

**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, 2022
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
(State or Other Jurisdiction of
Incorporation or Organization)

36-4169320
(IRS Employer
Identification No.)

121 West Wacker Drive, Suite 2050
Chicago, Illinois 60601
(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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

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, 2022, 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, 2022) held by non-affiliates of the registrant was \$471,211,321 at \$11.90 per share.

As of February 25, 2023, there were 40,001,325 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 2023 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

OneSpan Inc.
Annual Report on Form 10-K
For the Year Ended December 31, 2022
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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 strategic transformation plan; expected results of the investments we are making in sales, marketing, and product development; our plans for managing our Digital Agreements and Security Solutions segments; expectations regarding our ability to attract new customers and retain existing customers; efficiency, functionality and other expectations for our next-generation transaction-cloud platform; the timing for general availability of new or enhanced products, including Digipass CX; our expectations regarding our use of technology acquired in our ProvenDB acquisition or other acquisitions we may complete in the future; the expectation that software as a service, or SaaS, will constitute an increasingly important part of our business in the future; the potential benefits, performance and functionality of our products and solutions, including future offerings; future plans or trends in sales and marketing, research and development, and general and administrative expenditures; expectations regarding sources and uses of cash; plans to expand our salesforce and distribution channels; the impact of foreign currency exchange rate fluctuations; the impact of inflation; trends in microprocessor or other costs affecting our Digipass business; the effects of supply chain disruptions; plans or expectations for inventory management in our Digipass business; impacts of macroeconomic conditions or geopolitical conflict; trends in hiring or compensation costs or in gender diversity at our company; 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 strategic transformation plan; our ability to attract new customers and retain and expand sales to existing customers; our ability to effectively develop and expand our sales and marketing capabilities; our ability to hire, train, and retain sales and other employees necessary to implement our strategic transformation plan; our ability to successfully develop and market new product offerings and product enhancements; the loss of one or more large customers; difficulties enhancing and maintaining our brand recognition; competition; lengthy sales cycles; departures of senior management or other key employees; changes in customer requirements; interruptions or delays in the performance of our products and solutions; real or perceived malfunctions or errors in our products; the potential effects of technological changes; economic recession, inflation, and political instability; the impact of the COVID-19 pandemic and actions taken to contain it; our ability to effectively manage third party partnerships, acquisitions, divestitures, alliances, or joint ventures; security breaches or cyber-attacks; 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; reliance on third parties for certain products and data center services; 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 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.

PART I

Item 1 – Business

Overview

OneSpan helps organizations accelerate digital transformations by enabling secure, compliant, and refreshingly easy digital customer agreements and transaction experiences. We deliver digital agreement products and services that automate and secure customer-facing and revenue-generating business processes. Our solutions help organizations streamline and secure user experiences, which in turn allows them to drive growth, reduce risk, and unlock their business potential.

We are a global leader in providing high-assurance identity and authentication security as well as enterprise-grade electronic signature (e-signature) solutions, for use cases ranging from simple transactions to workflows that are complex or require higher levels of security. Our solutions help our clients 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 process millions of digital agreements and billions of transactions in more than 100 countries annually.

Our solutions are powered by a portfolio of products and services across identity verification, authentication, virtual interactions and transactions, and secure digital storage. These products and services can be acquired and embedded individually within enterprise business workflows or assembled into tailored solutions for simple yet secure business-to-business, business-to-employee, and business-to-customer experiences.

We offer our solutions through cloud-based and, in select cases, on-premises solutions using both open standards and proprietary technologies. We offer our products primarily through a subscription licensing model. 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. Our total revenue decreased on a year-over-year basis in 2020 and 2021, and we experienced negative operating income and net losses in both of those years. During 2021 and early 2022, our previous CEO, CFO, and several other senior executives left the company. In late November 2021, our current CEO joined us and has built a new executive team over the course of 2022 to effect the transformation.

In May 2022, we announced a three-year strategic transformation plan that began on January 1, 2023. We believe this transformation plan will enable us to build on our strong solution portfolio and market position, enhance our enterprise go-to-market strategy, accelerate revenue growth, and drive efficiencies to support margin expansion and increased profitability. In conjunction with the strategic transformation 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 our OneSpan Sign e-signature solution and our recently introduced OneSpan Notary and Virtual Room solutions.. As our transformation plan progresses, we expect to include other cloud-based security modules associated with the secure transaction lifecycle of identity verification, authentication, virtual interaction and transactions, and secure digital storage in the Digital Agreements segment. This segment also includes costs attributable to our transaction-cloud platform.
- **Security Solutions.** Security Solutions consist of our broad portfolio of software products and/or software development kits (SDKs) that are used to build applications designed to defend against attacks on digital transactions across online environments, devices and applications. These solutions, which are largely on-premises software products, include identity verification, multi-factor authentication and transaction signing, such as mobile application security, mobile software tokens, and Digipass authenticators that are not cloud connected devices.

We expect to manage Digital Agreements for accelerated growth and market share gains and Security Solutions for cash flows given its more modest growth profile. Across both segments, we plan to build on our strong foundation in both e-signature and cybersecurity by enhancing product features, developing new solutions, and building out our next-generation transaction cloud platform, which we expect will allow us to efficiently deliver security and e-signature solutions to our customers across their entire digital agreement lifecycle. We also plan to enhance our go-to-market strategy by prioritizing growth at large enterprise accounts, expanding our direct sales force, and accessing new routes to market through alliances and partnerships.

Our transformation plan involves numerous risks and uncertainties. Please see Item 1A, *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 more 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 believe that these trends will continue to accelerate and evolve, creating a unique opportunity for OneSpan to leverage its global security roots to deliver technology that enables frictionless customer experiences, with security seamlessly interwoven throughout every action and interaction. OneSpan is uniquely 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 stages of the digital agreement process:

- **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 with strong customer authentication.
- **Interact – Virtual Room:** Connect and collaborate with your customers in a secure, virtual environment.
- **Transact – E-Sign:** Sign transactions and agreements remotely and securely.
- **Store – Secure Vaulting:** 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 currently fall under each segment are shown below; however, as our transformation plan progresses and we deliver more of our products and services through our next-generation transaction- cloud platform, we expect to include other cloud-based security modules across the digital agreements lifecycle in the Digital Agreements segment.

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 deployment options, including public cloud or private cloud, without compromising security or functionality. The solution is also available in a Federal Risk and Authorization Management Program (FedRAMP) 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 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 the newest addition to the OneSpan product portfolio that spans the entire digital agreements lifecycle from identifying an unknown signer all the way to securely storing an agreement and associated assets. Developed for organizations with in-house notaries, OneSpan Notary 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.

Digipass CX is OneSpan's latest family of cloud-connected high-assurance identity verification and authentication devices designed to increase security, minimize fraud, and simplify the user experience. These new devices rely on biometrics rather than one-time passwords which can be stolen via social engineering. Because these devices are connected to the cloud, they can be dynamically provisioned, reprovisioned, and even updated to incorporate new features and applications as they become available in the future. We plan for the first two Digipass CX models to be generally available later in 2023.

Secure Storage is a new addition to the OneSpan product portfolio through the first quarter 2023 acquisition of ProvenDB. OneSpan plans to integrate the ProvenDB Compliance Vault technology obtained through the acquisition to add blockchain-backed secure storage initially for the OneSpan Sign product and eventually across the entire portfolio. This new secure storage capability is designed for high-value, high-risk use-cases by providing tamper resistant document storage supported by immutable compliance data, all protected by blockchain technology.

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.

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 devices included in the Security Solutions segment are not cloud-connected, in contrast to our cloud-connected Digipass CX device, which we expect to include in the Digital Agreements segment.

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, or IP, and other proprietary rights. In particular, we hold several patents in the U.S. and in other countries, which cover multiple aspects of our technology. These patents expire between 2023 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 hardware products, 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 1A, *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 next-generation 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, 2022, 2021, and 2020, we incurred expenses, net of software capitalization, of \$41.7 million, \$47.4 million, and \$41.2 million, respectively, for research and development.

Production

Our Digipass authentication devices are manufactured by third-party manufacturers pursuant to purchase orders that we issue. The majority of our Digipass products are manufactured by four independent factories in Southern China and one in Romania. We maintain local teams in China and Romania to conduct quality control and quality assurance

procedures. Periodic visits 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 third parties 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 has resulted in disruptions in our supply chain, as well as difficulties and delays in procuring certain microprocessors. 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. We expect increased costs to procure materials within the semiconductor market to continue in 2023. Further, we anticipate that the broader impact of inflationary pressures, increased material costs, and supply chain disruptions may continue in 2023.

In response to these supply chain conditions, in 2022 we focused on improving our supplier network, engineering alternative designs, and working to reduce supply shortages. We are actively managing 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 until supply constraints have been remediated. We are also considering alternative manufacturing and supply arrangements, including moving more of our manufacturing from China to Romania or other locations, to mitigate supply chain risks in the future.

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, 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.

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. Although we believe that our products currently compete favorably with respect to most of these factors, 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, or to devote greater resources to the development, promotion and sale of products, 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, with whom we have working relationships, and to potential end users of our products.

As part of our three-year strategic plan, we are enhancing our go-to-market strategy in several ways, including: shifting to a unified sales force that sells across our full solution portfolio (rather than separate sales forces for e-signature and security solutions); prioritizing growth at large enterprise accounts; expanding our direct sales force; and accessing new routes to market through alliances and partnerships. Our expanded selling effort also includes identifying additional applications for our solutions, cross-selling our products to existing enterprise customers, and selling our full portfolio into new market segments and additional geographic markets.

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. We believe there are substantial opportunities for future growth, both within the market segments we currently serve and in new market segments, as we expand our product portfolio and go-to-market strategy.

Our top 10 customers contributed 23%, 22%, and 21% in 2022, 2021, and 2020, 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 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*.

We also experience seasonality or variation across the year in our markets. These trends can include lower sales during the summer months, particularly in Europe.

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 17, *Geographic, Customer and Supplier Information* in the notes to consolidated financial statements for a breakdown of revenue, gross profit and long-lived assets between the U.S. and other regions.

Government Regulation

As a global cybersecurity 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 1A, *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 790 employees that spans the globe, consisting of approximately 300 employees in Canada, 292 in Europe, 27 in the Middle East and Latin America, 134 in the United States, and 37 in the Asia Pacific Region. As of December 31, 2022, approximately 309 of our employees were in research and development, 338 in sales and marketing, and 143 in general and administrative.

We are currently in the early stages of a business transformation that we believe will disrupt our industry by securing the digital agreements process while taking a human-centric approach to end-user experience. We understand that

achieving this ambitious goal will depend primarily on the skills, creativity, and determination of our people, and 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 to 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 conducted annually and through more frequent, “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 a 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 790 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 an annual diversity and inclusion training and an unconscious bias training. 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, and are beginning the process of making other employee resource groups available to interested employees.

We monitor the gender diversity of our workforce regularly. We measure gender diversity overall, by job level, and by job category. As of December 31, 2022, approximately 31% of our employees identified as female, up from 27% at the end of 2021. The percentage of women in all job levels and categories also improved year over year. 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 during 2022 in the diversity of our executive leadership team. As a result of new management hires during 2022, more than half of our 13-person executive team identifies as female, LGBTQ, and/or a person of color, which represents significant progress as compared to the prior year.

Training and Talent Development. We promote and support employee development, compliance and organizational effectiveness by providing compliance training and professional development programs. 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. In addition, in 2022, we added a training on psychological safety at work, which covers ways managers and employees can promote an open, trusting and non-judgmental environment that promotes 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 quarterly coaching sessions, where each employee is evaluated by their personal manager. 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. Beginning in mid-2023, we plan to launch a global social impact platform that will help our employees to find volunteer opportunities 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 conduct a comprehensive employee engagement survey annually, and compare results for each survey question from year to year.
- **Employee Turnover.** We monitor attrition, voluntary turnover, and total turnover, as a whole and by tenure, region, and by job family. 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. Total turnover is the sum of attrition plus voluntary turnover. Our voluntary turnover across our global employee base in 2022 was 16%, which we believe compares favorably with global turnover rates in the technology industry.
- **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 121 West Wacker Drive, Suite 2050, Chicago, IL 60601.

“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 (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. In addition, we intend to disclose on our website any amendments to, or waivers from, our code of business conduct and ethics that are required to be disclosed pursuant to SEC rules.

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.

MATTHEW P. MOYNAHAN — Mr. Moynahan has served as OneSpan’s President and Chief Executive Officer since November 2021 and as a director since June 2022. Before OneSpan, he was the Chief Executive Officer of Forcepoint LLC, a global provider of commercial and government cybersecurity solutions and a subsidiary of Raytheon Technologies Corporation, from May 2016 until its acquisition by Francisco Partners in January 2021. Prior to that, Mr. Moynahan served as President of Arbor Networks, a network security and monitoring software company and a subsidiary of Danaher Corporation, from January 2012 through May 2016, where he was responsible for building a large commercial cloud DDoS platform and network-based advanced threat protection systems, and as President and Chief Executive Officer of Veracode, Inc., a SaaS pioneer of cloud-based software security testing platforms, from April 2006 through May 2011. Earlier in his career, he served as Vice President of Symantec’s enterprise product management group, as well as Vice President and General Manager of its consumer division. Mr. Moynahan is 52 years old.

JORGE MARTELL — Mr. Martell has served as OneSpan’s Chief Financial Officer since September 2022. 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 Sapien 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 44 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 46 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:

- Our strategic transformation plan involves 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.
- Failure to effectively develop and expand our sales and marketing capabilities, and particularly our ability to hire, train, and retain sales personnel, may have a material adverse effect on our ability 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 is dependent on a limited number of suppliers, and the loss of their manufacturing capability, components and technology 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 successfully hire, train, and retain qualified personnel, we may be unable to achieve our business objectives. In addition, we are dependent on the continued services and performance of our senior management and other key employees, the loss of whom could adversely affect our business, operating results and financial condition.
- 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.
- 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 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

Our strategic transformation plan involves numerous risks and may not achieve the results we expect.

