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

FORM 10-K

FOR ANNUAL AND TRANSITION REPORTS PURSUANT TO
SECTIONS 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

(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, 2023**

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE TRANSITION PERIOD FROM TO**

Commission file number 000-24389

OneSpan Inc.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	**36-4169320**
(State or Other Jurisdiction of Incorporation or Organization)	**(IRS Employer Identification No.)**

1 Marina Park Drive, Unit 1410
Boston, Massachusetts 02210
(Address of Principal Executive Offices)(Zip Code)
Registrant's telephone number, including area code:
312-766-4001
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of exchange on which registered
Common Stock, par value $.001 per share	**OSPN**	**NASDAQ Capital Market**

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

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined by Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 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 past 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-T (§232.405 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 definition 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 check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards 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. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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

As of June 30, 2023, the aggregate market value of voting and non-voting common equity (based upon the last sale price of the common stock as reported on the NASDAQ Capital Market on June 30, 2023) held by non-affiliates of the registrant was $588,629,980 at $14.84 per share.

As of March 1, 2024, there were 37,789,737 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Certain sections of the registrant's Notice of Annual Meeting of Stockholders and Proxy Statement for its 2024 Annual Meeting of Stockholders are incorporated by reference into Part III of this report.

Auditor Name: KPMG LLP	Auditor Location: Chicago, IL	Auditor Firm ID: 185

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References to OneSpan

Throughout this Annual Report on Form 10-K, the “Company,” “OneSpan,” “we,” “us,” and “our,” except where the context requires otherwise, refer to OneSpan Inc. and its consolidated subsidiaries, and “our board of directors” refers to the board of directors of OneSpan Inc.

Cautionary Note Regarding Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements within the meaning of applicable U.S. securities laws, including statements regarding the outcomes we expect from our updated strategic transformation plan and cost reduction and restructuring actions approved in August 2023 and in prior periods, including the ability of those actions to allow us to accelerate Adjusted EBITDA (earnings before interest, taxes, depreciation, and amortization) growth and drive value creation by growing revenue efficiently and profitably; estimates concerning the timing and amount of savings, Adjusted EBITDA improvements, and/or restructuring charges that may result from our cost reduction and restructuring actions; our plans for managing our Digital Agreements and Security Solutions segments; expectations about trends in our cost of goods sold, gross margin, and sales and marketing, research and development, and general and administrative expenses; the impact of foreign currency rate fluctuations; expectations regarding sources and uses of cash; and our general expectations regarding our operational or financial performance in the future. Forward-looking statements may be identified by words such as "seek", "believe", "plan", "estimate", "anticipate", “expect", "intend", "continue", "outlook", "may", "will", "should", "could", or "might", and other similar expressions. These forward-looking statements involve risks and uncertainties, as well as assumptions that, if they do not fully materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. Factors that could materially affect our business and financial results include, but are not limited to: our ability to execute our updated strategic transformation plan and cost reduction and restructuring actions in the expected timeframe and to achieve the outcomes we expect from them; unintended costs and consequences of our cost reduction and restructuring actions, including higher than anticipated restructuring charges, disruption to our operations, litigation or regulatory actions, reduced employee morale, attrition of valued employees, adverse effects on our reputation as an employer, loss of institutional know-how, slower customer service response times, and reduced ability to complete or undertake new product development projects and other business, product, technical, compliance or risk mitigation initiatives; our ability to attract new customers and retain and expand sales to existing customers; our ability to successfully develop and market new product offerings and product enhancements; changes in customer requirements; the potential effects of technological changes; the loss of one or more large customers; difficulties enhancing and maintaining our brand recognition; competition; lengthy sales cycles; challenges retaining key employees and successfully hiring and training qualified new employees; security breaches or cyber-attacks; real or perceived malfunctions or errors in our products; interruptions or delays in the performance of our products and solutions; reliance on third parties for certain products and data center services; our ability to effectively manage third party partnerships, acquisitions, divestitures, alliances, or joint ventures; economic recession, inflation, and political instability; claims that we have infringed the intellectual property rights of others; price competitive bidding; changing laws, government regulations or policies; pressures on price levels; component shortages; delays and disruption in global transportation and supply chains; impairment of goodwill or amortizable intangible assets causing a significant charge to earnings; actions of activist stockholders; and exposure to increased economic and operational uncertainties from operating a global business, as well as other factors described in the “Risk Factors” section of this Annual Report on Form 10-K. Our filings with the Securities and Exchange Commission (the “SEC”) and other important information can be found in the Investor Relations section of our website at *investors.onespan.com*. We do not have any intent, and disclaim any obligation, to update the forward-looking information to reflect events that occur, circumstances that exist or changes in our expectations after the date of this Form 10-K, except as required by law.

Our website address is included in this Annual Report on Form 10-K as an inactive textual reference only.

PART I

Item 1 – *Business*

Overview

OneSpan provides security, identity, electronic signature ("e-signature") and digital workflow solutions that protect and facilitate digital transactions and agreements. Through our two business units, Security Solutions and Digital Agreements, we deliver products and services that automate and secure customer-facing and revenue-generating business processes for use cases ranging from simple transactions to workflows that are complex or require higher levels of security.

Our solutions help our customers ensure the integrity of the people and records associated with digital agreements, transactions, and interactions in industries including banking, financial services, healthcare, and professional services. We are trusted by global blue-chip enterprises, including more than 60% of the world's largest 100 banks, and we process millions of digital agreements and billions of transactions in more than 100 countries annually.

We offer our products primarily through a subscription licensing model and provide multiple deployment options, including cloud-based and on-premises solutions. Our solutions are sold worldwide through our direct sales force, as well as through distributors, resellers, systems integrators, and original equipment manufacturers.

Business Transformation

We are currently in the midst of a business transformation. In December 2021, our board of directors ("Board" or "Board of Directors") approved a restructuring plan (the "restructuring plan") designed to advance our operating model, streamline our business, improve efficiency, and enhance our capital resources. The first phase of this restructuring plan began and was substantially completed during the three months ended March 31, 2022. In May 2022, our Board approved additional actions related to the restructuring plan and we announced a three-year strategic transformation plan that began on January 1, 2023 (the "2022 strategic plan"). In conjunction with the 2022 strategic plan and to enable a more efficient capital deployment model, effective with the quarter ended June 30, 2022, we began reporting under the following two lines of business, which are our reportable operating segments: Digital Agreements and Security Solutions.

- **Digital Agreements.** Digital Agreements consists of solutions that enable our clients to secure and automate business processes associated with their digital agreement and customer transaction lifecycles that require consent, non-repudiation and compliance. These solutions, which are largely cloud-based, include OneSpan Sign e-signature, OneSpan Notary, and OneSpan Trust Vault. This segment also includes costs attributable to our transaction cloud platform.

- **Security Solutions.** Security Solutions consists of our broad portfolio of software products, software development kits (SDKs), and Digipass authenticator devices that are used to build applications designed to defend against attacks on digital transactions across online environments, devices, and applications. The software products and SDKs included in the Security Solutions segment are largely on-premises software products and include identity verification, multi-factor authentication and transaction signing solutions, such as mobile application security, and mobile software tokens.

When we began the 2022 strategic plan, we expected that we would manage Digital Agreements for accelerated growth and market share gains and Security Solutions for cash flow given its more modest growth profile. During the three months ended March 31, 2023, we changed our methodology for allocating expenses between the segments to better reflect the shift in employee time, effort, and costs toward supporting the growth of our Digital Agreements segment instead of our Security Solutions segment.

During the quarter ended June 30, 2023, we determined that we were unlikely to achieve the revenue growth levels set forth in our 2022 strategic plan within the contemplated three-year timeframe. A number of factors contributed to the challenges achieving the originally planned growth levels, particularly in Digital Agreements, on the timeframes set forth in the 2022 strategic plan, including: macroeconomic uncertainties in the banking and financial services segments, which have resulted in longer sales cycles and greater price sensitivity on the part of customers; increasing maturity and competitiveness in the market for e-signature solutions; limited awareness of our brand among buyers of e-signature tools; and higher pricing aggressiveness from competitors. These and other factors made it more difficult than we originally anticipated to build our Digital Agreements sales pipeline, generate demand for our Digital Agreements solutions through marketing efforts, and improve our sales force productivity levels.

In response to these challenges in growing our Digital Agreements revenue, we modified our strategy to focus more heavily on improving Adjusted EBITDA margin across the business. To this end, in August 2023, our Board approved cost reduction actions (the "2023 Actions") to seek to drive higher levels of Adjusted EBITDA while maintaining our long-term growth potential. We intend to continue to pursue the overall strategy set forth in the 2022 strategic plan, including driving efficient growth in Digital Agreements and managing Security Solutions for modest growth and cash flow, while implementing adjustments to our operating model that are intended to achieve greater operational efficiency and strengthen our ability to create value for our shareholders.

Our updated strategy, the 2023 Actions and other cost reduction actions implemented under our restructuring plan originally adopted in December 2021 involve numerous risks and uncertainties. For additional details please see Item IA, *Risk Factors*.

Industry Background

While digital transformation and the shift to cloud-delivered experiences across all industries has helped increase the pace of innovation and business execution, it has also increased security risks for organizations, their customers, and their employees. People and records associated with business interactions, transactions, and agreements have become the biggest attack surface, or point of vulnerability, to cyber-attacks.

Today's cybersecurity bad actors are sophisticated and well-resourced, which means that enterprises everywhere are confronted with security threats on all fronts, from identity fraud and firewall breaches to nation-state espionage. Without secure and enforceable business processes and outcomes, economies everywhere are vulnerable. However, current security measures are typically at odds with the pressure for organizations to drive growth and support increasing customer expectations for frictionless user experiences.

For high-value transactions and agreements that have shifted to digital workflows, these challenges are amplified due to the fragmented legal requirements, regulatory rules, and complexity associated with doing business across state and national borders. In addition to automating and securing these digital workflows, cross-border identity verification, data privacy, and sovereignty regulations vary from one jurisdiction to the next, complicating compliance for organizations operating globally.

We expect that these trends will continue to accelerate and evolve, creating an opportunity for OneSpan to leverage our global security roots to deliver technology that enables frictionless customer experiences, with security seamlessly interwoven throughout every action and interaction. We believe that OneSpan is well positioned to help organizations deliver the simple and intuitive experiences their customers demand today, while preparing them for the security challenges of tomorrow.

Our Products and Services Portfolio

We offer a portfolio of products and solutions to enable secure, compliant and refreshingly easy customer interactions and transactions. Whereas other companies provide point solutions for either security or digital agreements, we support the entire lifecycle of digital agreements for global enterprises that need to meet the highest levels of assurance, security, and compliance, all while using a human-centric approach that minimizes friction for customers. Our portfolio spans across the key stages of digital transactions and agreements:

- Verify – Identity Proofing and Verification: Establish a relationship with your customer, starting with knowing who they are.
- Authenticate – User Authentication: Protect yourself and your customer's identity and financial transactions with strong customer authentication.
- Interact – Virtual Room and OneSpan Notary: Connect and collaborate with your customers and notarize documents in a secure, virtual environment.
- Transact – E-Sign: Sign transactions and agreements remotely and securely.
- Store – Secure Digital Storage: Complete the digital agreement process by securely storing transaction records and documentation.

Since June 30, 2022, we have reported our financial results under two operating segments: Digital Agreements and Security Solutions. The products and services that fall under each segment are shown below.

Digital Agreements

OneSpan Sign supports a broad range of e-signature requirements from simple to complex, and from the occasional agreement to processing tens of thousands of transactions. OneSpan Sign provides multiple public cloud deployment options to meet global data residency needs. The solution is also available in a Federal Risk and Authorization Management Program (FedRAMP) software as a service ("SaaS")-level compliant cloud, allowing U.S. government agencies to implement e- signatures in the cloud and meet General Services Administration ("GSA") security requirements.

Customers can configure OneSpan Sign to reinforce their brand for a seamless signing experience. Each step of the digital agreement workflow can be customized, from authentication to e-signing and secure digital storage. OneSpan Sign also provides comprehensive and secure electronic evidence for strong legal protection by capturing all actions that took place during the agreement process. This reduces the time and cost of gathering evidence and demonstrating legal and regulatory compliance. Electronic signature capabilities can be a critical component of the account opening and onboarding processes, providing a secure and user-friendly way to execute legally binding agreements.

Virtual Room is a purpose-built, high-assurance solution that blends the simplicity of a consumer video collaboration app with high-assurance identity and authentication security. OneSpan's secure Virtual Room cloud service enables organizations to deliver live, high-touch assistance to their customers in a secure virtual environment. This next-generation customer engagement solution gives organizations the ability to combine identity verification, authentication, and e-signature solutions from the broader OneSpan portfolio with a high-assurance virtual experience that removes the friction of entering a branch or meeting in person. In addition, robust audit and compliance controls help manage risk and meet regulatory requirements.

OneSpan Notary is an online notary solution developed for organizations with in-house notaries. It includes live electronic signature, two-way secured videoconferencing, and strong identity proofing options, like ID Verification and Knowledge-based Authentication (KBA). It also simplifies the notarization process with guided workflows, the ability to upload eNotary Seal, recording, eJournaling, and audit trail capabilities in a single solution. OneSpan Notary is currently available for use in 30 states, and we are targeting availability for approximately 34 U.S. states by the end of the first quarter of 2024.

OneSpan Trust Vault is a blockchain-based decentralized digital storage solution that helps organizations meet compliance, regulatory, and chain of custody requirements for critical documents. Using blockchain technology, Trust Vault records the exact date of origin or creation of a document and tracks every user action with respect to the document, which enables the prompt detection of tampering and provides a comprehensive audit trail. Trust Vault is designed for high-value, high-risk use-cases by providing tamper resistant document storage supported by immutable compliance data.

Security Solutions

OneSpan Identity Verification gives banks and other financial institutions access to a wide range of identity verification services – all through a single API integration. This includes identity document (e.g., driver's license, passport, etc.) capture and real-time authenticity verification, as well as facial comparison ("selfie") and liveness detection (the ability to detect whether a digital interaction is with a live human being) to establish that the individual presenting the identity document is the same person whose picture appears on the authenticated identity document. We plan to present OneSpan Identity Verification in the Digital Agreements segment effective January 1, 2024 in order to reflect the greater alignment of this solution with our Digital Agreements product portfolio.

OneSpan Cloud Authentication is a quick-to-deploy, cloud-based multifactor authentication solution that supports a full range of authentication options including biometrics, push notification, visual cryptograms for transaction data security, SMS, and hardware authenticators. This allows customers to solve strong authentication problems across different endpoints to best meet their unique requirements through a single provider rather than integrating multiple modalities together. It eliminates cost associated with managing legacy on-premises authentication technology and provides a seamless upgrade path to more comprehensive capabilities such as Intelligent Adaptive Authentication, which applies a precise level of security for each unique customer interaction using advanced real-time risk analysis and scoring.

Mobile Security Suite is a comprehensive software development kit that helps protect mobile transactions from bad actors by allowing organizations to natively integrate security features including geolocation, device identification, jailbreak and root detection, fingerprint and face recognition, one-time password delivery via push notification, and transaction data security, among others. Through a comprehensive library of APIs, application developers can extend and strengthen application security, deliver enhanced convenience to their application users, and streamline application deployment and lifecycle management processes. Mobile Security Suite also includes a Runtime Application Self-Protection module, which can detect and mitigate malicious app activity and potential loss to hacking activities.

Authentication Server resides on-premises and incorporates a range of strong authentication utilities and solutions designed to allow organizations to securely authenticate users and transactions. The solution, once integrated, becomes largely transparent to users, minimizing rollout and support issues. Authentication Server encompasses multiple authentication technologies (e.g., passwords, dynamic password technologies, certificates, and biometrics) and allows the use of any combination of those technologies simultaneously.

Digipass Authenticators are our family of hardware authenticators, consisting of a wide variety of authentication devices, each of which has its own distinct characteristics to meet the needs of our customers. All models of the Digipass family of authenticators are designed to work together so customers can switch devices without changes to their existing infrastructure. Our models range from one-button devices and smart card readers to devices that include more advanced technologies, such as public key infrastructure ("PKI") and visual cryptography.

Digipass FX1 BIO, the latest addition to our Digipass Authenticators product line, is a physical passkey with fingerprint scan built for the workforce authentication market. Digipass FX BIO is built on FIDO passwordless authentication technology and works with a wide range of platforms, services, devices and connectivity options. It allows organizations to cost-effectively adopt passwordless authentication across dispersed workforces while safeguarding corporate data and applications against social engineering, adversary-in-the-middle attacks and replay attacks.

Intellectual Property and Proprietary Rights and Licenses

We rely on a combination of patent, copyright, trademark, design, and trade secret laws, as well as employee and third-party non-disclosure agreements to protect our intellectual property ("IP") and other proprietary rights. We hold patents in the U.S. and in other countries, which cover multiple aspects of our technology. These patents expire between 2024 and 2040. In addition to the issued patents, we also have several patent applications pending in the U.S., Europe, and other countries. Many of our issued and pending patents are related to our Digipass product line. In addition to our owned IP, we license software from third parties for integration into our solutions, including open-source software and other software available on commercially reasonable terms.

We furthermore have registrations for most of our trademarks in most of the markets where we sell the corresponding products and services, as well as registrations of the designs of many of our Digipass devices, primarily in the European Union ("EU") and China.

Protecting IP rights can be difficult, particularly in countries that provide less protection to IP rights and in the absence of harmonized international IP standards. Competitors and others may already have IP rights covering similar products. We may not be able to secure IP rights covering our own products or may have difficulties obtaining IP licenses from other companies on commercially favorable terms. For a discussion of IP-related risks, see Item IA, *Risk Factors*.

Research and Development

Our research and development efforts are focused primarily on enhancing our solutions by building new features, functionality, and applications; developing technology to support new products; enhancing our transaction-cloud platform; and conducting product and quality assurance testing. We employ a team of full-time engineers and, from time to time, also engage independent engineering firms to conduct certain product development efforts on our behalf. For fiscal years ended December 31, 2023, 2022, and 2021, we incurred expenses, net of software capitalization, of $38.4 million, $41.7 million, and $47.4 million, respectively, for research and development.

Production

Our Digipass authentication devices are manufactured by third-party manufacturers pursuant to purchase orders that we issue. Our Digipass products are manufactured by several independent factories in Southern China and one in Romania. We maintain local personnel in China to conduct quality control and quality assurance procedures. Periodic visits to the factories are conducted by our personnel for quality management, assembly process review, and supplier relations.

Digipass devices are made primarily from commercially available electronic components, including microprocessors purchased from several suppliers. We purchase microprocessors and arrange for shipment to our third-party manufacturers for assembly and testing in accordance with our design specifications. The microprocessors are the most important components of the devices which are not commodity items readily available on the open market.

During 2022, the supply chain for our Digipass devices was impacted by global issues related to the effects of the COVID-19 pandemic, the Russia-Ukraine conflict and the inflationary cost environment, particularly with respect to materials in the semiconductor market, including part shortages, increased freight costs, diminished transportation capacity and labor constraints. This resulted in disruptions in our supply chain during 2022, as well as difficulties and delays in procuring certain microprocessors. In addition, since late 2021, our costs have increased due to elevated lead times and increased material costs, in particular the need to purchase microprocessors from alternative sources. Although the supply chain issues we saw in 2022 stabilized during 2023, global supply chains for semiconductors and electronic components remain vulnerable to disruption from range of risks, including natural disasters and extreme weather, regional or global conflicts, and scarcity of certain minerals and components.

In response to these supply chain conditions, beginning in 2022, we focused on improving our supplier network, engineering alternative designs, and working to reduce supply shortages and mitigate their impact. We actively manage our inventory in an effort to minimize supply chain disruptions and enable continuity of supply and services to our customers, and we may maintain elevated levels of inventory for certain of our products to prepare for potential supply constraints. We also regularly evaluate alternative manufacturing and supply arrangements, including moving more of our manufacturing from China to Romania or other locations, to mitigate supply chain risks. Despite these efforts, we may experience additional supply chain disruptions or cost increases affecting our Digipass business in the future. Please see Item IA, *Risk Factors*.

Our software solutions are produced in-house or developed by third parties and sold under license.

Competition

The market for digital solutions for identity, authentication, and secure digital agreements is very competitive and, like most technology-driven markets, is subject to rapid change and constantly evolving solutions and services. Our identity verification and authentication products are designed to allow authorized users access to digital business processes and properties, in some cases using patented technology, as a replacement for or supplement to a static password. Our main competitors in our identity verification and authentication markets are Gemalto (a subsidiary of Thales Group), RSA Security and Yubico. There are also many other companies, such as Transmit Security, Symantec and Duo Security, that offer competing services.

In addition to these companies, we face competition from many small authentication solution providers, many of whom offer new technologies and niche solutions such as biometric or risk and behavioral analysis. We believe that competition in this market is likely to intensify as a result of increasing demand for security products.

Our primary competitors for electronic signature solutions are DocuSign and Adobe Systems. Both companies are significantly larger than us. In addition to these companies, there are numerous smaller and regional or niche providers of electronic signing solutions.

We believe that the principal competitive factors affecting the market for digital solutions for identity, security, and electronic signatures include the strength and effectiveness of the solution, technical features, ease of use, quality and reliability, customer service and support, brand recognition, customer base, distribution channels, and the total cost of ownership of the solution. With the exception of brand recognition, we believe that our products are currently competitive with respect to these factors; nevertheless, we may not be able to maintain our competitive position against current and potential competitors. Some of our present and potential competitors have significantly greater financial, technical, marketing, purchasing, and other resources. As a result, they may be able to respond more quickly to new or emerging technologies and changes in customer requirements, to devote greater resources to the development, promotion and sale of products, to establish and maintain greater brand recognition, or to deliver competitive products at a lower end-user price. Please see Item IA, *Risk Factors*.

Sales and Marketing

Our solutions are sold worldwide through our direct sales force as well as through distributors, resellers, systems integrators, and original equipment manufacturers. Our sales staff coordinates sales activity through both our sales channels and those of our partners, making direct sales calls either alone or with the sales personnel of our partners. Our sales staff also provides product education seminars to sales and technical personnel of resellers and distributors and to potential end users of our products.

In December 2023, we launched a new partner network program that we believe will allow our partners to reach more customers and grow their revenue with our high-assurance identity proofing, authentication, and secure electronic signature solutions. This new program features a streamlined onboarding process, access to sales enablement resources (including training materials, certifications, sales tools, marketing collateral, and technical support) and financial incentives. Partners can choose from various engagement models to meet their business needs, including distributors, resellers, system integrators, independent software vendors, and managed service providers.

Customers and Markets

The majority of our revenue is derived from financial institutions, which include traditional banks, credit unions, and online-only banks. We also sell to the enterprise market segment, government, healthcare, and insurance industries in select regions around the globe.

Our top 10 customers contributed 22%, 23%, and 22% in 2023, 2022, and 2021, respectively, of our total worldwide revenue.

Because a significant portion of our sales is denominated in foreign currencies, changes in exchange rates impact results of operations. To mitigate exposure to risks associated with fluctuations in currency exchange rates, we attempt to denominate an amount of billings in a currency such that it would provide a natural hedge against operating expenses being incurred in that currency. For additional information regarding how currency fluctuations can affect our business, please refer to Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations.*

Financial Information Relating to Foreign and Domestic Operations

For financial information regarding OneSpan, see our consolidated financial statements and the related notes, which are included in Part IV of this Annual Report on Form 10-K. See Note 18, *Geographic, Customer and Supplier Information* included in the notes to consolidated financial statements in Part IV of this Annual Report on Form 10-K for a breakdown of revenue, gross profit and long-lived assets between the U.S. and other regions.

Government Regulation

As a global cybersecurity and e-signature company, we are subject to complex and evolving global regulations in the various jurisdictions in which our products and services are used. Also, because banking and financial services is our largest industry target market, the government regulations affecting our customers in this area have a significant indirect effect on our business. Similar regulatory dynamics occur in the other primary markets where we have customers, such as healthcare and government. Additional proposed or new legislation and regulations could also significantly affect our business.

See Item IA, *Risk Factors*, for additional information about the laws and regulations we are subject to and the risks to our business associated with those laws and regulations.

Human Capital

OneSpan is powered by a team of approximately 676 employees that spans the globe, consisting of approximately 381 employees in the Americas (includes North, Central, and South America and Canada), 256 employees in EMEA (includes Europe, the Middle East, and Africa), and 39 employees in the Asia Pacific region. As of December 31, 2023, approximately 277 of our employees were in research and development, 279 in sales and marketing, and 120 in general and administrative.

We understand that achieving our business objectives will depend primarily on the skills, creativity, and determination of our people. We believe that people do their best work in an environment built on a compelling shared purpose, openness, trust, mutual accountability, and the opportunity to make a meaningful impact. To that end, our human capital objectives are built on the following five pillars, which we refer to as our "People Promise":

- **Now is the time**. With a bold vision and an ambitious market opportunity, we are ready to seize the moment. There's never been a better time to join the team and play a part in the OneSpan story.

- **Start from openness**. We lead with transparency, engage with open minds, and promote diversity in our thinking and in our culture. That's why we encourage each of our people to bring their whole self to work and be open to different ideas, new challenges, and new possibilities.

- **Build it on trust.** Real connections and true collaboration are built on trust. We trust each other and have no time for internal politics. We trust our people to always bring their best. We trust ourselves to take chances and to build something bigger – together.

- **Own it**. We believe in empowerment through freedom: giving our people flexibility and enabling them to carve their path, their way. We don't just ask our team to embrace change; we ask them to own it.

- **Make a global impact**. We challenge the now by thinking ahead, speaking up, and working together to constantly improve. Everyone is an integral part of the work we do with an equal opportunity to participate and make a global impact.

The goal of our People Promise is to create an environment that will attract, retain and develop talented people who are motivated to find opportunities and create new possibilities for our customers, for themselves and their teams, and for OneSpan. To achieve this goal, we focus on the areas described below.

Competitive Compensation and Benefits. We seek to provide our employees with competitive and fair compensation and benefit offerings, and use market benchmarks to ensure external competitiveness while maintaining equity within the organization. We tie incentive compensation to both business and individual performance and provide a range of health, wellness, family leave, savings, retirement, and time-off benefits for our employees, which vary based on local regulations and norms.

Engagement. We regularly request input from employees, including through a broad employee engagement survey which is typically conducted annually and through occasional "pulse" surveys. These surveys are intended to measure our progress in promoting an environment where employees are engaged, productive, and have a strong sense of belonging. As part of our commitment to acting on employee input, we also use survey results to identify areas where we can do better and expect our managers to actively work to improve those areas.

Hybrid Workplace Policy. For our employees who live near one of our offices, we have adopted a hybrid work model whereby employees generally come to the office in person once or twice per week, on a day designated by local office leadership. For the rest of the week, employees may work either remotely or from their local office. We believe this approach maintains the flexibility of remote work while also providing a regular opportunity for in-person interactions to collaborate, innovate, and build relationships with colleagues.

Diversity and Inclusion. With approximately 676 employees around the world and customers in more than 100 countries, we understand the importance of diversity in perspectives, experience, backgrounds and cultures. As part of our efforts to encourage diversity and inclusion, all employees take a diversity and inclusion training annually and an unconscious bias training upon hire. We also work with diversity focused job sites and candidate application platforms to increase access to diverse talent. In addition, we have an active employee resource group, Women at OneSpan, focused on providing support, mentoring and other resources for our female employees.

We monitor the gender diversity of our workforce regularly. We measure gender diversity overall, by job level, and by job family. As of December 31, 2023, approximately 31% of our employees identified as female, unchanged from the end of 2022 but up from 27% at the end of 2021. The percentage of women by job level (executive, vice president, director, manager, supervisor and individual) improved for the vice president, manager, and supervisor job levels, remained unchanged for the individual job level, and decreased slightly in the director and executive job levels. For job families (consisting of general and administrative, research and development, sales and marketing, and Digipass), the percentage of women by job family improved slightly for sales and marketing, remained unchanged for research and development, and declined slightly in general and administrative and Digipass. Although our gender diversity metrics may fluctuate from period to period, over the longer term, we hope and expect to see continued improvement in the representation of women across the company.

We are also proud of the strides we have made in the past two years in the diversity of our executive leadership team. More than half of our current 10-person executive team identifies as female, LGBTQ, and/or a person of color, which represents significant progress as compared to the beginning of 2022.

Training and Talent Development. We promote and support employee development, compliance and organizational effectiveness by providing professional development and compliance training. All of our employees take a required annual training on the following topics: our code of conduct and ethics; cybersecurity; diversity and inclusion; and preventing sexual harassment. We also require training on unconscious bias and psychological safety at work, which covers ways managers and employees can promote an open, trusting and non-judgmental environment that encourages creativity and the free exchange of ideas.

Feedback and Coaching. We believe regular feedback is an integral component of employee development, and that creating a culture of ongoing performance coaching is critical to our success. To that end, we conduct coaching sessions where each employee is evaluated by their personal manager at least annually. Employee performance is assessed in significant part based on the achievement of goals set collaboratively by the employee and their manager. We also encourage managers to provide ongoing feedback and performance coaching to their direct reports, and to solicit their teams' feedback on their own performance.

Employee Recognition. We regularly recognize our employees for driving business results and exemplifying our company values. We believe that these recognition programs help drive strong employee performance. Employees also have access to an internal communications channel to recognize their peers for their contributions to the company.

Community Outreach and Support. We believe it is important to promote community outreach through corporate giving and employee volunteerism in the communities where we live and work. We provide each employee with one paid day off each year to participate in volunteer activities of their choice. In 2023, we launched a global social impact platform that helps our employees find volunteer opportunities, participate in employee-directed corporate giving initiatives, and collaborate with colleagues on social impact efforts.

Monitoring our Progress

We monitor our progress toward the goal of our People Promise by tracking the following metrics:

- **Employee Survey Results**. As discussed above under "Engagement", we typically conduct a comprehensive employee engagement survey annually, and compare results for each survey question from year to year.

- **Employee Turnover**. We monitor voluntary turnover and total attrition, as a whole and by tenure, region, and by job family. Total attrition captures all reasons employees leave, including voluntary turnover and involuntary turnover due to job eliminations or performance reasons, whereas voluntary turnover is limited to elective departures by employees. Our voluntary turnover across our global employee base in 2023 was 9.5%, which we believe compares favorably with global voluntary turnover rates in the technology industry. Our total attrition in 2023 was 35.6%, primarily due to our cost reduction and restructuring efforts discussed elsewhere in this Annual Report on Form 10-K.

- **Diversity**. As discussed above under "Diversity and Inclusion", we measure gender diversity at least annually overall, by geography, by job role, and by job level. We also monitor the racial and ethnic diversity of our U.S.-based employees, to the extent that our employees disclose their race and ethnicity to us.

Corporate Information

Our predecessor company, VASCO Corp., entered the data security business in 1991 through the acquisition of a controlling interest in ThumbScan, Inc., which we renamed VASCO Data Security, Inc. In 1997, VASCO Data Security International, Inc. was incorporated and in 1998, we completed a registered exchange offer with the holders of the outstanding securities of VASCO Corp., thereby becoming a publicly traded company. In May 2018, VASCO Data Security International, Inc., our publicly traded parent company, changed its name to OneSpan Inc.

Including our predecessor companies, we have completed 17 acquisitions and two dispositions since our inception, including the 2013 acquisition of Cronto Limited, a provider of secure visual transaction authentication solutions for online banking, and the 2015 acquisition of Silanis Technology Inc., a provider of e-signature and digital transaction solutions which we now market and sell under the OneSpan Sign name.

Our principal executive offices are located at 1 Marina Park Drive, Unit 1410, Boston, MA 02210.

“OneSpan” and other trademarks, trade names or service marks of OneSpan Inc. or its subsidiaries appearing in this Annual Report on Form 10-K are the property of OneSpan Inc. or its applicable subsidiary. This Annual Report on Form 10-K may contain additional trade names, trademarks and service marks of others, which are the property of their respective owners. Solely for convenience, trademarks and trade names referred to in this Annual Report on Form 10-K may appear without the ® or ™ symbols.

Available Information

We maintain an Internet website at www.onespan.com. The information on, or that can be accessed through, our website is not incorporated by reference into this Annual Report on Form 10-K and should not be considered to be a part of this Annual Report on Form 10-K. Our website address is included in this Annual Report on Form 10-K as inactive textual reference only. Our reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q and our Current Reports on Form 8-K, and amendments to those reports, are accessible through our website, free of charge, as soon as reasonably practicable after these reports are filed electronically with, or otherwise furnished to, the Securities and Exchange Commission, or the SEC. We also make available on our website the charters of our audit committee, compensation committee and nominating and corporate governance committee, as well as our corporate governance guidelines and our code of business conduct and ethics.

Information about our Executive Officers

The following sets forth certain information with regard to each of our executive officers. There are no family relationships between any of the executive officers, and there is no arrangement or understanding between any executive officer and any other person pursuant to which the executive officer was selected.

VICTOR LIMONGELLI — Mr. Limongelli has served as OneSpan’s Interim Chief Executive Officer since January 2024. Mr. Limongelli is a seasoned software executive who most recently served as Chief Executive Officer at BQE Software, a private SaaS company providing billing, accounting, and similar functionality to professional services firms, from September 2021 to April 2023. From April 2018 to August 2021, he served as Chief Executive Officer of MobileCause, Inc., a private equity-backed SaaS company focused on fundraising and donor engagement for nonprofits, and from November 2015 to April 2018, he was initially Chairman of the Board and then Chief Executive Officer of AccessData Group, a privately held security software company. From May 2003 through November 2014, Mr. Limongelli held a number of executive positions with Guidance Software, Inc., a publicly traded security software company, including over 9 years as President and 7 years as its Chief Executive Officer. Mr. Limongelli received an A.B. from Dartmouth College and a J.D. from Columbia University. Mr. Limongelli is 57 years old.

JORGE MARTELL — Mr. Martell has served as OneSpan’s Chief Financial Officer since September 2022 and as its principal accounting officer since December 2023. From July 2016 to September 2022, he served as Chief Financial Officer and Treasurer and from April 2015 to July 2016 as Vice President of Finance, Corporate Controller, at Extreme Reach Inc., a private-equity owned omnichannel creative logistics company for brand advertising, where he played an integral role in optimizing the company’s balance sheet and in executing the company’s growth strategy through global M&A, prior to its acquisition by another private equity firm. From September 2012 to March 2015, Mr. Martell was Treasurer and Assistant Corporate Controller at Sapient Corporation, a technology company, where he led its global revenue organization, execution of its M&A financial strategy, and global treasury organization prior to its acquisition by Publicis Groupe. Earlier in his career, Mr. Martell held leadership roles at ABM Industries, Inc., a provider of facilities management solutions, and at KPMG LLP, a public accounting firm. Mr. Martell is 45 years old.

LARA MATAAC — Ms. Mataac has served as OneSpan’s General Counsel, Chief Compliance Officer and Secretary since June 2022. From April 2021 to June 2022, Ms. Mataac was General Counsel at Constant Contact, Inc., a provider of cloud-based online marketing solutions, where she led the legal and compliance team during a period of transition after the company’s spinout from Endurance International Group (EIG) in February 2021. Before Constant Contact, Ms. Mataac was at EIG, a provider of cloud-based web presence and online marketing solutions, from February 2013 through March 2021, most recently as Deputy General Counsel. Before EIG, Ms. Mataac was corporate legal director at Bottomline Technologies, a software company. Earlier in her career, Ms. Mataac practiced corporate law at the firms Wilmer Cutler Pickering Hale & Dorr LLP and Fenwick & West LLP. Ms. Mataac is 47 years old.

Item 1A - *Risk Factors*

Risk Factors Summary

Our business is subject to numerous risks and uncertainties, including those highlighted in the section titled “Risk Factors” immediately following this Risk Factors Summary. These summary risks provide an overview of many of the risks we are exposed to in the normal course of our business, some of which have manifested and any of which may occur in the future. As a result, the following summary risks do not contain all of the information that may be important to you, and you should read them together with the more detailed discussion of risks set forth following this section under the heading “Risk Factors,” and with the other information in this Annual Report on Form 10-K. Additional risks beyond those summary risks discussed below, in “Risk Factors” or elsewhere in this Annual Report on Form 10-K, could have an adverse effect on our business, results of operations, financial condition or prospects, and could cause the trading price of our common stock to decline. Our business, results of operations, financial condition or prospects could also be harmed by risks and uncertainties not currently known to us or that we currently do not believe are material. Consistent with the foregoing, we are exposed to a variety of risks, including the following significant risks:

- The change in our strategic plan and cost reduction and restructuring actions we implemented during 2023 involve numerous risks and may not achieve the results we expect.
- If we are unable to attract new customers and retain and expand sales to existing customers, we will be unable to grow our business.
- If our new product offerings and product enhancements do not keep pace with the needs of our customers or do not achieve sufficient customer acceptance, our competitive position and financial results will be negatively impacted.
- A significant portion of our sales are to a limited number of customers. The loss of substantial sales to any one of them could have an adverse effect on revenues and profits.
- If we are not able to enhance our brand recognition and maintain our brand reputation, our business may be adversely affected.
- The market we serve is highly competitive, which may negatively affect our ability to add new customers, retain existing customers and grow our business.
- Our Digipass authenticator business has a complex supply chain and is dependent on a limited number of suppliers for certain components, such that supply chain disruptions could materially impact our operations. Our Digipass business may also experience inventory-related losses.
- The sales cycle for our products is often long, and we may incur substantial expenses for sales that do not occur when anticipated or at all.
- If we are unable to retain key employees and successfully hire and train qualified new employees, we may be unable to achieve our business objectives.
- Security breaches or cyberattacks could expose us to significant liability, cause our business and reputation to suffer and harm our competitive position.
- Real or perceived malfunctions and errors in our products could result in warranty and product liability risks and economic and reputational damages.
- We depend on third party hosting providers and other technology vendors, as well as our own infrastructure, to provide our products and solutions to our customers in a timely manner. Interruptions or delays in performance of our products and solutions could result in customer dissatisfaction, damage to our reputation, loss of customers, and a reduction in revenue.
- Our success depends in part on establishing and maintaining relationships with other companies to distribute our technology and products or to incorporate their technology into our products and services, or vice versa.
- We have operated at a loss for each of the past three years, and we may not be profitable in the future.
- Our financial results may fluctuate from period to period, making it difficult to project future results. If we fail to meet the expectations of securities analysts or investors, the price of our common stock could decline.
- Consolidations, failures and other developments in the banking and financial services industry may adversely impact our revenue.
- We face a number of risks associated with our international operations, any or all of which could result in a disruption in our business and a decrease in our revenue.
- Acquisitions or other strategic transactions may not achieve the intended benefits or may disrupt our current plans and operations.

- We may be subject to legal proceedings for a variety of claims, including intellectual property disputes, labor and employment issues, commercial disagreements, securities law violations and other matters. These proceedings may be costly, subject us to significant liability, limit our ability to use certain technologies, increase our costs of doing business or otherwise adversely affect our business and operating results.
- We are subject to numerous laws and regulations and customer requirements governing the production, distribution, sale and use of our products. Any failure to comply with these laws, regulations and requirements could result in unanticipated costs and other negative impacts, and could have a materially adverse effect on our business, results of operations and financial condition.

Risk Factors

Our business involves significant risks, some of which are described below. You should carefully consider the following risks, some of which have manifested and any of which may occur in the future, together with all of the other information in this Annual Report on Form 10-K, including in the preceding Risk Factors Summary, and our consolidated financial statements and the related notes included elsewhere in this Annual Report on Form 10-K before making an investment decision with respect to any of our securities.

Risks Related to our Business and Industry

The change in our strategic plan and cost reduction and restructuring actions we implemented during 2023 involve numerous risks and may not achieve the results we expect.

In December 2021, our Board approved a restructuring plan designed to advance our operating model, streamline our business, improve efficiency, and enhance our capital resources. The first phase of this restructuring plan began and was substantially completed during the three months ended March 31, 2022. In May 2022, our Board approved additional actions in connection with the restructuring plan and we announced our 2022 strategic plan, a three-year plan which began on January 1, 2023. During the quarter ended June 30, 2023, we determined that we were unlikely to achieve the revenue growth levels set forth in the 2022 strategic plan within the contemplated three-year timeframe. A number of factors contributed to the challenges achieving the originally planned growth levels, particularly in Digital Agreements, on the timeframes set forth in the 2022 strategic plan, including: macroeconomic uncertainties in the banking and financial services segments, which have resulted in longer sales cycles and greater price sensitivity on the part of customers; increasing maturity and competitiveness in the market for e-signature solutions; limited awareness of our brand among buyers of e-signature tools; and higher pricing aggressiveness from competitors. These and other factors made it more difficult than we originally anticipated to build our Digital Agreements sales pipeline, generate demand for our Digital Agreements solutions through marketing efforts, and improve our sales force productivity levels.

In response to these challenges in growing our Digital Agreements revenue, we modified our strategy to focus more heavily on improving Adjusted EBITDA margin across the business. To this end, in August 2023, our Board approved the 2023 Actions described in Item 1, *Business* to seek to drive higher levels of Adjusted EBITDA while maintaining our long-term growth potential. The 2023 Actions consisted primarily of workforce related reductions, with a significantly smaller contribution from vendor contract termination and rationalization actions. Further information about the 2023 Actions, including associated expected restructuring charges, can be found in Item 7, *Management's Discussion and Analysis*. The 2023 Actions and other cost reduction actions implemented under our restructuring plan originally adopted in December 2021 may yield unintended consequences and costs, such as: higher than anticipated restructuring charges; disruption to our operations; litigation and regulatory actions; reduced employee morale, attrition of valued employees, and adverse effects on our reputation as an employer; loss of institutional know-how; slower customer service response times; and reduced ability to complete or undertake new product development projects and other business, product, technical, compliance or risk mitigation initiatives. In addition, our ability to complete the 2023 Actions and achieve the anticipated benefits from the 2023 Actions within the expected time frame or at all is subject to estimates and assumptions and may vary materially from our expectations, including as a result of factors that are beyond our control, such that we may not succeed in achieving all or part of the intended benefits of the 2023 Actions.

If we are unable to attract new customers and retain and expand sales to existing customers, we will be unable to grow our business.

Our success will depend significantly on our ability to attract new customers and retain and expand sales to existing customers. We have experienced, and expect to continue to experience, challenges in adding new customers. Factors that we believe have contributed to these challenges in the Digital Agreements segment include: our limited brand awareness; reluctance on the part of many customers to switch from well-known e-signature providers such as DocuSign or Adobe Systems, which may be highly integrated into their internal processes, to a comparatively lesser-known provider;

the fact that we do not yet offer some third-party integrations and features that certain customers, particularly large enterprise customers, may expect; and increased price aggressiveness from competitors, which has generally reduced price-based incentives for potential new customers to switch to us.

The achievement of our business objectives also depends on our ability to retain and expand sales to existing customers. While this factor is important in both of our reporting segments, it is especially significant for our Security Solutions segment, which has been focused in recent years mostly on expanding sales to existing customers rather than seeking new customers. Our renewal and expansion rates in either segment may be below our expectations, decline or fluctuate as a result of a number of factors, including customer budgets, decreases in the number of users at our customers, changes in the type and size of our customers, pricing, competitive conditions, the competitiveness of our solutions, customer attrition and general economic and global market conditions. If our efforts to expand sales to our existing customers are not successful or if our customers do not renew their subscriptions at the rates we expect, our business will be negatively impacted.

If our new product offerings and product enhancements do not keep pace with the needs of our customers or do not achieve sufficient customer acceptance, our competitive position and financial results will be negatively impacted.

Technological changes occur rapidly in our industry and development of new products and features is critical to maintain and grow our revenue. Our ability to attract and retain customers will depend in part upon our ability to enhance our current products and develop innovative new solutions to distinguish us from the competition and to meet customers' changing needs. Product developments and technology innovations by others may adversely affect our competitive position and we may not successfully anticipate or adapt to changing technology, industry standards or customer requirements on a timely basis. The introduction by our competitors of products embodying new technologies or the emergence of new industry standards could render our existing products obsolete and unmarketable. For example, if our competitors are better able to effectively integrate new technologies such as generative artificial intelligence ("AI") into their products, our competitive position may suffer.

We spend substantial amounts of time and money to research and develop new offerings and enhanced versions of our existing offerings in order to meet our customers' rapidly evolving needs. When we develop a new offering or an enhanced version of an existing offering, we typically incur expenses and expend resources upfront to market, promote and sell the new offering. Therefore, when we develop or acquire new or enhanced offerings, their introduction must achieve high levels of market acceptance in order to justify the amount of our investment in developing and bringing them to market. In some cases, we determine that product initiatives we initially believed were promising do not warrant further investment. For example, in 2023, we decided to discontinue investments in our Digipass CX product in order to rationalize and focus our product portfolio, and incurred non-cash charges as a result. If other recent or future new product offerings do not garner widespread customer adoption and implementation, we may incur future non-cash charges and our business may be adversely affected.

A significant portion of our sales are to a limited number of customers. The loss of substantial sales to any one of them could have an adverse effect on revenues and profits.

We derive a substantial portion of our revenue from a limited number of customers. The loss of substantial sales to any one of them could adversely affect our operations and results. In 2023, 2022, and 2021, our top 10 largest customers contributed 22%, 23%, and 22%, respectively, of our total worldwide revenue.

If we are not able to enhance our brand recognition and maintain our brand reputation, our business may be adversely affected.

We believe that enhancing our brand recognition is important to our efforts to attract new customers and channel partners, and that our relative lack of brand awareness, particularly in the Digital Agreements segment, has made it more challenging to acquire new customers. Our brand recognition and reputation are dependent upon numerous factors including:

- our marketing efforts;
- our ability to continue to offer high quality, innovative and reliable products;
- our ability to maintain customer satisfaction with our products;
- our ability to be responsive to customer concerns and provide high quality customer support, training and professional services;
- any misuse or perceived misuse of our products;

- positive or negative publicity, including through reviews by industry analysts;
- our ability to prevent or quickly react to any cyberattack on our information technology systems or security breach of or related to our software; and
- litigation or regulatory-related developments.

Improving our brand recognition is likely to require significant additional expenditures and may not be successful or yield increased revenues. If we do not successfully enhance our brand and maintain our reputation, we may continue to have difficulties attracting new customers, including due to reduced pricing power relative to competitors with stronger brands, and we could lose customers or renewals, which would adversely affect our business.

The market we serve is highly competitive, which may negatively affect our ability to add new customers, retain existing customers and grow our business.

The market for digital solutions for identity, authentication, and secure digital agreements is very competitive and, like most technology-driven markets, is subject to rapid change and constantly evolving solutions and services.

Our identity verification and authentication products are designed to allow authorized users access to digital business processes and properties, in some cases using patented technology, as a replacement for or supplement to a static password. Our main competitors in our identity verification and authentication markets are Gemalto, a subsidiary of Thales Group, Yubico and RSA Security. There are also many other companies, such as Transmit Security, Symantec, and Duo Security, that offer competing services. In addition to these companies, we face competition from many small authentication solution providers, many of whom offer new technologies and niche solutions such as biometric or risk and behavioral analysis. We believe that competition in this market is likely to intensify as a result of increasing demand for security products.

