of time to develop features that satisfy the dynamic needs of industry customers. Additionally, larger corporate competitors are likely to encounter roadblocks due to competitive overlap with end customers, limiting their ability to address the needs of the broader industrial market. With specific regard to manufacturing and distribution, a number of competitors have already begun to deploy products, but we believe the benefits stemming from our modular software-centric approach, technical expertise in the area of autonomous vehicles, and the ubiquitous applicability of EAS gives us the potential to displace current offerings and capture a significant share of this rapidly growing market.

## ***Governmental and Environmental Regulations***

Regulatory considerations contribute to our current strategic position that targets enterprise customers with operations mostly confined to private property. This decreases our exposure to regulations, which mitigates some deployment risks. Typically, we will satisfy regulatory requirements by adhering to the protocols of the site operator (the end customer).

The regulatory environment for autonomous industrial vehicles is still being developed. In 2016, the United States Department of Transportation (USDOT) issued regulations that require the submission of documentation covering specific topics related to autonomy and government regulators, but these regulations are targeted towards road vehicles. As the autonomous industrial vehicle regulatory environment continues to develop, it will be imperative not only to comply with applicable standards but to be an active participant in the development of new standards. Outside of government standards, third party organizations, industrial workplace advocates, and industry groups have and will continue to impose self-regulatory standards. In certain cases, these standards may be contractually applicable to our systems, products, and operations. Thus, we expect and prepare to comply with various standards, including Occupational Safety and Health Administration (OSHA), International Organization for Standardization (ISO), International Electrotechnical Commission (IEC), or American National Standards Institute (ANSI) on a case-by-case basis.

U.S. and international regulations related to data privacy are also of great importance to our company’s products, operations, and culture. Like the autonomous vehicle regulatory environment, the regulatory framework for data privacy, protection, and security worldwide is continuously evolving and developing. As a result, interpretation and implementation standards and enforcement practices are likely to remain fluid for the foreseeable future. As our company expands its operations, the collection, use, and protection of any and all data assets will be internally scrutinized to ensure compliance with this changing landscape.

Decreasing the environmental impact of industrial vehicles is a high priority. Research has shown that equipment utilization rate, configuration, and operational consistency have a strong effect on the emissions released by industrial vehicle equipment (Source: Journal of the Air & Waste Management Association). A key focus of Cyngn's EAS will be working to minimize the environmental impact of industrial vehicles through new data insights that can contribute to more sustainable practices. Our historic vehicle platforms have primarily been electric vehicles (EV). While electric drivetrains are not a requirement for DriveMod's technology, EVs are often an application requirement since the vehicles operate alongside humans in enclosed spaces.

### ***Intellectual Property***

Our ability to drive impact and growth within the autonomous industrial vehicle market largely depends on our ability to obtain, maintain, and protect our intellectual property and all other property rights related to our products and technology. To accomplish this, we utilize a combination of patents, trademarks, copyrights, and trade secrets as well as employee and third party non-disclosure agreements, licenses, and other contractual obligations. In addition to protecting our intellectual property and other assets, our success also depends on our ability to develop our technology and operate without infringing, misappropriating, or otherwise violating the intellectual property and property rights of third parties, customers, and partners.

Our software stack has over 30 subsystems, including those designed for perception, mapping & localization, decision making, planning, and control. As of the date of this report, we have 2 granted patents, 22 pending patent applications, and expect to file an additional 4 patent applications by the end of 2022. We expect to continue to file additional patent applications with respect to our technology in the future.

### ***Human Capital Resources***

Our team is composed of energetic, motivated and highly experienced visionaries. They include machine vision, AI, and autonomous software engineers from the greatest universities in the world. Together with a highly talented and skilled support team, we solve real-world industrial applications in autonomy. As of the date of this annual report, we had 42 full-time employees. The majority of our employees are based in Silicon Valley, California.

Our core values include focus on impact, display curiosity, communicate proactively, apply good judgment, and demonstrate selflessness. We believe these values encourage innovation and a team-oriented culture. Our employees have access to a wide range of training, different career paths, and, most importantly, challenging and purposeful work. Our culture is also built on diversity, inclusion, camaraderie, and celebration. We organize regular team building activities and public recognition forums to celebrate our diversity and invest in strong relationships.

In addition to a positive culture and career development, we offer a robust benefits package. This package includes a flexible vacation policy, access to a 401(k) plan, premier health plan options and numerous voluntary benefits for employees and their dependents.

### ***Impact of COVID-19***

The COVID-19 pandemic affected our company, partners, customers, and the industry at large in many ways. Namely, we saw decreased interest in new deployments due to travel restrictions and social distancing precautions. In addition, it was not feasible for us to engage in new on-site discussions and product demonstrations with the pandemic safety measures that were in place during most of 2020 and early 2021. Furthermore, many potential customers and partners paused their investment into new technologies as they focused on keeping their core business running under the extenuating circumstances of the pandemic. These factors delayed our progress, particular with respect to sales and business development activities. However, we believe this negative impact will be transient. In fact, we believe many of the industries that have positive feedback characteristics to the industrial vehicle market (e-commerce, construction mechanization, etc.) have entered a new stage of growth during the COVID-19 pandemic. The need to support these global markets and the desire to reduce human interactions, enable social distancing as a preventative measure in future operations has spawned new use cases and opportunities for our autonomous vehicle (AV) technology. In the long run, we believe that the pandemic will have accelerated the AV and automation strategies of many customers and partners.

## Corporate Information

The Company was originally incorporated in the State of Delaware on February 1, 2013, under the name Cyanogen, Inc. or Cyanogen. The Company started as a venture funded company with offices in Seattle and Palo Alto, aimed at commercializing CyanogenMod, direct to consumer and through collaborations with mobile phone manufacturers. CyanogenMod was an open-source operating system for mobile devices, based on the Android mobile platform.

Between 2013 and 2015, Cyanogen released multiple versions of its mobile operating system, and collaborated with an ecosystem of companies including mobile phone OEMs, content providers and leading technology partners.

In 2016 the Company's management and board of directors, determined to pivot its product focus and commercial direction from the mobile device and telecom space to industrial and commercial autonomous driving. In May 2017, the Company changed its name to Cyngn Inc.

## Available Information

Our common stock is quoted on the Nasdaq under the symbol "CYN". We file annual, quarterly, and current reports, proxy statements and other information with the U.S. Securities Exchange Commission (the "SEC"). These filings are available to the public on the Internet at the SEC's website at <http://www.sec.gov>.

Our principal business address is 1015 O'Brien Dr., Menlo Park, CA 94025. We maintain our corporate website at <https://cyngn.com> (this website address is not intended to function as a hyperlink and the information contained on our website is not intended to be a part of this Report). We make available free of charge on <https://investors.cyngn.com/> our annual, quarterly, and current reports, and amendments to those reports if any, as soon as reasonably practical after we electronically file such material with, or furnish it to, the SEC. We may from time to time provide important disclosures to investors by posting them in the Investor Relations section of our website.

## Item 1A. Risk Factors

### Risks Related to Our Technology, Business, and Industry

#### *Autonomous driving is an emerging technology and involves significant risks and uncertainties.*

We develop and deploy a suite of autonomous driving software products that are compatible with existing sensors and hardware to enable autonomous driving on industrial vehicle platforms manufactured and designed by OEMs and other third-party industrial vehicle suppliers. Our autonomous driving technology is highly dependent on internally developed software, as well as on partnerships with third parties such as industrial OEMs and other suppliers.

We partner with OEMs that are seeking to manufacture purpose-built industrial vehicles capable of incorporating our autonomous driving technology. The collaborative partnerships are established through mutually beneficial, non-binding memorandums of understanding or partnership agreements for the purpose of joint go-to-market efforts. In addition to OEMs, we depend on other third parties to produce hardware components, and, in some cases adjacent software solutions, that support our core suite of autonomous driving software products and tools. The timely development and performance of our autonomous driving programs is dependent on the materials, cooperation, and quality delivered by these partners. Further, we do not control the initial design of the industrial vehicles we work with and therefore have limited influence over the production and design of systems for braking, gear shifting, and steering. There can be no assurance that these systems and supporting technologies can be developed and validated at the high reliability standard required for deployment of autonomous industrial vehicles using our technology in a cost-effective and timely manner. Our dependence on these relationships exposes us to the risk that components manufactured by OEMs or other suppliers could contain defects that would cause our autonomous driving technology not to operate as intended.

Our autonomous driving technology is currently available as a private beta release, during which phase, we will prepare for scaled commercialization in 2024. Although we believe that our algorithms, data analysis and processing, and artificial intelligence technology are promising, we cannot assure you that our technology will achieve the necessary reliability for scaled commercialization of autonomous industrial vehicles. For example, we are still improving our technology in terms of handling edge cases, unique environments, and discrete objects. There can be no assurance that our data analytics and artificial intelligence could predict every single potential issue that may arise during the operation of an autonomous industrial vehicle utilizing our autonomous vehicle technology. Furthermore, the release and adoption of EAS and our other technologies and products may not be successful and may take longer than anticipated. If the development of EAS and our other technologies and products is delayed or customers do not adopt and buy our solutions to the extent we anticipate, our business and operating results will be adversely impacted.

***We have a limited operating history in a new market and face significant challenges as our industry is rapidly evolving.***

You should consider our business and prospects in light of the risks and challenges we face as a new entrant into a novel industry, including, among other things, with respect to our ability to:

- design, integrate, and deploy safe, reliable, and quality autonomous vehicle software products and tools for industrial vehicles with our partners on an ongoing basis;
- navigate an evolving and complex regulatory environment;
- successfully produce with OEM partners a line of purpose-built autonomous industrial vehicles on the timeline we estimate;
- improve and enhance our software and autonomous technology;
- establish and expand our customer base;
- successfully market our autonomous driving solutions and our other products and services;
- properly price our products and services;
- improve and maintain our operational efficiency;
- maintain a reliable, secure, high-performance, and scalable technology infrastructure;
- attract, retain, and motivate talented employees;
- anticipate and adapt to changing market conditions, including technological developments and changes in competitive landscape; and
- build a well-recognized and respected brand.

If we fail to address any or all of these risks and challenges, our business may be materially and adversely affected. There are also a number of additional challenges to the execution and adoption of autonomous vehicle technology in industrial markets, many of which are not within our control, including market acceptance of autonomous driving, governmental licensing requirements, concerns regarding data security and privacy, actual and threatened litigation (whether or not a judgment is rendered against us), and the general perception that an autonomous vehicle is not safe because there is no human driver. There can be no assurance that the market will accept our technology, in which case our future business, results of operations and financial condition could be adversely affected.

The autonomous industrial vehicle industry is in its early stages and is rapidly evolving. Our autonomous driving technology has not yet been commercialized at scale. We cannot assure you that we will be able to adjust to changing market or regulatory conditions quickly or cost-effectively. If we fail to do so, our business, results of operations, and financial condition will be adversely affected.

***Our business model has yet to be tested and any failure to commercialize our strategic plans would have an adverse effect on our operating results and business.***

You should be aware of the difficulties normally encountered by a relatively new enterprise that is beginning to scale its business, many of which are beyond our control, including unknown future challenges and opportunities, substantial risks and expenses in the course of entering new markets and undertaking marketing activities. The likelihood of our success must be considered in light of these risks, expenses, complications, delays, and the competitive environment in which we operate. There is, therefore, substantial uncertainty that our business plan will prove successful, and we may not be able to generate significant revenue, raise additional capital, or operate profitably. We will continue to encounter risks and difficulties frequently experienced by early commercial stage companies, including securing market acceptance for our product and service offerings, scaling up our infrastructure and headcount. We may encounter unforeseen expenses, difficulties, or delays in connection with our growth. In addition, as a result of the capital-intensive nature of our business, we can be expected to continue to sustain substantial operating expenses without generating sufficient revenue to cover expenditures. Any investment in our company is therefore highly speculative and could result in the loss of your entire investment.

Our future business depends in large part on our ability to continue to develop and successfully commercialize our suite of software products and tools. Our ability to develop, deliver, and commercialize at scale our technology to support or perform autonomous operation of industrial vehicles is still unproven.

Our technology suite is currently available as a private beta release which will need to be continually developed and enhanced for scaled commercialization. Our continued enhancement of our autonomous driving technology is and will be subject to risks, including with respect to:

- our ability to continue to enhance our data analytics and software technology;
- designing, developing, and securing necessary components on acceptable terms and in a timely manner;
- our ability to attract and retain customers;
- our ability to pay for research and development costs;
- our ability to attract, recruit, hire, and train skilled employees;
- our ability to fund the development and commercialization of our technology; and
- our ability to enter into strategic relationships with key members in the industrial vehicles and industrial automation industries and component suppliers.

***We operate in a highly competitive market and will face competition from both established competitors and new market entrants.***

The market for autonomous industrial vehicles and industrial automation solutions is highly competitive. Many companies are seeking to develop autonomous driving and delivery solutions. Competition in these markets is based primarily on technology, innovation, quality, safety, reputation, and price. Our future success will depend on our ability to further develop and protect our technology in a timely manner and to stay ahead of existing and new competitors. Our competitors in this market are working towards commercializing autonomous driving technology and may have substantial financial, marketing, research and development, and other resources.

In addition, we also face competition from traditional industrial vehicle and solution companies. Traditional vehicle and solution providers operating with human drivers are still the predominant operators in the market. Because of the long history of such traditional companies serving our potential customers and industries, there may be many constituencies in the market that would resist a shift towards autonomous industrial vehicles, which could include lobbying and marketing campaigns, particularly because our technology will displace machine operators and drivers.

In addition, the market leaders in our target industries, such as Industrial Material Handling (IMH) may start, or have already started, pursuing large scale deployment of autonomous industrial vehicle technology on their own. These companies may have more operational and financial resources than we do. We cannot guarantee that we will be able to effectively compete with them.

We may also face competition from component suppliers and other technology and industrial solution companies if they decide to expand vertically and develop their own autonomous industrial vehicles, some of whom have significantly greater resources than we do. We do not know how close these competitors are to commercializing autonomous driving systems.

Many established and new market participants have entered or have announced plans to enter the autonomous industrial vehicle market. Most of these participants have significantly greater financial, manufacturing, marketing, and other resources than we do and may be able to devote greater resources to the design, development, manufacturing, distribution, promotion, sale, and support of their products. If existing competitors or new entrants commercialize earlier than expected, our competitive advantage could be adversely affected.

***Business collaboration with third parties is subject to risks and these relationships may not lead to significant revenue.***

Strategic business relationships are and will continue to be an important factor in the growth and success of our business. We have alliances and partnerships, through mutually beneficial non-binding memoranda of understanding or partnering arrangements with other companies in the industrial equipment, automation and automotive industries to help us in our efforts to continue to enhance our technology, commercialize our solutions, and drive market acceptance.

Collaboration with these third parties is subject to risks, some of which are outside our control. For example, certain agreements with our partners grant our partner or us the right to terminate such agreements for cause or without cause. If any of our collaborations with third parties are terminated, it may delay or prevent our efforts to deploy our software products and tools on purpose-built autonomous industrial vehicles at scale. In addition, such agreements may contain certain exclusivity provisions which, if triggered, could preclude us from working with other businesses with superior technology or with whom we may prefer to partner with for other reasons. We could experience delays to the extent our partners do not meet agreed upon timelines or experience capacity constraints. We could also experience disagreement in budget or funding for joint development projects. There is also a risk of other potential disputes with partners in the future, including with respect to intellectual property rights. Our ability to successfully commercialize could also be adversely affected by perceptions about the quality of our or our partners' vehicles or products.

**Risks Related to Our Financial Position and Need for Additional Capital**

***Losses for the foreseeable future.***

We incurred net losses of \$7.9 million and \$8.3 million for the years ended December 31, 2021, and 2020, respectively. We have not recognized a material amount of revenue to date, and we had accumulated deficit of \$116.5 million and \$108.7 million as of December 31, 2021 and December 31, 2020, respectively. We have developed and tested our autonomous driving technology but there can be no assurance that it will be commercially successful at scale. Our potential profitability is dependent upon a number of factors, many of which are beyond our control. If we are unable to achieve and sustain profitability, the value of our business and common stock may significantly decrease.

We expect the rate at which we will incur losses to be significantly higher in future periods as we:

- design, develop, and deploy our autonomous vehicle software products and tools on industrial vehicle platforms with OEM partners and end customers.
- seek to achieve and commercialize deployments of level 4 autonomy for industrial vehicles;
- seek to expand our commercial deployments, on a nationwide basis in the United States and internationally;
- expand our design, development, maintenance, and repair capabilities;
- respond to competition in the autonomous driving market and from traditional industrial solution providers;
- respond to evolving regulatory developments in the nascent autonomous industrial vehicle and industrial automation markets;
- increase our sales and marketing activities; and
- increase our general and administrative functions to support our growing operations and for being a public reporting company.

Because we will incur the costs and expenses from these efforts before we receive any incremental revenue, our losses in future periods will be significant. In addition, we may find that these efforts are more expensive than we currently anticipate or that these efforts may not result in revenue, which would further increase our losses. In particular, we expect to incur substantial and potentially increasing research and development (“R&D”) costs as we continue to develop and enhance EAS and other technology and products for commercialization. While our R&D costs were \$5.0 million and \$5.1 million during the years ended December 31, 2021 and 2020, respectively, and are likely to grow in the future, we have no recurring revenues. Further, because we account for R&D as an operating expense, these expenditures will adversely affect our results of operations in the future. Our R&D program may not produce successful results, and our new products may not achieve market acceptance, create additional revenue, or become profitable.

***We have a limited operating history, which makes it difficult to forecast our future results of operations.***

We were founded in 2013. As a result of our limited operating history, our ability to accurately forecast our future results of operations is limited and subject to a number of uncertainties, including our ability to plan for and model future growth. Our historical performance should not be considered indicative of our future performance. Further, in future periods, our revenue growth could fluctuate for a number of reasons, including shifts in our offering and revenue mix, slowing demand for our offering, increasing competition, decreased effectiveness of our sales and marketing organization, and our sales and marketing efforts to acquire new customers, failure to retain existing customers, changing technology, a decrease in the growth of our overall market, or our failure, for any reason, to continue to take advantage of growth opportunities. We anticipate that we will encounter, risks and uncertainties frequently experienced by growing companies in rapidly changing industries, such as the risks and uncertainties described in this report.

If our assumptions regarding these risks and uncertainties and our future revenue growth are incorrect or change, or if we do not address these risks successfully, our operating and financial results could differ materially from our expectations, and our business could suffer.

***We expect fluctuations in our financial results making it difficult to project future results.***

Our results of operations may fluctuate in the future due to a variety of factors, many of which are outside of our control. As a result, our past results may not be indicative of our future performance. In addition to the other risks described herein, factors that may affect our results of operations include the following:

- changes in our revenue mix and related changes in revenue recognition;
- changes in actual and anticipated growth rates of our revenue, customers, and key operating metrics;
- fluctuations in demand for or pricing of our offering;
- our ability to attract new customers;
- our ability to retain our existing customers, particularly large customers;
- customers and potential customers opting for alternative products, including developing their own in-house solutions;
- investments in new offerings, features, and functionality;
- fluctuations or delays in development, release, or adoption of new features and functionality for our offering;
- delays in closing sales which may result in revenue being pushed into the next quarter;
- changes in customers' budgets and in the timing of their budget cycles and purchasing decisions;
- our ability to control costs;
- the amount and timing of payment for operating expenses, particularly research and development and sales and marketing expenses;
- timing of hiring personnel for our research and development and sales and marketing organizations;
- the amount and timing of costs associated with recruiting, educating, and integrating new employees and retaining and motivating existing employees;
- the effects of acquisitions and their integration;
- general economic conditions, both domestically and internationally, as well as economic conditions specifically affecting industries in which our customers participate;
- the impact of new accounting pronouncements;
- changes in revenue recognition policies that impact our technology license revenue;
- changes in regulatory or legal environments that may cause us to incur, among other things, expenses associated with compliance;
- the impact of changes in tax laws or judicial or regulatory interpretations of tax laws, which are recorded in the period such laws are enacted or interpretations are issued and may significantly affect the effective tax rate of that period;
- health epidemics or pandemics, such as the COVID-19 pandemic;

- changes in the competitive dynamics of our market, including consolidation among competitors or customers; and
- significant security breaches of, technical difficulties with, or interruptions to, the delivery and use of our offering.

Any of these and other factors, or the cumulative effect of some of these factors, may cause our results of operations to vary significantly. If our quarterly results of operations fall below the expectations of investors and securities analysts who follow our stock, the price of our common stock could decline substantially, and we could face costly lawsuits, including securities class action suits.

***We may need to raise additional funds and these funds may not be available to us on attractive terms when we need them, or at all.***

The commercialization of autonomous vehicles is capital intensive. This includes autonomous industrial vehicles outfitted with our technology and purpose-built autonomous industrial vehicles manufactured by OEMs we intend to partner with. To date, we have financed our operations primarily through the issuance of equity securities in private placements. We may need to raise additional capital to continue to fund our commercialization activities, sales and marketing efforts, enhancement of our technology and to improve our liquidity position. Our ability to obtain the necessary financing to carry out our business plan is subject to a number of factors, including general market volatility, investor acceptance of our business plan, regulatory requirements and the successful development of our autonomous technology. These factors may make the timing, amount, terms, and conditions of such financing unattractive or unavailable to us.

We may raise these additional funds through the issuance of equity, equity related, or debt securities. To the extent that we raise additional financing by issuing equity securities or convertible debt securities, our stockholders may experience substantial dilution, and to the extent we engage in debt financing, we may become subject to restrictive covenants that could limit our flexibility in conducting future business activities. Financial institutions may request credit enhancement such as third-party guarantee and pledge of equity interest in order to extend loans to us. We cannot be certain that additional funds will be available to us on attractive terms when required, or at all. If we cannot raise additional funds when we need them, our financial condition, results of operations, business, and prospects could be materially adversely affected.

***We may be subject to risks associated with potential future acquisitions.***

Although we have no current acquisition plans, if appropriate opportunities arise, we may acquire additional assets, products, technology or businesses that are complementary to our existing business. Any future acquisitions and the subsequent integration of new assets and businesses would require significant attention from our management and could result in a diversion of resources from our existing business, which in turn could have an adverse effect on our operations, and consequently our results of operations and financial condition. Acquired assets or businesses may not generate the financial results we expect. Acquisitions could result in the use of substantial amounts of cash, potentially dilutive issuances of equity securities, significant goodwill impairment charges, amortization expenses for other intangible assets and exposure to potential unknown liabilities of the acquired business. Moreover, the costs of identifying and consummating acquisitions may be significant.

## **Risks Related to Our Business Operations**

***Our success depends largely on the continued services of our senior management team, technical engineers, and certain key employees.***

We rely on our executive officers and key employees in the areas of business strategy, research and development, marketing, sales, services, and general and administrative functions. From time to time, there may be changes in our executive management team or key employees resulting from the hiring or departure of executives or key employees, which could disrupt our business. We do not maintain key-man insurance for any member of our senior management team or any other employee. We do not have employment agreements with our executive officers or other key personnel that require them to continue to work for us for any specified period and, therefore, they could terminate their employment with us at any time. The loss of one or more of our executive officers or key employees could have a serious adverse effect on our business.