In May 2022, we announced a three-year strategic transformation plan that began on January 1, 2023. Although we believe that this plan will enable to us accelerate revenue growth and increase profitability, we may not be successful in executing the plan on our expected timeframe or at all, or the plan may not achieve the results we expect, for a number of reasons, including the following:

- The assumptions we used in developing the plan, including assumptions regarding customer acquisition, customer retention, market needs, market opportunity size, and the impact of our marketing initiatives, may prove incorrect;
- We may experience challenges or delays in growing our salesforce and marketing programs to support our growth plans or in training and incentivizing our salespeople to execute our new go-to-market approach;
- We may have difficulties in hiring and retaining employees in general due to the challenging hiring environment;
- It may be more difficult, time consuming, or expensive than we anticipate to build a robust sales pipeline, increase our brand awareness, or enhance our product distribution channels;
- We may encounter difficulties and delays in platform and product-related initiatives to support our growth, including delays in the availability of new product offerings or the buildout of our next-generation transaction- cloud platform due to staffing and other resource constraints;
- Ongoing component shortages and shipping delays affecting our Digipass authenticator devices could negatively impact revenue and cash flow for our Security Solutions segment, which we are relying upon to help fund growth in our Digital Agreements segment; and
- Economic slowdown or recession, heightened inflation, capital markets volatility, political instability or conflict, and changes in interest rates and foreign exchange rates may negatively affect our financial and operating results.

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, particularly enterprise customers. We have experienced, and expect to continue to experience in the near term, challenges in adding new customers, in part because we are in the early stages of scaling our sales and marketing capabilities to support our strategic transformation plan. If we are unable to adequately enhance our sales and marketing organizations in the timeframe we expect, we may not be able to attract sufficient new enterprise customers to achieve the growth objectives in our strategic transformation plan, which would have an adverse effect on our business.

The achievement of our growth objectives also depends on our ability to retain and expand sales to existing customers. Our renewal and expansion rates 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, 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.

Failure to effectively develop and expand our sales and marketing capabilities, and particularly our ability to hire, train, and retain sales personnel, may have a material adverse effect on our ability to grow our business.

Our ability to increase our customer base and achieve broader market acceptance of our products and solutions depends to a significant extent on our ability to effectively develop and expand our sales and marketing operations. As part of our three-year strategic transformation plan, we are making significant investments in and changes to our sales operations. We are in the process of implementing a unified go-to-market approach across our entire business rather than having separate salespeople for Digital Agreements and Security Solutions. This initiative involves intensive training to enable our sales force to sell across our full product portfolio. We are also shifting our sales model to target high-potential enterprise sales prospects using an account-based engagement model. This buildout of our salesforce involves, among other things, hiring of additional salespeople to support our growth plans. To achieve this, we must locate and hire a significant number of qualified individuals with the experience and skills necessary to sell our full product portfolio, and competition for such individuals is intense. Once a new salesperson is hired, we must invest considerable time and resources into training before the person is able to achieve full productivity. If we are unable to retain the individual for a sufficiently long period of time, we may never recoup this investment.

We are also dedicating significant resources to demand generation and marketing efforts, and doing more outbound targeted marketing than we have historically. Since our investment in marketing has been relatively limited in the past and because we have limited brand awareness in many of our markets, it may take time and substantial expense to generate demand and a robust and consistent sales pipeline.

If we cannot train or expand our sales force or successfully generate demand for our products through our marketing efforts in the timeframe contemplated by our strategic transformation plan, we may not be able to achieve the goals of the plan on time or at all, which may have a material adverse effect on 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.

Technological changes occur rapidly in our industry and our development of new products and features is critical to maintain and grow our revenue. Our future growth 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 and the emergence of new industry standards could render our existing products obsolete and unmarketable.

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. For example, if our recent new product offerings, such as our Digipass CX and OneSpan Notary products, do not garner widespread customer adoption and implementation, our business may be adversely affected. Any such adverse effect may be particularly acute because of the significant research, development, marketing, sales and other expenses we will have incurred in connection with the new offerings or enhancements.

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 2022, 2021, and 2020, our top 10 largest customers contributed 23%, 22%, and 21%, 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. If we do not build awareness of our brand, we could be at a competitive disadvantage to companies whose brands are, or become, more recognizable than ours. 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 have 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, 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 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. Any of these factors would make it difficult for us to compete successfully, which would negatively affect our business.

Our Digipass authenticator business is dependent on a limited number of suppliers, and the loss of their manufacturing capability, components and technology 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 vendors is terminated, there could be increased costs and considerable delay in finding suitable replacement sources to manufacture our hardware products. Our hardware 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 government, political unrest or unstable economic conditions in China, or developments in the U.S. or EU that are adverse to trade, including enactment of

protectionist legislation. We experienced supply chain disruption in 2022 as a result of the impact on our Chinese contract manufacturers of China's implementation and subsequent reversal of

its “Zero COVID” policy. To mitigate the risks associated with our China-based contract manufacturing facilities, we are considering 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 this transition may cause a disruption in our Digipass manufacturing operations. Product supply disruptions or related cost increases 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 successfully hire, train, and retain qualified personnel, we may be unable to achieve our business objectives.

Our ability to successfully pursue our three-year strategic transformation plan will depend significantly on our ability to attract, motivate and retain employees, especially those in sales. We face intense competition for these employees from numerous technology, software and other companies, many of whom have greater resources than we do. In 2022, we incurred higher compensation-related expenses in order to remain competitive in a tight labor market, particularly in light of wage inflation, and we expect to continue to experience this type of cost pressure. Even with an increase in the compensation we offer, we may not be able to attract, motivate and/or retain sufficient qualified employees. Difficulties attracting and retaining personnel could have an adverse effect on our ability to achieve our sales, operational, or other 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.

We are dependent on the continued services and performance of our senior management and other key employees, the loss of any of whom could adversely affect our business, operating results and financial condition.

Our future performance depends on the continued services and contributions of our senior management, particularly Matthew Moynahan, our Chief Executive Officer, and other key sales and technical employees. Our senior management and key employees are 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 our 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, such a loss could be negatively perceived in the capital markets, which could reduce the market value of our securities.

Security breaches or cyberattacks could expose us to significant liability and 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 as related to financial, technology, employees, marketing, sales, etc.) which is used on a daily basis in our operations. In addition, our software involves 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 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 as a result 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 IT products and enterprise infrastructure. Because techniques used to obtain unauthorized access or to sabotage systems 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 any cybersecurity incident or any 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 also 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 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 risks, including, but not limited to, unauthorized use or disclosure of customer data, theft of proprietary information, theft of intellectual property, theft of internal employees' personally identifiable information, theft of financial data and financial reports, loss or corruption of customer data and computer hacking attacks or other cyberattacks, could require us to expend significant capital and other resources to alleviate the problem and to improve technologies, may impair our ability to provide services to our customers and protect the privacy of their data, may result in product development delays, may compromise confidential or technical business information, may harm our competitive position, may result in theft or misuse of our intellectual property or other assets and could expose 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 a breach or other incident, and other liabilities. We are continuously working to improve our IT systems, together with creating security boundaries around our critical and sensitive assets. We provide advanced security awareness training to our employees and contractors that focuses on various aspects of cybersecurity. All of these steps are taken in order to mitigate the risk of attack and to ensure our readiness to responsibly handle any security violation or attack. However, because techniques used to obtain unauthorized access or to sabotage systems change frequently and generally are not recognized until successfully launched against a target, we may be unable to anticipate these techniques 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, or temporarily impact our customer's 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 cancelation 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, 2022, 2021 and 2020, for which we reported a net loss of \$14.4 million, \$30.6 million, and \$5.5 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 support growth, further develop and enhance our products and solutions, expand our infrastructure and technology, increase our sales headcount and marketing activities, and grow our customer base. Our efforts to grow our business 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.

Our business, operations and financial performance may be negatively affected by adverse changes in the evolving COVID-19 pandemic.

The COVID-19 pandemic is continuing to evolve, and significant adverse changes in the spread or severity of COVID-19 infections and the resulting economic impact could have a material adverse effect on our business, operations and financial performance.

In our Digipass authenticator device business, we are exposed to specific risks related to manufacturing, supply chain, shipping and distribution, all of which have been impacted by the COVID-19 pandemic. As a result of COVID-19, we have experienced, and may continue to experience, delays and increased costs related to fulfilling our device orders. Although we have managed these issues to date, ongoing disruptions in global transportation may continue to delay fulfillment, which may in turn delay our recognition of revenue from customer orders, or even prevent us from satisfying certain customer orders for our products in the future if orders substantially increase and/or further supply chain problems emerge. In order to meet our customers' needs, we have and may continue to incur increased freight and other costs related to our Digipass devices, which would reduce our margins.

We experienced some increased sales for our e-signature solution and products used to facilitate remote employee access in 2020 that we attribute in part to the COVID-19 pandemic; however, since that time, customer buying patterns have generally returned to more typical pre-pandemic levels.

A resurgence or similar development in the COVID-19 pandemic would likely create additional economic uncertainty and have a number of adverse effects, including: a negative impact on our customers' ability or willingness to attend our sales and marketing events or to purchase our offerings; a delay in prospective customers' purchasing decisions; our inability to provide on-site sales meetings or professional services to our customers; delays in the provisioning of our products; longer customer payment terms; lower value or shorter duration of customer contracts; lower margins, especially in our Digipass business; or an increase in customer attrition rates, all of which could adversely affect our future sales, operating results and overall financial performance.

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 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 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 current 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. As discussed in *Management's Discussion and Analysis of Financial Condition and Results of Operations*, the U.S. Dollar's strength during foreign currencies, particularly the Euro, during 2022 had a significant impact on our 2022 financial results and may continue to adversely affect our results in the future. 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.

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 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. In 2020, approximately 88% of our revenue and approximately 73% 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 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, acts of war, terrorism, epidemics, or pandemics and other health crises, including the ongoing COVID-19 pandemic; and
- economic or political instability in foreign markets, including instability related to the United Kingdom's recent exit from the EU, China's "zero COVID" policies, 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, 2022, we had goodwill and intangible assets with a net book value of \$103.0 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. Any such charges may have a material negative impact on our operating results.

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 41% of our total revenue for the year ended December 31, 2022 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, 2022 we had U.S. federal, state and foreign net operating losses (NOLs), of \$18.0 million, \$27.7 million, and \$80.1 million, respectively, available to offset future taxable income, some of which begin to expire in 2023. 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 and 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 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 the 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 receive 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 the 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 regulatory environments regarding privacy and data protection 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 personally identifiable information that is subject to international and domestic privacy and data protection regulations. For example, in Europe, we are subject to the European Union's General Data Protection Regulation, (EU) 2016/679, commonly known as the GDPR, and laws implemented by EU member states. The GDPR and member state laws 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 a prohibition on the transfer of personal information 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 through the use of 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.

Moreover, the decision of the United Kingdom, or UK to leave the EU has created uncertainty with regard to data protection regulations in the UK, particularly because the UK government has recently announced that it intends to revise aspects of its data protection regime to move further away from the EU approach. This may result in substantively different compliance obligations with respect to transfers of personal data out of the UK and the EU. Compliance with a newly adopted UK data privacy regime may result in substantial operational costs and require us to modify our data handling practices. The costs of compliance with GDPR and new UK data privacy laws, and other burdens imposed by such laws, regulations and policies that are applicable to us may limit our use of personal data and solutions and could have a material adverse impact on our results of operations. Additionally, we may face audits or investigations by one or more foreign government agencies relating to our compliance with GDPR and new UK data privacy laws that could result in the imposition of penalties or fines.

In the United States the federal and state governments have also enacted privacy and data protection regulations that impact us, our customers, and partners. For example, in June 2018, California enacted the California Consumer Privacy Act, or 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 November 2020 California voters passed a ballot initiative for the California Privacy Rights Act of 2020, or CPRA, which went into effect on January 1, 2023, 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 risk. The provisions in the CPRA may apply to some of our business activities. In addition, other states, including Virginia, Colorado, Utah, and Connecticut, already have passed state privacy laws. Virginia's privacy law also went into effect on January 1, 2023, and the laws in the other three states will go into effect later in the year. Other states will be considering these laws in the future, and Congress has also been debating passing a federal privacy law. These laws may impact our business activities, including our identification of research subjects, relationships with business partners and ultimately the marketing and distribution of our products.

We work to comply with all applicable international and domestic privacy and data protection regulations; however, these laws vary greatly from jurisdiction to jurisdiction, change rapidly, and are subject to interpretation, all of which leads to uncertainty in their applicability. Preparation and compliance with these regulations 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 regulations, our processes and policies, contractual provisions, or an actual, perceived or suspected data protection or information security incident could result in serious consequences for us. These consequences may include enforcement actions, 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 has increased, and may continue to increase, our legal, accounting and financial 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 identified a material weakness in our internal control over financial reporting as of December 31, 2019. Although we remediated that material weakness, it is possible that additional 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 countries with a history of corruption 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 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 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, including lead, 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 hardware products contain certain minerals and derivatives that are subject to SEC disclosure and reporting requirements, or (Conflict Minerals). Compliance with these rules also requires due diligence including

country of origin inquiries to determine the sources of Conflict Minerals used in our products. We may incur continued costs associated with complying with these disclosure requirements. These requirements may affect

pricing, sourcing and availability of Conflict Minerals used to produce our devices. We may be unable to verify the origin of all Conflict Minerals in our products. We may encounter challenges with customers and stakeholders if we are unable to certify that our products are conflict free.

Environmental compliance and management of environmental factors has produced significant regulatory and legislative efforts on a global basis, a trend we expect to continue. New laws and regulations intended to curb environmental impacts such as climate change and pollution may result in added compliance requirements and increased costs of energy for the Company and our suppliers which could result in a significant negative impact on our ability to operate or operate profitably. In addition, disclosures we may be required to make with respect to climate change may damage our reputation and have an adverse impact on our business.

We sell products and services to U.S. federal, state and local, 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 certain policies and 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 jurisdictions 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 business growth, 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 growth 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 recently resulted in a significant disruption of global financial markets. If the disruption persists and deepens, 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 growth 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: Blackrock, Inc. holds approximately 16.3% of our outstanding common stock; Legion Partners Asset Management holds approximately 8.8%; Mr. T. Kendall Hunt, our founder and former Chairman of the Board, holds approximately 8.6%; Vanguard Group Holdings holds approximately 6.8%; Altai Capital Management L.P. holds approximately 5.8%; and Legal & General Investment Management Limited holds approximately 5.3%. 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.

U.S. investors may have difficulties in making claims for any breach of their rights as holders of shares because some of our assets and key employees are not located in the United States.

Several of our key employees are full-time or part-time residents of foreign countries, and a substantial portion of our assets and those of some of our key employees are located in foreign countries. As a result, it may not be possible for investors to effect service of process on those persons located in foreign countries, or to enforce judgments against some of our key employees based upon the securities or other laws of jurisdictions in those foreign countries.