Our primary competitors for electronic signature solutions are DocuSign and Adobe Systems. Both companies are significantly larger than us. In addition to these companies, there are numerous smaller and regional or niche providers of electronic signing solutions.

Some of our present and potential competitors have significantly greater brand awareness and financial, technical, marketing, purchasing, and other resources than we do. As a result, they may be able to respond more quickly to new or emerging technologies and changes in customer requirements, devote greater resources to the development, promotion and sale of products, or deliver competitive products at a lower end-user price than we do. These factors have made it more difficult for us to compete successfully and may continue to do so, which would negatively affect our business.

Our Digipass authenticator business has a complex supply chain and is dependent on a limited number of suppliers for certain components, such that supply chain disruptions could materially impact our operations. Our Digipass business may also experience inventory-related losses.

In the event that the supply of components or finished products for our Digipass authenticator business is interrupted or relations with any of our principal component vendors or contract manufacturers is terminated, there could be increased costs and considerable delay in finding suitable replacement sources for components or alternative manufacturers for our hardware products. Our Digipass authentication devices are assembled at facilities located in mainland China and Romania. The importation of these products from China and Romania exposes us to the possibility of product supply disruption and increased costs in the event of changes in the policies of the Chinese, Romanian or EU governments, political unrests, natural disasters, extreme weather or unstable economic conditions in China, Romania or the EU, or developments in China, Romania, the U.S. or the EU that are adverse to trade, including enactment of protectionist legislation. We experienced supply chain disruption in 2022 as a result of the China's implementation and subsequent reversal of its "Zero COVID" policy and extreme heatwaves and drought affecting southern China, both of which affected our China-based contract manufacturers. We may experience similar disruptions again due to numerous factors, including trade disputes, geopolitical tensions, armed conflict, impacts as a result of the COVID-19 pandemic, future pandemics or other public health threats, and natural disasters and extreme weather, which are likely to occur more frequently due to climate change. These factors have in the past, and may in the future, cause delays in our fulfillment of customer orders, which may in turn delay our recognition of revenue from such orders or cause customers not to place orders or to seek alternative suppliers.

To mitigate the risks associated with our China-based contract manufacturing facilities, we regularly evaluate alternative manufacturing and supply arrangements, such as moving some of the Digipass manufacturing currently done in

China to Romania or to other locations. It is possible that such a transition, if it occurred, would cause a disruption in our Digipass manufacturing operations. Regardless of whether we undertake such a transition, supply chain disruptions or related cost increases affecting our Digipass devices could have a material adverse impact on our business.

Under some circumstances, we purchase multiple years' supply of parts for our Digipass authenticator devices based on internal forecasts of demand, anticipated supply chain constraints, or other reasons. To meet customers' demands for accelerated delivery of product, we sometimes produce finished product for existing customers before we receive the executed order from the customer. Should our forecasts of future demand be inaccurate or if we produce product that is never ordered, we could incur substantial losses related to the realization of our inventory.

The sales cycle for our products is often long, and we may incur substantial expenses for sales that do not occur when anticipated or at all.

The sales cycle for our products, which is the period of time between the identification of a potential customer and completion of the sale, is typically lengthy and subject to a number of significant risks over which we have little control.

A typical sales cycle in the financial services market is often nine to 18 months long. We often need to spend significant time and resources to better educate and familiarize these potential customers with the value proposition of our products and solutions. Purchasing decisions for our products and services may be subject to delays due to a number of factors, many of which are outside of our control, such as:

- Time required for a prospective customer to recognize the need for our products;
- Effectiveness of our salesforce;
- Changes to regulatory requirements;
- The complexity of contracts with certain large business customers;
- The significant expense of some of our products and systems;
- Customer budgeting and procurement processes;
- Economic and other factors impacting customer budgets; and
- Customer evaluation, testing and approval process.

The timing of sales with our enterprise customers and related revenue recognition is difficult to predict because of the length and unpredictability of the sales cycle for these customers. As our operating expenses are based on anticipated revenue levels, a small fluctuation in the timing of sales can cause our operating results to vary significantly between periods. In addition, during the sales cycle, we expend significant time and money on sales and marketing and contract negotiation activities, which may not result in a sale.

If we are unable to retain key employees and successfully hire and train qualified new employees, we may be unable to achieve our business objectives.

Our ability to successfully attain our business objectives will depend significantly on our ability to retain and motivate key employees and attract qualified new hires. In 2022 and 2023, we terminated the employment of approximately 270 employees as part of our cost reduction and restructuring efforts, and in early January 2024, we terminated the employment of our previous CEO and hired an interim CEO. These layoffs and the changes in our leadership have created uncertainty among our employees, and we expect it may make it more difficult, more time-consuming and more expensive for us to retain key employees and attract new hires. We face intense competition for these employees from numerous technology, software and other companies, many of whom have greater resources than we do, and our employees are generally employed on an at-will basis, which means that they could terminate their employment with us at any time. The temporary or permanent loss of the services of senior management or other key employees for any reason could significantly delay or prevent the achievement of our objectives and harm our business, financial condition and results of operations. Further, the loss of key employees, particularly those in senior management roles, could be negatively perceived in the capital markets, which could reduce the market value of our securities.

Difficulties retaining, motivating and attracting qualified employees could have an adverse effect on our ability to achieve our business objectives and, as a result, our ability to compete could decrease and our financial results could be adversely affected. In addition, even if we are able to identify and recruit a sufficient number of new hires, these new hires will require significant training before they achieve full productivity, particularly in the case of sales employees.

Security breaches or cyberattacks could expose us to significant liability, cause our business and reputation to suffer and harm our competitive position.

Our corporate infrastructure stores and processes our sensitive, proprietary and other confidential information (including information related to financial, technology, employees, marketing, sales, etc.) which is used daily in our operations. In addition, our solutions involve transmission and processing of our customers' confidential, proprietary and sensitive information. We have legal and contractual obligations to protect the confidentiality and appropriate use of customer data. Because we are a digital agreements and cybersecurity company, and because the majority of our customers are banks and other financial institutions, which are frequent targets of cyberattacks, we may be an attractive target for cyber attackers or other data thieves.

High-profile cyberattacks and security breaches have increased in recent years, with the potential for such acts heightened because of the number of employees working remotely due to the COVID-19 pandemic. Security industry experts and government officials have warned about the risks of hackers and cyberattacks targeting information technology, or IT, products and enterprise infrastructure. Because techniques used to obtain unauthorized access or to sabotage systems are constantly evolving, change frequently and often are not recognized until launched against a specific target, we may be unable to anticipate these techniques or to implement adequate preventative measures. As we seek to increase our client base and expand awareness of our brand, we may become more of a target for third parties seeking to compromise our security systems and we anticipate that hacking attempts and cyberattacks will increase in the future.

We have experienced several security incidents in the past. None have been material to date, but it is possible that we will experience a material event in the future. Even though we have established teams, processes and strategies to protect our assets, we may not always be successful in preventing or repelling unauthorized access to our systems. We also may face delays in our ability to identify or otherwise respond to a cybersecurity incident or other breach. Additionally, we use third-party service providers to provide some services to us that involve the storage or transmission of data, such as software as a service (SaaS), cloud computing, and internet infrastructure and bandwidth, and they face various cybersecurity threats and may suffer cybersecurity incidents or other security breaches. Despite our security measures, our IT and infrastructure may be vulnerable to attacks. Threats to IT security can take a variety of forms. Individual and groups of hackers and sophisticated organizations, including state-sponsored organizations or nation-states, continuously undertake attacks that pose threats to our customers and our own IT. These actors may use a wide variety of methods, which may include developing and deploying malicious software or exploiting vulnerabilities in hardware, software, or other infrastructure in order to attack our products and services or gain access to our networks, using social engineering techniques to induce our employees, users, partners, or customers to disclose passwords or other sensitive information or take other actions to gain access to our data or our users' or customers' data, or acting in a coordinated manner to launch distributed denial of service or other coordinated attacks. Inadequate account security practices may also result in unauthorized access to confidential and/or sensitive data.

Security incidents may have a number of negative consequences to us, including the following: requiring us to expend significant capital and other resources to alleviate the incidents and to improve our security technologies; impairing our ability to provide services to our customers and protect the privacy of their data delaying product development efforts; compromising confidential or technical business information; harming our reputation or competitive position; resulting in theft or misuse of our intellectual property or other assets; and exposing us to substantial litigation expenses and damages, indemnity and other contractual obligations, government fines and penalties, mitigation expenses, costs for remediation and incentives offered to affected parties, including customers, other business partners and employees, in an effort to maintain business relationships after an incident. We are continuously working to improve our IT systems, together with creating security boundaries around our critical and sensitive assets. We provide security awareness training to our employees and contractors that focuses on various aspects of cybersecurity. All these steps are taken to mitigate the risk of attack and to ensure our readiness to responsibly manage a security violation or attack. However, we may nevertheless be unable to anticipate attacks or to implement adequate preventative measures. If an actual or perceived breach of our security occurs, the market perception of the effectiveness of our security measures and our products could be harmed, we could lose potential sales and existing customers, our ability to operate our business could be impaired, we may incur significant liabilities, we could suffer harm to our reputation and competitive position, and our business and financial condition could be negatively impacted.

Real or perceived malfunctions and errors in our products could result in warranty and product liability risks and economic and reputational damages.

Our products are inherently complex and may malfunction or contain undetected errors or defects when first introduced or as new versions are released. We have experienced these malfunctions and errors or defects in connection with new products and product upgrades, and we expect that these malfunctions, errors and defects will continue to be found from time to time in new or enhanced products. Malfunctions and defects may make our products vulnerable to attacks, prevent vulnerability detection, result in system instability or latency-related delays, or temporarily impact our customers' environments. These problems may result in a breach of a legal obligation or may cause physical harm or damage which could result in tort or warranty claims against us. We seek to reduce the risk of these losses by using qualified engineers in the design, manufacturing and testing of our hardware products, proper development, testing, and scanning of our software solutions (including SaaS), attempting to negotiate warranty disclaimers and liability limitation clauses in our sales agreements, and maintaining customary insurance coverage. However, these measures may ultimately prove ineffective in limiting our liability for damages.

In addition to any monetary liability for the failure of our products, a publicly known defect or perceived defect in our products could lead to customers delaying or withholding payments, divert the attention of our key personnel, adversely affect the market's perception of us and our products, and have an adverse effect on our reputation and the demand for our products.

Our financial results may fluctuate from period to period, making it difficult to project future results. If we fail to meet the expectations of securities analysts or investors, the price of our common stock could decline.

Our revenue and results of operations have historically varied from period to period, and we expect that they will continue to do so as a result of a number of factors, many of which are outside of our control, including:

- The size, timing, and payment terms of significant orders, and any unexpected delay or cancellation of such orders;
- The variability of revenue realized from individual customers, as their buying patterns can vary significantly from period to period and are affected by the individual solutions purchased and the structure of the contract;
- Larger customers delaying renewal of their subscriptions or failing to renew at all;
- Changes in customer budgets;
- The effectiveness of our sales and marketing programs, including our ability to hire, train and retain our sales personnel;
- Changes in pricing by competitors;
- New product announcements or introductions by competitors;
- Technological changes in the market for our products, including the adoption of new technologies and standards;
- Our ability to develop, introduce and market new products and product enhancements on a timely basis;
- Market and customer acceptance of any new products and product enhancements that we introduce;
- With respect to our Digipass business, component costs and availability;
- Network outages, security breaches, technical difficulties or interruptions affecting our products;
- Seasonality in our business;
- Changes in foreign currency exchange rates;
- General economic and political conditions, as well as economic conditions specifically affecting industries in which our customers operate; and
- Other events or factors, including those resulting from pandemics, war, natural disasters, incidents of terrorism or responses to these events.

Any one of these or other factors discussed elsewhere in this Annual Report on Form 10-K, or the cumulative effect of a combination of these factors, may result in fluctuations in our financial results, which may cause us to miss our guidance and analyst expectations and cause the price of our common stock to decline.

We have operated at a loss for each of the past three fiscal years, and we may not be profitable in the future.

Over our approximately 30-year operating history, we have operated at a loss for many of those years, including for the years ended December 31, 2023, 2022 and 2021, for which we reported a net loss of $29.8 million, $14.4 million, and $30.6 million, respectively. We will need to generate and sustain increased revenue levels and manage our expenses in future periods to become profitable and, even if we do, we may not be able to maintain or increase our level of profitability. We intend to continue to incur significant expenses to maintain, develop and enhance our products and solutions, improve our infrastructure and technology, and grow our customer base. These efforts may be costlier than we expect, and we may not be able to increase our revenue enough to offset our increased operating expenses. We may incur significant losses in the future for a number of reasons, including the other risks described herein, and experience unforeseen expenses, difficulties, complications and delays and other unknown events. If we are unable to achieve and sustain profitability, the value of our business and common stock may significantly decrease.

We depend on third-party hosting providers and other technology vendors, as well as our own infrastructure, to provide our products and solutions to our customers in a timely manner. Interruptions or delays in performance of our products and solutions could result in customer dissatisfaction, damage to our reputation, loss of customers, and reduction in revenue.

We outsource portions of our cloud infrastructure to third-party hosting providers, principally Amazon Web Services, or AWS. We also outsource components of our services to third-party technology vendors who host their products in the cloud. Customers of our products need to be able to access our platform at any time, without interruption or degradation of performance. AWS and other third-party hosting providers run their own platforms that we access, and we are therefore vulnerable to service interruptions on these third-party platforms, as well as to service interruptions affecting our own infrastructure and our third-party technology vendors. We have experienced interruptions, delays and outages in service and availability from time to time due to a variety of factors impacting our third-party hosting providers, our own infrastructure or other vendors, and we expect to experience these types of incidents in the future.

If our products or platform are unavailable or our users are otherwise unable to use our products within a reasonable amount of time or at all, then our business, results of operations and financial condition could be adversely affected. In some instances, we may not be able to identify the cause or causes of these performance problems within a period of time acceptable to our customers. It may become increasingly difficult to maintain and improve our platform performance, especially during peak usage times, as our products become more complex and the usage of our products increases. We have in the past and may in the future experience capacity constraints that affect our product performance and cause us to miss our service level agreements with our customers. These capacity constraints can be due to a number of causes, including technical failures, natural disasters, fraud or security attacks. To the extent that we do not effectively address capacity constraints, either through our own infrastructure, our current third-party providers or alternative providers of cloud infrastructure, our business, results of operations and financial condition may be adversely affected. In addition, any changes in service levels from our third-party hosting providers or other cloud-based technology vendors may adversely affect our ability to meet our customers' requirements.

Our third-party hosting providers have no obligations to renew their agreements with us on commercially reasonable terms or at all, and the agreements governing these relationships can generally be terminated by either party with limited notice. Access to hosting services may also be restricted by the provider at any time, with no or limited notice. Although we expect that we could receive similar services from other third parties, if any of our arrangements with AWS or other third-party hosting providers are terminated, we could experience interruptions on our platform and in our ability to make our platform available to customers, as well as downtime, delays and additional expenses in arranging alternative cloud infrastructure services.

It is also possible that our customers and potential customers would hold us accountable for any breach of security affecting infrastructure of our third-party hosting providers. We may incur significant liability from those customers and from third parties with respect to any such breach, and we may not be able to recover a material portion of our liabilities to our customers and third parties from our hosting providers in the event of any breach affecting their systems.

Any of the above circumstances or events may harm our reputation, cause customers to stop using our products, impair our ability to increase revenue from existing customers, impair our ability to grow our customer base, subject us to financial penalties and liabilities under our service level agreements and otherwise harm our business, results of operations and financial condition.

Our success depends in part on establishing and maintaining relationships with other companies to distribute our technology and products or to incorporate their technology into our products and services, or vice versa.

Part of our business strategy is to enter into partnerships and other cooperative arrangements with third parties. We are regularly involved in cooperative efforts with respect to the incorporation of our products into products of others and vice versa, research and development efforts, and marketing, distributor and reseller arrangements. These relationships are generally non-exclusive, and some of our partners also have cooperative relationships with certain of our competitors or offer some products and services that are competitive with ours. If we lose third-party relationships, if these relationships are not commercially successful, or if we are unable to enter into third-party relationships on commercially reasonable terms in the future, our business could be negatively impacted.

SaaS offerings, which involve various risks, constitute an important part of our business.

We expect that our SaaS offerings will constitute an increasingly important part of our business. As a result, we will need to continue to evolve our processes to meet a number of regulatory, intellectual property, contractual, service, and security compliance challenges. These challenges include compliance with licenses for open-source and third-party software embedded in our SaaS offerings, maintaining compliance with export control and privacy regulations (including the Health Insurance Portability and Accountability Act of 1996 ("HIPAA") and the General Data Protection Regulation ("GDPR")), protecting our products from external threats, maintaining continuous service levels and data security practices expected by our customers, preventing inappropriate use of our products, and incurring significant up-front costs where desired higher margins are dependent on achieving significant sales volume and adapting our go-to-market efforts. In addition to using our internal resources, we also utilize third-party resources to deliver SaaS offerings, such as third-party data hosting vendors. The failure of a third-party provider to prevent service disruptions, data losses or security breaches may require us to issue credits or refunds or to indemnify or otherwise be liable to customers or third parties for damages that may occur. Additionally, if these third-party providers fail to deliver on their obligations, our reputation could be damaged, and our customers could lose confidence in us and our ability to maintain and expand our SaaS offerings. Finally, our SaaS offerings need to be designed to operate at significant transaction volumes. When combined with third-party software and hosting infrastructure, our SaaS offerings may not perform as designed, which could lead to service disruptions and associated damages.

Failure to maintain high-quality customer support could have a material adverse effect on our business.

Our business relies on our customers' satisfaction with the technical and customer support and professional services we provide to support our products. If we fail to provide customer and technical support services that are high-quality, responsive, and able to promptly resolve issues that our customers encounter with our products and services, then they may elect not to purchase or renew subscription licenses or may otherwise reduce or discontinue their business relationship with us. This would likely result in loss of revenue and damage to our reputation, which could have an adverse effect on our business.

Failure to effectively manage our product and service lifecycles could harm our business.

As part of the natural lifecycle of our products and services, we periodically inform customers that products or services have reached their end of life or end of availability and will no longer be supported or receive updates and security patches. Failure to effectively manage our product and service lifecycles could lead to customer dissatisfaction and contractual liabilities, which could adversely affect our business and operating results. In addition, the failure to generate new revenue to replace and/or expand the revenue realized from discontinued products or services could adversely affect our business and operating results.

We are subject to foreign currency exchange rate fluctuations, which could adversely affect our financial condition and results of operations.

Because a significant number of our principal customers are located outside the United States, we expect that international sales will continue to generate a significant portion of our total revenue. We are subject to foreign exchange fluctuations and risks because the majority of our product costs are denominated in U.S. dollars, whereas a significant portion of the sales and expenses of our foreign operating subsidiaries are denominated in various foreign currencies. A decrease in the value of any of these foreign currencies relative to the U.S. dollar could adversely affect our revenue and profitability in U.S. dollars of our products sold in these markets. Furthermore, a strengthening of the U.S. dollar could increase the cost in local currency of our products and services to customers outside the United States, which could adversely affect our business, results of operations, financial condition and cash flows.

The exchange rate between the U.S. dollar and foreign currencies has fluctuated in recent years and may fluctuate substantially in the future. For example, the U.S. dollar's strength against foreign currencies, particularly the Euro, during 2022 had a significant impact on our 2022 financial results. Although foreign exchange impact was not significant to our 2023 results, it could adversely affect our results for 2024 and beyond. We do not currently use forward contracts or other hedging strategies such as options or foreign exchange swaps to mitigate our exposure to foreign currency fluctuations.

Consolidations, failures and other developments in the banking and financial services industry may adversely impact our revenue.

Mergers, acquisitions, and personnel changes at key banks and financial services organizations have the potential to adversely affect our business, financial condition, cash flows, and results of operations. A majority of our revenue is derived from customers in the banking and financial services industry, making us susceptible to consolidation in, or contraction of, the number of participating institutions within that industry. In addition, other factors affecting the banking and financial services industry, such as economic and credit conditions, may create uncertainty or financial pressures that cause our customers or potential customers to adopt cost reduction measures or reduce capital spending, resulting in longer sales cycles, deferrals or delays in purchases of our products, delays in paying our accounts receivable, and increased price competition, any of which could negatively impact our revenue. Furthermore, if customers respond to a negative or unpredictable economic climate by consolidating with other banks or financial institutions, it could reduce the number of our current and/or potential customers.

We face a number of risks associated with our international operations, any or all of which could result in a disruption in our business and a decrease in our revenue.

In 2023, approximately 83% of our revenue and approximately 58% of our operating expenses were generated/incurred outside of the U.S. In 2022, approximately 83% of our revenue and approximately 66% of our operating expenses were generated/incurred outside of the U.S. In 2021, approximately 86% of our revenue and approximately 68% of our operating expenses were generated/incurred outside of the U.S. A severe economic decline in any of our major foreign markets could adversely affect our results of operations and financial condition.

In addition to exposures to changes in the economic conditions of our major foreign markets, we are subject to a number of risks related to our international operations, any or all of which could result in a disruption in our business and a decrease in our revenue. These include:

- increased management, infrastructure and legal costs associated with having international operations;
- costs of compliance with foreign legal and regulatory requirements, including, but not limited to data privacy, data protection and data security regulations and sustainability reporting requirements and the risks and costs of non-compliance;
- costs of compliance with U.S. laws and regulations for foreign operations, including the U.S. Foreign Corrupt Practices Act, import and export control laws, tariffs, trade barriers, economic sanctions and other regulatory or contractual limitations on our ability to sell or provide our solutions in certain foreign markets, and the risks and costs of non-compliance;
- heightened risks of unfair or corrupt business practices in certain geographies and of improper or fraudulent sales arrangements that may impact financial results and result in restatements of, and irregularities in, financial statements;
- costs of compliance with multiple and possibly overlapping tax structures, and related potential adverse tax impacts;
- risks of reliance on channel partners for sales in some countries;
- differing technology standards in certain international markets;
- the uncertainty and limitation of protection for intellectual property rights in some countries;
- greater difficulty in enforcing contracts, accounts receivable collection and longer collection periods;
- difficulties and costs of staffing and managing international operations, including maintaining internal controls and challenges in closing or restructuring such operations;
- difficulty in providing support and training to customers in certain international locations;
- management communication and integration problems resulting from cultural and linguistic differences and geographic dispersion;
- foreign currency exchange rate fluctuations;
- adverse tax burdens and foreign exchange controls that could make it difficult to repatriate earnings and cash;
- increased exposure to climate change, natural disasters, armed conflict, terrorism, epidemics, or pandemics and other health crises; and
- economic or political instability in foreign markets, including instability related to the United Kingdom’s exit from the EU and the impact of geopolitical tensions between China and the U.S. over Taiwan, Hong Kong, tariffs and other matters.

Our business, including the sales of our products and professional services by us and our channel partners, may be subject to foreign governmental regulations, which vary substantially from country to country and change from time to time. Our failure, or the failure by our channel partners, to comply with these regulations could adversely affect our business. Further, in some foreign countries, it may be more common for others to engage in business practices that are prohibited by our internal policies and procedures or U.S. regulations applicable to us. Violations of laws or internal policies by our employees, contractors, channel partners or agents could result in delays in revenue recognition, financial reporting misstatements, fines, penalties or the prohibition of the importation or exportation of our products and could have a material adverse effect on our business and results of operations. If we are unable to successfully manage the challenges of international expansion and operations, our business and operating results could be adversely affected.

If our goodwill or intangible assets become impaired, we may be required to record a significant charge to earnings.

We review our goodwill and intangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. Goodwill is required to be tested for impairment at least annually. At December 31, 2023, we had goodwill and intangible assets with a net book value of $104.5 million primarily related to our acquisitions. An adverse change in market conditions, particularly if such change has the effect of changing one of our critical assumptions or estimates, could result in a change to the estimation of fair value that could result in an impairment charge to our goodwill or intangible assets.

Because we recognize revenue from subscription-based software licenses over the term of the relevant contract, downturns or upturns in sales contracts are not immediately reflected in full in our operating results. In addition, our reported revenue may fluctuate widely due to the interpretation or application of accounting rules.

Approximately 45% of our total revenue for the year ended December 31, 2023 was attributable to subscription license contracts. We recognize subscription revenue over the term of each of our subscription contracts, which are typically one year in length but may be up to three years or longer. As a result, much of our revenue is generated from the recognition of contract liabilities from contracts entered into during previous periods. Consequently, a shortfall in demand for our products or a decline in new or renewed contracts in any one quarter may not significantly reduce our revenue for that quarter but could negatively affect our revenue in future quarters. Our revenue recognition model also makes it difficult for us to rapidly increase our revenue through additional sales contracts in any period, as revenue from new customers is recognized over the applicable term of their contracts.

In addition, our sales arrangements often include multiple elements, including hardware, services, software, maintenance and support. We have sold software related arrangements in multiple forms, including perpetual licenses, term-based licenses and SaaS subscriptions, each of which may be treated differently under accounting rules. The accounting rules for such arrangements are complex and subject to change from time to time. The nature of the arrangement can create variations in the timing of revenue recognition. If applicable accounting standards or practices change, or if the judgments or estimates we use when applying existing standards prove to be incorrect, our financial results may be adversely affected.

We could be subject to additional tax liabilities, and our ability to use our net operating losses may be limited.

We are subject to U.S. federal, state, local and sales taxes in the United States and foreign income taxes, withholding taxes and transaction taxes in numerous foreign jurisdictions. Significant judgment is required in evaluating our tax positions and our worldwide provision for taxes. During the ordinary course of business, there are many activities and transactions for which the ultimate tax determination is uncertain and the relevant taxing authorities may disagree with our determinations as to the income and expenses attributable to specific jurisdictions. In addition, our tax obligations and effective tax rates could be adversely affected by changes in the relevant tax, accounting and other laws, regulations, principles and interpretations by recognizing tax losses or lower than anticipated earnings in jurisdictions where we have lower statutory rates and higher than anticipated earnings in jurisdictions where we have higher statutory rates, by changes to our operating structure (including a currently in-process revenue of our intellectual property structure), by changes in foreign currency exchange rates, or by changes in the valuation of our deferred tax assets and liabilities. We may be audited in various jurisdictions, and such jurisdictions may assess additional taxes, sales taxes and value-added taxes against us. Although we believe our tax estimates are reasonable, the final determination of any tax audits or litigation could be materially different from our historical tax provisions and accruals, which could have a material adverse effect on our operating results or cash flows in the period for which a determination is made.

At December 31, 2023 we had U.S. federal, state, and foreign net operating losses ("NOLs"), of $27.5 million, $30.5 million, and $124.3 million, respectively, available to offset future taxable income, some of which begin to expire in 2025. Federal NOLs incurred in taxable years beginning after December 31, 2017 can be carried forward indefinitely, but the deductibility of federal NOLs in taxable years beginning after December 31, 2021, is subject to certain limitations. A lack of future taxable income would adversely affect our ability to utilize these NOLs before they expire.

In addition, under the provisions of the Internal Revenue Code of 1986, as amended, or the Internal Revenue Code, substantial changes in our ownership may limit the amount of pre-change NOLs that can be utilized annually in the future to offset taxable income. Section 382 of the Internal Revenue Code imposes limitations on a company's ability to use its NOLs if one or more stockholders or groups of stockholders that own at least 5% of the company's stock increase their ownership by more than 50 percentage points over their lowest ownership percentage within a rolling three-year period. Similar rules may apply under state tax laws. Based upon an analysis as of December 31, 2021, we determined that we do not expect these limitations to materially impair our ability to use our NOLs prior to expiration. However, if changes in our ownership occurred after such date, or occur in the future, our ability to use our NOLs may be further limited. Subsequent statutory or regulatory changes in respect of the utilization of NOLs for federal or state purposes, such as suspensions on the use of NOLs or limitations on the deductibility of NOLs carried forward, or other unforeseen reasons, may result in our existing NOLs expiring or otherwise being unavailable to offset future income tax liabilities. For these reasons, we may not be able to utilize a material portion of the NOLs, even if we achieve profitability.

Acquisitions or other strategic transactions may not achieve the intended benefits or may disrupt our current plans and operations.

In order to remain competitive, we have in the past and may in the future seek to acquire additional businesses, products or technologies or to make investments in, or enter into joint ventures or similar transactions with, third parties. These transactions involve numerous risks, including the following:

- Difficulties or delays in integrating the acquired businesses, which could prevent us from realizing the anticipated benefits of acquisitions;
- Delays or reductions in customer purchases for both us and the company we acquired due to customer uncertainty about continuity and effectiveness of service from either company;
- Challenges in successfully cross-selling acquired products to our existing customer base, or in cross-selling our products to the acquired company's customer base;
- Difficulties in supporting and migrating acquired customers, if any, to our platforms, which could cause customer churn, unanticipated costs, and damage to our reputation;
- Disruption of our ongoing business and diversion of management and other resources from existing operations;
- Constraints on our liquidity in the event that we use cash or incur debt to fund an acquisition, or dilution to existing stockholders in the event we issue equity securities as part of the consideration for the acquisition;
- Our use of cash to pay for acquisitions would limit other potential uses for our cash and affect our liquidity;
- Assumption of debt or other actual or contingent liabilities of the acquired company, including litigation risk;
- Differences in in corporate culture, compliance protocols, and risk management practices between us and acquired companies;
- Potential loss of the key employees of an acquired business;
- Potential loss of the customers or partners of an acquired business due to the actual or perceived impact of the acquisition;
- Difficulties associated with governance, management, and control matters in majority or minority investments or joint ventures;
- Unforeseen or undisclosed liabilities or challenges associated with the companies, businesses, or technologies we acquire;
- Adverse tax consequences, including exposure of our entire business to taxation in additional jurisdictions; and
- Accounting effects, including potential impairment charges and requirements that we record acquired deferred revenue at fair value.

Any of these risks could result in acquisitions or other strategic transactions disrupting our business and/or failing to achieve their intended objectives.

We also review our product portfolio from time to time for contributions to our objectives and alignment with our strategy, and we may pursue divestiture activities as a result of these reviews. However, we may not be successful in separating any underperforming or non-strategic assets, and gains or losses on any divestiture of, or lost operating income from, such assets may adversely affect our results of operations. Divestitures could also expose us to unanticipated liabilities or result in ongoing obligations, including transition service obligations and indemnity obligations.

Provisions in various agreements potentially expose us to substantial liability for intellectual property infringement and other losses.

Our agreements with customers, solution partners and channel partners generally include provisions under which we agree to indemnify them for losses suffered or incurred as a result of claims of intellectual property infringement and, in some cases, for damages caused by us to property or persons or for other damages. In the past, we worked with a customer at our expense to resolve a claim brought against the customer related to our technology, and it is likely that we will need to indemnify our customers for similar claims in the future. The expense of defending these types claims may adversely affect our financial results and may not be covered by any insurance policies we maintain. In addition, any such disputes and litigation could divert management attention and harm our reputation in the market.

We also make certain representations and warranties and incur obligations under our contracts in the ordinary course of business, including for items related to data security and potential data privacy breaches. Although we normally contractually limit our liability with respect to such representations, warranties and other contractual obligations, we may still incur substantial liability related to them. Not all of our potential losses under our contracts are covered by insurance policies, which could increase the impact of any such loss should it occur. Large indemnity payments or damages resulting from our contractual obligations could harm our business, operating results and financial condition.

Any failure to protect our proprietary technology and intellectual property rights could substantially harm our business and operating results.

Our success is dependent, in part, upon protecting our proprietary technology. We rely on a combination of patents, copyrights, trademarks, service marks, trade secret laws and contractual provisions in an effort to establish and protect our proprietary rights. However, the steps we take to protect our intellectual property may be inadequate. While we have been issued patents in the U.S. and other countries and have additional patent applications pending, we may be unable to obtain patent protection for the technology covered in our patent applications. In addition, any patents issued in the future may not provide us with competitive advantages or may be successfully challenged by third parties. Any of our patents, trademarks or other intellectual property rights may be challenged or circumvented by others or invalidated through administrative process or litigation. There can be no guarantee that others will not independently develop similar products, duplicate any of our products or design around our patents. Furthermore, legal standards relating to the validity, enforceability and scope of protection of intellectual property rights are uncertain. Despite our precautions, it may be possible for unauthorized third parties to copy our products and use information that we regard as proprietary to create products and solutions that compete with ours. Some license provisions protecting against unauthorized use, copying, transfer and disclosure of our products may be unenforceable under the laws of jurisdictions outside the U.S. To the extent we expand our international activities, our exposure to unauthorized copying and use of our products and proprietary information may increase.

We enter into confidentiality and invention assignment agreements with our employees and consultants and enter into confidentiality agreements with parties with whom we have strategic relationships and business alliances. These agreements may not be effective in controlling access to and distribution of our products and proprietary information. Further, these agreements do not prevent our competitors or partners from independently developing technologies that are substantially equivalent or superior to our products and solutions.

In order to protect our intellectual property rights, we may be required to spend significant resources to monitor and protect and enforce these rights, including through litigation. Litigation brought to protect and enforce our intellectual property rights could be costly, time consuming and distracting to management and could result in the impairment or loss of portions of our intellectual property. Furthermore, 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 rights. 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 further sales or the implementation of our products and solutions, impair the functionality of our products and solutions, delay introductions of new solutions, result in our substituting inferior or more costly technologies into our products and solutions or injure our reputation. 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. 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 U.S. and where mechanisms for enforcement of intellectual property rights may be weak. If we fail to adequately protect our intellectual property and proprietary rights, our business, operating results and financial condition could be adversely affected.

We may be subject to legal proceedings for a variety of claims, including intellectual property disputes, labor and employment issues, commercial disagreements, securities law violations and other matters. These proceedings may be

costly, subject us to significant liability, limit our ability to use certain technologies, increase our costs of doing business or otherwise adversely affect our business and operating results.

From time to time, we are involved as a party or an indemnitor in disputes or regulatory inquiries. These may include alleged claims, lawsuits and proceedings regarding intellectual property disputes, labor and employment issues, commercial disagreements, securities law violations and other matters. In particular, companies in the software industry are often required to defend against litigation or claims based on allegations of infringement or other violations of intellectual property rights. In certain instances, we have received claims that we have infringed the intellectual property rights of others, including claims regarding patents, copyrights, and trademarks. Because of constant technological change in the markets in which we compete, the extensive patent coverage of existing technologies, and the rapid rate of issuance of new patents, it is possible that the number of these claims may grow. Such claims sometimes involve patent holding companies or other adverse patent owners that have no relevant product revenue and against which our own patents may therefore provide little or no deterrence. In addition, former employers of our former, current, or future employees may assert claims that such employees have improperly disclosed to us the confidential or proprietary information of these former employers. If we are not successful in defending such claims, we could be required to stop selling our products, delay shipments, redesign our products, pay monetary amounts as damages, enter into royalty or licensing arrangements (which may not be available to us on commercially reasonable terms), or satisfy indemnification obligations to our customers, any of which could have a material adverse effect on our business.

Regardless of the merits or ultimate outcome of any claims that have been or may be brought against us or that we may bring against others, lawsuits are time-consuming and expensive to resolve, divert management’s time and attention, and could harm our reputation. Although we carry general liability and other forms of insurance, our insurance may not cover potential claims that arise or may not be adequate to indemnify us for all liability that may be imposed. We may also determine that the most cost-effective way to resolve a dispute is to enter into a settlement agreement. Litigation is inherently unpredictable and we cannot predict the timing, nature, controversy or outcome of lawsuits, and it is possible that litigation could have an adverse effect on our business, operating results or financial condition.

We use open-source software in our products, which could subject us to litigation or other actions.

We use open-source software in our products and solutions. Any use of open-source software may expose us to greater risks than the use of commercial software because open-source licensors generally do not provide warranties or controls on the functionality or origin of the software. Any use of open-source software may involve security risks, making it easier for hackers and other third parties to determine how to compromise our platform. From time to time, there have been claims challenging the ownership of open-source software against companies that incorporate open-source software into their products. As a result, we could be subject to lawsuits by parties claiming ownership of what we believe to be open-source software. Litigation could be costly for us to defend, have a negative effect on our operating results and financial condition or require us to devote additional research and development resources to change our products. In addition, if we were to combine our proprietary software products with open-source software in a certain manner, we could, under certain of the open-source licenses, be required to release the source code of our proprietary software products. If we inappropriately use or incorporate open-source software subject to certain types of open-source licenses that challenge the proprietary nature of our software products, we may be required to re-engineer our products, discontinue the sale of our products and solutions or take other remedial actions.

There is significant government regulation of technology imports and exports. If we cannot meet the requirements of applicable regulations, we may be prohibited from exporting some of our products, which could negatively impact our revenue.

Our international sales and operations are subject to risks such as the imposition of government controls, new or changed export license requirements, restrictions on the export of critical technology, trade restrictions and changes in tariffs. If we are unable to obtain regulatory approvals on a timely basis, our business may be impacted. Certain of our products are subject to export controls under U.S. law including the U.S. Export Administration Regulations, U.S. Customs regulations, and various economic and trade sanctions administered by the U.S. Treasury Department’s Office of Foreign Assets Control. The list of products and countries for which export approval is required, and the regulatory policies with respect thereto, may be revised from time to time and our inability to obtain required approvals under these regulations could materially and adversely affect our ability to make international sales. Additionally, we may be negatively affected if our third-party technology partners fail to obtain proper licenses and permits for the import and export of their products. We maintain trade control compliance requirements for our partners; however, we cannot guarantee that our partners will comply with these requirements. Violations of export control and international trade laws could result in penalties, fines, adverse reputational consequences, and other materially adverse consequences. In the past, we voluntarily disclosed a trade control matter to the U.S. government. Although this matter was closed during 2019 with no fines, penalties, or finding of wrongdoing, similar issues could arise in the future. In addition, future changes in government regulation technology imports and exports could negatively affect our business.

We employ cryptographic technology in our authentication products. If the codes used in our cryptographic technology are eventually broken or become subject to additional government regulation, our technology and products may become less effective, which would have a material adverse effect on our business.

A portion of our products are based on cryptographic technology. With cryptographic technology, a user is given a key that is required to encrypt and decode messages. The security afforded by this technology depends on the integrity of a user's key and in part on the application of algorithms, which are advanced mathematical factoring equations. These codes may eventually be broken or become subject to government regulation regarding their use, which would render our technology and products less effective. The occurrence of any one of the following could result in a decline in demand for our technology and products, which would have a material adverse effect on our business:

- Any significant advance in techniques for attacking cryptographic systems, including the development of an easy factoring method or faster, more powerful computers, such as quantum computing;
- Publicity of the successful decoding of cryptographic messages or the misappropriation of keys; and
- Increased government regulation limiting the use, scope or strength of cryptography.

International and domestic privacy and data protection laws and regulations could have a material adverse impact on our results of operations.

We collect, transmit, store, and otherwise process (on our systems and on our third-party partners' systems) our customers' and our employees' data that includes personal data subject to international and domestic privacy and data protection laws and regulations. For example, in Europe, we are subject to the European Union's General Data Protection Regulation, (EU) 2016/679 ("GDPR") and laws implemented by EU member states. These laws and regulations impose restrictions on the collection and use of personal data that are generally more stringent, and impose more significant burdens on subject businesses, than current privacy standards in the United States. They establish several obligations that organizations must follow with respect to use of personal data, including consent requirements, data subject rights, and a prohibition on the transfer of personal data from the EU to other countries whose laws do not protect personal data to an adequate level of privacy or security. We continue to adapt our compliance with GDPR using standard contractual clauses and other methods; however, it is difficult to be certain that compliance has been achieved. We have expended significant resources to comply, but those methods may be subject to scrutiny by data protection authorities in EU member states. In addition, other jurisdictions such as Brazil, Canada, and the United Kingdom have enacted privacy and data protection laws and regulations that impose similar restrictions and obligations on products and services we sell.

In the United States, the federal and state governments have also enacted privacy and data protection laws and regulations that impact us, our customers, and partners. For example, in June 2018, California enacted the California Consumer Privacy Act ("CCPA"), which took effect January 1, 2020, and imposed many requirements on businesses that process the personal information of California residents. Many of the CCPA's requirements are similar to those found in the GDPR, including requiring businesses to provide notice to data subjects regarding the information collected about them and how such information is used and shared, and providing data subjects the right to request access to such personal information and, in certain cases, request the erasure of such personal information. The CCPA also affords California residents the right to opt-out of "sales" of their personal information. The CCPA contains significant penalties for companies that violate its requirements. In January 2023, the California Privacy Rights Act of 2020 ("CPRA") went into effect, and significantly expanded the CCPA to incorporate additional GDPR-like provisions including requiring that the use, retention, and sharing of personal information of California residents be reasonably necessary and proportionate to the purposes of collection or processing, granting additional protections for sensitive personal information, and requiring greater disclosures related to notice to residents regarding retention of information. The CPRA also created a new enforcement agency – the California Privacy Protection Agency – whose sole responsibility is to enforce the CPRA, which will further increase compliance risks. The provisions in the CPRA may apply to some of our business activities. In addition, several other states have passed state privacy and data protection laws, and the U.S. Congress has been debating passing a federal privacy law.

We use biometric data in some of our identity verification products, and several jurisdictions have imposed legal and compliance requirements on biometric data that are more stringent than requirements on other classifications of personal data. For example, under GDPR, biometric data is considered "sensitive data" which requires special attention and technical and organizational measures to protect the biometric data against breaches of confidentiality, integrity, and availability. Similarly, in the U.S., the Illinois Biometric Information Privacy Act ("BIPA") regulates the collection, use, safeguarding, and storage of biometric identifiers and information, requires informed consent before collection, imposes fines for non-compliance, and grants residents a private right of action over improper collection and mishandling of biometric data. Similarly, Québec's Act respecting the protection of personal data in the private sector ("Law 25" formerly known as "Bill 64") introduces substantial changes to the privacy landscape in Quebec, enhancing protection for personal data and introducing new obligations for transparency and accountability in data processing activities, including those involving biometric data.

Our activities as a SaaS solution provider mainly involve the processing of personal data on behalf of our customers. Our operations as a processor of our customers' data relate to collecting, transmitting, storing, and processing a wide array of data, including personal data and biometric information of individuals worldwide. This data is handled both on our systems and those of our third-party partners, making us subject to a complex web of regulations across various jurisdictions. Adapting to these requirements may entail significant operational changes, including revising data processing and storage practices, enhancing data security measures, ensuring transparent communication with data subjects about their rights and our data handling practices, and it may impact our business activities, including our relationships with business partners and the marketing and distribution of our products.

We work to comply with all applicable international and domestic privacy and data protection laws and regulations; however, these laws and regulations vary greatly from jurisdiction to jurisdiction, change rapidly, and are subject to interpretation, all of which leads to uncertainty in their applicability. The costs of compliance with these laws and regulations that apply to us, and other burdens imposed by them, may limit our use of personal data and could have a material adverse impact on our results of operations. Compliance may require that we implement new processes and policies or change our existing processes and policies or features of our systems, which may require substantial financial and other resources, and which otherwise may be difficult to undertake. Any failure or perceived failure by us (or our third-party partners) to comply with these privacy and data protection laws and regulations, our processes and policies, contractual provisions, or an actual, perceived or suspected data privacy or information security incident could result in serious consequences for us. These consequences may include enforcement actions, audits, investigations, prosecutions, fines, penalties, debarment, litigation, claims for damages by customers and other affected individuals, reputational loss, and financial and business losses. .

We must comply with the requirements of being a public company, including developing and maintaining proper and effective disclosure controls and procedures and internal control over financial reporting. Any failure to comply with these requirements may adversely affect investor confidence in our company and, as a result, the value of our common stock.

As a public company, we are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of Nasdaq and other applicable securities rules and regulations that impose various requirements on public companies. Our management and other personnel devote a substantial amount of time to compliance with these requirements and such compliance requires significant ongoing legal, accounting and financial reporting costs.

The Sarbanes-Oxley Act requires that we maintain effective disclosure controls and procedures and internal control over financial reporting and furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting on an annual basis. This assessment includes disclosure of any material weaknesses identified by our management in our internal control over financial reporting. We are also required to have our independent registered public accounting firm issue an opinion annually on the effectiveness of our internal control over financial reporting. During the evaluation and testing process, if we identify one or more material weaknesses in our internal control over financial reporting, we will be unable to assert that our internal control over financial reporting is effective.

We have identified a material weakness in the past and it is possible that other material weaknesses, or significant deficiencies, in our internal controls will be identified in the future. Failure to maintain effective controls or implement new or improved controls could result in significant deficiencies or material weaknesses, affect management evaluations and auditor attestations regarding the effectiveness of our internal controls, failure to meet periodic reporting obligations, and material misstatements in our financial statements. Any material misstatement of our financial statements may result in a restatement, loss of investor and customer confidence, a decline in the market price of our common stock, and potential sanctions or investigations by Nasdaq, the SEC or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets.

Our business in certain countries and transactions with foreign governments increase the risks associated with our international activities.

We are subject to anti-corruption laws in the jurisdictions in which we operate, including the U.S. Foreign Corrupt Practices Act ("FCPA"), the U.K. Bribery Act, and other similar laws that prohibit improper payments or offers of payments to foreign governments and their officials and political parties by U.S. and other business entities for the purpose of obtaining or retaining business. We have operations, deal with and make sales to governmental or quasi-governmental customers in countries known to experience corruption, particularly certain countries in the Middle East, Africa, East Asia and South and Central America, and further expansion of our international selling efforts may involve additional regions. Our activities in these countries create the risk of unauthorized payments or offers of payments by one of our employees, consultants, sales agents or channel partners that could be in violation of various laws, including the FCPA and the U.K. Bribery Act, even though these parties are not always subject to our control. While we have implemented policies and training that mandate compliance with these anti-corruption laws, we cannot guarantee that these policies and procedures will prevent reckless or criminal acts committed by our employees, consultants, sales agents or channel partners. Violations of these laws may result in materially significant diversion of management’s resources as well as significant investigation and outside counsel expense. Violations of these laws may also result in severe criminal or civil sanctions, including suspension or debarment from government contracting, and we may be subject to other liabilities which could disrupt our business and result in a materially adverse effect on our reputation, business, results of operations, and financial condition.

We are subject to numerous laws, regulations and customer requirements governing the production, distribution, sale and use of our products. Any failure to comply with these laws, regulations and requirements could result in unanticipated costs and other negative impacts, and could have a materially adverse effect on our business, results of operation, and financial condition.

We are subject to global legal, regulatory, and customer compliance requirements that span many different areas. For example, we are subject to the Restriction on the Use of Hazardous Substances Directive 2002/95/EC (also known as the RoHS Directive) and the Waste Electrical and Electronic Equipment Directive (also known as the WEEE Directive), which restrict the distribution of products containing certain substances within applicable geographies and require a manufacturer or importer to recycle products containing those substances. These directives affect the worldwide electronics and electronics components industries as a whole. If we or our customers fail to comply with such laws and regulations, we could incur liabilities and fines and our operations could be suspended.

