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

FORM 10-K

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		Commission file number	000-24389	
	(Exact	OneSpan I Name of Registrant as Spec		
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	DELAWARE Other Jurisdiction of		36-4169	
`	ation or Organization)		(IRS Employer Identification No.)	
	Registra	121 West Wacker Drive, Chicago, Illinois 60 ess of Principal Executive ant's telephone number, in 312-766-4001 registered pursuant to Se	0601 Offices)(Zip Code) Including area code:	
Title of ea	ch class	Trading Symbo	Name of exch	ange on which registered
Common Stock, par v		OSPN		Q Capital Market
	Securities	registered pursuant to Se	ction 12(g) of the Act:	
		None	(3)	
Indicate by check mark if the r	egistrant is a well-known seaso	oned issuer, as defined by Rule	e 405 of the Securities Act. Yes	No ⊠
Indicate by check mark if the r	egistrant is not required to file	reports pursuant to Section 13	or 15(d) of the act. Yes □ No ☒	
Indicate by check mark whether preceding 12 months (or for such shapes ≥ No □	er the registrant: (1) has filed a orter period that the registrant	Il reports required to be filed b was required to file such repor	by Section 13 or 15(d) of the Securities (ts), and (2) has been subject to such fi	Exchange Act of 1934 during the ling requirements for the past 90 days.
			e Data File required to be submitted pr sistrant was required to submit such file	ursuant to Rule 405 of Regulation S-T es). Yes ⊠ No □
			S-K is not contained herein, and will n Part III of this Form 10-K or any arr	
			er, a non-accelerated filer, a smaller reany", and "emerging growth company	porting company, or an emerging growth in Rule 12b-2 of the Exchange Act.
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financial accounting standards pursu Indicate by check mark whether	nant to Section 13(a) of the Excer the registrant has filed a repo	change Act. □ ort on and attestation to its ma	use the extended transition period for nagement's assessment of the effective public accounting firm that prepared of	eness of its internal control over financia
Indicate by check mark whether	er the registrant is a shell comp	pany (as defined in Rule 12b-2	of the Exchange Act). Yes □ No	
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Certain sections of the re	egistrant's Notice of Annual M	eeting of Stockholders and Pro reference into Part III of the		eting of Stockholders are incorporated by
Auditor Name: KPM	IG LLP	Auditor Location: Chica	ago, IL	Auditor Firm ID: 185

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Forward Looking Statement

This Annual Report on Form 10-K contains forward-looking statements within the meaning of applicable U.S. securities laws, including statements regarding the potential benefits, performance and functionality of our products and solutions, including future offerings; our expectations, beliefs, plans, operations and strategies relating to our business and the future of our business; our strategic plans regarding our portfolio, including acquisitions and dispositions; and our expectations regarding our 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 forwardlooking statements. Factors that could materially affect our business and financial results include, but are not limited to: market acceptance of our products and solutions and competitors' offerings; the potential effects of technological changes; the impact of the COVID-19 pandemic and actions taken to contain it; disruption in global transportation and supply chains; our ability to effectively manage acquisitions, divestitures, alliances, joint ventures and other portfolio actions; the execution of our transformative strategy on a global scale; the increasing frequency and sophistication of cybersecurity attacks; claims that we have infringed the intellectual property rights of others; changes in customer requirements; price competitive bidding; changing laws, government regulations or policies; pressures on price levels; investments in new products or businesses that may not achieve expected returns; 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 those 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.

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

PART I

Item 1 – Business

Overview

OneSpan Inc. and its wholly owned subsidiaries design, develop and market digital solutions for identity, security, and business productivity that protect and facilitate electronic transactions via mobile and connected devices. We are a global leader in digital identity and anti-fraud solutions to financial institutions and other businesses. We establish trust in people's identities, the devices they use, and the transactions they execute. We make digital banking accessible, secure, easy, and valuable. Our solutions secure access to online accounts, data, assets, and applications for global enterprises; provide tools for application developers to easily integrate security functions into their web-based and mobile applications; and facilitate end-to-end financial agreement automation. Our solutions enhance the ability of companies to onboard new customers and prevent hacking attacks against online and mobile transactions while providing an exceptional experience for remote customers.

We offer cloud based and on-premises solutions using both open standards and proprietary technologies. Some of our proprietary technologies are patented. Our products and services are used for a wide range of use cases including e-signing Business-to-Business ("B2B"), Business-to-Employee ("B2E") and Business-to-Consumer ("B2C") agreements, delivering passwordless authentication experiences, mitigating fraud, authorizing financial transactions, and achieving regulatory compliance.

Online and mobile application owners and publishers benefit from our expertise in multi-factor authentication, document signing, transaction signing, application security, remote customer onboarding, and in mitigating hacking attacks. Our convenient and proven security solutions enable low friction and trusted interactions between businesses, employees, and consumers across a variety of online and mobile platforms.

Our primary growth objectives include:

- Making digital banking more accessible, secure, easy and valuable;
- Expanding our portfolio of solutions that enable institutions to mitigate fraud, reduce operational costs, comply
 with regulations, easily on-board customers, adaptively authenticate transactions and reduce time to deploy;
- Automating and securing digital customer journeys to remotely verify identities, mitigate application fraud, and secure account openings and transactions;
- Increasing sales to existing customers and acquiring new customers;
- Driving increased demand for our products in new applications, new markets, and new territories;
- Expanding our channel partner ecosystem; and
- Strategically acquiring companies that expand our technology portfolio or customer base and increase our recurring revenue.

Impact of COVID-19 pandemic

We continue to actively address the effects of the COVID-19 pandemic and its impact globally. Due to economic uncertainty connected to the COVID-19 pandemic, we have experienced lengthened sales cycles and reduced demand for some of our security solutions.

In the current and future periods, we may experience weaker customer demand, requests for discounts or extended payment terms, customer bankruptcies, supply chain disruption, employee staffing constraints and difficulties, government restrictions or other factors that could negatively impact the Company and its business, operations and financial results.

As we cannot predict the duration or scope of the pandemic or its impact on the economy, financial markets and our customers, any negative impact to our results cannot be reasonably estimated, but it could be material. We continue to closely monitor the Company's financial health and liquidity and the impact of the pandemic on the Company. We are able to serve the needs of our customers while taking steps to protect the health and safety of our employees, customers, partners, and communities. See Part I – Item 1A – Risk Factors of this Form 10-K for additional information regarding the potential impact of COVID-19 on the Company.

Industry Background

Rapid global growth in cloud and mobile banking transactions is driving increased demand for multi-channel security solutions and enhanced user experiences across the financial services industry. Similarly, increasing remote corporate access of important resources by employees, business partners and customers is introducing new security risks for participants. Large and powerful criminal hacking organizations are launching more sophisticated hacking attacks with greater frequency. The criminal activities of private and state-sponsored hacking organizations have driven an increased need for security solutions and expansion of regulations requiring improved security measures to protect against hacking attacks and breaches. Several governments worldwide have issued specific recommendations either requiring or advocating multi-factor authentication and other security measures to improve the security of remote banking transactions. We believe these global trends have been accelerated by the pandemic and will continue and that the market for authentication, anti-fraud, and e-signature solutions will continue to grow driven by growth in digital banking transactions, digital commerce, work-from-home corporate access requirements, growing awareness of the impact of cyber-crime, and new government regulations.

Our Background

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 as VASCO Data Security, Inc.

In 1996, we expanded our computer security business by acquiring Lintel Security NV/SA, a Belgian corporation, which included assets associated with the development of security tokens and security technologies for personal computers and computer networks. Also in 1996, we acquired Digipass NV/SA, a Belgian corporation, which was also a developer of security tokens and security technologies. In 1997, the acquired entity was renamed VASCO Data Security NV/SA.

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., becoming a publicly traded company.

In 2006, we opened our international headquarters in Zurich, Switzerland.

In 2013, we acquired Cronto Limited ("Cronto"), a provider of secure visual transaction authentication solutions for online banking.

In 2014, we acquired Risk IDS, a provider of risk analysis solutions to the banking community.

In 2015, we acquired Silanis Technology Inc., a leading provider of electronic signature (e-signature) and digital transaction solutions used to electronically sign, send, and manage documents. The solution is sold under the OneSpan Sign (formerly eSignLive) name and is trusted by many of the largest banks, insurers, and government agencies.

In May 2018, we acquired Dealflo Limited, a leading provider of identity verification and end-to-end financial automation solutions.

Also in May 2018, VASCO Data Security international, Inc. changed its name to OneSpan Inc. The Company's name change reflects a shift in our strategy and solution offerings.

Including our predecessor companies, we have engaged in sixteen acquisitions and two dispositions.

Our Products and Services Portfolio

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, private cloud, or on-premises 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 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.

The OneSpan Sign Virtual Room option adds videoconferencing and collaboration capabilities to OneSpan Sign to support human-mediated agreement processes. This helps businesses deliver secure, interactive experiences for complex agreements that require human assistance.

Digital Identity & Authentication

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 signing, SMS and hardware authenticators. 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 allows application developers 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 electronic signing, 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.

Mobile Authenticator Studio is a user-friendly and secure mobile authenticator that operates as a discrete mobile application. It includes many of the features of the Mobile Security Suite and can easily be tailored to meet the needs of numerous authentication processes. It can be customized and deployed rapidly without extensive technical support ensuring strong security with compelling value.