To execute our growth plan, we must attract and retain highly qualified personnel. Competition for these personnel is intense in the technology industry, especially for engineers with high levels of experience in artificial intelligence and designing and developing autonomous driving related algorithms. Furthermore, it can be difficult to recruit personnel from other geographies to relocate to our California locations. We may also need to recruit highly qualified technical engineers internationally and therefore subject us to the compliance of relevant immigration laws and regulations. We have, from time to time, experienced, and we expect to continue to experience, difficulty in hiring and retaining employees with appropriate qualifications. Many of the companies with which we compete for experienced personnel have greater resources than we have and can offer more attractive compensation packages for new employees. If we hire employees from competitors or other companies, their former employers may attempt to assert that these employees or our company have breached their legal obligations, resulting in a diversion of our time and resources and potentially in litigation. In addition, job candidates and existing employees often consider the value of the share incentive awards they receive in connection with their employment. If the perceived value of our share awards declines, it may adversely affect our ability to recruit and retain highly skilled employees. If we fail to attract new personnel on a timely basis or fail to retain and motivate our current personnel, we may not be able to commercialize and then expand our solutions and services in a timely manner and our business and future growth prospects could be adversely affected.

***If we fail to manage our growth effectively, we may be unable to execute our business plan, maintain high levels of service, or adequately address competitive challenges.***

We expect to invest in our growth for the foreseeable future. Any growth in our business is expected to place a significant strain on not only our managerial, administrative, operational, and financial resources, but also our infrastructure. We plan to continue to expand our operations in the future. Our success will depend in part on our ability to manage this growth effectively and execute our business plan. To manage the expected growth of our operations and personnel, we will need to continue to improve our operational, financial, and management controls and our reporting systems and procedures.

We rely heavily on information technology (“IT”) systems to manage critical business functions. To manage our growth effectively, we must continue to improve and expand our infrastructure, including our IT, financial, and administrative systems and controls. In particular, we may need to significantly expand our IT infrastructure as the amount of data we store and transmit increases over time, which will require that we both utilize existing IT products and adopt new technology. If we are not able to scale our IT infrastructure in a cost-effective and secure manner, our ability to offer competitive solutions will be harmed and our business, financial condition, and operating results may suffer.

We must also continue to manage our employees, operations, finances, research and development, and capital investments efficiently. Our productivity and the quality of our solutions may be adversely affected if we do not integrate and train our new employees quickly and effectively or if we fail to appropriately coordinate across our executive, research and development, technology, service development, analytics, finance, human resources, marketing, sales, operations, and customer support teams. As we continue to grow, we will incur additional expenses, and our growth may continue to place a strain on our resources, infrastructure, and ability to maintain the quality of our solutions. If we do not adapt to meet these evolving challenges, or if the current and future members of our management team do not effectively manage our growth, the quality of our solutions may suffer and our corporate culture may be harmed. Failure to manage our future growth effectively could cause our business to suffer, which, in turn, could have an adverse impact on our business, financial condition, and operating results.

***Our management team has limited experience managing a public company.***

Our management team has limited experience managing a publicly-traded company, interacting with public company investors, and complying with the increasingly complex laws pertaining to public companies. Our management team may not successfully or efficiently manage our transition to being a public company subject to significant regulatory oversight and reporting obligations under the federal securities laws and the continuous scrutiny of securities analysts and investors. These new obligations and constituents will require significant attention from our senior management and could divert their attention away from the day-to-day management of our business, which could adversely affect our business, financial condition, and operating results.

***We may be subject to product liability or warranty claims that could result in significant direct or indirect costs, including reputational harm, increased insurance premiums or the need to self-insure, which could adversely affect our business and operating results.***

Our technology is used for autonomous driving, which presents the risk of significant injury, including fatalities. We may be subject to claims if one of our or a customer's industrial vehicles is involved in an accident and persons are injured or purport to be injured or if property is damaged. Any insurance that we carry may not be sufficient or it may not apply to all situations. If we experience such an event or multiple events, our insurance premiums could increase significantly or insurance may not be available to us at all. Further, if insurance is not available on commercially reasonable terms, or at all, we might need to self-insure. In addition, lawmakers or governmental agencies could pass laws or adopt regulations that limit the use of autonomous driving or industrial automation technology or increase liability associated with its use. Any of these events could adversely affect our brand, relationships with users, operating results, or financial condition.

***If our autonomous driving software fails to perform as expected our ability to market, sell or lease our autonomous driving software could be harmed.***

Our autonomous industrial vehicle software products and tools as well as the vehicles, sensors, and hardware they utilize and are deployed on may contain defects in design and manufacture that may cause them not to perform as expected or require repair. For example, our autonomous vehicle software will require modification and updates over the life of the vehicle it is deployed on. Software products are inherently complex and often contain defects and errors when first introduced. There can be no assurance that we will be able to detect and fix any defects in the industrial vehicles' hardware or software prior to commencing user sales or during the life of the vehicle. Autonomous industrial vehicles utilizing our suite of products and tools may not perform consistent with users' expectations or consistent with other vehicles that may become available. Any product defects or any other failure of our software, supportive hardware, or deployment vehicle platform or to perform as expected could harm our reputation, result in adverse publicity, lost revenue, delivery delays, product recalls, product liability claims, and significant warranty and other expenses, and could have a material adverse impact on our business, financial condition, operating results, and prospects.

***If we are unable to establish and maintain confidence in our long-term business prospects among users, securities and industry analysts, and within our industries, or are subject to negative publicity, then our financial condition, operating results, business prospects, and access to capital may suffer materially.***

Users may be less likely to purchase or use our technology and the industrial vehicles it is deployed on if they are not convinced that our business will succeed or that our service and support and other operations will continue in the long term. Similarly, suppliers and other third parties will be less likely to invest time and resources in developing business relationships with us if they are not convinced that our business will succeed. Accordingly, in order to build and maintain our business, we must maintain confidence among users, suppliers, securities and industry analysts, and other parties in our long-term financial viability and business prospects. Maintaining such confidence may be particularly complicated by certain factors including those that are largely outside of our control, such as our limited operating history at scale, user unfamiliarity with our solutions, any delays in scaling manufacturing, delivery, and service operations to meet demand, competition and uncertainty regarding the future of autonomous vehicles, and our performance compared with market expectations.

***Pandemics and epidemics, including the ongoing COVID-19 pandemic, natural disasters, terrorist activities, political unrest, and other manmade problems such as war could have a material adverse impact on our business, results of operations, financial condition and cash flows or liquidity.***

Our business is vulnerable to damage or interruption from pandemics and epidemics, including the ongoing COVID-19 pandemic, natural disasters, terrorist attacks, political unrest, acts of war, including the current conflict between Russia and Ukraine, and similar events.

During the ongoing global COVID-19 pandemic, the capital markets are experiencing pronounced volatility, which may adversely affect investor's confidence and, in turn may affect our ability to raise additional capital.

In addition, the COVID-19 pandemic has caused us to modify our business practices (such as employee travel plan and cancellation of physical participation in meetings, events, and conference), and we may take further actions as required by governmental authorities or that we determine are in the best interests of our employees, users, and business partners. In addition, the business and operations of our manufacturers, suppliers, and other business partners have also been adversely impacted by the COVID-19 pandemic and may be further adversely impacted in the future, which could result in delays in our ability to commercialize our suite of autonomous vehicle software products and tools.

As a result of social distancing, travel bans, and quarantine measures, access to our facilities, users, management, support staff, and professional advisors has been limited, which in turn has impacted, and will continue to impact, our operations, and financial condition.

The extent to which COVID-19 impacts our, and those of our partners and potential users, business, results of operations, and financial condition will depend on future developments, which are uncertain and cannot be predicted, including, but not limited to, the occurrence of a "second wave," duration and spread of the outbreak, its severity, the actions to contain the virus or treat its impact, and how quickly and to what extent normal economic and operating conditions can resume. Even if the COVID-19 outbreak subsides, we may continue to experience materially adverse impacts to our business as a result of its global economic impact, including any recession that has occurred or may occur in the future.

Other considerations related to the current conflict between Russia and Ukraine that may affect the Company include possible cyberattacks and potential disruptions in the banking systems and capital market, as well as supply chain and increased costs and expenditures on domestic and internationally-sourced materials and services. As an example, we engage third-party software development engineers who reside in Russia. Due to the current conflict, we may experience an interruption in the services provided by these parties.

We are also vulnerable to natural disasters and other calamities. Although we have servers that are hosted in an offsite location, our backup system does not capture data on a real-time basis, and we may be unable to recover certain data in the event of a server failure. We cannot assure you that any backup systems will be adequate to protect us from the effects of fire, floods, typhoons, earthquakes, power loss, telecommunications failures, break-ins, war, riots, terrorist attacks or similar events. Any of the foregoing events may give rise to interruptions, breakdowns, system failures, technology platform failures or internet failures, which could cause the loss or corruption of data or malfunctions of software or hardware as well as adversely affect our ability to provide services.

#### **Risks Related to Our Intellectual Property, Information Technology and Data Privacy**

*We may become subject to litigation brought by third parties claiming infringement, misappropriation or other violation by us of their intellectual property rights.*

The industry in which our business operates is characterized by a large number of patents, some of which may be of questionable scope, validity or enforceability, and some of which may appear to overlap with other issued patents. As a result, there is a significant amount of uncertainty in the industry regarding patent protection and infringement. In recent years, there has been significant litigation globally involving patents and other intellectual property rights. Third parties may in the future assert, that we have infringed, misappropriated or otherwise violated their intellectual property rights. As we face increasing competition and as a public company, the possibility of intellectual property rights claims against us grows. Such claims and litigation may involve one or more of our competitors focused on using their patents and other intellectual property to obtain competitive advantage, or patent holding companies or other adverse intellectual property rights holders who have no relevant product revenue, and therefore our own pending patents and other intellectual property rights may provide little or no deterrence to these rights holders in bringing intellectual property rights claims against us. There may be intellectual property rights held by others, including issued or pending patents and trademarks, that cover significant aspects of our technologies or business methods, and we cannot assure that we are not infringing or violating, and have not infringed or violated, any third-party intellectual property rights or that we will not be held to have done so or be accused of doing so in the future. In addition, because patent applications can take many years until the patents issue, there may be applications now pending of which we are unaware, which may later result in issued patents that our products may infringe. We expect that in the future we may receive notices that claim we or our collaborators have misappropriated or misused other parties' intellectual property rights, particularly as the number of competitors in our market grows.

To defend ourselves against any intellectual property claims brought by third parties, whether with or without merits, can be time-consuming and could result in substantial costs and a diversion of our resources. These claims and any resulting lawsuits, if resolved adversely to us, could subject us to significant liability for damages, impose temporary or permanent injunctions against our products, technologies or business operations, or invalidate or render unenforceable our intellectual property.

If our technology is determined to infringe a valid and enforceable patent, or if we wish to avoid potential intellectual property litigation on any alleged infringement, misappropriation or other violation of third party intellectual property rights, we may be required to do one or more of the following: (i) cease development, sales, or use of our products that incorporate or use the asserted intellectual property right; (ii) obtain a license from the owner of the asserted intellectual property right, which may be unavailable on commercially reasonable terms, or at all, or which may be non-exclusive, thereby giving our competitors and other third parties access to the same technologies licensed to us; (iii) pay substantial royalties or other damages; or (iv) redesign our technology or one or more aspects or systems of our autonomous industrial vehicles to avoid any infringement or allegations thereof. The aforementioned options sometimes may not be commercially feasible. Additionally, in our ordinary course of business, we agree to indemnify our customers, partners, and other commercial counterparties for any infringement arising out of their use of our intellectual property, along with providing standard indemnification provisions, so we may face liability to our users, business partners or third parties for indemnification or other remedies in the event that they are sued for infringement.

We may also in the future license third party technology or other intellectual property, and we may face claims that our use of such in-licensed technology or other intellectual property infringes, misappropriates or otherwise violates the intellectual property rights of others. In such cases, we will seek indemnification from our licensors. However, our rights to indemnification may be unavailable or insufficient to cover our costs and losses.

We also may not be successful in any attempt to redesign our technology to avoid any alleged infringement. A successful claim of infringement against us, or our failure or inability to develop and implement non-infringing technology, or license the infringed technology on acceptable terms and on a timely basis, could materially adversely affect our business and results of operations. Furthermore, such lawsuits, regardless of their success, would likely be time-consuming and expensive to resolve and would divert management's time and attention from our business, which could seriously harm our business. Also, such lawsuits, regardless of their success, could seriously harm our reputation with users and in the industry at large.

***Our business may be adversely affected if we are unable to adequately establish, maintain, protect, and enforce our intellectual property and proprietary rights or prevent third parties from making unauthorized use of our technology and other intellectual property rights.***

Our intellectual property is an essential asset of our business. Failure to adequately protect our intellectual property rights could result in our competitors offering similar products, potentially resulting in the loss of our competitive advantage, and a decrease in our revenue which would adversely affect our business prospects, financial condition, and operating results. Our success depends, at least in part, on our ability to protect our core technology and intellectual property. We rely on a combination of intellectual property rights, such as patents, trademarks, copyrights, and trade secrets (including know-how), in addition to employee and third-party nondisclosure agreements, intellectual property licenses, and other contractual rights, to establish, maintain, protect, and enforce our rights in our technology, proprietary information, and processes. Intellectual property laws and our procedures and restrictions provide only limited protection and any of our intellectual property rights may be challenged, invalidated, circumvented, infringed or misappropriated. If we fail to protect our intellectual property rights adequately, we may lose an important advantage in the markets in which we compete. While we take measures to protect our intellectual property, such efforts may be insufficient or ineffective, and any of our intellectual property rights may be challenged, which could result in them being narrowed in scope or declared invalid or unenforceable. Other parties may also independently develop technologies that are substantially similar or superior to ours. We also may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. However, the measures we take to protect our intellectual property from unauthorized use by others may not be effective and there can be no assurance that our intellectual property rights will be sufficient to protect against others offering products, services, or technologies that are substantially similar or superior to ours and that compete with our business.

Litigation may be necessary in the future to enforce our intellectual property rights and to protect our trade secrets. Our efforts to enforce our intellectual property rights may be met with defenses, counterclaims, and countersuits attacking the validity and enforceability of our intellectual property. Any litigation initiated by us concerning the violation by third parties of our intellectual property rights is likely to be expensive and time-consuming and could lead to the invalidation of, or render unenforceable, our intellectual property, or could otherwise have negative consequences for us. Furthermore, it could result in a court or governmental agency invalidating or rendering unenforceable our patents or other intellectual property rights upon which the suit is based. We will not be able to protect our intellectual property if we are unable to enforce our rights or if we do not detect unauthorized use of our intellectual property. Our inability to protect our proprietary technology against unauthorized copying or use, as well as any costly litigation or diversion of our management's attention and resources, could delay the introduction and implementation of new technologies, result in our substituting inferior or more costly technologies into our products or injure our reputation. Moreover, policing unauthorized use of our technologies, trade secrets, and intellectual property may be difficult, expensive, and time-consuming, particularly in foreign countries where the laws may not be as protective of intellectual property rights as those in the United States and where mechanisms for enforcement of intellectual property rights may be weak. If we fail to meaningfully establish, maintain, protect, and enforce our intellectual property and proprietary rights, our business, operating results, and financial condition could be adversely affected.

***Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our products.***

There are a number of recent changes to the patent laws that may have a significant impact on our ability to protect our technology and enforce our intellectual property rights. For example, the Leahy-Smith America Invents Act (the "AIA") enacted in September 2011, resulted in significant changes in patent legislation. An important change introduced by the AIA is that, as of March 16, 2013, the United States transitioned from a "first-to-invent" to a "first-to-file" system for deciding which party should be granted a patent when two or more patent applications are filed by different parties claiming the same invention. Under a "first-to-file" system, assuming the other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to a patent on the invention regardless of whether another inventor had made the invention earlier. A third party that files a patent application in the United States Patent and Trademark Office ("USPTO") after that date but before us could therefore be awarded a patent covering an invention of ours even if we made the invention before it was made by the third party. Circumstances could prevent us from promptly filing patent applications on our inventions.

The AIA also includes a number of significant changes that affect the way patent applications will be prosecuted and also may affect patent litigation. These include allowing third party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, *inter partes* review, and derivation proceedings. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action. The AIA and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Further, the standards applied by the USPTO and foreign patent offices in granting patents are not always applied uniformly or predictably. For example, there is no uniform worldwide policy regarding patentable subject matter or the scope of claims allowable for business methods. As such, we do not know the degree of future protection that we will have on our technologies, products, and services. While we will endeavor to try to protect our technologies, products, and services with intellectual property rights such as patents, as appropriate, the process of obtaining patents is time-consuming, expensive, and sometimes unpredictable.

Additionally, the U.S. Supreme Court has ruled on several patent cases in recent years, such as *Impression Products, Inc. v. Lexmark International, Inc.*, *Association for Molecular Pathology v. Myriad Genetics, Inc.*, *Mayo Collaborative Services v. Prometheus Laboratories, Inc.* and *Alice Corporation Pty. Ltd. v. CLS Bank International*, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained.

Depending on decisions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that could weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future.

***Our patent applications may not issue as patents, which may have a material adverse effect on our ability to prevent others from commercially exploiting products similar to ours.***

We cannot be certain that we are the first inventor of the subject matter to which we have filed a particular patent application, or if we are the first party to file such a patent application. If another party has filed a patent application to the same subject matter as we have, we may not be entitled to the protection sought by the patent application. Further, the scope of protection of issued patent claims is often difficult to determine. As a result, we cannot be certain that the patent applications that we file will issue, or that our issued patents will be broad enough to protect our proprietary rights or otherwise afford protection against competitors with similar technology. In addition, the issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability. Our competitors may challenge or seek to invalidate our issued patents, or design around our issued patents, which may adversely affect our business, prospects, financial condition or operating results. Also, the costs associated with enforcing patents, confidentiality and invention agreements, or other intellectual property rights may make aggressive enforcement impracticable.

***We may not be able to protect our intellectual property rights throughout the world.***

Filing, prosecuting, maintaining, defending, and enforcing patents and other intellectual property rights on our product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection or other intellectual property rights to develop their own products and may export otherwise infringing, misappropriating, or violating products to territories where we have patent or other intellectual property protection, but enforcement rights are not as strong as those in the United States. These products may compete with our product candidates, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of some countries do not favor the enforcement of patents and other intellectual property rights, which could make it difficult for us to stop the infringement, misappropriation, or other violation of our intellectual property rights generally. Proceedings to enforce our intellectual property rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful.

Many countries, including European Union countries, India, Japan, and China, have compulsory licensing laws under which a patent owner may be compelled under specified circumstances to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In those countries, we may have limited remedies if patents are infringed or if we are compelled to grant a license to a third party, which could materially diminish the value of those patents. This could limit our potential revenue opportunities. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license, which could adversely affect our business, financial condition, results of operations, and prospects.

***In addition to patented technology, we rely on our unpatented proprietary technology, trade secrets, processes, and know-how.***

We rely on proprietary information (such as trade secrets, know-how, and confidential information) to protect intellectual property that may not be patentable, or that we believe is best protected by means that do not require public disclosure. We generally seek to protect this proprietary information by entering into confidentiality agreements, or consulting, services, or employment agreements that contain non-disclosure and non-use provisions with our employees, consultants, contractors, scientific advisors, and third parties. However, we cannot guarantee that we have entered into such agreements with each party that has or may have had access to our trade secrets or proprietary information and, even if entered into, these agreements may be breached or may otherwise fail to prevent disclosure, third-party infringement or misappropriation of our proprietary information, may be limited as to their term and may not provide an adequate remedy in the event of unauthorized disclosure or use of proprietary information. We have limited control over the protection of trade secrets used by our third-party manufacturers and suppliers and could lose future trade secret protection if any unauthorized disclosure of such information occurs. In addition, our proprietary information may otherwise become known or be independently developed by our competitors or other third parties. To the extent that our employees, consultants, contractors, and other third parties use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain protection for our proprietary information could adversely affect our competitive business position. Furthermore, laws regarding trade secret rights in certain markets where we operate may afford little or no protection to our trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor or other third party, we would have no right to prevent them from using that trade secret to compete with us. If any of our trade secrets were to be disclosed (whether lawfully or otherwise) to or independently developed by a competitor or other third party, it could have a material adverse effect on our business, operating results, and financial condition.

We also rely on physical and electronic security measures to protect our proprietary information, but we cannot guarantee that these security measures provide adequate protection for such proprietary information or will never be breached. There is a risk that third parties may obtain unauthorized access to and improperly utilize or disclose our proprietary information, which would harm our competitive advantages. We may not be able to detect or prevent the unauthorized access to or use of our information by third parties, and we may not be able to take appropriate and timely steps to mitigate the damages (or the damages may not be capable of being mitigated or remedied).

***We utilize open-source software, which may pose particular risks to our proprietary software, technologies, products, and services in a manner that could harm our business.***

We use open-source software in our products and services and anticipate using open-source software in the future. We utilize a distribution of the open-source Linux system, and tools such as ROS (open-source publish-subscribe tool) in the technical stack. Professional open-source license scanning systems such as WhiteSource and ScanCode are used in both places. Both Continuous Integration and Continuous Deployment (“CI/CD”) level open-source scan and overall system opensource scan is performed to protect the systems and our intellectual property. In the event that our scanning and open-source check protocols fail, the Company could be negatively affected. Some open-source software licenses require those who distribute open-source software as part of their own software products to publicly disclose all or part of the source code to such software product or to make available any modifications or derivative works of the open-source code on unfavorable terms or at no cost. This could result in our proprietary software being made available in the source code form and/or licensed to others under open-source licenses, which could allow our competitors or other third parties to use our proprietary software freely without spending the development effort, and which could lead to a loss of the competitive advantage of our proprietary technologies and, as a result, sales of our products and services. The terms of many open-source licenses to which we are subject have not been interpreted by U.S. or foreign courts, and there is a risk that open-source software licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to provide or distribute our products or services or retain our ownership of our proprietary intellectual property. Additionally, we could face claims from third parties claiming ownership of, or demanding release of, the open-source software or derivative works that we developed using such software, which could include our proprietary source code, or otherwise seeking to enforce the terms of, or alleging breach of, the applicable open-source license. These claims could result in litigation and could require us to make our proprietary software source code freely available, purchase a costly license, or cease offering the implicated products or services unless and until we can re-engineer them to avoid breach of the applicable open-source software licenses or potential infringement. This re-engineering process could require us to expend significant additional research and development resources, and we cannot guarantee that we will be successful.