In addition, like many electronic devices, our Digipass authenticator devices contain certain minerals and derivatives, referred to as Conflict Minerals, that are subject to SEC and other disclosure and reporting requirements. Compliance with these rules requires due diligence, including country of origin inquiries to determine the sources of Conflict Minerals used in our products. We expect to incur ongoing costs associated with complying with these disclosure and due diligence requirements. We may be unable to verify the origin of all Conflict Minerals in our products, and may encounter challenges with customers and stakeholders if we are unable to certify that our products are conflict free. Disclosure and due diligence requirements may also affect pricing, sourcing and availability of Conflict Minerals used to produce our devices.

Efforts to manage and mitigate climate change, pollution, biodiversity loss and other environmental impacts have produced significant regulatory and legislative efforts on a global basis, a trend we expect to continue. We expect that new laws and regulations in this area will result in added compliance requirements and increased costs for us and our suppliers, which could result in a significant negative impact on our ability to operate profitably. In particular, we expect to be subject to the EU Corporate Social Responsibility Directive and related EU laws beginning for our fiscal year ending December 31, 2025, and believe we will need to incur significant costs to comply with these requirements. In addition, many of our customers are also subject to significant new environmental and climate-related regulations or stakeholder pressure, which may affect their purchasing decisions in ways unfavorable to us. For instance, customers who purchase our Digipass authenticator devices sometimes inquire about the environmental impact of the devices, and customers who are especially focused on carbon footprint or waste minimization may choose software-based authentication methods rather than physical authentication devices. Finally, disclosures we may be required to make with respect to climate change, pollution or other environmental impacts may damage our reputation and have an adverse impact on our business.

We sell products and services to U.S. federal, state and local governments as well as foreign government entities. Risks associated with selling our products and services to government entities include compliance with complex procurement regulations and government-specific contractual requirements that may vary from our standard terms and conditions, longer sales cycles that are not easy to predict, and varying government funding and budgeting processes. Selling to these entities is expensive and time-consuming and often requires significant up-front resource effort and expense. We have processes in place to aid in compliance with applicable government contracting requirements; however, it is difficult to be certain that compliance has been achieved. Non-compliance with government entity requirements may result in significant material risk to the Company including debarment, reputational loss, and financial and business losses.

New laws and regulations and changes to current laws and regulations are always possible and, in some cases they may be introduced with little or no time to bring related products into compliance. Furthermore, our products are used by customers to assist with achieving compliance with laws and regulations that apply to their industry. Our failure to comply with laws and regulations and to adapt to our customers' needs may prevent us from selling our products in a certain country or to a particular customer. In addition, these laws, regulations, and requirements may increase our cost of supplying the products by forcing us to redesign existing products, change manufacturing practices, or to use more expensive designs or components. In these cases, we may experience unexpected disruptions in our ability to supply customers with products, or we may incur unexpected costs or operational complexities to bring products into compliance, and we may experience lowered customer demand. This could have an adverse effect on our revenues, gross profit margins and results of operations and increase the volatility of our financial results.

We may require additional capital to support our business objectives, and this capital might not be available on acceptable terms, if at all.

We expect that our existing cash and cash equivalents will be sufficient to meet our anticipated cash needs for working capital and capital expenditures for at least the next 12 months. Our estimate as to how long we expect our cash and cash equivalents to be able to fund our operations is based on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect. Further, changing circumstances, some of which may be beyond our control, could cause us to consume capital significantly faster than we currently anticipate, and we may need to seek additional funds sooner than planned. We intend to continue to make investments to support our business objectives and may require additional funds to achieve our objectives and respond to business challenges, including the need to develop new features or enhance our products, improve our operating infrastructure or acquire complementary businesses and technologies. Accordingly, we may need to engage in equity or debt financings to secure additional funds. If we raise additional funds through future issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our common stock.

General economic conditions both inside and outside the U.S., as well as the COVID-19 pandemic and geopolitical events, have resulted in significant volatility in global financial markets in recent years. If this volatility persists or becomes more pronounced, we could experience an inability to access additional capital, which could in the future negatively affect our capacity for certain corporate development transactions or our ability to make other important, opportunistic investments. In addition, market volatility, high levels of inflation and interest rate fluctuations may increase our cost of financing or restrict our access to potential sources of future liquidity. Adequate additional financing may not be available to us on acceptable terms, or at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, our ability to continue to support our business objectives and to respond to business challenges could be significantly impaired, and our business may be adversely affected.

Risks Related to Ownership of Our Common Stock

Our stock price has been and will likely continue to be volatile.

The market price of our common stock has been and may continue to be highly volatile and may fluctuate substantially as a result of a variety of factors, including those described in this "Risk Factors" section, many of which are beyond our control and may not be related to our operating performance. Factors that could cause fluctuations in the market price of our common stock include the following:

- Actual or anticipated fluctuations in our quarterly or annual operating results;
- Variance in our financial performance from our own financial guidance or from expectations of securities analysts;
- The trading volume of our common stock;

- Failure of securities analysts to maintain coverage of our company or changes in financial estimates by any securities analysts who follow our company;
- Changes in market valuations of other technology companies;
- Announcements by us or our competitors of significant technical innovations, contracts, acquisitions, strategic partnerships, joint ventures or capital commitments;
- Our involvement in any litigation or investigations by regulators;
- Our sale of our common stock or other securities in the future;
- Sales of large blocks of our common stock, including sales by our executive officers, directors and significant stockholders;
- Repurchases pursuant to Board-authorized share repurchase programs, or announcements of the inception or discontinuation of any such program;
- Short sales, hedging and other derivative transactions involving our capital stock;
- Additions or departures of any of our key personnel;
- Changing legal or regulatory developments;
- The inclusion or exclusion of our stock in ETFs, indices and other benchmarks, and changes made to related methodologies;
- Reactions by investors to uncertainties in the world economy and financial markets.

In recent years, the stock markets have experienced price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies due to, among other factors, the actions of market participants or other actions outside of our control, including general market volatility caused by geopolitical events, developments in the COVID-19 pandemic, and general economic developments. These fluctuations have often been unrelated or disproportionate to the operating performance of those companies. Broad market and industry fluctuations, as well as general economic, political, regulatory and market conditions, may negatively impact the market price of our common stock. In the past, companies that have experienced volatility in the market price of their securities have been subject to securities class action litigation. We have been the target of this type of litigation in the past, and may be targeted again the future, which could result in substantial costs and divert our management's attention.

A small group of shareholders control a substantial amount of our common stock and could promote, delay or prevent a change of control.

A small number of shareholders control a significant amount of our outstanding common stock, as follows (based on the number of our shares of common stock outstanding as of December 31, 2023): Blackrock, Inc. holds approximately 9.2% of our outstanding common stock; Legion Partners Asset Management holds approximately 8.0%; Vanguard Group Holdings holds approximately 6.9%; First Trust holds approximately 6.0%; Legal & General Investment Management Limited holds approximately 5.9%; and Mr. T. Kendall Hunt, our founder and former Chairman of the Board, holds approximately 5.1%. This concentration of ownership may have the effect of a small number of investors promoting, discouraging, delaying or preventing a change in control and may also have an adverse effect on the market price of our common stock.

Certain provisions of our charter and of Delaware law make a takeover of our Company more difficult.

Our corporate charter and Delaware law contain provisions, such as a class of authorized but unissued preferred stock which may be issued by our Board without stockholder approval that might enable our management to resist a takeover of our Company. Delaware law also limits business combinations with interested stockholders. These provisions might discourage, delay or prevent a change in control or a change in our management. These provisions could also discourage proxy contests and make it more difficult for stockholders to elect directors and take other corporate actions. The existence of these provisions could limit the price that investors might be willing to pay in the future for shares of our common stock.

Future issuances of blank check preferred stock may reduce voting power of common stock and may have anti-takeover effects that could prevent a change in control.

Our corporate charter authorizes the issuance of up to 500,000 shares of preferred stock with such designations, rights, powers and preferences as may be determined from time to time by our Board of Directors, including such dividend, liquidation, conversion, voting or other rights, powers and preferences as may be determined from time to time by the Board of Directors without further stockholder approval.

The issuance of preferred stock could adversely affect the voting power or other rights of the holders of common stock. In addition, the authorized shares of preferred stock and common stock could be utilized, under certain circumstances, as a method of discouraging, delaying or preventing a change in control.

Our business could be adversely affected as a result of actions of activist stockholders.

Although we strive to maintain constructive, ongoing communications with all of our stockholders, and welcome their views and opinions with the goal of enhancing value for all of our stockholders, our stockholders have in the past, and may from time to time in the future, engage in proxy solicitations, advance stockholder proposals or otherwise attempt to effect changes or acquire control of the Company. Campaigns by stockholders to effect changes at publicly traded companies are sometimes led by investors seeking to increase short-term stockholder value through actions such as stock repurchases or sales of assets or the entire company. Responding to proxy contests and other actions by activist stockholders can be costly and time-consuming and could divert the attention of our Board of Directors and senior management from the management of our operations and the pursuit of our business strategy. We cannot predict whether additional proxy contests or related matters will occur in the future and the time and cost associated with such matters.

Any perceived uncertainties as to our future direction and control, our ability to execute on our strategy or changes to the composition of our Board of Directors or senior management team arising from proposals by activist stockholders or a proxy contest could lead to the perception of a change in the direction of our business or instability that may be exploited by our competitors and/or other activist stockholders, result in the loss of customers or potential business opportunities, and make it more difficult to pursue our strategic initiatives or attract and retain qualified employees and business partners, any of which could have an adverse effect on our business, financial condition and operating results.

General Risks

Economic uncertainties or downturns could materially adversely affect our business.

Negative economic conditions, including conditions resulting from changes in foreign currency rates, changes in interest rates, gross domestic product growth, financial and credit market fluctuations, inflation, political turmoil (including potential political turmoil or conflict related to the 2024 U.S. presidential elections), geopolitical tensions, natural catastrophes, regional and global conflicts, natural disasters, and terrorist attacks, could cause a decrease in business investments, including spending on information technology, and negatively affect the performance of our business. If global or regional economic and financial market conditions remain uncertain and/or weak for an extended period of time, any of the following factors, among others, could have a material adverse effect on our financial condition and results of operations:

- slower consumer or business spending may result in reduced demand for our products and services, reduced orders from customers, order cancellations, lower revenues, increased inventories, and lower gross margins;
- volatility in the global markets and fluctuations in exchange rates for foreign currencies could negatively impact our reported financial results and condition;
- volatility in the prices for materials and components we use in our Digipass products could have a material adverse effect on our costs, gross margins, and profitability;
- restructurings, reorganizations, consolidations and other corporate events could affect our customers' budgets and buying cycles, particularly in the banking and financial services industry, where we have particular exposure due to the majority of our customers being banks and financial institutions;
- if our customers experience declining revenues, or experience difficulty obtaining financing in the capital and credit markets to purchase our products and services, this could result in reduced orders, longer sales cycles, order cancellations, inability of customers to timely meet their payment obligations to us, extended payment terms, higher accounts receivable, reduced cash flows, greater expense associated with collection efforts and increased bad debt expense;
- severe financial difficulty experienced by our customers (such as the mid-market bank failures that occurred in 2023) may cause them to become insolvent or cease business operations, which could reduce sales, cash collections and revenue streams; and
- any difficulty or inability on the part of manufacturers of our products or other participants in our supply chain in obtaining sufficient financing to purchase raw materials or to finance general working capital needs may result in delays or non-delivery of shipments of our products.

Furthermore, in an adverse economic environment there is a risk that customers may delay their orders until the economic conditions improve. If a significant number of orders are delayed for an indefinite period of time, our revenue and cash receipts may not be sufficient to meet the operating needs of the business. If this is the case, we may need to significantly reduce our workforce, sell certain of our assets, enter into strategic relationships or business combinations, discontinue some or all of our operations, or take other similar restructuring actions. While we expect that these actions would result in a reduction of recurring costs, they also may result in a reduction of recurring revenue and cash receipts. It is also likely that we would incur substantial non-recurring costs to implement one or more of these restructuring actions.

Catastrophic events may disrupt our business.

Our business operations are subject to interruption by natural disasters, including extreme weather related to the effects of climate change, and other catastrophic events such as fire, floods, power loss, telecommunications failure, cyberattack, war or terrorist attack, or epidemic or pandemic, such as the COVID-19 pandemic. To the extent such events impact our facilities or off-premises infrastructure, we may be unable to continue our operations and may endure system interruptions, reputational harm, delays in our software development, lengthy interruptions in our services, breaches of data security and loss of critical data, all of which could have an adverse effect on our future operating results.

Item 1B - *Unresolved Staff Comments*

None.

Item 1C - *Cybersecurity*

Risk Management and Strategy

As a cloud-based digital agreements and identity and authentication security solutions provider servicing customers in regulated industries, cybersecurity risk management is an important part of our identity. We maintain an enterprise cybersecurity risk management program designed to assess, identify, and manage material cybersecurity risks within our corporate information security environment and the systems we develop and operate for the benefit of our customers. Our cybersecurity risk management program is based upon best practices and standards for cybersecurity and information technology, including the National Institute of Standards and Technology (“NIST”) Cybersecurity Framework (“CSF”) and the International Organization Standardization (“ISO”) 27001 Information Security Management System Requirements.

Policies and Training. We maintain security policies, standards, and processes that apply across our operations and that are approved by management, communicated to our personnel, and reviewed on an annual basis. We provide a global security awareness education program that includes mandatory security and privacy awareness training for all personnel, regular phishing identification exercises, focused training opportunities for particular roles, and incident response training for key individuals.

Risk Assessment and Safeguards. We conduct regular assessments of risks and vulnerabilities to the confidentiality, integrity, and availability of data in our systems, and we implement safeguards to reduce these risks and vulnerabilities to a reasonable and appropriate level. For internal information systems and assets, we conduct regular internal reviews, employ continuous security monitoring, and conduct periodic independent reviews of the key components of our security program. For customer-facing products and services, in addition to internal reviews and testing, we undergo external reviews and penetration testing using an independent third party provider. Our cloud platforms for SaaS solutions are audited annually by external independent auditors who review our platforms against the Service Organization Controls (“SOC”) 2 and ISO 27001, 27017 and 27018 standards, and some of our Digital Agreement products are available on a FedRAMP compliant platform. Some of our products are certified under specific technical standards or industry guidelines, such as FIPS 140-2 and FIDO. Our Digipass authentication fulfillment services are also audited annually by external independent auditors against the SOC 2 standard. We conduct self-assessment activities for those standards or regulations that are not covered by the external auditors, such as the General Data Protection Regulation in Europe. Additionally, we periodically engage third party consultants to assist with identifying, assessing, and/or managing cybersecurity threats.

Incident Management. We have a documented incident response plan for identifying and responding to cybersecurity incidents that focuses on isolating, containing, mitigating, and eradicating the threat as quickly as possible. In the event of a cybersecurity incident, we will follow a documented incident escalation procedure. For a discussion of whether any cybersecurity risks have, or are likely to materially affect us, please see 1A, *Risk Factors*, for a discussion of identified cybersecurity risks.

Third Party Risk Management. Our vendor security risk management program covers vendors that require connectivity to our systems or access to confidential information. We utilize a trust intelligence platform for managing data privacy and data governance which includes third party risk management. Security reviews are performed periodically, based on vendor criticality, to identify potential security issues with the vendor systems or practices. New vendor contracts are reviewed by our legal and security teams, as appropriate, to confirm that security and data protection are appropriately addressed.

Material Cybersecurity Incidents. While we have experienced several security incidents in the past, we have not experienced any material cybersecurity incidents for the fiscal year ended December 31, 2023. We do not believe that there are currently any known risks from cybersecurity threats that have materially affected or are reasonably likely to materially affect the Company or our business strategy, results of operations or financial condition.

Governance

Our Board is primarily responsible for overseeing the assessment and management of our risk exposure, including the balance between risk and opportunity and the totality of risk exposure across the organization. The Audit Committee oversees the company's cybersecurity risks and exposures. We operate our security program under a global Information Security Charter approved by the Audit Committee, and the Audit Committee receives security updates and information about cybersecurity risks from the Chief Information Officer ("CIO") and Chief Information Security Officer ("CISO") at least quarterly. Our Board generally reviews the company's overall risk management program at least annually, including the corporate insurance program which includes our cybersecurity insurance policy. We maintain an Information Security Steering Committee which is composed of key senior leaders who oversee the corporate information security program and our cybersecurity posture. Cybersecurity threats with the possibility of heightened criticality are escalated to a management team comprised of C-level executives and legal department representatives.

The CIO leads our global information technology organization and has nearly 30 years of information technology leadership experience, including acting as CIO at two cloud-based technology providers. The Senior Vice President of Research and Development has more than 25 years of information technology experience, including at another publicly traded technology company. Our CISO reports to the CIO and is responsible for leading our information security organization and overseeing our information security program. The CISO has over 20 years experience in information technology and security, including serving as Chief Information Security Officer at another cloud-based technology provider. Team members who support our cybersecurity risk management program have relevant education and experience in the fields of cybersecurity, risk management, security architecture, data protection, application security, audit, compliance, incident response, identity governance and governance of enterprise information technology.

Item 2 - *Properties*

OneSpan is headquartered in Boston, Massachusetts and has operations in Austria, Australia, Belgium, Canada, China, France, Japan, The Netherlands, Singapore, Switzerland, the United Arab Emirates, the United Kingdom, and the United States of America. Our European operational headquarters is in Brussels, Belgium; our primary global research and development center is in Montreal, Canada; and our Digipass authenticator logistics facility is located in Erembodegem, Belgium. We conduct sales and marketing, customer support, and general and administrative activities from various locations around the world.

Each of our properties support the operations of our two lines of business, which are our reportable operating segments: Digital Agreements and Security Solutions.

All of our properties are leased. We believe that our facilities are adequate for our current needs and that suitable additional or substitute space will be available as needed to accommodate expansion of our operations.

Item 3 - *Legal Proceedings*

We are subject to certain legal proceedings and claims incidental to the operations of our business. We are also subject to certain other legal proceedings and claims that have arisen in the ordinary course of business that have not been fully adjudicated. We currently do not anticipate that these matters, if resolved against us, will have a material adverse impact on our financial results or financial condition.

For further information regarding our legal proceedings and claims, see Note 19, *Commitments and Contingencies*, included in the notes to consolidated financial statements in Part IV of this Annual Report on Form 10-K.

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*

Our common stock, par value $0.001 per share, trades on the NASDAQ Capital Market under the symbol OSPN.

The following table sets forth, for the periods indicated, the range of high and low daily closing prices of our common stock on the NASDAQ Capital Market.

2023	High		Low	
Fourth quarter	$	11.77	$	7.71
Third quarter	$	14.96	$	10.67
Second quarter	$	18.48	$	12.94
First quarter	$	18.81	$	11.55

2022	High		Low	
Fourth quarter	$	14.12	$	8.36
Third quarter	$	12.40	$	8.58
Second quarter	$	15.87	$	11.01
First quarter	$	17.42	$	12.34

On February 19, 2024, there were 111 registered holders of our common stock.

Dividends

We have not paid any dividends on our common stock since incorporation. The declaration and payment of dividends will be at the sole discretion of the Board of Directors and subject to certain limitations under the General Corporation Law of the State of Delaware. The timing, amount and form of dividends, if any, will depend, among other things, on our results of operations, financial condition, cash requirements, plans for expansion and other factors deemed relevant by the Board of Directors. We intend to retain any future earnings for use in our business and therefore do not anticipate paying any cash dividends in the foreseeable future.

Recent Sales of Unregistered Securities

None

Issuer Purchases of Equity Securities

The following table provides information about purchases by the Company of its shares of common stock during the fourth quarter of 2023:

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share		Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1)	Maximum Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (1)
October 1, 2023 through October 31, 2023	—	$	—	—	40,761,555
November 1, 2023 through November 30, 2023	—	$	—	—	40,761,555
December 1, 2023 through December 31, 2023	2,380,834	$	10.50	2,380,834	15,762,798

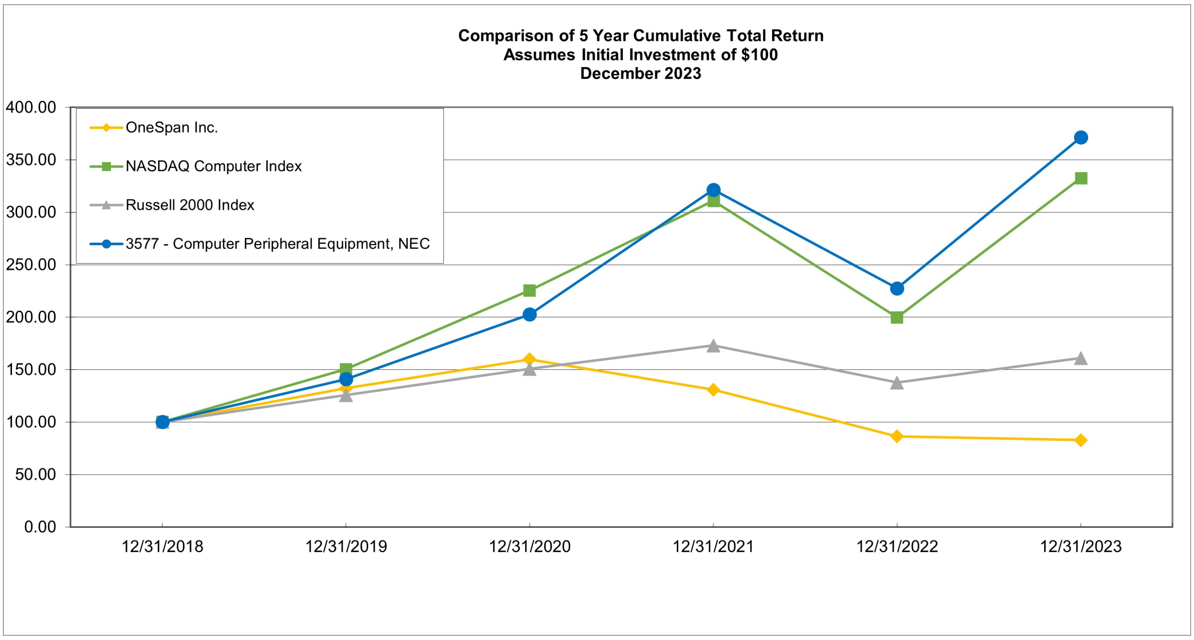
(1) On May 12, 2022, the Board of Directors adopted a stock repurchase program (the "2022 stock repurchase program") under which OneSpan is authorized to repurchase up to $50.0 million of our issued and outstanding shares of common stock. Share purchases under the program will take place in open market transactions, privately negotiated transactions or tender offers, and may be made from time to time depending on market conditions, share price, trading volume, and other factors. The timing of the repurchases and the amount of stock repurchased in each transaction is subject to our sole discretion and will depend upon market and business conditions, applicable legal and credit requirements, and

other corporate considerations. The authorization is effective until May 11, 2024 unless the total amount has been used or authorization has been cancelled. In December 2023, OneSpan repurchased 2,380,834 shares of our issued and outstanding common stock pursuant to a modified "Dutch auction" tender offer conducted under the 2022 stock repurchase program.

Stock Performance Graph

The Stock Performance Graph below compares the cumulative total return through December 31, 2023 assuming reinvestment of dividends, by an investor who invested $100.00 on December 31, 2018, in each of (i) our common stock, (ii) the Nasdaq Computer Index, (iii) the Russell 2000 Index, and (iv) the Standard Industrial Code Index 3577 – Computer Peripheral Equipment, NEC. The stock price performance shown on the graph below is not necessarily indicative of future price performance.

This graph shall not be deemed "soliciting material" or be deemed "filed" for purposes of Section 18 of the Exchange Act or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any of our filings under the Securities Act of 1933, as amended (the "Securities Act"), whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.



		12/31/2018		12/31/2019		12/31/2020		12/31/2021		12/31/2022		12/31/2023
OneSpan Inc.	$	100.00	$	132.20	$	159.69	$	130.73	$	86.40	$	82.76
NASDAQ Computer Index	$	100.00	$	150.34	$	225.48	$	310.84	$	199.64	$	332.34
Russell 2000 Index	$	100.00	$	125.52	$	150.58	$	172.90	$	137.56	$	160.85
3577 - Computer Peripheral Equipment, NEC	$	100.00	$	140.82	$	202.54	$	321.38	$	227.51	$	371.40

Item 6.

[Reserved]

Item 7 - *Management's Discussion and Analysis of Financial Condition and Results of Operations* (in thousands, except head count, ratios, time periods and percentages)

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our financial statements and related notes appearing elsewhere in this Annual Report on Form 10-K. In addition to historical financial information, the following discussion may contain predictions, estimates and other forward-

looking statements that involve a number of risks and uncertainties, including those discussed under Item 1A, Risk Factors and elsewhere in this Form 10-K. These risks could cause our actual results to differ materially from any future performance suggested below. Please see "Cautionary Note Regarding Forward Looking Statements" at the beginning of this Form 10-K.

For a comparison of our results of operations for the fiscal years ended December 31, 2022 and 2021, see "Part II, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations" of our Annual Report on Form 10-K for the year ended December 31, 2022, filed on February 28, 2023.

Overview

OneSpan provides security, identity, electronic signature ("e-signature") and digital workflow solutions that protect and facilitate digital transactions and agreements. Through our two business units, Security Solutions and Digital Agreements, we deliver products and services that automate and secure customer-facing and revenue-generating business processes for use cases ranging from simple transactions to workflows that are complex or require higher levels of security.

Our solutions help our customers ensure the integrity of the people and records associated with digital agreements, transactions, and interactions in industries including banking, financial services, healthcare, and professional services. We are trusted by global blue-chip enterprises, including more than 60% of the world's largest 100 banks, and we process millions of digital agreements and billions of transactions in more than 100 countries annually.

We offer our products primarily through a subscription licensing model and provide multiple deployment options, including cloud-based and on-premises solutions. Our solutions are sold worldwide through our direct sales force, as well as through distributors, resellers, systems integrators, and original equipment manufacturers.

Business Transformation

We are currently in the midst of a business transformation. In December 2021, our Board approved a restructuring plan (the "restructuring plan") designed to advance our operating model, streamline our business, improve efficiency, and enhance our capital resources. The first phase of this restructuring plan began and was substantially completed during the three months ended March 31, 2022. In May 2022, our Board approved additional actions related to the restructuring plan and we announced a three-year strategic transformation plan that began on January 1, 2023 (the "2022 strategic plan"). In conjunction with the 2022 strategic plan and to enable a more efficient capital deployment model, effective with the quarter ended June 30, 2022, we began reporting under the following two lines of business, which are our reportable operating segments: Digital Agreements and Security Solutions.

- **Digital Agreements.** Digital Agreements consists of solutions that enable our clients to secure and automate business processes associated with their digital agreement and customer transaction lifecycles that require consent, non-repudiation and compliance. These solutions, which are largely cloud-based, include OneSpan Sign e-signature, OneSpan Notary and OneSpan Trust Vault. This segment also includes costs attributable to our transaction cloud platform.

- **Security Solutions.** Security Solutions consists of our broad portfolio of software products, software development kits ("SDKs"), and Digipass authenticator devices that are used to build applications designed to defend against attacks on digital transactions across online environments, devices, and applications. The software products and SDKs included in the Security Solutions segment are largely on-premises software products and include identity verification, multi-factor authentication and transaction signing solutions, such as mobile application security, and mobile software tokens.

When we began the 2022 strategic plan, we expected that we would manage Digital Agreements for accelerated growth and market share gains and Security Solutions for cash flow given its more modest growth profile. During the three months ended March 31, 2023, we changed our methodology for allocating expenses between the segments to better reflect the shift in employee time, effort, and costs toward supporting the growth of our Digital Agreements segment instead of our Security Solutions segment.

During the quarter ended June 30, 2023, we determined that we were unlikely to achieve the revenue growth levels set forth in our 2022 strategic plan within the contemplated three-year timeframe. A number of factors contributed to the challenges achieving the originally planned growth levels, particularly in Digital Agreements, on the timeframes set forth in the 2022 strategic plan, including: macroeconomic uncertainties in the banking and financial services segments, which have resulted in longer sales cycles and greater price sensitivity on the part of customers; increasing maturity and competitiveness in the market for e-signature solutions; limited awareness of our brand among buyers of e-signature tools; and higher pricing aggressiveness from competitors. These and other factors made it more difficult than we originally anticipated to build our Digital Agreements sales pipeline, generate demand for our Digital Agreements solutions through marketing efforts, and improve our sales force productivity levels.

In response to these challenges in growing our Digital Agreements revenue, we modified our strategy to focus more heavily on improving Adjusted EBITDA margin across the business. To this end, in August 2023, our Board approved the 2023 Actions described in Item 1, *Business,* to seek to drive higher levels of Adjusted EBITDA while maintaining our long-term growth potential. We intend to continue to pursue the overall strategy set forth in the 2022 strategic plan, including driving efficient growth in Digital Agreements and managing Security Solutions for modest growth and cash flow, while implementing adjustments to our operating model that are intended to achieve greater operational efficiency and strengthen our ability to create value for our shareholders.

Our updated strategy, the 2023 Actions and other cost reduction actions implemented under our restructuring plan originally adopted in December 2021 involve numerous risks and uncertainties. For additional details please see Item IA, *Risk Factors*.

Restructuring Plan

In December 2021, our Board approved a restructuring plan designed to advance our operating model, streamline our business, improve efficiency, and enhance our capital resources. The first phase of this restructuring plan began and was substantially completed during the three months ended March 31, 2022.

In May 2022, our Board approved additional actions related to the restructuring plan through the year ending December 31, 2025. The additional actions consisted primarily of headcount-related reductions designed to continue to advance the same objectives as the first phase of the plan.

On August 3, 2023, our Board of Directors approved the 2023 Actions. We have incurred and expect to continue to incur restructuring charges in connection with the 2023 Actions, and anticipate that these charges will consist primarily of charges related to employee transition and severance payments and employee benefits, with a significantly smaller amount of charges relating to vendor contract termination and rationalization actions. We currently expect that we will incur restructuring charges of approximately $11.0 million to $12.0 million in employee transition and severance payments related to the 2023 Actions and approximately $2.0 million to $3.0 million in vendor contract termination and rationalization charges. We incurred approximately $9.0 million of these expected restructuring charges in 2023.

We completed a substantial majority of the workforce reductions that are planned as part of the 2023 Actions by the end of 2023, and we expect that most of the remaining workforce reductions will occur over the course of 2024 as several Company projects are completed during the year. The vendor contract component of the 2023 Actions is planned for completion by the end of 2025.

As part of the restructuring plan (including the 2023 Actions), we reduced headcount by eliminating approximately 270 positions. We incurred severance and related benefits costs, recorded in “Restructuring and other related charges” in the consolidated statement of operations for the year ended December 31, 2023.

Tender Offer

In December 2023, we completed a modified "Dutch auction" tender offer (the "Tender Offer"). Pursuant to the Tender Offer, we repurchased a total of 2,380,834 shares of our common stock at a purchase price of $10.50 per share, for an aggregate cost of approximately $25.0 million, excluding fees and expenses related to the Tender Offer. The repurchase of common stock in the Tender Offer was made pursuant to the share repurchase program approved by our Board of Directors in May 2022. Please see Item 5, *Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities*, for more information on share repurchases.

Recent Developments

On January 4, 2024, our Board of Directors appointed Victor Limongelli as Interim Chief Executive Officer, effective immediately. Mr. Limongelli is a seasoned software executive who most recently served as Chief Executive Officer at BQE Software, a private SaaS company providing billing, accounting, and similar functionality to professional services firms. Please see Item 1, *Business*, for more information about Mr. Limongelli.

Mr. Limongelli replaced Matthew Moynahan, whose employment as the Company's President and Chief Executive Officer was terminated without cause on January 4, 2024 immediately prior to Mr. Limongelli's appointment. Under his previously disclosed Amended and Restated Employment Agreement, dated February 27, 2023 (the "Employment Agreement"), subject to Mr. Moynahan's timely execution and non-revocation of a separation and release agreement, which includes a release of claims against the Company and its affiliates, Mr. Moynahan is entitled to receive the payments and benefits associated with a termination without cause as set forth in the Employment Agreement. Therefore, $1.2 million of severance and other benefits were accrued for as of December 31, 2023 and included within "Other accrued expenses" on the consolidated balance sheet.

Components of Operating Results

Revenue

We generate revenue from the sale of our subscriptions, maintenance and support, professional services, and Digipass hardware products. We believe comparison of revenues between periods is heavily influenced by the timing of orders and shipments reflecting the transactional nature of significant parts of our business.

- *Product and license revenue*. Product and license revenue includes Digipass hardware products and software licenses, which are provided on a perpetual or term basis subscription model.
- *Service and other revenue*. Service and other revenue includes solutions that are provided on a cloud-based subscription model, maintenance and support, and professional services.

Cost of Goods Sold

Our total cost of goods sold consists of cost of product and license revenue and cost of service and other revenue. We expect our cost of goods sold to increase in absolute dollars as our business grows, although it may fluctuate as a percentage of total revenue from period to period.

- *Cost of product and license revenue*. Cost of product and license revenue primarily consists of direct product and license costs, including personnel costs, production costs, freight, and inventory write-off adjustments for discontinued products and services.
- *Cost of service and other revenue*. Cost of service and other revenue primarily consists of costs related to cloud subscription solutions, including personnel and equipment costs, depreciation, amortization, and personnel costs of employees providing professional services and maintenance and support.

Gross Profit

Gross profit is revenue net of the cost of goods sold. Gross profit as a percentage of total revenue, or gross margin, has been and will continue to be affected by a variety of factors, including our average selling price, manufacturing costs, the mix of products sold, and the mix of revenue among products, subscriptions and services. We expect our gross margins to fluctuate over time depending on these factors.

Operating Expenses

Our operating expenses are generally based on anticipated revenue levels and fixed over short periods of time. As a result, small variations in revenue may cause significant variations in the period-to-period comparisons of operating income or operating income as a percentage of revenue.

Generally, the most significant factor driving our operating expenses is headcount. Direct compensation and benefit plan expenses generally represent between 50% and 60% of our operating expenses. In addition, a number of other expense categories are directly related to headcount. We attempt to manage our headcount within the context of the economic environments in which we operate, restructuring activities, and the investments we believe we need to make for our infrastructure to support future growth and for our products to remain competitive.

Historically, operating expenses have been impacted by changes in foreign exchange rates. We estimate the change in currency rates in 2023 compared to 2022 resulted in an increase in operating expenses of approximately $0.9 million in 2023.

The comparison of operating expenses can also be impacted significantly by costs related to our stock-based and long-term incentive plans. In 2023, 2022, and 2021, operating expenses included $14.6 million, $8.8 million, and $5.2 million, respectively, of expenses related to stock-based and long-term incentive plans. Stock-based compensation expense during 2023 included the impact of a significant number of new grants to executives hired in 2022 as well as an overall expansion of the equity incentive program in 2022 in order to promote the long-term retention of our employees. Long-term incentive plan compensation expense consists of stock-based incentives and an immaterial amount of cash-based incentives.

- *Sales and marketing*. Sales and marketing expenses consist primarily of personnel costs, commissions and bonuses, trade shows, marketing programs and other marketing activities, travel, outside consulting costs, and long-term incentive compensation. We expect sales and marketing expenses to decrease in absolute dollars as as result of the 2023 Actions. However, our sales and marketing expenses may fluctuate as a percentage of total revenue.
- *Research and development*. Research and development expenses consist primarily of personnel costs and long-term incentive compensation. We expect research and development costs to decrease in absolute dollars as a result of the 2023 Actions, and as we capitalize certain costs related to the expansion of our cloud product portfolio. However, our research and development expenses may fluctuate as a percentage of total revenue.
- *General and administrative*. General and administrative expenses consist primarily of personnel costs, legal, consulting and other professional fees, and long-term incentive compensation. We expect general and administrative expenses to decrease in absolute dollars as a result of the 2023 Actions, although our general and administrative expenses may fluctuate as a percentage of total revenue.
- *Restructuring and other related charges.* Restructuring and other related charges consists of employee costs which include severance and related benefits incurred from headcount reductions as part of our restructuring plan, including the 2023 Actions; real estate rationalization costs incurred to optimize our real estate footprint which include lease contract termination costs, fixed asset write-off charges, and lease right-of-use asset and lease liability write-off gains or losses; and vendor rationalization costs for contractually committed services that we are no longer utilizing. We plan to incrementally incur additional restructuring costs through December 31, 2025, when the restructuring plan terminates and the 2023 Actions are completed.
- *Impairment of intangible assets.* Impairment of intangible assets are incurred when we determine that the carrying value of an asset exceeds its fair value. We test annually, or when triggering events arise. During the year ended December 31, 2022, we performed an impairment review of the customer relationships intangible assets obtained in our 2018 acquisition of Dealflo Limited (“Dealflo”). The impairment review was triggered by our July 2022 notification to customers regarding our intent to gradually sunset our Dealflo solution in the months leading up to December 31, 2023. The results of the impairment review indicated that the carrying value of the Dealflo customer relationships exceeded the fair value, and we recorded a $3.8 million impairment charge on the entire remaining value of the asset during the year ended December 31, 2022. This was recorded in "restructuring and other related charges" on the consolidated statements of operations.
- *Amortization of intangible assets*. Acquired intangible assets are amortized over their respective amortization periods and are periodically evaluated for impairment.

Segment Results

Segment operating income (loss) consists of the revenue generated by a segment, less the direct costs of revenue, sales and marketing, research and development and amortization and impairment charges that are incurred directly by a segment. Unallocated corporate costs include general and administrative expense and other company-wide costs that are not attributable to a particular segment. Financial results by operating segment are included below under Results of Operations.

Interest Income (Expense), Net

Interest income (expense), net, consists of income earned on our cash equivalents and short-term investments. Our cash equivalents and short-term investments are invested in short-term instruments at current market rates.

Other Income (Expense), Net

Other income (expense), net, primarily includes exchange gains (losses) on transactions that are denominated in currencies other than our subsidiaries' functional currencies, subsidies received from foreign governments in support of our research and development in those countries and other miscellaneous non-operational expenses.

Income Taxes

Our effective tax rate reflects our global structure related to the ownership of our intellectual property ("IP"). The majority of our IP in our Security Solutions business is owned by two subsidiaries, one in the U.S. and one in Switzerland. The e-signature IP in our Digital Agreements business is owned by a subsidiary in Canada. These subsidiaries have entered into agreements with most of the other OneSpan entities under which those other entities provide services to the IP owners on either a percentage of revenue or on a cost plus basis, or both. In addition, many of our OneSpan entities operate as distributors for all of our OneSpan products. Under this structure, the earnings of our service provider subsidiaries are relatively constant. These service provider companies tend to be in jurisdictions with higher effective tax rates. Fluctuations in earnings flow to the IP owners.

As the majority of our revenues are generated outside of the U.S., our consolidated effective tax rate is strongly influenced by the effective tax rate of our foreign operations. Changes in the effective rate related to foreign operations reflect changes in the geographic mix of earnings and the tax rates in each of the countries in which it is earned. The statutory tax rate for the primary foreign tax jurisdictions ranges from 11% to 35%.

We recorded changes in valuation allowance of $8.5 million and $4.4 million, as of December 31, 2023 and 2022, respectively, against deferred tax assets that, based on management's assessment are considered not to be more likely than not to be realized. The increase in the valuation allowance in 2023 reflects Net Operating Losses ("NOLs"), other deduction carryforwards, and credits for which the realization is not more likely than not. The change in valuation allowance also reflects other factors including, but not limited to, changes in management's assessment of the ability to use existing deferred tax assets, including NOLs and other deduction carryforwards.

Management assesses the need for a valuation allowance on a regular basis, weighing all positive and negative evidence to determine whether a deferred tax asset will be fully or partially realized. In evaluating the realizability of deferred tax assets, significant pieces of negative evidence such as 3-year cumulative losses are considered. Management also reviewed reversal patterns of temporary differences to determine if the Company would have sufficient taxable income due to the reversal of temporary differences to support the realization of deferred tax assets. Management continues to maintain a valuation allowance against certain deferred tax assets in jurisdictions where assets are not more likely than not to be realized. For all other remaining deferred tax assets, management believes it is still more likely than not that the results of future operations will generate sufficient taxable income to realize the deferred tax assets.

Impact of Currency Fluctuations

In 2023 and 2022, we generated approximately 83% and 83% of our revenues and incurred approximately 58% and 66% of our operating expenses outside of the U.S., respectively. As a result, changes in currency exchange rates, especially the Euro exchange rate and the Canadian dollar exchange rate, can have a significant impact on our revenue and operating expenses.

While the majority of our revenue is generated outside of the U.S., a significant amount of our revenue earned during the year ended December 31, 2023 was denominated in U.S. dollars. In 2023, approximately 53% of our revenue was denominated in U.S. dollars, 43% was denominated in Euros and 4% was denominated in other currencies. In 2022, approximately 54% of our revenue was denominated in U.S. dollars, 42% was denominated in Euros and 4% was denominated in other currencies.

In general, to minimize the net impact of currency fluctuations on operating income, we attempt to denominate an amount of billings in a currency such that it would provide a natural hedge against the operating expenses being incurred in that currency. We expect that changes in currency rates may impact our future results if we are unable to match amounts of revenue with our operating expenses in the same currency. If the amount of our revenue in Europe denominated in Euros continues as it is now or declines, we may not be able to balance fully the exposures of currency exchange rates on revenue and operating expenses.

The financial position and the results of operations of our foreign subsidiaries, with the exception of our subsidiaries in Switzerland, Singapore and Canada, are measured using the local currency as the functional currency. The functional currency for our subsidiaries in Switzerland, Singapore and Canada is the U.S. dollar. Accordingly, assets and liabilities are translated into U.S. dollars using current exchange rates as of the balance sheet date. Revenues and expenses are translated at average exchange rates prevailing during the year. Translation adjustments arising from differences in exchange rates generated comprehensive income of $3.7 million in 2023 and a comprehensive loss of $7.2 million in 2022. These amounts are included as a separate component of stockholders' equity.

Gains and losses resulting from foreign currency transactions are included in the consolidated statements of operations in other income (expense). Foreign exchange transaction losses aggregated $1.1 million and $1.9 million for the years ended December 31, 2023 and 2022, respectively.

Results of Operations

In conjunction with the 2022 strategic plan, effective with the quarter ended June 30, 2022, we began reporting under the following two lines of business, which are our reportable operating segments: Digital Agreements and Security Solutions.

The following table sets forth, for the periods indicated, selected segment and consolidated operating results.

	Years Ended December 31,	
(In thousands, except percentages)	**2023**	**2022**
Digital Agreements		
Revenue	$ 50,925	$ 48,401
Gross profit	$ 37,742	$ 37,488
Gross margin	74 %	77 %
Operating (loss) income	$ (18,525)	$ 5,348
Security Solutions		
Revenue	$ 184,181	$ 170,605
Gross profit	$ 119,974	$ 111,082
Gross margin	65 %	65 %
Operating income	$ 60,190	$ 32,051
Total Company:		
Revenue	$ 235,106	$ 219,006
Gross profit	$ 157,715	$ 148,570
Gross margin	67 %	68 %
Statements of operations reconciliation:		
Segment operating income	$ 41,665	$ 37,399
Corporate operating expenses not allocated at the segment level	70,536	64,514
Operating loss	$ (28,871)	$ (27,115)
Interest income, net	2,090	595
Other income (expense), net	(532)	14,827
Loss before income taxes	$ (27,313)	$ (11,693)

Revenue

Revenue by products and services allocated to the segments for the years ended December 31, 2023 and 2022 is as follows:

	Years Ended December 31,			
	2023		2022	
(In thousands)	**Digital Agreements**	**Security Solutions**	**Digital Agreements**	**Security Solutions**
Subscription (1)	$ 45,886	$ 60,550	$ 42,029	$ 47,124
Maintenance and support	4,143	42,240	5,451	42,894
Professional services and other (2)	896	5,425	921	7,087
Hardware products	—	75,966	—	73,500
Total Revenue	$ 50,925	$ 184,181	$ 48,401	$ 170,605

(1) Subscription includes cloud and on-premises subscription revenue, previously referred to as "subscription" and "term-based software licenses", respectively.

(2) Professional services and other includes perpetual software licenses revenue, which was approximately 1% of total revenue for the year ended December 31, 2023 and approximately 2% of revenue for the year ended December 31, 2022.

For the year ended December 31, 2023, total revenue increased by $16.1 million, or 7%, compared to the year ended December 31, 2022. Changes in foreign exchange rates as compared to the same period in 2022 favorably impacted total revenue by approximately $2.3 million.

Additional information on our revenue by segment follows.

- **Digital Agreements** revenue increased $2.5 million, or approximately 5%, during the year ended December 31, 2023 compared to the year ended December 31, 2022. The increase in Digital Agreements revenue was driven by higher cloud subscription revenue from existing customer expansion, including some of our clients purchasing and running our on-premise and SaaS products simultaneously during their product migrations, partially offset by contraction related to our strategy of sunsetting our on-premises e-signature product. Changes in foreign exchange rates as compared to the same period in 2022 favorably impacted Digital Agreements revenue by less than $0.1 million.

- **Security Solutions** revenue increased $13.6 million, or approximately 8%, during the year ended December 31, 2023 compared to the year ended December 31, 2022. This increase was driven primarily by higher on-premises term subscription revenue, driven by existing customer expansion, and increased hardware revenue as a result of product mix and a higher average selling price, partially offset by a decrease in professional services and other revenue, driven by lower perpetual license revenue. Changes in foreign exchange rates compared to the same period in 2022 favorably impacted Security Solutions revenue by $2.3 million.

Revenue by Geographic Regions: We classify our sales by customer location in three geographic regions: 1) EMEA, which includes Europe, Middle East and Africa; 2) the Americas, which includes sales in North, Central, and South America; and 3) Asia Pacific (APAC), which also includes Australia, New Zealand, and India. The breakdown of revenue in each of our major geographic areas was as follows:

(In thousands, except percentages)	Years Ended December 31, 2023	2022	$ Change	% Change
Revenue				
EMEA	$ 111,568	$ 100,298	$ 11,270	11 %
Americas	80,057	77,740	2,317	3 %
APAC	43,481	40,968	2,513	6 %
Total revenue	$ 235,106	$ 219,006	$ 16,100	7 %
% of Total Revenue				
EMEA	47 %	46 %		
Americas	34 %	35 %		
APAC	19 %	19 %		

For the year ended December 31, 2023, revenue generated in EMEA was $11.3 million or 11% higher than the same period in 2022, driven largely by higher on-premises term subscription revenue and increased hardware revenue as a result of higher average selling prices.

For the year ended December 31, 2023, revenue generated in the Americas was $2.3 million or 3% higher than the same period in 2022, driven primarily by growth in Security Solutions, including hardware, mobile, and cloud authentication, as well as mobile application security products.

For the year ended December 31, 2023, revenue generated in the Asia Pacific region ("APAC") was $2.5 million or 6% higher than the same period in 2022, driven largely by higher on-premises term subscription revenue and an increase in hardware sales.