Mobile App Shielding protects a mobile banking app from the inside out. It allows the app to securely operate even in potentially hostile environments, such as jailbroken or rooted devices – and only deny service when necessary.

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 to establish that the individual presenting the identity document is the same person whose picture appears on the authenticated identity document.

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.

We also offer a wide variety of hardware authenticators, 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.

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 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 now and more than 10 years from now. In addition to the issued patents, we also have several patent applications pending in the U.S., Europe, and other countries. The majority of our issued and pending patents cover our Digipass product line. We believe these patents to be valuable property rights and we rely on the strength of our patents and on trade secret law to protect our proprietary technology. We furthermore have registrations for most of our trademarks in most of the markets where we sell the corresponding products and services and registrations of the designs of many of our hardware products primarily in the EU and China. To the extent that we believe our intellectual property rights are being infringed upon, we intend to assert vigorously our intellectual property rights, including but not limited to, pursuing all available legal remedies.

Research and Development

Our research and development efforts historically have been, and will continue to be, concentrated on solution enhancement, new technology development, and related new software introductions. We employ a team of full-time engineers and, from time to time, also engage independent engineering firms to conduct non-strategic product development efforts on our behalf. For fiscal years ended December 31, 2021, 2020, and 2019, we incurred expenses of \$47.4 million, \$41.2 million, and \$42.5 million, respectively, for research and development.

Production

Our Digipass security hardware products are manufactured by third party manufacturers pursuant to purchase orders that we issue. Our hardware Digipass products are made primarily from commercially available electronic components purchased globally. Our software solutions are produced in-house or developed by third parties and sold under license.

Hardware Digipass products utilize commercially available programmable microprocessors purchased from several suppliers. The microprocessors are the most important components of our security authenticators that are not commodity items readily available on the open market. Some microprocessors are single sourced. Orders of microprocessors generally require a lead-time of 12-16 weeks. We attempt to maintain a sufficient inventory of all parts to handle short-term increases in orders.

Large orders that would significantly deplete our inventory are typically required to be placed with more than twelve weeks of lead-time, allowing us to make appropriate arrangements with our suppliers. We purchase microprocessors and arrange for shipment to third parties for assembly and testing in accordance with our design specifications. The majority of our Digipass products are manufactured by four independent factories in Southern China and one in Romania. Purchases are made on a volume purchase order basis. We supply product test equipment at the point of assembly. 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.

The COVID-19 pandemic resulted in a temporary closure of some component suppliers and third party manufacturers, and a reduction in global marine and to some degree air transportation capacity. Adjustments to our supply chain, manufacturing and transportation workflow processes have enabled us to meet customer delivery requirements.

Competition

The market for digital solutions for identity, security, and business productivity solutions is very competitive and, like most technology-driven markets, is subject to rapid change and constantly evolving solutions and services. Our anti-fraud products are designed to allow authorized users access to a computing environment or application, in some cases using patented technology, as a replacement for or supplement to a static password. Although certain of our security technologies are patented, there are other organizations that offer anti-fraud solutions that compete with us for market share. Our main competitors in our anti-fraud markets are Gemalto, a subsidiary of Thales Group, and RSA Security. There are many other companies, such as Transmit Security, Yubico, Symantec, Forgerock and Early Warning 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 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 include DocuSign and Adobe Systems. Both companies are significantly larger than us. In addition to these companies, there are dozens of smaller and regional providers of electronic signing solutions.

We believe that the principal competitive factors affecting the market for digital solutions for identity, security, and business productivity, as well as 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 such factors, there can be no assurance that we can 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. Current and potential competitors have established or may establish cooperative relationships among themselves or with third parties to increase the ability of their products to address the needs of our prospective customers. It is possible that new competitors or alliances may emerge and rapidly acquire significant market share. Accordingly, we have forged, and will continue to forge, our own partnerships to offer a broader range of products and capabilities to the market.

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.

We offer customers a choice between SaaS, private cloud, and traditional on-premise software deployments.

Part of our expanded selling effort includes finding additional applications for our products. In addition, our marketing plan calls for the identification of new business opportunities that may require enhanced security or areas where we do not currently market our products.

Customers and Markets

We generally focus our sales and marketing efforts in three primary areas. The first is financial institutions where the majority of our revenue is derived. This segment includes traditional banks, credit unions, and online-only banks. We also sell to the enterprise market segment and the government, healthcare and insurance market segments in select regions around the globe. We believe there are substantial opportunities for future growth in the market segments we serve as we expand our product portfolio of digital agreement and digital identity and authentication solutions.

Our top 10 customers contributed 22%, 21%, and 29%, in 2021, 2020, and 2019, respectively, of total worldwide revenue.

A significant portion of our sales is denominated in foreign currencies and 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 "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Quantitative and Qualitative Disclosures about Market Risk."

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

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 this Annual Report on Form 10-K. We have a single operating segment for all our products and operations. See Note 17 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. The most significant government regulations that impact our business are discussed below. For further discussion of how global regulations may impact our business, see Item 1A – Risk Factors.

We are subject to anti-corruption laws and regulations, including the U.S. Foreign Corrupt Practices Act (FCPA), the UK Bribery Act and other laws that generally prohibit the making or offering of improper payments to foreign government officials and political figures for the purpose of obtaining or retaining business or to gain an unfair business advantage.

In addition, we are subject to economic and trade sanctions programs administered by the Office of Foreign Assets Control (OFAC) in the U.S. Therefore, we do not permit financial institutions or entities that are domiciled in countries or territories subject to comprehensive OFAC trade sanctions (currently, Cuba, Iran, North Korea, Syria and Crimea), or that are included on OFAC's list of Specially Designated Nationals and Blocked persons, to purchase OneSpan products and services or engage in transactions using our services.

The European General Data Production Regulation (GDPR) took effect in May 2019 and applies to certain of our products and services used by customers in Europe. The GDPR includes operational requirements for companies that

receive or process personal data of residents of the European Union that are different from those previously in place in the European Union, and includes significant penalties for non-compliance. Other jurisdictions, such as Canada and Australia have enacted data privacy or data protection laws. As these laws continue to emerge in the countries where we or our customers operate, we need to analyze each of them to determine the applicability to our corporate operations and the applicability to our solutions and customers.

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"). These directives 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.

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. For example, regulatory changes in Europe to promote a more open and connected digital banking ecosystem create compliance needs for our customers as well as market opportunities for those market participants that move to capitalize on these changes. 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.

Human Capital

OneSpan's values focus on developing and maintaining a world class innovative workforce through collaboration, accountability, transparency, and speed. Our talented teams are carefully managed to ensure retention and ability to sustain business performance with an eye toward the future.

Our talent management and succession plan process at OneSpan includes the identification of key positions based on current and future business strategies, the identification of potential successors, and a plan for talent development. In addition to deep technical and skill development opportunities that enable OneSpan to foster employee engagement, we conduct extensive compliance-related training which is completed by all employees annually. Our managers of people are offered a variety of leadership development modules. Moreover, all employees are empowered to lead from any seat.

OneSpan strives to offer competitive base and variable pay programs. We use market benchmarks to ensure external competitiveness while maintaining internal value or equity within the organization. Our short-term and long-term incentive plans are designed to provide a variable pay opportunity to reward the attainment of key financial and operational goals and shareholder value creation. The mix among base compensation, short-term incentives and long-term incentives is designed to align with the competitive market.

OneSpan is committed to fostering, cultivating, and preserving a culture of diversity, equality and inclusion. Our vision is to embrace an inclusive and engaged culture that drives a sense of belonging and respects and celebrates our differences. In addition, we have an evolving program and sets of policies and procedures regarding corporate social responsibility, privacy, compliance and security. We believe these issues are important not only to our customers and investors, but also to our employees. Certain highlights on these matters are presented publicly on our website onespan.com under the About Us section.

As of December 31, 2021, we had 879 total employees, including 463 located in the Americas, 381 located in EMEA (Europe, the Middle East and Africa), and 35 located in Asia Pacific. Of the total employees, 367 were involved in sales, marketing, operations, and customer support, 373 in research and development and 139 in general and administration.

Item 1A - Risk Factors

You should carefully consider the following risk factors, which we consider the most significant, as well as other information contained in this Annual Report on Form 10-K. In addition, there are a number of less significant and other general risk factors that could affect our future results. If any of the events described in the risk factors were to occur, our business, financial condition or operating results could be materially and adversely affected. We have grouped our Risk Factors under captions that we believe describe various categories of potential risk. For the reader's convenience, we have not duplicated risk factors that could be considered to be included in more than one category.

Summary of Risk Factors

We are providing the following summary of the risk factors contained in this Form 10-K to enhance the readability and accessibility of our risk factor disclosures. We encourage our stockholders to carefully review the full risk factors contained in this Form 10-K in their entirety for additional information regarding the risks and uncertainties that could cause our actual results to vary materially from recent results or from our anticipated future results.