Additionally, the use of certain open-source software can lead to greater risks than use of third-party commercial software, as open-source licensors generally do not provide warranties or controls on the origin of software. There is typically no support available for open-source software, and we cannot ensure that the authors of such open-source software will implement or push updates to address security risks or will not abandon further development and maintenance. Many of the risks associated with the use of open-source software, such as the lack of warranties or assurances of title, non-infringement, or performance, cannot be eliminated, and could, if not properly addressed, negatively affect our business. We have processes to help alleviate these risks, including a review process for screening requests from our developers for the use of open-source software, but we cannot be sure that all open-source software is identified or submitted for approval prior to use in our products and services. Any of these risks could be difficult to eliminate or manage, and, if not addressed, could adversely affect our ownership of proprietary intellectual property, the security of our vehicles, or our business, results of operations, and financial condition.

***Unauthorized control or manipulation of systems in autonomous industrial vehicles may cause them to operate improperly or not at all, or compromise their safety and data security, which could result in loss of confidence in us and our products, cancellation of contracts with future OEM or supplier partners.***

There have been reports of vehicles of certain automotive OEMs being “hacked” to grant access to and operation of the vehicles to unauthorized persons. Our autonomous vehicle software products and tools as well as the vehicles they are deployed on contain or will contain complex IT systems and are designed with built-in data connectivity. We are in the process of and will continue implementing security measures intended to prevent unauthorized access to our information technology networks and systems. However, hackers may attempt to gain unauthorized access to modify, alter, and use such networks and systems to gain control of, or to change the functionality of the autonomous industrial vehicles’ running our software, user interface and performance characteristics, or to gain access to data stored in or generated by our products. As techniques used to obtain unauthorized access to or sabotage systems change frequently and may not be known until launched against us or our third-party service providers, there can be no assurance that we will be able to anticipate, or implement adequate measures to protect against, these attacks. Any such security incidents could result in unexpected control of or changes to the vehicles’ functionality and safe operation and could result in legal claims or proceedings and negative publicity, which would negatively affect our brand and harm our business, prospects, financial condition, and operating results.

***The costs to comply with, or our actual or perceived failure to comply with, changing U.S. and foreign laws related to data privacy, security and protection, could adversely affect our financial condition, operating results, and our reputation.***

In operating our business and providing services and solutions to clients, we collect, use, store, transmit, and otherwise process employee, partner, and customer data, including personal data, in and across multiple jurisdictions. We use the electronic systems within the autonomous industrial vehicles that log information about each industrial vehicle’s use in order to aid us in vehicle diagnostics, repair, and maintenance, as well as to help us collect data regarding operators’ use patterns and preference in order to help us customize and optimize the driving and operating experiences. The integrated autonomous industrial vehicles leveraging our software products and tools may also collect personal information of drivers, operators and passengers, such as a voice command of a person, in order to aid the manual operation of our industrial vehicles. When our autonomy enabled industrial vehicles are in operation, the camera, LiDAR, and other sensing components of the vehicles will collect site and route view, mapping data, landscape images, and other LiDAR information, which may include personal information such as license plate numbers of other vehicles, facial features of pedestrians, appearance of individuals, GPS data, geolocation data, in order to train the data analytics and artificial intelligence technology equipped in our industrial vehicles for the purpose of identifying different objects, and predicting potential issues that may arise during the operation of our integrated industrial vehicles.

We plan to utilize systems and applications that are spread over the globe, requiring us to regularly move data across national borders. As a result, we are subject to a variety of laws and regulations in the United States, and other foreign jurisdictions as well as contractual obligations, regarding data privacy, protection, and security. Some of these laws and regulations require obtaining data subjects' consent to the collection and use of their data, honoring data subjects' request to delete their data or limit the processing of their data, providing notifications in the event of a data breach, and setting up the proper legal mechanisms for cross-border data transfers. Some customers may refuse to provide consent to our collection and use of their personal information, or may restrict our use of such personal information, and in some cases it is not feasible to obtain consent from data subjects in the general public whose personal information may be captured by our autonomous industrial vehicles, all of which may hinder our ability to train our data analytics and artificial intelligence technology, and may harm the competitiveness of our technology. In many cases, these laws and regulations apply not only to the collection and processing of personal information from third parties with whom we do not have any contractual relationship, but also to the sharing or transfer of information between or among us, our subsidiaries and other third parties with which we have commercial relationships, such as our service providers, partners, and customers. The regulatory framework for data privacy, protection, and security worldwide is continuously evolving and developing and, as a result, interpretation and implementation standards and enforcement practices are likely to remain uncertain for the foreseeable future. In particular, some of these laws and regulations may require us to store certain categories of data collected from individuals residing in a jurisdiction only on servers physically located in such jurisdiction, and may further require us to conduct security assessments and/or adopt other cross-border data transfer mechanisms in order to transfer such data outside of such jurisdiction. With the continuously evolving and rapidly changing privacy regulatory regime, our ability to freely transfer data among our affiliates and with our partners in different jurisdictions may be impeded, or we may need to incur significant costs in order to comply with such requirements. In addition, the number of high-profile data breaches at major companies continues to accelerate, which will likely lead to even greater regulatory scrutiny.

The scope and interpretation of the laws and regulations that are or may be applicable to us are often uncertain and may be conflicting, particularly with respect to foreign laws. For example, the E.U. General Data Protection Regulation (the "GDPR"), which became effective in May 2018, greatly increased the European Commission's jurisdictional reach of its laws and added a broad array of requirements for handling personal data with respect to EU data subjects. EU member states are tasked under the GDPR to enact, and have enacted, certain implementing legislation that adds to and/or further interprets the GDPR requirements and potentially extends our obligations and potential liability for failing to meet such obligations. The GDPR, together with national legislation, regulations and guidelines of the EU member states and the United Kingdom governing the processing of personal data, impose strict obligations and restrictions on the ability to collect, use, retain, protect, disclose, transfer, and otherwise process personal data with respect to EU and UK data subjects. In particular, the GDPR includes obligations and restrictions concerning the consent and rights of individuals to whom the personal data relates, the transfer of personal data out of the European Economic Area or the United Kingdom, security breach notifications and the security and confidentiality of personal data. Among other stringent requirements, the GDPR restricts transfers of data outside of the EU to third countries deemed to lack adequate privacy protections (such as the U.S.), unless an appropriate safeguard specified by the GDPR is implemented. A July 16, 2020 decision of the Court of Justice of the European Union invalidated a key mechanism for lawful data transfer to the U.S. and called into question the viability of its primary alternative. As such, the ability of companies to lawfully transfer personal data from the EU to the U.S. is presently uncertain. Other countries have enacted or are considering enacting similar cross-border data transfer rules or data localization requirements. These developments could limit our ability to launch our products in the EU and other foreign markets. The GDPR authorizes fines for certain violations of up to 4% of global annual revenue or €20 million, whichever is greater. Such fines are in addition to any civil litigation claims by data subjects. Much remains unknown with respect to how to interpret and implement the GDPR and guidance on implementation and compliance practices is often updated or otherwise revised. Given the breadth and depth of changes in data protection obligations, including classification of data and our commitment to a range of administrative, technical and physical controls to protect data and enable data transfers outside of the EU and the United Kingdom, our compliance with the GDPR's requirements will continue to require time, resources and review of the technology and systems we use to satisfy the GDPR's requirements, including as EU member states enact their legislation. Further, while the United Kingdom enacted the Data Protection Act 2018 in May 2018 that supplements the GDPR, and has publicly announced that it will continue to regulate the protection of personal data in the same way post-Brexit, Brexit has created uncertainty with regard to the future of regulation of data protection in the United Kingdom.

The U.S. federal government and various states and governmental agencies also have adopted or are considering adopting various laws, regulations, and standards regarding the collection, use, retention, security, disclosure, transfer, and other processing of sensitive and personal information. In addition, many states in which we operate have laws that protect the privacy and security of sensitive and personal information. Certain state laws may be more stringent or broader in scope, or offer greater individual rights, with respect to sensitive and personal information than federal, international, or other state laws, and such laws may differ from each other, which may complicate compliance efforts. State laws are changing rapidly and there is discussion in Congress of a new federal data protection and privacy law to which we would become subject if it is enacted. All of these evolving compliance and operational requirements impose significant costs that are likely to increase over time, may require us to modify our data processing practices and policies, and may divert resources from other initiatives and projects. Furthermore, non-compliance with data privacy laws and regulations, or a major breach of our network security and systems, could have serious negative consequences for our businesses and future prospects, including possible fines, penalties, and damages, reduced customer demand for our products, and harm to our reputation and brand, all of which may have a material and adverse impact on our business, financial condition, and operating results.

We make public statements about our use and disclosure of personal information through our privacy policy, information provided on our website and press statements. Also, we enter into contracts with third parties (such as our partners and clients) that contain provisions regarding the collection, sharing, and processing of personal information. Although we endeavor to comply with our public statements and documentation as well as our contractual and other privacy-related obligations, we may at times fail to do so or be alleged to have failed to do so. The publication of our privacy policy and other statements that provide promises and assurances about data privacy and security can subject us to potential government or legal action if they are found to be deceptive, unfair or misrepresentative of our actual practices. In addition, from time to time, concerns may be expressed about whether our products and services compromise the privacy of clients and others. Any concerns about our data privacy and security practices (even if unfounded), or any failure, real or perceived, by us to comply with our posted privacy policies, contractual obligations, or any legal or regulatory requirements, standards, certifications, or orders, or other privacy or consumer protection-related laws and regulations applicable to us, could cause our clients to reduce their use of our autonomous industrial vehicles and could affect our financial condition, operating results, and our reputation, and may result in governmental or regulatory investigations, enforcement actions, regulatory fines, criminal compliance orders, litigations, breach of contract claims, or public statements against us by government regulatory authorities, our partners and/or clients, data subjects, consumer advocacy groups, or others, all of which could be costly and have an adverse effect on our business.

Furthermore, enforcement actions and investigations by regulatory authorities related to data security incidents and privacy violations continue to increase. Non-compliance could result in proceedings against us by data protection authorities, governmental entities or others, including class action privacy litigation in certain jurisdictions, which would subject us to significant fines, penalties, judgments, and negative publicity, and may otherwise affect our financial condition, operating results, and our reputation. Given the complexity of operationalizing the GDPR and other data privacy and security laws and regulations to which we are subject, the maturity level of proposed compliance frameworks and the relative lack of guidance in the interpretation of the numerous requirements of the GDPR and other data privacy and security laws and regulations to which we are subject, we may not be able to respond quickly or effectively to regulatory, legislative, and other developments, and these changes may in turn impair our ability to offer our existing or planned products and services and/or increase our cost of doing business. In addition, if our practices are not consistent or viewed as not consistent with legal and regulatory requirements, including changes in laws, regulations, and standards or new interpretations or applications of existing laws, regulations and standards, we may become subject to audits, inquiries, whistleblower complaints, adverse media coverage, investigations, loss of export privileges, or severe criminal or civil sanctions, all of which may affect our financial condition, operating results, and our reputation. Unauthorized access or disclosure of personal or other sensitive or confidential data of Company (including data about third parties which the Company possesses), whether through systems failure, employee negligence, fraud, or misappropriation, by the Company, our service providers or other parties with whom we do business (if they fail to meet the standards we impose, or if their systems on which our data is stored experience any data breaches or security incidents) could also subject us to significant litigation, monetary damages, regulatory enforcement actions, fines, and criminal prosecution in one or more jurisdictions.

## **Risks Related to our Common Stock**

***Prior to our initial public offering in October 2021, no public market for our common stock existed, and an active public trading market may not develop or be sustained following our initial public offering.***

Prior to our initial public offering in October 2021, there was no public market for our common stock. Although our common stock is listed on the Nasdaq Capital Market and will begin trading on October 20, 2021, an active public trading market for our common stock may not develop following the completion of our offering or, if developed, it may not be sustained. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. The lack of an active market may also reduce the fair value of your shares. An inactive market may also impair our ability to raise capital to continue to fund operations by selling shares and may impair our ability to acquire other companies or technologies by using our shares as consideration.

***There is no established trading market for our shares; further, our shares will be subject to potential delisting if we do not maintain the listing requirements of the Nasdaq Capital Market.***

Prior to our initial public offering in October 2021, there was no public market for our shares of common stock. Although our common stock began trading on the Nasdaq Capital Market on October 20, 2021, there can be no assurance that an active trading market for these securities will develop or be sustained.

In addition, Nasdaq has rules for continued listing, including, without limitation, minimum market capitalization and other requirements. Failure to maintain our listing, or de-listing from Nasdaq, would make it more difficult for shareholders to dispose of our common stock and more difficult to obtain accurate price quotations on our common stock. This could have an adverse effect on the price of our common stock. Our ability to issue additional securities for financing or other purposes, or otherwise to arrange for any financing we may need in the future, may also be materially and adversely affected if our common stock is not traded on a national securities exchange.

***Costs as a result of operating as a public company are significant, and our management is required to devote substantial time to compliance with our public company responsibilities and corporate governance practices.***

As a public company, we incur significant legal, accounting and other expenses that private companies do not incur, and we expect these costs to further increase after we are no longer an “emerging growth company.” The Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of the Nasdaq Capital Market, and other applicable securities rules and regulations impose various requirements on public companies. Our management and other personnel will devote a substantial amount of time to compliance with these requirements. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. We cannot predict or estimate the amount of additional costs we will incur as a public company or the specific timing of such costs.

***As a result of being a public company, we are obligated to develop and maintain proper and effective internal controls over financial reporting, and any failure to maintain the adequacy of these internal controls may adversely affect investor confidence in our company and, as a result, the value of our common stock.***

We will be required, pursuant to Section 404 of the Sarbanes-Oxley Act, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting as of the end of the fiscal year that coincides with the filing of our second annual report on Form 10-K. This assessment will need to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting. In addition, our independent registered public accounting firm will be required to attest to the effectiveness of our internal control over financial reporting in our first annual report required to be filed with the SEC following the date we are no longer an “emerging growth company.” We have commenced the costly and time-consuming process of compiling the system and processing documentation necessary to perform the evaluation needed to comply with Section 404, and we may not be able to complete our evaluation, testing and any required remediation in a timely fashion once initiated. Our compliance with Section 404 will require that we incur substantial expenses and expend significant management efforts. We currently do not have an internal audit group, and we will need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge and compile the system and process documentation necessary to perform the evaluation needed to comply with Section 404.

Our current controls and any new controls that we develop may become inadequate because of changes in conditions in our business. In addition, changes in accounting principles or interpretations could also challenge our internal controls and require that we establish new business processes, systems and controls to accommodate such changes. Additionally, if these new systems, controls or standards and the associated process changes do not give rise to the benefits that we expect or do not operate as intended, it could adversely affect our financial reporting systems and processes, our ability to produce timely and accurate financial reports or the effectiveness of internal control over financial reporting. Moreover, our business may be harmed if we experience problems with any new systems and controls that result in delays in their implementation or increased costs to correct any post-implementation issues that may arise.

The growth and expansion of our business places a continuous, significant strain on our operational and financial resources. Further growth of our operations to support our customer base, our information technology systems and our internal controls and procedures may not be adequate to support our operations. For example, we are still in the process of implementing information technology and accounting systems to help manage critical functions such as billing and revenue recognition and financial forecasts. As we continue to grow, we may not be able to successfully implement requisite improvements to these systems, controls and processes, such as system access and change management controls, in a timely or efficient manner. Our failure to improve our systems and processes, or their failure to operate in the intended manner, whether as a result of the growth of our business or otherwise, may result in our inability to accurately forecast our revenue and expenses, or to prevent certain losses. Moreover, the failure of our systems and processes could undermine our ability to provide accurate, timely and reliable reports on our financial and operating results and could impact the effectiveness of our internal control over financial reporting. In addition, our systems and processes may not prevent or detect all errors, omissions or fraud.

***Future sales of our common stock in the public market could cause the market price of our common stock to decline.***

Sales of a substantial number of shares of our common stock in the public market, or the perception that these sales might occur, could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. Many of our existing equity holders have substantial unrecognized gains on the value of the equity they hold based upon the price of our initial public offering, and therefore, they may take steps to sell their shares or otherwise secure the unrecognized gains on those shares. We are unable to predict the timing of or the effect that such sales may have on the prevailing market price of our common stock.

***Our stock price may be volatile, and the value of our common stock may decline.***

Prior to our initial public offering in October 2021, there was no public market for our common stock. The lack of an active market for our common stock may impair investors' ability to sell their shares at the time they wish to sell them or at a price that they consider reasonable, may reduce the market value of their shares and may result in significant price and volume fluctuations. The market price of our common stock may fluctuate or decline significantly in response to numerous factors, many of which are beyond our control, including:

- actual or anticipated fluctuations in our financial condition or results of operations;
- variance in our financial performance from expectations of securities analysts;
- changes in the pricing of the solutions on our platforms;
- changes in our projected operating and financial results;
- changes in laws or regulations applicable to our technology;
- announcements by us or our competitors of significant business developments, acquisitions or new offerings;
- sales of shares of our common stock by us or our shareholders;
- significant data breaches, disruptions to or other incidents involving our technology;
- our involvement in litigation;
- future sales of our common stock by us or our stockholders, as well as the anticipation of lock-up releases;
- changes in senior management or key personnel;

- the trading volume of our common stock;
- changes in the anticipated future size and growth rate of our market;
- general economic and market conditions; and
- other events or factors, including those resulting from war, incidents of terrorism, global pandemics or responses to these events.

Broad market and industry fluctuations, as well as general economic, political, regulatory and market conditions, may also negatively impact the market price of our common stock. In addition, technology stocks have historically experienced high levels of volatility. In the past, companies who have experienced volatility in the market price of their securities have been subject to securities class action litigation. We may be the target of this type of litigation in the future, which could result in substantial expenses and divert our management's attention.

***If securities or industry analysts do not publish research or publish unfavorable or inaccurate research about our business, the market price and trading volume of our common stock could decline.***

The market price and trading volume of our common stock will be heavily influenced by the way analysts interpret our financial information and other disclosures. We do not have control over these analysts. If few securities analysts commence coverage of us, or if industry analysts cease coverage of us, our stock price would be negatively affected. If securities or industry analysts do not publish research or reports about our business, downgrade our common stock, or publish negative reports about our business, our stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our common stock could decrease, which might cause our stock price to decline and could decrease the trading volume of our common stock.

***Our executive officers, directors and principal stockholders, if they choose to act together, have the ability and will continue to have the ability to control or significantly influence all matters submitted to stockholders for approval.***

Our executive officers, directors and principal stockholders (including entities affiliated with Benchmark), beneficially own approximately 52 % of our common stock. Such persons acting together, will have the ability to control or significantly influence all matters submitted to our stockholders for approval, as well as our management and business affairs. This concentration of ownership may have the effect of delaying, deferring or preventing a change in control, impeding a merger, consolidation, takeover or other business combination involving us, or discouraging a potential acquiror from making a tender offer or otherwise attempting to obtain control of our business, even if such a transaction would benefit other stockholders.

***Future securities issuances could result in significant dilution to our stockholders and impair the market price of our common stock.***

Future issuances of shares of our common stock could depress the market price of our common stock and result in dilution to existing holders of our common stock. Also, to the extent outstanding options and warrants to purchase our shares of our common stock are exercised or options or other equity-based awards are issued or become vested, there will be further dilution. The amount of dilution could be substantial depending upon the size of the issuances or exercises. Furthermore, we may issue additional equity securities that could have rights senior to those of our common stock.

***We anticipate that we will need to raise additional capital, and our issuance of additional capital stock in connection with financings, acquisitions, investments, our equity incentive plans or otherwise will dilute all other stockholders.***

We expect to issue additional capital stock in the future that will result in dilution to all other stockholders. We expect to grant equity awards to employees, directors and consultants under our equity incentive plans. We may also raise capital through equity financings in the future. As part of our business strategy, we may acquire or make investments in companies, products or technologies and issue equity securities to pay for any such acquisition or investment. We may not be able to obtain additional capital if and when needed on terms acceptable to us, or at all. Further, if we do raise additional capital, it may cause stockholders to experience significant dilution of their ownership interests and the per share value of our common stock to decline.

***We do not intend to pay dividends for the foreseeable future and, as a result, your ability to achieve a return on your investment will depend on appreciation in the price of our common stock.***

We have never declared or paid any cash dividends on our capital stock, and, subject to the discretionary dividend policy described in the section entitled “Dividend Policy” of this annual report, we do not intend to pay any cash dividends in the foreseeable future. Any determination to pay dividends in the future will be at the discretion of our board of directors. Accordingly, you may need to rely on sales of our common stock after price appreciation, which may never occur, as the only way to realize any future gains on your investment.

***We are an “emerging growth company,” and we cannot be certain if the reduced reporting and disclosure requirements applicable to emerging growth companies will make our common stock less attractive to investors.***

We are an “emerging-growth company,” as defined in the JOBS Act, and we have elected to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies,” including the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, or Section 404, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. Pursuant to Section 107 of the Jumpstart Our Business Startups (“JOBS”) Act, as an emerging growth company, we have elected to use the extended transition period for complying with new or revised accounting standards until those standards would otherwise apply to private companies. As a result, our consolidated financial statements will not be comparable to the financial statements of issuers who are required to comply with the effective dates for new or revised accounting standards that are applicable to public companies, which may make our common stock less attractive to investors. In addition, if we cease to be an emerging growth company, we will no longer be able to use the extended transition period for complying with new or revised accounting standards.

We will remain an emerging-growth company until the earliest of: (1) the last day of the fiscal year following the fifth anniversary of this offering; (2) the last day of the first fiscal year in which our annual gross revenue is \$1.07 billion or more; (3) the date on which we have, during the previous rolling three-year period, issued more than \$1 billion in non-convertible debt securities; and (4) the date we qualify as a “large accelerated filer,” with at least \$700 million of equity securities held by non-affiliates.

We cannot predict if investors will find our common stock less attractive as a result of choosing to rely on these exemptions. For example, if we do not adopt a new or revised accounting standard, our future results of operations will not be as comparable to the results of operations of certain other companies in our industry that adopted such standards. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock, and our stock price may be more volatile.

***Anti-takeover provisions in our charter documents may discourage our acquisition by a third party, which could limit our stockholders’ opportunity to sell their shares, at a premium.***

Our amended and restated certificate of incorporation includes provisions that could limit the ability of others to acquire control of our company. These provisions could have the effect of depriving our stockholders of an opportunity to sell their shares at a premium over prevailing market prices by discouraging third parties from seeking to obtain control in a tender offer or similar transaction. Among other things, the charter documents will provide:

- certain amendments to our bylaws that will require the approval of two-thirds of the combined vote of our then-outstanding shares of our common stock; and
- our board of directors has the authority, without further action by our stockholders, to issue preferred stock in one or more series and to fix their designations, powers, preferences, privileges, and relative participating, optional, or special rights, and the qualifications, limitations, or restrictions, including dividend rights, conversion rights, voting rights, terms.

***Our amended and restated certificate of incorporation designates the Court of Chancery of the State of Delaware and federal court within the State of Delaware as the exclusive forum for certain types of actions and proceedings that our stockholders may initiate, which could limit a stockholder's ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.***

Our amended and restated certificate of incorporation provides that, subject to limited exceptions, the Court of Chancery of the State of Delaware will be exclusive forums for any:

- derivative action or proceeding brought on our behalf;
- action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders;
- action asserting a claim against us, our directors or officers or employees arising pursuant to any provision of the DGCL, our amended and restated certificate of incorporation or amended and restated bylaws; or
- other action asserting a claim against us, our directors or officers or employees that is governed by the internal affairs doctrine.