Cost of Goods Sold and Gross Margin

(In thousands, except percentages)	Years Ended December 31, 2023	2022	$ Change	% Change
Cost of goods sold				
Product and license	$ 48,676	$ 45,106	$ 3,570	8 %
Services and other	28,715	25,330	3,385	13 %
Total cost of goods sold	$ 77,391	$ 70,436	$ 6,955	10 %
Gross profit	$ 157,715	$ 148,570	$ 9,145	6 %
Gross margin				
Product and license	63 %	63 %		
Services and other	72 %	74 %		
Total gross margin	67 %	68 %		

The cost of product and license revenue increased $3.6 million or 8% for the year ended December 31, 2023 compared to the year ended December 31, 2022. The increase in cost of product and license was driven by product mix, including increased sales of lower margin hardware products, and higher third-party license costs, partially offset by lower freight and hardware components costs.

The cost of services and other revenue increased $3.4 million or 13% for the year ended December 31, 2023, compared to the year ended December 31, 2022. This increase was largely due to a one-time credit from a cloud service provider in the prior year period, along with higher cloud platform costs related to higher volume usage, higher depreciation of our capitalized software costs, and increased amortization associated with the ProvenDB acquisition.

Gross profit increased $9.1 million, or 6% for the year ended December 31, 2023 compared to the year ended December 31, 2022. Total gross margin was 67% for the year ended December 31, 2023, compared to 68% for the year ended December 31, 2022. The increase in total gross profit was driven by the increased revenue and the higher costs of revenues discussed above.

The majority of our inventory purchases are denominated in U.S. dollars. Our sales are denominated in various currencies, including the Euro, although over 90% of our sales are either in U.S. dollars or Euros. The impact of changes in currency rates are estimated to have had a unfavorable impact on overall cost of goods sold of approximately $0.2 million for the year ended December 31, 2023. Had currency rates in 2023 been equal to rates in the comparable period of 2022, the gross profit margin would have been less than 1 percentage point higher for the year ended December 31, 2023.

Additional information on our gross profit by segment follows.

- **Digital Agreements** gross profit increased $0.3 million, or approximately 1%, for the year ended December 31, 2023 compared to the prior year. The increase in gross profit was driven by higher overall revenue, partially offset by increased costs of sales depreciation and amortization included in cost of goods sold. Digital Agreements gross margin for the years ended December 31, 2023 and 2022 was 74% and 77%, respectively. The decrease in gross margin is related to the increase in depreciation and amortization included in cost of goods sold in 2023 as compared to 2022.

- **Security Solutions** gross profit increased $8.9 million, or approximately 8%, for the year ended December 31, 2023 compared to the prior year. The increase in gross profit was primarily driven by higher overall revenue. Security Solutions gross margin was 65% for each of the years ended December 31, 2023 and 2022, respectively.

Operating Expenses

For the year ended December 31, 2023, operating expenses increased by $10.9 million, or 6%, compared to the year ended December 31, 2022. Changes in foreign exchange rates unfavorably impacted operating expenses by approximately $0.9 million as compared to the year ended December 31, 2022.

The following table presents the breakout of operating expenses by category as of December 31, 2023 and 2022:

	Years Ended December 31,			
(In thousands, except percentages)	**2023**	**2022**	**$ Change**	**% Change**
Operating costs				
Sales and marketing	$ 70,235	$ 60,949	$ 9,286	15 %
Research and development	38,420	41,735	(3,315)	(8)%
General and administrative	58,267	55,552	2,715	5 %
Restructuring and other related charges	17,311	13,310	4,001	30 %
Amortization of intangible assets	2,353	4,139	(1,786)	(43)%
Total operating costs	$ 186,586	$ 175,685	$ 10,901	6 %

Sales and Marketing Expenses

Sales and marketing expenses increased $9.3 million, or 15%, for the year ended December 31, 2023 compared to the year ended December 31, 2022. The increase was driven by higher expenses for sales-related activities, higher hiring expenses, commission expenses and other employee compensation costs, and an increase in travel-related expenses due to increased customer activity and in-person company meetings.

Average full-time sales and marketing employee headcount for year ended December 31, 2023 was 339, compared to 344 for year ended December 31, 2022. Average headcount in 2023 was 1% lower than in 2022.

Research and Development Expenses

Research and development expenses decreased $3.3 million, or 8%, for the year ended December 31, 2023 compared to the year ended December 31, 2022. The decrease in expense was driven primarily by the capitalization of research and development costs of $6.1 million, partially offset by an increase in contractor and consultant costs.

Average full-time research and development employee headcount for year ended December 31, 2023 was 305, compared to 340 for year ended December 31, 2022. Average headcount in 2023 was 10% lower than in 2022.

General and Administrative Expenses

General and administrative expenses increased $2.7 million, or 5%, for the year ended December 31, 2023 compared to the year ended December 31, 2022. This increase in expense was due to higher salaries and stock-based compensation expense in 2023, partially offset by lower consulting fees related to our strategic plan as compared with the prior year period.

Average full-time general and administrative employee headcount for the years ended December 31, 2023 and December 31, 2022 was 139. There was no change in average general and administrative headcount from 2023 to 2022.

Restructuring and Other Related Charges

Restructuring and other related charges were $17.3 million for the year ended December 31, 2023, compared to $13.3 million for the year ended December 31, 2022, an increase of $4.0 million or 30%. The increase was due to severance, retention pay, and related benefit costs incurred in conjunction with our restructuring plans, real estate rationalization costs to align the real estate footprint with the Company's needs, and vendor rationalization costs for contractually committed services the Company is no longer utilizing, offset by the impact of an impairment recognized in 2022 that did not recur in 2023.

Amortization of Intangible Assets

Amortization of intangible assets for the year ended December 31, 2023 was $2.4 million, compared to $4.1 million for the year ended December 31, 2022, a decrease of $1.8 million or 43%. The decrease was driven by certain intangible assets acquired in the prior years becoming fully amortized or impaired during 2022.

Segment Operating Income (Loss)

Information on our operating income (loss) by segment follows.

- **Digital Agreements** Operating loss for the year ended December 31, 2023 was $18.5 million, compared to operating income of $5.3 million for the prior year. The decrease in operating income (loss) was primarily driven by a change in expense allocations between the segments primarily impacting operating expenses, higher investments made in the first half of 2023 in sales and marketing, higher depreciation of capitalized software, and a one-time credit from a cloud service provider in the prior year, partially offset by higher revenue in 2023.

- **Security Solutions** For the year ended December 31, 2023, Security Solutions operating income was $60.2 million, which was $28.1 million, or 88%, higher than the prior year. This increase was driven by higher revenue, a change in expense allocations between the segments primarily impacting operating expenses, lower research and development costs, and lower amortization as a result of the Dealflo intangible asset impairment of $3.8 million in 2022.

Interest Income (expense), net

	Years Ended December 31,			
(In thousands, except percentages)	**2023**	**2022**	**$ Change**	**% Change**
Interest income (expense), net	$ 2,090	$ 595	$ 1,495	NM

Interest income (expense), net, was $2.1 million for the year ended December 31, 2023, compared to $0.6 million for the year ended December 31, 2022. The increase in interest income is related to higher interest rates favorably impacting our invested excess cash.

Other Income (Expense), Net

(In thousands, except percentages)	Years Ended December 31, 2023	2022	$ Change	% Change
Other income (expense), net	$ (532)	$ 14,827	$ (15,359)	NM

Other income (expense), net, includes subsidies received from foreign governments in support of our research and development in those countries, exchange gains (losses) on transactions that are denominated in currencies other than our subsidiaries' functional currencies, and other miscellaneous non-operational, non-recurring income and expenses.

For the year ended December 31, 2023, other income (expense), net was $(0.5) million, compared to $14.8 million for the year ended December 31, 2022. The fluctuation was primarily driven by the $14.8 million gain in 2022 on the sale of our equity-method investment in Promon AS ("Promon") in January 2022.

Provision for income taxes

(In thousands, except percentages)	Years Ended December 31, 2023	2022	$ Change	% Change
Provision for income taxes	$ 2,486	$ 2,741	$ (255)	(9)%

We recorded income taxes expense of $2.5 million and $2.7 million for the years ended December 31, 2023 and 2022, respectively. The decrease in expense recorded for the year ended December 31, 2023 was primarily attributable to the jurisdictional mix of profits, and a higher loss before taxes in 2023 compared to 2022.

Loss Carryforwards Available

At December 31, 2023, we have gross deferred tax assets of $53.3 million resulting from U.S. federal, foreign and state NOL carryforwards of $182.3 million and other foreign deductible carryforwards of $117.0 million. At December 31, 2023, we have a valuation allowance of $45.9 million against deferred tax assets related to certain carryforwards.

Key Business Metrics and Non-GAAP Financial Measures

In our quarterly earnings press releases and conference calls, we discuss the below key metrics and financial measures that are not calculated according to generally accepted accounting principles ("GAAP"). These metrics and non-GAAP financial measures help us monitor and evaluate the effectiveness of our operations and evaluate period-to-period comparisons. Management believes that these metrics and non-GAAP financial measures help illustrate underlying trends in our business. We use these metrics and non-GAAP financial measures to establish budgets and operational goals (communicated internally and externally), manage our business and evaluate our performance. We also believe that both management and investors benefit from referring to these metrics and non-GAAP financial measures as supplemental information in assessing our performance and when planning, forecasting, and analyzing future periods. We believe these metrics and non-GAAP financial measures are useful to investors both because they allow for greater transparency with respect to financial measures used by management in their financial and operational decision-making and also because they are used by investors and the analyst community to help evaluate the health of our business.

Annual Recurring Revenue

We use annual recurring revenue, or ARR, as an approximate measure to monitor the revenue growth of our recurring business. ARR represents the annualized value of the active portion of SaaS, term-based license, and maintenance and support contracts at the end of the reporting period. For term-based license arrangements, the amount included in ARR is consistent with the amount that we invoice the customer annually for the term-based license transaction. A customer with a one-year term-based license contract will be invoiced for the total value of the contract at the beginning of the contractual term, while a customer with a multi-year term-based license contract will be invoiced for each annual period at the beginning of each year of the contract. For contracts that include annual values that increase over time because there are additional deliverables in subsequent periods, we include in ARR only the annualized value of components of the contract that are considered active as of the date of the ARR calculation. We do not include the future committed increases in the contract value as of the date of the ARR calculation.

We consider a contract to be active from when the product or service contractual term commences (the "start date") until the right to use the product or service ends (the "expiration date"). Even if the contract with the customer is executed before the start date, the contract will not count toward ARR until the customer's right to receive the benefit of the products or services has commenced.

To the extent that we are negotiating a renewal with a customer within 90 days after the expiration of a recurring contract, we continue to include that revenue in ARR if we are actively in discussions with the customer for a new recurring contract or renewal and the customer has not notified us of an intention not to renew. We exclude from the calculation of ARR renewal contracts that are more than 90 days after their expiration date, even if we are continuing to negotiate a renewal at that time.

ARR is not calculated based on recognized or unearned revenue and there is no direct relationship between revenue recognized in accordance with ASC 606 and the Company's ARR business metric. We believe ARR is a valuable operating measure to assess the health of our SaaS, term-based license, and maintenance and support contracts because it illustrates our customer recurring contracts as of the measurement date. ARR is not a forecast of future revenue, which can be impacted by contract start and end dates and renewal rates, and does not include revenue from perpetual licenses, purchases of Digipass authenticators, training, professional services or other sources of revenue that are not deemed to be recurring in nature.

ARR does not have any standardized meaning and is therefore unlikely to be comparable to similarly titled measures presented by other companies. ARR should be viewed independently of revenue and deferred revenue as ARR is an operating metric and is not intended to be combined with or replace these items. Investors should consider our ARR operating measure only in conjunction with our GAAP financial results.

At December 31, 2023, we reported ARR of $154.6 million, which was 11% higher than 2022 ARR of $138.7 million. Changes in foreign exchange rates during the year ended December 31, 2023 as compared to the prior year did not materially impact ARR. ARR growth was primarily driven by an increase in subscription contracts.

Net Retention Rate

Net Retention Rate, or NRR, is defined as the approximate year-over-year percentage growth in ARR from the same set of customers at the end of the prior year period. It measures the Company's ability to increase revenue across our existing customer base through expanded use of our platform, offset by customers whose subscription contracts with us are not renewed or renew at a lower amount. The Company's ability to drive growth and generate incremental revenue depends, in part, on our ability to maintain and grow our relationships with customers. NRR is an important way in which we track our performance in this area.

We previously referred to NRR as Dollar-Based Net Expansion ("DBNE"). There is no change in how we define or calculate NRR as compared to DBNE.

We reported NRR of 110% and 107% at December 31, 2023 and 2022, respectively. The year-over-year increase in NRR was primarily driven by an expansion in the use of our solutions at existing customers.

Adjusted EBITDA

We define Adjusted EBITDA as net income (loss) before interest, taxes, depreciation, amortization, long-term incentive compensation, restructuring and other related charges, and certain non-recurring items, including acquisition related costs, rebranding costs, and non-routine shareholder matters. We use Adjusted EBITDA as a simplified measure of performance for use in communicating our performance to investors and analysts and for comparisons to other companies within our industry.

As a performance measure, we believe that Adjusted EBITDA presents a view of our operating results that is most closely related to serving our customers. By excluding interest, taxes, depreciation, amortization, long-term incentive compensation, restructuring costs, and certain other non-recurring items, we are able to evaluate performance without considering decisions that, in most cases, are not directly related to meeting our customers' requirements and were either made in prior periods (e.g., depreciation, amortization, long-term incentive compensation, non-routine shareholder matters), deal with the structure or financing of the business (e.g., interest, one-time strategic action costs, restructuring costs, impairment charges) or reflect the application of regulations that are outside of the control of our management team (e.g., taxes). In addition, removing the impact of these items helps us compare our core business performance with that of our competitors.

Non-GAAP financial metrics such as Adjusted EBITDA are not measures of performance under GAAP and should not be considered in isolation or as alternatives or substitutes for the most directly comparable financial measures calculated in accordance with GAAP, but, rather, should be considered together with our consolidated financial statements, which are prepared in accordance with GAAP and included in Part IV, Item 15, Exhibits and *Financial Statement Schedules*.

The following table reconciles net income as reported on our consolidated statements of operations to non-GAAP Adjusted EBITDA:

	Years Ended December 31,	
(In thousands)	**2023**	**2022**
Net loss	$ (29,799)	$ (14,434)
Interest income, net	(2,090)	(595)
Provision for income taxes	2,486	2,741
Depreciation and amortization of intangible assets (1)	6,479	7,066
Long-term incentive compensation (2)	14,562	8,813
Restructuring and other related charges	17,311	13,310
Other non-recurring items (3)	3,048	(10,505)
Adjusted EBITDA	$ 11,997	$ 6,396

(1) Includes cost of sales depreciation and amortization expense directly related to delivering cloud subscription revenue of $1.5 million and $0 for the years ended December 31, 2023 and 2022, respectively. Costs are recorded in "Cost of goods sold - Services and other" on the consolidated statements of operations.

(2) Long-term incentive compensation includes immaterial expense for cash incentive grants awarded to employees located in jurisdictions where we do not issue stock-based compensation due to tax, regulatory or similar reasons. The expense associated with these cash incentive grants was $0.3 million and $0.2 million for the years ended December 31, 2023 and 2022, respectively.

(3) For the year ended December 31, 2023, other non-recurring items consist of $1.6 million of fees related to non-recurring projects and our acquisition of ProvenDB, and $1.4 million of fees related to non-recurring items, primarily severance payable to our former chief executive officer. For the year ended December 31, 2022, other non-recurring items consist of $4.3 million of outside services related to our strategic action plan, and a $(14.8) million non-operating gain on the sale of our investment in Promon AS.

Adjusted EBITDA increased during the year ended December 31, 2023 compared to 2022, primarily due to higher revenue and gross profit dollars, partially offset by an increase in operating expenses net of depreciation of software capitalization costs, restructuring, and other non-recurring items.

Please see further discussion in Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations* for an analysis of what comprises Net loss in the consolidated statements of operations for the years ended December 31, 2023 and 2022, and additional detail around items excluded from Adjusted EBITDA.

Liquidity and Capital Resources

As of December 31, 2023, we had net cash balances (total cash and cash equivalents) of $42.5 million and short-term investments of $0. At December 31, 2022, we had net cash balances of $96.2 million and short-term investments of $2.3 million. Short-term investments at December 31, 2022 consisted of U.S. treasury bills and notes, government agency notes, corporate notes and bonds, and high-quality commercial paper with maturities at acquisition of more than three months and less than twelve months. The decrease in net cash balances from December 31, 2022 to December 31, 2023 resulted primarily from $3.5 million in repurchases of our common stock on the open market pursuant to our share repurchase program, $25.0 million in repurchases of our common stock pursuant to the Tender Offer, and $12.2 million in severance payments associated with the 2023 Actions. Please see Item 5 - *Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities* for more information on share repurchases.

We are party to lease agreements that require letters of credit and guarantees to secure the obligations which totaled $0.9 million and $1.1 million at December 31, 2023 and 2022, respectively. Additionally, the Company maintained a cash guarantee with a payroll vendor in the amount of $0.1 million at both December 31, 2023 and 2022. The restricted cash related to the letters of credit and guarantees is recorded in "Restricted cash" on the consolidated balance sheets.

As of December 31, 2023, we held $37.1 million of cash and cash equivalents in subsidiaries outside of the United States. Of that amount, $36.5 million is not subject to repatriation restrictions, but may be subject to taxes upon repatriation.

We expect that our existing cash and cash equivalents will be sufficient to meet our anticipated cash needs for working capital and capital expenditures for at least the next 12 months.

Our cash flows are as follows:

	Years Ended December 31,	
(In thousands)	**2023**	**2022**
Cash provided by (used in):		
Operating activities	$ (10,735)	$ (5,759)
Investing activities	$ (12,013)	$ 46,587
Financing activities	$ (32,094)	$ (7,308)
Effect of foreign exchange rate changes on cash and cash equivalents	$ 997	$ (372)

Operating Activities

Cash used in operating activities is primarily comprised of net income (loss), as adjusted for non-cash items, and changes in operating assets and liabilities. Non-cash adjustments consist primarily of amortization of intangible assets, deferred taxes, depreciation of property and equipment, and stock-based compensation. We expect cash inflows from operating activities to be affected by increases or decreases in sales and timing of collections. Our primary uses of cash from operating activities have been for personnel and vendor costs. We expect cash outflows from operating activities to be affected by changes in personnel costs and the payments of expenditures.

For the year ended December 31, 2023, $10.7 million of cash was used in operating activities. This was primarily driven by investments made in sales and marketing during the first half of the year, severance payments made associated with the 2023 Actions, and increases in inventories and income taxes payable. For the year ended December 31, 2022, $5.8 million of cash was used in operating activities.

Our working capital at December 31, 2023 was $31.5 million, a decrease of $56.1 million, or 64%, from $87.6 million at December 31, 2022. The decrease was due to a lower operating income driven by restructuring and other related charges as well as lower capital needs as we better manage the timing of cash collections and vendor payments.

Investing Activities

The changes in cash flows from investing activities primarily relate to timing of purchases, maturities and sales of investments, purchases of property and equipment, capitalized software activities, and activity in connection with acquisitions. We expect to continue to purchase property and equipment to support the continued growth of our business as well as to continue to invest in our infrastructure and activity in connection with acquisitions.

For the year ended December 31, 2023 cash of $12.0 million was used in investing activities, compared to cash of $46.6 million provided by investing activities during the year ended December 31, 2022. The cash used for the year ended December 31, 2023 was primarily attributable to additions to property and equipment, net (primarily capital software activities) and purchase of ProvenDB, offset by the maturities of short-term investments.

Financing Activities

The changes in cash flows from financing activities primarily relate to the purchases of common stock under our share repurchase program and tax payments for restricted stock issuances.

For the year ended December 31, 2023, net cash used in financing activities was $32.1 million, which consisted of $29.2 million of common stock repurchases, both in open market repurchases and pursuant to the Tender Offer, and $2.9 million of tax payments for restricted stock issuances.

For the year ended December 31, 2022, net cash used in financing activities was $7.3 million, which consisted of $5.7 million of common stock repurchases and $1.6 million of tax payments for restricted stock issuances.

Off-Balance Sheet Arrangements

The Company has no off-balance sheet arrangements.

Contractual Obligations and Commitments

We have unrecognized purchase obligations of $6.3 million for other software agreements related to the administration of our business which range from 1 to 3 years.

We have operating lease obligations of $8.9 million which will expire in the next 1 to 9 years. The operating lease obligations do not include common area maintenance charges or real estate taxes under our operating leases, for which we are also obligated. These charges are generally not fixed and can fluctuate from year to year.

We have taxes payable of $2.6 million due within 1 year, which primarily represent deemed repatriation tax from 2017. We had $0 of unrecognized tax benefits as of both December 31, 2023 and 2022.

Critical Accounting Policies and Estimates

Management’s Discussion and Analysis of Financial Condition and Results of Operations discusses our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the U.S. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period.

On an on-going basis, management evaluates its estimates and judgments, including those related to bad debts, net realizable value of inventory and intangible assets. Management bases its estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. Management believes the following critical accounting policies affect significant judgments and estimates used in the preparation of its consolidated financial statements.

Revenue Recognition

We record revenue in accordance with ASC Topic 606 "Revenue from Contracts with Customers". We determine revenue recognition through the following steps:

- Identification of the contract, or contracts, with a customer;
- Identification of the performance obligations in the contract;
- Determination of the transaction price;
- Allocation of the transaction price to the performance obligations in the contract; and
- Recognition of revenue when, or as, we satisfy a performance obligation.

Revenues are recognized when control of the promised goods or services is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those products or services, which excludes any sales incentives and amounts collected on behalf of third parties. Taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction, that are collected by us from a customer, are excluded from revenue. Shipping and handling costs associated with outbound freight before control over a product has transferred to a customer are accounted for as a fulfillment cost and are included in "Cost of goods sold".

Nature of Goods and Services

We derive our revenues primarily from product and license revenue, which includes hardware products and on-premises subscription revenue, and services and other, which is inclusive of cloud subscription revenue, maintenance and support, and professional services.

***Subscription*:** Subscription includes cloud and on-premises subscription revenue, previously referred to as “subscription” and “term-based software licenses”, respectively.

We generate cloud subscription revenues from our Digital Agreements and Security Solutions cloud service offerings. Our standard customer arrangements do not provide the customer with the right to take possession of the software supporting the cloud-based application service at any time. As such, these arrangements are considered service contracts and revenue is recognized ratably over the service period of the contract. Customer payments are normally in advance for annual service.

Revenue from the sale of on-premises subscription revenue is recorded upon delivery which is the latter of when the customer receives the ability to access the software or when they are legally allowed to use the software. No significant obligations or contingencies exist with regard to delivery, customer acceptance or rights of return at the time revenue is recognized. We offer term licenses for on-premises subscription revenue ranging from one to five years in length. For term licenses, payments are either on installment or in advance. In limited circumstances, we integrate third-party software solutions into our software products. We have determined that, consistent with our conclusion under prior revenue recognition rules, generally we act as the principal with respect to the satisfaction of the related performance obligation and record the corresponding revenue on a gross basis from these transactions. For transactions in which we do not act as the principal, we recognize revenue on a net basis. The fees owed to the third parties are recognized as a component of cost of goods sold when the revenue is recognized.

Maintenance and support: Maintenance and support agreements generally call for us to provide software updates and technical support, respectively, to customers. The annual fee for maintenance and technical support is recognized ratably over the term of the maintenance and support agreement as this is the period the services are delivered. Customer payments are normally in advance for annual service.

Professional Services and other revenue: Professional services revenues are primarily comprised of implementing, automating and extending business processes, technology infrastructure, and software applications. Professional services revenues are recognized over time as services are rendered, usually over a period of time that is generally less than a few months. Most projects are performed on a time and materials basis while a portion of revenues is derived from projects performed on a fixed fee. For time and material contracts, revenues are generally recognized and invoiced by multiplying the number of hours expended in the performance of the contract by the contractual hourly rates. For fixed fee contracts, revenues are generally recognized using an input method based on the ratio of hours expended to total estimated hours to complete the services. Customer payments normally correspond with delivery. Professional services and other revenue includes perpetual licenses revenue, which was approximately 1% of total revenue for the year ended December 31, 2023 and approximately 2% of total revenue for the year ended December 31, 2022. Perpetual licenses grant the customer unlimited access to the software.

Hardware products: Revenue from the sale of security hardware is recorded upon shipment, which is the point at which control of the goods are transferred and the completion of the performance obligations, unless there are specific terms that would suggest control is transferred at a later date (e.g. delivery). No significant obligations or contingencies typically exist with regard to delivery, customer acceptance or rights of return at the time revenue is recognized. Customer invoices and subsequent payments normally correspond with delivery.

The Company also enters into separate service agreements with certain hardware customers to perform distribution services. In these situations, revenue is recognized prior to physical delivery of a good (i.e. “bill-and-hold arrangements). The Company evaluates bill-and-hold arrangements, and records revenue accordingly when the following criteria are met:

- The reason for the bill-and-hold arrangement is substantive;
- The product is identified separately as belonging to the customer;
- The product currently is ready for physical transfer to the customer; and
- OneSpan does not have the ability to use the product or to direct it to another customer.

Multiple-Element Arrangements

In our typical multiple-element arrangement, the primary deliverables include:

1. A client component (i.e. an item that is used by the person being authenticated in the form of either a new standalone hardware device or software that is downloaded onto a device that the customer already owns);

2. Server system software that is installed on the customer's systems (i.e., software on the server system that verifies the identity of the person being authenticated) or licenses for additional users on the server system software if the server system software had been installed previously; and

3. Post contract support ("PCS") in the form of maintenance on the server system software or support.

Our multiple-element arrangements may also include other items that are usually delivered prior to the recognition of any revenue and are incidental to the overall transaction such as initialization of the hardware device, customization of the hardware device itself or the packaging in which it is delivered, deployment services where we deliver the device to our customer's end-use customer or employee and, in some limited cases, professional services to assist with the initial implementation of a new customer.

Significant Judgments

We enter into contracts to deliver a combination of hardware devices, software licenses, subscriptions, maintenance and support and, in some situations, professional services. The Company evaluates the nature of the goods or services promised in these arrangements to identify the distinct performance obligations. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment depending on the terms and conditions of the respective customer arrangement. When a hardware client device and licenses to server software are sold in a contract, they are treated as a single performance obligation because the software license is deemed to be a component of the hardware that is integral to the functionality of the hardware that is used by our customers for identity authentication. When a software client device is sold in a contract server software, the licenses are considered a single performance obligation to deliver the authentication solution to the customer. In either of these types of arrangements, maintenance and support and professional services are typically distinct separate performance obligations from the hardware or software solutions. Our contracts to deliver subscription services typically do not include multiple performance obligations; however, in certain limited cases customers may purchase professional services that are distinct performance obligations.

For contracts that contain multiple performance obligations, the transaction price is allocated to the separate performance obligations based on their estimated relative standalone selling price. Judgment is required to determine the stand-alone selling price ("SSP") of each distinct performance obligation. We determine SSP for maintenance and support and professional services based on observable inputs; specifically, the range of prices charged to customers to renew annual maintenance and support contracts and the range of hourly rates we charge our customers in standalone professional services contracts. In instances where SSP is not directly observable, and when we sell at a highly variable price range, such as for transactions involving software licenses or subscriptions, we determine the SSP for those performance obligations using the residual approach.

Credit Losses

In accordance with Accounting Standards Update ("ASU") No. 2016-13, the Company evaluates its allowance based on expected losses rather than incurred losses, which is known as the current expected credit loss ("CECL") model. The allowance is determined using the loss rate approach and is measured on a collective (pool) basis when similar risk characteristics exist. Where financial instruments do not share risk characteristics, they are evaluated on an individual basis. The allowance is based on relevant available information, from internal and external sources, relating to past events, current conditions, and reasonable and supportable forecasts.

Income Taxes

As a global company, we calculate and provide for income taxes in each tax jurisdiction in which we operate. The provision for income taxes includes the amounts payable or refundable for the current year, the effect of deferred taxes and impacts from uncertain tax positions. Our provision for income taxes is significantly affected by shifts in the geographic mix of our pre-tax earnings across tax jurisdictions, changes in tax laws and regulations, and tax planning opportunities available in each tax jurisdiction.

Deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial statement and tax bases of our assets and liabilities and for operating losses and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates that will apply to taxable income in the years in which those differences are expected to be recovered or settled. Valuation allowances are established for deferred tax assets when it is more likely than not that a tax benefit will not be realized. We recognize the effect of a change in tax rates on deferred tax assets and liabilities and in income in the period that includes the enactment date.

We recognize tax benefits for tax positions that are more likely than not to be sustained upon examination by tax authorities. The amount recognized is measured as the largest amount of benefit that is greater than 50 percent likely to be realized upon ultimate settlement. Unrecognized tax benefits are tax benefits claimed in our income tax returns that do not meet these recognition and measurement standards. Assumptions, judgments, and the use of estimates are required in determining whether the “more-likely-than-not” standard has been met when developing the provision for income taxes.

We recognize the tax impact of including certain foreign earnings in U.S. taxable income as a period cost. We have recognized deferred income taxes for local country income and withholding taxes that could be incurred on distributions of non-U.S. earnings because we do not plan to indefinitely reinvest such earnings.

We monitor for changes in tax laws and reflect the impacts of tax law changes in the period of enactment.

Recently Issued Accounting Pronouncements

For information regarding our new accounting pronouncements, see Note 2, *Summary of Significant Accounting Policies*, in the notes to consolidated financial statements included in Part IV, Item 15, *Exhibits and Financial Statements Schedules*.

Item 7A - *Quantitative and Qualitative Disclosures about Market Risk (In thousands)*

Foreign Currency Exchange Risk – In 2023, approximately 83% of our business was conducted outside the United States, primarily in Europe, Latin America and Asia Pacific. A significant portion of our business operations is transacted in foreign currencies. As a result, we have exposure to foreign exchange fluctuations. We are affected by both foreign currency translation and transaction adjustments. Translation adjustments result from the conversion of the foreign subsidiaries’ balance sheets and income statements to U.S. dollars at year-end exchange rates and weighted average exchange rates, respectively. Translation adjustments resulting from this process are recorded directly into stockholders’ equity. Transaction adjustments result from currency exchange movements when one of our companies transacts business in a currency that differs from its local currency. These adjustments are recorded as gains or losses in our consolidated statements of operations. Our business transactions are spread across numerous countries and currencies. As noted in Item 7, *Management’s Discussion and Analysis of Financial Condition and Results of Operations* above, we attempt to minimize the net impact of currency on operating earnings by denominating an amount of billings in a currency such that it would provide a natural hedge against the operating expenses being incurred in that currency. We do not believe that an immediate 10% increase or decrease in the relative value of the U.S. dollar to other currencies would have a material effect on our operating results.

Interest Rate Risk – We have minimal interest rate risk. We had no debt outstanding at December 31, 2023. Our cash and cash equivalents are invested in short-term instruments at current market rates. The effect of a hypothetical one percentage point increase or decrease would not have a material impact on our consolidated financial statements.

Item 8 - *Financial Statements and Supplementary Data*

The information in response to this item is included in our consolidated financial statements, together with the report thereon of KPMG LLP, in Item 15, *Exhibits and Financial Statement Schedules.*

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

None.

Item 9A - *Controls and Procedures*

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Interim Chief Executive Officer (our principal executive officer) and Chief Financial Officer (our principal financial officer), has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 as amended (the "Exchange Act")) as of December 31, 2023.

Based upon that evaluation, our Interim Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of December 31, 2023, to provide reasonable assurance that the information required to be disclosed by us in reports filed under the Exchange Act, is recorded, processed, summarized and reported within the time period specified in the rules and forms of the SEC, and is accumulated and communicated to management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Management's Annual Report on Internal Control over Financial Reporting

The management of OneSpan Inc. is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) promulgated under the Exchange Act). Management, led by our Interim Chief Executive Officer and Chief Financial Officer, assessed the effectiveness of our internal control over financial reporting based upon the criteria set forth in the Internal Control Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control—Integrated Framework (2013).

Management has concluded that its internal control over financial reporting was effective as of December 31, 2023 to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements in accordance with U.S. GAAP.

KPMG LLP, an independent registered public accounting firm, has audited the effectiveness of our internal control over financial reporting as of December 31, 2023, included on F-2 of this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as that term is defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended December 31, 2023, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on the Effectiveness of Controls

Management believes that our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving their objectives and are effective at the reasonable assurance level. However, our management does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of the controls. Also, 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 and procedures may deteriorate.

Item 9B - ***Other Information***

Director and Officer Trading Arrangements

None of our directors or executive officers adopted or terminated a Rule 10b5-1 trading arrangement or a non-Rule 10b5-1 trading arrangement (as defined in Item 408(c) of Regulation S-K) during the fourth quarter of 2023.

Item 9C - ***Disclosure Regarding Foreign Jurisdictions that Prevent Inspection***

Not applicable.

PART III

Item 10 - ***Directors, Executive Officers and Corporate Governance***

All information in response to this Item, other than the required information on executive officers and the required information under Regulation S-K Item 406, is incorporated by reference to the “Information regarding our Board of Directors” and “Delinquent Section 16(a) Reports” sections of OneSpan’s Proxy Statement to be filed with the SEC for the 2024 Annual Meeting of Stockholders. The required information on executive officers is set forth in Part I of this Form 10-K under the heading "Information about our Executive Officers."

We have adopted a written code of business conduct and ethics that applies to our directors, officers, and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A copy of the code is posted on the Corporate Governance section of our website,which is located at www.onespan.com. If we make any substantive amendments to, or grant any waivers from, the code of business conduct and ethics for any officer or director, we will disclose the nature of such amendment or waiver on our website. We will provide any person, without charge, a copy of our code of conduct and ethics upon written request, which may be mailed to Corporate Secretary, OneSpan Inc.,1 Marina Park Drive, Unit 1410, Boston, Massachusetts, 02210.

Item 11 - ***Executive Compensation***

The information in response to this Item is incorporated by reference to the “Executive Compensation” and "Director Compensation" sections of OneSpan’s Proxy Statement (except for the section titled "Executive Compensation - Pay versus Performance") to be filed with the SEC for the 2024 Annual Meeting of Stockholders.

Item 12 - ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters***

The information in response to this Item is incorporated by reference to the “Security Ownership of Certain Beneficial Owners, Directors and Management” and “Equity Compensation Plan Information”sections of OneSpan’s Proxy Statement to be filed with the SEC for the 2024 Annual Meeting of Stockholders.

Item 13 - ***Certain Relationships and Related Transactions, and Director Independence***

The information in response to this Item is incorporated by reference to the “Information regarding our Board of Directors” and “Transactions with Related Persons” sections of OneSpan’s Proxy Statement to be filed with the SEC for the 2024 Annual Meeting of Stockholders.

Item 14 - *Principal Accounting Fees and Services*

The information in response to this Item is incorporated by reference to the "Fees Paid to Independent Registered Public Accounting Firm for 2023 and 2022" section of OneSpan's Proxy Statement to be filed with the SEC for the 2024 Annual Meeting of Stockholders.

PART IV

Item 15 - *Exhibits and Financial Statement Schedules*

(a) The following documents are filed as part of this Annual Report on Form 10-K.

(1) The following consolidated financial statements and notes thereto, and the related independent auditors' report, are included on pages F-1 through F-39 of this Annual Report on Form 10-K:

Report of Independent Registered Public Accounting Firm

Consolidated Balance Sheets as of December 31, 2023 and 2022

Consolidated Statements of Operations for the Years Ended December 31, 2023, 2022 and 2021

Consolidated Statements of Comprehensive Income (Loss) for the Years Ended December 31, 2023, 2022 and 2021

Consolidated Statements of Stockholders' Equity for the Years Ended December 31, 2023, 2022 and 2021

Consolidated Statements of Cash Flows for the Years Ended December 31, 2023, 2022 and 2021

Notes to Consolidated Financial Statements

(2) The following consolidated financial statement schedule of the Company is included on page F-41 of this Form 10-K:

Schedule II – Valuation and Qualifying Accounts

All other financial statement schedules are omitted because such schedules are not required or the information required has been presented in the aforementioned consolidated financial statements.

(3) The following exhibits are filed with this Annual Report on Form 10-K or incorporated by reference as set forth at the end of the list of exhibits:

Exhibit Number	Description
3.1	Certificate of Incorporation of the Registrant, as amended (Incorporated by Reference to the Registrant's Form 10-Q filed August 4, 2022)
3.2	Amended and Restated Bylaws of Registrant, effective as of January 30, 2023. (Incorporated by Reference to the Registrant's Form 8-K filed on February 1, 2023)

Exhibit Number	Description
4.1	Specimen of Registrant’s Common Stock Certificate. (Incorporated by Reference to the Registrant’s Registration Statement on Form S-4, as amended (Registration No. 333-35563), originally filed on September 12, 1997.)
4.2	Description of Securities Registered under Section 12 of the Securities Exchange Act of 1934
10.1*	Interim CEO Employment Agreement dated January 4, 2024 between the Registrant and Victor Limongelli (Incorporated by Reference to the Registrant’s Form 8-K filed January 5, 2024)
10.2*	Employment Agreement between the Registrant and Jorge Martell (Incorporated by Reference to the Registrant’s Form 10-Q filed November 1, 2022)
10.3*	Employment Agreement between the Registrant and Lara Mataac (Incorporated by Reference to the Registrant’s Form 10-K filed February 28, 2023)
10.4*	2023 Management Incentive Plan
10.5*	OneSpan Inc. 2019 Omnibus Incentive Plan (Incorporated by Reference to Attachment A to the Registrant’s Definitive Proxy Statement filed with the Securities and Exchange Commission on April 26, 2019)
10.6*	Form of Director and Officer Indemnification Agreement (Incorporated by Reference to the Registrant’s Form 10-K filed February 28, 2023)
10.7*	Form of 2023 Performance-Based RSU Agreement under the Registrant’s 2019 Omnibus Incentive Plan (Incorporated by Reference to the Registrant’s Form 10-Q filed May 4, 2023)
10.8*	Form of 2023 Time-Based RSU Agreement (Executive) under the Registrant’s 2019 Omnibus Incentive Plan
10.9*	Form of 2023 Time-Based RSU Agreement (General) under the Registrant’s 2019 Omnibus Incentive Plan (Incorporated by Reference to the Registrant’s Form 10-Q filed May 4, 2023)
10.10*	Form of 2022 Performance-Based RSU Agreement under the Registrant’s 2019 Omnibus Incentive Plan (Incorporated by Reference to the Registrant's Form 10-Q filed November 1, 2022)
10.11*	Form of 2022 Time-Based RSU Agreement (Executive) under the Registrant’s 2019 Omnibus Incentive Plan (Incorporated by Reference to the Registrant's Form 10-Q filed November 1, 2022)
10.12*	Form of 2022 Time-Based RSU Agreement (General) under the Registrant’s 2019 Omnibus Incentive Plan (Incorporated by Reference to the Registrant's Form 10-Q filed November 1, 2022)
10.13*	Form of Time-Based Deferred RSU Agreement for Non-Employee Directors of the Registrant (Incorporated by Reference to the Registrant’s Form 10-K filed March 16, 2020)
10.14	Cooperation Agreement dated May 28, 2021, by and among the Registrant, Legion Partners, Christopher S. Kiper and Raymond T. White (Incorporated by Reference to the Registrant's Form 8-K filed May 28, 2021)

Exhibit Number	Description
10.15*	Amended and Restated Employment Agreement between the Registrant and Matthew Moynahan (Incorporated by Reference to the Registrant’s Form 8-K filed January 5, 2024)
10.16*	Special PSU Agreement dated March 11, 2023 between the Registrant and Matthew Moynahan (Incorporated by Reference to the Registrant’s Form 10-Q filed May 4, 2023)
10.17*	Time-Based RSU Agreement dated February 17, 2022 between the Registrant and Matthew Moynahan (Incorporated by Reference to the Registrant's Form 10-Q filed November 1, 2022)
10.18*	Amended and Restated PSU Agreement dated February 26, 2023 between the Registrant and Matthew Moynahan
10.19*	One-Time Special Grant Award Agreement dated November 29, 2021 for Time-Based Restricted Stock Units between the Registrant and Matthew Moynahan under the Registrant’s 2019 Omnibus Incentive Plan (Incorporated by Reference to the Registrant’s Form 10-K filed February 28, 2023)
10.20*	One-Time Special Grant Award Agreement dated November 29, 2021 for Performance-Based Restricted Stock Units between the Registrant and Matthew Moynahan under the Registrant’s 2019 Omnibus Incentive Plan (Incorporated by Reference to the Registrant’s Form 10-K filed February 28, 2023)
10.21*	Separation Agreement dated February 7, 2024 between the Registrant and Matthew Moynahan
10.22*	Separation Agreement dated December 1, 2023 between the Registrant and John Bosshart
21	Subsidiaries of Registrant
23	Consent of KPMG LLP
31.1	Rule 13a-14(a)/15d-14(a) Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, dated March 6, 2024
31.2	Rule 13a-14(a)/15d-14(a) Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, dated March 6, 2024
32.1	Section 1350 Certification of Principal Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, dated March 6, 2024
32.2	Section 1350 Certification of Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, dated March 6, 2024
97	Dodd-Frank Compensation Recovery Policy
101.INS	XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document

Exhibit Number	Description
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
104	Cover page Interactive Data File (formatted as inline XBRL with applicable taxonomy extension information contained in Exhibit 101)

* Compensatory plan or management contract.

OneSpan Inc. will furnish any of the above exhibits to stockholders upon written request addressed to the Secretary at the address given on the cover page of this Form 10-K.

OneSpan Inc.
INDEX TO FINANCIAL STATEMENTS AND SCHEDULE

Financial Statements

Financial Statement Schedule

The following consolidated financial statement schedule is included herein:

All other financial statement schedules are omitted because they are not applicable or the required information is shown in the consolidated financial statements or notes thereto.

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
OneSpan Inc.:

Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of OneSpan Inc. and subsidiaries (the Company) as of December 31, 2023 and 2022, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2023, and the related notes and financial statement schedule II (collectively, the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2023, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023 based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's consolidated financial statements and an opinion on the Company's internal control over financial reporting 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 consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated 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 consolidated financial statements. Our audits of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, 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.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Identification of performance obligations in contracts containing software licenses with unique terms and conditions

As discussed in Notes 2 and 4 to the consolidated financial statements, the Company enters into contracts to deliver a combination of hardware devices, software licenses, subscriptions, maintenance and support and, in some situations, professional services. The Company evaluates the nature of the goods and services promised in these arrangements to identify the distinct performance obligations. The Company recognized total revenue of $235 million, a portion of which related to contracts containing software licenses, for the year ended December 31, 2023. We identified the evaluation of the Company's identification of performance obligations in contracts containing software licenses with unique terms and conditions as a critical audit matter. Specifically, complex auditor judgment was required to evaluate the Company's identification of performance obligations in such contracts, including for contracts with new customers or contracts that were amended with existing customers.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Company's revenue recognition process. This included controls related to the identification of performance obligations and evaluation of unique terms and conditions present in individual contracts. We tested a selection of contracts, including contracts with new customers and contracts that were amended with existing customers, by obtaining and reading the underlying contract and accounting analysis to evaluate the Company's identification of performance obligations. Specifically, we evaluated the completeness and accuracy of the Company's identification of terms and conditions that were unique to the selected contracts and the Company's determination of the impact of those terms and conditions on revenue recognition.

/s/ KPMG LLP

We have served as the Company's auditor since 1996.

Chicago, Illinois
March 6, 2024

OneSpan Inc.
CONSOLIDATED BALANCE SHEETS
(In thousands, except per share data)

	December 31, 2023	December 31, 2022
ASSETS		
Current assets		
Cash and cash equivalents	$ 42,493	$ 96,167
Restricted cash	1,037	1,208
Short-term investments	—	2,328
Accounts receivable, net of allowances of $1,536 in 2023 and $1,600 in 2022	64,387	65,132
Inventories, net	15,553	12,054
Prepaid expenses	6,575	6,222
Contract assets	5,139	4,520
Other current assets	11,159	10,757
Total current assets	146,343	198,387
Property and equipment, net	18,722	12,681
Operating lease right-of-use assets	6,171	8,022
Goodwill	93,684	90,514
Intangible assets, net of accumulated amortization	10,832	12,482
Deferred income taxes	1,721	1,901
Other assets	11,718	11,095
Total assets	$ 289,191	$ 335,082
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	$ 17,452	$ 17,357
Deferred revenue	69,331	64,637
Accrued wages and payroll taxes	14,335	18,345
Short-term income taxes payable	2,646	2,438
Other accrued expenses	10,684	7,664
Deferred compensation	382	373
Total current liabilities	114,830	110,814
Long-term deferred revenue	4,152	6,269
Long-term lease liabilities	6,824	8,442
Long-term income taxes payable	—	2,565
Deferred income taxes	1,067	1,197
Other long-term liabilities	3,177	2,484
Total liabilities	130,050	131,771
Stockholders' equity		
Preferred stock: 500 shares authorized, none issued and outstanding at December 31, 2023 and 2022	—	—
Common stock: $0.001 par value per share, 75,000 shares authorized; 41,243 and 40,764 shares issued; 37,519 and 39,726 shares outstanding at December 31, 2023 and 2022	38	40
Additional paid-in capital	118,620	107,305
Treasury stock, at cost, 3,724 and 1,038 shares outstanding at December 31, 2023 and 2022, respectively	(47,377)	(18,222)
Retained earnings	98,939	128,738
Accumulated other comprehensive loss	(11,079)	(14,550)
Total stockholders' equity	159,141	203,311
Total liabilities and stockholders' equity	$ 289,191	$ 335,082

See accompanying notes to consolidated financial statements.

OneSpan Inc.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)

	Years Ended December 31, 2023	2022	2021
Revenue			
Product and license	$ 130,848	$ 121,426	$ 120,358
Services and other	104,258	97,580	94,123
Total revenue	235,106	219,006	214,481
Cost of goods sold			
Product and license	48,676	45,106	46,196
Services and other	28,715	25,330	25,350
Total cost of goods sold	77,391	70,436	71,546
Gross profit	157,715	148,570	142,935
Operating costs			
Sales and marketing	70,235	60,949	62,730
Research and development	38,420	41,735	47,414
General and administrative	58,267	55,552	53,031
Restructuring and other related charges	17,311	13,310	—
Amortization of intangible assets	2,353	4,139	5,888
Total operating costs	186,586	175,685	169,063
Operating loss	(28,871)	(27,115)	(26,128)
Interest income (expense), net	2,090	595	(1)
Other income (expense), net	(532)	14,827	(14)
Loss before income taxes	(27,313)	(11,693)	(26,143)
Provision for income taxes	2,486	2,741	4,441
Net loss	$ (29,799)	$ (14,434)	$ (30,584)
Net loss per share			
Basic	$ (0.74)	$ (0.36)	$ (0.77)
Diluted	$ (0.74)	$ (0.36)	$ (0.77)
Weighted average common shares outstanding			
Basic	40,193	40,143	39,614
Diluted	40,193	40,143	39,614

See accompanying notes to consolidated financial statements.

OneSpan Inc.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands)

	Years Ended December 31,		
	2023	**2022**	**2021**
Net loss	$ (29,799)	$ (14,434)	$ (30,584)
Other comprehensive loss			
Cumulative translation adjustment, net of tax	3,689	(7,245)	(2,997)
Pension adjustment, net of tax	(222)	3,859	2,056
Unrealized gains (losses) on available-for-sale securities	4	18	(21)
Comprehensive loss	$ (26,328)	$ (17,802)	$ (31,546)

See accompanying notes to consolidated financial statements.