Risks Related to our Business

- While we believe the coronavirus may have a negative impact on our financial results, the impact is difficult to assess at this
 time.
- 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 have been undertaking a multi-year business transformation since 2017 and in 2021 we replaced multiple senior
 executives, including our CEO. It is anticipated that our current CEO will lead a further transformation beginning in 2022. If
 such transformation is not successful or completed on time, there could be an adverse impact on our business.
- The return of a worldwide recession and/or regional economic downturns may further impact our business.
- Disruptions in markets or the European Union may affect our liquidity and capital resources.
- We could incur substantial accounting related costs if we are unable to maintain an effective system of internal control over financial reporting.
- We have a long operating history, but only modest accumulated profit.
- We derive revenue from a limited number of products.
- The sales cycle for our products and technology is often long, and we may incur substantial expenses for sales that do not
 occur when anticipated.
- We have a great dependence on a limited number of suppliers and the loss of their manufacturing capability, components or technology could materially impact our operations.
- We order some hardware components, such as processors, in advance of expected use and often produce finished goods prior
 to the receipt of executed customer orders. If orders are not received, we could suffer losses related to inventory that cannot
 be sold at full value.
- Our success depends on establishing and maintaining strategic relationships with other companies to distribute our technology and products and, in some cases, for us to incorporate their technology into our products and our products and services
- We may not be able to maintain effective product distribution channels, which could result in decreased revenue.
- We depend on our key personnel for the success of our business and the loss of one or more of our key personnel could have
 an adverse effect on our ability to manage our business or could be negatively perceived in the capital markets.
- If we fail to attract and retain qualified personnel, especially in competitive markets and functions, our business may be harmed.
- Changes in our effective tax rate may have an adverse effect on our results of operations.
- Our worldwide income tax provisions and other tax accruals may be insufficient if any taxing authorities assume taxing
 positions that are contrary to our positions.

- Changes in global tax laws or in their interpretation or enforcement, could have a material adverse effect on our effective tax rate, results of operations, cash flows and financial condition.
- Acquisitions, divestitures and other strategic transactions present many risks, and failure to realize the financial and strategic
 goals we anticipate could have a material adverse effect on our business, results of operations, cash flows and financial
 condition
- Reported revenue may fluctuate widely due to the interpretation or application of accounting rules.
- Provisions in various agreements potentially expose us to substantial liability for intellectual property infringement and other losses
- The evolution of our business requires more complex development and go-to-market strategies, which involve significant risk

Risks Related to the Market

- We face significant competition and if we lose or fail to gain market share our financial results will suffer.
- A decrease of average selling prices for our products and services could adversely affect our business.
- We may need additional capital in the future and our failure to obtain capital would interfere with our growth strategy.
- We experience variations in quarterly operating results and sales are subject to seasonality, both of which may result in a
 volatile stock price.
- Our stock price may be volatile for reasons other than variations in our quarterly operating results, such as due to the limited number of shares that publicly trade.
- Our stock repurchase program could affect the price of our common stock and increase volatility and may be suspended or terminated at any time, which may result in a decrease in the trading price of our common stock.
- A small group of persons control a substantial amount of our common stock and could delay or prevent a change of control.
- Certain provisions of our charter and of Delaware law make a takeover of our Company more difficult.
- 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 business could be adversely affected as a result of actions of activist stockholders.

Risks Related to Technology and Intellectual Property

- Technological changes occur rapidly in our industry and our development of new products or features is critical to maintain
 our revenue. New or disruptive technology from competitors or future competitors could decrease the amount of business
 from our current customers which represent a large majority of our revenue.
- Our business could be negatively impacted by cyber security incidents and other disruptions.
- We rely upon Amazon Web Services to operate portions of our platform and any disruption of or interference with our use of Amazon Web Services or other vendors' material would adversely affect our business, results of operations and financial condition. Similarly, our key suppliers also have business continuity risks associated with their vendors which could in turn have a material effect upon us.
- Some of our products contain third-party, open-source software and failure to comply with the terms of the underlying open-source software licenses could restrict our ability to sell our products or otherwise result in claims against us.
- We must continue to attract and retain highly skilled technical personnel for our research and development efforts.
- We cannot be certain that our research and development activities will be successful.
- Failure to effectively manage our product and service lifecycles could harm our business.
- SaaS offerings, which involve various risks, constitute an important part of our business.
- We depend significantly upon our proprietary technology and intellectual property and the loss of or successful challenge to
 our proprietary rights could require us to divert management attention and could reduce revenue and increase our operating
 costs.
- Our patents may not provide us with competitive advantages.
- We are subject to warranty and product liability risks.

- There is significant government regulation of technology imports and exports and to the extent we cannot meet the
 requirements of the regulations we may be prohibited from exporting some of our products, which could negatively impact
 our revenue.
- We employ cryptographic technology in our authentication products that uses complex mathematical formulations.

Risks Related to International Operations

- 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.
- We are subject to foreign currency exchange rate fluctuations and risks, and improper management of that risk could
 adversely affect our business, results of operations, and financial conditions.
- Changes in the European or Asian regulatory environment regarding privacy and data protection regulations could have a
 material adverse impact on our results of operations.
- We must comply with governmental regulations setting environmental standards. In addition, governments or customers may
 demand increased disclosure related to environment, social and other issues.
- The vote by the United Kingdom (UK) to leave the European Union (EU) or the actions by China in Hong Kong could adversely affect our financial results.
- We or our suppliers may be impacted by new regulations related to climate change.
- The effects of regulations relating to conflict minerals may adversely affect our business.
- 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.
- Our business in countries with a history of corruption and transactions with foreign governments increase the risks associated with our international activities.
- Delays in global transportation and disruptions in supply chains increase the likelihood that we will be unable to fulfill
 customer orders on time or within budget.

Risks Related to Our Business

While we believe the coronavirus may have a negative impact on our financial results, the impact is difficult to assess at this time.

The effects of the COVID-19 pandemic and its variations have materially affected how we and our customers are operating our businesses, and the duration and extent to which this will impact our future results of operations and overall financial performance remains uncertain.

In December 2019, a novel coronavirus disease ("COVID-19") was reported and in January 2020, the World Health Organization ("WHO") declared it a Public Health Emergency of International Concern. On February 28, 2020, the WHO raised its assessment of the COVID-19 threat from high to very high at a global level due to the continued increase in the number of cases and affected countries, and on March 11, 2020, the WHO characterized COVID-19 as a pandemic. A significant outbreak of epidemic, pandemic, or contagious diseases in the human population could result in a widespread health crisis that could adversely affect the broader economies, financial markets and overall demand environment for our products.

As a result of the COVID-19 pandemic, we temporarily closed our offices in March 2020 (including our corporate headquarters) in many countries except where we have been able to accommodate limited essential employees such as for the shipping of our hardware authentication tokens under revised procedures. Subsequently, certain geographies have experienced progress and regression in addressing the pandemic, including the distribution of vaccines, and therefore progress has been uneven and difficult to predict. We re-opened a limited number of our offices during 2020 and continued to date with limited capacity under revised procedures. We are unable to predict further re-openings or whether the initial re-openings will be successful or remain in place. We implemented certain travel restrictions, remote work arrangements and other measures and while our experience with this new situation has been mostly satisfactory to date, it has disrupted how we normally operate our business and may in the longer term impact our productivity, innovation and effectiveness such that our results are adversely affected. We have shifted customer events

to virtual-only experiences and we may deem it advisable to similarly alter, postpone or cancel entirely additional customer, employee or industry events in the future. Because we operate in multiple international locations, we expect there to be variability and additional complications from differing conditions and inconsistent guidance from numerous public health agencies.

In our hardware 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 hardware orders. Such issues have been managed however continuing disruptions in global transportation means we may be unable to satisfy 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 costs which reduce our margins. In addition, the global economic uncertainty associated with the COVID-19 pandemic has affected many of our customers differently and we believe those effects may include changes to ordering of hardware authentication tokens, mobile authentication software and delays in implementing certain security software projects. We are not able to predict at this time whether the COVID-19 pandemic will continue to affect ordering patterns, and to what extent such orders may return or in what specific quantities. This risk is in addition to the other risks associated with our business as stated elsewhere in "Risk Factors."

In our software business, we experienced some increased sales for products used in remote employee access and electronic signature in 2020 that we attribute in part to the COVID-19 pandemic. This increase may have been temporary, and we are unable to predict whether it will continue or decline. Moreover, the conditions caused by the COVID-19 pandemic can affect the rate of IT spending, the decision to start new IT projects, the timing of existing projects and the priority our customers place on various projects. While these factors may be positive for some of our software solutions such as electronic signature, these factors may be negative for our other software solutions. The COVID-19 pandemic could adversely affect our customers' ability or willingness to attend our events or to purchase our offerings, delay prospective customers' purchasing decisions, adversely impact our ability to provide on-site sales meetings or professional services to our customers, delay the provisioning of our offerings, lengthen payment terms, reduce the value or duration of their contracts, or affect attrition rates, all of which could adversely affect our future sales, operating results and overall financial performance. During the Summer of 2020, we began to experience some of the aforementioned scenarios, and this continued through the present, due in part to, we believe, global economic uncertainty connected with the continued seriousness of the COVID-19 pandemic. While we hope that the negative consequences on our business associated with the COVID-19 pandemic will subside, we cannot predict the impact with certainty.

If the restrictions on our employees, customers and others in the world continue or increase in order to limit the spread of COVID-19, the potential effects could continue and could be exacerbated, and our results of operations and overall financial performance may be harmed. The duration and extent of the impact from the COVID-19 pandemic depends on future developments that cannot be accurately predicted at this time, such as the severity, new strains and transmission rate of the virus, the extent and effectiveness of containment actions and vaccines, and the impact of these and other factors on our employees, customers, partners and vendors. If we are not able to respond to and manage the impact of such events effectively, our business will be harmed.