This choice of forum provision does not apply to actions brought to enforce a duty or liability created under the Exchange Act. Our amended and restated certificate of incorporation to be in effect after this offering also provides that the federal district courts of the United States are the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. We intend for this provision to apply to any complaints asserting a cause of action under the Securities Act despite the fact that Section 22 of the Securities Act creates concurrent jurisdiction for the federal and state courts over all actions brought to enforce any duty or liability created by the Securities Act or the rules and regulations promulgated thereunder. There is uncertainty as to whether a court would enforce such a provision with respect to claims under the Securities Act, and our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to the provisions of our amended and restated certificate of incorporation described above.

These choice of forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees, which may discourage such lawsuits against us and our directors, officers and employees. Alternatively, if a court were to find these provisions of our amended and restated certificate of incorporation inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business and financial condition.

#### **Item 1B. Unresolved Staff Comments**

None.

#### **Item 2. Properties**

##### ***Description of Property***

Our corporate headquarters is located in Menlo Park, California and acts as the main operational facility for our vehicle engineering, software engineering and business units. The lease agreement, as amended, for our corporate headquarters provides for an annual base rent of \$558,820 through February 2023 and \$289,189 for the remainder of the term of the lease which expires in August 2023. We believe that our office space is adequate for our current needs and, should we need additional space, we believe we will be able to obtain additional space on commercially reasonable terms.

#### **Item 3. Legal Proceedings**

We are not a party to any pending legal proceeding, nor is our property the subject of a pending legal proceeding, that is not in the ordinary course of business or otherwise material to the financial condition of our business. None of our directors, officers or affiliates are involved in a proceeding adverse to our business or have a material interest adverse to our business.

#### **Item 4. Mine Safety Disclosures**

Not Applicable.

## PART II

### Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

#### Information with Respect to our Common Stock

Our common stock is traded on the Nasdaq Capital Market, or Nasdaq, and began trading under the symbol “CYN” on October 20, 2021.

#### Holders of Record

As of December 31, 2021, we had 72 shareholders of record.

#### Dividend Policy

We have not declared or paid cash dividends on our capital stock and have no present intention of paying any dividends on our capital stock. We currently intend to retain all available funds and future earnings, if any, to fund the development and expansion of our business, and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination regarding the declaration and payment of dividends, if any, will be at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

#### Recent Sales of Unregistered Securities

None

#### Issuer Purchases of Equity Securities

The Company did not repurchase any of its equity securities during the fourth quarter ended December 31, 2021.

#### Item 6. [Reserved]

### Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

*The objective of this Management’s Discussion and Analysis is to allow investors to view the Company from management’s perspective, considering items that would have a material impact on future operations. The following discussion and analysis summarizes the significant factors affecting our results of operations and financial condition as of and during the years ended December 31, 2021 and 2020 and should be read in conjunction with our consolidated financial statements and related notes included elsewhere in this report. This discussion contains forward-looking statements based upon current plans, expectations and beliefs that involve risks and uncertainties. Our actual results and the timing of certain events could differ materially from those anticipated in or implied by these forward-looking statements as a result of several factors, including those discussed in the section captioned “Risk Factors” included under Part I, Item 1A and elsewhere in this report. See also the section captioned “Forward-Looking Statements” in this report.*

#### Overview

We are an autonomous vehicle (AV) technology company that is focused on addressing industrial uses for autonomous vehicles. We believe that technological innovation is needed to enable adoption of autonomous industrial vehicles that will address the substantial industry challenges that exist today. These challenges include labor shortages, lagging technological advancements from incumbent vehicle manufacturers, and high upfront investment commitment.

Industrial sites are typically rigid environments with consistent standards as opposed to city streets that have more variable environmental and situational conditions and diverse regulations. These differences in operational design domains (ODD) will be major factors that make proliferation of industrial AVs in private settings achievable with less time and resources than AVs on public roadways. Namely, safety and infrastructure challenges are cited as roadblocks that have delayed AVs from operating on public roadways at scale. Our focus on industrial AVs simplifies these challenges because industrial facilities (especially those belonging to a single end customer that operates similarly at different sites) share much more in common than different cities do. Furthermore, our end customers own their infrastructure and can make changes more easily than governments can on public roadways.

With these challenges in mind, we are developing an EAS that leverages advanced in-vehicle autonomous driving technology and incorporates leading supporting technologies like data analytics, fleet management, cloud, and connectivity. EAS provides a differentiated solution that we believe will drive pervasive proliferation of industrial autonomy and create value for customers at every stage of their journey towards full automation and the adoption of Industry 4.0.

EAS is a suite of technologies and tools that we divide into three complementary categories:

1. *DriveMod*, our modular industrial vehicle autonomous driving software;
2. *Cyngn Insight*, our customer-facing tool suite for monitoring and managing AV fleets (including remotely operating vehicles) and aggregating/analyzing data; and
3. *Cyngn Evolve*, our internal tool suite and infrastructure that facilitates artificial intelligence (AI) and machine learning (ML) training to continuously enhance our algorithms and models and provides a simulation framework (both record/rerun and synthetic scenario creation) to ensure that data collected in the field can be applied to validating new releases.

Legacy automation providers manufacture specialized industrial vehicles with integrated robotics software for rigid tasks, limiting automation to narrow uses. Unlike these specialized vehicles, EAS can be compatible with the existing vehicle assets in addition to new vehicles that have been purpose built for autonomy by vehicle manufacturers. EAS is operationally expansive, vehicle agnostic, and compatible with indoor and outdoor environments. By offering flexible autonomous services, we aim to remove barriers to industry adoption.

We understand that scaling of autonomy solutions will require an ecosystem made up of different technologies and services that are enablers for AVs. Our approach is to forge strategic collaborations with complementary technology providers that accelerate AV development and deployment, provide access to new markets, and create new capabilities. Our focus on designing DriveMod to be modular will combine with our experience deploying AV technology on diverse industrial vehicle form factors, which will be difficult for competitors to replicate.

We expect our technology to generate revenue through two main methods: deployment and EAS subscriptions. Deploying our EAS requires us and our integration partners to work with a new client to map the job site, gather data, and install our AV technology within their fleet and site. We anticipate that new deployments will yield project-based revenues based on the scope of the deployment. After deployment, we expect to generate revenues by offering EAS through a Software as a Service (SaaS) model, which can be considered the AV software component of Robotics as a Service (RaaS). Although we have not offered, and have no present intention to offer, the robotic assets ourselves directly to the end customer, our software can be part of a combined offering with third parties, such as an OEM.

RaaS is a subscription model that allows customers to use robots/vehicles without purchasing the hardware assets upfront. We will seek to achieve sustained revenue growth largely from ongoing SaaS-style EAS subscriptions that enable companies to tap into our ever-expanding suite of AV and AI capabilities as organizations transition into full industrial autonomy.

Although EAS is not yet commercially available and both the components and the combined solution are still under development, components of EAS have already been used for a paid customer trial and pilot deployments. We have not yet derived any recurring revenues from EAS and intend to start marketing EAS to customers in 2022. We expect EAS to continually be developed and enhanced according to evolving customer needs, which will take place concurrently while other completed features of EAS are commercialized. We expect annual R&D expenditures in the foreseeable future to equal or exceed that of 2019 and 2020. We also expect that limited paid pilot deployments in 2022 and 2023 will offset some of the ongoing R&D costs of continually developing EAS. We target scaled deployments to begin in 2024.

Our go-to-market strategy is to acquire new customers that use industrial vehicles in their mission-critical and daily operations by (a) leveraging the relationships and existing customers of our network of strategic partners, (b) bringing AV capabilities to industrial vehicles as a software service provider, and (c) executing a robust in-house sales and marketing effort to nurture a pipeline of industrial organizations. Our focus is on acquiring new customers who are either looking (a) to embed our technology into their vehicle product roadmaps or (b) to apply autonomy to existing fleets with our vehicle retrofits. In turn, our customers are any organizations that could utilize our EAS solution, including OEMs that supply industrial vehicles, end customers that operate their own industrial vehicles, or service providers that operate industrial vehicles for end customers.

As OEMs and leading industrial vehicle users seek to increase productivity, reinforce safer working environments, and scale their operations, we believe we are uniquely positioned to deliver a dynamic autonomy solution via our EAS to a wide variety of industrial uses. Our long-term vision is for EAS to become a universal autonomous driving solution with minimal marginal cost for companies to adopt new vehicles and expand their autonomous fleets across new deployments. We have already deployed DriveMod software on nine different vehicle form factors that range from stockchasers and stand-on floor scrubbers to 14-seat shuttles and 5-meter-long cargo vehicles demonstrating the extensibility of our AV building blocks. These deployments were prototypes or part of proof-of-concept projects. Of these deployments, two were at customer sites. For one deployment we were paid \$166,000 and the other was part of our normal R&D activities.

Our strategy upon establishing a customer relationship with an OEM, is to seek to embed our technology into their vehicle roadmap and expand our services to their many clients. Once we solidify an initial AV deployment with a customer, we intend to seek to expand within the site to additional vehicle platforms and/or expand the use of similar vehicles to other sites operated by the customer. This “land and expand” strategy can repeat iteratively across new vehicles and sites and is at the heart of why we believe industrial AVs that operate in geo-fenced, constrained environments are poised to create value.

Meanwhile, over \$16 billion has been invested into passenger AV development over the last several years with negligible revenues generated and constant delays. The \$200B annual industrial equipment market (projected by 2027) is substantial, but it does not justify billions of dollars of annual research & development spend. These leading passenger AV companies will need to take the approach of first capturing the trillion-dollar markets of passenger AV to achieve their desired returns.

### **Critical Accounting Policies and Estimates and Judgements**

Our consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities, disclosure of contingent liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. We continually evaluate our estimates and judgments. We base our estimates and judgments on historical experience and other factors that we believe to be reasonable under the circumstances. Materially different results can occur as circumstances change and additional information becomes known. Besides the estimates identified below that are considered critical, we make many other accounting estimates in preparing our financial statements and related disclosures. All estimates, whether or not deemed critical, affect reported amounts of assets, liabilities, revenues and expenses, as well as disclosures of contingent liabilities. These estimates and judgments are also based on historical experience and other factors that are believed to be reasonable under the circumstances. Materially different results can occur as circumstances change and additional information becomes known, even for estimates and judgments that are not deemed critical.

We believe the assumptions and estimates associated with the following have the greatest potential impact on our consolidated financial statements.

### ***Warrants***

The Company issued to its lead underwriter in the IPO, warrants to purchase up to 140,000 shares of its common stock. The Company accounts for warrants in accordance with ASC 480, *Distinguishing Liabilities from Equity*, depending on the specific terms of the warrant agreement. The Company determined the fair value of the warrants using the Black-Scholes pricing model and treated the valuation as equity instruments in consideration of the cashless settlement provisions in the warrant agreement.

The Company also applied the guidance in ASC 340-10-S99-1, *Other Assets and Deferred Costs*, that states specific incremental costs directly attributable to a proposed or actual offering of equity securities may properly be deferred and charged against the gross proceeds of the offering. The Company treated the valuation of the warrants as directly attributable to the issuance of an equity contract and accordingly, classified the warrants as additional paid-in capital.

### ***Stock-based Compensation***

The Company recognizes the cost of share-based awards granted to employees and directors based on the estimated grant-date fair value of the awards. Cost is recognized on a straight-line basis over the service period, which is generally the vesting period of the award. The Company recognizes stock-based compensation cost and reverses previously recognized costs for unvested awards in the period forfeitures occur. The Company determines the fair value of stock options using the Black-Scholes option pricing model, which is impacted by the fair value of common stock, expected price volatility of common stock, expected term, risk-free interest rates, and expected dividend yield.

### ***Research and Development Expense***

Research and development expense consist primarily of outsourced engineering services, internal engineering and development expenses, materials, labor and stock-based compensation related to development of the Company's products and services. Research and development costs are expensed as incurred.

### ***General, and Administrative Expense***

General, and administrative expense consist primarily of personnel costs, facilities expenses, depreciation and amortization, travel, and advertising costs.

### **Results of Operations**

#### ***Revenue***

The Company has not generated any revenue for the years ended December 31, 2021 and 2020.

#### ***Research and Development***

Research and development expense for the year ended December 31, 2021 decreased by \$0.1 million or 2.5% to \$5.0 million from \$5.1 million for the year ended December 31, 2020. The decrease is primarily attributable to the decrease in personnel engaged in the research and development of our AV technology in 2021 compared to pre-COVID-19 headcount levels in 2020. The Company plans to continue to restore the appropriate level of engineering and other personnel to support its research and development efforts and expects research and development costs to increase over time.

### ***General and Administrative***

General and administrative expenses increased by approximately \$1.2 million or 36.5% to \$4.4 million for the year ended December 31, 2021 from \$3.2 million for the year ended December 31, 2020. The majority of the increase was attributed to the increase in stock-based compensation expense, legal and professional fees, and personnel related costs as the Company increased staff to support being a public company during the year ended December 31, 2021, compared to the year ended December 31, 2020.

### ***Other Income, net***

For the year ended December 31, 2021, other income, net, increased by approximately \$1.6 million to \$1.6 million from approximately \$35,000 for the year ended December 31, 2020. The increase is attributed to the increase in other income of \$1.6 million representing gains recognized on the forgiveness of the PPP Notes by the SBA during the fourth quarter of 2021 and the disposal of assets, offset by the increase in interest expense recognized on the second PPP Note for the year ended December 31, 2021 compared to interest expense on a single PPP Note for the year ended December 31, 2020.

### **Liquidity and Capital Resources**

In recent years, we have devoted substantially all of our efforts toward the development of EAS and toward raising capital. We have financed our operations primarily through the issuance and sale of equity securities for cash consideration and through bank debt. At December 31, 2021, we had working capital of \$22.1 million, compared to working capital of \$6.1 million at December 31, 2020. The increase in working capital is primarily due to the IPO proceeds of \$23.3 million in October, 2021. As of December 31, 2021 and 2020, the Company had cash and cash equivalents of approximately \$21.9 million and \$6.1 million respectively. As of December 31, 2021, we had an accumulated deficit of \$116.5 million. Largely as a result of significant research and development activities related to our advanced technology, we have incurred significant operating losses and negative cash flows from operations since inception. We have incurred net losses of \$7.8 million and \$8.3 million for the years ended December 31, 2021 and 2020, respectively.

The Company's liquidity is based on its ability to enhance its operating cash flow position, obtain capital financing from equity interest investors and borrow funds to fund its general operations, research and development activities and capital expenditures. The Company's ability to continue as a going concern is dependent on management's ability to successfully execute its business plan, which includes increasing revenue while controlling operating costs and expenses to generate positive operating cash flows and obtaining funds from outside sources of financing to generate positive financing cash flows.

Based on cash flow projections from operating and financing activities and existing balance of cash and cash equivalents, management is of the opinion that the Company has sufficient funds for sustainable operations and it will be able to meet its payment obligations and commitments from operations for at least one year from the issuance date of this report. Based on the above considerations, the Company's consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and liquidation of liabilities during the normal course of operations (see Initial Public Offering above).

### **Cash Flows**

#### ***Operating activities***

Net cash used in operating activities for the year ended December 31, 2021 was \$8.6 million, an increase of \$0.7 million or 9.1% compared to \$7.9 million for the year ended December 31, 2020. The increase is primarily attributed to the level of increases in administrative personnel-related costs and professional services as the Company increased staff to support being a public company.

### *Investing activities*

Net cash used in investing activities for the year ended December 31, 2021 was approximately \$20,000, consisting of \$62,000 in purchases of equipment and fixtures offset by \$42,000 in asset disposals.

### *Financing activities*

Cash provided by financing activities for the year ended December 31, 2021 was \$24.2 million consisting of proceeds from the IPO of \$23.3 million, the February 2021 PPP Note proceeds of \$0.9 million from the SBA, and stock option exercises of approximately \$14,000. The Company expects to experience increases in proceeds from option exercises to supplement the public listing of its common stock shares in future periods.

### **Emerging Growth Company Status**

We are an “emerging-growth company”, as defined in the JOBS Act, and, for as long as we continue to be an emerging growth company, we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies but not to emerging growth companies, including, but not limited to, not being required to have our independent registered public accounting firm audit our internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. As an emerging growth company we can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We intend to avail ourselves of these options. Once adopted, we must continue to report on that basis until we no longer qualify as an emerging growth company.

We will cease to be an emerging growth company upon the earliest of: (i) the end of the fiscal year following the fifth anniversary of the initial public offering; (ii) the first fiscal year after our annual gross revenue are \$1.07 billion or more; (iii) the date on which we have, during the previous three-year period, issued more than \$1.0 billion in non-convertible debt securities; or (iv) the end of any fiscal year in which the market value of our common stock held by non-affiliates exceeded \$700 million as of the end of the second quarter of that fiscal year. We cannot predict if investors will find our common stock less attractive if we choose to rely on these exemptions. If, as a result of our decision to reduce future disclosure, investors find our common shares less attractive, there may be a less active trading market for our common shares and the price of our common shares may be more volatile.

We are also a “smaller reporting company”, meaning that the market value of our stock held by non-affiliates plus the aggregate amount of gross proceeds to us as a result of the IPO is less than \$700 million and our annual revenue was less than \$100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company if either (i) the market value of our stock held by non-affiliates is less than \$250 million or (ii) our annual revenue was less than \$100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than \$700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation

### **Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

As a “Smaller Reporting Company”, this Item and the related disclosure is not required.

**Item 8. Financial Statements and Supplementary Data**

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Shareholders and Board of Directors of  
**Cyngn Inc.**

**Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheets of Cyngn Inc. (the "Company") as of December 31, 2021 and 2020, the related consolidated statements of operations, changes in stockholders' equity and cash flows for each of the two years in the period ended December 31, 2021, and the related notes to the consolidated financial statements (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2021, in conformity with accounting principles generally accepted in the United States of America.

**Basis for Opinion**

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provides a reasonable basis for our opinion.

/s/ Marcum LLP

We have served as the Company's auditor since 2021.

San Jose, California  
March 24, 2022

PCAOB ID Number 688

**CYNGN INC. AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**

	<u>December 31,</u> <u>2021</u>	<u>December 31,</u> <u>2020</u>
Assets		
Current assets		
Cash and cash equivalents	\$ 21,945,981	\$ 6,056,190
Restricted cash	50,000	400,000
Prepaid expenses and other current assets	525,304	48,852
Total current assets	<u>22,521,285</u>	<u>6,505,042</u>
Property and equipment, net	102,787	133,805
Intangible assets, net	30,917	34,383
Total Assets	<u>\$ 22,654,989</u>	<u>\$ 6,673,230</u>
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	\$ 112,271	\$ 73,016
Accrued expenses and other current liabilities	295,156	307,402
Total current liabilities	<u>407,427</u>	<u>380,418</u>
Note payable, Paycheck Protection Program	-	695,078
Total liabilities	<u>407,427</u>	<u>1,075,496</u>
Commitments and contingencies (Note 12)		
Stockholders' Equity		
Convertible Series A, B and C preferred stock, Par \$0.00001; 10,000,000 authorized as of December 31, 2021 and 21,982,491 shares authorized, issued and outstanding as of December 31, 2020	-	220
Common stock, Par \$0.00001; 100,000,000 shares authorized, 26,487,680 shares issued and outstanding as of December 31, 2021 and 42,000,000 shares authorized, 951,794 shares issued and outstanding as of December 31, 2020	265	10
Common stock warrants	170,397	-
Additional paid-in capital	138,570,430	114,291,505
Accumulated deficit	(116,493,530)	(108,694,001)
Total stockholders' equity	<u>22,247,562</u>	<u>5,597,734</u>
Total Liabilities and Stockholders' Equity	<u>\$ 22,654,989</u>	<u>\$ 6,673,230</u>

The accompanying notes are an integral part of these consolidated financial statements.

**CYNGN INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

	<b>Years ended December 31,</b>	
	<b>2021</b>	<b>2020</b>
Revenue	\$ -	\$ -
Operating expenses:		
Research and development	4,990,407	5,120,979
General and administrative	4,409,651	3,252,649
Total operating expenses	<u>9,400,058</u>	<u>8,373,628</u>
Loss from operations	<u>(9,400,058)</u>	<u>(8,373,628)</u>
Other income, net		
Interest (expense) income	(9,580)	39,841
Other (expense) income	7,173	(5,020)
Paycheck Protection Program Note forgiveness	1,602,936	-
Total other income, net	<u>1,600,529</u>	<u>34,821</u>
Net loss	<u>\$ (7,799,529)</u>	<u>\$ (8,338,807)</u>
Net loss per share attributable to common stockholders, basic and diluted	\$ (1.33)	\$ (8.78)
Weighted-average shares used in computing net loss per share attributable to ordinary shareholders, basic and diluted	5,861,730	949,544

The accompanying notes are an integral part of these consolidated financial statements.

**CYNGN INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY**

	<b>Convertible Preferred Stock</b>		<b>Common Stock</b>		<b>Common Stock Warrants</b>	<b>Additional Paid in Capital</b>	<b>Accumulated Deficit</b>	<b>Total Stockholders' Equity</b>
	<b>Shares</b>	<b>Amount</b>	<b>Shares</b>	<b>Amount</b>				
Balance as of December 31, 2019	21,982,491	\$ 220	949,086	\$ 10	\$ -	\$ 114,159,150	\$(100,355,194)	\$ 13,804,186
Exercise of stock options	-	-	2,708	-	-	623	-	623
Stock-based compensation	-	-	-	-	-	131,732	-	131,732
Net loss	-	-	-	-	-	-	(8,338,807)	(8,338,807)
Balance as of December 31, 2020	21,982,491	\$ 220	951,794	\$ 10	\$ -	\$ 114,291,505	\$(108,694,001)	\$ 5,597,734
Exercise of stock options	-	-	53,395	-	-	14,220	-	14,220
Issuance of common stock in connection with initial public offering, net of closing costs of \$2,954,110	-	-	3,500,000	35	-	23,295,855	-	23,295,890
Conversion of convertible preferred stock to common stock in connection with initial public offering	(21,982,491)	(220)	21,982,491	220	-	-	-	-
Stock-based compensation	-	-	-	-	-	1,139,247	-	1,139,247
Issuance of warrants	-	-	-	-	170,397	(170,397)	-	-
Net loss	-	-	-	-	-	-	(7,799,529)	(7,799,529)
Balance as of December 30, 2021	-	\$ -	26,487,680	\$ 265	\$ 170,397	\$ 138,570,430	\$(116,493,530)	\$ 22,247,562

The accompanying notes are an integral part of these consolidated financial statements.