OneSpan Inc.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands)

Description	Common Stock Shares	Common Stock Amount	Treasury - Common Stock Shares	Treasury - Common Stock Amount	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Stockholders Equity
Balance at December 31, 2020	40,103	$ 40	250	$ (5,030)	$ 98,819	$ 173,731	$ (10,220)	$ 257,340
Net loss	—	—	—	—	—	(30,584)	—	(30,584)
Foreign currency translation adjustment, net of tax	—	—	—	—	—	26	(2,997)	(2,971)
Share-based compensation	—	—	—	—	4,354	—	—	4,354
Vesting of restricted stock awards	385	—	—	—	—	—	—	—
Tax payments for stock issuances	(145)	—	—	—	(2,923)	—	—	(2,923)
Unrealized gain (loss) on available-for-sale securities	—	—	—	—	—	—	(21)	(21)
Share repurchases	(342)	—	342	(7,471)	—	—	—	(7,471)
Pension adjustment, net of tax	—	—	—	—	—	—	2,056	2,056
Balance at December 31, 2021	40,001	$ 40	592	$ (12,501)	$ 100,250	$ 143,173	$ (11,182)	$ 219,780
Net loss	—	—	—	—	—	(14,434)	—	(14,434)
Foreign currency translation adjustment, net of tax	—	—	—	—	—	(1)	(7,245)	(7,246)
Share-based compensation	—	—	—	—	8,642	—	—	8,642
Vesting of restricted stock awards	263	—	—	—	—	—	—	—
Tax payments for stock issuances	(92)	—	—	—	(1,587)	—	—	(1,587)
Unrealized gain (loss) on available-for-sale securities	—	—	—	—	—	—	18	18
Share repurchases	(446)	—	446	(5,721)	—	—	—	(5,721)
Pension adjustment, net of tax	—	—	—	—	—	—	3,859	3,859
Balance at December 31, 2022	39,726	$ 40	1,038	$ (18,222)	$ 107,305	$ 128,738	$ (14,550)	$ 203,311
Net loss	—	—	—	—	—	(29,799)	—	(29,799)
Foreign currency translation adjustment, net of tax	—	—	—	—	—	—	3,689	3,689
Share-based compensation	—	—	—	—	14,252	—	—	14,252
Vesting of restricted stock awards	741	—	—	—	—	—	—	—
Tax payments for stock issuances	(262)	—	—	—	(2,939)	—	—	(2,939)
Unrealized gain (loss) on available-for-sale securities	—	—	—	—	—	—	4	4
Share repurchases	(2,686)	(2)	2,686	(29,155)	2	—	—	(29,155)
Pension adjustment, net of tax	—	—	—	—	—	—	(222)	(222)
Balance at December 31, 2023	37,519	$ 38	3,724	$ (47,377)	$ 118,620	$ 98,939	$ (11,079)	$ 159,141

See accompanying notes to consolidated financial statements.

OneSpan Inc.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Years Ended December 31,		
	2023	2022	2021
Cash flows from operating activities:			
Net loss from operations	$ (29,799)	$ (14,434)	$ (30,584)
Adjustments to reconcile net loss from operations to net cash used in operations:			
Depreciation and amortization of intangible assets	6,479	7,066	8,926
Loss on disposal of asset	455	—	—
Write-off of property and equipment, net	2,728	3,828	—
Impairment of inventories, net	143	—	—
Gain on sale of equity-method investment	—	(14,810)	—
Deferred tax benefit	118	1,637	2,823
Stock-based compensation	14,252	8,642	4,354
Allowance for doubtful accounts	(65)	184	(2,705)
Changes in operating assets and liabilities:			
Accounts receivable	1,571	(9,705)	2,047
Inventories, net	(3,275)	(2,168)	2,209
Contract assets	(574)	52	3,787
Accounts payable	(253)	9,261	2,716
Income taxes payable	(2,367)	(1,140)	(2,525)
Accrued expenses	(1,531)	2,197	3,089
Deferred compensation	9	(504)	(725)
Deferred revenue	2,015	8,173	9,713
Other assets and liabilities	(641)	(4,038)	(5,870)
Net cash used in operating activities	(10,735)	(5,759)	(2,745)
Cash flows from investing activities:			
Purchase of short-term investments	—	(15,812)	(59,925)
Maturities of short-term investments	2,330	48,550	51,149
Additions to property and equipment	(12,484)	(4,996)	(2,169)
Additions to intangible assets	(59)	(29)	(35)
Cash paid for acquisition of business	(1,800)	—	—
Sale of equity-method investment	—	18,874	—
Net cash provided by (used in) investing activities	(12,013)	46,587	(10,980)
Cash flows from financing activities:			
Repurchase of common stock	(29,155)	(5,721)	(7,471)
Tax payments for restricted stock issuances	(2,939)	(1,587)	(2,923)
Net cash used in financing activities	(32,094)	(7,308)	(10,394)
Effect of exchange rate changes on cash	997	(372)	(895)
Net (decrease) increase in cash	(53,845)	33,148	(25,014)
Cash, cash equivalents, and restricted cash, beginning of period	97,375	64,227	89,241
Cash, cash equivalents, and restricted cash, end of period	$ 43,530	$ 97,375	$ 64,227
Supplemental cash flow disclosures:			
Cash paid for income taxes	$ 4,989	$ 2,025	$ 7,700
Cash paid for interest	$ —	$ —	$ —

See accompanying notes to consolidated financial statements.

OneSpan Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Unless otherwise noted, references in this Annual Report on Form 10-K to "OneSpan" and "Company" refer to OneSpan Inc. and its subsidiaries.

Note 1 – Description of the Company and Basis of Presentation

Description of the Company

OneSpan provides security, identity, electronic signature ("e-signature") and digital workflow solutions that protect and facilitate digital transactions and agreements. The Company delivers products and services that automate and secure customer-facing and revenue-generating business processes for use cases ranging from simple transactions to workflows that are complex or require higher levels of security. The Company's solutions help its customers ensure the integrity of the people and records associated with digital agreements, transactions, and interactions in industries including banking, financial services, healthcare, and professional services. OneSpan has operations in Austria, Australia, Belgium, Canada, China, France, Japan, The Netherlands, Singapore, Switzerland, the United Arab Emirates, the United Kingdom (U.K.), and the United States (U.S.).

Business Transformation

In December 2021, the Company's Board of Directors approved a restructuring plan (the "restructuring plan") designed to advance the Company's operating model, streamline its business, improve efficiency, and enhance its capital resources. The first phase of this restructuring plan began and was substantially completed during the three months ended March 31, 2022. In May 2022, the Company's Board of Directors approved additional actions related to the restructuring plan and the Company announced a three-year strategic transformation plan that began on January 1, 2023 (the "2022 strategic plan"). In conjunction with the 2022 strategic plan and to enable a more efficient capital deployment model, effective with the quarter ended June 30, 2022, the Company began reporting under the following two lines of business, which are its reportable operating segments: Digital Agreements and Security Solutions.

As a result of the ongoing strategic transformation, the Company refined its operating segment allocation methodology to better align internal and external costs more directly to where the employee efforts and company resources are being spent on each segment. The Company applied this revised methodology on a prospective basis beginning in 2023.

For further information regarding the Company's reportable segments, see Note 3, *Segment Information.*

Basis of Presentation

The Company's consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America ("U.S. GAAP"). Certain amounts in prior periods have been reclassified to conform with current period presentation.

Principles of Consolidation

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

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period.

The Company regularly assess these estimates, including but not limited to, stock-based compensation including the determination of the fair value of our stock-based awards, realization of deferred tax assets, pension obligations, estimated life of our long-lived assets, purchase price allocations for business combinations, valuation of the acquired intangibles purchased in a business combination, valuation of goodwill, estimated standalone selling price of our performance obligations, and estimated consideration for implementation services. Estimates are based on historical experience and on various other market-specific and relevant assumptions that the Company believes to be reasonable under the circumstances. Actual results could differ from those estimates.

Foreign Currency Translation and Transactions

The financial position and results of operations of the majority of the Company's foreign subsidiaries are measured using the local currency as the functional currency. Accordingly, assets and liabilities are translated into U.S. dollars using current exchange rates as of the balance sheet date. Revenue and expenses are translated at average exchange rates prevailing during the year. Translation adjustments arising from differences in exchange rates are charged or credited to other comprehensive income (loss). Gains and losses resulting from foreign currency transactions are included in the consolidated statements of operations in other income (expense), net. Foreign exchange transaction losses aggregated $1.1 million, $1.9 million, and $0.8 million in 2023, 2022, and 2021, respectively.

Note 2 – Summary of Significant Accounting Policies

Cash and Cash Equivalents and Restricted Cash

Cash and cash equivalents are stated at cost plus accrued interest, which approximates fair value. Cash equivalents are high-quality short-term money market instruments and commercial paper with maturities at acquisition of three months or less. Cash and cash equivalents are held by a number of U.S. and non-U.S. commercial banks and money market investment funds.

The Company is party to lease agreements that require letters of credit and guarantees to secure the obligations which totaled $0.9 million and $1.1 million at December 31, 2023 and 2022, respectively. Additionally, the Company maintained a cash guarantee with a payroll vendor in the amount of $0.1 million at both December 31, 2023 and 2022. The restricted cash related to the letters of credit and guarantees is recorded in "Restricted cash" on the consolidated balance sheets.

Short-Term Investments

The Company's short-term investments are in debt securities which consist of U.S. treasury bills and notes, U.S. government agency notes, corporate notes, and high-quality commercial paper with maturities at acquisition of more than three months and less than twelve months. The Company classifies its investments in debt securities as available-for-sale. In accordance with Accounting Standards Update "ASU" No. 2016-13, credit impairments are recorded through an allowance and are recorded through a charge to the consolidated statement of operations. Unrealized gains or losses not related to credit impairments are recorded in "Accumulated other comprehensive loss" on the consolidated balance sheets. The Company reviews available-for-sale debt securities for impairments related to credit losses and other factors each quarter. In 2023, the Company liquidated its short-term investments, which had a balance of $0 and $2.3 million as of December 31, 2023 and 2022, respectively. As of December 31, 2023 and 2022, the unrealized gains and losses were not material.

Credit Losses

Reasonable assurance of collection is a requirement for revenue recognition. Credit limit adjustments for existing customers may result from the periodic review of outstanding accounts receivable. The Company records trade accounts receivable at invoice values, which are generally equal to fair value.

In accordance with accounting standards updates ("ASU") No. 2016-13, the Company evaluates its allowance based on expected losses rather than incurred losses, which is known as the current expected credit loss ("CECL") model. The allowance is determined using the loss rate approach and is measured on a collective (pool) basis when similar risk characteristics exist. Where financial instruments do not share risk characteristics, they are evaluated on an individual basis. The allowance is based on relevant available information, from internal and external sources, relating to past events, current conditions, and reasonable and supportable forecasts.

Fair Value of Financial Instruments

At December 31, 2023 and 2022, the Company's financial instruments were cash and cash equivalents, restricted cash, short-term investments, accounts receivable, accounts payable, and accrued liabilities. The estimated fair value of financial instruments has been determined by using available market information and appropriate valuation methodologies, as defined in Accounting Standards Codification "ASC" 820, *Fair Value Measurements*. The fair values of the financial instruments were not materially different from their carrying amounts at December 31, 2023 and 2022. See Note 10, *Fair Value Measurements,* for additional detail.

Inventories

Inventories, consisting principally of hardware and component parts, are stated at the lower of cost or net realizable value. Cost is determined using the first-in-first-out (FIFO) method. The Company writes down inventory when it appears that the carrying cost of the inventory may not be recovered through subsequent sale of the inventory. The Company analyzes the quantity of inventory on hand, the quantity sold in the past year, the anticipated sales volume in the form of sales to new customers as well as sales to previous customers, the expected sales price and the cost of making the sale when evaluating the valuation of inventory. If the sales volume or sales price of a specific model declines significantly, additional write downs may be required.

Property and Equipment, net

Property and equipment, net, is stated at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the related assets ranging from three to ten years. Leasehold improvements are depreciated over the lesser of the remaining lease term or ten years. Additions and improvements are capitalized, while expenditures for maintenance and repairs are charged to operations as incurred. Gains or losses resulting from sales or retirements are recorded as incurred, at which time related costs and accumulated depreciation are removed from the accounts.

Accounting for Leases

All of the Company's leases are operating leases.

The Company records leases in accordance with ASC Topic 842, *Leases.* The Company elected the following practical expedients:

- The package of practical expedients permitted under the transition guidance within the new standard. The practical expedient package applies to leases commenced prior to adoption of the new standard and permits companies not to reassess whether existing or expired contracts contain a lease, the lease classification, and any initial direct costs for existing leases.

- The short-term lease practical expedient, which allowed the Company to exclude short-term leases from recognition in the consolidated balance sheets;

- The Company has lease agreements that contain lease and non-lease components. For automobile leases, lease and non-lease components are accounted for together. For office leases, the components are accounted for separately using a relative standalone selling basis; and

- The Company applies the portfolio approach to automobile leases with similar characteristics that commence in the same period.

The difference between the asset and liability is a result of lease incentives, such as tenant improvement allowances, and deferred rent on the consolidated balance sheet at transition. See Note 12, *Leases,* for additional information.

Goodwill

Goodwill represents the excess of purchase price over the fair value of net identifiable assets acquired in a business combination. The Company assesses the impairment of goodwill annually or whenever events or changes in circumstances indicate that the carrying value may not be recoverable. The annual impairment test date is October 1.

The Company's impairment assessment begins with a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. The qualitative assessment includes comparing the overall financial performance of the reporting unit against the planned results. Additionally, the reporting unit's fair value is assessed in light of certain events and circumstances, including macroeconomic conditions, industry and market considerations, cost factors, and other relevant entity and reporting unit specific events. The selection and assessment of qualitative factors used to determine whether it is more likely than not that the fair value of a reporting unit exceeds the carrying value involves significant judgments. If it is determined under the qualitative assessment that it is more likely than not that the fair value of a reporting unit is less than its carrying value, then the estimated fair value of the reporting unit is compared with its carrying value. An impairment charge is recognized for the amount by which the carrying amount exceeds the reporting unit's fair value.

As a result of the transformation plan and new reportable operating segments, the Company allocated the goodwill balance to each of its reporting units and respective reportable operating segments on May 17, 2022. Prior to the transformation plan, the Company operated under one reporting unit. See Note 1, *Description of the Company and Basis of Presentation,* for additional information.

No goodwill impairment was recorded during the years ended December 31, 2023, 2022, and 2021.

Long-Lived and Intangible Assets

Finite-lived intangible assets include proprietary technology, customer relationships, and other intangible assets. Intangible assets other than patents with indefinite lives are amortized over the useful life, generally three to seven years for proprietary technology and five to twelve years for customer relationships. Patents are amortized over the life of the patent which is generally 20 years in the U.S. Intangible assets arising from business combinations, such as acquired technology, customer relationships, and other intangible assets, are originally recorded at fair value.

Long-lived assets, including property, plant and equipment, operating lease right-of-use assets, finite-lived intangible assets being amortized and capitalized software costs for internal use, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the long-lived asset group may not be recoverable. An impairment loss shall be recognized if the carrying amount of a long-lived asset group exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. If it is determined that an impairment loss has occurred, the loss is measured as the amount by which the carrying amount of the long-lived asset group exceeds its fair value. Long-lived assets held for sale are reported at the lower of carrying value or fair value less cost to sell.

Equity Method Investment

On January 31, 2022, the Company sold its equity interest in Promon AS (Promon) for $18.9 million and recorded the gain on sale of $14.8 million in "Other income (expense), net", on the consolidated statement of operations for the year ended December 31, 2022. Promon is a technology company headquartered in Norway that specializes in mobile app security, whose solutions focus largely on Runtime Application Self-Protection (RASP).

Prior to January 31, 2022, the Company held a 17% interest in Promon and applied the equity method of accounting to its investment in Promon because it exercised significant influence on, but did not hold a controlling interest in, the investee. Under the equity method of accounting, the Company's proportionate share of the net earnings (losses) of Promon was reported in "Other income (expense), net", on the consolidated statements of operations. The impact of the proportionate share of net earnings (losses) was immaterial for the years ended December 31, 2022 and 2021, as were the relative size of Promon's assets and operations in relation to the Company's.

The Company intends to continue to purchase and integrate Promon's RASP technology into its customer software solutions.

Share Repurchase Program

On May 12, 2022, the Board of Directors adopted a stock repurchase program (the "2022 stock repurchase program") under which the Company is authorized to repurchase up to $50.0 million of its issued and outstanding common stock. Share purchases under the program will take place in open market transactions, privately negotiated transactions or tender offers, and may be made from time to time depending on market conditions, share price, trading volume, and other factors. The timing of the repurchases and the amount of stock repurchased in each transaction is subject to OneSpan's sole discretion and will depend upon market and business conditions, applicable legal and credit requirements and other corporate considerations. The authorization is effective until May 11, 2024 unless the total amount has been used or authorization has been cancelled. In December 2023, the Company repurchased 2,380,834 shares of its issued and outstanding common stock pursuant to a modified "Dutch auction" tender offer conducted under the 2022 stock repurchase program (the "Tender Offer"). The purchase price paid for these shares was $10.50, or an aggregate cost of approximately $25.0 million, excluding fees and expenses related to the Tender Offer.

During the year ended December 31, 2023, the Company repurchased 2.7 million shares of the Company's stock for $29.2 million in the aggregate, both in open market transactions and pursuant to the Tender Offer, at an average cost of $10.62 per share under its repurchase program. As of December 31, 2023, approximately $15.8 million remained available for potential future repurchases under the repurchase program.

Revenue Recognition

The Company records revenue in accordance with ASC Topic 606 "Revenue from Contracts with Customers". We determine revenue recognition through the following steps:

- Identification of the contract, or contracts, with a customer;
- Identification of the performance obligations in the contract;
- Determination of the transaction price;
- Allocation of the transaction price to the performance obligations in the contract; and
- Recognition of revenue when, or as, we satisfy a performance obligation.

Revenues are recognized when control of the promised goods or services is transferred to the Company's customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those products or services, which excludes any sales incentives and amounts collected on behalf of third parties. Taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction, that are collected by the Company from a customer, are excluded from revenue. Shipping and handling costs associated with outbound freight before control over a product has transferred to a customer are accounted for as a fulfillment cost and are included in "Cost of goods sold".

Nature of Goods and Services

The Company derives our revenues primarily from product and license revenue, which includes hardware products and on-premises subscription revenue, and services and other, which is inclusive of cloud subscription revenue, maintenance and support, and professional services.

Subscription**:** Subscription includes cloud and on-premises subscription revenue, previously referred to as "subscription" and "term-based software licenses", respectively.

Cloud subscription revenues are generated from the Company's Digital Agreements and Security Solutions service offerings. Standard customer arrangements do not provide the customer with the right to take possession of the software supporting the cloud-based application service at any time. As such, these arrangements are considered service contracts and revenue is recognized ratably over the service period of the contract. Customer payments are normally in advance for annual service.

Revenue from the sale of on-premises subscription revenue is recorded upon delivery which is the latter of when the customer receives the ability to access the software or when they are legally allowed to use the software. No significant obligations or contingencies exist with regard to delivery, customer acceptance or rights of return at the time revenue is recognized. The Company offers term licenses for on-premises subscription revenue ranging from one to five years in length. For term licenses, payments are either on installment or in advance. In limited circumstances, the Company integrates third-party software solutions into our software products. The Company has determined that, consistent with its conclusion under prior revenue recognition rules, generally the Company acts as the principal with respect to the satisfaction of the related performance obligation and records the corresponding revenue on a gross basis from these transactions. For transactions in which the Company does not act as the principal, the Company recognizes revenue on a net basis. The fees owed to the third parties are recognized as a component of cost of goods sold when the revenue is recognized.

Maintenance and support: Maintenance and support agreements generally call for the Company to provide software updates and technical support, respectively, to customers. The annual fee for maintenance and technical support is recognized ratably over the term of the maintenance and support agreement as this is the period the services are delivered. Customer payments are normally in advance for annual service.

Professional Services and other Revenue: Professional services revenues are primarily comprised of implementing, automating and extending business processes, technology infrastructure, and software applications. Professional services revenues are recognized over time as services are rendered, usually over a period of time that is generally less than a few months. Most projects are performed on a time and materials basis while a portion of revenues is derived from projects performed on a fixed fee. For time and material contracts, revenues are generally recognized and invoiced by multiplying the number of hours expended in the performance of the contract by the contractual hourly rates. For fixed fee contracts, revenues are generally recognized using an input method based on the ratio of hours expended to total estimated hours to complete the services. Customer payments normally correspond with delivery. Professional services and other includes perpetual software licenses revenue, which was approximately 1%, 2%, and 5% of total revenue for the years ended December 31, 2023, 2022, and 2021, respectively. Perpetual licenses grant the customer unlimited access to the software.

Hardware products: Revenue from the sale of security hardware is recorded upon shipment, which is the point at which control of the goods are transferred and the performance obligations are completed, unless there are specific terms that would suggest control is transferred at a later date (e.g. delivery). No significant obligations or contingencies typically exist with regard to delivery, customer acceptance or rights of return at the time revenue is recognized. Customer invoices and subsequent payments normally correspond with delivery.

The Company also enters into separate service agreements with certain hardware customers to perform distribution services. In these situations, revenue is recognized prior to physical delivery of a good (i.e. "bill-and-hold arrangements). The Company evaluates bill-and-hold arrangement, and records revenue accordingly when the following criteria is met:

- The reason for the bill-and-hold arrangement is substantive;
- The product is identified separately as belonging to the customer;
- The product currently is ready for physical transfer to the customer;
- The Company does not have the ability to use the product or to direct it to another customer.

Multiple-Element Arrangements

In the Company's typical multiple-element arrangement, the primary deliverables include:

1. A client component (i.e. an item that is used by the person being authenticated in the form of either a new standalone hardware device or software that is downloaded onto a device that the customer already owns);
2. Server system software that is installed on the customer's systems (i.e. software on the server system that verifies the identity of the person being authenticated) or licenses for additional users on the server system software if the server system software had been installed previously; and
3. Post contract support (PCS) in the form of maintenance on the server system software or support.

The Company's multiple-element arrangements may also include other items that are usually delivered prior to the recognition of any revenue and are incidental to the overall transaction such as initialization of the hardware device, customization of the hardware device itself or the packaging in which it is delivered, deployment services where the Company delivers the device to its customer's end-use customer or employee and, in some limited cases, professional services to assist with the initial implementation of a new customer.

Significant Judgments

The Company enters into contracts to deliver a combination of hardware devices, software licenses, subscriptions, maintenance and support and, in some situations, professional services. The Company evaluates the nature of the goods or services promised in these arrangements to identify the distinct performance obligations. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment depending on the terms and conditions of the respective customer arrangement. When a hardware client device and licenses to server software are sold in a contract, they are treated as a single performance obligation because the software license is deemed to be a component of the hardware that is integral to the functionality of the hardware that is used by customers for identity authentication. When a software client device is sold in a contract server software, the licenses are considered a single performance obligation to deliver the authentication solution to the customer. In either of these types of arrangements, maintenance and support and professional services are typically distinct separate performance obligations from the hardware or software solutions. Contracts to deliver subscription services typically do not include multiple performance obligations; however, in certain limited cases customers may purchase professional services that are distinct performance obligations.

For contracts that contain multiple performance obligations, the transaction price is allocated to the separate performance obligations based on their estimated relative standalone selling price. Judgment is required to determine the stand-alone selling price ("SSP") of each distinct performance obligation. We determine SSP for maintenance and support and professional services based on observable inputs; specifically, the range of prices charged to customers to renew annual maintenance and support contracts and the range of hourly rates we charge customers in standalone professional services contracts. In instances where SSP is not directly observable, and when we sell at a highly variable price range, such as for transactions involving cloud and on-premise subscription-based licenses or hardware, we determine the SSP for those performance obligations using the residual approach.

Cost of Goods Sold

Cost of goods sold related to product and license include direct product costs and direct costs, including personnel costs, production costs, and freight costs. Cost of goods sold related to service and other revenues are primarily costs related to cloud subscription solutions, including personnel, equipment costs, and capitalized software costs and internal professional services and maintenance support.

Research and Development Costs

As part of the 2022 strategic plan, the Company began investing in its Digital Agreements operating segment for accelerated growth. In conjunction with expanded research and development activities to grow the Company's transaction-cloud platform and Digital Agreements product offerings, the Company began capitalizing certain costs incurred in connection with obtaining or developing internal-use software during the year ended December 31, 2022. These costs include payroll and payroll-related costs for employees who are directly associated with the internal-use software projects, external direct costs of materials and services costs while developing the software. Capitalized software costs are included in "Property and equipment, net" on the consolidated balance sheets and are depreciated using the straight-line method over the estimated life of three years. Capitalization of such costs ceases when the project is substantially complete and ready for its intended purpose. Costs incurred during the preliminary project and post-implementation stages, as well as software maintenance and training costs, are expensed in the period in which they are incurred. Other costs for research and development, principally the design and development of hardware, and the design and development of software prior to the determination of technological feasibility, are expensed as incurred on a project-by-project basis.

The Company capitalized $10.1 million and $4.0 million of internal-use software during the years ended December 31, 2023 and 2022, respectively.

Stock-Based Compensation

The Company has stock-based employee compensation plans, described in Note 15, *Stock Compensation Plans*. ASC 718, *Stock Compensation,* requires the Company to estimate the fair value of restricted stock granted to employees, directors and others to record compensation expense equal to the estimated fair value. Compensation expense is recorded on a straight-line basis over the vesting period for time-based awards and performance and market-based awards with cliff vesting provisions and on a graded basis for performance and market-based awards with graded vesting provisions. Forfeitures are recorded as incurred.

Retirement Benefits

The Company records annual expenses relating to defined benefit pension plans based on calculations which include various actuarial assumptions, including discount rates, assumed asset rates of return, compensation increases, and turnover rates. The Company reviews its actuarial assumptions on an annual basis and makes modifications to the assumptions based on current rates and trends. The effects of gains, losses, and prior service costs and credits are amortized over the average service life. The funded status, or projected benefit obligation less plan assets, for each plan, is reflected in the consolidated financial statements using a December 31 measurement date.

Other Income (Expense), net

Other income (expense), net, consists primarily of exchange gains (losses) on transactions that are denominated in currencies other than the Company’s subsidiaries’ functional currencies, subsidies received from foreign governments in support of the Company's research and development in those countries and other miscellaneous non-operational income and expenses.

Income Taxes

The Company calculates and provides for income taxes in each tax jurisdiction in which it operates. The provision for income taxes includes the amounts payable or refundable for the current year, the effect of deferred taxes and impacts from uncertain tax positions. The Company’s provision for income taxes is significantly affected by shifts in the geographic mix of its pre-tax earnings across tax jurisdictions, changes in tax laws and regulations, and tax planning opportunities available in each tax jurisdiction.

Deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial statement and tax bases of the Company's assets and liabilities and for operating losses and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates that will apply to taxable income in the years in which those differences are expected to be recovered or settled. Valuation allowances are established for deferred tax assets when it is more likely than not that a tax benefit will not be realized. The Company recognizes the effect of a change in tax rates on deferred tax assets and liabilities and in income in the period that includes the enactment date.

The Company recognizes tax benefits for tax positions that are more likely than not to be sustained upon examination by tax authorities. The amount recognized is measured as the largest amount of benefit that is greater than 50 percent likely to be realized upon ultimate settlement. Unrecognized tax benefits are tax benefits claimed in the Company's income tax returns that do not meet these recognition and measurement standards. Assumptions, judgments, and the use of estimates are required in determining whether the “more-likely-than-not” standard has been met when developing the provision for income taxes.

The Company recognizes the tax impact of including certain foreign earnings in U.S. taxable income as a period cost. The Company has recognized deferred income taxes for local country income and withholding taxes that could be incurred on distributions of non-U.S. earnings because management does not plan to indefinitely reinvest such earnings.

The Company monitors for changes in tax laws and reflect the impacts of tax law changes in the period of enactment.

Recently Issued Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board (FASB) or other standard setting bodies that are adopted by the Company as of the specified effective date.

In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 280) – *Improvements to Reportable Segment Disclosures*, to improve reportable segment disclosure requirements, primarily through enhanced disclosures about significant segment expenses. The amendments are effective for fiscal years beginning after December 15, 2023 and interim periods within fiscal years beginning after December 15, 2024. Early adoption is permitted. The

Company is evaluating the impact the adoption of this guidance will have on its consolidated financial statements and related disclosures.

In December 2023, the FASB issued ASU 2023-09, Income Taxes (Topic 740) – *Improvements to Income Tax Disclosures*, which is intended to enhance the transparency and decision usefulness of income tax disclosures. Public business entities are required to adopt for annual fiscal periods beginning after December 31, 2024 and early adoption is permitted. The Company is evaluating the impact the adoption of this guidance will have on its consolidated financial statements and related disclosures.

Note 3 – Segment Information

Segments are defined as components of a company that engage in business activities from which they may earn revenues and incur expenses, and for which separate financial information is available and is evaluated regularly by the chief operating decision maker (CODM), in deciding how to allocate resources and in assessing performance. The Company's CODM is its Chief Executive Officer.

- **Digital Agreements.** Digital Agreements consists of solutions that enable our clients to secure and automate business processes associated with their digital agreement and customer transaction lifecycles that require consent, non-repudiation and compliance. These solutions, which are largely cloud-based, include OneSpan Sign e-signature, OneSpan Notary and OneSpan Trust Vault. This segment also includes costs attributable to our transaction cloud platform.

- **Security Solutions.** Security Solutions consists of our broad portfolio of software products, software development kits (SDKs) and Digipass authenticator devices that are used to build applications designed to defend against attacks on digital transactions across online environments, devices, and applications. The software products and SDKs included in the Security Solutions segment are largely on-premises software products and include identity verification, multi-factor authentication and transaction signing solutions, such as mobile application security and mobile software tokens.

Segment operating income consists of the revenues generated by a segment, less the direct costs of revenue, sales and marketing, research and development expenses, amortization expense, and restructuring and other related charges that are incurred directly by a segment. Unallocated corporate costs include costs related to administrative functions that are performed in a centralized manner that are not attributable to a particular segment.

Prior to 2023, the Company allocated certain cost of goods sold and operating expenses to its two reportable operating segments using a direct cost allocation and an allocation based on revenue split between the segments. As a result of the ongoing strategic transformation, the Company refined its operating segment allocation methodology to better align internal and external costs more directly to where the employee efforts are being spent on each segment moving forward. The revised methodology was applied on a prospective basis beginning in 2023. As a result of this change, there was an increase in cost of goods sold and operating expenses being allocated to the Digital Agreements segment, which better aligns with the investments the Company is making to grow that segment as compared to its Security Solutions segment.

The tables below set forth information about the Company's operating segments for the years ended December 31, 2023, 2022, and 2021, along with the items necessary to reconcile the segment information to the totals reported in the accompanying consolidated financial statements.

(In thousands, except percentages)	Years Ended December 31, 2023	2022	2021
Digital Agreements			
Revenue	$ 50,925	$ 48,401	$ 40,551
Gross profit	$ 37,742	$ 37,488	$ 29,557
Gross margin	74 %	77 %	73 %
Operating (loss) income (1)	$ (18,525)	$ 5,348	$ (1,612)
Security Solutions			
Revenue	$ 184,181	$ 170,605	$ 173,930
Gross profit	$ 119,974	$ 111,082	$ 113,378
Gross margin	65 %	65 %	65 %
Operating income (2)	$ 60,190	$ 32,051	$ 35,395
Total Company:			
Revenue	$ 235,106	$ 219,006	$ 214,481
Gross profit	$ 157,715	$ 148,570	$ 142,935
Gross margin	67 %	68 %	67 %
Statements of operations reconciliation:			
Segment operating income	$ 41,665	$ 37,399	$ 33,783
Corporate operating expenses not allocated at the segment level	70,536	64,514	59,911
Operating loss	$ (28,871)	$ (27,115)	$ (26,128)
Interest income, net	2,090	595	(1)
Other income (expense), net	(532)	14,827	(14)
Loss before income taxes	$ (27,313)	$ (11,693)	$ (26,143)

(1) Digital Agreements operating income includes $2.3 million, $2.3 million, and $2.5 million of amortization of intangible assets expense for the years ended December 31, 2023, 2022, and 2021, respectively.

(2) Security Solutions operating income includes $0, $1.8 million, and $3.3 million of amortization of intangible assets expense for the years ended December 31, 2023, 2022, and 2021, respectively.

The following tables illustrate the disaggregation of revenues by category and services, including a reconciliation of the disaggregated revenues to revenues from the Company's two operating segments for the years ended December 31, 2023, 2022, and 2021.

	Years Ended December 31, 2023		2022		2021	
(In thousands)	Digital Agreements	Security Solutions	Digital Agreements	Security Solutions	Digital Agreements	Security Solutions
Subscription (1)	$ 45,886	$ 60,550	$ 42,029	$ 47,124	$ 33,283	$ 35,224
Maintenance and support	4,143	42,240	5,451	42,894	5,709	45,567
Professional services and other (2)	896	5,425	921	7,087	1,494	13,703
Hardware products	—	75,966	—	73,500	65	79,436
Total Revenue	$ 50,925	$ 184,181	$ 48,401	$ 170,605	$ 40,551	$ 173,930

(1) Subscription includes cloud and on-premises subscription revenue, previously referred to as “subscription” and “term-based software licenses”, respectively.

(2) Professional services and other includes perpetual software licenses revenue, which was approximately 1%, 2%, and 5% of total revenue for the years ended December 31, 2023, 2022, and 2021, respectively.

The Company allocates goodwill by reporting unit, in accordance with ASC 350 – *Goodwill and Other*. Asset information by segment is not reported to or reviewed by the CODM to allocate resources, and therefore, the Company has not disclosed asset information for the segments.

Note 4 – Revenue

Disaggregation of Revenues

The following tables present the Company's revenues disaggregated by major products and services, geographical region and timing of revenue recognition.

Revenue by major products and services

	Years Ended December 31,		
(In thousands)	2023	2022	2021
Subscription (1)	$ 106,436	$ 89,153	$ 68,507
Maintenance and support	46,383	48,345	51,276
Professional services and other (2)	6,321	8,008	15,197
Hardware products	75,966	73,500	79,501
Total Revenue	$ 235,106	$ 219,006	$ 214,481

(1) Subscription includes cloud and on-premises subscription revenue, previously referred to as “subscription” and “term-based software licenses”, respectively.

(2) Professional services and other includes perpetual software licenses revenue, which was approximately 1%, 2%, and 5% of total revenue for the years ended December 31, 2023, 2022, and 2021, respectively.

Revenue by location of customer for the years ended December 31, 2023, 2022, and 2021

	Years Ended December 31,		
(In thousands, except percentages)	2023	2022	2021
Revenue			
EMEA	$ 111,568	$ 100,298	$ 104,878
Americas	80,057	77,740	68,646
APAC	43,481	40,968	40,957
Total revenue	$ 235,106	$ 219,006	$ 214,481
% of Total Revenue			
EMEA	47 %	46 %	49 %
Americas	34 %	35 %	32 %
APAC	19 %	19 %	19 %

Timing of revenue recognition

	Years Ended December 31,		
(In thousands)	2023	2022	2021
Products and Licenses transferred at a point in time	$ 130,848	$ 121,426	$ 120,358
Services transferred over time	104,258	97,580	94,123
Total Revenue	$ 235,106	$ 219,006	$ 214,481

Contract balances

The following table provides information about receivables, contract assets and contract liabilities from contracts with customers as of December 31, 2023 and 2022:

	December 31,	
(In thousands)	**2023**	**2022**
Receivables, inclusive of trade and unbilled	$ 64,387	$ 65,132
Contract Assets (current and non-current)	$ 5,322	$ 4,642
Contract Liabilities (Deferred Revenue current and non-current)	$ 73,483	$ 70,907

Contract assets relate primarily to multi-year term license arrangements and the remaining contractual billings. These contract assets are transferred to receivables when the right to billing occurs over a 2- to 5-year period. The contract liabilities primarily relate to the advance consideration received from customers for subscription and maintenance services. Revenue is recognized for these services over time.

As a practical expedient, the Company does not adjust the promised amount of consideration for the effects of a significant financing component when it is expected, at contract inception, that the period between the Company's transfer of a promised product or service to a customer and when the customer pays for that product or service will be one year or less. Extended payment terms are not typically included in contracts with customers.

Revenue recognized during the year ended December 31, 2023 included $62.1 million that was included on the December 31, 2022 consolidated balance sheet in contract liabilities. Deferred revenue increased in the same period due to timing of annual renewals.

Transaction price allocated to the remaining performance obligations

Remaining performance obligations represent the revenue that is expected to be recognized in future periods related to performance obligations that are unsatisfied, or partially unsatisfied, as of the end of the period. The following table includes estimated revenue expected to be recognized in the future related to performance obligations that are unsatisfied (or partially unsatisfied) as of December 31, 2023:

(In thousands)	2024	2025	2026	Beyond 2026	Total
Future revenue related to current unsatisfied performance obligations	$ 49,644	$ 23,894	$ 14,138	$ 4,761	$ 92,437

The Company applies practical expedients and does not disclose information about remaining performance obligations (a) that have original expected durations of one year or less, or (b) where revenue is recognized as invoiced.

Costs of obtaining a contract

The Company incurs incremental costs related to commissions, which can be directly tied to obtaining a contract. The Company capitalizes commissions associated with certain new contracts and amortizes the costs over a period of up to seven years, which is the determined benefit period based on the transfer of goods or services. The Company determined the period of benefit by taking into consideration the customer contracts, its technology and other factors, including customer attrition. Commissions are earned upon invoicing to the customer. For contracts with multiple year payment terms, because the commissions that are payable after year 1 are payable based on continued employment, they are expensed when incurred. Commissions and amortization expense are included in “Sales and marketing” expense in the consolidated statements of operations.

Applying the practical expedient, the Company recognizes the incremental costs of obtaining contracts as an expense when incurred if the amortization period for the assets that the Company otherwise would have recognized is one year or less. These costs are included in the “Sales and marketing” caption in the consolidated statements of operations.

The following tables provide information related to the capitalized costs and amortization recognized in the current and prior period:

(In thousands)	December 31, 2023	December 31, 2022
Capitalized costs to obtain contracts, current	$ 3,503	$ 2,929
Capitalized costs to obtain contracts, non-current	$ 10,766	$ 10,571

(In thousands)	Years Ended December 31, 2023	Years Ended December 31, 2022
Amortization of capitalized costs to obtain contracts	$ 3,122	$ 2,404
Impairments of capitalized costs to obtain contracts	$ —	$ —

Note 5 – Inventories, net

Inventories, net, consisting principally of hardware and component parts, are stated at the lower of cost or net realizable value. Cost is determined using the FIFO method.

Inventories, net, are comprised of the following as of December 31, 2023 and 2022:

(In thousands)	December 31, 2023	December 31, 2022
Component parts (1)	$ 8,511	$ 6,762
Work-in-process and finished goods	7,042	5,292
Total	$ 15,553	$ 12,054

(1) In June 2023, the Company discontinued investments in its Digipass CX product (see Note 20, *Restructuring and Other Related Charges*) and $1.6 million of write-offs for component parts, net were recorded in "Cost of goods sold - Product and license." In November 2023, the Company launched a new product line, Digipass FX1 BIO, and identified the component parts previously purchased for the Digipass CX products will be used for Digipass FX1 BIO products. For the year ended December 31, 2023, the Company reversed $1.4 million of the previous write-off to "Cost of goods, sold - Product license" within the consolidated statements of operations.

Note 6 - Business Acquisitions

On February 22, 2023, the Company acquired substantially all of the assets of the ProvenDB business of Southbank Software Pty Ltd. ("ProvenDB") under the terms of an asset purchase agreement. Pursuant to the terms of the asset purchase agreement, the total consideration for the acquisition was $2.0 million, of which $1.8 million was paid in cash at closing. The remaining $0.2 million was held back as security for any indemnity claims made by the Company. If no indemnity claims are made by the Company this amount is required to be paid to the seller 12 months after the acquisition date. The Company paid the full amount of $0.2 million to the seller in February 2024.

ProvenDB is a developer of secure storage that leverages blockchain technology in order to prevent data tampering or alteration of documents. The technology acquired in the acquisition is expected to provide a foundational architecture for future blockchain-based digital solutions, including secure storage.

As of December 31, 2023, the Company has determined the purchase price allocation of the fair value of the assets acquired and liabilities assumed which is shown in the table below.

ProvenDB is allocated entirely to our Digital Agreements reportable operating segment.

(In thousands)	As of Date of Opening Balance Sheet
Net assets acquired:	
Acquired technology	$ 1,447
Accrued wages and payroll taxes	(47)
Goodwill	600
Total net assets acquired	$ 2,000
Consideration	$ 2,000

The financial impact of this acquisition was not material to our consolidated financial statements, and therefore, we have not presented pro forma results of operations for the acquisition.

Note 7 – Goodwill

The following tables present the changes in goodwill during 2023 and 2022:

(In thousands)	Digital Agreements	Security Solutions	Total
Net balance at December 31, 2021	$ —	$ —	$ 96,174
Goodwill reallocation	20,966	75,208	—
Net foreign currency translation	(1,234)	(4,426)	(5,660)
Net balance at December 31, 2022	19,732	70,782	90,514
Acquisition during the period (1)	600	—	600
Net foreign currency translation	561	2,009	2,570
Net balance at December 31, 2023	$ 20,893	$ 72,791	$ 93,684

(1) Represents goodwill recorded in conjunction with the acquisition of substantially all the assets of the ProvenDB business of Southbank Software Pty Ltd. during the three months ended March 31, 2023. See Note 6 , *Business Acquisitions,* for additional information.

Goodwill reallocation: As a result of the transformation plan and new reportable operating segments, the Company allocated the goodwill balance to each reporting unit and respective reportable operating segments on May 17, 2022 (see Note 1, *Description of the Company and Basis of Presentation* for additional information).

No impairment of goodwill was recorded during the years ended December 31, 2023, 2022, or 2021.

Note 8 – Intangible Assets

Intangible assets as of December 31, 2023 and 2022 consist of the following:

		December 31,			
		2023		2022	
(In thousands)	Useful Life (in years)	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Acquired technology	3 to 7	$ 43,869	$ 42,712	$ 42,022	$ 41,894
Customer relationships	5 to 12	34,773	25,960	34,386	23,323
Patents and trademarks	10 to 20	13,103	12,241	13,518	12,227
Total		$ 91,745	$ 80,913	$ 89,926	$ 77,444

Amortization expense was $2.8 million, $4.1 million, and $5.9 million for the years ended December 31, 2023, 2022, and 2021, respectively. Amortization expense includes cost of sales amortization expense directly related to delivering cloud subscription revenue of $0.4 million, $0, and $0 for the years ended December 31, 2023, 2022, and 2021, respectively. Costs are recorded in "Cost of goods sold - Services and other" on the consolidated statements of operations.

Certain intangible assets are denominated in local currencies and are subject to currency fluctuations.

During the year ended December 31, 2022, the Company performed an impairment review of the customer relationships intangible assets obtained in its 2018 acquisition of Dealflo Limited ("Dealflo"). The impairment review was triggered by the Company's July 2022 notification to customers regarding its intent to gradually sunset its Dealflo solution in the months leading up to December 31, 2023. As a result, substantially all Dealflo solution customer contracts will terminate on or before December 31, 2023. The results of the impairment review indicated that the carrying value of the Dealflo customer relationships exceeded the fair value, and the Company recorded a $3.8 million impairment charge on the entire remaining value of the asset during the year ended December 31, 2022. The charge is included in "Restructuring and other related charges" on the consolidated statements of operations and is included in "Operating income" of the Security Solutions reportable operating segment.

There were no additional impairments of intangible assets recorded during the years ended December 31, 2023, 2022, and 2021.

The estimated future amortization expense of intangible assets as of December 31, 2023, is as follows:

2024	$ 2,839
2025	2,806
2026	2,398
2027	2,124
2028	50
Thereafter	217
Subject to amortization	10,434
Trademarks	398
Total intangible assets	$ 10,832

Note 9 – Property and Equipment, net

The following table presents the major classes of property and equipment, net, as of December 31, 2023 and 2022:

		December 31,	
(In thousands)	**Useful Life (in years)**	**2023**	**2022**
Office equipment and software	3-5	$ 8,574	$ 14,451
Leasehold improvements	10	7,459	9,927
Furniture and fixtures	5	3,658	4,260
Capitalized software	3	12,560	4,007
Total		32,251	32,645
Accumulated depreciation		(13,529)	(19,964)
Property and equipment, net		$ 18,722	$ 12,681

Depreciation expense was $3.7 million, $2.9 million, and $3.0 million for the years ended December 31, 2023, 2022, and 2021, respectively. Depreciation expense includes cost of sales depreciation expense directly related to delivering cloud subscription revenue of $1.1 million, $0, and $0 for the years ended December 31, 2023, 2022, and 2021, respectively. Costs are recorded in "Cost of goods sold - Services and other" on the consolidated statements of operations.

In conjunction with the Company's Chicago office lease abandonment (see Note 20, *Restructuring and Other Related Charges)*, write-offs of $0.6 million for leasehold improvements and $0.1 million for office equipment and software were recorded in "Restructuring and other related charges" on the consolidated statements of operations during the three months ended June 30, 2023.

Due to the Company's Brussels office lease termination (see Note 20, *Restructuring and Other Related Charges)*, $0.6 million of leasehold improvements were written off and recorded in "Restructuring and other related charges" on the consolidated statements of operations during the three months ended September 30, 2023.

Note 10 – Fair Value Measurements

The fair values of cash equivalents, accounts receivables, and accounts payable approximate their carrying amounts due to their short duration. The fair value hierarchy is based on inputs to valuation techniques that are used to measure fair value that are either observable or unobservable. Observable inputs reflect assumptions market participants would use in pricing an asset or liability based on market data obtained from independent sources while unobservable inputs reflect a reporting entity's pricing base upon its own market assumptions.

The estimated fair value of financial instruments has been determined by using available market information and appropriate valuation methodologies, as defined in ASC 820, *Fair Value Measurements*. The fair value hierarchy consists of the following three levels:

- Level 1 – Inputs are quoted prices in active markets for identical assets or liabilities.
- Level 2 – Inputs are quoted prices for similar assets or liabilities in an active market, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable and market-corroborated inputs which are derived primarily from or corroborated by observable market data.
- Level 3 – Inputs are derived from valuation techniques in which one or more significant inputs or value drivers are unobservable.