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, many of which are financial institutions. The loss of substantial sales to any one of them could adversely affect our operations and results. In fiscal 2021, 2020, and 2019, our top 10 largest customers contributed 22%, 21%, and 29%, respectively, of total worldwide revenue.

The return of a worldwide recession and/or regional economic downturns may further impact our business.

Our business is subject to economic conditions that may fluctuate in the major markets in which we operate. Factors that could cause economic conditions to fluctuate include, without limitation, recession, inflation, deflation,

interest rates, unemployment, consumer debt levels, general retail or commercial markets and consumer or business purchasing power or preferences.

If global 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 for our products, order cancellations, lower revenues, increased inventories, and lower gross
 margins;
- continued volatility in the global markets and fluctuations in exchange rates for foreign currencies and contracts or purchase orders in foreign currencies could negatively impact our reported financial results and condition;
- continued volatility in the prices for commodities and raw materials we use in our products could have a material adverse effect on our costs, gross margins, and ultimately our 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, 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;
- in the event of a contraction of our sales, dated inventory may result in a need for increased obsolescence reserves;
- 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.
- 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.

We are unable to predict potential future economic conditions, disruptions in the sovereign debt markets or other financial markets, regional recessions, or the effect of any such disruption or disruptions on our business and results of operations, but the consequences may be materially adverse. We believe that our business in the banking and financial services market in Europe would be impacted most directly by any such disruption and that the consequences may be materially adverse, as approximately 49% of our consolidated revenues originated in the EMEA region in 2021.

Disruptions in markets or the European Union may affect our liquidity and capital resources.

We believe our financial resources are adequate to meet our operating needs. However, disruptions in the sovereign debt markets or other financial markets, the Euro Monetary Union or the European Union, could materially adversely affect our liquidity and capital resources and expose us to additional currency fluctuation risk. Sufficiently adverse effects could cause us to modify our business plans.

Furthermore, in an adverse economic environment there is a risk that customers may delay their orders until the economic conditions improve further. 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.

We could incur substantial accounting related costs if we are unable to maintain an effective system of internal control over financial reporting.

In response to the material weakness in our internal control over financial reporting disclosed as of December 31, 2019, we expended significant resources to improve our internal control over financial reporting and the effectiveness of our disclosure controls and procedures. We expended significant resources, including accounting related costs and significant management oversight as we corrected the deficiencies. Management has determined that full remediation of the prior deficiencies in internal control over financial reporting that led to this material weakness occurred, disclosed in Item 9A of the annual report on Form 10-K for the year ended December 31, 2020. Investments will continue to be made to improve the control environment.

We cannot provide absolute assurance that additional material weaknesses, or significant deficiencies, in our internal controls will not 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. Material misstatement of our financial statements may result in a restatement, loss of investor and customer confidence, a decline in the market price of the Company's common stock, and potential sanctions or investigations by NASDAQ, the Securities and Exchange Commission or other regulatory authorities. Failure to remedy any material weakness in the Company's internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict the Company's future access to the capital markets.

We have a long operating history, but only modest accumulated profit.

Although we have reported net income (loss) of \$(30.6) million, \$(5.5) million, and \$7.9 million for the years ended December 31, 2021, 2020, and 2019, respectively, our retained earnings were \$143.2 million at December 31, 2021. Over our approximately 30 year operating history, we have operated at a loss for many of those years. Depending on the economic environment's changing conditions, business volatility, applicable rules and regulations, and our investment strategies, it may be difficult for us to sustain profitability on a GAAP basis. We may choose to invest for long term value which could decrease or eliminate short-term profit. We have now operated at a net loss for two years in a row and we cannot predict with certainty whether this will change in the future.

We derive revenue from a limited number of products.

A significant portion of our revenue is derived from the sales of our legacy authentication hardware, software, and related services. We anticipate a substantial portion of future revenue, will be derived from the same. If the sale of these products and services is impeded for any reason and we have not diversified our offerings into more products or markets, our business and results of operations would be negatively impacted. Further, we expect the growth of our hardware product sales to be minimal or negative over the long term in our traditional markets. If the rate of decline is more than expected and the aforementioned diversification is not enough to offset the decline, our results could be uneven and overall could be negative.

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

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. If revenue falls significantly below anticipated levels, our business would be seriously harmed.

A typical sales cycle in the financial services market is often six months or more. Larger banking transactions may take up to 18 months or more. Purchasing decisions for our products and services may be subject to delays due to many factors that are not within our control, such as:

- Changes to the regulatory framework;
- Time required for a prospective customer to recognize the need for our products;
- Significant expense of many security products and systems;
- Customer budgeting process; and
- Customer evaluation, testing and approval process.

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.

We have a great dependence on a limited number of suppliers and the loss of their manufacturing capability, components and technology could materially impact our operations.

In the event that the supply of components or finished products 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 United States or European Union that are adverse to trade, including enactment of protectionist legislation. In 2020, a portion of our hardware products became subject to tariffs. If such tariffs increase in amount or scope, our financial results could be negatively affected. In part to address these risks of manufacturing in mainland China, in 2020 we launched an initiative to establish limited manufacturing in the European Union. At this time, we do not know whether this project will be successful or how much this project could mitigate the risks related to Chinese manufacturing. Regardless of the location of manufacturing, we continue to be exposed to supply chain risks and uncertainties related to disruptions caused by the COVID-19 pandemic. In addition, portions of our software solutions are materially dependent on third parties who supply the underlying technology. Should we lose the ability to utilize such technology, or do so at a commercially reasonable price, our results of operations could be adversely affected.

We order some hardware components, such as processors, in advance of expected use and often produce finished goods prior to the receipt of executed customer orders. If orders are not received, we could suffer losses related to inventory that cannot be sold at full value.

In an attempt to minimize the risk of not having an adequate supply of component parts to meet demand and to take advantage of volume purchasing benefits, especially in situations where we have been notified that key processors will no longer be manufactured or supply chain difficulties emerge, we sometimes purchase multiple years' supply of parts based on internal forecasts of demand. In addition, 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.

Our success depends on establishing and maintaining strategic relationships with other companies to distribute our technology and products and, in some cases, for us to incorporate their technology into our products and services.

Part of our business strategy is to enter into strategic alliances and other cooperative arrangements with other companies in our industry. We currently are involved in cooperative efforts with respect to the incorporation of our products into products of others and vice versa, research and development efforts, marketing efforts and reseller arrangements. These relationships are generally non-exclusive, and some of our strategic partners also have cooperative

relationships with certain of our competitors. If we are unable to enter cooperative arrangements in the future or if we lose any of our current strategic or cooperative relationships, our business could be harmed. We do not control the time and resources devoted to such activities by parties with whom we have relationships. In addition, we may not have the resources available to satisfy expectations, which may adversely affect these relationships. These relationships may not continue, may not be commercially successful, or may require our expenditure of significant financial, personnel and administrative resources from time to time. Further, certain of our products and services compete with the products and services of our strategic partners.

We may not be able to maintain effective product distribution channels, which could result in decreased revenue.

We rely on both our direct sales force and an indirect channel distribution strategy for the sale and marketing of our products. We may be unable to attract distributors, resellers and integrators, as planned, that can market our products effectively and provide timely and cost-effective customer support and service. There is also a risk that some or all of our distributors, resellers or integrators may be acquired, may change their business models or may go out of business, any of which could have an adverse effect on our business. Further, our distributors, integrators and resellers may sell competing products. The loss of important sales personnel, distributors, integrators or resellers could adversely affect us.

We depend on our key personnel for the success of our business and the loss of one or more of our key personnel could have an adverse effect on our ability to manage our business or could be negatively perceived in the capital markets.

Our success and our ability to manage our business depend, in large part, upon the efforts and continued service of our senior management team. The loss of one or more of our key personnel could have a material adverse effect on our business and operations. It could be difficult for us to find replacements for our key personnel, as competition for such personnel is often intense. For example, in 2021, our Chief Executive Officer and Chief Financial Officer left the Company. Further, such a loss could be negatively perceived in the capital markets, which could reduce the market value of our securities.

If we fail to continue to attract and retain qualified personnel, our business may be harmed.

Our future success depends upon our ability to attract and retain highly qualified technical, sales and managerial personnel. Competition for such personnel is often intense and there can be no assurance that we can attract other highly qualified personnel in the future or may be able to do so only at significantly increased compensation. If we cannot retain or are unable to hire such key personnel, our business, financial condition and results of operations could be significantly adversely affected.

Changes in our effective tax rate may have an adverse effect on our results of operations.

Our future effective tax rates may be adversely affected by a number of factors including changes in the volume and mix of earnings and losses in jurisdictions with different statutory rates, changes in the valuation of our deferred tax assets and liabilities, and in deferred tax valuation allowances, increases in expenses not deductible for tax purposes, including the impairment of goodwill in connection with acquisitions, changes in share-based compensation expense, changes in available tax credits, the resolution of tax audits, adjustments to income taxes upon finalization of returns, and changes in tax laws or the interpretation of such tax laws and changes in generally accepted accounting principles. Any significant increase in our future effective tax rates could adversely impact net income for future periods.