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 potential business opportunities, result in the loss of our employees and business partners and make it more difficult to pursue our strategic initiatives or attract and retain qualified personnel 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, 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 growth 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;

- continued volatility in the global markets and fluctuations in exchange rates for foreign currencies could negatively impact our reported financial results and condition;

- continued volatility in the prices for materials we use in our 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;
- 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;
- a severe financial difficulty experienced by our customers 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 those 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 2 - *Properties*

OneSpan 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 corporate headquarters is in Chicago, Illinois; 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 Mollem, 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 18, *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.

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
2021	High	Low
Fourth quarter	\$ 21.30	\$ 15.86
Third quarter	\$ 25.55	\$ 17.86
Second quarter	\$ 28.97	\$ 24.33
First quarter	\$ 26.77	\$ 21.43

On February 18, 2023, there were 120 registered holders and approximately 10,799 street name 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

On May 12, 2022, the Board of Directors terminated the stock repurchase program it adopted on September 10, 2020 and adopted a new stock repurchase program under which we are 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 or in privately negotiated transactions 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 the authorization has been cancelled.

During the year ended December 31, 2022, we repurchased 0.4 million shares of our stock for \$5.7 million in the aggregate at an average cost of \$12.83 per share under our repurchase program. An additional 0.1 million shares of our common stock were withheld to satisfy the mandatory tax withholding requirements upon vesting of restricted stock and restricted stock units issued to employees under our equity incentive plan. There were no shares of stock repurchased during the fourth quarter of 2022.

Stock Performance Graph

The Stock Performance Graph below compares the cumulative total return through December 31, 2022 assuming reinvestment of dividends, by an investor who invested \$100.00 on December 31, 2017, in each of (i) our common stock, (ii) the Nasdaq Computer Index, (iii) the Russell 2000 Index, (iv) the Standard Industrial Code Index 3577 – Computer Peripheral Equipment, NEC and (v) a comparable industry index selected by the company (the peer group). The peer group for this purpose consists of: American Software, Inc., Appian Corporation, BlackLine, Inc., CPI Card Group, Inc., Mandiant, Inc., ProofPoint, Inc., PROS Holdings, Inc., Q2 Holdings, Inc., QAD, Inc., Qualys, Inc., Rapid7, Inc., Seachange, Inc., SecureWorks Corp., Varonis Systems, Inc. Of these peer group companies, three (Mandiant, ProofPoint, and QAD) were sold prior to December 31, 2022, and are therefore included in the graph only through their last trading day prior to the closing of their respective acquisitions. 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.



ospn-20221231_g1.jpg

		12/31/2017		12/31/2018		12/31/2019		12/31/2020		12/31/2021		12/31/2022
OneSpan Inc.	\$	100.00	\$	93.17	\$	123.17	\$	148.78	\$	121.80	\$	80.49
NASDAQ Computer Index	\$	100.00	\$	96.32	\$	144.80	\$	217.17	\$	299.39	\$	192.28
Russell 2000 Index	\$	100.00	\$	88.99	\$	111.70	\$	134.00	\$	153.85	\$	122.41
3577 - Computer Peripheral Equipment, NEC	\$	100.00	\$	116.39	\$	163.74	\$	235.43	\$	373.68	\$	264.54
Peer Group	\$	100.00	\$	114.57	\$	156.68	\$	270.83	\$	232.95	\$	140.54

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, 2021 and 2020, 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, 2021](#), filed on February 22, 2022.

Overview

OneSpan helps organizations accelerate digital transformations by enabling secure, compliant, and refreshingly easy digital customer agreements and transaction experiences. We deliver digital agreement products and services that automate and secure customer-facing and revenue-generating business processes. Our solutions help organizations streamline and secure user experiences, which in turn allows them to drive growth, reduce risk, and unlock their business potential.

We are a global leader in providing high-assurance identity and authentication security as well as enterprise-grade electronic signature (e-signature) solutions, for use cases ranging from simple transactions to workflows that are complex or require higher levels of security. Our solutions help our clients ensure the integrity of the people and records associated with digital agreements, transactions, and interactions in industries including banking, financial services, healthcare, digital services and others. We are trusted by global blue-chip enterprises, including more than 60% of the world's largest 100 banks, and process millions of digital agreements and billions of transactions in more than 100 countries annually.

Our solutions are powered by a portfolio of products and services across identity verification, authentication, virtual interactions and transactions, and secure digital storage. These products and services can be acquired and embedded individually within enterprise business workflows or assembled into tailored solutions for simple yet secure business-to-business, business-to-employee, and business-to-customer experiences.

We offer our solutions through cloud-based and on-premises solutions using both open standards and proprietary technologies. We offer our products primarily through a subscription licensing model. 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 transition and transformation. Our total revenue decreased on a year-over-year basis in 2020, and 2021, and we experienced negative operating income and net losses in both of those years. During 2021 and early 2022, our previous CEO, CFO, and several other senior executives left the company. In late

November 2021, our current CEO joined us and has built a new executive team over the course of 2022 to affect the transformation.

In May 2022, we announced a three-year strategic transformation plan that began on January 1, 2023. We believe this transformation plan will enable us to build on our strong solution portfolio and market position, enhance our enterprise go-to-market strategy, accelerate revenue growth, and drive efficiencies to support margin expansion and increased profitability. In conjunction with the strategic transformation 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 our OneSpan Sign e-signature solution and our recently introduced OneSpan Notary and Virtual Room solutions. As our transformation plan progresses, we expect to include other cloud-based security modules associated with the secure transaction lifecycle of identity verification, authentication, virtual interactions and transactions, and secure digital storage in the Digital Agreements segment. This segment also includes costs attributable to our transaction- cloud platform.
- **Security Solutions.** Security Solutions consists of our broad portfolio of software products and/or software development kits (SDKs) that are used to build applications designed to defend against attacks on digital transactions across online environments, devices and applications. These solutions, which are largely on-premises software products, include identity verification, multi-factor authentication and transaction signing, such as mobile application security, mobile software tokens, and Digipass authenticators that are not cloud-connected devices.

We expect to manage Digital Agreements for accelerated growth and market share gains and Security Solutions for cash flows given its more modest growth profile. Across both segments, we are building on our strong foundation in both e-signature and cybersecurity by enhancing product features, developing new solutions, and building out our next-generation transaction cloud platform, which we expect will allow us to efficiently deliver security and e-signature solutions to our customers across their entire digital agreement lifecycle. We also plan to enhance our go-to-market strategy by prioritizing growth at large enterprise accounts, expanding our direct sales force, and accessing new routes to market through alliances and partnerships.

Our transformation plan involves numerous risks and uncertainties. Please see Item 1A, *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 consist primarily of headcount-related reductions designed to continue to advance the same objectives as the first phase of the plan.

As part of the restructuring plan, we reduced headcount by eliminating approximately 100 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, 2022.

Macroeconomic Events

Macroeconomic events impacting our business are discussed below. Throughout 2022, we operated under uncertain market conditions, influenced by events such as the Russia-Ukraine conflict, the continuing impact of the COVID-19 pandemic, disruption to our supply chain and the inflationary cost environment. For a more complete discussion of the risks we encounter in our business, please see Item 1A, *Risk Factors*.

Russia-Ukraine Conflict

While we do not anticipate that the current posture of the Russia-Ukraine conflict will materially and adversely affect our results of operations, the conflict is still ongoing and future impacts are difficult to estimate. An escalation of the conflict’s current

scope or expansion of the conflict's economic disruption could materially and adversely affect our

company and its operations. The conflict has and may continue to have a significant impact on the global macroeconomic and geopolitical environments, including increased volatility in capital and commodity markets, rapid changes to regulatory conditions (including the use of sanctions), supply chain and operational challenges for multinational corporations, inflationary pressures and an increased risk of cybersecurity incidents.

COVID-19, Supply Chain Disruption and Inflationary Cost Environment

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 has resulted in disruptions in our supply chain, as well as difficulties and delays in procuring certain semiconductor components. Since late 2021, our costs have increased due to elevated lead times and increased material costs, in particular the need to purchase semiconductor components from alternative sources. We expect increased costs to procure materials within the semiconductor market to continue in 2023. Further, we anticipate the broader impact of inflationary pressures and increased material and supply chain costs and disruptions will continue in 2023.

In response to these supply chain conditions, in 2022 we focused on improving our supplier network, engineering alternative designs and working to reduce supply shortages. We are actively managing our inventory in an effort to minimize supply chain disruptions and enable continuity of supply and services to our customers, and we expect to maintain elevated levels of inventory for certain of our products until supply constraints have been remediated. We are also considering alternative manufacturing and supply arrangements, including moving more of our manufacturing from China to Romania or other locations, to mitigate these supply chain risks in the future.

In order to combat rising inflation in the U.S., the Federal Reserve has raised interest rates multiple times since the beginning of 2022. The increase in U.S. dollar interest rates and overall market conditions led to significant strengthening of the U.S. dollar against other global currencies in 2022. The strong U.S. dollar reduced the impact of cash generated from our foreign operations during 2022, driven by revenues and costs that are denominated in foreign currencies, which impacted our revenue, operating cash flows and net income throughout 2022. We expect these impacts to continue into 2023.

Although the macroeconomic environment presented challenges in 2022 and may continue to do so in 2023, we are encouraged by customer demand for our products and services, particularly in our e-signature solution in the Digital Agreements segment and our mobile, security, authentication server and Digipass solutions in our Security Solutions segment. We believe our existing balances of cash and cash equivalents, along with our short-term investments, will continue to be sufficient to satisfy our liquidity requirements associated with our existing operations.

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, and freight.

- *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, 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 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 2022 compared to 2021 resulted in a decrease in operating expenses of approximately \$7.5 million in 2022.

The comparison of operating expenses can also be impacted significantly by costs related to our stock-based and long-term incentive plans. In 2022, 2021, and 2020, operating expenses included \$8.8 million, \$5.2 million, and \$6.0 million, respectively, of expenses related to stock-based and long-term incentive plans. Stock-based compensation expense during 2022 included a significant number of new grants to our newly hired executives, as well as an overall expansion of the equity incentive program put in place for the long-term retention of our employees. Long-term incentive plan compensation expense includes both cash and stock-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 increase in absolute dollars as we expand our salesforce and marketing activities to support our strategic transformation plan, although 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 increase in absolute dollars as we continue to enhance and expand our product offerings and cloud platform. However, our research and development expenses may fluctuate as a percentage of total revenue due to expected growth of our team and continued capitalization of certain costs related to the expansion of our cloud product portfolio.
- *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 increase in absolute dollars to support the anticipated growth of our business, although our general and administrative expenses may fluctuate as a percentage of total revenue.
- *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.

- *Amortization of intangible assets.* Acquired intangible assets are amortized over their respective amortization periods and are periodically evaluated for impairment.
- *Restructuring and related charges.* Restructuring and other related charges consists of severance and related benefits incurred from headcount reductions as part of our restructuring plan. We plan to incrementally incur additional restructuring costs through December 31, 2025, when the plan terminates.

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 general and administrative expenses, amortization and impairment charges that are incurred directly by a segment. Unallocated corporate costs include companywide 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 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 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%.

The Company recorded changes in valuation allowance of \$4.4 million and \$15.0 million, as of December 31, 2022 and 2021, 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 2022 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. In 2022, Management made the decision to establish 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. Management continues to maintain a valuation allowance against certain deferred tax assets in other jurisdictions where assets had been previously valued. 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 2022 and 2021, respectively, we generated approximately 83% and 86% of our revenues and incurred approximately 66% and 68% of our operating expenses outside of the U.S. 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, 2022 was denominated in U.S. Dollars. 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 2021, approximately 51% of our revenue was denominated in U.S. Dollars, 44% was denominated in Euros and 5% 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 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. 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 loss of \$7.2 million in 2022 and \$3.0 million in 2021. These amounts are included as a separate component of stockholders' equity. The functional currency for our subsidiaries in Switzerland, Singapore and Canada is the U.S. Dollar.

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 \$1.8 million and foreign exchange transaction gains aggregated less than \$0.1 million for the years ended December 31, 2022 and 2021, respectively.

Results of Operations

In conjunction with our strategic transformation 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,	
	2022	2021
<i>(In thousands, except percentages)</i>		
Digital Agreements		
Revenue	\$ 48,401	\$ 40,551
Gross profit	\$ 37,488	\$ 29,557
Gross margin	77 %	73 %
Operating income	\$ 5,348	\$ (1,612)
Security		
Revenue	\$ 170,605	\$ 173,930
Gross profit	\$ 111,082	\$ 113,378
Gross margin	65 %	65 %
Operating income	\$ 32,051	\$ 35,395
Total Company:		
Revenue	\$ 219,006	\$ 214,481
Gross profit	\$ 148,570	\$ 142,935
Gross margin	68 %	67 %
Statements of operations reconciliation:		
Segment operating income	\$ 37,399	\$ 33,783
Corporate operating expenses not allocated at the segment level	64,514	59,911
Operating loss	\$ (27,115)	\$ (26,128)

Revenue

Revenue by products and services allocated to the segments for the years ended December 31, 2022 and 2021 is as follows:

	Years Ended December 31,			
	2022		2021	
	Digital Agreements	Security Solutions	Digital Agreements	Security Solutions
<i>(In thousands)</i>				
Subscription (1)	\$ 42,029	\$ 47,124	\$ 33,283	\$ 35,224
Maintenance and support	5,451	42,894	5,709	45,567
Professional services and other (2)	921	7,087	1,494	13,703
Hardware products	—	73,500	65	79,436
Total Revenue	\$ 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 2% of total revenue for the year ended December 31, 2022 and approximately 5% of revenue for the year ended December 31, 2021.

For the year ended December 31, 2022, total revenue increased by \$4.5 million, or 2%, compared to the year ended December 31, 2021. Changes in foreign exchange rates as compared to the same period in 2021 negatively impacted total revenue by approximately \$12.2 million.

Additional information on our revenue by segment follows.

- **Digital Agreements** revenue increased \$7.9 million, or 19%, during the year ended December 31, 2022 compared to the year ended December 31, 2021. The increase in Digital Agreements revenue was driven by new customer revenue and existing customer expansion, partially offset by the non-renewal of certain contracts and contraction. We saw the conversion of some of our large existing on-premises Digital Agreements customers convert to our cloud subscription model, contributing to the growth. Changes in foreign exchange rates as compared to the same period in 2021 negatively impacted Digital Agreements revenue by \$0.4 million.
- **Security Solutions** revenue decreased \$3.3 million, or approximately 2%, during the year ended December 31, 2022 compared to the year ended December 31, 2021. This decrease was driven by lower hardware revenues as a result of delayed production deliveries due to global supply chain disruptions. In addition, we experienced lower volume hardware purchases from existing customers. Both maintenance and professional services and other revenue decreased while subscription revenue increased in conjunction with the transition from perpetual license to term license deals. Changes in foreign exchange rates compared to the same period in 2021 negatively impacted Security Solutions revenue by \$11.8 million, driven largely by the US Dollar strengthening versus the Euro.