The following tables summarize the Company's financial assets by level in the fair value hierarchy, which are measured at fair value on a recurring basis, as of December 31, 2023 and 2022:

		Fair Value Measurement at Reporting Date Using		
(In thousands)	December 31, 2023	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Money Market Funds	$ 8,496	$ 8,496	$ —	$ —

		Fair Value Measurement at Reporting Date Using		
(In thousands)	December 31, 2022	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Corporate Notes / Bonds	$ 2,328	$ —	$ 2,328	$ —
Commercial Paper	$ 6,743	$ —	$ 6,743	$ —
Money Market Funds	$ 48,623	$ 48,623	$ —	$ —

The Company classifies its investments in debt securities as available-for-sale. The Company reviews available-for-sale debt securities for impairments related to losses and other factors each quarter. The unrealized gains and losses on the available-for-sale debt securities were not material as of December 31, 2023 and 2022. The Company did not have any financial liabilities that are measured at fair value on a recurring basis as of December 31, 2023 and 2022.

The Company's non-financial assets and liabilities, which include goodwill and long-lived assets held and used, are not required to be measured at fair value on a recurring basis. However, if certain triggering events occur, or if an annual impairment test is required, the Company would evaluate the non-financial assets and liabilities for impairment. If an impairment was to occur, the asset or liability would be recorded at its estimated fair value.

Note 11 – Allowance for Credit Losses

The change in the allowance for credit losses during the years ended December 31, 2022 and 2023 were as follows:

(In thousands)		
Balance at December 31, 2021	$	1,419
Provision		517
Write-offs		(334)
Net foreign currency translation		(2)
Balance at December 31, 2022		1,600
Provision		286
Write-offs		(350)
Net foreign currency translation		—
Balance at December 31, 2023	$	1,536

Note 12 – Leases

The Company leases certain real estate and automobiles. Leases with an initial term of 12 months or less ("short-term leases") are not recorded on the consolidated balance sheet. The Company recognizes lease expense for these leases on a straight-line basis over the lease term. The Company determines if an arrangement is a lease at inception. All of the Company's leases are operating leases.

Operating lease right-of-use ("ROU") assets and operating lease liabilities are recognized based on the present value of lease payments over the lease term at commencement date. The majority of the Company's leases do not provide an implicit rate of return. The Company uses its imputed collateralized rate based on the information available at the commencement date in determining the present value of lease payments. Operating lease ROU assets are comprised of the lease liability plus prepaid rents and are reduced by lease incentives or deferred rents. The Company has lease agreements with non-lease components which are not bifurcated.

Some of the Company's leases include options to renew, with renewal terms that can extend the lease from one to five years. The exercise of a lease renewal option typically occurs at the discretion of both parties. Certain leases also include options to purchase the leased property at fair value. For purposes of calculating operating lease liabilities, lease terms are deemed not to include options to extend the lease termination until it is reasonably certain that the Company will exercise that option. Certain of the Company's lease agreements include payments adjusted periodically for inflation based on the consumer price index. The Company's lease agreements do not contain any material residual value guarantees or material restrictive covenants.

Operating lease cost details for the years ended December 31, 2023, 2022, and 2021 are as follows:

	Years Ended December 31,		
(In thousands)	**2023**	**2022**	**2021**
Building rent	$ 1,638	$ 2,117	$ 2,564
Automobile rentals	1,132	1,180	1,505
Total net operating lease costs	$ 2,770	$ 3,297	$ 4,069

Short-term lease costs and variable lease costs recognized during the years ended December 31, 2023, 2022, and 2021 are immaterial.

Supplemental consolidated balance sheet information related to operating leases as of December 31, 2023 and 2022 is as follows:

	December 31,	
(In thousands)	2023	2022
Leases		
Assets	$ 6,171	$ 8,022
Operating lease right-of-use assets	$ 6,171	$ 8,022
Liabilities		
Current		
Operating lease liabilities	$ 2,027	$ 2,258
Non-current		
Operating lease liabilities	6,110	8,442
Accrued early lease termination fees	714	—
Total lease liabilities	$ 8,851	$ 10,700

The weighted average remaining lease term for operating leases is 5.3 years. The weighted-average discount rate for operating leases is 5%.

Supplemental consolidated cash flow information related to leases is as follows:

	Years Ended December 31,		
(In thousands)	2023	2022	2021
Supplemental cash flow and other information related to leases:			
Operating cash payments from operating leases	$ 2,836	$ 3,346	$ 3,630
ROU assets obtained in exchange for new operating lease liabilities	$ 2,650	$ 1,172	$ 589

As part of its multiyear restructuring plan (see Note 20, *Restructuring and Other Related Charges*), the Company vacated its Chicago office space and abandoned the underlying leases during June 2023. The Company accrued a $1.4 million early lease termination fee, which is reflected in "Restructuring and other related charges" on the consolidated statements of operations for the year ended December 31, 2023. Of the early lease termination fee, $0.7 million is outstanding and is reflected in the non-current lease liability balance on the consolidated balance sheet. The underlying lease right-of-use asset and lease liability for the Chicago leased office space were written off, and a $0.3 million gain related to rent concessions and tenant improvement allowances was recorded in "Restructuring and other related charges" on the consolidated statements of operations for the year ended December 31, 2023.

In September 2023, the Company vacated its Brussels office and terminated the lease as of September 30, 2023. The Company accrued a $0.3 million early lease termination fee, which is reflected in "Restructuring and other related charges" on the consolidated statements of operations for the year ended December 31, 2023. The underlying lease right-of-use asset and lease liability for the Brussels leased office space were written off, and a $0.1 million loss related to rent concessions and tenant improvement allowances was recorded in "Restructuring and other related charges" on the consolidated statements of operations for the year ended December 31, 2023.

In October 2023, the Company signed a lease agreement to lease new office space in Brussels. The lease agreement consisted of a nine year lease that is expected to commence in 2024. The Company will record a right of use asset and liability at the commencement date, which is expected to result in total lease term payments of $1.3 million.

Maturities of the Company's operating leases as of December 31, 2023 are as follows:

(In thousands)	
2024	$ 2,378
2025	1,608
2026	1,515
2027	1,327
2028	1,218
Later years	1,369
Less imputed interest	(1,278)
Accrued lease termination fees	714
Total lease liabilities	$ 8,851

Note 13 – Quarterly Results of Operations (unaudited)

The quarterly results of operations are summarized in the following select income statement line items (in thousands, except per share data):

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2023				
Total revenues	$ 57,607	$ 55,733	$ 58,838	$ 62,928
Gross profit	$ 39,286	$ 34,294	$ 40,669	$ 43,466
Operating costs	$ 47,416	$ 52,058	$ 45,463	$ 41,649
Operating income (loss)	$ (8,130)	$ (17,764)	$ (4,794)	$ 1,817
Provision (benefit) for income taxes	$ 689	$ 601	$ 279	$ 917
Net income (loss)	$ (8,356)	$ (17,751)	$ (4,133)	$ 441
Net income/(loss) per share:				
Basic	$ (0.21)	$ (0.44)	$ (0.10)	$ 0.01
Diluted	$ (0.21)	$ (0.44)	$ (0.10)	$ 0.01
2022				
Total revenues	$ 52,447	$ 52,790	$ 57,147	$ 56,622
Gross profit	$ 36,678	$ 35,506	$ 38,431	$ 37,955
Operating costs	$ 45,921	$ 43,744	$ 44,056	$ 41,964
Operating income (loss)	$ (9,243)	$ (8,238)	$ (5,625)	$ (4,009)
Provision (benefit) for income taxes	$ 1,173	$ 472	$ 600	$ 496
Net income (loss)	$ 5,214	$ (9,350)	$ (7,201)	$ (3,097)
Net income/(loss) per share:				
Basic	$ 0.13	$ (0.23)	$ (0.18)	$ (0.08)
Diluted	$ 0.13	$ (0.23)	$ (0.18)	$ (0.08)

Note 14 – Income Taxes

Loss before income taxes was generated in the following jurisdictions:

	Years Ended December 31,		
(In thousands)	2023	2022	2021
U.S.	$ (13,526)	$ (9,569)	$ (15,056)
Non-U.S.	(13,787)	(2,124)	(11,087)
Total	$ (27,313)	$ (11,693)	$ (26,143)

For the years ended December 31, 2023, 2022, and 2021, domestic income excludes intercompany dividend income of $0 each year. The provision (benefit) for income taxes consists of the following:

	Years Ended December 31,		
(In thousands)	2023	2022	2021
Current:			
Federal	$ 2	$ 122	$ (11)
State	54	32	(23)
Foreign	2,473	1,665	2,478
Total current	2,529	1,819	2,444
Deferred:			
Federal	361	(349)	3,774
State	(47)	35	(3)
Foreign	(357)	1,236	(1,774)
Total deferred	(43)	922	1,997
Total	$ 2,486	$ 2,741	$ 4,441

For 2023, 2022, and 2021, the Company's U.S. federal statutory rate was 21%. The differences between the income tax provisions computed using the statutory federal income tax rate and the provisions for income taxes reported in the consolidated statements of operations are as follows:

	Years Ended December 31,		
(In thousands)	2023	2022	2021
Expected tax at statutory rate	$ (5,736)	$ (2,456)	$ (5,490)
Foreign taxes at other rates	(213)	3,373	307
Valuation allowance changes	8,513	4,370	15,019
Global intangible low-taxed income inclusion	—	—	—
State income taxes, net of federal benefit	(170)	(322)	(811)
Uncertain tax positions	—	(515)	12
Research credits	(633)	(2,568)	(3,466)
Disallowed expenses and other	725	859	(1,130)
Total	$ 2,486	$ 2,741	$ 4,441

Significant components of the Company's deferred tax assets and liabilities as of December 31, 2023 and 2022, are as follows:

	December 31,	
(In thousands)	2023	2022
Deferred tax assets:		
Stock and long-term compensation plans	$ 1,515	$ 923
Foreign NOL & other carryforwards	45,390	41,154
U.S. and state NOL carryforwards	7,866	5,654
Deferred revenue	650	863
Pension liability	531	498
Amortization and depreciation	1,626	526
Lease liability	2,383	2,641
Capitalized research and development	446	487
Accrued expenses and other	948	1,427
Total gross deferred tax assets	61,355	54,173
Less: Valuation allowance	(47,844)	(39,177)
Net deferred income tax assets	$ 13,511	$ 14,996
Deferred tax liabilities:		
Accruals	$ 367	$ 319
Tax on unremitted foreign earnings	1,164	1,249
Right of use asset	2,095	2,531
Intangible assets	2,217	3,009
Tax on credits	3,689	3,736
Contract acquisition costs	3,325	3,448
Deferred tax liabilities	$ 12,857	$ 14,292
Net deferred tax assets	$ 654	$ 704

Deferred tax assets and liabilities are netted by tax jurisdiction.

At December 31, 2023, the Company had foreign and state net operating loss (NOL) carryforwards and other foreign deductible carryforwards as shown in the following table:

(In thousands)	Carryforward	Expiration
NOL Carryforward		
Canada	$ 44,461	2032-2043
United States	27,512	None
United Kingdom	10,543	None
Switzerland	20,127	2028-2029
Other foreign	5,779	None
Canada province	43,352	2032-2043
U.S. states	30,526	2025-2043
	$ 182,300	
Other Carryforwards		
United States credit	$ 1,277	2031-2033
Canada	44,357	None
Canada province	58,488	None
Capital loss	382	None
Canada credits	8,819	2033-2043
Canada province credits	3,677	2036-2043
	$ 117,000	
	$ 299,300	

The valuation allowance against the net deferred tax assets as of December 31, 2023 and 2022 was $47.8 million and $39.2 million, respectively.

The Company recorded changes in valuation allowance of $8.5 million and $4.4 million, during the years ended December 31, 2023 and 2022, respectively, against deferred tax assets that, based on the Company's assessment are considered not to be more likely than not to be realized. The increase in the valuation allowance in 2023 reflects Net Operating Losses ("NOLs"), other deduction carryforwards, and credits for which the realization is not more likely than not. The change in valuation allowance also reflects other factors including, but not limited to, changes in the Company's assessment of the ability to use existing deferred tax assets, including NOLs and other deduction carryforwards.

The Company assesses the need for a valuation allowance on a regular basis, weighing all positive and negative evidence to determine whether a deferred tax asset will be fully or partially realized. In evaluating the realizability of deferred tax assets, significant pieces of negative evidence such as 3-year cumulative losses are considered. The Company also reviewed reversal patterns of temporary differences to determine if the Company would have sufficient taxable income due to the reversal of temporary differences to support the realization of deferred tax assets. In 2022, the Company established a valuation allowance against certain deferred tax assets in jurisdictions that were not previously valued as the deferred tax assets were no longer more likely than not to be realized. In 2023, the Company continued to maintain a valuation allowance against certain deferred tax assets in jurisdictions where assets are not more likely than not to be realized. For all other remaining deferred tax assets, the Company believes it is still more likely than not that the results of future operations or tax planning strategies will generate sufficient taxable income to realize the deferred tax assets.

The Company's policy is to record interest and penalties on income taxes as income tax expense. It recorded expense of less than $0.1 million in 2023, 2022, and 2021.

ASC 740, Income Taxes sets a “more-likely-than-not” criterion for recognizing the tax benefit of uncertain tax positions. As of December 31, 2023, 2022, and 2021, the Company had reserves of $0, $0, and $0.5 million, respectively.

	December 31,		
(In thousands)	2023	2022	2021
Reserve at beginning of year	$ —	$ 512	$ 500
Increases related to prior year tax positions	—	—	12
Decreases related to prior year tax positions	—	(512)	—
Settlement	—	—	—
Total	$ —	$ —	$ 512

The Company files income tax returns in the U.S. federal jurisdiction and in many state and foreign jurisdictions, and is subject to examination of its income tax returns by the IRS and other tax authorities. The Company reduced an uncertain tax position in the U.S. upon filing of an accounting method change and receiving audit protection.

The Company believes that an adequate provision has been made for any adjustments that may result from tax examinations. However, the outcome of tax audits cannot be predicted with certainty. If any issues addressed in the Company's tax audits are resolved in a manner not consistent with the Company's expectations, there could be a requirement to adjust the provision for income taxes in the period such resolution occurs. Included in the balance of unrecognized tax benefits as of December 31, 2023 is $0 of tax benefits that, if recognized, would affect the effective tax rate.

The Company's primary tax jurisdictions and the earliest tax year subject to audit are presented in the following table.

Australia	2015
Austria	2017
Belgium	2019
Canada	2019
Netherlands	2018
Singapore	2018
Switzerland	2019
United Kingdom	2021
United States	2017

Note 15 – Stock Compensation Plans

The Company has a share-based compensation plan, the OneSpan Inc. 2019 Omnibus Incentive Plan (“Plan”), under which the Board of Directors may grant share-based awards including restricted stock units (RSUs) and performance restricted stock units (PSUs).

The Plan may provide performance incentives to employees and non-employee directors, consultants and other key persons of the Company. The plan is administered by the Compensation Committee as appointed by the Board of Directors and is intended to be a non-qualified plan.

As of December 31, 2023, the remaining number of shares allowed to be issued under the Plan was 0.5 million shares of the Company’s common stock, representing 1% of the issued and outstanding shares of the Company as of such date.

The following table presents stock-based compensation expense and other long-term incentive plan compensation expense for the years ended December 31, 2023, 2022, and 2021.

	Years Ended December 31,		
(In thousands)	2023	2022	2021
Stock-based compensation	$ 14,252	$ 8,642	$ 4,354
Other long-term incentive plan compensation (1)	310	171	848
Total compensation	$ 14,562	$ 8,813	$ 5,202

(1) Other long-term incentive compensation consists of cash incentive grants awarded to employees located in jurisdictions where the Company does not issue stock-based compensation due to tax, regulatory or similar reasons.

Time-Based Restricted Stock Awards

Non-forfeited time-based restricted stock awards granted to certain executive officers and other employees under the VASCO Data Security International, Inc. 2009 Equity Plan became fully vested during the year ended December 31, 2022. Certain shares became subject to forfeiture when the service requirement was not met. No awards were outstanding as of December 31, 2022 and, therefore, there was no compensation expense, no tax benefit or any time-based restricted stock activity for the year ended December 31, 2023. Compensation expense was less than $0.1 million and $0.3 million for 2022 and 2021, respectively. Tax benefit related to the compensation expense was less than $0.1 million and $0.1 million for 2022 and 2021, respectively.

There was no unamortized future compensation expense for time-based restricted stock awards at December 31, 2023.

Time-Based Restricted Stock Units

Under the OneSpan Inc. 2019 Omnibus Incentive Plan, the Company grants non-employee directors and certain eligible employees RSUs that settle in Company stock. RSUs granted to non-employee directors vest on the first anniversary date of the grant and have a deferred delivery feature whereby they are not delivered until resignation or upon a change in control of the Company. RSUs granted to employees vest over one to four years in equal annual or semi-annual installments in the initial year and thereafter in semi-annual installments. Shares are subject to forfeiture if the service period is not met. Compensation expense for time-based restricted stock unit awards was $10.9 million, $6.9 million, and $3.7 million for 2023, 2022, and 2021, respectively, and the related tax benefit was $0.5 million, $0.2 million, and $0.1 million, respectively. The following table summarizes the time-based restricted stock activity for the year ended December 31, 2023:

(Sharecounts in thousands)	Shares	Weighted-average remaining term (years)	Weighted-average grant date fair value
Unearned, January 1, 2023	1,733	2.41	$ 13.08
Shares vested	(641)		13.49
Shares awarded	1,097		13.14
Shares forfeited	(376)		13.04
Unearned, December 31, 2023	1,813	1.85	$ 12.98

The unamortized future compensation expense for time-based restricted stock awards was $18.1 million at December 31, 2023.

Performance-Based Restricted Stock Units settled in stock

Performance-based restricted stock units granted to executive officers and certain other employees were subject to achievement of one to three year performance criteria established by the Board of Directors. Under certain grants, shares related to one to three year targets are earned upon fulfillment of the performance criteria as determined by the

Compensation Committee of the OneSpan Inc. Board of Directors ("Compensation Committee") and vest upon completion of the requisite service period. Shares are subject to forfeiture if the performance criteria and the service period are not met.

The restricted stock units subject to achievement of future performance criteria awarded during the year ended December 31, 2023 will be earned if the performance criteria are met at the end of the one-year performance period and then subsequent service period is also met.

Compensation expense related to performance-based restricted stock unit awards in 2023, 2022, and 2021 was $2.8 million, $1.6 million, and $0.3 million, respectively. Tax benefit related to the compensation expense was less than $0.1 million, less than $0.1 million, and $0.1 million for 2023, 2022, and 2021, respectively.

The following table summarizes activity related to unvested performance restricted stock shares during 2023:

(Sharecounts in thousands)	**Total Unvested Shares**	**Weighted-average remaining term (years)**	**Weighted-average grant date fair value**
Unearned, January 1, 2023	316	1.38	$ 12.96
Shares vested	(95)		13.09
Shares awarded	1,003		14.25
Shares forfeited	(258)		14.09
Unearned, December 31, 2023	966	0.84	$ 13.99

Unamortized future compensation expense for performance-based restricted stock was $1.7 million at December 31, 2023.

Market-Based Restricted Stock Units settled in stock

Market-based restricted stock units granted to executive officers and certain other employees were subject to achievement of three-year or four-year market-based performance criteria established by the Board of Directors. Under certain grants, shares related to three-year or four-year targets are earned based upon fulfillment of the market-based performance criteria as determined by the Compensation Committee and cliff vest upon completion of the three-year or four-year period. Shares are subject to forfeiture if the performance criteria and service period are not met. Compensation expense for market-based restricted stock unit awards in 2023, 2022, and 2021 was $0.6 million, $0.5 million, and less than $0.1 million, respectively, and the related tax benefit was less than $0.1 million, less than $0.1 million, and $0 million respectively.

The following table summarizes activity related to unvested market and service restricted stock units settled in stock:

(Sharecounts in thousands)	**Shares**	**Weighted-average remaining term (years)**	**Weighted-average grant date fair value**
Unearned, January 1, 2023	257	2.75	$ 12.17
Shares vested	(1)		33.31
Shares awarded	—		—
Shares forfeited	(5)		37.93
Unearned, December 31, 2023	251	1.89	$ 11.58

Unamortized future compensation expense for market-based restricted stock was $1.4 million at December 31, 2023.

Note 16 – Earnings per Common Share

Basic earnings per share is based on the weighted average number of shares outstanding and excludes the dilutive effect of common stock equivalents. Diluted earnings per share is based on the weighted average number of shares outstanding and includes the dilutive effect of common stock equivalents to the extent they are not anti-dilutive. Because the Company is in a net loss position for the years ended December 31, 2023, 2022 and 2021, diluted net loss per share for these periods exclude the effects of all common stock equivalents, which are anti-dilutive.

A reconciliation of the shares included in the basic and fully diluted earnings per share calculations is as follows:

	Years Ended December 31,		
(In thousands, except per share data)	2023	2022	2021
Net loss	$ (29,799)	$ (14,434)	$ (30,584)
Weighted average common shares outstanding:			
Basic	40,193	40,143	39,614
Incremental shares with dilutive effect:			
Restricted stock awards	—	—	—
Diluted	40,193	40,143	39,614
Net loss per share:			
Basic	$ (0.74)	$ (0.36)	$ (0.77)
Diluted	$ (0.74)	$ (0.36)	$ (0.77)

Note 17 – Employee Benefit Plans

U.S. Plan

The Company maintains a defined contribution pension plan for U.S. employees established pursuant to Section 401(k) of the Internal Revenue Code. The plan allows voluntary employee contributions and discretionary employer contributions. For the years ended December 31, 2023, 2022, and 2021, the Company expensed contributions of $0.6 million, $0.5 million, and $0.2 million, respectively.

Non-U.S. Plans

The Company is subject to national mandatory pension systems and other compulsory plans, or makes contributions to social pension funds based on local regulations. When the Company's obligation is limited to the payment of the contribution into these plans or funds, the recognition of such liabilities is not required.

In addition, the Company has, in some countries, defined benefit plans consisting of final retirement salary and committed pension payments.

In Switzerland, the pension plan is a cash balance plan where contributions are expressed as a percentage of the pensionable salary. Contributions to Swiss plans are paid by the employees and the employer. The pension plan guarantees the amount accrued on the members' savings accounts, as well as a minimum interest on those savings accounts. The plan assets are held in guaranteed investment contracts.

The Company also maintains a pension plan for Belgian employees, in compliance with Belgian law. Contributions to Belgium plans are paid by the employees and the employer. Certain features of the plans require them to be categorized as defined benefit plans under ASC 715 due to Belgian social legislation, which prescribes a minimum annual return of 1.8% on employer contributions and 1.8% for employee contributions. The plan assets are held in guaranteed investment contracts.

The Company also includes a liability related to obligations to provide retirement benefits to employees who retire from the Company's French subsidiary, as required by law. Per French regulations, each employee is entitled to a lump sum payment upon retirement based on years of service and salary at retirement. Benefit rights vest upon the statutory retirement age of 62. The obligation recorded represents the present value of amounts the Company expects to pay.

Components of net periodic pension cost included in earnings:

	Years Ended December 31,		
(In thousands)	2023	2022	2021
Service cost (gross)	$ 879	$ 1,107	$ 1,587
Interest cost	560	138	53
Expected return on plan assets	(358)	(288)	(302)
Amortization of unrecognized actuarial gain	(265)	(90)	(12)
Net periodic pension cost	$ 816	$ 867	$ 1,326

The net unfunded status of the Non-U.S. pension plans as of December 31, 2023 and 2022, is as follows:

	December 31,	
(In thousands)	2023	2022
Fair value of plan assets	$ 16,460	$ 15,415
Projected benefit obligation	(19,014)	(17,715)
Net unfunded benefit obligation	$ (2,554)	$ (2,300)

Net unfunded benefit obligation is recorded as other long-term liabilities in the consolidated balance sheets.

The change in the fair value of plan assets is as follows:

	Years Ended December 31,	
(In thousands)	2023	2022
Fair value of plan assets at January 1	$ 15,415	$ 17,394
Employee contributions	406	437
Actual return on plan assets	461	(288)
Benefits (paid), net of transfers	(1,487)	(2,361)
Employer contributions	864	911
Foreign exchange adjustment	801	(678)
Fair value of plan assets at December 31	$ 16,460	$ 15,415

The change in benefit obligations is as follows:

	Years Ended December 31,	
(In thousands)	2023	2022
Benefit obligations at January 1	$ 17,715	$ 24,855
Gross service cost	879	1,107
Interest cost	560	138
Employee contributions	406	437
Actuarial (gains)/losses	313	(4,676)
Benefits (paid), net of transfers	(1,487)	(2,361)
Curtailments & settlements	(285)	(799)
Foreign exchange adjustment	913	(986)
Benefit obligations at December 31	$ 19,014	$ 17,715

The increase in benefit obligations at December 31, 2023 compared to December 31, 2022 was primarily driven by actuarial gains and foreign exchange adjustments, the strengthened Euro and Swiss Franc currencies, offset by benefits paid. The decrease in benefit obligations at December 31, 2022 compared to December 31, 2021 was primarily driven by benefits paid, actuarial gains and foreign exchange adjustments, driven by the weakened Euro and Swiss Franc currencies.

The Company's investment policy meets the responsibility under local social legislation and aligns plan assets with liabilities, while minimizing risk. For the years ended December 31, 2023 and 2022, plan assets are invested in guaranteed investment contracts. Fair value of guaranteed investment contracts is surrender value. Fair value for the year ended December 31, 2023 was determined using Level 3 inputs as defined by ASC 820, *Fair Value Measurements*. Changes in plan assets are attributable to benefit payments and contributions as the Company has not actively traded assets during the years ended December 31, 2023 and 2022.

Other

The accumulated benefit obligation for the plans were $17.8 million and $16.8 million as of December 31, 2023 and 2022, respectively.

The Company expects to pay approximately $0.8 million of contributions over the next twelve months.

The amounts reclassified out of other comprehensive income during the years ended December 31, 2023, 2022, and 2021 were not material.

Actuarial Assumptions

Certain actuarial assumptions such as the discount rate and the long-term rate of return on plan assets have a significant effect on the amounts reported for net periodic cost and the benefit obligation. The assumed discount rates reflect the prevailing market rates of a universe of high-quality, non-callable, corporate bonds currently available that, if the obligation were settled at the measurement date, would provide the necessary future cash flows to pay the benefit obligation when due. In determining the long-term return on plan assets, the Company considers long-term rates of return of comparable low risk investments, such as Euro AA bonds.

The following range of assumptions between all plans were utilized in the pension calculations:

	December 31,					
	2023			2022		
	(%)					
Discount rates	1.40	-	4.10	2.15	-	3.50
Inflation	1.25	-	2.20	1.25	-	2.20
Expected return on plan assets	2.00	-	2.50	2.00	-	2.50
Rate of salary increases	2.25	-	3.20	2.25	-	3.20

Projected future pension benefits as of December 31, 2023 (in thousands):

2024	$	479
2025	$	558
2026	$	1,146
2027	$	417
2028	$	503
Beyond	$	5,681

Note 18 – Geographic, Customer and Supplier Information

The Company classifies sales by customers' locations in three geographic regions: 1) EMEA, which includes Europe, the Middle East, and Africa; 2) the Americas, which includes sales in North, Central, and South America and Canada; and 3) Asia Pacific, which also includes Australia and New Zealand.

(In thousands)

	Europe, Middle East, Africa (EMEA)	Americas	Asia Pacific	Total
2023				
Revenue	$ 111,568	$ 80,057	$ 43,481	$ 235,106
Gross profit	$ 74,843	$ 53,704	$ 29,168	$ 157,715
Long-lived assets	$ 5,783	$ 18,795	$ 315	$ 24,893
2022				
Revenue	$ 100,298	$ 77,740	$ 40,968	$ 219,006
Gross profit	$ 68,040	$ 52,738	$ 27,792	$ 148,570
Long-lived assets	$ 4,856	$ 15,270	$ 577	$ 20,703
2021				
Revenue	$ 104,878	$ 68,646	$ 40,957	$ 214,481
Gross profit	$ 69,893	$ 45,747	$ 27,295	$ 142,935
Long-lived assets	$ 5,978	$ 13,634	$ 342	$ 19,954

For the years 2023, 2022, and 2021, the top 10 customers contributed 22%, 23% and 22%, respectively, of total worldwide revenue. All of the Company's hardware products are assembled by four independent factories in China and one independent factory in Romania.

Note 19 – Commitments and Contingencies

The Company leases office space and automobiles under operating lease agreements. See Note 12, *Leases,* for future minimum rental payments required under non-cancelable leases.

At December 31, 2023, the Company has purchase obligations of $6.3 million for other software agreements related to the administration of the Company's business which range from 1 to 3 years.

The Company is subject to certain legal proceedings and claims incidental to the operations of its business. The Company is also subject to certain other legal proceedings and claims that have arisen in the ordinary course of business and that have not been fully adjudicated. The Company currently does not anticipate that these matters, if resolved against the Company, will have a material adverse impact on its financial results or financial condition.

The Company accrues loss contingencies when losses become probable and are reasonably estimable. If the reasonable estimate of the loss is a range and no amount within the range is a better estimate, the minimum amount of the range is recorded as a liability. As of December 31, 2023, the Company has recorded an accrual of $1.2 million for loss contingencies related to all probable losses where a reasonable estimate could be made.

The Company does not accrue for contingent losses that, in the judgment of the Company, are considered to be reasonably possible, but not probable. As of December 31, 2023, the Company does not have any reasonably possible losses for which an estimate can be made. Although the Company intends to defend its legal matters vigorously, the ultimate outcome of these matters is uncertain. However, the Company does not expect the potential losses, if any, to have a material adverse impact on its operating results, cash flows, or financial condition.

Note 20 – Restructuring and Other Related Charges

In December 2021, the Company's Board approved a restructuring plan ("Plan") designed to advance the Company's operating model, streamline its business, improve efficiency, and enhance its capital resources. As part of the first phase of the Plan, the Company reduced headcount by eliminating positions in certain areas of its organization. The first phase of the Plan began and was substantially completed during the three months ended March 31, 2022.

In May 2022, the Board approved additional actions related to the Plan through the year ending December 31, 2025. This second phase of the Plan consisted primarily of headcount-related reductions and was designed to achieve the same objectives as the first phase of the Plan.

On August 3, 2023, the Board approved additional cost reduction and restructuring actions (the "2023 Actions") to seek to drive higher levels of Adjusted EBITDA while maintaining the Company's long-term growth potential. The Company has incurred and expects to continue to incur restructuring charges in connection with the 2023 Actions, and anticipates that these charges will consist primarily of charges related to employee transition and severance payments, employee benefits and retention related payments, and share-based compensation, with a significantly smaller amount of charges relating to vendor contract termination and rationalization actions.

In connection with the Plan (including the 2023 Actions), the Company recorded $17.3 million and $13.3 million in “Restructuring and other related charges” in the consolidated statement of operations for the years ended December 31, 2023 and 2022.

The main categories of charges are in the following areas:

- Employee costs – include severance, related benefits, and retention pay costs incurred as a result of eliminating positions in certain areas of the Company. For the years ended December 31, 2023 and 2022, severance-related costs were $11.7 million and $9.5 million, respectively. In total, there were approximately 270 employees, across multiple functions, whose positions were made redundant. The $2.6 million current portion of the restructuring liability at December 31, 2023 is included in "Accrued wages and payroll taxes" in the consolidated balance sheet and is expected to be paid within the next 12 months. The $0.5 million non-current portion is included in "Other long-term liabilities" in the consolidated balance sheet and is expected to be paid within the next 24 months.

- Real estate rationalization costs – includes costs to align the real estate footprint with the Company’s needs. The Company vacated its Chicago office space and abandoned the underlying leases during June 2023. In September 2023, the Company vacated its Brussels office and terminated the lease effective September 30, 2023. The Company accrued contract termination fees of $1.4 million and $0.3 million for the Chicago office and Brussels office, respectively. The Company also made the decision to terminate its Brussels warehouse lease, effective July 31, 2024, and accrued $0.2 million in settlement costs. The $1.2 million current portion of the restructuring liability at December 31, 2023 is included in "Other accrued expenses" in the consolidated balance sheet and is expected to be paid within the next 12 months. The $0.7 million non-current portion is included in "Long-term lease liabilities" in the consolidated balance sheet and is expected to be paid within the next 16 months. In conjunction with the abandonment of the Chicago lease and termination of the Brussels lease, the underlying right-of-use assets and liabilities were written off and a $0.3 million gain and $0.1 million loss, respectively, were recorded related to rent concessions and tenant improvement allowances for restructuring. The Company wrote off $0.7 million and $0.6 million of fixed assets in its Chicago and Brussels leased office space, respectively (See Note 9, *Property and Equipment, net*).

- Product and services optimization costs – includes costs to discontinue products and services that are no longer advancing the Company's operating model. In June 2023, the Company discontinued its investments in its Digipass CX product and incurred $1.5 million of write-offs for capitalized software. The charges were recorded in "Restructuring and other related charges" on the consolidated statements of operations for the year ended December 31, 2023.

- Vendor rationalization costs – includes costs for contractually committed services the Company is no longer utilizing or deriving benefit. For the year ended December 31, 2023, these costs totaled $1.2 million, and are included in "Restructuring and other related charges" on the consolidated statements of operations.

- Impairment of intangibles – include impaired Dealflo customer relationships where the carrying value exceeded the fair value for the year ended December 31, 2022. The Company recorded a $3.8 million impairment charge on the entire remaining value of the asset during the year ended December 31, 2022. The charge is included in “Restructuring and other related charges” on the consolidated statements of operations and is included in "Operating income" of the Security Solutions reportable operating segment (See Note 8, *Intangible Assets*).

The table below sets forth the changes in the carrying amount of the restructuring charge liability for the year ended December 31, 2023.

(In thousands)	Employee Costs	Real Estate Rationalization	Total
Balance as of December 31, 2021	$ —	$ —	$ —
Additions	9,482	—	9,482
Payments	(5,886)	—	(5,886)
Balance as of December 31, 2022	3,596	—	3,596
Additions	11,703	1,885	13,588
Payments	(12,169)	—	(12,169)
Balance as of December 31, 2023	$ 3,130	$ 1,885	$ 5,015

Note 21 – Related Party Transactions

Agreements with Related Parties

Since the fourth quarter of 2021, the Company has provided e-signature and secure agreement automation services to a customer that is considered a related party because one of the Company's Board members is an officer of the customer. The amount of revenue recognized for e-signature and secure agreement automation services during the years ended December 31, 2023, 2022, and 2021 was $1.1 million, $0.7 million, and $0.3 million, respectively, and is included in subscription revenue. The amount receivable as of December 31, 2023 and 2022 was $1.1 million and $1.0 million, respectively.

The Company purchased SMS subscription services and cloud operations services from vendors that were considered related parties during 2023 and/or 2022 because one of the Company's Board members is, or was during the relevant period, an officer of the respective vendor. The total amount paid to the related parties during the years ended December 31, 2023 and 2022 was $1.3 million and $1.2 million, respectively, and is included in cost of goods sold. The amount payable at both December 31, 2023 and 2022 was $0.2 million.

Note 22 – Subsequent Events

On January 4, 2024, the Board of Directors of the Company appointed Victor Limongelli as Interim Chief Executive Officer, effective immediately. Mr. Limongelli replaced Matthew Moynahan, whose employment as the Company's President and Chief Executive Officer was terminated without cause on January 4, 2024 immediately prior to Mr. Limongelli's appointment. Under his previously disclosed Amended and Restated Employment Agreement, dated February 27, 2023, (the "Employment Agreement"), Mr. Moynahan is entitled to receive the payments and benefits associated with a termination without cause as set forth in the Employment Agreement. Therefore, $1.2 million of severance and other benefits were accrued for as of December 31, 2023 and included within "other accrued expenses" on the consolidated balance sheet.

SCHEDULE II
ONESPAN INC.
VALUATION AND QUALIFYING ACCOUNTS

Credit losses for trade receivables.

Years Ended December 31,	Beginning Balance	Provision for Bad Debts	Chargeoffs	Foreign Currency Translation	Ending Balance
2023	$ 1,600	286	(350)	—	$ 1,536
2022	$ 1,419	517	(334)	(2)	$ 1,600
2021	$ 4,135	(16)	(2,689)	(11)	$ 1,419

See accompanying independent auditors' report.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized

March 6, 2024

OneSpan Inc.

/s/ Victor Limongelli

Victor Limongelli
Interim Chief Executive Officer
(Principal Executive Officer)

POWER OF ATTORNEY

Each of the undersigned, in his or her capacity as an officer or director, or both, as the case may be, of OneSpan Inc. does hereby appoint Victor Limongelli and Jorge Martell, and each of them severally, his or her true and lawful attorneys or attorney to execute in his or her name, place and stead, in his or her capacity as director or officer, or both, as the case may be, this Annual Report on Form 10-K for the fiscal year ended December 31, 2023 and any and all amendments thereto and to file the same with all exhibits thereto and other documents in connection therewith with the Securities and Exchange Commission. Each of said attorneys shall have power to act hereunder with or without the other attorney and shall have full power and authority to do and perform in the name and on behalf of each of said directors or officers, or both, as the case may be, every act whatsoever requisite or necessary to be done in the premises, as fully and to all intents and purposes as to which each of said officers or directors, or both, as the case may be, might or could do in person, hereby ratifying and confirming all that said attorneys or attorney may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ Victor Limongelli Victor Limongelli	Interim Chief Executive Officer (Principal Executive Officer)	March 6, 2024
/s/ Jorge Martell Jorge Martell	Chief Financial Officer (Principal Financial and Accounting Officer)	March 6, 2024
/s/ Alfred Nietzel Alfred Nietzel	Chairman	March 6, 2024
/s/ Marc D. Boroditsky Marc D. Boroditsky	Director	March 6, 2024
/s/ Garry Capers Garry Capers	Director	March 6, 2024
/s/ Sarika Garg Sarika Garg	Director	March 6, 2024
/s/ Marianne Johnson Marianne Johnson	Director	March 6, 2024
/s/ Michael McConnell Michael McConnell	Director	March 6, 2024
/s/ Marc Zenner Marc Zenner	Director	March 6, 2024

Exhibit 4.2

DESCRIPTION OF SECURITIES REGISTERED UNDER SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

General

OneSpan Inc. (the "Company, "us", "we", or "our") is currently authorized to issue up to 75,000,000 shares of common stock, par value $0.001 per share and up to 500,000 shares of preferred stock, par value $0.01 per share. Our common stock is registered under Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act").

The following summary is not complete. For a complete description of our capital stock, you should refer to the applicable provisions of our certificate of incorporation, as amended, and our amended and restated bylaws and to the Delaware General Corporation Law (the "DGCL").

Common Stock

Voting Rights

Each holder of our 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. Generally, a matter submitted for stockholder action shall be approved if the votes cast "for" the matter exceed the votes cast "against" such matter, unless a greater or different vote is required by statute, any applicable law or regulation, the rights of any authorized class of stock, or our certificate of incorporation, as amended, or our amended and restated bylaws. Other than in a contested election where directors are elected by a plurality vote, a director nominee shall be elected to the board if the votes cast "for" such nominee's election exceeds the votes cast "against" such nominee's election. Holders of shares of our common stock have no cumulative voting rights.

Dividends

Holders of common stock are entitled to receive those dividends, if any, as may be declared from time to time by the board of directors out of legally available funds, subject to the rights of holders of any preferred stock that may be issued and outstanding and to restrictions contained in agreements to which the Company may be a party.

Rights Upon Liquidation

In the event of any liquidation, dissolution or winding up of the Company, holders of common stock will be entitled to share ratably in all assets available for distribution to holders of common stock.

Rights and Preferences

Holders of shares of common stock have no preemptive, conversion or subscription rights and there are no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of the holders of shares 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 we may designate in the future.

Preferred Stock

No shares of our preferred stock are currently outstanding. Under our certificate of incorporation, as amended, our board of directors, without further action by our stockholders, is authorized to issue up to 500,000 shares of preferred stock in one or more series. The board may fix the designation, powers, preferences and rights of the preferred stock, along with any qualifications, limitations or restrictions, including voting rights, dividend rights, conversion rights, redemption privileges, sinking fund rights, the number of shares constituting, or the designation of, such series, liquidation preferences and any other relative rights, preferences and limitations of each series of preferred stock, any or all of which may be greater than the rights of common stock. The issuance of preferred stock could adversely affect the voting power or other rights of holders of our common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. The issuance of preferred stock could also have the effect, under certain circumstances, of delaying, deferring or preventing a change of control of the Company.

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

Our certificate of incorporation, as amended, and our amended and restated bylaws contain certain provisions that could have the effect of delaying, deferring or preventing another party from acquiring control of us. These provisions are also designed, in part, to encourage persons seeking to acquire control of us to negotiate first with our board of directors rather than pursue non-negotiated takeover attempts. These provisions include the items described below.

Director Vacancies

Under our amended and restated bylaws, except as required by law or our certificate of incorporation, as amended, and subject to the rights of holders of any series of preferred stock with respect to the election of directors, any vacancy of our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board of directors, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum. The limitation on the ability of our stockholders to fill vacancies could make it more difficult for stockholders to change the composition of our board of directors or for a third party to acquire, or discourage a third party from seeking to acquire, control of our company.

Amendment to Bylaws

Our amended and restated bylaws provide that our amended and restated bylaws may only be amended by our board of directors or by the affirmative vote of the holders of not less than a majority of the voting power of all then outstanding shares of capital stock entitled to vote generally in the election of directors, voting together as a single class.

Special Meetings of Stockholders; Advance Notice Requirements for Stockholder Proposals and Director Nominations

Our amended and restated bylaws provide that special meetings of our stockholders may be called at any time only by our board or our chief executive officer. Our amended and restated bylaws provide that a stockholder must notify us in writing, within timeframes specified in the bylaws, of any stockholder nomination of a director and of any other business that the stockholder intends to bring at a meeting of stockholders. Our amended and restated bylaws specify the requirements as to form and content of all stockholders' notices. These provisions may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control or management of the Company.

Authorized but Unissued Shares

Our authorized but unissued shares of common stock and preferred stock are available for future issuance without stockholder approval, subject to stock exchange rules. These additional shares may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans. One of the effects of the existence of authorized but unissued common stock or preferred stock may be to enable our board to issue shares to persons friendly to current management, which issuance could render more difficult or discourage an attempt to obtain control of the company by means of a merger, tender offer, proxy contest or otherwise, and thereby protect the continuity of our management and possibly deprive our stockholders of opportunities to sell their shares of common stock at prices higher than prevailing market prices.

Delaware Business Combinations Statute

We are subject to the provisions of Section 203 of the DGCL. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a three-year period following the time that the person becomes an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes, among other things, a merger, asset sale or other transaction resulting in a financial benefit, other than proportionately as a stockholder, to the interested stockholder. An "interested stockholder" is a person who, together with affiliates and associates, owns, or did own within three years prior to the determination of interested stockholder status, 15% or more of the corporation's voting stock.

Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions: (1) before the stockholder became an interested stockholder, the board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder; (2) upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances; or (3) at or after the time the stockholder became an interested stockholder, the business combination was approved by the board of directors and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Under certain circumstances, these provisions will make it more difficult for a person who would be an “interested stockholder” to effect various business combinations with the company for a three-year period. These provisions may encourage companies interested in acquiring the company to negotiate in advance with our board because the stockholder approval requirement would be avoided if our board approves either the business combination or the transaction which results in the stockholder becoming an interested stockholder. These provisions also may have the effect of preventing changes in our board and may make it more difficult to accomplish transactions which stockholders may otherwise deem to be in their best interests.

OneSpan

OneSpan Inc.
2023 Management Incentive Plan (MIP)

1. PURPOSE

The purpose of the OneSpan Inc. (together with its subsidiaries, the "**Company**" or "**OneSpan**") 2023 Management Incentive Plan ("**2023 MIP**") is to share the success of the Company with our leaders and top performers.

2. PARTICIPATION

To participate in the MIP, you must be a full-time employee of OneSpan unless otherwise approved in writing by the Company's Chief People Officer. Employees participating in the 2023 MIP will be notified in writing. You must be hired before October 1, 2023 to be eligible to participate in the 2023 MIP. If you are hired from January 1, 2023 through September 31, 2023 (inclusive), any Bonus you earn under the 2023 MIP will be prorated based on your date of hire (unless otherwise set forth in your offer letter or employment agreement, if any).

3. OVERVIEW

Participants in the 2023 MIP are eligible to receive a cash bonus ("**Bonus**") based upon a combination of (1) the Company's achievement against targets for designated performance metrics ("**Company Performance Factors**") and (2) your individual performance (the "**Individual Performance Factor**"). The Company Performance Factors are weighted to account for a total of 90% of your potential Bonus amount and the Individual Performance Factor is weighted to account for 10% of your potential Bonus amount. The weighted Company Performance Factors and Individual Performance Factor are added together to create a Combined Performance Factor, which is used to calculate the amount of your Bonus. More detail on this calculation is provided below in Sections 4 and 5 of this document.

In addition to the Company Performance Factors and the Individual Performance Factor, your potential Bonus depends on your eligible target bonus amount, which may be expressed either as a fixed dollar amount or as a percentage of your base salary. If you do not know your eligible target bonus amount, please contact your manager or Human Resources.

4. PERFORMANCE FACTORS

Company Performance Factors - 90% of your potential Bonus amount is calculated based on the Company's achievement against specified targets for the Company Performance Factors. Company Performance Factors and associated targets are determined by the Compensation Committee (the "Compensation Committee") of the Company's Board of Directors (the "Board").

For the 2023 MIP, the two Company Performance Factors are Revenue and Adjusted EBITDA. "Revenue" refers to the Company's publicly reported annual revenue, and Adjusted EBITDA is defined in the Company's publicly reported earnings releases. The Revenue factor is weighted at 70% and the Adjusted EBITDA factor is weighted at 20% (for a total Company Performance Factor weighting of 90%).

2023 MIP targets and payout levels for Revenue and Adjusted EBITDA will be communicated to you separately. Different levels of achievement against the Revenue and Adjusted EBITDA targets will correspond to different Bonus payout levels, as follows:

- **Revenue**: The Company must achieve a minimum of 97.9% of the Revenue target in order for the Revenue factor to contribute to the Bonus payout calculation. A 97.9% achievement level would correspond to the minimum payout level of 50%; a 100% achievement level would correspond to the target payout level of 100%;

and a 105.3% or greater achievement level would correspond to the maximum payout level of 150%.

- **Adjusted EBITDA**: The Company must achieve a minimum of 66.67% of the Adjusted EBITDA target in order for the Adjusted EBITDA factor to contribute to the Bonus payout calculation. A 66.7% achievement level would correspond to the minimum payout level of 50%; a 100% achievement level would correspond to the target payout level of 100%; and a 133.3% or greater achievement level would correspond to the maximum payout level of 125%.

For achievement levels that fall between the maximum, target, and minimum Revenue and Adjusted EBITDA achievement levels, the corresponding payout levels will be calculated using linear interpolation.

Individual Performance Factor - 10% of your potential bonus amount is calculated based on your performance against individual performance objectives set by your manager. These objectives will consist of a mix of metrics tied to the OneSpan 2.0 operational plan and other key business metrics pertinent to your role. Performance that meets expectations will correspond to a 100% payout level for the Individual Performance Factor, and performance that is below or above expectations will be adjusted accordingly.

5. EXAMPLE BONUS CALCULATIONS

Assume for purposes of these examples that your eligible target bonus amount is $15,000.