Our worldwide income tax provisions and other tax accruals may be insufficient if any taxing authorities assume taxing positions that are contrary to our positions.

Significant judgment is required in determining our provision for income taxes and other taxes such as sales and VAT taxes. There are many transactions for which the ultimate tax outcome is uncertain. Some of these uncertainties arise as a consequence of intercompany agreements to purchase intellectual properties, allocate revenue and costs, determination of permanent establishment and other factors, each of which could ultimately result in changes once the arrangements are reviewed by taxing authorities. Although we believe that our approach to determining the amount of

such arrangements is reasonable, we cannot be certain that the final tax authority review of these matters will not differ materially from what is reflected in our historical income tax provisions and other tax accruals. Such differences could have a material effect on our income tax provisions or benefits, or other tax accruals, in the period in which such determination is made, and consequently, on our results of operations for such period.

Changes in global tax laws or in their interpretation or enforcement, could have a material adverse effect on our effective tax rate, results of operations, cash flows and financial condition.

We could be materially adversely affected by future changes in tax law or policy (or in their interpretation or enforcement) in the jurisdictions where we operate. These changes could be exacerbated by economic, budget or other challenges facing these jurisdictions. For example, foreign jurisdictions could impose tax rate changes along with additional corporate tax provisions that would disallow or tax perceived "base erosion" or profit shifting amongst jurisdictions. In addition, aspects of U.S. tax reform may lead foreign jurisdictions to respond by enacting additional tax legislation that results in an adverse effect on our effective tax rate, results of operations, cash flows and financial condition.

Acquisitions, divestitures and other strategic transactions present many risks, and failure to realize the financial and strategic goals we anticipate could have a material adverse effect on our business, results of operations, cash flows and financial condition.

We may evaluate and consider potential strategic transactions, including acquisitions of, or investments in, complementary businesses, technologies, services, products and other assets, divestitures, alliances, joint ventures and other portfolio actions. We also may enter into relationships with other businesses to expand our products and platform, which could involve preferred or exclusive licenses, additional channels of distribution, discount pricing or investments in other companies.

Our success depends, in part, upon our ability to identify suitable transactions; negotiate favorable contractual terms; comply with applicable regulations and receive necessary consents, clearances and approvals (including regulatory and antitrust clearances and approvals); integrate or separate businesses, operations technology and personnel; realize the full extent of the benefits, cost savings or synergies presented by strategic transactions; minimize potential losses of customers, business partners and key technical and managerial personnel; and minimize indemnities and potential disputes with buyers, sellers and strategic partners. In addition, execution or oversight of strategic transactions may result in the diversion of management attention from our existing business and may present financial, managerial and operational risks, including disruptions in our business because of the allocation of resources to consummate these transactions. Moreover, we might incur asset impairment charges related to acquisitions or divestitures that reduce our earnings.

With respect to acquisitions in particular, our failure to successfully structure or manage the transactions could seriously harm our financial condition or operating results. The expected benefits of any acquisition may not be realized. In connection with our recent acquisitions and any future purchases, we could face additional financial and operational risks beyond those described above, including: dilution of our stockholders, if we issue equity to fund these transactions; reduced liquidity, increased debt and higher amortization expenses; assumption of operating losses, increased expenses and liabilities; discovery of unanticipated issues and liabilities; failure to meet expected returns; and difficulty in maintaining financial reporting and internal control processes needed to be compliant with requirements applicable to companies subject to SEC reporting.

We also regularly review our portfolio 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.

Reported revenue may fluctuate widely due to the interpretation or application of accounting rules.

Our sales arrangements often include multiple elements, including hardware, services, software, maintenance and support. In addition, 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.

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 addition, we 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. 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.

The evolution of our business requires more complex development and go-to-market strategies, which involve significant risk.

Our increasing focus on developing and marketing a platform of solutions for identity management, authentication, risk analysis, fraud detection, digital business processes and related areas requires different development and go-to-market strategies than our historic hardware authentication business. We are developing, buying and licensing technology weighted toward software solutions and investment in research, development, product management, sales training and senior management. This transformation strategy has been in process for multiple years and currently continues and brings with it significant risks related to our choice of solutions and our ability to execute the strategy successfully. This strategy requires a greater focus on marketing and selling product suites and software solutions rather than selling hardware products for authentication and transaction signing. Consequently, we are developing, and must continue to develop, new strategies for marketing and selling our offerings. In addition, marketing and selling new solutions to enterprises requires significant investment of time and resources in order to train our employees and educate our customers on the benefits of our product offerings. These investments can be costly and the additional effort required to educate both customers and our own sales force can distract from efforts to sell existing products and services, or may not produce the desired results.

Risks Related to the Market

We face significant competition and if we lose or fail to gain market share our financial results will suffer.

The market for security and electronic signature products and services is highly competitive. Our competitors include organizations that provide products based upon approaches similar to and different from those that we employ. Many of our competitors have significantly greater financial, marketing, technical and other competitive resources than we do. As a result, our competitors may be able to adapt more quickly to new or emerging technologies and changes in customer requirements, or to devote greater resources to the promotion and sale of their products.

A decrease of average selling prices for our products and services could adversely affect our business.

The average selling prices for our products and services may decline as a result of competitive pricing pressures or a change in our mix of products, software and services. In addition, competition continues to increase in the market segments in which we participate and we expect competition to further increase in the future, thereby leading to increased pricing pressures. Furthermore, we anticipate that the average selling prices and gross profits for our products will decrease over product life cycles. To maintain or realize our revenue and gross margins, we must continue to

develop, or purchase and introduce new products and services that incorporate new technologies or increased functionality. If we experience such pricing pressures or fail to deliver new products and services relevant to our markets, our revenue and gross margins could decline, which could harm our business, financial condition and results of operations.

We may need additional capital in the future and our failure to obtain capital would interfere with our growth strategy.

Our ability to obtain financing will depend on a number of factors, including market conditions, our operating performance and investor or creditor interest. These factors may make the timing, amount, terms and conditions of any financing unattractive. They may also result in our incurring additional indebtedness or accepting stockholder dilution. If adequate funds are not available or are not available on acceptable terms, we may have to forego strategic acquisitions or investments, defer our product development activities, or delay the introduction of new products.

We experience variations in quarterly operating results and sales are subject to seasonality, both of which may result in a volatile stock price.

In the future, as in the past, our quarterly operating results may vary significantly, resulting in a volatile stock price. Factors affecting our operating results include:

- The level of competition;
- The size, timing, cancellation or rescheduling of significant orders;
- New product announcements or introductions by competitors;
- Technological changes in the market for our products including the adoption of new technologies and standards;
- Changes in pricing by competitors;
- Our ability to develop, introduce and market new products and product enhancements on a timely basis, if at all;
- Component costs and availability;
- Achievement of significant market share in particular markets followed by declines as buying cycles may be multiple years apart;
- The variability of revenue realized from individual customers as their buying patterns can vary significantly from period to period and is affected by the individual solutions purchased and the structure of the contract;
- Our success in expanding our sales and marketing programs;
- Market acceptance of new products and product enhancements;
- Changes in foreign currency exchange rates; and
- General economic conditions in the countries in which we operate.

We also experience seasonality or variation across the year in our markets. These trends can include the summer months, particularly in Europe, or the second half of the fiscal year is generally higher than the first half in terms of sales.

Our stock price may be volatile for reasons other than variations in our quarterly operating results, such as due to the limited number of our shares that trade in the public markets.

The market price of our common stock may fluctuate significantly in response to factors, some of which are beyond our control, including the following:

- Actual or anticipated fluctuations in our quarterly or annual operating results:
- Differences between actual operating results and results estimated by analysts that follow our stock and provide estimates of our results to the market;
- Differences between guidance relative to financial results, if given, and actual results;
- Changes in market valuations of other technology companies, and cybersecurity companies in particular;
- Investor acceptance of our strategies and the perception of our success in executing those strategies;
- Announcements by us or our competitors of significant technical innovations, contracts, acquisitions, strategic
 partnerships, joint ventures or capital commitments;
- Additions or departures of key personnel;
- Future sales of common stock, including from current and former directors and officers;
- The inclusion or exclusion of our stock in ETF's, indices and other benchmarks, and changes made to methodologies connected therewith;
- Trading volume fluctuations; and
- Reactions by investors to uncertainties in the world economy and financial markets.

Our stock repurchase program could affect the price of our common stock and increase volatility and may be suspended or terminated at any time, which may result in a decrease in the trading price of our common stock

On June 10, 2020, the Board of Directors authorized a share repurchase program ("program"). Under the program, we are authorized to repurchase shares of our common stock from time to time in the open market, in privately negotiated transactions, or otherwise, at prices that the Company deems appropriate and subject to market conditions, applicable law and other factors deemed relevant in the Company's sole discretion, up to an aggregate purchase price of \$50.0 million. The timing and actual number of shares repurchased depend on a variety of factors including the timing of open trading windows, price, corporate and regulatory requirements, and other market conditions. The program does not obligate the Company to repurchase any dollar amount or number of shares of common stock. The authorization is effective until June 10, 2022. Repurchases pursuant to our stock repurchase program could affect our stock price and increase its volatility. The existence of a stock repurchase program could also cause our stock price to be higher than it would be in the absence of such a program and could potentially reduce the market liquidity for our stock. There can be no assurance that any stock repurchases will enhance stockholder value because the market price of our common stock may decline below the levels at which we repurchased shares of common stock. Although our stock repurchase program is intended to enhance long-term stockholder value, short-term stock price fluctuations could reduce the program's effectiveness.