**CYNGN INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	<b>Years ended December 31,</b>	
	<b>2021</b>	<b>2020</b>
<b>Cash flows from operating activities</b>		
Net loss	\$ (7,799,529)	\$ (8,338,807)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	85,855	159,040
Stock-based compensation	1,139,247	131,732
Gain on disposal of asset	(31,356)	-
Gain on forgiveness of Paycheck Protection Program Notes	(1,602,936)	-
<i>Changes in operating assets and liabilities:</i>		
Prepaid expenses and other current assets	(476,452)	33,774
Accounts payable	39,255	(43,335)
Accrued expenses and other current liabilities	3,496	137,535
Net cash used in operating activities	(8,642,419)	(7,920,061)
<b>Cash flows from investing activities</b>		
Purchase of property and equipment	(62,204)	-
Disposal of assets	42,189	-
Net cash used in investing activities	(20,015)	-
<b>Cash flows from financing activities</b>		
Proceeds from issuance of common stock upon initial public offering, net of offering costs	23,295,890	-
Proceeds from Paycheck Protection Program Notes	892,115	695,078
Proceeds from exercise of stock options	14,220	623
Net cash provided by financing activities	24,202,225	695,701
Net increase/(decrease) in cash and cash equivalents and restricted cash	15,539,791	(7,224,360)
Cash and cash equivalents and restricted cash, beginning of year	6,456,190	13,680,550
Cash and cash equivalents and restricted cash, end of year	\$ 21,995,981	\$ 6,456,190
Supplemental disclosure of cash flow:		
Cash paid during the year for taxes	\$ 16,719	\$ 10,813
Supplemental disclosure of non-cash financing activities:		
The Company's Paycheck Protection Program Note was forgiven by the SBA in the amount of \$1,602,936.		

The accompanying notes are an integral part of these consolidated financial statements.

**CYNGN INC. AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements**

**1. Description of Business**

Headquartered in Menlo Park, California, CYNGN Inc., together with its subsidiaries (collectively, “Cyngn” or the “Company”), was incorporated in Delaware in 2013. Cyngn Singapore PTE. LTD., a Singaporean limited company organized in 2015 and Cyngn Philippines, Inc., a Philippine corporation incorporated in 2018 are wholly owned subsidiaries. The Company is in the process of dissolving these subsidiaries.

Cyngn develops autonomous driving software that can be deployed on multiple vehicle types in various environments. The Company has been operating autonomous vehicles (“AV”) in production environments since 16 Built and tested in difficult and diverse real-world environments, the self-driving system (DriveMod), fleet management system, and Software Development Kit combine to create a full-stack advanced autonomy solution designed to be modular, extendable, and safe. The Company operates one business segment.

***Initial Public Offering***

On October 22, 2021, the Company closed the initial public offering (the “IPO”) of 3,500,000 shares of its authorized common stock at an offering price of \$7.50 per share. Simultaneous with the closing of the IPO, the common stock began trading on the NASDAQ Capital Market under the symbol “CYN.” The IPO generated net proceeds of \$23.3 million after deducting underwriting discounts, commissions and offering expenses. The Company also granted its underwriters the election to exercise a 45-day over-allotment option to purchase an additional 525,000 shares of common stock at the IPO offering price, less underwriting discounts. The underwriters elected not to exercise the over-allotment option in whole or in part. No price stabilization activities have been carried out since the IPO, and due to the stock’s share price performance, the underwriters have, as stabilizing manager on behalf of the Company, decided to end the stock trading stabilization period.

Simultaneous with the closing of its IPO, the Company also issued 140,000 warrants (the “Warrant”) to its underwriters. Each Warrant entitles its holder the option to purchase at a future exercise date, one share of common stock at an initial exercise price of \$9.375 per share, subject to certain adjustments and restrictions relating to subsequent resale and transfers. The Purchase Warrants are exercisable six (6) months after the IPO and expire five (5) years thereafter.

At the completion of the IPO, all shares of the Company’s outstanding convertible preferred stock shares automatically converted to shares of common stock (see Note 7. Capital Structure).

Immediately after the IPO, the Company filed an amended and restated certificate of incorporation, which became effective on October 22, 2021. The amended and restated certificate of incorporation authorized 110,000,000 shares consisting of 100,000,000 shares of common stock, at a par value of \$0.00001, and 10,000,000 shares of preferred stock at a par value of \$0.00001. The rights of the holders of common stock are subject to and qualified by rights of the holders of the preferred stock.

Additionally, the Company recognized \$1.1 million of stock-based compensation expense related to stock options granted to employees with time-based vesting conditions.

***Liquidity***

The Company has incurred losses from operations since inception. The Company incurred net losses of \$7.8 million and \$8.3 million for the year ended December 31, 2021 and 2020, respectively. Accumulated deficit amounted to \$116.5 million and \$108.7 million as of December 31, 2021 and 2020, respectively. Net cash used in operating activities was \$8.6 million and \$7.9 million for the year ended December 31, 2021 and 2020, respectively.

The Company's liquidity is based on its ability to enhance its operating cash flow position, obtain capital financing from equity interest investors and obtain funds from outside sources of financing to fund its general operations, research and development activities and capital expenditures. The Company's ability to continue as a going concern is dependent on management's ability to successfully execute its business plan, which includes generating progressive revenue streams while controlling operating costs and expenses, to then result in positive operating cash flows. The Company's unrestricted balance of cash and cash equivalents was \$21.9 million and \$6.1 million as of December 31, 2021 and 2020, respectively.

Based on cash flow projections from operating and financing activities and existing balances of cash and cash equivalents, management is of the opinion that the Company has sufficient funds for sustainable operations and it will be able to meet its payment obligations and commitments from operations for at least one year from the issuance date of this report. Based on the above considerations, the Company's consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and liquidation of liabilities during the normal course of operations.

## **2. Summary of Significant Accounting Policies**

### ***Basis of Presentation***

The accompanying consolidated financial statements as of and for the years ended December 31, 2021 and 2020 have been prepared in accordance with accounting principles generally accepted in the United States ("GAAP") and pursuant to applicable rules and regulations of the Securities and Exchange Commission ("SEC"). The consolidated financial statements include all normal adjustments necessary for a fair presentation of the Company's financial position at December 31, 2021 and 2020, and operating results and cash flows for the periods presented.

These consolidated financial statements should be read in conjunction with the following: i) audited consolidated financial statements as of and for the years ended December 31, 2020 and 2019; ii) the discussion under "Management's Discussion and Analysis of Financial Condition and Results of Operations" and' iii) our final prospectus (the "Prospectus"), filed with the Securities and Exchange Commission or the SEC, pursuant to Rule 424(b) under the Securities Act of 1933, as amended or the Securities Act), on October 21, 2021.

### ***Principles of Consolidation***

The consolidated financial statements include the accounts of CYNGN Inc. and its wholly owned subsidiaries. Intercompany accounts and transactions have been eliminated upon consolidation.

### ***Foreign Currency Translation***

The functional and reporting currency for Cyngn is the U.S. dollar. Monetary assets and liabilities denominated in currencies other than U.S. dollar are translated into the U.S. dollar at period end rates, income and expenses are translated at the weighted average exchange rates for the period and equity is translated at the historical exchange rates. Foreign currency translation adjustments and transactional gains and losses are immaterial to the consolidated financial statements.

### ***Use of Estimates***

The preparation of financial statements in conformity with GAAP requires management to make certain estimates and assumptions. These estimates and assumptions affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the balance sheet date, as well as reported amounts of revenue and expenses during the reporting period. The Company's significant estimates and judgments include but are not limited to underwriter's warrants and share-based compensation. Estimates are based on historical experience and on various other assumptions believed to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results could differ from those estimates.

### **Concentration of Credit Risk**

Financial instruments that potentially subject the Company to concentrations of credit risk consist of cash and cash equivalents. The Company's cash is placed with high-credit-quality financial institutions and at times exceeds federally insured limits. The Company has not experienced any credit loss relating to its cash equivalents.

### **Concentration of Supplier Risk**

The Company generally utilizes suppliers for outside development and engineering support. The Company does not believe that there is any significant supplier concentration risk as of December 31, 2021 and 2020.

### **Cash and Cash Equivalents and Restricted Cash**

The Company considers all highly liquid money market placements with a remaining maturity of three months or less to be cash equivalents. The Company had \$21.9 million and \$6.1 million of unrestricted cash and cash equivalents as of December 31, 2021 and 2020, respectively.

In addition, the Company had \$50,000 and \$400,000 in restricted cash as of December 31, 2021 and 2020, respectively, which is reported separately as current assets on the consolidated balance sheet. The Company's restricted cash consists of cash not available for immediate use that the Company is obligated to maintain in accordance with the terms of its credit card spending arrangement.

The following table provides a reconciliation of cash and cash equivalents and restricted cash to amounts shown in the consolidated statements of cash flows:

	<b>December 31,</b>	
	<b>2021</b>	<b>2020</b>
Cash and cash equivalents	\$ 21,945,981	\$ 6,056,190
Restricted cash	50,000	400,000
Total Cash and cash equivalents and Restricted cash	<u>\$ 21,995,981</u>	<u>\$ 6,456,190</u>

### **Fair Value Measurements**

The accounting guidance under Accounting Standards Codification ("ASC") Topic 820, *Fair Value Measurements*, defines fair value, establishes a consistent framework for measuring fair value, and expands disclosure for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis. Fair value is defined as an exit price representing the amount that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants. As such, fair value is considered a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability.

The Company uses the following fair value hierarchy prescribed by U.S. GAAP, which prioritizes the inputs used to measure fair value as follows:

*Level 1*—Unadjusted quoted prices in active markets for identical assets or liabilities.

*Level 2*—Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

*Level 3*—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

Assets and liabilities are considered to be fair valued on a recurring basis if fair value is measured regularly. However, if the fair value measurement of an instrument does not necessarily result in a change in the amount recorded on the consolidated balance sheets, assets and liabilities are considered to be fair valued on a nonrecurring basis. This typically occurs when accounting guidance requires assets and liabilities to be recorded at the lower of cost or fair value, or on certain nonfinancial assets and liabilities. Nonfinancial assets and liabilities that are measured at fair value on a nonrecurring basis include certain long-lived assets, intangible assets, share-based compensation and underwriter warrants measured at fair value upon initial recognition.

The carrying amounts of the Company's cash and cash equivalents, accounts payable and notes payable are reasonable estimates of their fair values due to the short-term nature of these accounts. The fair values of the Company's share-based compensation and underwriter warrants were based on observable inputs and assumptions used in Black-Scholes valuation models derived from independent external valuations.

#### ***Property and Equipment***

Property and equipment is stated at cost less accumulated depreciation. Repair and maintenance costs are expensed as incurred. Depreciation is recorded on a straight-line basis over each asset's estimated useful life.

<b>Property and Equipment</b>	<b>Useful life</b>
Machinery and equipment	5 years
Furniture and fixtures	7 years
Leasehold improvements	Shorter of 3 years or lease term
Automobile	5 years

#### ***Leases***

The Company accounts for leases in accordance with ASC 842, *Leases*. All contracts are evaluated to determine whether or not they represent a lease. A lease conveys the right to control the use of an identified asset for a period of time in exchange for consideration. Leases are classified as finance or operating in accordance with the guidance in ASC 842. The Company does not hold any finance leases. The Company has elected to adopt the short-term lease exemption in ASC 842 and as such has not recognized a "right of use" asset or lease liability in the consolidated balance sheets as of December 31, 2021 and 2020.

#### ***Long-Lived Assets and Finite Lived Intangibles***

The Company has finite lived intangible assets consisting of patents and trademarks. These assets are amortized on a straight-line basis over their estimated remaining economic lives. The patents and trademarks are amortized over 15 years.

The Company reviews its long-lived assets and finite lived intangibles for impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. The events and circumstances the Company monitors and considers include significant decreases in the market price of similar assets, significant adverse changes to the extent and manner in which the asset is used, an adverse change in legal factors or business climate, an accumulation of costs that exceed the estimated cost to acquire or develop a similar asset, and continuing losses that exceed forecasted costs. The Company assesses the recoverability of these assets by comparing the carrying amount of such assets or asset group to the future undiscounted cash flow it expects the assets or asset group to generate. The Company recognizes an impairment loss if the sum of the expected long-term undiscounted cash flows that the long-lived asset is expected to generate is less than the carrying amount of the long-lived asset being evaluated. An impairment charge would then be recognized equal to the amount by which the carrying amount exceeds the fair value of the asset.

## ***Income Taxes***

The Company accounts for income taxes using the asset and liability method, under which deferred tax assets and liabilities are recognized for the expected future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis.

A valuation allowance is provided when it is more likely than not that some portion or all of a deferred tax asset will not be realized. Due to the Company's lack of earnings history, the net deferred tax assets have been fully offset by a valuation allowance as of December 31, 2021 and 2020 (see Note 11. Income Taxes).

There are no uncertain tax positions that would require recognition in the financial statements. If the Company were to incur an income tax liability in the future, interest on any income tax liability would be reported as interest expense and penalties on any income tax would be reported as income taxes. Management's conclusions regarding uncertain tax positions may be subject to review and adjustment at a later date based upon ongoing analysis of or changes in tax laws, regulations and interpretations thereof as well as other factors.

## ***Convertible Preferred Stock***

The Company has applied the guidance in ASC 480-10-S99-3A, *SEC Staff Announcement: Classification and Measurement of Redeemable Securities* and has classified all of its outstanding convertible preferred shares as permanent equity. The Company records shares of convertible preferred stock at their respective issuance price, net of issuance costs. The Company's convertible preferred stock share's redemption and conversion provisions are not exclusively at the option of the holder and are contingent on certain deemed liquidation events within the Company's control (see Note 7. Capital Structure).

## ***Warrants***

The Company issued to its lead underwriter in the Company's IPO warrants to purchase up to 140,000 shares of the Company's common stock. The Company accounts for warrants in accordance with ASC 480, *Distinguishing Liabilities from Equity*. The Company determined the fair value of the warrants using the Black-Scholes pricing model and treated the valuation as equity instruments in consideration of the cashless settlement provisions in the warrant agreement.

The Company also applied the guidance in ASC 340-10-S99-1, *Other Assets and Deferred Costs*, that states specific incremental costs directly attributable to a proposed or actual offering of equity securities may properly be deferred and charged against the gross proceeds of the offering. The Company treated the valuation of the warrants as directly attributable to the issuance of an equity contract and accordingly, classified the warrants as additional paid-in capital.

## ***Stock-based Compensation***

The Company recognizes the cost of share-based awards granted to employees and directors based on the estimated grant-date fair value of the awards. Cost is recognized on a straight-line basis over the service period, which is generally the vesting period of the award. The Company recognizes stock-based compensation cost and reverses previously recognized costs for unvested awards in the period forfeitures occur. The Company determines the fair value of stock options using the Black-Scholes option pricing model, which is impacted by the fair value of common stock, expected price volatility of common stock, expected term, risk-free interest rates, and expected dividend yield (see Note 9. Stock-based Compensation Expense).

### ***Net Loss Per Share Attributable to Ordinary Shareholders***

The Company computes loss per share attributable to ordinary shareholders by dividing net loss attributable to ordinary shareholders by the weighted-average number of ordinary shares outstanding. Diluted net loss per share reflects the potential dilution that could occur if securities or other contracts to issue shares were exercised into shares. In calculating diluted net loss per share, the numerator is adjusted for the change in the fair value of the shares (only if dilutive) and the denominator is increased to include the number of potentially dilutive common shares assumed to be outstanding (see Note 8. Net Loss per Share Attributable to Common Stockholders).

### ***Research and Development Expense***

Research and development expense consist primarily of outsourced engineering services, internal engineering and development expenses, materials, labor and stock-based compensation related to development of the Company's products and services. Research and development costs are expensed as incurred.

### ***Selling, General, and Administrative Expense***

Selling, general, and administrative expense consist primarily of personnel costs, facilities expenses, depreciation and amortization, travel, and advertising costs.

### ***Commitments***

The Company recognizes a liability with regard to loss contingencies when it believes it is probable a liability has occurred and the amount can be reasonably estimated. If some amount within a range of loss appears at the time to be a better estimate than any other amount within the range, the Company accrues that amount. When no amount within the range is a better estimate than any other amount the Company accrues the minimum amount in the range. There have been no such liabilities recorded by the Company as of December 31, 2021 and 2020.

### ***Segment Reporting***

The Company's chief operating decision maker, its Chief Executive Officer, manages operations and business as one operating segment for the purposes of allocating resources, makes operating decisions and evaluates financial performance.

### ***Revenue Recognition***

On January 1, 2019, the Company adopted Accounting Standards Update ("ASU") No. 2014-09, *Revenue from Contracts with Customers* ("Topic 606") and recognizes revenue upon the transfer of goods or services in an amount that reflects the expected consideration received in exchange for those goods or services. The Company has not generated any revenue for the years ended December 31, 2021 and 2020.

### ***Recent Accounting Pronouncements***

There were no significant updates to the recently issued accounting standards. Although there are several other new accounting standards issued or proposed by the Financial Accounting Standards Board ("FASB"), the Company does not believe any of those accounting standards have had or will have a material impact on its financial position or operating results.

## **3. Balance Sheet Components**

### ***Property and Equipment, Net***

Property and equipment is comprised of the following:

	<b>December 31, 2021</b>	<b>December 31, 2020</b>
Automobiles	\$ 279,617	\$ 325,406
Furniture and fixtures	133,102	125,000
Computer and Equipment	76,048	26,157
Property and equipment, gross	488,767	476,563
Less: accumulated depreciation	(385,980)	(342,758)
Total property and equipment, net	\$ 102,787	\$ 133,805

Depreciation expense for the year ended December 31, 2021 and 2020 was \$82,389 and \$88,170, respectively.

### *Accrued Expenses and Other Current Liabilities*

Accrued expenses and other current liabilities are comprised of the following:

	<b>December 31, 2021</b>	<b>December 31, 2020</b>
Credit card payable	\$ 11,678	\$ 37,455
Accrued expenses	82,478	175,761
Accrued payroll	201,000	94,186
Total accrued expenses and other current liabilities	<u>\$ 295,156</u>	<u>\$ 307,402</u>

On March 27, 2020, the United States Congress passed the Coronavirus, Aid, Relief and Economic Security Act (the “CARES Act”) in response to the economic impact of the coronavirus (“COVID-19”) pandemic in the United States (see Note 13. Risks and Uncertainties). Section 2302 of the CARES Act allowed employers to defer the remittance and payment of the employer’s share of social security taxes that were otherwise required to be remitted between March 27 and December 31, 2020, and to pay the deferred taxes in two installments — with the first half due on December 31, 2021, and the remainder by December 31, 2022. As of December 31, 2021, the Company remitted \$67,958 in social security taxes due that were deferred between May 1 and December 31, 2020.

Section 2301 of the CARES Act also provided refundable employee retention credits (the “ERC”) against certain employment taxes. The Company is currently evaluating its eligibility to claim the ERC and the impact of the credits on its consolidated statement of operations.

#### **4. Leases**

The Company leases its office space under a recurring lease agreement which expired in February 2022 and was subsequently renewed and amended (see Note 14. Subsequent Events). Monthly payments are approximately \$15,500 while future minimum payments under the primary terms of the lease in effect at December 31, 2021 are approximately \$31,000 in 2022 until the expiration of the lease in February 2022.

Rent expense for the year ended December 31, 2021 and 2020 was \$236,476 and \$229,019, respectively.

## 5. Intangible Assets, Net

The gross carrying amount and accumulated amortization of separately identifiable intangible assets are as follows:

	As of December 31, 2021		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patent	\$ 7,000	\$ (4,083)	\$ 2,917
Trademark	45,000	(17,000)	28,000
Total intangible assets	\$ 52,000	\$ (21,083)	\$ 30,917

	As of December 31, 2020		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patent	\$ 7,000	\$ (3,617)	\$ 3,383
Trademark	45,000	(14,000)	31,000
Total intangible assets	\$ 52,000	\$ (17,617)	\$ 34,383

Amortization expense for each of the years ended December 31, 2021 and 2020 was \$3,466.

Estimated amortization expense for all intangible assets subject to amortization in future years is expected to be:

Years ended December 31,	Amortization
2022	\$ 3,467
2023	3,467
2024	3,467
2025	3,467
Thereafter	17,049
Total	\$ 30,917

## 6. Debt

### *Paycheck Protection Program Notes*

In April 2020, the Company entered into a Note with JPMorgan Chase (the “Lender”) under the U.S. Small Business Administration (“SBA”) Paycheck Protection Program (“PPP”) established under Section 1102 of the CARES Act, pursuant to which the Company borrowed \$695,078 (the “Note”). The Note accrues interest at a rate of 0.98% per annum and matures in 24 months from the date of the Note. The Note may be repaid at any time with no prepayment penalty. All of the funds received under the PPP had been used for qualified purposes. The Company applied for forgiveness of the Note in accordance with PPP guidelines, and in October, 2021, received approval of the forgiveness application.

In February 2021, the Company entered into a second Note (the “PPP2 Note”) with the Lender, pursuant to which the Lender agreed to make a loan to the Company under the PPP offered by the SBA in a principal amount of \$892,115 pursuant to Title 1 of the CARES Act. The PPP2 Note matures in five years with interest accruing at 0.98% per annum. Proceeds of the PPP2 Note are available to be used to pay for payroll costs, including salaries, commissions, and similar compensation, group health care benefits, and paid leaves; rent; utilities; and interest on certain other outstanding debt. All of the funds received under the PPP2 Note were used for qualified purposes during 2021. The Company applied for forgiveness of the PPP2 Note in accordance with PPP guidelines, and in November, 2021, received approval of the forgiveness application.

The PPP and PPP2 Notes that were forgiven by the SBA were recognized as gains and included in ‘Other income’ or the non-operating section of the Company’s consolidated statements of operations.

## 7. Capital Structure

### *Common Stock*

As of December 31, 2021, the Company is authorized to issue 100,000,000 shares with a par value of \$0.00001 per share. As of December 31, 2020, the Company was authorized to issue 42,000,000 shares of Common Stock with a par value of \$0.00001 per share. As of December 31, 2021 and December 31, 2020, the Company had 26,487,680 and 951,794 shares of Common Stock issued and outstanding, respectively. Holders of common stock have no preemptive, conversion or subscription rights and there is no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that the Company may designate in the future.

### *Convertible Preferred Stock*

In October 2021, the Company amended its Certificate of Incorporation and revised the number of preferred stock shares authorized for issuance to 10,000,000 shares at a par value of \$0.00001. As of December 31, 2021, there were no shares issued and outstanding against these shares. . As of December 31, 2020 and prior to the completion of the IPO, the Company was authorized to issue up to 21,982,491 shares of preferred stock at a par value of \$0.00001.

### *Conversion*

The Company’s convertible preferred stock shares that were outstanding at the completion of the IPO on October 20, 2021 automatically converted to shares of common stock on a 1:1 basis.