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:

	Years Ended December 31,			
	2022	2021	\$ Change	% Change
(In thousands, except percentages)				
Revenue				
EMEA	\$ 100,298	\$ 104,878	(\$4,580)	(4)%
Americas	77,740	68,646	9,094	13 %
APAC	40,968	40,957	11	— %
Total revenue	<u>\$ 219,006</u>	<u>\$ 214,481</u>	<u>\$4,525</u>	<u>2 %</u>
% of Total Revenue				
EMEA	46 %	49 %		
Americas	35 %	32 %		
APAC	19 %	19 %		

For the year ended December 31, 2022, revenue generated in EMEA was \$4.6 million or 4% lower than the same period in 2021, driven largely by the strengthening of the U.S. Dollar compared to the Euro, as well as lower hardware sales.

For the year ended December 31, 2022, revenue generated in the Americas was \$9.1 million or 13% higher than the same period in 2021, driven primarily by higher cloud subscription revenue as a result of both new customers and expansion of services to existing customers as a result of higher usage of our products.

For the year ended December 31, 2022, revenue generated in the Asia Pacific region (APAC) was less than \$0.1 million or less than 1% higher than the same period in 2021.

Cost of Goods Sold and Gross Margin

	Years Ended December 31,			
	2022	2021	\$ Change	% Change
(In thousands, except percentages)				
Cost of goods sold				
Product and license	\$ 45,106	\$ 46,196	\$ (1,090)	(2)%
Services and other	25,330	25,350	(20)	— %
Total cost of goods sold	<u>\$ 70,436</u>	<u>\$ 71,546</u>	<u>\$ (1,110)</u>	<u>(2)%</u>
Gross profit	\$ 148,570	142,935	5,635	4 %
Gross margin				
Product and license	63 %	62 %		
Services and other	74 %	73 %		
Total gross margin	68 %	67 %		

The cost of product and license revenue decreased \$1.1 million or 2% for the year ended December 31, 2022 compared to the year ended December 31, 2021. The decrease in cost of product and license was driven by lower hardware sales, partially offset by

higher third-party software licensing costs in conjunction with higher software license sales, as well as price increases for our hardware components, and higher shipping costs for certain hardware products.

The cost of services and other revenue decreased by less than \$0.1 million, or less than 1% during the year ended December 31, 2022, compared to the year ended December 31, 2021.

Gross profit increased \$5.6 million, or 4% for the year ended December 31, 2022 compared to the year ended December 31, 2021. Total gross margin was 68% for the year ended December 31, 2022, compared to 67% for the year ended December 31, 2021. The improvement in total gross margin was primarily due to product mix and certain cloud cost incentives received, partially offset by foreign currency impact. Subscription revenue increased 30% year-over-year, while hardware revenue decreased 7%.

The majority of our inventory purchases are denominated in U.S. Dollars. Our sales are denominated in various currencies, including the Euro. The impact of changes in currency rates are estimated to have had a favorable impact on overall cost of goods sold of approximately \$1.0 million for the year ended December 31, 2022. Had currency rates in 2022 been equal to rates in the comparable period of 2021, the gross profit margin would have been approximately 1 percentage points higher for the year ended December 31, 2022.

Additional information on our gross profit by segment follows.

- **Digital Agreements** gross profit increased \$7.9 million, or 27%, for the year ended December 31, 2022 compared to the prior year. The increase in gross profit was driven by higher revenues and lower outside services costs for operating our cloud platform due to higher usage tier discounts, including a one-time incentive credit. Digital Agreements gross margin for the years ended December 31, 2022 and 2021 was 77% and 73%, respectively.
- **Security Solutions** Security Solutions gross profit decreased \$2.3 million, or approximately 2%, for the year ended December 31, 2022 compared to the prior year. The decrease in profitability was primarily driven by higher hardware materials and logistics costs relative to the average selling price of the units. Security Solutions gross margin was 65% for each of the years ended December 31, 2022 and 2021 .

Operating Expenses

For the year ended December 31, 2022, operating expenses increased by \$6.6 million, or 4%, compared to the year ended December 31, 2021. Changes in foreign exchange rates favorably impacted operating expenses by approximately \$7.5 million as compared to the year ended December 31, 2021.

The following table presents the breakout of operating expenses by category as of December 31, 2022 and 2021:

	Years Ended December 31,			
	2022	2021	\$ Change	% Change
(In thousands, except percentages)				
Operating costs				
Sales and marketing	\$ 60,949	62,730	\$ (1,781)	(3)%
Research and development	41,735	47,414	(5,679)	(12)%
General and administrative	55,552	53,031	2,521	5 %
Impairment of intangible assets	3,828	—	3,828	NM
Restructuring and other related charges	9,482	—	9,482	NM
Amortization of intangible assets	4,139	5,888	(1,749)	(30)%
Total operating costs	\$ 175,685	\$ 169,063	\$ 6,622	4 %

Sales and Marketing Expenses

Sales and marketing expenses decreased \$1.8 million, or 3%, for the year ended December 31, 2022 compared to the year ended

December 31, 2021. The decrease was primarily related to lower headcount and associated payroll related expenses during the year ended December 31, 2022 compared to the prior year.

Average full-time sales and marketing employee headcount for year ended December 31, 2022 was 344, compared to 368 for year ended December 31, 2021. Average headcount in 2022 was 7% lower than in 2021.

In future periods, we expect sales and marketing spend to increase as we enhance our enterprise go-to-market strategy. We are focused on new logo growth through building brand awareness, as well as expanding offerings to our existing customers. We expect to expand our sales force and add new distribution channels.

Research and Development Expenses

Research and development expenses decreased \$5.7 million, or 12%, for the year ended December 31, 2022 compared to the year ended December 31, 2021. The decrease in expense was driven primarily by the capitalization of expanded research and development costs of \$4.0 million to enhance our transaction-cloud platform and our Digital Agreements product offerings. Personnel costs were also lower for the year ended December 31, 2022 compared to the prior year as a result of restructuring actions that reduced headcount.

Average full-time research and development employee headcount for year ended December 31, 2022 was 340, compared to 363 for year ended December 31, 2021. Average headcount in 2022 was 6% lower than in 2021.

General and Administrative Expenses

General and administrative expenses increased \$2.5 million, or 5%, for the year ended December 31, 2022 compared to the year ended December 31, 2021. This increase in expense was due to higher average compensation per employee, higher stock-based compensation expense, and higher travel costs. The increases were partially offset by lower outside services costs.

Average full-time general and administrative employee headcount for year ended December 31, 2022 was 139, compared to 135 for the year ended December 31, 2021. Average general and administrative headcount in 2022 was 3% higher than in 2021.

Impairment of Intangible Assets

For the year ended December 31, 2022, we recorded \$3.8 million of impairment of intangible assets charges. The impaired intangible assets were customer relationships associated with our Dealflo product, which was purchased in connection with a prior year acquisition.

Restructuring and Other Related Charges

Restructuring and other related charges were \$9.5 million for the year ended December 31, 2022. The charges include severance, retention pay, and related benefit costs incurred in conjunction with our restructuring plans.

Amortization of Intangible Assets

Amortization of intangible assets for the year ended December 31, 2021 was \$4.1 million, compared to \$5.9 million for the year ended December 31, 2021, a decrease of \$1.7 million or 30%. The decrease was driven by certain intangible assets acquired in the prior years becoming fully amortized.

Segment Operating Income (Loss)

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

- **Digital Agreements** Operating income for the year ended December 31, 2022 was \$5.4 million, compared to operating loss of \$1.6 million for the the prior year. The operating income increase reflects our strategic transformation plan to accelerate growth in this operating segment, which drove higher revenues. The increase in operating income was also driven by the capitalization of research and development costs for internal-use software incurred to grow the Digital Agreements product offerings. A one-time incentive credit from our cloud services provider also contributed to the increase, as well as lower payroll related expenses due to lower headcount, partially offset by the impact of foreign currency fluctuations.

- **Security Solutions** For the year ended December 31, 2022, Security Solutions operating income was \$32.1 million, which was \$3.3 million, or 10%, lower than the prior year. This decrease was driven by the intangible assets impairment, an increase in material and freight costs, and the impact of foreign currency fluctuations.

Interest Income (expense), net

	Years Ended December 31,			
	2022	2021	\$ Change	% Change
(In thousands, except percentages)				
Interest income (expense), net	\$ 595	(1)	\$ 596	NM

Interest income (expense), net, was \$0.6 million for the year ended December 31, 2022, compared to less than \$(0.1) million for the year ended December 31, 2021. The increase in interest income is related to higher interest rates favorably impacting our invested cash balances during 2022.

Other Income (Expense), Net

	Years Ended December 31,			
	2022	2021	\$ Change	% Change
<i>(In thousands, except percentages)</i>				
Other income (expense), net	\$ 14,827	(14)	\$ 14,841	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, 2022, other income (expense), net was \$14.8 million, compared to less than \$(0.1) million for the year ended December 31, 2021. The fluctuation was primarily driven by the \$14.8 million gain on sale of our equity-method investment in Promon AS.

Provision for income taxes

	Years Ended December 31,			
	2022	2021	\$ Change	% Change
(In thousands, except percentages)				
Provision for income taxes	\$ 2,741	4,441	\$ (1,700)	(38)%

We recorded Provision for income taxes for the year ended December 31, 2022 of \$2.7 million compared to \$4.4 million for the year ended December 31, 2021. The decrease in expense recorded for the year ended December 31, 2022 was primarily attributable to the jurisdictional mix of profit before taxes, and a lower valuation allowance recorded in 2022 compared to 2021.

Loss Carryforwards Available

At December 31, 2022, we have gross deferred tax assets of \$46.8 million resulting from U.S. federal, foreign and state NOL carryforwards of \$125.7 million and other foreign deductible carryforwards of \$124.2 million. At December 31, 2022, we have a valuation allowance of \$37.7 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, maintenance and support contracts, and other subscription services at the end of the reporting period.

ARR is calculated as the approximate annualized value of our customer recurring contracts as of the measurement date. These include subscription, term-based license, and maintenance contracts and exclude one-time fees. To the extent that we are negotiating a renewal with a customer 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, or until such customer notifies us that it is not renewing its recurring contract.

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. 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 that are not cloud-connected devices, training, professional services or other sources of revenue that are not deemed to be recurring in nature.

At December 31, 2022, we reported ARR of \$138.7 million, which was 12% higher than 2021 ARR of \$124.1 million. Changes in foreign exchange rates during the year ended December 31, 2022 as compared to the prior year negatively impacted ARR by approximately \$3.9 million. 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 107% and 115% at December 31, 2022 and 2021, respectively. Year-over-year, NRR was impacted by foreign currency exchange impacts, longer sales cycles in certain international regions, timing related to contract renewals, and contraction.

Adjusted EBITDA

We define Adjusted EBITDA as net income before interest, taxes, depreciation, amortization, long-term incentive compensation, and certain non-recurring items, including acquisition related costs, lease exit 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, impairment of intangible assets, 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:

(In thousands)	Years Ended December 31,	
	2022	2021
Net loss	\$ (14,434)	\$ (30,584)
Interest (expense) income, net	(595)	1
Provision for income taxes	2,741	4,441
Depreciation and amortization of intangible assets	7,066	8,926
Long-term incentive compensation	8,813	5,202
Impairment of intangible assets	3,828	—
Restructuring and other related charges	9,482	—
Other non-recurring items (1)	(10,505)	6,951
Adjusted EBITDA	\$ 6,396	\$ (5,063)

(1) For the year ended December 31, 2022, 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 equity-method investment in Promon AS.

For the year ended December 31, 2021, non-recurring items consist of \$3.5 million of outside service costs related to our strategic action plan, \$2.8 million of outside service costs related to the proxy contest that took place in 2021 and the related \$0.7 million settlement with Legion Partners.

Adjusted EBITDA increased during the year ended December 31, 2022 compared to 2021, primarily due to higher Net income (loss) as well as increases in certain expenses excluded from Adjusted EBITDA. Long-term incentive compensation, Impairment of intangible assets, and Restructuring and other related charges were offset by a \$14.8 million net gain from the sale of our equity-method investment in Promon.

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, 2022 and 2021, and additional detail around items excluded from Adjusted EBITDA.

Liquidity and Capital Resources

As of December 31, 2022, we had net cash balances (total cash and cash equivalents) of \$96.5 million and short-term investments of \$2.3 million. At December 31, 2022, short-term investments consist of corporate notes and bonds. At December 31, 2021, we had net cash balances of \$63.4 million and short-term investments of \$35.1 million. Short-term investments at December 31, 2021 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.

We are party to lease agreements that require letters of credit to secure the obligations. The restricted cash related to these letters of credit is recorded in "Other non-current assets" on the consolidated balance sheets in the amounts of \$0.8 million at December 31, 2022 and 2021.

As of December 31, 2022, we held \$58.9 million of cash and cash equivalents in subsidiaries outside of the United States. Of that amount, \$58.0 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,	
	2022	2021
<i>(In thousands)</i>		
Cash provided by (used in):		
Operating activities	(5,786)	(2,745)
Investing activities	46,587	(10,980)
Financing activities	(7,308)	(10,394)
Effect of foreign exchange rate changes on cash and cash equivalents	(372)	(895)

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 and impairment 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 and payment of expenditures. Our primary uses of cash from operating activities have been for personnel costs. We expect cash outflows from operating activities to be affected by increases in personnel cost as we grow our business.

For the year ended December 31, 2022, \$5.8 million of cash was used in operating activities. This was primarily driven by severance payments, offset by changes in accounts receivable, inventories, accounts payable, and deferred revenue. For the year ended December 31, 2021, \$2.7 million of cash was used in operating activities.

Our working capital at December 31, 2022 was \$86.7 million, a decrease of \$11.3 million, or 12%, from \$98.0 million at December 31, 2021. 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, 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 to continue to invest in our infrastructure and activity in connection with acquisitions.

For the year ended December 31, 2022 cash of \$46.6 million was provided by investing activities, compared to cash of \$11.0 million used in investing activities during the year ended December 31, 2021. The cash provided for the year ended December 31, 2022 was primarily attributable to the proceeds received from the sale of our equity investment in Promon AS and the sale of certain of our 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, 2022, net cash used in financing activities was \$7.3 million, which consisted of \$5.7 million of common stock repurchased and \$1.6 million of tax payments for restricted stock issuances.