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

Mr. T. Kendall Hunt, our founder and former Chairman of the Board, beneficially owns approximately 10.2% of the outstanding shares of our common stock. In addition, Blackrock, Inc. holds approximately 12.8% of ownership, Legion Partners Asset Management holds approximately 6.9% of ownership, The Vanguard Group holds approximately 5.6% of ownership, and Legal & General Investment Management LTD holds approximately 5.1% of ownership.

The concentration of ownership may have the effect of a small number of investors promoting, discouraging, delaying or preventing a change in control and may also have an adverse effect on the market price of our common stock.

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

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

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

Our corporate charter authorizes the issuance of up to 500,000 shares of preferred stock with such designations, rights, powers and preferences as may be determined from time to time by our Board of Directors, including such dividend, liquidation, conversion, voting or other rights, powers and preferences as may be determined from time to time by the Board of Directors without further stockholder approval. The issuance of preferred stock could adversely affect the voting power or other rights of the holders of common stock. In addition, the authorized shares of preferred stock and common stock could be utilized, under certain circumstances, as a method of discouraging, delaying or preventing a change in control.

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

Although we strive to maintain constructive, ongoing communications with all of our stockholders, and welcome their views and opinions with the goal of enhancing value for all of our stockholders, our stockholders may from time to time 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.

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.

Further, actual or perceived actions of activist stockholders may cause significant fluctuations in our stock price based upon temporary or speculative market perceptions or other factors that do not necessarily reflect the Company's

underlying fundamentals and prospects. In 2021, Legion Partners Asset Management launched a proxy contest that settled prior to our annual stockholder meeting in June 2021. Pursuant to that settlement (which was disclosed at that time) we made certain changes to our Board of Directors. Such proxy contest and related matters required significant time and attention from our directors and officers, and we incurred significant incremental expenses. We cannot predict whether additional proxy contests or related matters will occur in the future and the time and cost associated with such matters.

Risks Related to Technology and Intellectual Property

Technological changes occur rapidly in our industry and our development of new products and features is critical to maintain our revenue. New or disruptive technology from competitors or future competitors could decrease the amount of business from our current customers which represent a large majority of our revenue.

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. Our future revenue growth and operating profit 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. In addition, a substantial number of our competitors are much larger organizations with many more financial and human resources.

Our business could be negatively impacted by cyber security incidents and other disruptions.

Our use of technology is increasing and is critical in at least three primary areas of our business:

- 1. Software and information systems that we use to help us run our business more efficiently and cost effectively, which are increasingly cloud-based tools;
- 2. The products we have traditionally sold and continue to sell to our customers contain technology that incorporates the use of secret numbers and encryption technology; and
- Solutions delivered on a software-as-a-service basis, from both public and private cloud models, which may process
 and store confidential, personal, health and financial information and which may rely on third parties for some or
 all of the solution.

A cyber incident in any of these areas of our business could disrupt our ability to take orders or deliver products or services to our customers, cause us to suffer significant monetary and other losses and significant reputational harm, or substantially impair our ability to grow the business. We expect that there will continue to be unauthorized attempts intended to capture business information or exploit computing power to impede the performance of our products, to access our customers' information, or harm our reputation as a company. The processes used by hackers to access or sabotage technology products, services and networks are evolving in sophistication and increasing in frequency. We could experience a security incident due to various causes including intentional or unintentional conduct of our employees, vendors, technology partners and others that have access to or store our information.

In July 2011, we discovered a cyber-incident related to DigiNotar B.V. shortly after we purchased the company. The hacking incident at DigiNotar B.V. led to the termination of DigiNotar B.V's registration as a certification service provider and DigiNotar B.V.'s bankruptcy. Since that time, we have experienced several security incidents, although none have been material. Even though we have established teams, processes and strategies to protect our corporate and solution assets, we may incur losses from such events as a result of unanticipated costs associated with data security incidents.

In addition, because we are in the cyber security industry, we could be targeted by hackers more than other companies and if a material cyber security breach occurred related to corporate or customer information, the reputational harm and potential lost future business could be greater than other companies not in our industry. We have taken various

measures to strengthen the security of our products and our systems, to establish information security governance procedures and to train our employees. However, we are the subject of a large volume of hacking attempts and our defenses might not always be effective. If a hacking attempt were to be successful and lead to a material data breach, then it could harm our business, financial condition and results of operations, both in the current period and for a significant future period of time.

We rely upon Amazon Web Services to operate portions of our platform and any disruption of or interference with our use of Amazon Web Services or other vendors' material would adversely affect our business, results of operations and financial condition

We outsource portions of our cloud infrastructure to Amazon Web Services, or AWS. Customers of our products need to be able to access our platform at any time, without interruption or degradation of performance. AWS runs its own platform that we access, and we are, therefore, vulnerable to service interruptions at AWS. We have experienced and expect that in the future we may experience interruptions, delays and outages in service and availability from time to time due to a variety of factors, including infrastructure changes, human or software errors, website hosting disruptions and capacity constraints. Capacity constraints could be due to a number of potential causes including technical failures, natural disasters, fraud or security attacks. In addition, if our security, or that of AWS, is compromised, our products or platform are unavailable or our users are 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. To the extent that we do not effectively address capacity constraints, either through AWS 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 AWS may adversely affect our ability to meet our customers' requirements.

Any of the above circumstances or events may harm our reputation, possibly move 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. These risks are also present with our other cloud service infrastructure vendors beside AWS. In addition, we also utilize strategic vendors to resell or incorporate third party technology and if these material vendors experienced a data breach, outage in service or other failure, we could be prevented from meeting our customers' requirements.

Some of our products contain third-party, open-source software and failure to comply with the terms of the underlying open-source software licenses could restrict our ability to sell our products or otherwise result in claims against us.

Our products are distributed with software programs licensed to us by third-party authors under open-source licenses, which may include the GNU General Public License, the GNU Lesser Public License, the BSD License and the Apache License. Third-party, open-source programs are typically licensed to us for no fee and the underlying license agreements could require us to make available to users the source code for such programs, as well as the source code for any modifications or derivative works we create based on these third-party, open-source software programs.

We do not provide end users a copy of the source code to our proprietary software because we believe that the manner in which our proprietary software is aligned or communicates with the relevant open-source programs does not create a modification, derivative work or extended version of, or a work based on, that open-source program requiring the distribution of our proprietary source code.

Our ability to commercialize our products by incorporating third-party, open-source software may be restricted because, among other reasons:

- the terms of open-source license agreements are unclear and subject to varying interpretations, which could result in unforeseen obligations regarding our proprietary products or claims of infringement;
- it may be difficult to determine the developers of open-source software and whether such licensed software infringes another party's intellectual property rights;
- competitors may have equal access to these open source products, which may help them develop competitive products; and
- open-source software potentially increases customer support costs because licensees can modify the software and potentially introduce errors, which could also increase the risk of vulnerabilities available to hackers.

We must continue to attract and retain highly skilled technical personnel for our research and development efforts.

The market for highly skilled technical talent is highly competitive. If we fail to attract, train, assimilate and retain qualified technical personnel for our research and development and product management efforts, we will experience delays or failures in introductions of new or modified products, and services, failures in adequate analysis of technology or acquisitions in the market, loss of clients and market share and a reduction in revenue.

We cannot be certain that our research and development activities will be successful.

While management is committed to enhancing our current product offerings and introducing new products, we cannot be certain our research and development activities will be successful. Furthermore, we may not have sufficient financial resources to identify and develop new technologies and bring new products to market in a timely and cost effective manner, and we cannot ensure that any such products will be commercially successful.

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 will be reaching 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 realize new revenue to replace and/or expand the revenue realized from discontinued products or services could adversely affect our business and operating results.

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

As we continue to grow SaaS products, we will need to continue to evolve our processes to meet a number of regulatory, intellectual property, contractual and service 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 HIPAA and GDPR, protecting our services from external threats, maintaining continuous service levels and data security expected by our customers, preventing inappropriate use of our services, incurring significant upfront 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 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, 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.

We depend significantly upon our proprietary technology and intellectual property and the loss of or successful challenge to our proprietary rights could require us to divert management attention and could reduce revenue and increase our operating costs.

From time to time, 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 segments 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. 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. Any such claim, with or without merit, could result in costly litigation and distract management from day-to-day operations. If we are not successful in defending such claims, we could be required to stop selling, delay shipments, redesign our products, pay monetary amounts as damages, enter into royalty or licensing arrangements, or satisfy indemnification obligations with our customers. Royalty or licensing arrangements we may seek in such circumstances may not be available to us on commercially reasonable terms or at all. We have made and expect to continue making significant expenditures to establish our intellectual property rights and to investigate, defend and settle claims related to the use of technology and intellectual property rights as part of our strategy to manage this risk. In addition, we license and use software from third parties in our business. These third party software licenses may not continue to be available to us on acceptable terms or at all, and may expose us to additional liability. This liability, or our inability to use any of this third party software or technology, could result in shipment delays or other disruptions in our business that could materially and adversely affect our operating results.