Example 1:

If the Company achieves 97.9% of the Revenue factor and 100% of the Adjusted EBITDA factor, and if your individual performance meets expectations, your Bonus will be paid out at 65% of your eligible target bonus amount, based on a Combined Performance Factor of 65%:

	Achievement Level against Target	**Payout Level**	**Weight**	**Weighted Factor (Payout Level*Weight)**
Company Performance Factors				
Revenue	97.9%	50%	70%	35%
Adjusted EBITDA	100%	100%	20%	20%
Individual Performance Factor	100%	100%	10%	10%
Combined Performance Factor (sum of the three weighted factors)				**65%**

The Combined Performance Factor is then applied to the $15,000 eligible target bonus amount for a Bonus payout of $9,750 (65% of $15,000).

Example 2:

If the Company achieves 100% of the Revenue factor and 60% of the Adjusted EBITDA factor, and if your individual performance meets expectations, your Bonus will be paid out at 80% of your eligible target bonus amount, based on a Combined Performance Factor of 80%:

	Achievement Level against Target	Payout Level	Weight	Weighted Factor (Payout Level*Weight)
Company Performance Factors				
Revenue	100%	100%	70%	70%
Adjusted EBITDA	60%	0%	20%	0%
Individual Performance Factor	100%	100%	10%	10%
Combined Performance Factor (sum of the three weighted factors)				**80%**

The Combined Performance Factor is then applied to the $15,000 eligible target bonus amount for a Bonus payout of $12,000 (80% of $15,000).

6. DETERMINATION OF ACHIEVEMENT

The Company expects that the assessment of achievement against Company Performance Factors and the Individual Performance Factor for 2023 will be completed during the first quarter of 2024, and that any Bonus earned would be paid out via payroll by the end of that quarter. The Company may adjust these dates depending upon the timing of its year-end audit and other factors.

Achievement against the Company Performance Factors is based on the Company's 2023 financial performance and is approved by the Board or the Compensation Committee. The Board or the Compensation Committee may make adjustments to the targets for the Company Performance Factors to address the impact of any mergers, acquisitions or other unexpected activities, developments, trends or events. In addition, achievement of the targets for the Company Performance Factors may, in the Board or Compensation Committee's discretion, include or exclude the impact of any of the following events that occur during 2023: any reorganization or restructuring transactions; extraordinary nonrecurring items; and significant acquisitions or divestitures.

7. GENERAL TERMS

If your base salary or eligible target bonus amount changes during 2023, any Bonus amount you earn will be prorated based on the timing of such change. For purposes of this proration, changes that occur on before the 15th of a given month will be considered to have been in effect for the full month, and changes that occur after the 15th of a month will be considered to take effect on the first of the immediately following month. For example, if your eligible target bonus amount increases from 15% to 20% on July 10, your Bonus amount will be calculated based on six months of a 15% eligible target bonus amount and six months of a 20% eligible target bonus amount, whereas if the increase happens on July 20, your Bonus amount will be calculated based on seven months of a 15% eligible target bonus amount and five months of a 20% eligible target bonus amount.

If you take a leave of absence during 2023 that is longer than 90 days (which days need not be consecutive), any Bonus you earn under the 2023 MIP will be prorated based on the number of total days in excess of 90 days in your leave of absence.

If you switch from a Sales Commission Plan to the 2023 MIP, or vice versa, any Bonus you earn under the 2023 MIP will be prorated based on the timing of the change. Changes of this type will generally be effective on the first day of a specified month.

Unless otherwise prohibited by applicable law, any Bonus amount is not earned until it is determined based on the Company's 2023 financial performance as approved by the Board or Compensation Committee. To receive any Bonus under the 2023 MIP, and unless prohibited by applicable law, you must be actively working for the Company at the time payment is made. The 2023 MIP is valid for 2023 only and will not continue to apply for future years.

Participants do not have any contractual or otherwise acquired right to MIP participation in any future years. There are no promises or guarantees of payments under the 2023 MIP, and the Company reserves the right to unilaterally alter or discontinue the program at its complete discretion, unless specifically prohibited under local law.

AWARD AGREEMENT FOR TIME-BASED RESTRICTED STOCK UNITS
UNDER THE
ONESPAN INC. 2019 OMNIBUS INCENTIVE PLAN

THIS AWARD AGREEMENT FOR RESTRICTED STOCK UNITS (this "**Agreement**") is made as of February 23, 2023 (the "**Effective Date**"), between OneSpan Inc. (the "**Company**") and the individual identified on the signature page and Exhibit A hereto (the "**Grantee**").

WHEREAS, the Company maintains the OneSpan Inc. 2019 Omnibus Incentive Plan (as amended, the "**Plan**") for the benefit of its employees, directors, consultants, and other individuals who provide services to the Company; and

WHEREAS, to further align the Grantee's personal financial interests with those of the Company's stockholders, the Company wishes to award the Grantee restricted stock units with respect to shares of Common Stock (as defined below), subject to the restrictions, terms and conditions contained in the Plan and this Agreement.

NOW, THEREFORE, in consideration of these premises and the agreements set forth herein, the parties, intending to be legally bound hereby, agree as follows:

1. **Grant of Restricted Stock Units**. Pursuant to Article III of the Plan, the Company hereby grants to the Grantee an award of restricted stock units (the "**Restricted Stock Units**") with respect to the number of shares of the Company's common stock, par value of $0.001 per share (the "**Common Stock**"), as set forth on Exhibit A hereto, subject to the terms and conditions set forth in this Agreement and in the Plan. The terms of the Plan are hereby incorporated into this Agreement by this reference, as though fully set forth herein. Capitalized terms used but not defined in this Agreement have the meanings set forth in the Plan.

2. **Vesting of Restricted Stock Units**. The Restricted Stock Units will become vested in accordance with this Section 2.

(a) Restricted Stock Units will become vested in accordance with the vesting schedule set forth on Exhibit A hereto, provided that on each vesting date, the Grantee has, from the date hereof or as otherwise provided for herein, continuously provided services to the Company.

(b) If the Grantee's employment with the Company terminates as a result of death or by the Company due to Disability and, in the case of termination due to Disability, subject to the Grantee executing the Company's standard release of claims which becomes effective in accordance with its terms within 60 days following such termination of employment, the Restricted Stock Units that are unvested as of such termination of employment shall become immediately vested.

(c) If, on or within 18 months following a Change in Control, either (x) the Grantee's employment is terminated by the Company other than for Cause or (y) the Grantee resigns from employment with the Company for Good Reason, and subject to the Grantee executing the Company's standard release of claims which becomes effective in accordance with its terms within 60 days following such termination of employment, then the Restricted Stock Units that are unvested as of such termination of employment shall become immediately vested.

(d) Except as provided in this Agreement or in any other agreement between the Grantee and the Company or any of its Subsidiaries that is in effect as of the Effective Date, upon cessation of the Grantee's service with the Company for any reason or for no reason (and whether such cessation is initiated by the Company, the Grantee or otherwise): (i) any Restricted Stock Units that have not, prior to such cessation, become vested shall immediately and automatically, without any action on the part of the Company or the Grantee, be forfeited, and (ii) the Grantee shall have no further rights with respect to those Restricted Stock Units (or the underlying shares of Common Stock).

(e) For purposes of this Agreement, service with the Company shall be deemed to include service with any Subsidiary of the Company for only so long as such entity remains a Subsidiary.

(f) For purposes of this Agreement, "**Disability**" means a mental or physical impairment of the Grantee that is expected to result in death or that has lasted or is expected to last for a continuous period of 12 months or more and that causes the Grantee to be unable to perform his or her material duties for the Company and to be engaged in any substantial gainful activity, in each case as determined by the Company's chief human resources officer or other person performing that function or, in the case of directors and executive officers, the Compensation Committee of the Company's Board of Directors (the "**Committee**"), whose determination shall be conclusive and binding. The determination of Disability for purposes of this Agreement shall not be construed to be an admission of disability for any other purpose.

(g) For purposes of this Agreement, "**Good Reason**" has the meaning given to it in the employment agreement in effect as of the Effective Date between the Grantee and Company, including, for avoidance of doubt, the written notice, cure period, and resignation timing requirements applicable to a termination due to Good Reason under the employment agreement; provided, however, in the event the Grantee is not subject to an employment agreement as of the Effective Date or if an employment agreement in effect as of the Effective Date does not define "Good Reason" or a similar term, then "**Good Reason**" means, without the Grantee's consent:

(i) The Company materially breaches the Company's obligations under any employment, consulting, or other agreement between the Grantee and the Company (each, a "**Company Agreement**"), provided that a change in reporting relationship shall not be deemed a material breach;

(ii) A reduction in Grantee's base salary below the base salary in effect during the immediately preceding year, unless such reduction is commensurate with and part of a general salary reduction program applicable to all senior executives of the Company;

(iii) A requirement that Grantee relocate Grantee's primary place of work by more than 45 miles (including a requirement that Grantee work primarily at a Company office that is located more than 45 miles from the location of Grantee's home office), provided that travel required in connection with the Grantee's performance of Grantee's duties will not be treated as a violation of this clause (iii); and

(iv) Any material diminution of Grantee's authority, duties or responsibilities (provided that a diminution that results in Grantee having authority, duties, or responsibilities with respect to the business represented by the Company that are reasonably comparable to those in effect before the Change in Control shall not be treated as Good Reason);

provided, however, that, (a) Grantee has provided written notice describing such Good Reason in reasonable detail to the Company within 90 days of the initial occurrence of such Good Reason event, (b) the Company failed to cure such Good Reason within 30 days of receipt of such written notice from Grantee, and (c) Grantee's resignation occurs within 60 days following the end of the cure period; provided, further, that in the case of clauses (ii) and (iv), an act or omission shall not constitute Good Reason if Grantee has incurred a Disability.

(h) For purposes of this Agreement, "**Cause**" and "**Wrongful Act**" mean:

(i) The Grantee materially breaches the Grantee's obligations under any Company Agreement;

(ii) The Grantee materially breaches the Grantee's obligations under the Company's Code of Ethics and Conduct (or any successor thereto) or an established policy of the Company;

(iii) The Grantee engages in conduct prohibited by law (other than minor violations), commits an act of dishonesty, fraud, or serious or willful misconduct in connection with the Grantee's job duties, or engages in unethical or immoral conduct that, in the reasonable judgment of the Committee, could injure the integrity, character or reputation of Company;

(iv) The Grantee fails or refuses to perform, or habitually neglects, the Grantee's duties and responsibilities under any Company Agreement (other than on account of Disability), and continues such failure, refusal or neglect after having been given written notice by the Company that specifies what duties the Grantee failed to perform and an opportunity to cure of 30 days;

(v) Subject to Section 10, use or disclosure by the Grantee of confidential information or trade secrets other than in the furtherance of the Company's (or its Subsidiaries') business interests, or other violation of a fiduciary duty to the Company (including, without limitation, entering into any transaction or contractual relationship causing diversion of business opportunity from the Company or any of its Subsidiaries (other than with the prior written consent of the Board));

(vi) The Grantee fails to reasonably cooperate with any audit or investigation involving the Company or its business practices after having been given written notice by the Company that specifies the Grantee's failure to cooperate and an opportunity to cure of ten days; or

(vii) Any other act or omission on the part of the Grantee that would constitute just cause for termination under applicable law.

3. **Delivery of Common Stock Underlying Restricted Stock Units**. Within 60 days after the vesting of any Restricted Stock Units (or such later date as may be required to comply with Section 409A of the Internal Revenue Code of 1986, as amended ("**Section 409A**")), the Company will issue or deliver, subject to the conditions of this Agreement, the shares of Common Stock in respect of such vested Restricted Stock Units to the Grantee. Such issuance or delivery shall be evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company. The Company shall pay all original issue or transfer taxes and all fees and expenses incident to such issuance or delivery, except as otherwise provided herein. Prior to the issuance to the Grantee of the shares of Common Stock subject to the Restricted Stock Units, the Grantee shall have no direct or secured claim in any specific assets of the Company or in such shares, and will have the status of a general unsecured creditor of the Company.

4. **Adjustments.** In the event of any equity restructuring (within the meaning of Financial Accounting Standards Board Accounting Standards Codification Topic 718, Compensation—Stock Compensation) that causes the per share value of shares of Common Stock to change, such as a stock dividend, stock split, spinoff, rights offering or recapitalization through an extraordinary dividend, the terms of this Agreement, including the number and class of securities subject hereto, shall be appropriately adjusted by the Committee. In the event of any other change in corporate capitalization, including a merger, consolidation, reorganization, or partial or complete liquidation of the Company, such equitable adjustments described in the foregoing sentence may be made as determined to be appropriate and equitable by the Committee to prevent dilution or enlargement of rights of the Grantee. The decision of the Committee regarding any such adjustment shall be final, binding and conclusive.

5. **Rights as a Stockholder**. The Grantee shall have no rights as a stockholder of the Company with respect to the shares of Common Stock subject to the Restricted Stock Units (including the right to vote) until the underlying Common Stock becomes vested pursuant to Section 2 and the Grantee becomes a stockholder of record with respect to such shares, except that the Grantee shall be entitled to receive dividend equivalents related to the Restricted Stock Units equal in amount to the dividends declared on the underlying shares of Common Stock. Dividend equivalent amounts shall accrue and be paid or distributed in cash at the same time the underlying shares of Common Stock are distributed to the Grantee in accordance with Section 3.

6. **Tax Consequences**.

(a) The Grantee acknowledges that the Company has not advised the Grantee regarding the Grantee's income tax liability in connection with the grant or vesting of the Restricted Stock Units, the dividend equivalents contemplated hereunder or the delivery of the Common Stock underlying the Restricted Stock Units. The Grantee has reviewed with the Grantee's own tax advisors the federal, state, local and foreign tax consequences of this investment and the transactions contemplated by this Agreement. The Grantee is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. The Grantee understands that the Grantee (and not the Company) will be responsible for the Grantee's own tax liability that may arise as a result of the transactions contemplated by this Agreement.

(b) As a condition precedent to the delivery of the shares of Common Stock upon the vesting of the Restricted Stock Units, the Grantee acknowledges and agrees that the Company may be required, under all applicable federal, state, local or other laws or regulations, to withhold and pay over as income or other withholding taxes (the "**Required Tax Payments**") with respect to such shares of Common Stock. If the Grantee has not been given permission by the Company to advance the Required Tax Payments in cash, then the obligation to advance the Required Tax Payments by the Grantee shall take place by the Company withholding whole shares of Common Stock which would otherwise be delivered to the Grantee having an aggregate Fair Market Value, determined as of the applicable date, equal to the Required Tax Payments. Shares of Common Stock to be withheld may not have a Fair Market Value in excess of the minimum amount of the Required Tax Payments. Any fraction of a share of Common Stock which would be required to satisfy any such obligation shall be disregarded and the remaining amount due shall be paid in cash by the Grantee. No certificate representing a share of Common Stock shall be delivered until the Required Tax Payments have been satisfied in full.

7. **<u>Nontransferability of Award</u>**. The Grantee may not sell, pledge, assign, encumber, hypothecate, gift, transfer, bequeath, devise, donate or otherwise dispose of, in any way or manner whatsoever, whether voluntary or involuntary, any legal or beneficial interest in any of the Restricted Stock Units until the Restricted Stock Units become vested and settled in accordance with <u>Section 3</u>; <u>provided</u>, <u>however</u>, that the restrictions of this <u>Section 7</u> shall not apply to any transfer (i) pursuant to applicable laws of descent and distribution or (ii) among the Grantee's family group; provided that such restrictions will continue to be applicable to the Restricted Stock Units after any such transfer and the transferees of such Restricted Stock Units have agreed in writing to be bound by the provisions of this Agreement. The Grantee's "family group" means the Grantee's spouse and descendants (whether natural or adopted) and any trust solely for the benefit of the Grantee and/or the Grantee's spouse and/or descendants during the Grantee's lifetime.

8. **<u>Securities Laws</u>**. The Company may from time to time impose any conditions on the Restricted Stock Units or any underlying shares of Common Stock as it deems necessary or advisable to ensure that this Agreement and the Plan satisfies the conditions of Rule 16b-3 adopted under the Securities and Exchange Act of 1934, as amended, and otherwise complies with applicable rules and laws.

9. **<u>Recoupment of Award</u>**. Notwithstanding anything in this Agreement to the contrary, if the Company determines that the Grantee's Wrongful Act was a significant contributing factor to the Company or a Subsidiary having to restate all or a portion of its financial statements, all outstanding Restricted Stock Units will immediately and automatically be forfeited and the Grantee shall promptly repay to the Company any shares of Common Stock, cash or other property paid in respect of any Restricted Stock Units during the period beginning on the date the financial statements requiring restatement were originally released to the public or submitted to the Securities and Exchange Commission (whichever is earlier) and ending on the date the restated financial statements are filed with the Securities and Exchange Commission.

10. **<u>Protected Rights</u>.** The Grantee understands that nothing contained in this Agreement limits the Grantee's ability to report possible violations of law or regulation to, or file a charge or complaint with, the Securities and Exchange Commission, the Equal Employment Opportunity Commission, the National Labor Relations Board, the Occupational Safety and Health Administration, the Department of Justice, the Congress, any Inspector General, or any other federal, state or local governmental agency or commission ("**Government Agencies**"). The Grantee further understands that this Agreement does not limit the Grantee's ability to communicate with any Government Agencies or otherwise participate in any investigation or proceeding that may be conducted by any Government Agency, including providing documents or other information, without notice to the Company. Nothing in this Agreement shall limit the Grantee's ability under applicable United States federal law to (i) disclose in confidence trade secrets to federal, state, and local government officials, or to an attorney, for the sole purpose of reporting or investigating a suspected violation of law or (ii) disclose trade secrets in a document filed in a lawsuit or other proceeding, but only if the filing is made under seal and protected from public disclosure.

11. **<u>Compliance with Section 409A</u>.** The Restricted Stock Units are intended to be exempt from or comply with Section 409A, and shall be interpreted and construed accordingly, and each payment hereunder shall be considered a separate payment. To the extent this Agreement provides for the Restricted Stock Units to become vested and be settled upon the Grantee's termination of employment, the applicable shares of Common Stock shall be transferred to the Grantee or his or her beneficiary upon the Grantee's "separation from service," within the meaning of Section 409A. Notwithstanding any other provision in this Agreement, to the extent any payments hereunder constitute nonqualified deferred compensation, within the meaning of Section 409A, then (a) each such payment which is conditioned upon the Grantee's execution of a release of claims and which is to be paid or provided during a designated period that begins in one taxable year and ends in a second taxable year, shall be paid or provided in the later of the two taxable years, and (b) if the Grantee is a specified employee (within the meaning of Section 409A) as of the date of the Grantee's separation from service, each such payment that is payable upon the Grantee's separation from service and would have been paid prior to the six-month anniversary of the Grantee's separation from service, shall be delayed until the earlier to occur of (i) the first day of the seventh month following the Grantee's separation from service or (ii) the date of the Grantee's death.

12. General Provisions.

(a) This Agreement and the Plan together represent the entire agreement between the parties with respect to the granting of the Restricted Stock Units and may only be modified or amended in a manner materially adverse to the Grantee in writing signed by both parties.

(b) Any notice, demand or request required or permitted to be given by either the Company or the Grantee pursuant to the terms of this Agreement must be in writing and will be deemed given (i) on the date and at the time delivered via personal, courier or recognized overnight delivery service, (ii) if sent via telecopier on the date and at the time telecopied with confirmation of delivery, (iii) if sent via email or other electronic delivery and receipt is confirmed, on the date and at the time received, or (iv) if mailed, on the date five days after the date of the mailing (which must be by registered or certified mail). Delivery of a notice by telecopy (with confirmation) or by email or other electronic delivery (with confirmation or receipt) will be permitted and will be considered delivery of a notice notwithstanding that it is not an original that is received. Any notice to the Grantee under this Agreement will be made to the Grantee at the address (or telecopy number, email or other electronic address, as the case may be) listed in the Company's personnel files. If directed to the Company, any such notice, demand or request will be sent to the Corporate Secretary at the Company's principal executive office, or to such other address or person as the Company may hereafter specify in writing.

(c) The Company may condition delivery of certificates for shares of Common Stock subject to the Restricted Stock Units (or, if the shares are not certificated, the entry in the stock record books of the Company of the transfer to the Grantee of the shares of Common Stock) upon the prior receipt from the Grantee of any undertakings which it may determine are required to assure that the certificates are being issued in compliance with federal and state securities laws.

(d) The Grantee has received a copy of the Plan, has read the Plan and is familiar with its terms, and hereby accepts the Restricted Stock Units subject to all of the terms and provisions of the Plan, as amended from time to time. Pursuant to the Plan, the Board and the Committee are authorized to interpret the Plan and to adopt rules and regulations not inconsistent with the Plan as they deem appropriate. The Grantee hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Board or the Committee upon any questions arising under the Plan.

(e) Subject to Section 7, neither this Agreement nor any rights or interest hereunder will be assignable by the Grantee, the Grantee's beneficiaries or legal representatives, and any purported assignment in violation hereof will be null and void.

(f) Either party's failure to enforce any provision or provisions of this Agreement will not in any way be construed as a waiver of any such provision or provisions, nor prevent that party thereafter from enforcing each and every other provision of this Agreement. The rights granted both parties herein are cumulative and will not constitute a waiver of either party's right to assert all other legal remedies available to it under the circumstances.

(g) The grant of Restricted Stock Units hereunder does not confer upon the Grantee any right to continue in service with the Company.

(h) This Agreement shall be governed by, and enforced in accordance with, the laws of the State of Delaware, without regard to the application of the principles of conflicts or choice of laws.

(i) This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, and all of which together shall be deemed to be one and the same instrument. In the event that any signature to this Agreement is delivered by facsimile transmission or by e- mail delivery of a ".pdf" format data file or picture format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such electronic facsimile signature page were an original thereof. The parties confirm that it is their wish that this Agreement may be executed by means of electronic signature.

(j) The parties hereto have expressly required that this Agreement and any other contract or document relating thereto be drafted in the English language. All other documents, notices and legal proceedings entered into, given or instituted pursuant to the Award, shall be drawn up in English. If the Grantee has received the Agreement or any other documents related to the Award translated into a language other than English, and if the meaning of the translated version is different than the English version, the English version shall control.

[Signature Page Follows]

[SIGNATURE PAGE TO AWARD AGREEMENT FOR TIME-BASED RESTRICTED STOCK UNITS]

IN WITNESS WHEREOF, the parties have duly executed this Award Agreement intending it to be effective as of the first date written above.

ONESPAN INC.

By:_______________

Name:

Its:

GRANTEE

Name:

Signature:_____________

Exhibit A

GRANTEE SPECIFIC INFORMATION:

Grantee	# of RSUs	Vesting Start Date	Vesting Schedule
		Feb 23, 2023	• 33.32% of the Restricted Stock Units will vest on the first annual anniversary date of the Vesting Start Date; • An additional 16.67% of the Restricted Stock Units will vest on the eighteen month anniversary date of the Vesting Start Date; • An additional 16.67% of the Restricted Stock Units will vest on the second annual anniversary date of the Vesting Start Date; • An additional 16.67% of the Restricted Stock Units will vest on the thirty month anniversary date of the Vesting Start Date; and • The final 16.67% of the Restricted Stock Units will vest on the third annual anniversary date of the Vesting Start Date.

AMENDED AND RESTATED AWARD AGREEMENT FOR PERFORMANCE-BASED RESTRICTED STOCK UNITS UNDER THE ONESPAN INC. 2019 OMNIBUS INCENTIVE PLAN

THIS AMENDED AND RESTATED AWARD AGREEMENT FOR RESTRICTED STOCK UNITS (this "**Agreement**"), made as of February 26, 2023, between OneSpan Inc. (the "**Company**") and the individual identified on the signature page and Exhibit A hereto (the "**Grantee**"), amends and restates that certain Award Agreement for Performance-Based Restricted Stock Units under the OneSpan Inc. 2019 Omnibus Incentive Plan between the Company and the Grantee (the "**Prior Agreement**") dated as of June 23, 2022 (the "**Effective Date**").

WHEREAS, the Company maintains the OneSpan Inc. 2019 Omnibus Incentive Plan (as amended, the "**Plan**") for the benefit of its employees, directors, consultants, and other individuals who provide services to the Company;

WHEREAS, to further align the Grantee's personal financial interests with those of the Company's stockholders, the Company awarded the Grantee restricted stock units (the "**2022 PSU Award**") with respect to shares of Common Stock (as defined below), subject to the restrictions, terms and conditions contained in the Plan and the Prior Agreement; and

WHEREAS, the Company and the Grantee desire to amend and restate the terms and conditions of the 2022 PSU Award by entering into this Agreement.

NOW, THEREFORE, in consideration of these premises and the agreements set forth herein, the parties, intending to be legally bound hereby, agree as follows:

1. Grant of Restricted Stock Units. Pursuant to Article IV of the Plan, the Company granted to the Grantee, effective as of the Effective Date, an award of performance-based restricted stock units (the "**Restricted Stock Units**") with respect to the number of shares of the Company's common stock, par value of $0.001 per share (the "**Common Stock**"), as set forth on Exhibit A hereto. The terms of the Plan are hereby incorporated into this Agreement by this reference, as though fully set forth herein. Capitalized terms used but not defined in this Agreement have the meanings set forth in the Plan.

2. Vesting of Restricted Stock Units. The Restricted Stock Units will become vested in accordance with this Section 2.

(a) Performance Period. The number of Restricted Stock Units that are earned (the "**Earned RSUs**") shall be determined by the Compensation Committee of the Company's Board of Directors (the "**Committee**") based upon the Company's achievement relative to Performance Targets established by the Committee for the performance period that commenced on **January 1, 2022** and ended on **December 31, 2022** (the "**Performance Period**"). The Grantee shall vest in one-third of any Earned RSUs on each of December 31, 2022, December 31, 2023 and December 31, 2024 (each, a "**Vesting Date**"), subject in each case to the Grantee's continued service to the Company through the applicable Vesting Date. The Performance Targets for the Performance Period are set forth on Exhibit A attached hereto. For the avoidance of doubt, the RSUs shall be automatically forfeited in their entirety if the Grantee does not remain in the service of the Company through the applicable Vesting Date, except as otherwise provided for herein.

(b) If, on or within 18 months following a Change in Control and prior to any Vesting Date, either (x) the Grantee's employment is terminated by the Company other than for Cause or (y) the Grantee resigns from employment with the Company for Good Reason, and subject to the Grantee executing the Company's standard release of claims which becomes effective in accordance with its terms within 60 days following such termination of employment, then the number of then-outstanding Earned RSUs shall become vested immediately prior to (and contingent upon) such termination of employment.

(c) If the Grantee's service with the Company ceases by reason of the Grantee's death or termination by the Company due to Disability prior to the any Vesting Date, 100% of any then-outstanding Earned RSUs shall become vested immediately prior to (and contingent on) the occurrence of such death or termination by the Company due to Disability. Notwithstanding the foregoing, a Disability shall not qualify if it is the result of (A) a willfully self-inflicted injury or willfully self-induced sickness; or (B) an injury or disease contracted, suffered, or incurred while participating in a criminal offense. The determination of Disability for purposes of this Agreement shall not be construed to be an admission of disability for any other purpose.

(d) Except as provided in this Agreement or in any other agreement between the Grantee and the Company or any of its Subsidiaries that is in effect as of the Effective Date, upon cessation of the Grantee's service with the Company for any reason or for no reason (and whether such cessation is initiated by the Company, the Grantee or otherwise): (i) any Restricted Stock Units that have not, prior to such cessation, become vested shall immediately and automatically, without any action on the part of the Company or the Grantee, be forfeited, and (ii) the Grantee shall have no further rights with respect to those Restricted Stock Units (or the underlying shares of Common Stock).

(e) For purposes of this Agreement, service with the Company shall be deemed to include service with any Subsidiary of the Company for only so long as such entity remains a Subsidiary.

(f) For purposes of this Agreement, "**Good Reason**" has the meaning given to it in the employment agreement in effect as of the Effective Date between the Grantee and Company, including, for avoidance of doubt, the written notice, cure period, and resignation timing requirements applicable to a termination due to Good Reason under the employment agreement; provided, however, in the event the Grantee is not subject to an employment agreement as of the Effective Date or if an employment agreement in effect as of the Effective Date does not define "Good Reason" or a similar term, then "**Good Reason**" means, without the Grantee's consent:

(i) The Company materially breaches the Company's obligations under any employment, consulting, or other agreement between the Grantee and the Company (each, a "**Company Agreement**"), provided that a change in reporting relationship shall not be deemed a material breach;

(ii) A reduction in Grantee's base salary below the base salary in effect during the immediately preceding year, unless such reduction is commensurate with and part of a general salary reduction program applicable to all senior executives of the Company;

(iii) A requirement that Grantee relocate Grantee's primary place of work by more than 45 miles (including a requirement that Grantee work primarily at a Company office that is located more than 45 miles from the location of Grantee's home office), provided that travel required in connection with the Grantee's performance of Grantee's duties will not be treated as a violation of this clause (iii); and

(iv) Any material diminution of Grantee's authority, duties or responsibilities (provided that a diminution that results in Grantee having authority, duties, or responsibilities with respect to the business represented by the Company that are reasonably comparable to those in effect before the Change in Control shall not be treated as Good Reason);

provided, however, that, (a) Grantee has provided written notice describing such Good Reason in reasonable detail to the Company within 90 days of the initial occurrence of such Good Reason event, (b) the Company failed to cure such Good Reason within 30 days of receipt of such written notice from Grantee, and (c) Grantee's resignation occurs within 60 days following the end of the cure period; provided, further, that in the case of clauses (ii) and (iv), an act or omission shall not constitute Good Reason if Grantee has incurred a Disability.

(g) For purposes of this Agreement, "**Cause**" and "**Wrongful Act**" mean:

(i) Grantee materially breaches Grantee's obligations under any Company Agreement;

(ii) Grantee materially breaches Grantee's obligations under the Company's Code of Ethics and Conduct (or any successor thereto) or an established policy of the Company;

(iii) Grantee engages in conduct prohibited by law (other than minor violations), commits an act of dishonesty, fraud, or serious or willful misconduct in connection with Grantee's job duties, or engages in unethical or immoral conduct that, in the reasonable judgment of the Committee, could injure the integrity, character or reputation of Company;

(iv) Grantee fails or refuses to perform, or habitually neglects, Grantee's duties and responsibilities under any Company Agreement (other than on account of Disability), and continues such failure, refusal or neglect after having been given written notice by the Company that specifies what duties Grantee failed to perform and an opportunity to cure of 30 days;

(v) Subject to Section 10, use or disclosure by Grantee of confidential information or trade secrets other than in the furtherance of the Company's (or its Subsidiaries') business interests, or other violation of a fiduciary duty to the Company (including, without limitation, entering into any transaction or contractual relationship causing diversion of business opportunity from the Company or any of its Subsidiaries (other than with the prior written consent of the Board));

(vi) Grantee fails to reasonably cooperate with any audit or investigation involving the Company or its business practices after having been given written notice by the Company that specifies Grantee's failure to cooperate and an opportunity to cure of ten days; or

(vii)Any other act or omission on the part of the Grantee that would constitute just cause for termination under applicable law.

(h) For purposes of this Agreement, "**Disability**" means a mental or physical impairment of Grantee that is expected to result in death or that has lasted or is expected to last for a continuous period of 12 months or more and that causes Grantee to be unable to perform his or her material duties for the Company and to be engaged in any substantial gainful activity, in each case as determined by the Company's chief human resources officer or other person performing that function or, in the case of directors and executive officers, the Committee, whose determination shall be conclusive and binding. The determination of Disability for purposes of this Agreement shall not be construed to be an admission of disability for any other purpose.

3. **Delivery of Common Stock Underlying Restricted Stock Units**. Within 60 days after the vesting of any Restricted Stock Units (or such later date as may be required to comply with Section 409A of the Internal Revenue Code of 1986, as amended (the "**Code**")), the Company will issue or deliver, subject to the conditions of this Agreement, the shares of Common Stock in respect of the then-vested Earned RSUs to Grantee. Such issuance or delivery shall be evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company. The Company shall pay all original issue or transfer taxes and all fees and expenses incident to such issuance or delivery, except as otherwise provided herein. Prior to the issuance to Grantee of the shares of Common Stock subject to the Restricted Stock Units, Grantee shall have no direct or secured claim in any specific assets of the Company or in such shares, and will have the status of a general unsecured creditor of the Company.

4. **Adjustments.** In the event of any equity restructuring (within the meaning of Financial Accounting Standards Board Accounting Standards Codification Topic 718, Compensation— Stock Compensation) that causes the per share value of shares of Common Stock to change, such as a stock dividend, stock split, spinoff, rights offering or recapitalization through an extraordinary dividend, the terms of this Agreement, including the number and class of securities subject hereto, shall be appropriately adjusted by the Committee. In the event of any other change in corporate capitalization, including a merger, consolidation, reorganization, or partial or complete liquidation of the Company, such equitable adjustments described in the foregoing sentence may be made as determined to be appropriate and equitable by the Committee to prevent dilution or enlargement of rights of the Grantee. The decision of the Committee regarding any such adjustment shall be final, binding and conclusive.

5. **Rights as a Stockholder**. The Grantee shall have no rights as a stockholder of the Company with respect to the shares of Common Stock subject to the Restricted Stock Units (including the right to vote) until the underlying Common Stock becomes vested pursuant to Section 2 and the Grantee becomes a stockholder of record with respect to such shares, except that the Grantee shall be entitled to receive dividend equivalents related to the Restricted Stock Units equal in amount to the dividends declared on the underlying shares of Common Stock that become vested pursuant to this Agreement. Dividend equivalent amounts shall accrue and be paid or distributed in cash at the same time the underlying shares of Common Stock are distributed to Grantee in accordance with Section 3.

6. **Tax Consequences**.

(a) The Grantee acknowledges that the Company has not advised the Grantee regarding the Grantee's income tax liability in connection with the grant or vesting of the Restricted Stock Units, the dividend equivalents contemplated hereunder or the delivery of the Common Stock underlying the Restricted Stock Units. The Grantee has reviewed with the Grantee's own tax advisors the federal, state, local and foreign tax consequences of this investment and the transactions contemplated by this Agreement. The Grantee is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. The Grantee understands that the Grantee (and not the Company) will be responsible for the Grantee's own tax liability that may arise as a result of the transactions contemplated by this Agreement.

(b) As a condition precedent to the delivery of the shares of Common Stock upon the vesting of the Restricted Stock Units, the Grantee acknowledges and agrees that the

Company may be required, under all applicable federal, state, local or other laws or regulations, to withhold and pay over as income or other withholding taxes (the "**Required Tax Payments**") with respect to such shares of Common Stock. If the Grantee has not been given permission by the Company to advance the Required Tax Payments in cash, then the Company may, in its discretion, deduct any Required Tax Payments from any amount then or thereafter payable by the Company to the Grantee.

(c) The obligation to advance the Required Tax Payments by the Grantee shall by default take place by the Company withholding whole shares of Common Stock which would otherwise be delivered to the Grantee having an aggregate Fair Market Value, determined as of the applicable date, equal to the Required Tax Payments. Shares of Common Stock to be withheld may not have a Fair Market Value in excess of the minimum amount of the Required Tax Payments. Any fraction of a share of Common Stock which would be required to satisfy any such obligation shall be disregarded and the remaining amount due shall be paid in cash by the Grantee. No certificate representing a share of Common Stock shall be delivered until the Required Tax Payments have been satisfied in full.

7. **Nontransferability of Award**. The Grantee may not sell, pledge, assign, encumber, hypothecate, gift, transfer, bequeath, devise, donate or otherwise dispose of, in any way or manner whatsoever, whether voluntary or involuntary, any legal or beneficial interest in any of the Restricted Stock Units until the Restricted Stock Units become vested and settled in accordance with Section 2; provided, however, that the restrictions of this Section 7 shall not apply to any transfer (i) pursuant to applicable laws of descent and distribution or (ii) among Grantee's family group; provided that such restrictions will continue to be applicable to the Restricted Stock Units after any such transfer and the transferees of such Restricted Stock Units have agreed in writing to be bound by the provisions of this Agreement. Grantee's "family group" means Grantee's spouse and descendants (whether natural or adopted) and any trust solely for the benefit of Grantee and/or Grantee's spouse and/or descendants during Grantee's lifetime.

8. **Securities Laws**. The Company may from time to time impose any conditions on the Restricted Stock Units or any underlying shares of Common Stock as it deems necessary or advisable to ensure that this Agreement and the Plan satisfies the conditions of Rule 16b-3 adopted under the Securities and Exchange Act of 1934, as amended, and otherwise complies with applicable rules and laws.

9. **Recoupment of Award**. Notwithstanding anything in this Agreement to the contrary, if the Company determines that the Grantee's Wrongful Act was a significant contributing factor to the Company or a Subsidiary having to restate all or a portion of its financial statements, all outstanding Restricted Stock Units will immediately and automatically be forfeited and the Grantee shall promptly repay to the Company any shares of Common Stock, cash or other property paid in respect of any Restricted Stock Units during the period beginning on the date the financial statements requiring restatement were originally released to the public or submitted to the Securities and Exchange Commission (whichever is earlier) and ending on the date the restated financial statements are filed with the Securities and Exchange Commission.

10. **Protected Rights**. Grantee understands that nothing contained in this Agreement limits Grantee's ability to report possible violations of law or regulation to, or file a charge or complaint with, the Securities and Exchange Commission, the Equal Employment Opportunity Commission, the National Labor Relations Board, the Occupational Safety and Health Administration, the Department of Justice, the Congress, any Inspector General, or any other federal, state or local governmental agency or commission ("**Government Agencies**"). Grantee further understands that this Agreement does not limit Grantee's ability to communicate with any Government Agencies or otherwise participate in any investigation or proceeding that may be conducted by any Government

Agency, including providing documents or other information, without notice to the Company. Nothing in this Agreement shall limit Grantee's ability under applicable United States federal law to (i) disclose in confidence trade secrets to federal, state, and local government officials, or to an attorney, for the sole purpose of reporting or investigating a suspected violation of law or (ii) disclose trade secrets in a document filed in a lawsuit or other proceeding, but only if the filing is made under seal and protected from public disclosure.

11. <u>Compliance with Section 409A</u>. The Restricted Stock Units are intended to be exempt from or comply with Section 409A, and shall be interpreted and construed accordingly, and each payment hereunder shall be considered a separate payment. To the extent this Agreement provides for the Restricted Stock Units to become vested and be settled upon the Grantee's termination of employment, the applicable shares of Common Stock shall be transferred to the Grantee or his or her beneficiary upon the Grantee's "separation from service," within the meaning of Section 409A. Notwithstanding any other provision in this Agreement, to the extent any payments hereunder constitute nonqualified deferred compensation, within the meaning of Section 409A, then (a) each such payment which is conditioned upon Grantee's execution of a release of claims and which is to be paid or provided during a designated period that begins in one taxable year and ends in a second taxable year, shall be paid or provided in the later of the two taxable years, and (b) if Grantee is a specified employee (within the meaning of Section 409A) as of the date of Grantee's separation from service, each such payment that is payable upon Grantee's separation from service and would have been paid prior to the six-month anniversary of Grantee's separation from service, shall be delayed until the earlier to occur of (i) the first day of the seventh month following the Grantee's separation from service or (ii) the date of Grantee's death.

12. <u>General Provisions</u>

(a) This Agreement and the Plan together represent the entire agreement between the parties with respect to the granting of the Restricted Stock Units and may only be modified or amended in a manner materially adverse to the Grantee in writing signed by both parties.

(b) Any notice, demand or request required or permitted to be given by either the Company or the Grantee pursuant to the terms of this Agreement must be in writing and will be deemed given (i) on the date and at the time delivered via personal, courier or recognized overnight delivery service, (ii) if sent via telecopier on the date and at the time telecopied with confirmation of delivery, (iii) if sent via email or other electronic delivery and receipt is confirmed, on the date and at the time received, or (iv) if mailed, on the date five days after the date of the mailing (which must be by registered or certified mail). Delivery of a notice by telecopy (with confirmation) or by email or other electronic delivery (with confirmation or receipt) will be permitted and will be considered delivery of a notice notwithstanding that it is not an original that is received. Any notice to Grantee under this Agreement will be made to Grantee at the address (or telecopy number, email or other electronic address, as the case may be) listed in the Company's personnel files. If directed to the Company, any such notice, demand or request will be sent to the Corporate Secretary at the Company's principal executive office, or such other address or person as the Company may hereafter specify in writing.

(c) The Company may condition delivery of certificates for shares of Common Stock subject to the Restricted Stock Units (or, if the shares are not certificated, the entry in the stock record books of the Company of the transfer to the Grantee of the shares of Common Stock) upon the prior receipt from Grantee of any undertakings which it may determine are required to assure that the certificates are being issued in compliance with federal and state securities laws.

(d) The Grantee has received a copy of the Plan, has read the Plan and is familiar with its terms, and hereby accepts the Restricted Stock Units subject to all of the terms and provisions of the Plan, as amended from time to time. Pursuant to the Plan, the Board and the Committee are authorized to interpret the Plan and to adopt rules and regulations not inconsistent with the Plan as they deem appropriate. The Grantee hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Board or the Committee upon any questions arising under the Plan.

(e) Subject to Section 7, neither this Agreement nor any rights or interest hereunder will be assignable by the Grantee, the Grantee's beneficiaries or legal representatives, and any purported assignment in violation hereof will be null and void.

(f) Either party's failure to enforce any provision or provisions of this Agreement will not in any way be construed as a waiver of any such provision or provisions, nor prevent that party thereafter from enforcing each and every other provision of this Agreement. The rights granted both parties herein are cumulative and will not constitute a waiver of either party's right to assert all other legal remedies available to it under the circumstances.

(g) The grant of Restricted Stock Units hereunder does not confer upon the Grantee any right to continue in service with the Company.

(h) This Agreement shall be governed by, and enforced in accordance with, the laws of the State of Delaware, without regard to the application of the principles of conflicts or choice of laws.

(i) This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, and all of which together shall be deemed to be one and the same instrument. In the event that any signature to this Agreement is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file or picture format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such electronic facsimile signature page were an original thereof. The parties confirm that it is their wish that this Agreement may be executed by means of electronic signature.

(j) The parties hereto have expressly required that this Agreement and any other contract or document relating thereto be drafted in the English language. All other documents, notices and legal proceedings entered into, given or instituted pursuant to the Award, shall be drawn up in English. If the Grantee has received the Agreement or any other documents related to the Award translated into a language other than English, and if the meaning of the translated version is different than the English version, the English version shall control.

[Signature Page Follows]

[SIGNATURE PAGE TO AWARD AGREEMENT FOR PERFORMANCE-BASED RESTRICTED STOCK UNITS]

IN WITNESS WHEREOF, the parties have duly executed this Award Agreement intending it to be effective as of the first date written above.

ONESPAN INC.

By: /s/ Lara Mataac

Name: Lara Mataac

Its: General Counsel

GRANTEE

Name: Matthew Moynahan

Signature: /s/ Matthew Moynahan

Exhibit A

GRANTEE SPECIFIC INFORMATION:

Grantee	Target $ USD	Grant Date	Grant Date Price	Target # of Restricted Stock Units
Matthew Moynahan	$1,250,012.12	June 23, 2022	$12.46	100,322

Performance Targets

The number of Earned RSUs for the Performance Period, if any, will be dependent on the Company's achievement of the Performance Targets as defined below:

The "**Performance Target**" for the RSUs is comprised of the following metrics and weightings:

Metric	*Weighting*	*Awarded RSUs*
2022 Average of Subscription plus Term License Revenue	75%	75,243
2022 Adjusted EBITDA	25%	25,079
Total	100%	100,322

Metrics follow the Company's published financial statements and earnings disclosures. Inclusion of revenue from acquisitions shall be determined by the Company in accordance with U.S. Generally Accepted Accounting Principles and approved by the Committee.

The Performance Target metrics shall be subject to a minimum threshold, a maximum achievement and linear interpolation between various performance levels as follows:

2022 Subscription plus Term License Revenue	Earned RSUs as a percentage of Awarded RSUs	2022 Target	Earned RSUs
Threshold	50%	$78.7M	37,621
Target	100%	$82.5M	75,243
Maximum	150%	$90.0M	112,864

2022 ADJUSTED EBITDA	Earned RSUs as a percentage of Awarded RSUs	2022 Target	Earned RSUs
Target (Floor)	100%	$(6.0)M	25,079
Maximum	150%	$5M	37,618

Exhibit 10.21

SEPARATION AGREEMENT AND RELEASE

Matthew P. Moynahan ("Employee" or "You") entered into an Amended and Restated Executive Employment Agreement with OneSpan North America, Inc. (the "Company", and along with You, the "Parties") dated February 27, 2023 (the "Employment Agreement"). Capitalized terms used but not defined in this Separation Agreement (the "Agreement") have the meanings given to them in the Employment Agreement.

WHEREAS, you received written notice of the termination of your employment with the Company pursuant to Section 3.3 of the Employment Agreement;

WHEREAS, pursuant to Section 3.3 of the Employment Agreement, in the event the Company terminates your employment with the Company without Cause (as defined in the Employment Agreement), the Company shall pay you your Base Salary and provide the employee benefits under Section 2.4 of the Employment Agreement through the termination date;

WHEREAS, in addition, subject to the requirements set forth in Section 3.7 (Execution of Separation Agreement), Section 3.8 (Timing of Payments, Section 409A) and Section 3.9 (Excess Parachute Payments of the Employment Agreement; No Excise Tax Gross-Up) of the Employment Agreement, the Company will provide you with Severance Pay (as defined Section 3.3 of the Employment Agreement);

WHEREAS, Section 3.7 (Execution of Separation Agreement) provides that, as a condition of receiving the severance benefits described in Section 3.3 of the Employment Agreement, you must execute and return to the Company and not revoke any part of a general release and waiver of claims against the Company and its officers, directors, stockholders employees and affiliates with respect to Executive's employment and other customary terms on a form provided by the Company on or around Executive's date of termination (the "Release"); and

WHEREAS, this Separation Agreement is the Separation Agreement and Release (the "Agreement") referenced in Section 3.7 of the Employment Agreement and includes a general release of claims and other customary terms in a form provided by the Company.

NOW, THEREFORE, you and the Company agree to the terms and conditions of this Agreement as set forth below:

1. Separation from Employment.

(a) Your last day of employment with the Company was January 4, 2024 (the "Separation Date"). Following the Separation Date, you have not represented yourself as being an employee, officer, agent or representative of the Company for any purpose. As of your Separation Date, you shall not be eligible to participate in, or be covered by, any employee benefit plan or program offered by or through the Company, and you shall not receive any benefits or payments from the Company, except as otherwise provided in this Agreement, under the terms of applicable benefits plans, or by law. Additionally, as of your Separation Date, you will no longer have authorization to incur any expenses on behalf of the Company.

(b) Information about your benefits and right to continue or convert your insurance coverage, including your eligibility to extend your health benefits at your own cost under the federal law called COBRA, will be provided to you.

(c) In accordance with Section 3.10 of the Employment Agreement (Removal from any Boards and Positions), the ending of your employment is an automatic resignation by you as of your Separation Date as a member of the Board of Directors of OneSpan Inc. and from any other director or officer positions you hold with the Company or its affiliates and any fiduciary positions with respect to the Company's benefit plans.