For the year ended December 31, 2021, net cash used in financing activities was \$10.4 million, which consisted of \$7.5 million of common stock repurchased and \$2.9 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 purchase obligations of \$24.6 million, including \$5.3 million of inventory purchase obligations which are expected to be consummated in the next 12 months, \$17.4 million of committed hosting arrangements which we expect will be used in the next one to two years, and \$2.0 million for other software agreements related to the administration of our business which range from one to three years.

We have operating lease obligations of \$10.7 million which will expire in the next one to seven years. The operating lease obligations do not include common area maintenance charges or real estate taxes under our operating leases, for which the Company is also obligated. These charges are generally not fixed and can fluctuate from year to year.

We have taxes payable of \$4.5 million due within the next one to three years, which primarily represent deemed repatriation tax from 2017. The Company had \$0.0 million and \$0.5 million of unrecognized tax benefits as of December 31, 2022 and 2021, respectively.

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 less than 3% of revenue for the year ended December 31, 2022 and less than 6% for the year ended December 31, 2021. 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 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; 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 2022, 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 Management’s Discussion and Analysis 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 hedge against the operating expenses being incurred in that currency.

Interest Rate Risk – We have minimal interest rate risk. We had no debt outstanding at December 31, 2022. Our cash, cash equivalents, and short-term investments are invested in short-term instruments at current market rates. If rates were to increase or decrease by one percentage point, our interest income would increase or decrease by less than \$0.1 million annually.

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*, and in Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations*.

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 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 Exchange Act as of December 31, 2022.

Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of December 31, 2022, 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 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, 2022 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, 2022, included on page 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, 2022, 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

On February 23, 2022, the Compensation Committee of our Board of Directors (the “Compensation Committee”) adopted the 2023 Management Incentive Plan (the “2023 MIP”), a cash-based incentive compensation plan pursuant to which eligible employees of OneSpan Inc. and its subsidiaries, including named executive officers, are eligible for an annual bonus.

Participants in the 2023 MIP are eligible to receive a cash bonus (“Bonus”) based upon a combination of (1) our achievement against targets for designated performance metrics (“Company Performance Factors”) and (2) their individual performance (the “Individual Performance Factor”). The Company Performance Factors are weighted to account for a total of 90% of the potential Bonus amount and the Individual Performance Factor is weighted to account for 10% of the 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 the Bonus.

The two Company Performance Factors are Revenue and Adjusted EBITDA. “Revenue” refers to our publicly reported revenue, and Adjusted EBITDA is defined in Item 7, *Management’s Discussion and Analysis of Financial Condition and Results of Operations*. 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%). 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. For the Revenue factor, 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 66.7% of the Adjusted EBITDA target in order for the Adjusted EBITDA factor to contribute to the Bonus payout calculation. For the Adjusted EBITDA factor, 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.

10% of the potential Bonus amount is calculated based on a participant’s performance against individual performance objectives set by their manager. 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.

In addition to the Company Performance Factors and the Individual Performance Factor, the potential Bonus under the 2023 MIP depends on a participant’s eligible target Bonus amount, which may be expressed either as a fixed dollar amount or as a percentage of the participant's base salary.

Achievement against the Company Performance Factors is based on the Company's 2023 financial performance and is subject to approval by the Board of Directors or the Compensation Committee. The Board of Directors 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 of Directors' 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. OneSpan reserves the right to unilaterally alter or discontinue the 2023 MIP at its complete discretion, unless specifically prohibited under local law.

The foregoing summary of the terms of the 2023 MIP is qualified in its entirety by reference to the 2023 MIP, which the Company expects to file as an exhibit to its Quarterly Report on Form 10-Q for the quarter ending March 31, 2023.

Also on February 23, 2022, the Compensation Committee approved, and on February 27, 2022 OneSpan entered into, the following two amendments to agreements with our CEO, Matthew Moynahan:

Amendment and Restatement of 2022 PSU Agreement. The original 2022 performance-based restricted stock unit (PSU) agreement between Mr. Moynahan and the Company dated June 23, 2022 provided that one-third of the PSUs granted under the agreement would be earned and vest based on the Company's performance against 2022 targets for Subscription and Term Revenue and Adjusted EBITDA; one-third would be earned and vest based on performance metrics to be established by the Compensation Committee for 2023; and one-third would be earned and vest based on performance metrics to be established by the Compensation Committee for 2024. The amendment and restatement of the 2022 PSU Agreement (the "Amended PSU Agreement") provides that the PSUs granted under the Amended PSU Agreement are earned based entirely on the Company's performance against 2022 targets for Subscription and Term Revenue and Adjusted EBITDA, and once earned, vest as to one-third of the earned shares on December 31 of each of 2022, 2023, and 2024, provided that Mr. Moynahan is still employed with the Company as of the applicable vesting date. In the event Mr. Moynahan is terminated without cause or resigns his employment within 18 months following a change in control of the Company, all earned shares will vest in full. The definitions of the terms "cause", "good reason", and "change in control" are set forth in the Amended PSU Agreement. The purpose of the Amended PSU Agreement was to effectuate the Compensation Committee's original intent with respect to this 2022 grant to Mr. Moynahan, which was to incentivize and reward 2022 performance.

Amendment and Restatement of Employment Agreement. This amendment and restatement (the "Amended Employment Agreement") of Mr. Moynahan's employment agreement with the Company dated November 29, 2021 makes a variety of changes to the original agreement in order to conform Mr. Moynahan's agreement to certain of the Company's practices for more recently hired executives, including: providing that Mr. Moynahan will receive the severance pay specified in the agreement if he is terminated without cause or resigns for good reason within 18 months (rather than 12 months) following a change in control of the Company; providing that in the event he is terminated without cause or leaves for good reason (whether or not in connection with a change in control), the Company will pay his full COBRA premiums rather than the employer portion only; requiring Mr. Moynahan to execute the Company's standard executive non-disclosure and invention assignment agreement and standard non-competition and non-solicitation agreement for Massachusetts-based executives, the latter of which contemplates a one-year non-compete and non-solicit period; clarifying certain timing requirements and logistics in the event of Mr. Moynahan's resignation for good reason; clarifying separation and release requirements in the event of a separation from the Company; and making certain other administrative, clarifying and conforming changes. The definitions of the terms "cause", "good reason", and "change in control" are set forth in the Amended Employment Agreement. The Amended Employment Agreement also increases Mr. Moynahan's base salary to \$600,000 per year, effective in the next reasonably practicable pay period following the effective date of the Amended Employment Agreement.

The foregoing summaries of the terms of the Amended PSU Agreement and the Amended Employment Agreement are qualified in their entirety by reference to the full respective agreements, which the Company expects to file as exhibits to its Quarterly Report on Form 10-Q for the quarter ending March 31, 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, 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 2023 Annual Meeting of Stockholders. The required information on executive officers is set forth in Part I of this Form 10-K under "Information about our Executive Officers."

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 2023 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” section of OneSpan’s Proxy Statement to be filed with the SEC for the 2023 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 “Directors and Executive Officers” and “Transactions with Related Persons” sections of OneSpan’s Proxy Statement to be filed with the SEC for the 2023 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 2022 and 2021” section of OneSpan’s Proxy Statement to be filed with the SEC for the 2023 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, 2022 and 2021

Consolidated Statements of Operations for the Years Ended December 31, 2022, 2021 and 2020

Consolidated Statements of Comprehensive Income (Loss) for the Years Ended December 31, 2022, 2021 and 2020

Consolidated Statements of Stockholders’ Equity for the Years Ended December 31, 2022, 2021 and 2020

Consolidated Statements of Cash Flows for the Years Ended December 31, 2022, 2021 and 2020

Notes to Consolidated Financial Statements

- (2) The following consolidated financial statement schedule of the Company is included on page F-40 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
2.1	<u>Agreement for the Sale and Purchase of the Entire Issued Capital of Cronto Limited dated May 20, 2013. (Incorporated by Reference to the Registrant's Form 8-K filed May 23, 2013)</u>
2.2	<u>Arrangement Agreement, dated October 6, 2015, among VASCO Data Security International, Inc., 685102 N.B. Inc., Silanis Technology Inc., Silanis International Limited, Silanis Canada Inc., and Silanis Agent Inc. (Incorporated by Reference to the Registrant's Form 8-K filed October 13, 2015)</u>
3.1	<u>Certificate of Incorporation of the Registrant, as amended (Incorporated by Reference to the Registrant's Form 10-Q filed August 4, 2022)</u>
3.2	<u>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)</u>
4.1	<u>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.)</u>
10.1	<u>Form of Director and Officer Indemnification Agreement</u>
10.2*	<u>Employment Agreement between the Registrant and Jorge Martell (Incorporated by Reference to the Registrant's Form 10-Q filed November 1, 2022)</u>
10.3*	<u>Employment Agreement between the Registrant and Lara Mataac</u>
10.4*	<u>2022 Management Incentive Plan of the Registrant (Incorporated by Reference to the Registrant's Form 10-Q filed August 4, 2022)</u>
10.6*	<u>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)</u>
10.7*	<u>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</u>
10.8*	<u>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</u>
10.10*	<u>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)</u>
10.11*	<u>Form of 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)</u>

Exhibit Number	Description
10.12*	<u>Form of 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)</u>
10.13*	<u>Form of 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)</u>
10.14	<u>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)</u>
21	<u>Subsidiaries of Registrant</u>
23	<u>Consent of KPMG LLP</u>
31.1	<u>Rule 13a-14(a)/15d-14(a) Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, dated February 28, 2023</u>
31.2	<u>Rule 13a-14(a)/15d-14(a) Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, dated February 28, 2023</u>
32.1	<u>Section 1350 Certification of Principal Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, dated February 28, 2023</u>
32.2	<u>Section 1350 Certification of Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, dated February 28, 2023</u>
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
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	The cover page interactive data file does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document

* 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

<u>Report of Independent Registered Public Accounting Firm</u>	F-2
<u>Consolidated Balance Sheets as of December 31, 2022 and 2021</u>	F-4
<u>Consolidated Statements of Operations for the Years Ended December 31, 2022, 2021 and 2020</u>	F-5
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<u>Consolidated Statements of Stockholders' Equity for the Years Ended December 31, 2022, 2021 and 2020</u>	F-7
<u>Consolidated Statements of Cash Flows for the Years Ended December 31, 2022, 2021 and 2020</u>	F-8
<u>Notes to Consolidated Financial Statements</u>	F-9

Financial Statement Schedule

The following consolidated financial statement schedule is included herein:

<u>Schedule II – Valuation and Qualifying Accounts</u>	F-40
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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, 2022 and 2021, 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, 2022, 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, 2022, 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, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2022, 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, 2022 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 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 audit 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 audit 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 audit 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 5 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 \$219 million, a portion of which related to contracts containing software licenses, for the year ended December 31, 2022.

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
February 28, 2023

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

	December 31,	
	2022	2021
ASSETS		
Current assets		
Cash and cash equivalents	\$ 96,501	\$ 63,380
Short-term investments	2,328	35,108
Accounts receivable, net of allowances of \$1,600 in 2022 and \$1,419 in 2021	65,132	56,612
Inventories, net	12,054	10,345
Prepaid expenses	6,222	7,594
Contract assets	4,520	4,694
Other current assets	10,783	9,356
Total current assets	197,540	187,089
Property and equipment, net	12,681	10,757
Operating lease right-of-use assets	8,022	9,197
Goodwill	90,514	96,174
Intangible assets, net of accumulated amortization	12,482	21,270
Deferred income taxes	1,901	3,786
Other assets	11,942	13,998
Total assets	\$ 335,082	\$ 342,271
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	\$ 17,357	\$ 8,204
Deferred revenue	64,637	54,617
Accrued wages and payroll taxes	18,345	16,607
Short-term income taxes payable	2,438	1,103
Other accrued expenses	7,664	7,668
Deferred compensation	373	877
Total current liabilities	110,814	89,076
Long-term deferred revenue	6,269	9,125
Long-term lease liabilities	8,442	10,180
Other long-term liabilities	2,484	7,770
Long-term income taxes payable	2,565	5,054
Deferred income taxes	1,197	1,286
Total liabilities	131,771	122,491
Stockholders' equity		
Preferred stock: 500 shares authorized, none issued and outstanding at December 31, 2022 and 2021	—	—
Common stock: \$.001 par value per share, 75,000 shares authorized; 40,764 and 40,593 shares issued; 39,726 and 40,001 shares outstanding at December 31, 2022 and 2021, respectively	40	40
Additional paid-in capital	107,305	100,250
Treasury stock, at cost, 1,038 and 592 shares outstanding at December 31, 2022 and 2021, respectively	(18,222)	(12,501)
Retained earnings	128,738	143,173
Accumulated other comprehensive loss	(14,550)	(11,182)
Total stockholders' equity	203,311	219,780
Total liabilities and stockholders' equity	\$ 335,082	\$ 342,271

See accompanying notes to consolidated financial statements.

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

	Years Ended December 31,		
	2022	2021	2020
Revenue			
Product and license	\$ 121,426	\$ 120,358	\$ 132,986
Services and other	97,580	94,123	82,705
Total revenue	219,006	214,481	215,691
Cost of goods sold			
Product and license	45,106	46,196	46,013
Services and other	25,330	25,350	21,619
Total cost of goods sold	70,436	71,546	67,632
Gross profit	148,570	142,935	148,059
Operating costs			
Sales and marketing	60,949	62,730	56,663
Research and development	41,735	47,414	41,194
General and administrative	55,552	53,031	46,338
Impairment of intangible assets	3,828	—	—
Restructuring and other related charges	9,482	—	—
Amortization of intangible assets	4,139	5,888	9,122
Total operating costs	175,685	169,063	153,317
Operating loss	(27,115)	(26,128)	(5,258)
Interest income (expense), net	595	(1)	404
Other income (expense), net	14,827	(14)	1,434
Loss before income taxes	(11,693)	(26,143)	(3,420)
Provision for income taxes	2,741	4,441	2,035
Net loss	<u>\$ (14,434)</u>	<u>\$ (30,584)</u>	<u>\$ (5,455)</u>
Net loss per share			
Basic	<u>\$ (0.36)</u>	<u>\$ (0.77)</u>	<u>\$ (0.14)</u>
Diluted	<u>\$ (0.36)</u>	<u>\$ (0.77)</u>	<u>\$ (0.14)</u>
Weighted average common shares outstanding			
Basic	<u>40,143</u>	<u>39,614</u>	<u>40,035</u>
Diluted	<u>40,143</u>	<u>39,614</u>	<u>40,035</u>

See accompanying notes to consolidated financial statements.