We rely principally on trade secrets to protect much of our intellectual property in cases where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. Although our employees are subject to confidentiality obligations, this protection may be inadequate to deter or prevent misappropriation of our confidential information. We may be unable to detect unauthorized use of our intellectual property or otherwise take appropriate steps to enforce our rights. Failure to obtain or maintain trade secret protection could adversely affect our competitive business position. If we are unable to prevent third parties from infringing or misappropriating our copyrights, trademarks or other proprietary information, our competitive position could be adversely affected. In the course of conducting our business, we may inadvertently infringe the intellectual property rights of others, resulting in claims against us or our customers. Our contracts generally indemnify our customers for third-party claims for intellectual property infringement by the services and products we provide. In the past, we have resolved several claims of patent infringement brought against us and a claim brought against a customer related to our technology. None of these claims were material to our financial results but this may not always be the case. The expense of defending these 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.

Our patents may not provide us with competitive advantages.

We hold numerous patents in the United States and in other countries, which cover multiple aspects of our technology. A substantial part of our patents cover the Digipass product line. Our patents expire between now and more than 10 years from now. There can be no assurance that we will continue to develop proprietary products or technologies that are patentable, that any issued patent will provide us with any competitive advantages or will not be challenged by third parties, or that patents of others will not hinder our competitive advantage. Although certain of our technologies are patented, there are other organizations that offer products with comparable functionality that employ different technological solutions and compete with us for market share.

We are subject to warranty and product liability risks.

A malfunction of or design defect in our products which results in a breach of a legal obligation or physical harm or damage from our products 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 and testing of our software solutions, 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, an actual or perceived breach of network or security at one of our customers or publicly known defect or perceived defect in our products could adversely affect the market's perception of us and our products, and could have an adverse effect on our reputation and the demand for our products. Similarly, an actual or perceived breach of security within our own systems could damage our reputation and have an adverse effect on the demand for our products.

There is significant government regulation of technology imports and exports and to the extent 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. 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. 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, we cannot guarantee that such issues will not arise in the future. In addition, we cannot predict the future government regulation of aspects of our business and such regulation could be detrimental to our results.

We employ cryptographic technology in our authentication products that uses complex mathematical formulations.

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:

- 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.

Risks Related to International Operations

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 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. In 2019, approximately 89% of our revenue and approximately 72% 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 any or all of which could result in a disruption in our business and a decrease in our revenue. These include:

- Inconsistent regulations and unexpected changes in regulatory requirements;
- Export controls relating to our technology;
- Difficulties and costs of staffing and managing international operations, including maintaining internal controls and closing or restructuring such operations;
- Potentially adverse tax consequences;
- Wage and price controls or protection;
- Uncertain protection for intellectual property rights, contractual rights and collecting accounts receivable;
- Imposition of trade barriers;
- Differing technology standards;
- Uncertain demand for our solutions in individual countries, even if there were past sales;
- Linguistic and cultural differences;
- A widely distributed workforce;
- Difficulty in providing support and training to customers in certain international locations;
- Economic and political instability, including military or terrorist actions and uncertainties in market conditions caused by the COVID-19 pandemic; and
- Social unrest, health crises, and cultural barriers or changes.

We are subject to foreign currency exchange rate fluctuations and risks, and improper management of that risk could adversely affect our business, results of operations, and financial conditions.

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. We do not currently hold forward exchange contracts to exchange foreign currencies for U.S. Dollars to offset currency rate fluctuations.

Changes in the European regulatory environment regarding privacy and data protection regulations could have a material adverse impact on our results of operations.

In Europe, we are subject to the 1995 European Union ("EU") Directive on Data Protection ("1995 Data Protection Directive"), which requires EU member states to impose minimum restrictions on the collection and use of personal data that, in some respects, are more stringent, and impose more significant burdens on subject businesses, than current privacy standards in the United States. We may also face audits or investigations by one or more foreign government agencies relating to our compliance with these regulations that could result in the imposition of penalties or fines. The EU member state regulations 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. In addition, certain member states have adopted more stringent data protection standards. The Company addressed these requirements by certification to the U.S.-EU Safe Harbor Frameworks prior to such Frameworks being invalidated in October 2015 by the European Court of Justice. The Company continues to adapt its compliance through the use of standard contractual clauses and other methods however it is difficult to be certain that compliance has been achieved. The General Data Protection Regulation ("GDPR") replaced the 1995 Data Protection Directive effective May 25, 2019, creating significant impacts on how businesses can collect and process the personal data of EU individuals. We have expended significant resources to comply, but those methods may be subject to scrutiny by data protection authorities in EU member states. The costs of compliance with, 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.

We must comply with governmental regulations setting environmental standards. In addition, governments or customers may demand increased disclosure related to environment, social and other issues.

Governmental regulations setting environmental standards influence the design, components or operation of our products. New regulations and changes to current regulations are always possible and, in some jurisdictions, regulations may be introduced with little or no time to bring related products into compliance with these regulations. Our failure to comply with these regulations may prevent us from selling our products in a certain country. In addition, these regulations may increase our cost of supplying the products by forcing us to redesign existing products 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. 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 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"). These directives 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 to these laws and regulations, we may be subject to increased disclosure obligations related to environmental, social or other issues from governments or customers. If we do not make such disclosures, or do so in a way that is not perceived as positive, our business could be adversely affected.

The vote by the United Kingdom (UK) to leave the European Union (EU) or the actions by China in Hong Kong could adversely affect our financial results.

In June 2016, UK voters approved a referendum to withdraw the UK's membership from the EU, which is commonly referred to as "Brexit". We have operations in the UK and the EU, and as a result, we face risks associated with the potential uncertainty and disruptions that may follow Brexit, including with respect to volatility in exchange

rates and interest rates and potential material changes to the regulatory regime applicable to our operations in the UK. Brexit could adversely affect European or worldwide political, regulatory, economic or market conditions and could contribute to instability in global political institutions, regulatory agencies and financial markets. Any of these effects of Brexit, and others we cannot anticipate or that may evolve over time, could adversely affect our business, financial condition, and operating results. We have customers and manufacturing partners connected to Hong Kong. The recent unrest in Hong Kong and the related actions by China could adversely affect our business.

We or our suppliers may be impacted by new regulations related to climate change.

In addition to the European environmental regulations noted above, we or our suppliers may become subject to new laws enacted with regards to climate change. In the event that new laws are enacted or current laws are modified in countries in which we or our suppliers operate, our flow of product may be impacted and/or the costs associated with our products may increase dramatically, either of 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.

The effects of regulations relating to conflict minerals may adversely affect our business.

The Dodd-Frank Wall Street Reform and Consumer Protection Act contains provisions to improve transparency and accountability concerning the supply of certain minerals and derivatives (collectively "Conflict Minerals") which may originate from the conflict zones of the Democratic Republic of Congo (DRC) and adjoining countries (collectively, "Covered Countries"). As a result, in August 2012 the SEC established annual disclosure and reporting requirements for companies using Conflict Minerals in their products, including products manufactured by third parties. Like many electronic devices, our hardware products contain Conflict Minerals and are subject to the disclosure and reporting requirements. Compliance with these rules also requires due diligence including country of origin inquiries to determine the sources of Conflict Minerals used in our products.

As required, we filed our annual reports related to products manufactured. We reported that we determined we had no reason to believe Conflict Minerals used in our products may have originated in Covered Countries.

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.

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 in countries with a history of corruption and transactions with foreign governments increase the risks associated with our international activities.

We are subject to the U.S. Foreign Corrupt Practices Act (FCPA), and other 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. Violations of the FCPA may result in severe criminal or civil sanctions, including suspension or debarment from U.S. government contracting, and we may be subject to other liabilities, which could negatively affect our business, operating results and financial condition. Violations of the U.K. Bribery Act may result in severe criminal or civil sanctions and we may be subject to other liabilities that could negatively affect our business operating results and financial condition.

Item 1B - Unresolved Staff Comments

None.

Item 2 - Properties

Our corporate headquarters is located in Chicago, Illinois. Our international headquarters is in Zurich, Switzerland. Our European operational headquarters is in Brussels, Belgium, along with our logistics facility. We conduct sales and marketing, research and development and customer support activities from various locations. Our primary global research and development center is in Montreal, Canada. We have additional research and development facilities in the Netherlands, Cambridge, United Kingdom, Bordeaux, France and Vienna, Austria.

We have sales personnel in our offices near Brussels, Belgium, Singapore, Tokyo, Japan, Dubai, Zurich, Switzerland, Chicago, Illinois, London, United Kingdom, Boston, Massachusetts, and in several field offices around the world.

All of our properties are leased.

Item 3 - Legal Proceedings

We are a party to or have intellectual property subject to litigation and other proceedings that arise in the ordinary course of our business. These types of matters could result in fines, penalties, compensatory or treble damages or non-monetary sanctions or relief. We believe the probability is remote that the outcome of each of these matters, including the legal proceedings described below, will have a material adverse effect on the corporation as a whole, notwithstanding that the unfavorable resolution of any matter may have a material effect on our financial results in any particular interim reporting period. Among the factors that we consider in this assessment are the nature of existing legal proceedings and claims, the asserted or possible damages or loss contingency (if estimable), the progress of the case, existing law and precedent, the opinions or views of legal counsel and other advisers, our experience in similar cases and the experience of other companies, the facts available to us at the time of assessment and how we intend to respond to the proceeding or claim. Our assessment of these factors may change over time as individual proceedings or claims progress.