The authorized, issued and outstanding shares of the convertible preferred stock and liquidation preferences prior to the IPO were as follows:

<b>Series</b>	<b>Shares Authorized</b>	<b>Shares Issued and Outstanding</b>	<b>Per Share Liquidation Preference</b>	<b>Aggregate Liquidation Amount</b>	<b>Gross Proceeds</b>
Series A	10,157,843	10,157,843	0.6842	6,949,996	6,949,996
Series B	6,567,670	6,567,670	3.3939	22,290,015	22,290,015
Series C	5,256,978	5,256,978	15.7933	83,025,031	83,025,031
	<u>21,982,491</u>	<u>21,982,491</u>		<u>112,265,042</u>	<u>112,265,042</u>

### **Warrants**

As of December 31, 2021, the fair value of the warrants was estimated using the Black-Scholes option-pricing model. The Company used the following assumptions in the model:

	<b>December 31, 2021</b>
Fair value of underlying securities	\$ 2.88
Expected volatility	51.0%
Expected term (in years)	5.0
Risk-free interest rate	1.13%

### **Dividends**

The holders of preferred stock are entitled to receive dividends, when and if declared by the Company's Board of Directors, out of any legally available funds. The holders of preferred stock are entitled to receive dividends, prior and in preference to dividends declared on common stock, at the rate of: Series A - \$0.0411 per share per annum; Series B - \$0.2036 per share per annum; and Series C - \$0.9476 per share per annum. Dividends are non-cumulative and will be paid pro rata, on an equal priority, pari passu basis. After payment of preferred stock dividends, any additional dividends will be paid ratably among holders of common stock and preferred stock on an as converted to Common Stock basis. As of December 31, 2021 and 2020, respectively, no dividends have been declared.

### **Voting**

The holder of each share of Preferred Stock is entitled to voting rights equal to the number of shares of common stock.

Preferred stockholders shall cast the number of votes equal to the number of whole shares of common stock into which the shares of Preferred Stock held by such holder are convertible. So long as any shares of Series A Preferred Stock remain outstanding, the holders of the Series A Preferred Stock, voting as a separate class, are entitled to elect one director of the Company. So long as any shares of Series B Preferred Stock remain outstanding, the holders of the Series B Preferred Stock, voting as a separate class, are entitled to elect one director of the Company. So long as any shares of Series C Preferred Stock remain outstanding, the holders of the Series C Preferred Stock, voting as a separate class, are entitled to elect one director of the Company. The holders of Common Stock, voting as a separate class, are entitled to elect two directors of the Company. The holders of Preferred Stock and Common Stock, on an as converted to basis, are entitled to elect any remaining members to the Board of Directors.

### **Liquidation**

In the event of any liquidation, dissolution or winding up of the Company, either voluntary or involuntary, the holders of preferred stock on a pari passu basis, are entitled to receive, prior to and in preference over holders of common stock, an amount equal to the original issuance price—Series A - \$0.6842 per share; Series B - \$3.3939 per share; and Series C - \$15.7933 per share. 2) If the assets of the Company available for distribution to its stockholders shall be insufficient to pay the holders of the shares of Preferred Stock the full amount to which they are entitled, the holders of shares of Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amount which would otherwise be payable in respect to the share of Preferred Stock held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

## 8. Net Loss Per Share Attributable to Common Stockholders

The following table summarizes the computation of basic and diluted loss per share:

	Year Ended December 31,	
	2021	2020
Net loss attributable to common stockholders	\$ (7,799,529)	\$ (8,338,807)
Basic and diluted weighted average common shares outstanding	5,861,730	949,544
Loss per share:		
Basic and diluted	\$ (1.33)	\$ (8.78)

Basic loss per share is based upon the weighted average number of shares of common stock outstanding during the period. Diluted loss per share would include the effect of unvested restricted stock awards and the convertible preferred Stock; however, such items were not considered in the calculation of the diluted weighted average common shares outstanding since they would be anti-dilutive.

Potentially dilutive securities excluded from the calculation of diluted shares outstanding are shown below:

	Year Ended December 31, 2021	Year ended December 31, 2020
	Unvested restricted shares	3,123,931
Common shares issuable upon conversion of preferred stock	-	21,982,491
Total	3,123,931	32,635,171

## 9. Stock-based Compensation Expense

### *Stock-Based Compensation*

The Company measures employee and director stock-based compensation awards based on the award's estimated fair value on the date of grant. Expense associated with these awards is recognized using the straight-line attribution method over the requisite service period for stock options, and is reported in our consolidated statements of comprehensive loss.

The fair value of our stock options is estimated, using the Black-Scholes option-pricing model. The resulting fair value is recognized on a straight-line basis over the period during which an employee is required to provide service in exchange for the award. The Company has elected to recognize forfeitures as they occur. Stock options generally vest over four years and have a contractual term of ten years. Vesting terminates at the end of the employment relationship.

Determining the grant date fair value of options requires management to make assumptions and judgments. These estimates involve inherent uncertainties and if different assumptions had been used, stock-based compensation expense could have been materially different from the amounts recorded.

The assumptions and estimates for valuing stock options are as follows:

- *Fair value per share of Company's common stock.* The fair value of the Company's stock options with service conditions is measured on the following basis according to when the stock options were granted: i) stock options granted prior to the IPO: due to the absence of a public market for Cyngn's common stock prior to the IPO, our Board of Directors, with the assistance of a third-party valuation specialist, determined the common stock fair value at the time of the grant of stock options by considering a number of objective and subjective factors, including our actual operating and financial performance, market conditions and performance of comparable publicly traded companies, developments and milestones in the company, and the likelihood of achieving a liquidity event among other factors; ii) stock options granted after the IPO: the closing fair market value of its common stock at the time of the grant.
- *Expected volatility.* The Company determines the expected volatility based on historical average volatilities of similar publicly traded companies corresponding to the expected term of the stock options.
- *Expected term.* The Company does not have sufficient historical data relating to its common stock nor to its stock-option exercises. As such, the Company determines the expected term of awards which contain only service conditions using the simplified approach, wherein the expected term of an award is presumed to be the mid-point between the vesting date and the expiration date of the award.
- *Risk-free interest rate.* The risk-free interest rate is based on the U.S. Treasury yield curve with maturities that approximate the expected term of the stock options.
- *Estimated dividend yield.* The estimated dividend yield is zero, as the Company does not currently intend to declare dividends in the foreseeable future.

### ***Equity Incentive Plans***

In February 2013, the Board of Directors adopted the 2013 Equity Incentive Plan ("2013 Plan"). The 2013 Plan authorizes the award of stock options, stock appreciation rights, restricted stock awards, stock appreciation rights, RSUs, performance awards, and other stock or cash awards.

In October 2021, our Board of Directors adopted the Cyngn Inc. 2021 Equity Incentive Plan (the "2021 Plan"). Our 2021 Plan replaces our 2013 Plan. However, awards outstanding under our 2013 Plan will continue to be governed by their existing terms.

As of December 31, 2021 and 2020, approximately 10,502,696 and 9,830,005 shares of common stock were reserved and available for issuance under the 2021 Plan and 2013 Plan, respectively.

Options issued under the Plan generally vest based on continuous service provided by the option holder over a four-year period. Compensation expense related to these options is recognized on a straight-line basis over the four-year period based upon the fair value at the grant date.

The following table sets forth the summary of options activity for the year ended December 31, 2021 and 2020:

	Shares	Weighted- average exercise price	Weighted- average remaining contractual term (years)	Aggregate intrinsic value
Outstanding as of December 31, 2020	6,971,301	\$ 0.20	7.0	\$ 1,399,827
Vested and expected to vest at December 31, 2020	10,892,738	\$ 0.54	7.0	\$ 5,860,120
Vested and exercisable at December 31, 2020	5,978,428	\$ 0.20	7.03	\$ 406,094
Granted	2,926,473	3.20		
Exercised	(41,416)	0.23		109,902
Cancelled/forfeited	(1,086,664)	\$ 0.20		
Outstanding as of December 31, 2021	8,769,694	\$ 1.20	7.15	\$ 15,746,916
Vested and expected to vest at December 31, 2021	8,769,694	\$ 1.20	7.15	\$ 15,746,916
Vested and exercisable at December 31, 2021	5,645,763	\$ 0.27	5.94	\$ 14,967,973

The fair value of a stock option is estimated using an option-pricing model that takes into account as of the grant date the exercise price and expected life of the option, the current price of the underlying stock and its expected volatility, expected dividends on the stock, and the risk-free interest rate for the expected term of the option. The Company has used the simplified method in calculating the expected term of all option grants based on the vesting period and contractual term. Compensation costs related to share-based payment transactions are recognized in the financial statements upon satisfaction of the requisite service or vesting requirements.

The weighted average per share grant-date fair value of options granted during the years ended December 31, 2021 and 2020 was \$2.78 and \$0.07 respectively.

The following weighted average assumptions were used in estimating the grant date fair values in December 31, 2021 and 2020:

	December 31, 2021	December 31, 2020
Fair value of common stock	\$ 2.78	\$ 0.23
Expected term (in years)	6.15	6.00
Risk-free rate	0.95%	0.68%
Expected volatility	51.0%	29.34%
Dividend yield	0%	0%

For the year ended December 31, 2021 and 2020, the Company recorded stock-based compensation expense from stock options of approximately \$1,139,247 and \$131,732, respectively.

As of December 31, 2021, total unrecognized stock-based compensation cost related to outstanding unvested stock options that are expected to vest was \$7,031,949. This unrecognized stock-based compensation cost is expected to be recognized over a weighted-average period of approximately 4.6 years. Income tax benefits recognized from stock-based compensation expense recognized for the year ended December 31, 2021 were immaterial due to cumulative losses and valuation allowances.

## 10. Retirement Savings Plan

Effective November 17, 2017, the Company established the Cyngn Inc. 401(k) Plan for the exclusive benefit of all eligible employees and their beneficiaries with the intention to provide a measure of retirement security for the future. This plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA) and qualifies under Section 401(k) of the Internal Revenue Code. Cyngn, Inc. did not offer and has not provided a company match for its 401(k) Plan.

## 11. Income Taxes

For the years ended December 31, 2021 and 2020, the Company recorded income tax expense of \$800. The effective tax rate is 0% for the years ended December 31, 2021 and 2020.

For financial reporting purposes, the Company's effective tax rate used for the interim periods is based on the estimated full-year income tax rate. Income tax expense differed from the amount computed by applying the federal statutory income tax rate of 21% to pretax income for the year ended December 31, 2021 as a result of the following:

	<b>December 31, 2021</b>
Federal tax at statutory rate	\$ (1,635,786)
State taxes	(543,984)
Nondeductible expenses	(308,449)
Research and development credit	(897,331)
FIN 48 reserve	—
Foreign Tax Rate Difference	1,779
Stock Compensation	150,330
True-up and Rate Change	26,751
Valuation allowance	3,207,490
Total	<u>\$ 800</u>

The tax effects of temporary differences that give rise to significant portions of the Company's deferred tax assets and liabilities as of December 31, 2021 and 2020 related to the following:

	<b>December 31, 2021</b>	<b>December 31, 2020</b>
Deferred tax assets:		
Intangibles	\$ 1,772,704	\$ 2,299,275
Net operating losses and Credit carryover	32,425,152	28,834,590
State taxes	168	168
Fixed Assets	89,979	101,694
SBC	243,970	90,726
Accruals And Others	40,005	38,034
Gross deferred tax assets	<u>34,571,977</u>	<u>31,364,488</u>
Valuation allowance	(34,571,977)	(31,364,488)
Total deferred tax assets	<u>-</u>	<u>-</u>
Deferred tax liabilities:		
Fixed Assets	-	-
Deferred Commissions	-	-
Total deferred tax liabilities	<u>-</u>	<u>-</u>
Net deferred tax assets:	<u>\$ -</u>	<u>-</u>

Management regularly assesses the ability to realize deferred tax assets recorded based upon the weight of available evidence, including such factors as recent earnings history and expected future taxable income on a jurisdiction by jurisdiction basis. In the event that the Company changes its determination as to the amount of realizable deferred tax assets, the Company will adjust its valuation allowance with a corresponding charge to the provision for income taxes in the period in which such determination is made. The Company's management believes that, based on a number of factors, it is more likely than not, that all or some portion of the deferred tax assets will not be realized; and accordingly, for the years ending December 31, 2021 and December 31, 2020, the Company has provided a valuation allowance against the Company's U.S. net deferred tax assets. The net change in the valuation allowance for the year ended December 31, 2021 was an increase of \$3,207,490.

As of December 31, 2021, the Company had net operating loss carryforwards for federal and state income tax purposes of approximately \$100,697,360 and \$101,454,126, respectively, which will both begin to expire in 2034 with \$65,360,163 of our federal net operating loss carryforward lasting indefinitely.

As of December 31, 2021, the Company had federal and state research credit carryforwards of approximately \$4,258,776 and \$2,192,429, respectively. The federal research credit carryforwards will begin to expire in 2023 while the California research credits carry forward have an indefinite life.

The Internal Revenue Code of 1986, as amended, imposes restrictions on the utilization of net operating losses in the event of an "ownership change" of a corporation. Accordingly, a company's ability to use net operating losses may be limited as prescribed under Internal Revenue Code Section 382 ("IRC Section 382"). Events which may cause limitations in the amount of the net operating losses that the Company may use in any one year include, but are not limited to, a cumulative ownership change of more than 50% over a three-year period. Utilization of the federal and state net operating losses may be subject to substantial annual limitation due to the ownership change limitations provided by the IRC Section 382 and similar state provisions.

As of December 31, 2021, and 2020, the total amount of gross unrecognized tax benefits was \$1,797,238 and \$1,412,668, respectively, including no interest and penalties. As of December 31, 2021, \$1,797,238 of the total unrecognized tax benefits, if recognized, would have an impact on the Company's effective tax rate. The Company estimates that there will be no material changes in its uncertain tax positions in the next 12 months. In accordance with FASB ASC 740, the Company has adopted the accounting policy that interest and penalties recognized are classified as part of its income taxes. Total interest and penalties recognized in the consolidated statement of operations was zero for 2021 and 2020.

The Company files income tax returns in the US federal and various state jurisdictions. The Company's tax years for 2018 and forward are subject to examination by the US tax authorities. The Company's tax years for 2017 and forward are subject to examination by various state tax authorities. However, due to the fact that the Company had loss and credits carried forward in some jurisdictions, certain items attributable to technically closed years are still subject to adjustment by the relevant taxing authority through an adjustment to tax attributes carried forward to open years. The Company files U.S. and foreign income tax returns with varying statutes of limitations. Due to the Company's net carryover of unused operating losses, all years remain subject to future examination by tax authorities.

## **12. Commitments and Contingencies**

### ***Legal Proceedings***

The Company is subject to legal and regulatory actions that arise from time to time. The assessment as to whether a loss is probable or reasonably possible, and as to whether such loss or a range of such loss is estimable, often involves significant judgment about future events, and the outcome of litigation is inherently uncertain. There is no material pending or threatened litigation against the Company that remains outstanding as of December 31, 2021 and 2020.

## **13. Risks and Uncertainties**

COVID-19. A novel strain of coronavirus (COVID-19) was first identified in December 2019, and subsequently declared a pandemic by the World Health Organization. While Cyngn's business has experienced limited disruption due to this pandemic, our leadership team continues to focus on the highest level of safety measures to protect our employees. The Company is aware COVID-19 continues to present significant uncertainty in the future economic outlook for our customers and the markets we serve.

## **14. Subsequent Events**

On February 17, 2022, the Company amended the lease agreement (the "Lease Amendment"). The Lease Amendment extended the current lease for an additional 18 months, which commenced on March 1, 2022, and expanded the leased space to a total of 23,311 square feet from the previous 6,886 square feet.

## **Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

There were no disagreements related to accounting principles or practices, financial statement disclosure, internal controls or auditing scope or procedure during the two fiscal years and their respective interim periods.

### **Item 9A. Controls and Procedures**

#### ***Management's Report on Disclosure Controls and Procedures***

Our management, under the supervision and with the participation of our Principal Executive Officer (our Chief Executive Officer) and Principal Financial Officer (our Chief Financial Officer), has evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2021, the end of our fiscal year covered by this report. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or person performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Management recognizes that any disclosure controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2021, that consider remediation efforts commenced by the Company as a result of the material weaknesses noted during the assessment of the effectiveness of the Company's internal controls over financial reporting as of and for the years ended December 31, 2020 and 2019, our Chief Executive Officer and Chief Financial Officer have concluded that, as of such date, our disclosure controls and procedures are effective.

#### ***Management's Report on Internal Control over Financial Reporting***

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Responsibility on estimates and judgments by management are required to assess the expected benefits and related costs of control procedures. The objectives of internal control include providing management with reasonable, but not absolute, assurance that assets are safeguarded against loss from unauthorized use or disposition, and that transactions are executed in accordance with management's authorization and recorded properly to permit the preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States. Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2021. In making this assessment, our management used the criteria set forth in the report entitled "*Internal Control — Integrated Framework*" published by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Our management has concluded that, as of December 31, 2021, our internal control over financial reporting is effective in providing reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with US generally accepted accounting principles. Our management reviewed the results of their assessment with our Board of Directors. While the Company believes the remediation measures taken to date will improve the effectiveness of its internal control over financial reporting, the Company will continue to perform additional procedures and employ additional tools and resources deemed necessary to ensure that its consolidated financial statements are fairly stated in all material respects.

### ***Inherent Limitations on Effectiveness of Controls***

Internal control over financial reporting has inherent limitations which include but is not limited to the use of independent professionals for advice and guidance, interpretation of existing and/or changing rules and principles, segregation of management duties, scale of organization, and personnel factors. Internal control over financial reporting is a process which involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements on a timely basis, however these inherent limitations are known features of the financial reporting process and it is possible to design into the process safeguards to reduce, though not eliminate, this risk. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

### ***Changes in Internal Control over Financial Reporting***

The Company implemented changes in its internal controls to remediate the material weaknesses over financial reporting that occurred during the year ended December 31, 2020.

Changes made to internal controls that were put in place to remediate the material weaknesses included: i) the hiring of finance and accounting personnel with previous backgrounds handling complex accounting matters and financial reporting; ii) the adoption and implementation of formal policies and disclosure control procedures related to the Company's financial processes; iii) refinements in the Company's business processes and solutions that facilitate the accounting and financial reporting needs of a public company.

The Company's disclosure controls and procedures were designed at a reasonable assurance level and were effective to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP and pursuant to applicable rules and regulations of the SEC. Subject to ongoing executive management review and audit committee oversight, the Company will continue to monitor the effectiveness of the remediation measures and will make changes and take other actions that are appropriate given the circumstances.

### **Item 9B. Other Information**

None.

### **Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections**

Not applicable.

## PART III

### Item 10. Directors, Executive Officers and Corporate Governance<sup>1</sup>

The following table sets forth the names and ages of all of our directors and executive officers. Our Board of Directors is currently comprised of three members, who are elected annually to serve for one year or until their successor is duly elected and qualified, or until their earlier resignation or removal. Executive officers serve at the discretion of the Board of Directors and are appointed by the Board of Directors.

<b>Name</b>	<b>Age</b>	<b>Position</b>
Lior Tal	47	Chief Executive Officer, Chairman of the Board of Directors and Director
Donald Alvarez	57	Chief Financial Officer
Ben Landen	34	Vice-President of Business Development
Mitch Lasky	60	Director
Karen Macleod	58	Director
Colleen Cunningham	59	Director
James McDonnell	66	Director

<sup>1</sup> Officers and directors to complete updated D&O Questionnaires.

The principal occupations and business experience for the past five years (and, in some instances, for prior years) of each of our directors and executive officers are as follows:

#### ***Lior Tal***

Mr. Tal has served as the Company's Chief Executive Officer and a Director since October 2016. From June 2016 to October 2016, Mr. Tal served as the Company's Chief Operating Officer. Prior to joining the Company, Mr. Tal was the director of international growth and partnerships at Facebook where he worked from April 2011 to June 2016. Mr. Tal co-founded Snaptu (acquired by Facebook) in September 2007 and was the vice president of business development until May 2011. During his time at Snaptu, Mr. Tal helped grow the user base from launch to tens of millions of users. Prior to co-founding Snaptu, Mr. Tal was a partner at Barzam, Tal, Lerer Attorneys at law & Patent attorneys from March 2004 to August 2007. Mr. Tal has also held leadership roles at Actimize (acquired by NICE), DiskSites (acquired by EMC), and Odigo (acquired by Comverse). Mr. Tal holds a law degree from Tel Aviv University.

Mr. Tal holds an LLB in law and a BA in Business Management from Reichman University. Mr. Tal's executive and technology industry experience qualify him to serve on our board of directors.

### ***Donald Alvarez***

Mr. Alvarez has served as the Company's Chief Financial Officer since June 2021. Prior to joining the Company, Mr. Alvarez was the vice president of finance of the International Council of Shopping Centers from 2017 to August 2020. During his time at the International Council of Shopping Centers, Mr. Alvarez helped improve internal controls, increase productivity and reduce cost. Mr. Alvarez was active in renegotiating merchant credit card fees. Mr. Alvarez also implemented a company-wide, annual budget process and deployment of a new budgeting software tool. From 2015 to 2017, Mr. Alvarez was vice president of finance of QuVa Pharma, Inc. ("QuVa"), where he helped create an accounting and finance department. From 2011 to 2014, Mr. Alvarez was the national managing partner, COO and CFO of Tatum, a Randstand Company ("Tatum"). During his time with Tatum, Mr. Alvarez oversaw a business turnaround that significantly improved Tatum's financial performance. Mr. Alvarez has held several other senior financial and operational roles in both private and public companies, including CFO of Broadband Discovery Systems, Inc., CFO of Fatbrain.com, CFO of Shop.com, and Regional Managing Director of Resources Global Professionals. Mr. Alvarez began his career in the audit and assurance practice of Deloitte where he spent seven (7) years. Mr. Alvarez holds a BS in Business Administration from California State University, East Bay.

### ***Ben Landen***

Mr. Landen has served as the Company's Vice President of Business Development since May 2021. Prior to that, Mr. Landen served as the Company's Senior Director of Product & Partnerships from September 2019 to May 2021. From May 2017 to September 2019, Mr. Landen was the Head of Product & Business Development at DeepScale (acquired by Tesla), a venture-backed startup that developed AI perception solutions for autonomous vehicles. From August 2015 to April 2017, Mr. Landen was a Senior Business Manager of Maxim Integrated, where he managed a \$100M automotive semiconductor product line and supervised a team of product managers. Mr. Landen was a Business Manager from September 2013 to August 2015 and an Associate Business Manager from August 2010 to September 2013. Mr. Landen holds a BS in Electrical Engineering from California Polytechnic University, San Luis Obispo and an MBA from UC Berkeley's Haas School of Business.

### **Non-Executive Directors**

#### ***Mitch Lasky***

Mr. Lasky has served as a member of the Company's board of directors since March 2013. Mr. Lasky has been a partner of Benchmark Capital, a venture capital firm, since April 2007. Mr. Lasky has been a co-owner of the Los Angeles Football Club since January 2016. Mr. Lasky was the EVP, Mobile & Online of Electronic Arts from February 2006 to April 2007. From November 2000 to February 2006, Mr. Lasky was the CEO and chairman of the board of JAMDAT Mobile, Inc. Mr. Lasky currently serves as a member of the board of directors of various companies, including: Discord, Manticore Games Inc., Ubiquity6 Inc., and thatgamecompany. Mr. Lasky has previously served as a member of the board of directors of various companies, including: Snap Inc., PlayFab, Inc., Engine Yard, Outpost Games, Inc., NaturalMotion, Gakai, and Riot Games. Mr. Lasky holds a JD from the University of Virginia School of Law and a BA in History and Literature from Harvard University.