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

	Years Ended December 31,		
	2022	2021	2020
Net loss	\$ (14,434)	\$ (30,584)	\$ (5,455)
Other comprehensive loss			
Cumulative translation adjustment, net of tax	(7,245)	(2,997)	4,534
Pension adjustment, net of tax	3,859	2,056	(1,459)
Unrealized losses on available-for-sale securities	18	(21)	—
Comprehensive loss	<u>\$ (17,802)</u>	<u>\$ (31,546)</u>	<u>\$ (2,380)</u>

See accompanying notes to consolidated financial statements.

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

Description	Common Stock		Treasury - Common Stock		Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Stockholders Equity
	Shares	Amount	Shares	Amount				
Balance at December 31, 2019	40,207	\$ 40	—	\$ —	\$ 96,109	\$179,440	\$ (13,295)	\$ 262,294
Cumulative effect of change related to adoption of ASU 2016-13, net of tax	—	—	—	—	—	(254)	—	(254)
Net income (loss)	—	—	—	—	—	(5,455)	—	(5,455)
Foreign currency translation adjustment, net of tax	—	—	—	—	—	—	4,534	4,534
Stock-based compensation	242	—	—	—	4,740	—	—	4,740
Tax payments for stock issuances	(96)	—	—	—	(2,030)	—	—	(2,030)
Pension adjustment, net of tax	—	—	—	—	—	—	(1,459)	(1,459)
Repurchase of common shares	(250)	—	250	(5,030)	—	—	—	(5,030)
Balance at December 31, 2020	<u>40,103</u>	<u>\$ 40</u>	<u>250</u>	<u>\$ (5,030)</u>	<u>\$ 98,819</u>	<u>\$173,731</u>	<u>\$ (10,220)</u>	<u>\$ 257,340</u>
Net income (loss)	—	—	—	—	—	(30,584)	—	(30,584)
Foreign currency translation adjustment, net of tax	—	—	—	—	—	26	(2,997)	(2,971)
Stock-based compensation	385	—	—	—	4,354	—	—	4,354
Tax payments for stock issuances	(145)	—	—	—	(2,923)	—	—	(2,923)
Pension adjustment, net of tax	—	—	—	—	—	—	2,056	2,056
Repurchase of common shares	(342)	—	342	(7,471)	—	—	—	(7,471)
Unrealized gain (loss) on available-for-sale securities	—	—	—	—	—	—	(21)	(21)
Balance at December 31, 2021	<u>40,001</u>	<u>\$ 40</u>	<u>592</u>	<u>\$ (12,501)</u>	<u>\$100,250</u>	<u>\$143,173</u>	<u>\$ (11,182)</u>	<u>\$ 219,780</u>
Net income (loss)	—	—	—	—	—	(14,434)	—	(14,434)
Foreign currency translation adjustment, net of tax	—	—	—	—	—	(1)	(7,245)	(7,246)
Stock-based compensation	263	—	—	—	8,642	—	—	8,642
Tax payments for stock issuances	(92)	—	—	—	(1,587)	—	—	(1,587)
Share repurchase	(446)	—	446	(5,721)	—	—	—	(5,721)
Pension adjustment, net of tax	—	—	—	—	—	—	3,859	3,859
Unrealized gain (loss) on available-for-sale securities	—	—	—	—	—	—	18	18
Balance at December 31, 2022	<u>39,726</u>	<u>\$ 40</u>	<u>1,038</u>	<u>\$ (18,222)</u>	<u>\$107,305</u>	<u>\$128,738</u>	<u>\$ (14,550)</u>	<u>\$ 203,311</u>

See accompanying notes to consolidated financial statements.

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

	Years Ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net loss from operations	\$ (14,434)	\$ (30,584)	\$ (5,455)
Adjustments to reconcile net loss from operations to net cash provided by (used in) operations:			
Depreciation and amortization of intangible assets	7,066	8,926	12,003
Impairment of intangible assets	3,828	—	—
Gains on sale of equity-method investment	(14,810)	—	—
Deferred tax benefit	1,637	2,823	(1,487)
Stock-based compensation	8,642	4,354	4,740
Allowance for doubtful accounts	184	(2,705)	1,611
Changes in operating assets and liabilities:			
Accounts receivable	(9,705)	2,047	5,181
Inventories, net	(2,168)	2,209	6,725
Contract assets	52	3,787	(191)
Accounts payable	9,261	2,716	(5,237)
Income taxes payable	(1,140)	(2,525)	(5,642)
Accrued expenses	2,197	3,089	(3,124)
Deferred compensation	(504)	(725)	574
Deferred revenue	8,173	9,713	8,342
Other assets and liabilities	(4,065)	(5,870)	(3,118)
Net cash (used in) provided by operating activities	(5,786)	(2,745)	14,922
Cash flows from investing activities:			
Purchase of short-term investments	(15,812)	(59,925)	(34,060)
Maturities of short-term investments	48,550	51,149	32,630
Additions to property and equipment	(4,996)	(2,169)	(3,101)
Additions to intangible assets	(29)	(35)	(133)
Sale of equity-method investment	18,874	—	—
Net cash provided by (used in) investing activities	46,587	(10,980)	(4,664)
Cash flows from financing activities:			
Repurchase of common stock	(5,721)	(7,471)	(5,030)
Tax payments for restricted stock issuances	(1,587)	(2,923)	(2,030)
Net cash used in financing activities	(7,308)	(10,394)	(7,060)
Effect of exchange rate changes on cash	(372)	(895)	914
Net increase (decrease) in cash	33,121	(25,014)	4,112
Cash, cash equivalents, and restricted cash, beginning of period	64,227	89,241	85,129
Cash, cash equivalents, and restricted cash, end of period (1)	\$ 97,348	\$ 64,227	\$ 89,241
Supplemental cash flow disclosures:			
Cash paid for income taxes	\$ 2,025	\$ 7,700	\$ 9,442
Cash paid for interest	\$ —	\$ —	\$ —

(1) End of period cash, cash equivalents, and restricted cash includes \$0.8 million, \$0.8 million and \$0.9 million of restricted cash at December 31, 2022, 2021, and 2020, respectively.

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 helps organizations accelerate digital transformations by enabling secure, compliant, and easy customer agreements and transaction experiences. The Company is a global leader in providing high-assurance identity and authentication security as well as enterprise-grade electronic signature (e-signature) solutions for use cases ranging from simple transactions to workflows that are complex or require higher levels of security. The Company’s solutions help its clients 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. The Company offers a portfolio of products and services across identity verification, authentication, virtual interactions and transactions, and secure digital storage. 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.).

Transformation Plan

In May 2022, the Company announced a three-year strategic transformation plan that begins on January 1, 2023. The Company expects this transformation plan will enable it to build on its strong solution portfolio and market position, enhance its enterprise go-to-market strategy, accelerate revenue growth, and drive efficiencies to support margin expansion and increased profitability. In conjunction with the strategic transformation 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. The Company plans to manage Digital Agreements for accelerated growth and market share gains and Security Solutions for cash flow given its more modest growth profile. For further information regarding the Company’s reportable segments, see Note 3, *Segment Information*.

While the Company’s consolidated results will not be impacted, the Company has recast its segment information during 2022 for comparable 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.

Estimates and Assumptions

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. Actual results could differ from those estimates.

Foreign Currency Translation and Transactions

The financial position and results of the 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 or (losses) resulting from foreign currency transactions were \$(1.9) million, less than \$0.1 million, and less than \$0.1 million in 2022, 2021, and 2020, respectively, and are included in "Other income (expense)" in the consolidated statements of operations.

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 to secure the obligations. The restricted cash related to these letters of credit is recorded in “Other non-current assets” in the consolidated balance sheets in the amount of \$0.8 million at December 31, 2022 and 2021.

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. As of December 31, 2022 and 2021, 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 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, 2022 and 2021, the Company's financial instruments were Cash and cash equivalents, 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, 2022 and 2021. See Note 9, *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 10 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 11, *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, 2022, 2021, and 2020.

Long-Lived and Intangible Assets

Finite-lived intangible assets include proprietary technology, customer relationships, and other intangible assets. Intangible assets other than patents with definite 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, 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, 2021, and 2020, 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 terminated the stock repurchase program adopted on September 10, 2020 and adopted a new 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 or in privately negotiated transactions 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.

During the year ended December 31, 2022, the Company repurchased 0.4 million shares of the Company's stock for \$5.7 million in the aggregate at an average cost of \$12.83 per share under its repurchase program.

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 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

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.

Cloud subscription revenues are generated from 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. 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 records 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 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 revenue includes perpetual licenses revenue, which was less than 3% of revenue for the year ended December 31, 2022 and less than 6% for the year ended December 31, 2021. 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 software licenses or subscriptions, we determine the SSP for those performance obligations using the residual approach.

Cost of Goods Sold

Included in "Product and license cost of goods sold" are direct product costs and direct costs to deliver and provide software licenses. Cost of goods sold related to service and other revenues are primarily costs related to cloud subscription solutions, including personnel and equipment costs, and personnel costs of employees providing professional services and maintenance support.

Research and Development Costs

As part of the strategic transformation plan announced in May 2022, 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 amortized 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 \$4.0 million of internal-use software during the year ended December 31, 2022.

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.

Stock-Based Compensation

The Company has stock-based employee compensation plans, described in Note 14, *Stock Compensation*. 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 make 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

In November 2021, the FASB issued ASU 2021-10, *Government Assistance: Disclosures by Business Entities about Government Assistance* ("ASU 2021-10"), which requires business entities to disclose certain information about certain government assistance they receive. ASU 2021-10 is effective for annual periods beginning after December 15, 2021. The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies that are adopted by the Company as of the specified effective date. Unless otherwise discussed, management believes that the issued standards that are not yet effective will not have a material impact on the consolidated financial statements upon adoption.

Note 3 - Segment Information

In May 2022, the Company announced a three-year strategic transformation plan begins on January 1, 2023. The Company expects this transformation plan that will enable it to build on its strong solution portfolio and market position, enhance its enterprise go-to-market strategy, accelerate revenue growth, and drive efficiencies to support margin expansion and increased profitability. In conjunction with the strategic transformation 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. The Company expects to manage Digital Agreements for accelerated growth and market share gains and Security Solutions for cash flow given its more modest growth profile.

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 the Company's 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 the Company's OneSpan Sign e-signature solution and its recently introduced OneSpan Notary and Virtual Room

solutions. As the transformation plan progresses, the Company expects to include other cloud-based security modules associated with the secure transaction lifecycle of identity verification, authentication, virtual interactions and transactions, and secure digital storage in the Digital Agreements segment. This segment also includes costs attributable to our next-generation transaction-cloud platform.

- **Security Solutions.** Security Solutions consists of a broad portfolio of software products and/or software development kits (SDKs) that are used to build applications designed to defend against attacks on digital transactions across online environments, devices and applications. These solutions, which are largely on-premises software products, include identity verification, multi-factor authentication and transaction signing, such as mobile application security, mobile software tokens, and Digipass authenticators that are not cloud-connected devices.

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. The Company recorded \$2.3 million and \$1.8 million of amortization expense in Digital Agreements operating income and Security Solutions operating income, respectively, during the year ended December 31, 2022. During the year ended December 31, 2021, the Company recorded \$2.5 million and \$3.3 million of amortization expense in Digital Agreements operating income and Security Solutions operating income, respectively. The Company recorded \$5.9 million and \$3.1 million of amortization expense in Digital Agreements operating income and Security Solutions operating income, respectively, during the year ended December 31, 2020. Unallocated corporate costs include costs related to administrative functions that are performed in a centralized manner that are not attributable to a particular segment.

The tables below set forth information about the Company's operating segments for the years ended December 31, 2022, 2021, and 2020, along with the items necessary to reconcile the segment information to the totals reported in the accompanying consolidated financial statements.

	Years Ended December 31,		
	2022	2021	2020
<i>(In thousands, except percentages)</i>			
Digital Agreements			
Revenue	\$ 48,401	\$ 40,551	\$ 29,633
Gross profit	\$ 37,488	\$ 29,557	\$ 20,361
Gross margin	77 %	73 %	69 %
Operating income	\$ 5,348	\$ (1,612)	\$ (7,559)
Security			
Revenue	\$ 170,605	\$ 173,930	\$ 186,058
Gross profit	\$ 111,082	\$ 113,378	\$ 127,698
Gross margin	65 %	65 %	69 %
Operating income	\$ 32,051	\$ 35,395	\$ 55,295
Total Company:			
Revenue	\$ 219,006	\$ 214,481	\$ 215,691
Gross profit	\$ 148,570	\$ 142,935	\$ 148,059
Gross margin	68 %	67 %	69 %
Statements of operations reconciliation:			
Segment operating income	\$ 37,399	\$ 33,783	\$ 47,736
Corporate operating expenses not allocated at the segment level	64,514	59,911	52,994
Operating loss	\$ (27,115)	\$ (26,128)	\$ (5,258)
Interest income, net	595	(1)	404
Other income (expense), net	14,827	(14)	1,434
Loss before income taxes	\$ (11,693)	\$ (26,143)	\$ (3,420)

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, 2022, 2021, and 2020.

	Years Ended December 31,					
	2022		2021		2020	
	Digital Agreements	Security Solutions	Digital Agreements	Security Solutions	Digital Agreements	Security Solutions
<i>(In thousands)</i>						
Subscription (1)	\$ 42,029	\$ 47,124	\$ 33,283	\$ 35,224	\$ 22,632	\$ 29,757
Maintenance and support	5,451	42,894	5,709	45,567	5,035	44,193
Professional services and other (2)	921	7,087	1,494	13,703	1,966	30,259
Hardware products	—	73,500	65	79,436	—	81,849
Total Revenue	\$ 48,401	\$ 170,605	\$ 40,551	\$ 173,930	\$ 29,633	\$ 186,058

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 2%, 5%, and 12% of total revenue for the years ended December 31, 2022, 2021, and 2020, 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 – 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, 2022 and 2021:

(In thousands)	December 31,	
	2022	2021
Component parts	\$ 6,762	\$ 3,841
Work-in-process and finished goods	5,292	6,504
Total	<u>\$ 12,054</u>	<u>\$ 10,345</u>

Note 5 – 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

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Subscription (1)	\$ 89,153	\$ 68,507	\$ 52,389
Maintenance and support	48,345	51,276	49,228
Professional services and other (2)	8,008	15,197	32,225
Hardware products	73,500	79,501	81,849
Total Revenue	<u>\$ 219,006</u>	<u>\$ 214,481</u>	<u>\$ 215,691</u>

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 2%, 5%, and 12% of total revenue for the years ended December 31, 2022, 2021, and 2020, respectively.