2. Separation Benefits. As provided in Section 3.3 and Section 3.7 of the Employment Agreement, if you execute and return to the Company and do not revoke this Agreement within the time periods in Section 19 of this Agreement, then this Agreement will become effective on the date the revocation period of the Agreement expires without Executive revoking the Agreement (the "Release Effective Date"). Payment of the Severance Pay will begin (or be made, as applicable) in the first payroll whose cutoff date follows the Release Effective Date. Any obligation of the Company to provide the Severance Pay shall cease: (i) if you materially breached or breach your contractual obligations to the Company, including those set forth in Article IV or Article V of the Employment Agreement, or in this Agreement or (ii) if, within 90 days after your termination, the Company discovers facts and circumstances that would have justified a termination for Cause during the Employment Period. Subject to the requirements set forth in this Agreement and Section 3.7, Section 3.8 and Section 3.9 of the Employment Agreement, the Company will provide the following Severance Pay:

(a) An amount equal to 12 months of your current Base Salary, less applicable withholdings, payable in equal installments on each regularly scheduled payroll pay date during the 12 month period that begins on the first day immediately after the Release Effective Date;

(b) A payment of $600,000, less applicable withholdings, which represents your current annual incentive compensation target, payable in full with the first installment of the salary-based severance;

(c) Awards, if any under the Long-Term Incentive Plan shall be paid in accordance with the terms and conditions of the Long-Term Incentive Plan and applicable awards, as further set forth in Section 3 below; and

(d) subject to your timely election for continuation coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), the Company will pay your monthly COBRA premiums as part of your severance benefits until the earliest of (i) twelve (12) months following the date of termination (the "COBRA Continuation Benefit") or (ii) the date Executive becomes eligible for group insurance coverage through a new employer. Thereafter, medical, dental and vision insurance coverage and health reimbursement account coverage shall be continued only to the extent required by COBRA and only to the extent you timely pay the premium payments yourself. Notwithstanding the foregoing, the Company may end the payment of premiums earlier (but not your eligibility for COBRA) if it reasonably determines that applicable laws or regulations are reasonably likely to cause the payment of these premiums to trigger taxes or penalties on the Company or other participants or, to the extent you would be taxed on more than the amount of premiums, to you.

(e) although you did not earn any Bonus under the 2023 MIP, the Company will exercise its discretion to award you $60,000, less applicable withholdings (the "2023 MIP Payment"). For the avoidance of doubt, you are not entitled to any other bonus payments under the 2023 MIP or otherwise. The 2023 MIP Payment will be payable in full with the first installment of the salary-based severance.

3. Acknowledgment Regarding Equity Grants. With respect to the equity awards granted to you under the Company's Long Term Incentive Plan, you agree and acknowledge that (i) 258,472 shares (before giving effect to the withholding of shares for tax purposes) subject to your equity awards are vested as of the Separation Date and (ii) in accordance with the terms of the applicable award agreements, all other shares subject to your equity awards remain unvested as of the Separation Date, and will therefore be forfeited effective upon the Separation Date (other than (x) as set forth in Exhibit A of the One-Time Special Grant Award Agreement for Performance-Based Restricted Stock Units under the OneSpan 2019 Omnibus Incentive Plan made as of November 29, 2021 (the "Performance Tail") and (y) as set forth in Section 2(a) and Exhibit A of the Award Agreement For Performance-Based Restricted Stock Units under the OneSpan 2019 Omnibus Incentive Plan made as of February 23, 2023 (the "February 2023 PSU").

4. General Release of Claims and Waiver of Damages.

(a) In consideration for the Severance Pay to be provided to you pursuant to Paragraph 2 above and other valuable consideration, and except as provided below, you, for yourself and for your heirs, executors, administrators, trustees, legal representatives, successors and assigns forever release and discharge the Company and any and all of the Company's past and present parent companies, subsidiaries, affiliates, successors and assigns, and its and their respective past and present officers, directors, employees, shareholders, clients, customers, agents, attorneys, and employee benefit plans and their administrators and trustees, in their individual and official capacities (the "Released Parties"), from any and all claims, demands, causes of action, fees and liabilities of any kind whatsoever, whether known or unknown, which you ever had, now have, or may have against any of the Released Parties by reason of any act, omission, transaction, practice, plan, policy, procedure, conduct, occurrence, or other matter, up to and including the date you sign this Agreement, including without limitation, to the following:

i. any and all claims arising from or related in any way to Employee's employment, compensation, other terms and conditions of employment, or cessation of employment with OneSpan, including but not limited to bonus compensation under the 2023 Management Incentive Plan (except the 2023 MIP Payment subject to the terms of this Agreement) and any equity compensation not vested as of the Separation Date (other than the Performance Tail and the February 2023 PSU);

ii. all claims that were or could have been asserted by Employee or on Employee's behalf: (i) in any federal, state, or local court, commission, or agency; (ii) under any public policy or common law theory; or (iii) under any employment, contract, tort (including but not limited to claims for infliction of emotional distress), federal, state, or local law, regulation, ordinance, or executive order; and

iii. all claims that were or could have been asserted by Employee or on Employee's behalf arising under any of the following laws, as in effect or amended from time to time: Title VII of the Civil Rights Act of 1964, 42 U.S.C. § 2000e et seq., the Pregnancy Discrimination Act of 1978, 42 U.S.C. § 2000e et seq., the Equal Pay Act of 1963, 29 U.S.C. § 206(d), the Americans with Disabilities Act of 1990, 42 U.S.C. § 12101 et seq., the Genetic Information Nondiscrimination Act of 2008, 42 U.S.C. § 2000ff et seq., the Family and Medical Leave Act, 29 U.S.C. § 2601 et seq., the Worker Adjustment and Retraining Notification Act ("WARN"), 29 U.S.C. § 2101 et seq., the Rehabilitation Act of 1973, 29 U.S.C. § 701 et seq., Executive Order 11246, Executive Order 11141, the Fair Credit Reporting Act, 15 U.S.C. § 1681 et seq., the Uniformed Services Employment and Reemployment Rights Act of 1994 ("USERRA"), the False Claims Act, 31 U.S.C. § 3729 et seq., 38 U.S.C. § 4301 et seq., and the Employee Retirement Income Security Act of 1974 ("ERISA"), 29 U.S.C. § 1001 et seq.; the Age Discrimination in Employment Act, 29 U.S.C. § 621 et seq. all as amended; the Massachusetts Fair Employment Practices Act, Mass. Gen. Laws ch. 151B, § 1 et seq., the Massachusetts Civil Rights Act, Mass. Gen. Laws ch. 12, §§ 11H and 11I, the Massachusetts Equal Rights Act, Mass. Gen. Laws. ch. 93, § 102, Mass. Gen. Laws ch. 214, § 1C (Massachusetts right to be free from sexual harassment law), the Massachusetts Labor and Industries Act, Mass. Gen. Laws ch. 149, § 1 et seq., Mass. Gen. Laws ch. 214, § 1B (Massachusetts right of privacy law), the Massachusetts Parental Leave Act, Mass. Gen. Laws ch. 149, § 105D, the Massachusetts Wage Act, Mass. Gen. Laws ch. 149, § 148 et seq., (Massachusetts law regarding payment of wages and overtime), including any rights or claims thereunder to unpaid wages, including overtime, bonuses, commissions, and accrued, unused vacation time; the Massachusetts Paid Family and Medical Leave Act, Mass. Gen. Laws ch. 175m, § 1, et seq., the Massachusetts Earned Sick Time Law, Mass. Gen. Laws ch. 149, § 148c, and the Massachusetts Small Necessities Leave Act, Mass. Gen. Laws ch. 149, § 52D; the Illinois Human Rights Act, 775 Ill. Comp. Stat. 5/1-101 et seq., the Illinois Equal Wage Act, 820 Ill. Comp. Stat. 110/1 et seq., the Illinois Equal Pay Act of 2003, 820 Ill. Comp. Stat. 112/1 et seq., 820 Ill. Comp. Stat. 105/4(b) (Illinois equal pay law), the Illinois Wages of Women and Minors Act, 820 Ill. Comp. Stat. 125/0.01 et seq., the Illinois Wage Payment and Collection Act, 820 Ill. Comp. Stat. 115/1 et seq., the Illinois Employee Sick Leave Act, 820 Ill. Comp.

Stat. 191/1 et seq., the Illinois School Visitation Rights Act, 820 Ill. Comp. Stat. 147/1 et seq., the Illinois Family Military Leave Act, 820 Ill. Comp. Stat. 151/1 et seq., the Illinois Right to Privacy in the Workplace Act, 820 Ill. Comp. Stat. 55/1, and the Illinois Whistleblower Act, 740 Ill. Comp. Stat. 174/1 et seq., and any other federal, state or local statute, regulation and/or ordinance.

You acknowledge and agree that the Severance Pay represents full and final settlement and resolution of any all claims that you may have against any of the Released Parties and/or any disputes that may exist between you and any of the Released Parties.

5. Claims Not Released. You are not releasing claims arising after you sign this Agreement; claims to enforce of this Agreement; any rights or claims you may have to workers' compensation or unemployment benefits; claims for accrued, vested benefits under any employee retirement plan of the Company or for reimbursement under any group health or disability plan in which you participated in accordance with the terms of such plans and applicable law; and/or any claims or rights which cannot be waived by law.

6. Acknowledgements. Employee acknowledges, represents and warrants each of the following:

(a) Other than the Severance Pay offered as consideration for this Agreement (which Employee is not entitled to unless and until Employee complies with Section 3.7 of the Employment Agreement) and the potential equity compensation under the Performance Tail and the February 2023 PSU, the Company has paid or provided all compensation, salary, wages, bonuses, and any and all other benefits and compensation due to Employee.

(b) Employee has no known workplace injury or occupational disease and has been provided and/or has not been denied any leave requested under the Family and Medical Leave Act or other applicable leave laws. To the extent Employee took any such leave or requested a reasonable accommodation as defined by applicable law, the Company provided Employee the full range of leave benefits and/or appropriately responded to Employee's accommodation request;

(c) Employee acknowledges and agrees that effective as of the Separation Date (or such later date designated in the applicable plan documents), except for rights under the Consolidated Omnibus Budget Reconciliation Act of 1985 and/or as otherwise provided by applicable law, Employee ceased to be eligible to participate in or receive benefits under any benefit plans or programs, including, without limitation, medical, dental and vision insurance plans, life insurance plans, short and long-term disability plans, 401(k) plans and any other benefit plans, sponsored or maintained by the Company or any of the other Released Parties; and

(d) Employee acknowledges and agrees that the preceding information is factually accurate as to Employee and may be used as a sworn statement of fact in any proceeding between Employee and the Company.

7. No Re-hire. Employee acknowledges and agrees that effective as of the Separation Date, Employee will cease to hold any position with the Company or its affiliates. Employee also acknowledges and agrees that Employee shall have no present or future right to employment with the Company and Employee agrees to not seek employment with the Company or its affiliates in the future.

8. Restrictive Covenants and Post-Termination Obligations. Subject to the Section 9 of this Agreement, Employee acknowledges and reaffirms Employee's obligations to comply with all terms and conditions of the "Restrictive Covenant Agreements" (consisting of the Invention and Non-Disclosure Agreement and the Non-Competition and Non-Solicitation Agreement between you and the Company, executed on February 28, 2023) and Article 5 of the Employment Agreement, all of which are incorporated by reference into this Agreement.

9. Reservation of Rights. Nothing in this Agreement, any other agreement, any Company policy or otherwise, prevents you from discussing or disclosing information about unlawful acts in the workplace, such as harassment or discrimination or any other conduct that you have reason to believe is unlawful. Nothing in this Agreement, any other agreement any Company policy or otherwise shall be construed to

prevent or limit Employee from (i) responding timely and truthfully to a valid subpoena; (ii) filing a charge or complaint with, or participating in any investigation conducted by, a governmental agency ("Government Agency") including the Department of Labor, the National Labor Relations Board, the Occupational Safety and Health Administration, the Equal Employment Opportunity Commission and/or any state or local human rights agency; (iii) filing, testifying or participating in or otherwise assisting in a proceeding relating to, or reporting, an alleged violation of any federal, state or municipal law relating to fraud or any rule or regulation of the Securities and Exchange Commission ("SEC"), the Commodity Futures Trading Commission ("CFTC") or any self-regulatory organization (including, but not limited to, the Financial Industry Regulatory Authority), or making other disclosures that are protected under the whistleblower provisions of federal or state law or regulation, or (iv) requesting or receiving confidential legal advice. Prior authorization of the Company shall not be required to make any reports or disclosures under this Paragraph 9 and Employee is not required to notify the Company that Employee has made such reports or disclosures. Nevertheless, Employee acknowledges and agrees that by virtue of the Release set forth in Paragraph 4 above, Employee has waived any relief available to Employee (including without limitation, monetary damages, equitable relief and reinstatement) under any of the claims and/or causes of action waived in this Agreement. Therefore, except as set forth herein, Employee agrees that Employee will not seek or accept any award or settlement from any source or proceeding (including but not limited to any proceeding brought by any other person or by any Government Agency) with respect to any claim or right waived in this Agreement. This Agreement does not, however, waive or release or impact an Employee's right to receive a monetary award from the SEC, CFTC or any other Government Agency for information provided to the SEC or CFTC or other Government Agency. Any provision of any agreement or Company policy that is inconsistent with the language in this Section 9 will be deemed invalid and will not be enforced by the Company.

10. Return of Company Property. Employee agrees to return all Company property to the Company as required by Section 5.1 of the Employment Agreement, provided the Company will work cooperatively to assist Employee in transferring his purely personal electronic information from his Company laptop. Employee further acknowledges and agrees that the Company shall have no obligation to make the payment(s) and provide the benefits referred to in Paragraph 2 above unless and until Employee has satisfied all Employee's obligations pursuant to this paragraph.

11. Warranties. Employee also represents and warrants that Employee is the sole owner of the actual or alleged claims, demands, rights, causes of action and other matters relating to Employee's employment with the Company or the cessation of Employee's employment that are released herein; that the same have not been assigned, transferred or disposed of by fact, by operation of law, or in any manner whatsoever; and that Employee has the full right and power to grant, execute, and deliver the releases, undertakings and agreements contained herein.

12. No Admission of Wrongdoing. The making of this Agreement is not intended, and shall not be construed, as an admission that the Company or any of the Released Parties have violated any federal, state or local law (statutory or decisional), ordinance or regulation, breached any contract or committed any wrongdoing whatsoever against you or otherwise.

13. Entire Agreement — Other Agreements. This Agreement sets forth the full terms of the separation arrangement between Employee and the Company and supersedes any prior oral or written understanding or any prior draft or version of the Separation Agreement and Release. This Agreement supersedes the Employment Agreement, other than as provided in Sections 3.8-3.10 and Articles 4 through 6 thereof, which are incorporated by referenced herein. In connection therewith, Employee acknowledges and agrees that Employee remains bound by, and agrees to comply fully with, the Restrictive Covenant Agreements and the post-termination obligations set forth in Article 5 of the Employment Agreement.

14. Amendment. This Agreement shall be binding upon the parties and may not be abandoned, supplemented, changed or modified in any manner, orally or otherwise, except by an instrument in writing of concurrent or subsequent date signed by a duly authorized representative of the parties hereto. This Agreement is binding upon and shall inure to the benefit of the parties and their respective agents, assigns, heirs, executors, successors and administrators.

15. Validity. Should any provision of this Agreement be declared or be determined by any court of competent jurisdiction to be illegal or invalid, the validity of the remaining parts, terms, or provisions shall not be affected thereby and said illegal and invalid part, term or provision shall be deemed not to be a part of this Agreement.

16. Applicable Law. This Agreement shall in all respects be subject to, governed by and construed in accordance with the laws of the Commonwealth of Massachusetts without reference to the principles of conflicts of laws thereof.

17. Voluntary Assent. Employee affirms that no other promises or agreements of any kind have been made to or with Employee by any person or entity whatsoever to cause Employee to sign this Agreement, and that Employee fully understands the meaning and intent of this Agreement.

18. Counterparts. This Agreement may be executed by means of electronic signature or in any number of counterparts, where all such counterparts taken together will be deemed to constitute one and the same instrument. A signed or e-signed copy of this Agreement delivered by facsimile, e-mail, or other means of electronic transmission is deemed to have the same legal effect as delivery of an original signed Agreement.

19. Acceptance and Release Effective Date.

(a) You are being provided at least twenty-one (21) days from receipt of this Agreement to consider it. You must not sign it before close of business on the Separation Date nor will it be effective if you have not signed it by the later of the close of business on the first day following the Separation Date and twenty-one (21) days after receipt. The Parties agree that any changes to this Agreement do not restart the Consideration Period and that, to accept this Agreement, you must execute this Agreement on or before February 7, 2024. You have seven (7) business days to revoke and rescind this Agreement (the "Revocation Period") by giving notice in writing of such revocation to Lara Mataac at lara.mataac@onespan.com. This Agreement shall not become effective until the day after the Revocation Period, provided you do not revoke during the Revocation Period ("Release Effective Date"). You are advised to consult with an attorney before signing this Agreement and, in fact, you have been represented by counsel. In the event that you do not sign, or if you revoke this Agreement, this Agreement will be null and void and you will not be entitled to receive the Severance Pay and benefits referred to in Paragraph 2.

(b) You may accept this Agreement by signing it and delivering it to Lara Mataac at lara.mataac@onespan.com in the time period specified above. This Agreement will *not* be effective or accepted if modified by you unilaterally without the express written consent/agreement of the Company.

20. Final Acknowledgments. By signing below, you acknowledge that you: (a) have carefully read this Agreement in its entirety; (b) have had an opportunity to consider the terms of this Agreement, for up to twenty-one (21) calendar days; (c) are hereby advised by the Company to consult with an attorney of your choice before signing this Agreement; (d) fully understand the significance of all of the terms and conditions of this Agreement and have discussed them with an attorney of your choice; and (e) are signing this Agreement voluntarily and of your own free will and agree to abide by all the terms and conditions contained herein.

[Signature Page Follows]

[Signature Page to Separation Agreement and Release]

So Agreed:

Matthew P. Moynahan	OneSpan North America Inc.
/s/ Matthew P. Moynahan	/s/ Lara Mataac
	By: Lara Mataac
Employee Signature	Its: General Counsel
Date: February 7, 2024	Date: February 7, 2024

Exhibit 10.22

OneSpan

December 1,2023

John Bosshart

Dear John:

As we discussed, your employment with OneSpan North America Inc. ("OneSpan" or the "Company") is being terminated. This letter explains certain important information relating to your separation from employment.

Your last day of work is December 1,2023 (the "Separation Date"). You will receive your normal base salary up to the Separation Date in accordance with the Company's standard policies and procedures and applicable law. All employment benefits, including any insurance coverage you may have elected through the Company's group plan will cease as of your Separation Date, or as otherwise provided in the plan documents. Your right to any continued insurance benefits will be pursuant to COBRA or similar state laws.

In addition, if you execute and return the enclosed Separation Agreement and General Release (the "Agreement")[1] and comply with all of the terms and conditions therein, the Company will provide you with the following separation benefits (the "Separation Benefits"):

- ***Severance Pay:*** The Company will provide you severance pay, in the form of your regular base salary less applicable taxes and withholding deductions, to be paid together with the Company's regular payroll for a period of 39 weeks following your Separation Date (the "Severance Period").

- ***COBRA***: During the Severance Period, the Company will pay for any continued medical insurance coverage you may elect under COBRA as if your employment had continued. Any continued insurance coverage you may elect after the Severance Period will be entirely at your cost.

- **Outplacement Services:** The Company will make outplacement services available to you by a professional outplacement provider selected by the Company for a period of three months following the Termination Date at the Company's sole cost

This offer will remain open for forty-five (45) days. The Company will only provide Severance Benefits to you after it has received the Agreement with your signature indicating your acceptance and the revocation period explained in the Agreement has expired. Because the Agreement is a legally binding document, you are advised to consult with an attorney before signing it.

Very truly yours,

/s/ Tom Aurelio

Tom Aurelio, Chief People Officer

[1] To the extent any inconsistency exists between this letter and the Agreement, the language in the Agreement shall control.

By signing this Agreement, you will be giving up valuable legal rights. For this reason, it is very important that you carefully review and understand the Agreement before signing it. The deadline for accepting this Agreement is forty five (45) days from the date of receipt of this document. If you do not sign and return this document within the forty five (45) day period, this offer of severance pay will expire. The Company encourages you to take advantage of this period of time by consulting with a lawyer before signing the document.

Separation Agreement and General Release

OneSpan North America Inc. ("OneSpan" or the "Company") and John Bosshart ("Employee" or "You"), agree to the terms and conditions of this Agreement and General Release ("Agreement") as set forth below:

1. Employment Status and Final Payments:

1. Separation Date: Your last day of employment with the Company will be December 1, 2023 ("Separation Date"), and after that date you shall not represent yourself as being an employee, officer, agent or representative of the Company for any purpose. As of your Separation Date, you shall not be eligible to participate in, or be covered by, any employee benefit plan or program offered by or through the Company, and you shall not receive any benefits or payments from the Company, except as otherwise provided in this Agreement, under the terms of applicable benefits plans, or by law. Additionally, as of your Separation Date, you will no longer have authorization to incur any expenses on behalf of the Company.

(a) You hereby acknowledge that you have been paid all earned wages as of the Separation Date.

(b) The Separation Date is the date of the "qualifying event" under the Consolidated Omnibus Budget Reconciliation Act of 1985 ("COBRA"). If you are enrolled in the Company's medical plans, you will be provided a benefits packet containing information on your COBRA rights and how to elect to convert to a direct pay plan under COBRA.

(c) You hereby acknowledge (i) receipt of all compensation and benefits due through the Separation Date as a result of services performed for the Company with the receipt of a final paycheck except as provided in this Agreement; (ii) having reported to the Company any and all work-related injuries incurred during employment; (iii) the Company properly provided any leave of absence because of your or a family member's health condition and you have not been subjected to any improper treatment, conduct or actions due to a request for or taking such leave; (iv) you have had the opportunity to provide the Company with written notice of any and all concerns regarding suspected ethical and compliance issues or violations on the part of the Company or any other Company Releasees.

2. Consideration: In exchange for, and in consideration of, your full execution of this Agreement and the expiration of the Revocation Period set out in Section 10 below, the Company agrees as follows:

(a) Severance Pay: The Company will pay you a severance payment of two hundred seventy- four thousand four hundred eighty-two dollars ($274,482), which is the equivalent of thirty-nine (39) weeks of your current base salary. This severance amount will be paid to you in biweekly installments. This severance amount will be paid to you in the form of your regular base salary less applicable taxes and withholding deductions, to be paid together with the Company's regular payroll cycle.

(b) COBRA Premiums: If you elect in a timely manner to continue medical and/or dental insurance coverage after the Separation Date in accordance with the provisions of COBRA, the Company will pay your monthly premium payments until the earlier of: (i) January 31, 2024 or (ii) the date your COBRA continuation coverage would terminate in accordance with the provisions of COBRA. Thereafter, medical and dental insurance coverage shall be continued only to the extent required by COBRA and only to the extent you timely pay the entire premium payments yourself. Please note that if the Company, in its sole discretion, subsequently determines that all or some of its payment of the COBRA premiums are discriminatory under the Internal Revenue Code, any remaining COBRA payments shall instead be paid to you as additional severance pay over the same period that the subsidy would have been provided.

(c) Payments: The payments set forth in this Section 2 shall be subject to all applicable federal, state and/or local withholding and/or payroll taxes.

(d) Outplacement Services: The Company will make outplacement services available to you by a professional outplacement provider selected by the Company for a period of three months following the Termination Date at the Company's sole cost

3. Release: This section of the Agreement is a release of legal claims. Please carefully review this section with your attorney and do not sign this document unless you understand what this section says.

(a) In exchange for the amounts described in Section 2, which are in addition to anything of value to which you are entitled to receive, you and your representatives, agents, estate, heirs, successors and assigns, absolutely and unconditionally release, discharge, indemnify and hold harmless the "Company Releasees" from any and all legally waivable claims that you have against the Company Releasees. Other than as permitted in Section 3 below, this means that by signing this Agreement, you are agreeing to forever waive, release and discharge any type of claim against the Company Releasees arising from conduct that occurred any time in the past and up to and through the date you sign this document. Company Releasees is defined to include the Company and/or any of its parents, subsidiaries or affiliates, predecessors, successors or assigns, and its and their respective current and/or former directors, shareholders/stockholders, officers, employees, attorneys and/or agents, all both individually and in their official capacities.

(b) This release includes, but is not limited to, any waivable claims you have against the Company Releasees based on conduct that occurred any time in the past and up to and through the date you sign this Agreement that arises from any federal, state or local law, regulation, code or constitution dealing with either employment, employment benefits or employment discrimination. By way of example, this release includes the release of claims against the Company Releasees under the laws or regulations concerning discrimination on the basis of race, color, creed, religion, age, sex, sex harassment, sexual orientation, gender identity, national origin, ancestry, genetic carrier status, handicap or disability, veteran status, any military service or application for military service, or any other category protected under federal, state or local law. This release also includes any claim you may have against the Company Releasees for breach of contract, whether oral or written, express or implied; any tort claims (such as wrongful discharge, tortious interference with contractual or advantageous relations, misrepresentation, emotional distress and/or defamation); any claims for equity or employee benefits of any kind; or any other legally waivable statutory and/or common law claims.

(c) For avoidance of doubt, by signing this Agreement you are agreeing not to bring any waivable claims against the Company Releasees (other than as permitted in Section 3 below) under the following nonexclusive list of discrimination and employment statutes: the Civil Rights Act of 1866, Title VII of the Civil Rights Act of 1964 (Title VII"), the Civil Rights Act of 1991, the Americans With Disabilities Act ("ADA"), the ADA Amendments Act, the Equal Pay Act ("EPA"), the Lilly Ledbetter Fair Pay Act, the Family and Medical Leave Act ("FMLA"), the Worker Adjustment and Retraining Notification Act ("WARN"), the Genetic Information Non-Discrimination Act ("GINA"), the Employee Retirement Income Security Act ("ERISA"), the Illinois Human Rights Act, 775 Ill. Comp. Stat. 5, the Illinois Equal Pay Act, 820 Ill. Comp. Stat. 110 *et seq.*, the Illinois Victims' Economic Security and Safety Act, the Illinois Personnel Records Review Act, the Illinois AIDS Confidentiality Act, 410 Ill. Comp. Stat. 305, the Illinois Genetic Information Privacy Act, 820 Ill. Comp. Stat. 110, the Illinois Religious Freedom Restoration Act, 775 Ill. Comp. Stat.

35/1 *et seq.*, the Illinois Employee Sick Leave Act, the Illinois Constitution, the City of Chicago Paid Sick Leave Ordinance, the Cook County Earned Sick Leave Ordinance, all as amended, as well as any other federal, state and local statutes, regulations, codes or ordinances that apply to you.

(d) You release the Company Releasees from any and all wage and hour related claims to the maximum extent permitted by state law. This release of legal claims includes any state wage and hour related claims arising out of or in any way connected with your employment with the Company, including any claims for unpaid or delayed payment of wages, overtime, bonuses, commissions, incentive payments or severance, missed or interrupted meal periods, as well as interest, attorneys' fees, costs, expenses, liquidated damages, treble damages or damages of any kind relating to a wage and hour claim, to the maximum extent permitted by law.

(e) Nothing in this Section 3 or elsewhere in this Agreement (including but not limited to the accord & satisfaction and return of property provisions) (i) prevents you from filing a claim under the workers compensation or unemployment compensation statutes; (ii) limits or affects your right to challenge the validity of this Agreement under the ADEA or the Older Worker Benefits Protection Act; (iii) prevents you from filing a charge or complaint with or from participating in an investigation or proceeding conducted by the Equal Employment Opportunity Commission, the National Labor Relations Board, the Securities and Exchange Commission, or any other federal, state or local agency charged with the enforcement of any laws, including providing documents or other information to such agencies; (iv) prevents you, if you are a non-management, non-supervisory employee, from engaging in protected concerted activity under §7 of the NLRA or similar state law such as joining, assisting, or forming a union, bargaining, picketing, striking, or participating in other activity for mutual aid or protection, or refusing to do so; this includes using or disclosing information acquired through lawful means regarding wages, hours, benefits, or other terms and conditions of employment, unless the information was entrusted to you in confidence by the Company as part of your job duties; or (v) limits your rights to make truthful statements or disclosures regarding unlawful employment practices or precludes you from testifying in an administrative, legislative, or judicial proceeding concerning alleged criminal conduct or alleged unlawful employment practices regarding the Company, its agents, or employees, when you have been required or requested to do so pursuant to a court order, subpoena, or written request from an administrative agency or the legislature, although, by signing this Agreement you are waiving your right to recover any individual relief (including any backpay, frontpay, reinstatement or other legal or equitable relief) in any charge, complaint, or lawsuit or other proceeding brought by you or on your behalf by any third party, except for any right you may have to receive an award from a government agency (and not the Company) for information provided to the government agency.

(f) You further acknowledge that you have (i) reported to the Company any and all work-related injuries or occupational disease incurred by you during your employment by the Company; (ii) been properly provided any leave requested because of your or a family member's health condition or military service and have not been subjected to any improper treatment, conduct or actions due to a request for or taking such leave; (iii) had the opportunity to provide the Company with written notice of any and all concerns regarding suspected ethical and compliance issues or violations on the part of any Company Releasees; and (iv) no claim against the Company or any Company Releasees for sexual assault; sexual harassment; or unlawful workplace harassment or discrimination, failure to prevent an act of workplace harassment or discrimination, or act of retaliation against a person for reporting or opposing harassment or discrimination whether or not filed in a court or government agency proceeding, in an alternative dispute resolution forum, or through the Company's internal complaint process.

4. **<u>Accord and Satisfaction</u>:** The amounts described in Sections 1 and 2 shall be complete and unconditional payment, accord and/or satisfaction with respect to all obligations and liabilities of the Company Releasees to you, including, without limitation, all claims for back wages, salary, vacation pay and other forms of paid time off, draws, incentive pay, bonuses, commissions, stock, stock options and any other form of equity, severance pay, reimbursement of expenses, any and all other forms of compensation or benefits, attorney's fees, or other costs or sums.

5. **Waiver of Rights and Claims Under the Age Discrimination in Employment Act of 1967:**

Since you are 40 years of age or older, you are being informed that you have or may have specific rights and/or claims under the Age Discrimination in Employment Act of 1967 ("ADEA") and you agree that:

(a) in consideration for the amounts described in Section 2 of this Agreement, which you are not otherwise entitled to receive, you specifically and voluntarily waive such rights and/or claims under the ADEA you might have against the Company Releasees to the extent such rights and/or claims arose on or prior to the date this Agreement was executed;

(b) you understand that rights or claims under the ADEA which may arise after the date this Agreement is executed are not waived by you;

(c) you have carefully read and fully understand all of the provisions of this Agreement, and you knowingly and voluntarily agree to all of the terms set forth in this Agreement;

(d) you are informed in Schedule "A," which is attached hereto, of the class, unit or group of individuals considered for this termination program, the job title and ages of all individuals selected for the program benefits and the job title and ages of all individuals in the same job classification or organizational unit who are not selected for the program benefits; and

(e) in entering into this Agreement you are not relying on any representation, promise or inducement made by the Company Releasees or their attorneys with the exception of those promises described in this document.

6. **Period for Review and Consideration of Agreement:**

(a) You acknowledge that you have forty-five (45) days to review this Agreement and consider its terms before signing it.

(b) The 45-day review period will not be affected or extended by any revisions, whether material or immaterial, that might be made to this Agreement.

7. **Company Files, Documents and Other Property:** Other than as permitted in Section 3, you represent that you have returned to the Company all Company property and materials, including but not limited to, (if applicable) personal computers, laptops, fax machines, scanners, copiers, cellular phones, Company credit cards and telephone charge cards, Company keys and passes, intangible information stored on hard drives or thumb drives, software passwords or codes, security passwords or codes, tangible copies of trade secrets and confidential information, and all other confidential information of the Company ("Company Property"). You agree that in the event that you discover any other Company Property in your possession after the Separation Date of this Agreement you will immediately return such materials to the Company.

8. **Future Conduct:**

By signing this Agreement you are acknowledging your post-employment obligations as set out in the Employee Confidential Information and Invention Agreement you signed as a condition of being hired, and you are agreeing to comply, and representing you will comply, with those obligations.

9. **Representations and Governing Law:**

(a) This Agreement sets forth the complete and sole agreement between the parties and supersedes any and all other agreements or understandings, whether oral or written, between you and the Company, except for the Employee Confidential Information and Invention Agreement, which shall remain in full force and effect in accordance with its terms. This Agreement may not be changed, amended, modified, altered or rescinded except upon the express written consent of both the Company and you.

(b) If any provision of this Agreement, or part thereof, is held invalid, void or voidable as against public policy or otherwise, the invalidity shall not affect other provisions, or parts thereof, which may be given effect without the invalid provision or part. To this extent, the provisions and parts thereof of this Agreement are declared to be severable. Any waiver of any provision of this Agreement shall not constitute a waiver of any other provision of this Agreement unless expressly so indicated otherwise in writing by the waiving party. The language of all parts of this Agreement shall in all cases be construed according to its fair meaning and not strictly for or against either of the parties.

(c) This Agreement and any claims arising out of this Agreement shall be governed by and construed in accordance with the laws of the state in which you most recently resided when you worked for the Company, and shall in all respects be interpreted, enforced and governed under the internal and domestic laws of such state, without giving effect to the principles of conflicts of laws of such state. The Parties agree that the jurisdiction and venue of any action with respect to this Agreement shall be in a court of competent subject matter jurisdiction located in Suffolk County, Massachusetts, and each of the Parties hereby agrees to submit itself to the exclusive jurisdiction and venue of such courts for the purpose of any such action and hereby waives any objection or argument that such a venue is inconvenient.

(d) You may not assign any of your rights or delegate any of your duties under this Agreement. The rights and obligations of the Company shall inure to the benefit of the Company's successors and assigns.

(e) This Agreement may be signed by the Parties in one or more counterparts, each of which shall be an original and all of which shall together constitute one and the same instrument. Each counterpart may be delivered by facsimile transmission or e-mail (as a .pdf, .tif or similar un-editable attachment), which transmission shall be deemed delivery of an originally executed counterpart hereof. The Parties also agree that an electronic signature shall have the same effect as the use of a signature affixed by hand.

10. **Effective Date:** If this letter correctly states the agreement and understanding we have reached, please indicate your acceptance by countersigning the enclosed copy and returning it to [*] at [*]@onespan.com by February 14,2024. You may revoke this Agreement for a period of seven
(7) days after signing it. In order to revoke the Agreement, you must submit a written notice of revocation to [*]@onespan.com . This written notice may be sent via email to [*]@onespan.com or hand-delivery but must be received by no later than 11:59 p.m. on the seventh day. The Agreement will not become effective or enforceable, and no payments will be made, until this revocation period has expired ("Effective Date") without being exercised.

Very truly yours,
OneSpan North America Inc.

By: /s/ Tom Aurelio
Tom Aurelio, Chief Human Resources Officer Authorized Representative of OneSpan North America Inc.

I REPRESENT THAT I HAVE READ THE FOREGOING AGREEMENT, THAT I FULLY UNDERSTAND THE TERMS AND CONDITIONS OF SUCH AGREEMENT AND THAT I AM KNOWINGLY AND

VOLUNTARILY EXECUTING THE SAME. IN ENTERING INTO THIS AGREEMENT, I DO NOT RELY ON ANY REPRESENTATION, PROMISE OR INDUCEMENT MADE BY THE COMPANY OR ITS REPRESENTATIVES WITH THE EXCEPTION OF THE CONSIDERATION DESCRIBED IN THIS DOCUMENT.

Accepted and Agreed to:

/s/ John Bosshart
John Bosshart

Date: December 1, 2023

IF YOU DO NOT WISH TO USE THE FULL 45-DAY PERIOD, PLEASE CAREFULLY REVIEW AND SIGN THIS DOCUMENT

I, John Bosshart, acknowledge that I was informed and understand that I have 45 days within which to consider the attached Severance Agreement and Release, have been advised of my right to consult with an attorney regarding such Agreement and have considered carefully every provision of the Agreement, and that after having engaged in those actions, I prefer to and have requested that I enter into the Agreement prior to the expiration of the 45-day period.

Dated: December 1, 2023

/s/ John Bosshart
John Bosshart

Exhibit 10.22

SCHEDULE "A"

Federal law requires that when an employee who is 40 or more years of age is provided certain benefits and asked to sign a release agreement in connection with a group employment termination program, the employee must be provided with certain information.

You and other employees selected for a group employment termination program are eligible to receive certain severance benefits from the Company as described in the attached Severance Agreement and Release (the "Agreement") that the Company has given you to consider. To receive the benefits described in the Agreement, you must sign the Agreement and return it by email to [*]@onespan.com, by the deadline set forth in the Agreement.

The decisional unit considered in connection with your group employment termination program is the Executive Leadership team. Factors considered in determining which employees within the decisional unit would be eligible for benefits under this group employment termination program were for workforce reduction.

The Company is providing you with information on the accompanying chart showing the number of employees in your decisional unit, who are selected and not selected for the severance benefits described in the Agreement, by department, age and job title. If an employee is listed as "not selected," this is because, as of the date indicated below, the employee's employment will not be terminated as part of this group employment termination program, the employee was transferred to an alternative role in the Company in lieu of separation, or the employee is not otherwise eligible for severance benefits. The employees who are listed as "selected" are those terminated from employment as part of this group employment termination program and who are eligible for severance benefits.

As set forth in the attached Agreement, you have up to 45 calendar days to review and sign the Agreement and return it to the Company. You will have 7 calendar days after you sign the Agreement to change your mind and revoke the Agreement; if you do not do so, the Agreement will be effective on the 8th calendar day after you sign the Agreement. You will not receive the severance benefits described in the Agreement until the expiration of this 7 calendar day period without you exercising your right of revocation.

The attached chart was prepared as of November 17, 2023, and the ages below are as of that date. This information is subject to change and may be affected by future employment decisions. If you have any questions about this information, contact [*]@onespan.com.

Department	Job Title	Age	# Selected	# Not Selected

Exhibit 2.1

Subsidiaries of Registrant

Entity Name	**Place of Incorporation or Organization**
OneSpan Australia Pty Ltd	Australia
OneSpan Pty Ltd	Australia
OneSpan Austria GmbH	Austria
OneSpan Europe NV	Belgium
OneSpan NV	Belgium
OneSpan Seguranca de Dados Brasil Ltda	Brazil
Dealflo Technology Inc.	New Brunswick, Canada
OneSpan Canada Inc.	New Brunswick, Canada
OneSpan Software (Beijing) Co. Ltd.	China
OneSpan France SAS	France
OneSpan Japan Kabushiki Kaisha	Japan
OneSpan Netherlands B.V.	Netherlands
OneSpan Asia Pacific Pte Ltd	Singapore
OneSpan International GmbH	Switzerland
OneSpan Solutions GmbH	Switzerland
OneSpan Middle East FZE	Dubai, United Arab Emirates
OneSpan Solutions UK Limited	United Kingdom
OneSpan Technology Limited	United Kingdom
OneSpan Inc.	USA, State of Delaware
OneSpan North America Inc.	USA, State of Delaware

KPMG LLP
Aon Center Suite 5500
200 E. Randolph Street Chicago, IL 60601-6436

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the registration statements (No. 333-161158 and No. 333-232207) on Form S-8 of our report dated March 6, 2024, with respect to the consolidated financial statements of OneSpan Inc. and the effectiveness of internal control over financial reporting.

/s/ KPMG LLP

Chicago, Illinois March 6, 2024

Exhibit 31.1

Certification of Principal Executive Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Victor Limongelli, certify that:

1. I have reviewed this annual report on Form 10-K of OneSpan 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 in order 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; and

   (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; and

   (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 the report based on such evaluation; and

   (d) Disclosed in this report any change 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.

5. The registrant's other certifying officer 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.

Dated: March 6, 2024

/s/ Victor Limongelli

Victor Limongelli
Interim Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

Certification of Principal Financial Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Jorge Martell, certify that:

1. I have reviewed this annual report on Form 10-K of OneSpan 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 in order 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; and

    (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; and

    (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 the report based on such evaluation; and

    (d) Disclosed in this report any change 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.

5. The registrant's other certifying officer 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.

Dated: March 6, 2024

/s/ Jorge Martell

Jorge Martell
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
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 filing with the Securities and Exchange Commission of the Annual Report of OneSpan Inc. (the company) on Form 10-K for the period ended December 31, 2023 (the Report), I, Victor Limongelli, Interim Chief Executive Officer of the company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

i. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

ii. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the company.

/s/ Victor Limongelli

Victor Limongelli
Interim Chief Executive Officer

March 6, 2024

Exhibit 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
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 filing with the Securities and Exchange Commission of the Annual Report of OneSpan Inc. (the company) on Form 10-K for the period ended December 31, 2023 (the Report), I, Jorge Martell, Chief Financial Officer of the company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

i. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

ii. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the company.

/s/ Jorge Martell

Jorge Martell
Chief Financial Officer

March 6, 2024

ONESPAN INC.

Dodd-Frank Compensation Recovery Policy

This Compensation Recovery Policy (this "**Policy**") is adopted by OneSpan Inc. (the "**Company**") in accordance with Nasdaq Listing Rule 5608 ("**Rule 5608**"). This Policy is effective as of October 2, 2023 (the "**Effective Date**").

1. Definitions

(a) **"Accounting Restatement"** means a requirement that the Company prepare an accounting restatement due to the material noncompliance of the Company with any financial reporting requirement under the U.S. federal securities laws, including any required accounting restatement to correct an error in previously issued financial statements that is material to the previously issued financial statements, or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period. Changes to the Company's financial statements that do not represent error corrections are not an Accounting Restatement, including: (A) retrospective application of a change in accounting principle; (B) retrospective revision to reportable segment information due to a change in the structure of the Company's internal organization; (C) retrospective reclassification due to a discontinued operation; (D) retrospective application of a change in reporting entity, such as from a reorganization of entities under common control; and (E) retrospective revision for stock splits, reverse stock splits, stock dividends or other changes in capital structure.

(b) **"Committee"** means the Management Development and Compensation Committee of the Company's Board of Directors (the "**Board**").

(c) **"Covered Person"** means a person who served as an Executive Officer at any time during the performance period for the applicable Incentive-Based Compensation.

(d) **"Erroneously Awarded Compensation"** means the amount of Incentive-Based Compensation that was Received that exceeds the amount of Incentive-Based Compensation that otherwise would have been Received had the amount of Incentive-Based Compensation been determined based on the restated amounts, computed without regard to any taxes paid by the Covered Person or by the Company on the Covered Person's behalf. For Incentive-Based Compensation based on stock price or total shareholder return, where the amount of Erroneously Awarded Compensation is not subject to mathematical recalculation directly from the information in an Accounting Restatement, the amount of Erroneously Awarded Compensation will be based on a reasonable estimate by the Committee of the effect of the Accounting Restatement on the stock price or total shareholder return upon which the Incentive-Based Compensation was Received.

(e) **"Executive Officer"** means the Company's officers as defined in Rule 16a-1(f) under the Exchange Act.

(f) **"Financial Reporting Measures"** means (A) measures that are determined and presented in accordance with the accounting principles used in preparing the Company's financial statements, and any measures that are derived wholly or in part from such measures (whether or not such measures are presented within the Company's financial statements or included in a filing made with the U.S. Securities and Exchange Commission), (B) stock price and (C) total shareholder return.

(g) **“Incentive-Based Compensation”** means any compensation that is granted, earned, or vested based wholly or in part upon the attainment of a Financial Reporting Measure.

(h) Incentive-Based Compensation is deemed to be **“Received”** in the Company’s fiscal period during which the Financial Reporting Measure specified in the applicable Incentive-Based Compensation award is attained, even if the payment or grant of the Incentive-Based Compensation occurs after the end of that period or is subject to additional time-based vesting requirements

(i) **“Recovery Period”** means the three completed fiscal years immediately preceding the earlier of: (A) the date the Board, a committee of the Board, or the officer or officers of the Company authorized to take such action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare an Accounting Restatement; or (B) the date a court, regulator, or other legally authorized body directs the Company to prepare an Accounting Restatement. In addition, if there is a change in the Company’s fiscal year end, the Recovery Period will also include any transition period to the extent required by Rule 5608.

2. **Recovery of Erroneously Awarded Compensation**. Subject to the terms of this Policy and the requirements of Rule 5608, if, on or after the Effective Date, the Company is required to prepare an Accounting Restatement, the Company will attempt to recover, reasonably promptly from each Covered Person, any Erroneously Awarded Compensation that was Received by such Covered Person during the Recovery Period pursuant to Incentive-Based Compensation that is subject to this Policy.

3. Interpretation and Administration

(a) Role of the Committee. This Policy will be interpreted by the Committee in a manner that is consistent with Rule 5608 and any other applicable law and will otherwise be interpreted in the business judgment of the Committee. All decisions and interpretations of the Committee that are consistent with Rule 5608 will be final and binding.

(b) Compensation Not Subject to this Policy. This Policy does not apply to Incentive-Based Compensation that was Received before the Effective Date. With respect to any Covered Person, this Policy does not apply to Incentive-Based Compensation that was Received by such Covered Person before beginning service as an Executive Officer.

(c) Determination of Means of Recovery. Subject to the requirement that recovery be made reasonably promptly, the Committee will determine the appropriate means of recovery, which may vary between Covered Persons or based on the nature of the applicable Incentive-Based Compensation, and which may involve, without limitation, establishing a deferred repayment plan or setting off against current or future compensation otherwise payable to the Covered Person. Recovery of Erroneously Awarded Compensation will be made without regard to income taxes paid by the Covered Person or by the Company on the Covered Person’s behalf in connection with such Erroneously Awarded Compensation.

(d) Determination That Recovery is Impracticable. The Company is not required to recover Erroneously Awarded Compensation if a determination is made by the Committee that either (A) after the Company has made and documented a reasonable attempt to recover such Erroneously Awarded Compensation, the direct expense paid to a third party to assist in enforcing this Policy would exceed the amount to be recovered or (B) recovery of such Erroneously Awarded Compensation would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the registrant, to fail to meet the requirements of Section 401(a)(13) or 411(a) of the Internal Revenue Code and regulations thereunder.

(e) No Indemnification or Company-Paid Insurance. The Company will not indemnify any Covered Person against the loss of Erroneously Awarded Compensation and will not pay or reimburse any Covered Person for the purchase of a third-party insurance policy to fund potential recovery obligations.

(f) Interaction with Other Clawback Provisions. The Company will be deemed to have recovered Erroneously Awarded Compensation in accordance with this Policy to the extent the Company actually receives such amounts pursuant to any other Company policy, program or agreement, pursuant to Section 304 of the Sarbanes-Oxley Act or otherwise.

(g) No Limitation on Other Remedies. Nothing in this Policy will be deemed to limit the Company's right to terminate employment of any Covered Person, to seek recovery of other compensation paid to a Covered Person, or to pursue other rights or remedies available to the Company under applicable law.

Adopted by the Board on November 16, 2023.