Mr. Lasky's prior experience serving on the boards of publicly traded companies and his financial and technology industry experience qualify him to serve on the Company's board of directors.

### ***Karen Macleod***

Ms. Macleod has served as a member of the Company's board of directors since July 2021. Ms. Macleod currently serves as Market Leader — Interim Solutions of Korn Ferry. Ms. Macleod served as the CEO of the Arete Group through 2021, a company she founded in 2015. Ms. Macleod was the president of Tatum, Randstand Holdings NV Company from 2011 to 2014. Ms. Macleod was the president of Resources Connection, Inc. North America from 2004 to 2009 and previously served in other capacities after joining the company in 1998. From 1985 to 1994, Ms. Macleod was a senior manager at Deloitte. Ms. Macleod has also served on various boards. Ms. Macleod has served as a member of the board of directors of Track Group Inc. (OTCQX — TRCK), and has been the chair of Track Group Inc.'s audit committee since 2016. Ms. Macleod served as a member of the board of directors and a member of the audit committee of FWA of New York from 2018 to 2021. From 1998 to 2009, Ms. Macleod served on the board of directors of Resources Connection, Inc. (NASDAQ — RGP). From 2006 to 2013, Ms. Macleod served on the board of directors of Overland Solutions. Ms. Macleod holds a B.A. in Business Economics from University of California, Santa Barbara.

Ms. Macleod prior board experience and particularly her role serving on audit committees qualify her to serve on the Company's board of directors.

### ***Colleen Cunningham***

Ms. Cunningham has served as a member of the Company's board of directors since September 2021. Ms. Cunningham has served as a board member and the treasurer of Northstar Pet Rescue since 2017. From 2012 to 2018, Ms. Cunningham was the senior vice president and corporate controller of Zoetis, Inc. Prior to that, Ms. Cunningham was the global managing director of Resources Connection, Inc. from 2007 to 2012. From 2003 to 2007, Ms. Cunningham was the president and chief executive officer of Financial Executives International. From 2001 to 2003, Ms. Cunningham was the chief financial officer of Havas Advertising, North America. Ms. Cunningham was chief accountant at AT&T, Inc. from 1999 to 2001. Prior to that, Ms. Cunningham was a division manager of accounting policy and external reporting for AT&T, Inc. from 1995 to 1999. Ms. Cunningham was the assistant controller of AT&T Capital Corporation from 1988 to 1995. From 1984 to 1988, Ms. Cunningham was a senior auditor at Touche Ross/Coopers & Lybrand. Ms. Cunningham has also served on various committees. From 2015 to 2018, Ms. Cunningham served as a member of the US Chamber of Commerce Financial Reporting Committee. From 2012 to 2018, Ms. Cunningham served as a member of the FEI Committee on Corporate Reporting. From 2007 to 2012, Ms. Cunningham served as a member of the International Issues Conference Committee of AICPA. From 2005 to 2009, Ms. Cunningham served as a board member and the chair of the Ethics Resource Center Finance Committee. From 2005 to 2018, Ms. Cunningham served as a member of the advisory board to the accounting department of Pennsylvania State University. From 2003 to 2007, Ms. Cunningham served as a member of both the International Accounting Standards Board Standing Advisory Committee and the Financial Accounting Standards Board Advisory Committee. Ms. Cunningham holds a B.A. in economics from Rutgers University and an M.B.A. in management from New York University's Stern School of Business.

Ms. Cunningham's prior management experience and expertise in corporate reporting, governance and accounting issues qualify her to serve on the Company's board of directors.

### ***James McDonnell***

Mr. McDonnell has served as a member of the Company's board of directors since September 2021. Mr. McDonnell is currently the Senior Vice President of Sales and Marketing for Vispero, since 2017. Mr. McDonnell was VP of sales at Honeywell from 2013 to 2017. Mr. McDonnell served on the board of Asetek from 2014-2019. Mr. McDonnell was SVP Sales & Marketing at Intermed from 2010 to 2013. Prior to this, Mr. McDonnell was an SVP and served in many executive sales and marketing roles at Hewlett-Packard from 1983 to 2009. Mr. McDonnell began his career at the General Electric Company from 1977 to 1983. Mr. McDonnell has a BS degree in Electrical engineering from Villanova University.

Mr. McDonnell's prior experiences in sales & marketing leadership within various technology companies and his experience in industrial markets qualify him to serve on the Company's board of directors.

### **Board Composition**

Our board currently consists of five directors, Lior Tal, Mitch Lasky, Karen Macleod, Colleen Cunningham and James McDonnell. Ms. Macleod, Ms. Cunningham and Mr. McDonnell are "*independent directors*" within the meaning of the Listing Rules (the "Nasdaq Listing Rules") of the Nasdaq Stock Market ("Nasdaq").

### **Family Relationships**

No family relationships exist between any of our officers or directors.

### **Role of Board of Directors in Risk Oversight Process**

The board of directors has extensive involvement in the oversight of risk management related to us and our business and accomplishes this oversight through the regular reporting by the Audit Committee. The purpose of the Audit Committee is to assist the board of directors in fulfilling its fiduciary oversight responsibilities relating to (1) the integrity of the Company's financial statements, (2) the effectiveness of the Company's internal control over financial reporting, (3) the Company's compliance with legal and regulatory requirements, and (4) the independent auditor's qualifications and independence. Through its regular meetings with management, including the finance, legal and internal audit functions, the Audit Committee reviews and discusses all significant areas of our business and summarizes for the board of directors all areas of risk and the appropriate mitigating factors. In addition, our board of directors receives periodic detailed operating performance reviews from management.

### **Director Independence**

The Board evaluates the independence of each nominee for election as a director of our Company in accordance with the Nasdaq Listing Rules. Pursuant to these rules, a majority of our Board must be "independent directors" within the meaning of the Nasdaq Listing Rules, and all directors who sit on our Audit Committee, Nominating and Corporate Governance Committee and Compensation Committee must also be independent directors.

### **Committees of the Board of Directors**

Our board of directors has established an audit committee, a compensation committee, and a nominating and corporate governance committee. The composition and responsibilities of each of the committees of our board of directors are described below. Members serve on these committees until their resignation or until otherwise determined by our board of directors. Our board of directors may establish other committees as it deems necessary or appropriate from time to time.

### **Audit Committee**

The members of our Audit Committee are Karen Macleod, Colleen Cunningham and James McDonnell, with Ms. Cunningham serving as the Chairperson. Each of Ms. Macleod, Ms. Cunningham and Mr. McDonnell, is independent under the rules and regulations of the SEC and the listing standards of the Nasdaq Stock Market applicable to audit committee members. Our board of directors has determined that each of Ms. Macleod and Ms. Cunningham qualify as an audit committee financial expert within the meaning of SEC regulations and meet the financial sophistication requirements of the Nasdaq Stock Market.

Our Audit Committee has the responsibility for, among other things, (i) selecting, retaining and overseeing our independent registered public accounting firm, (ii) obtaining and reviewing a report by independent auditors that describe the accounting firm's internal quality control, and any materials issues or relationships that may impact the auditors, (iii) reviewing and discussing with the independent auditors standards and responsibilities, strategy, scope and timing of audits, any significant risks, and results, (iv) ensuring the integrity of the Company's financial statements, (v) reviewing and discussing with the Company's independent auditors any other matters required to be discussed by PCAOB Auditing Standard No. 1301, (vi) reviewing, approving and overseeing any transaction between the Company and any related person and any other potential conflict of interest situations, (vii) overseeing the Company's internal audit department, (viii) reviewing, approving and overseeing related party transactions, and (ix) establishing and overseeing procedures for the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters and the confidential, anonymous submission by Company employees of concerns regarding questionable accounting or auditing matters.

## **Compensation Committee**

The members of our Compensation Committee are Ms. Macleod, Ms. Cunningham and Mr. McDonnell, with Ms. Macleod serving as the Chairperson. Our Compensation Committee has the responsibility for, among other things, (i) reviewing and approving the chief executive officer's compensation based on an evaluation in light of corporate goals and objectives, (ii) reviewing and recommending to the Board the compensation of all other executive officers, (iii) reviewing and recommending to the Board incentive compensation plans and equity plans, (iv) reviewing and discussing with management the Company's Compensation Discussion and Analysis and related information to be included in the annual report on Form 10-K and proxy statements, and (v) reviewing and recommending to the Board for approval procedures relating to Say on Pay Votes.

## **Nominating and Corporate Governance Committee**

The members of our Nominating and Corporate Governance Committee are Ms. Macleod, Ms. Cunningham and Mr. McDonnell, with Mr. McDonnell serving as the Chairperson. Our Nominating and Corporate Governance Committee has the responsibility relating to assisting the Board in, among other things, (i) identifying and screening individuals qualified to become members of our board of directors, consistent with criteria approved by our board of directors, (ii) recommending to the Board the approval of nominees for director, (iii) developing and recommending to our board of directors a set of corporate governance guidelines, and (iv) overseeing the evaluation of our board of director.

## **Code of Business Conduct and Ethics**

Our board of directors has adopted a Code of Business Conduct and Ethics (the "Code"). The Code applies to all of our directors, officers and employees. We have made the Code available on our website <https://investors.cynngn.com/corporate-governance-documents/>. We intend to disclose future amendments to, or waivers of, our Code, as and to the extent required by SEC regulations, at the same location on our website identified above or in public filings.

## **Board Diversity**

Each year, our nominating and corporate governance committee will review, with the board of directors, the appropriate characteristics, skills and experience required for the board of directors as a whole and its individual members. In evaluating the suitability of individual candidates, our nominating and corporate governance committee will consider factors including, without limitation, an individual's character, integrity, judgment, potential conflicts of interest, other commitments and diversity. While we have no formal policy regarding board diversity for our board of directors as a whole nor for each individual member, the nominating and corporate governance committee does consider such factors as gender, race, ethnicity, experience and area of expertise, as well as other individual attributes that contribute to the total diversity of viewpoints and experience represented on the board of directors.

On August 6, 2021, the Securities and Exchange Commission ("SEC") approved The Nasdaq Stock Market LLC's ("Nasdaq") proposal to adopt listing rules for Nasdaq-listed companies related to board diversity. The new Rule 5605(f) (Diverse Board Representation) requires Nasdaq-listed companies, subject to certain exceptions, (1) to have at least one director who self-identifies as a female, and (2) to have at least one director who self-identifies as Black or African American, Hispanic or Latinx, Asian, Native American or Alaska Native, Native Hawaiian or Pacific Islander, two or more races or ethnicities, or as LGBTQ+, or (3) to explain why the reporting company does not have at least two directors on its board who self-identify in the categories listed above. In addition, Rule 5606 (Board Diversity Disclosure) requires each Nasdaq-listed company, again subject to certain exceptions, to provide statistical information about such company's Board of Directors, in a proposed uniform format, related to each director's self-identified gender, race, and self-identification as LGBTQ+. The Company has elected to include the requested disclosures in the uniform format proposed by Nasdaq in our annual report herein, as set forth in the matrix below.

In addition, the State of California has enacted two statutes on the subject of board diversity that apply to all publicly held companies whose principal executive offices are located in California. In 2018, SB 826 was adopted whereby such companies whose boards of directors have six or more members were required to have at least one female director by the end of 2019 and are required to have at least three female directors by the end of 2021. In 2020, AB 979 was adopted which requires all publicly held corporations headquartered in California to diversify their boards of directors with directors from “underrepresented communities.” Similar to Nasdaq Rule 5605(f), AB 979 defines “director from an underrepresented community” as “an individual who self-identifies as Black, African American, Hispanic, Latino, Asian, Pacific Islander, Native American, Native Hawaiian, or Alaska Native, or who self-identifies as gay, lesbian, bisexual, or transgender.” Covered companies must have at least one director from an underrepresented community on their boards by December 31, 2021, and covered companies with nine or more directors must have at least three such directors on their boards by December 31, 2022. The same individual may count for the purposes of both gender and underrepresented community diversity.

The Company believes that it is presently in compliance with the diversity requirements imposed by the Nasdaq listing rules as well as the two State of California statutes summarized above.

**Board Diversity Matrix (as of March 23, 2022)**

Total Number of Directors	5			
	Female	Male	Non-Binary	Did Not Disclose Gender
<b>Part I: Gender Identity</b>				
Directors	2	3	-	-
<b>Part II: Demographic Background</b>				
African American or Black	-	-	-	-
Alaskan Native or Native American	-	-	-	-
Asian	-	-	-	-
Hispanic or Latinx	-	-	-	-
Native Hawaiian or Pacific Islander	-	-	-	-
White	2	3	-	-
Two or More Races or Ethnicities	-	-	-	-
LGBTQ+	-			
Did Not Disclose Demographic Background	-			

## Involvement in Certain Legal Proceedings

Our directors and executive officers have not been involved in any of the following events during the past ten years:

1. any bankruptcy petition filed by or against such person or any business of which such person was a general partner or executive officer either at the time of the bankruptcy or within two years prior to that time;
2. any conviction in a criminal proceeding or being subject to a pending criminal proceeding (excluding traffic violations and other minor offenses);
3. being subject to any order, judgment, or decree, not subsequently reversed, suspended or vacated, of any court of competent jurisdiction, permanently or temporarily enjoining him from or otherwise limiting his involvement in any type of business, securities or banking activities or to be associated with any person practicing in banking or securities activities;
4. being found by a court of competent jurisdiction in a civil action, the SEC or the Commodity Futures Trading Commission to have violated a Federal or state securities or commodities law, and the judgment has not been reversed, suspended, or vacated;
5. being subject of, or a party to, any Federal or state judicial or administrative order, judgment decree, or finding, not subsequently reversed, suspended or vacated, relating to an alleged violation of any Federal or state securities or commodities law or regulation, any law or regulation respecting financial institutions or insurance companies, or any law or regulation prohibiting mail or wire fraud or fraud in connection with any business entity; or
6. being subject of or party to any sanction or order, not subsequently reversed, suspended, or vacated, of any self-regulatory organization, any registered entity or any equivalent exchange, association, entity or organization that has disciplinary authority over its members or persons associated with a member.

## Item 11. Executive Compensation

The following table provides information regarding the compensation earned by or paid to our named executive officers with respect to the years ended December 31, 2021 and 2020 .

### Summary Compensation Table

Name and Principal Position	Fiscal Year	Salary (\$)	Bonus (\$)	Stock Awards (\$)	Option Award (\$) <sup>(1)</sup>	Non-Equity Incentive Plan Compensation	Non-Qualified Deferred Compensation Earnings (\$)	All Other Compensation (\$)	Total (\$)
Lior Tal CEO	2021	\$ 350,000	\$ 150,000	\$ -	\$ 506,857	\$ -	\$ -	\$ -	\$ 1,006,857
	2020	350,000	150,000	-	102,301	-	-	15,724 <sup>(2)</sup>	618,025
Donald Alvarez CFO	2021	152,885	-	-	139,336	-	-	-	292,221
	2020	-	-	-	-	-	-	-	-
Ben Landen VP of Business Development	2021	222,454	-	-	32,256	-	-	5,000 <sup>(2)</sup>	259,710
	2020	208,297	-	-	3,045	-	-	-	211,342

The amounts below represent the compensation awarded to or earned by or paid to our named executive officers for the years ended December 31, 2021 and 2020:

- (1) Represents the aggregate grant date fair value of equity compensation awards granted to the named executive officer, computed in accordance with FASB ASC Topic 718. See Note 9 to our consolidated financial statements included elsewhere in this report for a discussion of the assumptions made by us in determining the grant date fair value of our equity awards.
- (2) Represents relocation expenses paid by the Company on behalf of Mr. Tal and Mr. Landen.

## Executive Employment Agreements

### Lior Tal

On January 1, 2022, we entered into an employment agreement with our Chief Executive Officer, Lior Tal, which agreement superseded and replaced the offer letter entered into by and between the Company and Mr. Tal on April 17, 2016.

Pursuant to the employment agreement, as compensation for his services as Chief Executive Officer of the Company, Mr. Tal will receive: (1) a salary of \$500,000 per annum (the “Base Salary”) and commensurate benefits; (2) eligibility, subject to Mr. Tal’s continued employment with the Company, to earn an annual performance based bonus in the target of 60% of his Base Salary; (3) eligibility, also subject to Mr. Tal’s continued employment with the Company, to participate in the Company’s 2013 Equity Incentive Plan, the Company 2021 Incentive Plan, or any successor plan, subject to the terms of such plan; and (4) entitlement, also subject to Mr. Tal’s continued employment with the Company, to reimbursement for all reasonable and necessary out-of-pocket business, entertainment, and travel expenses incurred by Mr. Tal in connection with the performance of Mr. Tal’s duties as the Company’s Chief Executive Officer and the Company’s expense reimbursement policies and procedures.

The agreement also provides for severance to Mr. Tal pursuant to the terms described therein and the extension of the post termination exercise period of stock options held by Mr. Tal upon the termination of his employment, upon the terms and conditions outlined in the Agreement.

### Ben Landen

On September 19, 2019, we entered into an immediately effective offer letter with Mr. Ben Landen. Pursuant to Mr. Landen’s offer letter, he will serve as our Senior Director of Business and Corporate Development. Mr. Landen’s offer letter shall continue until terminated by either the Company or Mr. Landen. Pursuant to Mr. Landen’s offer letter, he will receive (i) an annual base salary of \$220,000, and (ii) an option to purchase 150,000 shares of the Company’s common stock at an exercise price of \$0.23 per share, which is based on the Board of Directors-approved fair market valuation as of March 31, 2019, as determined by an independent financial consultant. The option shall vest and become exercisable over a four-year period with 25% vesting on the one-year anniversary of Mr. Landen’s employment start date and the balance vesting equally after each additional one-month period for continuous service completed over the following 36 months, subject to and in accordance with the terms of the Company’s 2013 Stock Incentive Plan. Mr. Landen’s options expire in November, 2029. The offer letter contains customary provisions relating to vacation, benefits, and non-compete.

### Donald Alvarez

On May 28, 2021, we entered into an offer letter with Mr. Donald Alvarez, effective June 1, 2021. Pursuant to Mr. Alvarez’s offer letter, he serves as our Chief Financial Officer. Mr. Alvarez’s offer letter shall continue until terminated by either the Company or Mr. Alvarez. Pursuant to Mr. Alvarez’s offer letter, he will receive (i) an annual base salary of \$250,000 for his first year of employment, which annual base salary will increase to \$300,000 upon the completion by the Company of an initial public offering, and (ii) a stock option to purchase 400,000 shares of the Company’s common stock at an exercise price of \$2.88 per share, which option shall vest and become exercisable over a four-year period with 25% vesting on the one-year anniversary of Mr. Alvarez’s employment start date and the balance vesting equally after each additional one-month period for continuous service completed over the following 36 months, subject to and in accordance with the terms of the Company’s 2013 Stock Incentive Plan. Mr. Alvarez’s options will expire in June 2031. The offer letter contains customary provisions relating to vacation, benefits, and non-compete.

### Outstanding Equity Awards at Fiscal Year-End

The following table discloses information regarding outstanding equity awards granted or accrued as of December 31, 2021, for our named executive officers.

Name	Outstanding Equity Awards					
	Option Awards			Stock Awards		
	Number of Securities Underlying Unexercised Options (#) Vested	Number of Securities Underlying Unexercised Options (#) Unvested	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock that have not Vested (#)	Market Value of Shares or Units of Stock that have not Vested (\$)
Lior Tal (Chief Executive Officer)	2,424,215	—	\$ 0.13	4/5/27	—	—
	953,789	—	\$ 0.13	3/22/28	—	—
	1,805,262	181,738	\$ 0.22	5/30/28	—	—
	—	1,600,000	\$ 2.88	7/25/31	—	—
Donald Alvarez (Chief Financial Officer)	—	400,000	\$ 2.88	7/25/31	—	—
Ben Landen (Vice President of Business Development)	84,375	65,625	\$ 0.23	11/4/29	—	—
	—	100,000	\$ 2.88	7/25/31	—	—

## Compensation of Directors

Prior to November 2021, our directors did not receive compensation for board service. On November 16, 2021, our Board of Directors, upon recommendation of the Compensation Committee, approved and adopted a program for compensating independent directors of the Board. Each independent director shall receive annual cash compensation of \$35,000. In addition, the chairperson of the Audit Committee, Compensation Committee and Nominating and Governance Committee shall receive an annual compensation of \$20,000, \$15,000 and \$10,000, respectively; and the lead independent director shall receive an annual cash compensation of \$15,000. There shall also be (i) an initial award of \$270,000 in restricted stock units of the Company to each new independent director which shall be awarded on May 1<sup>st</sup> of each fiscal year commencing in 2022 and which will vest monthly over three (3) years, and (ii) an annual award of \$180,000 in restricted stock units of the Company, which shall be granted on May 1<sup>st</sup> of each fiscal year starting in 2022 and which will vest in its entirety one (1) year from the grant date.

The following table sets forth the summary compensation information (described above) for each of our non-employee directors:

<b>DIRECTOR COMPENSATION</b>							
<b>Name</b>	<b>Fees Earned or Paid in Cash (\$)</b>	<b>Stock Awards (\$)</b>	<b>Option Awards (\$)</b>	<b>Non-Equity Incentive Plan Compensation (\$)</b>	<b>Nonqualified Deferred Compensation Earnings (\$)</b>	<b>All Other Compensation (\$)</b>	<b>Total (\$)</b>
Karen Macleod	-	-	61,019	-	-	-	61,019
Colleen Cunningham	-	-	30,508	-	-	-	30,508
James McDonnell	-	-	30,508	-	-	-	30,508

## Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The following table sets forth certain information with respect to the beneficial ownership of our voting securities as of March 24, 2022 by (i) any person or group beneficially owning more than 5% of any class of voting securities; (ii) our directors, and; (iii) each of our named executive officers; and (iv) all executive officers and directors as a group as of the date of March 24, 2022. The information presented below regarding beneficial ownership of our voting securities has been presented in accordance with the rules of the Securities and Exchange Commission and is not necessarily indicative of ownership for any other purpose. Under these rules, a person is deemed to be a “beneficial owner” of a security if that person has or shares the power to vote or direct the voting of the security or the power to dispose or direct the disposition of the security. A person is deemed to own beneficially any security as to which such person has the right to acquire sole or shared voting or investment power within 60 days through the conversion or exercise of any convertible security, warrant, option or other right. More than one person may be deemed to be a beneficial owner of the same securities. Unless otherwise indicated, the address of all listed stockholders is c/o Cyngn Inc., 1015 O’Brien Drive, Menlo Park, CA 94025.