Revenue by location of customer for the years ended December 31, 2022, 2021, and 2020

(In thousands, except percentages)

	EMEA	Americas	APAC	Total
Total Revenue:				
2022	\$ 100,298	\$ 77,740	\$ 40,968	\$ 219,006
2021	\$ 104,878	\$ 68,646	\$ 40,957	\$ 214,481
2020	\$ 117,086	\$ 53,171	\$ 45,434	\$ 215,691

Percent of Total:

2022	46 %	35 %	19 %	100 %
2021	49 %	32 %	19 %	100 %
2020	54 %	25 %	21 %	100 %

Timing of revenue recognition

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Products and Licenses transferred at a point in time	\$ 121,426	\$ 120,358	\$ 132,986
Services transferred over time	97,580	94,123	82,705
Total Revenue	\$ 219,006	\$ 214,481	\$ 215,691

Contract balances

The following table provides information about receivables, contract assets and contract liabilities from contracts with customers as of December 31, 2022 and 2021:

(In thousands)	December 31,	
	2022	2021
Receivables, inclusive of trade and unbilled	\$ 65,132	\$ 56,612
Contract Assets (current and non-current)	\$ 4,642	\$ 4,889
Contract Liabilities (Deferred Revenue current and non-current)	\$ 70,907	\$ 63,742

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, which is normally over 3-5 years. 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, 2022 included \$52.8 million that was included on the December 31, 2021 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, 2022:

<i>(In thousands)</i>	2023	2024	2025	Beyond 2025	Total
Future revenue related to current unsatisfied performance obligations	\$ 44,407	\$ 19,574	\$ 7,872	\$ 5,336	\$ 77,189

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:

<i>(In thousands)</i>	December 31,	
	2022	2021
Capitalized costs to obtain contracts, current	\$ 2,929	\$ 2,134
Capitalized costs to obtain contracts, non-current	\$ 10,571	\$ 8,675

<i>(In thousands)</i>	Years Ended December 31,	
	2022	2021
Amortization of capitalized costs to obtain contracts	\$ 2,404	\$ 1,555
Impairments of capitalized costs to obtain contracts	\$ —	\$ —

Note 6 – Goodwill

The following tables present the changes in goodwill during 2022 and 2021:

<i>In thousands</i>	Digital Agreements	Security Solutions	Total
Net balance at December 31, 2020	\$ —	\$ —	\$ 97,552
Net foreign currency translation	—	—	(1,378)
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

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*). Additionally, the Company performed a goodwill impairment test on the goodwill balances of each of the reporting units of its reportable operating segments as of May 17, 2022, by comparing the fair value of each reporting unit to its carrying value, including the allocated goodwill. The Company concluded that there was no indication of goodwill impairment for any of the reporting units as of May 17, 2022.

No impairment of goodwill was recorded during the years ended December 31, 2022, 2021, or 2020.

Note 7 – Intangible Assets

Intangible assets as of December 31, 2022 and 2021 consist of the following:

(In thousands)	Useful Life (in years)	December 31,			
		2022		2021	
		Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Acquired technology	3 to 7	\$ 42,022	\$ 41,894	\$ 43,034	\$ 42,281
Customer relationships	5 to 12	34,386	23,323	39,814	20,653
Patents and trademarks	10 to 20	13,518	12,227	13,549	12,193
Total		<u>\$ 89,926</u>	<u>\$ 77,444</u>	<u>\$ 96,397</u>	<u>\$ 75,127</u>

Amortization expense was \$4.1 million, \$5.9 million, and \$9.1 million for the years ended December 31, 2022, 2021, and 2020, respectively.

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, 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 “Impairment of intangible assets” 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, 2022, 2021, and 2020.

The estimated future amortization expense of intangible assets as of December 31, 2022, is as follows:

2023	\$ 2,338
2024	2,335
2025	2,334
2026	2,328
2027	2,123
Thereafter	263
Subject to amortization	<u>11,721</u>
Trademarks	761
Total intangible assets	<u>\$ 12,482</u>

Note 8 – Property and Equipment, net

The following table presents the major classes of property and equipment, net, as of December 31, 2022 and 2021:

(In thousands)	Useful Life (in years)	December 31,	
		2022	2021
Office equipment and software	3-5	\$ 14,451	\$ 14,327
Leasehold improvements	10	9,927	10,296
Furniture and fixtures	5	4,260	4,223
Capitalized software	3	4,007	—
Total		32,645	28,846
Accumulated depreciation		(19,964)	(18,089)
Property and equipment, net		\$ 12,681	\$ 10,757

Depreciation expense was \$2.9 million, \$3.0 million, and \$2.9 million for the years ended December 31, 2022, 2021, and 2020, respectively.

Note 9 – Fair Value Measurements

The fair values of cash equivalents, "Receivables, net", 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, 2022 and 2021:

(In thousands)	December 31, 2022	Fair Value Measurement at Reporting Date Using		
		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	\$ 28,388	—	\$ 28,388	—

(In thousands)	December 31, 2021	Fair Value Measurement at Reporting Date Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
U.S. Treasury Notes	\$ 4,038	—	\$ 4,038	—
Corporate Notes / Bonds	\$ 9,585	—	\$ 9,585	—
Commercial Paper	\$ 8,996	—	\$ 8,996	—
U.S. Treasury Bills	\$ 9,990	—	\$ 9,990	—
U.S. Government Agencies	\$ 2,499	—	\$ 2,499	—

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, 2022 and 2021.

The Company did not have any transfers of assets between Level 1 and Level 2 or Level 3 of the fair value hierarchy during the year ended December 31, 2022. Also, the Company did not have any financial liabilities that are measured at fair value on a recurring basis as of December 31, 2022 and 2021.

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. During the year ended December 31, 2022, the Company recorded an impairment of its Dealflo customer relationships intangible asset in the amount of \$3.8 million, which was the entire remaining value of the asset. See Note 7, *Intangible Assets*, for additional information. No impairment was recorded during the year ended December 31, 2021.

Note 10 – Allowance for Credit Losses

The change in the allowance for credit losses during the years ended December 31, 2021 and 2022 were as follows:

(In thousands)

Balance at December 31, 2020	4,135
Provision	(16)
Write-offs	(2,689)
Net foreign currency translation	(11)
Balance at December 31, 2021	\$ 1,419
Provision	517
Write-offs	(334)
Net foreign currency translation	(2)
Balance at December 31, 2022	\$ 1,600

During the years ended December 31, 2022 and 2021, the Company wrote off \$0.3 million and \$2.7 million, respectively, of accounts receivable that were fully reserved for and no longer deemed collectible.

Note 11 – 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. Because most 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 one or more 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, 2022, 2021, and 2020 are as follows:

	Years Ended December 31,		
	2022	2021	2020
<i>(In thousands)</i>			
Building rent	\$ 2,117	\$ 2,564	\$ 2,978
Automobile rentals	1,180	1,505	1,576
Total net operating lease costs	\$ 3,297	\$ 4,069	\$ 4,554

Short-term lease costs and variable lease costs recognized during the years ended December 31, 2022, 2021, and 2020 are immaterial.

Supplemental consolidated balance sheet information related to operating leases as of December 31, 2022 and 2021, is as follows:

	December 31,	
	2022	2021
<i>(In thousands)</i>		
Leases		
Assets	\$ 8,022	\$ 9,197
Operating lease right-of-use assets	\$ 8,022	\$ 9,197
Liabilities		
Current		
Operating lease liabilities	\$ 2,258	\$ 2,476
Noncurrent		
Operating lease liabilities	8,442	10,180
Total lease liabilities	\$ 10,700	\$ 12,656

The weighted average remaining lease term for operating leases is 5.7 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,		
	2022	2021	2020
<i>(In thousands)</i>			
Supplemental cash flow and other information related to leases:			
Operating cash payments from operating leases	\$ 3,346	\$ 3,630	\$ 3,835
ROU assets obtained in exchange for new operating lease liabilities	\$ 1,172	\$ 589	\$ 3,549

Maturities of the Company's operating leases as of December 31, 2022 are as follows:

<i>(In thousands)</i>	
2023	\$ 2,743
2024	2,082
2025	1,778
2026	1,698
2027	1,530
Later years	2,713
Less imputed interest	(1,844)
Total lease liabilities	\$ 10,700

Note 12 – 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
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)
2021				
Total revenues	\$ 50,775	\$ 52,277	\$ 52,276	\$ 59,153
Gross profit	34,242	34,831	36,395	37,467
Operating costs	43,536	43,690	38,411	43,426
Operating income (loss)	(9,294)	(8,859)	(2,016)	(5,959)
Provision (benefit) for income taxes	(501)	(1,143)	(762)	6,847
Net income (loss)	(9,151)	(6,685)	(975)	(13,773)
Net income/(loss) per share:				
Basic	\$ (0.23)	\$ (0.17)	\$ (0.02)	\$ (0.36)
Diluted	\$ (0.23)	\$ (0.17)	\$ (0.02)	\$ (0.36)

Note 13 – Income Taxes

Income (loss) before income taxes was generated in the following jurisdictions:

	Years Ended December 31,		
	2022	2021	2020
(In thousands)			
U.S.	\$ (9,569)	\$ (15,056)	\$ 1,046
Non-U.S.	(2,124)	(11,087)	(4,466)
Total	\$ (11,693)	\$ (26,143)	\$ (3,420)

For the years ended December 31, 2022, 2021, and 2020, domestic income excludes intercompany dividend income of \$0 million, \$0 million, and \$38.0 million, respectively. The provision (benefit) for income taxes consists of the following:

	Years Ended December 31,		
	2022	2021	2020
<i>(In thousands)</i>			
Current:			
Federal	\$ 122	\$ (11)	\$ 1,715
State	32	(23)	49
Foreign	1,665	2,478	1,758
Total current	1,819	2,444	3,522
Deferred:			
Federal	(349)	3,774	1,385
State	35	(3)	(24)
Foreign	1,236	(1,774)	(2,848)
Total deferred	922	1,997	(1,487)
Total	\$ 2,741	\$ 4,441	\$ 2,035

For 2022, 2021, and 2020, 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,		
	2022	2021	2020
<i>(In thousands)</i>			
Expected tax at statutory rate	\$ (2,456)	\$ (5,490)	\$ (718)
Foreign taxes at other rates	3,373	307	(309)
Valuation allowance changes	4,370	15,019	2,617
Global intangible low-taxed income inclusion	—	—	339
State income taxes, net of federal benefit	(322)	(811)	32
Uncertain tax positions	(515)	12	235
Research credits	(2,568)	(3,466)	(1,029)
Disallowed expenses and other	859	(1,130)	868
Total	\$ 2,741	\$ 4,441	\$ 2,035

Significant components of the Company's deferred tax assets and liabilities as of December 31, 2022 and 2021, are as follows:

	December 31,	
	2022	2021
<i>(In thousands)</i>		
Deferred tax assets:		
Stock and long-term compensation plans	\$ 923	\$ 1,337
Foreign NOL & other carryforwards	41,154	38,153
US and state NOL carryforwards	5,654	5,539
Deferred revenue	863	2,068
Pension liability	498	1,547
Amortization and depreciation	526	257
Lease liability	2,641	3,171
Capitalized research and development	487	—
Accrued expenses and other	1,427	1,157
Total gross deferred tax assets	54,173	53,229
Less: Valuation allowance	(39,177)	(34,979)
Net deferred income tax assets	\$ 14,996	\$ 18,250
Deferred tax liabilities:		
Accruals	\$ 319	\$ 231
Tax on unremitted foreign earnings	1,249	1,357
Right of use asset	2,531	2,872
Intangible assets	3,009	5,225
Tax on credits	3,736	3,439
Contract acquisition costs	3,448	2,626
Deferred tax liabilities	\$ 14,292	\$ 15,750
Net deferred tax assets	\$ 704	\$ 2,500

Deferred tax assets and liabilities are netted by tax jurisdiction.

At December 31, 2022, the Company had foreign and state net operating loss (NOL) carryforwards and other foreign deductible carryforwards as shown in the following table:

	Carryforward	Expiration
<i>(In thousands)</i>		
NOL Carryforward		
Canada	\$ 24,804	2034-2039
United States	17,989	None
United Kingdom	9,569	None
Switzerland	14,319	2028-2029
Other foreign	5,886	None
Canada province	25,502	2034-2039
U.S. states	27,680	2023-2042
	<u>\$ 125,749</u>	
Other Carryforwards		
United States credit	\$ 828	2032
Canada	47,526	None
Canada province	61,657	None
Capital loss	383	None
Canada credits	9,809	2025-2042
Canada province credits	3,980	2036-2042
	<u>\$ 124,183</u>	
	<u><u>\$ 249,932</u></u>	

The valuation allowance against the net deferred tax assets as of December 31, 2022 and 2021 was \$39.2 million and \$35.0 million, respectively.

The Company recorded changes in valuation allowance of \$4.4 million and \$15.0 million, during the years ended December 31, 2022 and 2021, 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 2022 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 and 2021, the Company made the decision to establish 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. The Company continues to maintain a valuation allowance against certain deferred tax assets in other jurisdictions where assets had been previously valued. 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 2022 and 2021, and \$0.1 million during 2020.

ASC 740, Income Taxes sets a “more-likely-than-not” criterion for recognizing the tax benefit of uncertain tax positions. As of December 31, 2022, 2021, and 2020, the Company had reserves of \$0 million, \$0.5 million, and \$0.5 million, respectively.

	December 31,		
	2022	2021	2020
<i>(In thousands)</i>			
Reserve at beginning of year	\$ 512	\$ 500	\$ 2,923
Increases related to prior year tax positions	—	12	277
Decreases related to prior year tax positions	(512)	—	(37)
Settlement	—	—	(2,663)
Total	\$ —	\$ 512	\$ 500

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, 2022 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	2014
Austria	2016
Belgium	2018
Canada	2018
Netherlands	2017
Singapore	2017
Switzerland	2020
United Kingdom	2020
United States	2017

Note 14 – 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, 2022, the remaining number of shares allowed to be issued under the Plan was 1.9 million shares of the Company’s common stock, representing 4% of the issued and outstanding shares of the Company as of such date.

The following table details long-term compensation plan and stock-based compensation expense for the years ended December 31, 2022, 2021, and 2020.

	Years Ended December 31,		
	2022	2021	2020
<i>(In thousands)</i>			
Stock-based compensation	\$ 8,642	\$ 4,354	\$ 4,740
Other long-term incentive plan compensation	171	848	1,262
Total compensation	<u>\$ 8,813</u>	<u>\$ 5,202</u>	<u>\$ 6,002</u>

Time-Based Restricted Stock Awards (sharecounts in thousands)

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. Compensation expense was less than \$0.1 million, \$0.3 million, and \$0.7 million for 2022, 2021, and 2020, respectively. Tax benefit related to the compensation expense was less than \$0.1 million, \$0.1 million, and \$0.2 million for 2022, 2021, and 2020, respectively. The following table summarizes the time-based restricted stock activity for the year ended December 31, 2022.

<i>(In thousands)</i>	Shares	Weighted-average remaining term (years)	Weighted-average grant date fair value
Outstanding at January 1, 2022	7	0.42	\$ 16.23
Shares vested	(3)		16.17
Shares forfeited	(4)		17.75
Outstanding at December 31, 2022	<u>—</u>	<u>—</u>	<u>\$ —</u>

There was no unamortized future compensation expense for time-based restricted stock awards at December 31, 2022.

Time-Based Restricted Stock Units (sharecounts in thousands)

Under the OneSpan Inc. 2019 Omnibus Incentive Plan, the Company grants certain eligible employees RSUs that settle in Company stock. RSUs granted to non-employee directors vest on the first anniversary date of the grant. Awards granted vest in equal semi-annual installments over one to four years. Shares are subject to forfeiture if the service period is not met. Compensation expense was \$6.9 million, \$3.7 million, and \$2.5 million for 2022, 2021, and 2020, respectively, and the related tax benefit was \$0.2 million, \$0.1 million, and \$0.5 million, respectively. The following table summarizes the time-based restricted stock activity for the year ended December 31, 2022:

<i>(In thousands)</i>	Shares	Weighted-average remaining term (years)	Weighted-average grant date fair value
Unearned, January 1, 2022	559	3.08	\$ 19.30
Shares vested	(308)		17.19
Shares awarded	2,064		11.97
Shares forfeited	(245)		15.06
Unearned, December 31, 2022	<u>2,070</u>	<u>2.95</u>	<u>\$ 12.82</u>

The unamortized future compensation expense for time-based restricted stock awards was \$19.4 million at December 31, 2022.

Performance-Based Restricted Stock Units settled in stock (sharecounts in thousands)

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, earned shares related to one to three-year targets cliff vest upon fulfillment of the performance criteria and completion of the requisite service period and per recommendation of the Compensation Committee of the OneSpan Inc. Board of Directors (“Compensation Committee”). Shares are subject to forfeiture if the performance criteria and service period are not met.

The restricted stock units subject to achievement of future performance criteria awarded during the year ended December 31, 2022 will be earned if the performance criteria and service period are met at the end of the one to three year performance period.

Compensation expense in 2022, 2021, and 2020 was \$1.6 million, \$0.3 million, and \$1.1 million. Tax benefit related to the compensation expense was less than \$0.1 million, \$0.1 million, and \$0.2 million for 2022, 2021, and 2020, respectively.

The following table summarizes activity related to unvested performance restricted stock shares during 2022:

<i>(In thousands)</i>	Total Unvested Shares	Weighted- average remaining term (years)	Weighted- average grant date fair value
Unearned, January 1, 2022	121	3.29	\$ 17.30
Shares vested	(50)		19.88
Shares awarded	370		11.37
Shares forfeited	(52)		13.31
Unearned, December 31, 2022	389	2.76	\$ 12.60

Unamortized future compensation expense for performance-based restricted stock was \$3.1 million at December 31, 2022.

Market-Based Restricted Stock Units settled in stock (sharecounts in thousands)

Market-based restricted stock units granted to executive officers and certain other employees were subject to achievement of three year market-based performance criteria established by the Board of Directors. Under certain grants, earned shares related to three-year targets cliff vest upon fulfillment of the market-based performance criteria and completion of the three-year period. Shares are subject to forfeiture if the performance criteria and service period are not met. Compensation expense for the years ended December 31, 2022 and 2021 was \$0.5 million and less than \$0.1 million, respectively, and the related tax benefit was 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:

<i>(In thousands)</i>	Shares	Weighted- average remaining term (years)	Weighted- average grant date fair value
Unearned, January 1, 2022	283	3.43	\$ 19.06
Shares awarded	—		—
Shares forfeited	—		—
Unearned, December 31, 2022	283	3.43	\$ 19.06

Unamortized future compensation expense for market-based restricted stock was \$2.2 million at December 31, 2022.

Note 15 – Earnings per Common Share (sharecounts in thousands)

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, 2022, 2021 and 2020, 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:

<i>(In thousands, except per share data)</i>	Years Ended December 31,		
	2022	2021	2020
Net loss	\$ (14,434)	\$ (30,584)	\$ (5,455)
Weighted average common shares outstanding:			
Basic	40,143	39,614	40,035
Incremental shares with dilutive effect:			
Restricted stock awards	—	—	—
Diluted	40,143	39,614	40,035
Net loss per share:			
Basic	\$ (0.36)	\$ (0.77)	\$ (0.14)
Diluted	\$ (0.36)	\$ (0.77)	\$ (0.14)

Note 16 – 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, 2022, 2021, and 2020, the Company expensed contributions of \$0.3 million, \$0.3 million, and \$0.3 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,		
	2022	2021	2020
<i>(In thousands)</i>			
Service cost (gross)	\$ 1,107	\$ 1,587	\$ 1,549
Interest cost	138	53	106
Expected return on plan assets	(288)	(302)	(271)
Amortization of unrecognized actuarial gain	(90)	(12)	(40)
Net periodic pension cost	<u>\$ 867</u>	<u>\$ 1,326</u>	<u>\$ 1,344</u>

The net unfunded status of the Non-U.S. pension plans as of December 31, 2022 and 2021, is as follows:

	December 31,	
	2022	2021
<i>(In thousands)</i>		
Fair value of plan assets	\$ 15,415	\$ 17,394
Projected benefit obligation	(17,715)	(24,855)
Net unfunded benefit obligation	<u>\$ (2,300)</u>	<u>\$ (7,461)</u>

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,	
	2022	2021
<i>(In thousands)</i>		
Fair value of plan assets at January 1	\$ 17,394	\$ 17,290
Employee contributions	437	499
Actual return on plan assets	(288)	46
Benefits (paid), net of transfers	(2,361)	(492)
Employer contributions	911	1,049
Foreign exchange adjustment	(678)	(998)
Fair value of plan assets at December 31	<u>\$ 15,415</u>	<u>\$ 17,394</u>

The change in benefit obligations is as follows:

	Years Ended December 31,	
	2022	2021
<i>(In thousands)</i>		
Benefit obligations at January 1	\$ 24,855	\$ 27,431
Gross service cost	1,107	1,587
Interest cost	138	53
Employee contributions	437	499
Actuarial (gains)/losses	(4,676)	(2,185)
Benefits (paid), net of transfers	(2,361)	(432)
Curtailments & settlements	(799)	(492)
Foreign exchange adjustment	(986)	(1,606)
Benefit obligations at December 31	\$ 17,715	\$ 24,855

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 decrease in benefit obligations at December 31, 2021 compared to December 31, 2020 was primarily driven by an increase in actuarial gains and the impact of foreign exchange adjustments.

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, 2022 and 2021, 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, 2022 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, 2022 and 2021.

Other

The accumulated benefit obligation for the plans were \$16.8 million and \$22.9 million as of December 31, 2022 and 2021, respectively.

The Company expects to pay approximately \$1.0 million of contributions over the next twelve months.

The amounts reclassified out of other comprehensive income during the years ended December 31, 2022, 2021, and 2020 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 weighted-average assumptions between all plans were utilized in the pension calculations:

	December 31,					
	2022			2021		
	(%)					
Discount rates	2.15	-	3.50	0.20	-	0.90
Inflation	1.25	-	2.20	0.90	-	1.90
Expected return on plan assets	2.00	-	2.50	1.25	-	2.00
Rate of salary increases	2.25	-	3.20	1.90	-	2.80

Projected future pension benefits as of December 31, 2022 (in thousands):

2023	\$	662
2024	\$	426
2025	\$	643
2026	\$	1,204
2027	\$	474
Beyond	\$	5,628

Note 17 – 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
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
2020							
Revenue	\$	117,086	\$	53,171	\$	45,434	\$ 215,691
Gross profit		78,456		37,532		32,071	148,059
Long-lived assets		7,482		14,968		741	23,191

For the years 2022, 2021, and 2020, the top 10 customers contributed 23%, 22% and 21%, respectively, of total worldwide revenue. The majority of the Company's hardware products are assembled by four independent factories in China and one independent factory in Romania.

Note 18 – Commitments and Contingencies

The Company leases office space and automobiles under operating lease agreements. See Note 11, *Leases*, for future minimum rental payments required under non-cancelable leases.

At December 31, 2022, the Company has purchase obligations of \$24.6 million, including \$5.3 million of inventory purchase obligations which are expected to be consummated in the next 12 months, \$17.4 million of committed hosting arrangements which will be used in the next one to two years, and \$2.0 million for other software agreements related to the administration of the Company's business which range from one to three 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, 2022, the Company has recorded an accrual of \$1.5 million for loss contingencies, which represents the better estimate within the probable range of \$1.5 million and \$2.0 million, 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, 2022, 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 19 – Restructuring and Other Related Charges

In December 2021, the 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 consists primarily of headcount-related actions and is designed to achieve the same objectives as the first phase of the Plan.

In connection with the Plan, the Company incurred severance, retention pay, and related benefit costs. The Company recorded \$9.5 million in “Restructuring and other related charges” in the consolidated statement of operations for the year ended December 31, 2022. Expense of \$1.9 million and \$5.1 million was recognized in Digital Agreements operating income and Security Solutions operating income, respectively, during the year ended December 31, 2022.

In total, there were approximately 100 employees, across multiple functions, whose positions were made redundant.

The table below sets forth the changes in the carrying amount of the restructuring charge liability for the year ended December 31, 2022.

<i>(In thousands)</i>	Restructuring Charge Liability	
Balance as of December 31, 2021	\$	—
Additions		9,482
Payments		(5,886)
Balance as of December 31, 2022	\$	3,596

The \$3.6 million restructuring charge liability at December 31, 2022 is included in “Accrued wages and payroll taxes” in the consolidated balance sheet. The liability is entirely comprised of employee costs that are expected to be paid by December 31, 2023.

Note 20 – Related Party Transactions

Agreements with Related Parties

The Company entered into an agreement to provide e-signature and secure agreement automation services to Cox Automotive in the fourth quarter of 2021. Marianne Johnson is an Executive Vice President and the Chief Product Officer at Cox Automotive. Ms. Johnson has served on the OneSpan Board of Directors since March 2020. The amount of revenue recognized for e-signature and secure agreement automation services during the years ended December 31, 2022 and 2021 was \$0.7 million and \$0.3 million, respectively, and is included in subscription revenue. The amount receivable as of December 31, 2022 and 2021 was \$1 million and \$0 million, respectively.

The Company purchases subscription SMS services from Twilio, Inc. From February 2015 through August 2022, Marc Boroditsky was the Chief Revenue Officer of Twilio, Inc. Mr. Boroditsky has served on the OneSpan Board of Directors since June 2020. The total amount paid to Twilio, Inc. during the year ended December 31, 2022 was \$1.0 million and is included in "Cost of goods sold". The amount payable at December 31, 2022 was \$0.2 million. The total amount paid to Twilio, Inc. during the year ended December 31, 2021 was \$0.8 million and the amount payable at December 31, 2021 was less than \$0.1 million.

The Company purchases cloud operations services from Cloudflare Inc. Mr. Boroditsky has served as the President of Revenue at Cloudflare Inc. since November 2022. The total amount paid to Cloudflare Inc. during the year ended December 31, 2022 was \$0.2 million and is included in "Cost of goods sold". The amount payable at December 31, 2022 was less than \$0.1 million. During the year ended December 31, 2021, the Company paid Cloudflare Inc. \$0.1 million, and had no accounts payable due at December 31, 2021.

Note 21 – Subsequent Events

On February 22, 2023, the Company completed its previously announced acquisition of ProvenDB pursuant to an Asset Purchase Agreement, dated January 26, 2023 (the "Purchase Agreement"), by and between the Company, as purchaser, and Southbank Software Pty Ltd., the seller, for the acquisition of substantially all of the assets and the assumption of designated liabilities of the ProvenDB business.

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.

Pursuant to the Purchase Agreement, the Company agreed to purchase ProvenDB for an aggregate purchase price of \$2.0 million, of which \$1.8 million was paid upfront, and \$0.2 million will be held and paid within 12 months of the acquisition date, to account for potential net working capital adjustments. The Company estimates that most of the purchase price will be allocated to capitalized software development and related technology costs.

The Company's consolidated balance sheet as of December 31, 2022 and the Company's consolidated statement of operations and consolidated statement of cash flows for the year ended December 31, 2022 do not reflect the impacts of ProvenDB as the acquisition was completed after the balance sheet date.

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
2022	\$ 1,419	517	(334)	(2)	\$ 1,600
2021	\$ 4,135	(16)	(2,689)	(11)	\$ 1,419
2020	\$ 2,812 ⁽¹⁾	2,306	(994)	11	\$ 4,135

(1) Includes the \$288 impact of the initial ASU No. 2016-13 adoption on January 1, 2020.

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

February 28, 2023

OneSpan Inc.

/s/ Matthew P. Moynahan

Matthew P. Moynahan

Chief 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 Matthew Moynahan 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, 2022 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/ Matthew P. Moynahan Matthew P. Moynahan	President and Chief Executive Officer (Principal Executive Officer)	February 28, 2023
/s/ Jorge Martell Jorge Martell	Chief Financial Officer (Principal Financial Officer)	February 28, 2023
/s/ John Bosshart John Bosshart	Chief Accounting Officer (Principal Accounting Officer)	February 28, 2023
/s/ Alfred Nietzel Alfred Nietzel	Chairman	February 28, 2023
/s/ Marc D. Boroditsky Marc D. Boroditsky	Director	February 28, 2023
/s/ Garry Capers Garry Capers	Director	February 28, 2023
/s/ Sarika Garg Sarika Garg	Director	February 28, 2023
/s/ Marianne Johnson Marianne Johnson	Director	February 28, 2023
/s/ Michael McConnell Michael McConnell	Director	February 28, 2023
/s/ Marc Zenner Marc Zenner	Director	February 28, 2023