<b>Name of Beneficial Owner</b>	<b>Common Stock Beneficially Owned</b>	<b>Percentage of Common Stock<sup>(1)</sup></b>
<b>Directors and Officers:</b>		
Lior Tal <sup>(2)</sup>	5,328,656	16.69%
Donald Alvarez	—	*
Ben Landen <sup>(3)</sup>	100,000	0.36%
Mitch Lasky <sup>(7)</sup>	9,238,787	34.09%
Karen Macleod <sup>(4)</sup>	19,737	0.07%
Colleen Cunningham <sup>(5)</sup>	9,868	0.03%
James McDonnell <sup>(6)</sup>	9,868	0.03%
All Executive Officers and Directors as a Group (7 persons)	14,706,916	51.27%
<b>Beneficial owners of more than 5%:</b>		
Entities affiliated with Benchmark <sup>(7)</sup>	9,238,787	34.09%
Andreessen Horowitz Fund III, L.P. <sup>(8)</sup>	5,234,828	19.32%
Entities affiliated with Redpoint <sup>(9)</sup>	2,463,851	9.09%

\* represents less than 1%

- (1) We have based our calculation of the percentage of beneficial ownership on 27,094,430 shares of common stock outstanding on March 24, 2022. We have deemed shares of common stock subject to stock options that are currently exercisable or exercisable within 60 days of March 24, 2022 to be outstanding and to be beneficially owned by the person holding the stock option for the purpose of computing the percentage ownership of that person. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person.
- (2) Includes 500,000 shares of common stock held directly and 4,828,656 shares of common stock issuable upon the exercise of stock options that are exercisable within 60 days of March 24, 2022.
- (3) Represents shares of common stock underlying 100,000 options to purchase shares of common stock of the Company which are vested and currently exercisable and shares underlying options which will become exercisable on or before March 24, 2022.
- (4) Represents shares of common stock underlying 19,737 options to purchase shares of common stock of the Company which are vested and currently exercisable and shares underlying options which will become exercisable on or before March 24, 2022.
- (5) Represents shares of common stock underlying 9,868 options to purchase shares of common stock of the Company which are vested and currently exercisable and shares underlying options which will become exercisable on or before March 24, 2022.



- (6) Represents shares of common stock underlying 9,868 options to purchase shares of common stock of the Company which are vested and currently exercisable and shares underlying options which will become exercisable on or before March 24, 2022.
- (7) Based solely on a Schedule 13G filed with the SEC on February 14, 2022 by entities and individuals affiliated with Benchmark. Represents 9,238,787 shares, of which 239,529 are directly owned by Benchmark Capital Partners VI, L.P. (“BCP VI”), 14,980 are directly owned by Benchmark Founders’ Fund VI, L.P. (“BFF VI”), 9,832 are directly owned by Benchmark Founders’ Fund VI-B, L.P. (“BFF VI-B”), 25,821 are held in nominee form for the benefit of persons associated with Benchmark Capital Management Co. VI, L.L.C. (“BCMC VI”), 7,111,971 are directly owned by Benchmark Capital Partners VII, L.P. (“BCP VII”), 789,847 are directly owned by Benchmark Founders’ Fund VII, L.P. (“BFF VII”) and 1,046,807 are directly owned by Benchmark Founders’ Fund VII-B, L.P. (“BFF VII-B”). BCMC VI is the general partner of BCP VI, BFF VI and BFF VI-B, and BCMC VII is the general partner of BCP VII, BFF VII and BFF VII-B. Matthew R. Cohler (“Cohler”), a member of BCMC VI and BCMC VII, may be deemed to have shared power to dispose of the shares held directly by these entities. BCMC VI, the general partner of BCP VI, BFF VI and BFF VI-B, may be deemed to have sole power to vote and sole power to dispose of shares of the Company directly owned by BCP VI, BFF VI and BFF VI-B. BCMC VII, the general partner of BCP VII, BFF VII and BFF VII-B, may be deemed to have sole power to vote and sole power to dispose of shares of the Company directly owned by BCP VII, BFF VII and BFF VII-B. Alexandre Balkanski (“Balkanski”), Matthew R. Cohler (“Cohler”), Bruce W. Dunlevie (“Dunlevie”), Peter Fenton (“Fenton”), J. William Gurley (“Gurley”), Keven R. Harvey (“Harvey”), Robert C. Kagle (“Kagle”) and Mitchell H. Lasky (“Lasky”) are members of BCMC VI and may be deemed to have shared power to vote and shared power to dispose of shares of the Company directly owned by BCP VI, BFF VI and BFF VI-B. Cohler, Dunlevie, Fenton, Gurley, Harvey and Lasky are members of BCMC VII and may be deemed to have shared power to vote and shared power to dispose of shares of the Company directly owned by BCP VII, BFF VII and BFF VII-B. The principal business address for each of these entities and individuals is 2965 Woodside Road, Woodside, California 94062.
- (8) Based solely on a Schedule 13G filed with the SEC on February 14, 2022 by entities and individuals affiliated with Andreessen Horowitz Fund III, L.P. (“AH III”). Represents 5,234,828 shares of common stock, all of which are held of record by AH III. The address of the stockholder is Andreessen Horowitz Fund III, L.P. 2865 Sand Hill Road, Suite 101 Menlo Park, CA 94025 Attn: Robin Casey. Marc Andreessen and Ben Horowitz share voting and dispositive power over the securities held by the stockholder.
- (9) Based solely on a Schedule 13G filed with the SEC on February 11, 2022 by entities affiliated with Redpoint. Represents (i) 2,402,255 shares of common stock, held of record by Redpoint Ventures IV, L.P. (“RV IV”) and (ii) 61,596 shares of common stock held of record by Redpoint Associates IV, L.L.C. (“RA IV,” and together with RV IV, the “Redpoint Entities”). Redpoint Ventures IV, LLC (“RV IV LLC”) is the sole general partner of RV IV and the managers of RV IV LLC commonly control RA IV. Voting and dispositive decisions with respect to the shares held by RV IV and RA IV are made by the managers of RV IV LLC and RA IV: W. Allen Beasley, Jeffrey D. Brody, Satish Dharmaraj, R. Thomas Dyal, Timothy M. Haley, Christopher B. Moore, Scott C. Raney, John L. Walecka and Geoffrey Y. Yang. The address for each of the Redpoint Entities is 2969 Woodside Road, Woodside, CA 94062.

## **Securities Authorized for Issuance under Equity Compensation Plans**

### ***2013 Equity Incentive Plan***

*General.* In February 2013, our Board of Directors adopted the 2013 Equity Incentive Plan (the “2013 Plan”). Our 2013 Plan became effective immediately on adoption.

*Share Reserve.* The number of shares of our common stock available for issuance under our 2013 Plan is 17,158,579, subject to adjustment as described in the 2013 plan.

### ***2021 Equity Incentive Plan***

*General.* In October 2021, our Board of Directors adopted the Cyngn Inc. 2021 Equity Incentive Plan (the “2021 Plan”) and the 2021 Plan was submitted to our stockholders for approval. Our 2021 Plan became effective immediately on adoption. Our 2021 Plan replaces our 2013 Plan. However, awards outstanding under our 2013 Plan will continue to be governed by their existing terms. Our 2021 Plan has the features described below.

*Share Reserve.* The number of shares of our common stock available for issuance under our 2021 Plan is 1,500,000 plus up to 8,500,000 shares common stock that are reserved and not yet issued or subject to awards granted under the 2013 Plan or that have subsequently forfeited, expire or lapse unexercised or unsettled. There will also be an annual increase to be added as of the first day of the Company’s fiscal year beginning in 2022 equal to the least of (i) 5% of the outstanding common stock on a fully diluted basis as of the end of the Company’s immediately preceding fiscal year, (ii) 1,000,000 shares, and (iii) a lesser amount determined by the board; provided, however, that any shares from any such increases in previous years that are not actually issued shall continue to be available for issuance under the 2021 Plan.

<b>Plan Category</b>	<b>Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)</b>	<b>Weighted-average exercise price of outstanding options, warrants and rights (b)</b>	<b>Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))</b>
Equity compensation plans approved by security holders	8,535,221	\$ 0.75	-
Equity compensation plans not approved by security holders	234,473	\$ 6.88	\$ 10,490,196
<b>Total</b>	<b>8,769,694</b>		<b>\$ 10,490,196</b>

### Item 13. Certain Relationships and Related Transactions, and Director Independence

Other than as set forth below and compensation arrangements, including employment, and indemnification arrangements, discussed, there have been no transactions since January 1, 2020, in which the amount involved in the transaction exceeded or will exceed the lesser of \$120,000 or one percent of the average of our total assets as at the year-end for the last two completed fiscal years, and to which any of our directors, executive officers or beneficial holders of more than 5% of our capital stock, or any immediate family member of, or person sharing the household with, any of these individuals, had or will have a direct or indirect material interest.

#### Amended and Restated Investor Rights Agreement

We are parties to that certain second amended and restated investor rights agreement dated December 24, 2014, entered into with our certain of our stockholders, including an entity with which one of our directors is affiliated. These stockholders are entitled to rights with respect to the registration of their shares following our initial public offering.

#### Indemnification Agreements

On October 29, 2021, the Board of Directors entered into indemnification agreements with each of its directors and executive officers (the “D&O Indemnification Agreements”). The D&O Indemnification Agreements provide that the Corporation will indemnify each of its directors, executive officers, and such other key employees against any and all expenses incurred by that director or executive officer because of his or her status as one of the Corporation’s directors or executive officers, to the fullest extent permitted by Delaware law and the Corporation’s amended and restated certificate of incorporation. In addition, the D&O Indemnification Agreements provide that, to the fullest extent permitted by Delaware law, the Corporation will advance all expenses incurred by its directors, executive officers, and other key employees in connection with a legal proceeding involving his or her status as a director, executive officer, or key employee.

#### Limitation of Liability and Indemnification of Officers and Directors

Our certificate of incorporation, as amended and restated, limits the liability of directors to the maximum extent permitted by Delaware General Corporation Law (the “DGCL”). The DGCL provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors.

Our bylaws provide that we will indemnify our directors and officers to the fullest extent permitted by law, and may indemnify employees and other agents. Our bylaws also provide that we are obligated to advance expenses incurred by a director or officer in advance of the final disposition of any action or proceeding.

Our bylaws, subject to the provisions of the DGCL contain provisions which allow the corporation to indemnify any person against liabilities and other expenses incurred as the result of defending or administering any pending or anticipated legal issue in connection with service to us if it is determined that person acted in good faith and in a manner which he or she reasonably believed was in the best interest of the corporation. Insofar as indemnification for liabilities arising under the Securities Act of 1933 as amended, or the Securities Act, may be permitted to our directors, officers and controlling persons, we have been advised that in the opinion of the Securities and Exchange Commission, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

The limitation of liability and indemnification provisions in our bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might provide a benefit to us and our stockholders. Our results of operations and financial condition may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

At present, there is no pending litigation or proceeding involving any of our directors or officers as to which indemnification is required or permitted, and we are not aware of any threatened litigation or proceeding that may result in a claim for indemnification.

#### Policies and Procedures for Related Party Transactions

We have adopted a formal, written related party transactions policy that provides that transactions with directors, officers and holders of five percent or more of our voting securities and their affiliates, each a related party must be approved by our audit committee. Pursuant to this policy, the audit committee will have the primary responsibility for reviewing and approving or disapproving “related party transactions,” which are transactions between us and related persons in which the aggregate amount involved exceeds or may be expected to exceed the lesser of (i) \$120,000 or (ii) one percent of the average of our total assets for the last two completed fiscal years, and in which a related person has or will have a direct or indirect material interest. For purposes of this policy, a related person will be defined as a director, executive officer, nominee for director, or greater than 5% beneficial owner of our common stock, in each case since the beginning of the most recently completed year, and their immediate family members.

#### Director Independence

The Board evaluates the independence of each nominee for election as a director of our Company in accordance with the Nasdaq Listing Rules. Pursuant to these rules, a majority of our Board must be “independent directors” within the meaning of the Nasdaq Listing Rules, and all directors who sit on our Audit Committee, Nominating and Corporate Governance Committee and Compensation Committee must also be independent directors.

Our board currently consists of five directors, Lior Tal, Mitch Lasky, Karen Macleod, Colleen Cunningham and James McDonnell. Ms. Macleod, Ms. Cunningham and Mr. McDonnell are “independent directors” within the meaning of the Listing Rules (the “Nasdaq Listing Rules”) of the Nasdaq Stock Market (“Nasdaq”).

#### Item 14. Principal Accounting Fees and Services

The following table summarizes the fees billed by Marcum LLP for the fiscal years ended December 31, 2021 and 2020, inclusive of out-of-pocket expenses. All fees described below were pre-approved by the audit committee.

Fee Category	Year Ended December 31,	
	2021	2020
Audit fees <sup>(1)</sup>	\$ 123,000	\$ 57,912
Audit-related fees <sup>(2)</sup>	107,852	19,000
Tax fees <sup>(3)</sup>	-	-
All other fees <sup>(4)</sup>	3,806	-
<b>Total fees</b>	<b>\$ 234,658</b>	<b>\$ 76,912</b>

(1) Audit fees consist of fees for professional services rendered in connection with the annual audit of our consolidated financial statements, the review of our quarterly condensed consolidated financial statements and consultations on accounting matters directly related to the audit.

(2) Audit-related fees consist of fees for professional services rendered in connection with the submission of our Registration Statement on Form S-1 in connection with our initial public offering.

(3) Tax fees consist of fees for professional services for tax compliance, tax advice and tax planning.

(4) All other fees consist of fees related to engagement administration.

## PART IV

### Item 15. Exhibits, Financial Statement Schedules

#### a) Financial Statements

- 1) Financial statements for our Company are listed in the index under Item 8 of this document.
- 2) All financial statement schedules are omitted because they are not applicable, not material or the required information is shown in the financial statements or notes thereto.

#### b) Exhibits

Exhibit Number	Description
3.1	<a href="#">Fourth Amended and Restated Certificate of Incorporation of Registrant incorporated by reference to Exhibit 3.1 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-259278) filed with the SEC on October 15, 2021.</a>
3.2	<a href="#">Certificate of Amendment to the Fourth Amended and Restated Certificate of Incorporation of Registrant incorporated by reference to Exhibit 3.2 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-259278) filed with the SEC on October 15, 2021.</a>
3.3	<a href="#">Second Certificate of Amendment to the Fourth Amended and Restated Certificate of Incorporation of Registrant incorporated by reference to Exhibit 3.3 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-259278) filed with the SEC on October 15, 2021.</a>
3.4	<a href="#">Third Certificate of Amendment to the Fourth Amended and Restated Certificate of Incorporation of Registrant incorporated by reference to Exhibit 3.4 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-259278) filed with the SEC on October 15, 2021.</a>
3.5	<a href="#">Fourth Certificate of Amendment to the Fourth Amended and Restated Certificate of Incorporation of Registrant incorporated by reference to Exhibit 3.5 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-259278) filed with the SEC on October 15, 2021.</a>
3.6	<a href="#">Fifth Amended and Restated Certificate of Incorporation of Registrant incorporated by reference to Exhibit 3.6 to the Company's Quarterly Report on Form 10-Q filed with the SEC on November 19, 2021.</a>
3.7	<a href="#">Amended and Restated Bylaws of Registrant, incorporated by reference to Exhibit 3.8 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-259278) filed with the SEC on October 15, 2021.</a>
4.1*	<a href="#">Description of Registrant's Securities</a>
10.1	<a href="#">Offer Letter between the Company and Lior Tal dated April 17, 2016 incorporated by reference to Exhibit 10.1 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-259278) filed with the SEC on October 15, 2021.</a>
10.2	<a href="#">Offer Letter between the Company and Ben Landen dated as of September 18, 2019 incorporated by reference to Exhibit 10.2 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-259278) filed with the SEC on October 15, 2021.</a>
10.3	<a href="#">Offer Letter between the Company and Donald Alvarez dated as of May 28, 2021 incorporated by reference to Exhibit 10.3 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-259278) filed with the SEC on October 15, 2021.</a>
10.4	<a href="#">2013 Equity Incentive Plan incorporated by reference to Exhibit 10.4 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-259278) filed with the SEC on October 15, 2021.</a>
10.5	<a href="#">2021 Incentive Plan incorporated by reference to Exhibit 10.5 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-259278) filed with the SEC on October 15, 2021.</a>
10.6	<a href="#">Second Amended and Restated Investors' Rights Agreement dated as of December 24, 2014 incorporated by reference to Exhibit 10.6 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-259278) filed with the SEC on October 15, 2021.</a>
10.7	<a href="#">Form of Indemnification Agreement to be entered into with the Registrant and each of its officers and directors incorporated by reference to Exhibit 10.7 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-259278) filed with the SEC on October 15, 2021.</a>
10.8	<a href="#">Employment Agreement by and between Cyngn Inc. and Lior Tal dated as of January 1, 2022 incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on January 6, 2022.</a>
21.1*	<a href="#">List of Subsidiaries of the Registrant</a>
23.1*	<a href="#">Consent of Marcum LLP</a>
31.1*	<a href="#">Certification of Principal Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) of the Securities Exchange Act, as amended.</a>
31.2*	<a href="#">Certification of Principal Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) of the Securities Exchange Act, as amended.</a>
32.1**	<a href="#">Certification of Principal Executive Officer and Principal Financial Officer pursuant to Rules 13a-14(b) or 15d-14(b) of the Securities Exchange Act, as amended, and 18 U.S.C. Section 1350.</a>
101.INS	Inline XBRL Instance Document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

\* Filed herewith.

\*\*Furnished herewith.

### Item 16. Form 10-K Summary

None.



## SIGNATURES

In accordance with Section 13 or 15(d) of the Exchange Act, the registrant caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

### CYNGN INC.

By: /s/ Lior Tal  
Lior Tal  
Chief Executive Officer and Chairman of the Board  
(Principal Executive Officer)

Date: March 24, 2022

In accordance with the Exchange Act, this Report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Lior Tal</u> Lior Tal	Chief Executive Officer and Director (Principal Executive Officer),	March 24, 2022
<u>/s/ Donald Alvarez</u> Donald Alvarez	Chief Financial Officer (Principal Financial Officer)	March 24, 2022
<u>/s/ Mitch Lasky</u> Mitch Lasky	Director	March 24, 2022
<u>/s/ Karen Macleod</u> Karen Macleod	Director	March 24, 2022
<u>/s/ Colleen Cunningham</u> Colleen Cunningham	Director	March 24, 2022
<u>/s/ James McDonnell</u> James McDonnell	Director	March 24, 2022

**DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT  
TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934**

Cyngn Inc. has one class of securities registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"): its common stock, par value \$0.00001 per share ("common stock"). The following description of our capital stock is a summary and does not purport to be complete. The following description is subject to and qualified in its entirety by reference to our restated certificate of incorporation and amended and restated bylaws, each of which is incorporated by reference as an exhibit to our Annual Report on Form 10-K of which this Exhibit is a part.

We encourage you to read our restated certificate of incorporation, amended and restated bylaws and the applicable provisions of the Delaware General Corporation Law (the "DGCL") for more information. References herein to "we," "our," "us," and "the Company" refer solely to Cyngn Inc.

**General**

Our authorized capital stock consists of 110,000,000 shares of capital stock, par value \$0.00001 per share, of which:

- 100,000,000 shares are designated as common stock; and
- 10,000,000 shares are designated as preferred stock.

Our board of directors is authorized, without stockholder approval except as required by the listing standards of the Nasdaq Capital Market ("Nasdaq"), to issue additional shares of our capital stock.

**Voting Rights**

Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Our restated certificate of incorporation and amended and restated bylaws do not provide for cumulative voting rights. Because of this, the holders of a plurality of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they should so choose. With respect to matters other than the election of directors, at any meeting of the stockholders at which a quorum is present or represented, the affirmative vote of a majority of the voting power of the shares present in person or represented by proxy at such meeting and entitled to vote on the subject matter shall be the act of the stockholders, except as otherwise required by law. The holders of a majority of the stock issued and outstanding and entitled to vote, present in person or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of the stockholders.

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**Dividends**

Subject to preferences that may be applicable to any then-outstanding preferred stock, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

**Liquidation**

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of preferred stock.

**Rights and Preferences**

Holders of our common stock have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of our preferred stock that we may designate in the future.

*Preferred Stock*

Our restated certificate of incorporation contains provisions that permit our board of directors to issue, without any further vote or action by the stockholders, shares of preferred stock in one or more series and, with respect to each such series, to fix the number of shares constituting the series and the designation of the series, the voting rights (if any) of the shares of the series, and the powers, preferences or relative, participation, optional and other special rights, if any, and any qualifications, limitations or restrictions, of the shares of such series.

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## Subsidiaries of Registrant

Name of Subsidiary	Jurisdiction of Incorporation
Cyngn Singapore PTE. LTD. <sup>(1)</sup>	Singapore
Cyngn Philippines, Inc. <sup>(2)</sup>	Philippines

(1) Cyngn Singapore PTE. LTD. is being dissolved.

(2) Cyngn Philippines, Inc. is being dissolved.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in the Registration Statement of Cyngn Inc. on Form S-8 (File no. 333-262130) of our report dated March 24, 2022, with respect to our audits of the consolidated financial statements of Cyngn Inc. as of December 31, 2021 and 2020, and for each of the two years then ended, which report is included in this Annual Report on Form 10-K of Cyngn Inc. for the year ended December 31, 2021.

/s/ Marcum LLP

Marcum LLP  
San Jose, CA  
March 24, 2022

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**CERTIFICATIONS OF CHIEF EXECUTIVE OFFICER  
PURSUANT TO RULES 13A-14 AND 15D-14  
OF THE SECURITIES EXCHANGE ACT OF 1934**

I, Lior Tal, certify that:

- 1) I have reviewed this Annual Report of Cyngn Inc.;
- 2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3) Based on my knowledge, the financial statements and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared.
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in this report any changes in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5) The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 24, 2022

/s/ Lior Tal

Lior Tal  
Chief Executive Officer, Chairman of the  
Board of Directors and Director  
(Principal Executive Officer)

**CERTIFICATIONS OF CHIEF EXECUTIVE OFFICER  
PURSUANT TO RULES 13A-14 AND 15D-14  
OF THE SECURITIES EXCHANGE ACT OF 1934**

I, Donald Alvarez, certify that:

- 1) I have reviewed this Annual Report of Cyngn Inc.;
- 2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3) Based on my knowledge, the financial statements and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared.
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in this report any changes in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5) The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 24, 2022

*/s/ Donald Alvarez*

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Donald Alvarez  
Chief Financial Officer  
(Principal Financial Officer)

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Cyngn Inc. (“Company”) on Form 10-K for the year ending December 31, 2021, as filed with the Securities and Exchange Commission on the date hereof (“Report”), the undersigned, in the capacities and on the date indicated below, each hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the knowledge of each of the undersigned:

- 1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- 2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 24, 2022

*/s/ Lior Tal*

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Lior Tal  
Chief Executive Officer, Chairman of the  
Board of Directors and Director  
(Principal Executive Officer)

*/s/ Donald Alvarez*

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Donald Alvarez  
Chief Financial Officer  
(Principal Financial Officer)