Although we cannot predict the outcome of legal or other proceedings with certainty, where there is at least a reasonable possibility that a loss may have been incurred, U.S. GAAP requires us to disclose an estimate of the reasonably possible loss or range of loss or make a statement that such an estimate cannot be made. We follow a process in which we seek to estimate the reasonably possible loss or range of loss, and only if we are unable to make such an estimate do we conclude and disclose that an estimate cannot be made. Accordingly, unless otherwise indicated below in our discussion of legal proceedings, a reasonably possible loss or range of loss associated with any individual legal proceeding cannot be estimated.

We include various types of indemnification clauses in our agreements. These indemnifications may include, but are not limited to, infringement claims related to our intellectual property, direct damages and consequential damages. The type and amount of such indemnifications vary substantially based on our assessment of risk and reward associated with each agreement. We believe the estimated fair value of these indemnification clauses is minimal, and we cannot determine the maximum amount of potential future payments, if any, related to such indemnification provisions. We have no liabilities recorded for these clauses as of December 31, 2021.

A complaint was filed on August 20, 2020 against OneSpan and certain of its officers, asserting claims for purported violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 (the "Exchange Act"), and SEC Rule 10b-5 promulgated thereunder, based on certain alleged material misstatements and omissions. The case is captioned Almendariz v. OneSpan Inc., et al., No. 1:20-cv-04906 (N.D. Ill.) (the "Securities Class Action"). Specifically, the plaintiff in the Securities Class Action alleges, among other things, that certain statements about OneSpan's business were misleading because of defendants' failure to disclose that OneSpan purportedly had inadequate internal procedures and controls over financial reporting and related disclosures; and OneSpan purportedly downplayed the negative impacts of immaterial errors in its financial statements. On April 28, 2021, the Securities Class Action was dismissed by the court without prejudice.

A complaint, related in subject matter to the Securities Class Action, was filed on October 23, 2020 against certain of OneSpan's officers and directors, and names OneSpan as a nominal defendant. The case is captioned Klein v. Boroditzky, et al., No. 1:20-cv-06310 (N.D. Ill.) (the "Derivative Action" and, collectively with the Securities Class Action, the "Litigation"). The plaintiff asserts claims for breach of fiduciary duty, abuse of control and corporate waste, as well as a claim for contribution under Sections 10(b) and 21D of the Exchange Act, based on the same alleged wrongdoing pled in the Securities Class Action. On February 16, 2021, on the parties' agreed motion, the court stayed the action pending a decision on the then-anticipated motion to dismiss in the Securities Class Action. On June 28, 2021 the Klein case was dismissed by the court without prejudice.

On April 2, 2021, a different purported shareholder of the Company, represented by one of the same law firms representing plaintiff in the Klein case, filed second derivative suit in the Northern District of Illinois arising out of the same events that led to the filing of the Securities Class Action. The case is captioned Herrera v. Boroditsky, et al., 1:21-cv-01789 (N.D. Ill.). The factual allegations are substantially similar to those in Klein, except that the complaint does not contain express allegations regarding the pendency of the Securities Class Action and only one cause of action, for breach of fiduciary duty, is asserted. On June 28, 2021 the Herrera case was dismissed by the court without prejudice.

From time to time, we have been involved in litigation and claims incidental to the conduct of our business, such as compensation claims from current or former employees, or commercial disputes with vendors. We expect that to continue. Excluding matters specifically disclosed above, we are not a party to any lawsuit or proceeding that, in management's opinion, is likely to have a material adverse effect on its business, financial condition or results of operations.

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 the range of high and low daily closing prices of our common stock on the NASDAQ Capital Market for the past two years.

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
-		
2020	High	Low
2020 Fourth quarter	High \$ 26.60	Low \$ 18.20
Fourth quarter	\$ 26.60	\$ 18.20

On February 18, 2022, there were 153 registered holders and approximately 9,860 street name holders of the Company's common stock.

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 the Company's results of operations, financial condition, cash requirements, plans for expansion and other factors deemed relevant by the Board of Directors. The Company intends to retain any future earnings for use in its business and therefore does not anticipate paying any cash dividends in the foreseeable future.

Recent Sales of Unregistered Securities

None

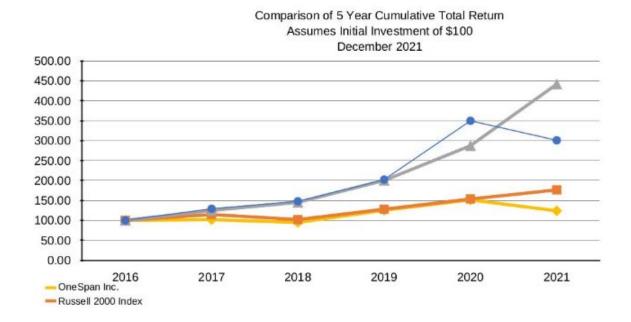
Issuer Purchases of Equity Securities

During the year ended December 31, 2020, the Board of Directors authorized a share repurchase program ("program"), pursuant to which the Company can repurchase up to \$50.0 million of 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 June 10, 2022 unless the total amount has been used or authorization has been cancelled.

During the year ended December 31, 2021, the Company repurchased 0.3 million shares of the Company's stock for \$7.5 million in the aggregate at an average cost of \$21.82 per share under its repurchase program. An additional 0.3 million shares of its common stock were withheld to satisfy the mandatory tax withholding requirements upon vesting of restricted stock and restricted stock units. There were no shares of stock repurchased during the fourth quarter of 2021.

Stock Performance Graph

The Stock Performance Graph below compares the cumulative total return through December 31, 2021 assuming reinvestment of dividends, by an investor who invested \$100.00 on December 31, 2015, in each of (i) our common stock, (ii) the Russell 2000 index, (iii) the Standard Industrial Code Index 3577 – Computer Peripheral Equipment, NEC and (iv) a comparable industry (the peer group) index selected by the Company. 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. The stock price performance shown on the graph below is not necessarily indicative of future price performance.



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 "Forward Looking Statements" at the beginning of this Form 10-K.

The Company has excluded discussion of the comparison of the years ended December 31, 2020 and 2019 from this Form 10-K., which can be found in the <u>annual report on Form 10-K for the period ended December 31, 2020</u>, filed on February 25, 2021.

Revision of Previously Issued Financial Statements

This information should be read in conjunction with the consolidated financial statements and the notes thereto included in this Annual Report. We have revised our prior period financial statements to reflect the correction of immaterial errors as described in this Annual Report in Notes to the Consolidated Financial Statements, Note 3 – Revision of Previously Issued Financial Statements.

COVID-19 Pandemic Response and Impact

We continue to actively address the effects of the COVID-19 pandemic and its impact globally. Due to economic uncertainty connected to the COVID-19 pandemic, we have experienced lengthened sales cycles and reduced demand for some of our security solutions.

Financial Results and Outlook

In the current and future periods, we may experience weaker customer demand, requests for discounts or extended payment terms, customer bankruptcies, supply chain disruption, employee staffing constraints and difficulties, government restrictions or other factors that could negatively impact the Company and its business, operations and financial results.

We believe that we will emerge from these events well positioned for long-term growth, though we cannot reasonably estimate the duration and severity of the pandemic or its ultimate impact on the global economy and our business results. See Part I – Item 1A – Risk Factors of this Form 10-K for additional information regarding the potential impact of COVID-19 on the Company.

Overview

OneSpan Inc. and its wholly owned subsidiaries design, develop and market digital solutions for identity, security, and business productivity that protect and facilitate electronic transactions via mobile and connected devices. We are a global leader in digital identity and anti-fraud solutions to financial institutions and other businesses. We establish trust in people's identities, the devices they use, and the transactions they execute. We make digital banking accessible, secure, easy, and valuable. Our solutions secure access to online accounts, data, assets, and applications for global enterprises; provide tools for application developers to easily integrate security functions into their web-based and mobile applications; and facilitate end-to-end financial agreement automation. Our solutions enhance the ability of companies to onboard new customers and prevent hacking attacks against online and mobile transactions while providing an exceptional experience for remote customers.

We offer cloud based and on-premises solutions using both open standards and proprietary technologies. Some of our proprietary technologies are patented. Our products and services are used for a wide range of use cases including e-signing Business-to-Business ("B2B"), Business-to-Employee ("B2E") and Business-to-Consumer ("B2C") agreements, delivering passwordless authentication experiences, mitigating fraud, authorizing financial transactions, and achieving regulatory compliance.

Online and mobile application owners and publishers benefit from our expertise in multi-factor authentication, document signing, transaction signing, application security, remote customer onboarding, and in mitigating hacking attacks. Our convenient and proven security solutions enable low friction and trusted interactions between businesses, employees, and consumers across a variety of online and mobile platforms.

Our primary growth objectives include:

Making digital banking more accessible, secure, easy and valuable;

- Expanding our portfolio of solutions that enable institutions to mitigate fraud, reduce operational costs, comply
 with regulations, easily on-board customers, adaptively authenticate transactions and reduce time to deploy;
- Automating and securing digital customer journeys to remotely verify identities, mitigate application fraud, and secure account openings and transactions;
- Increasing sales to existing customers and acquiring new customers;
- Driving increased demand for our products in new applications, new markets, and new territories;
- · Expanding our channel partner ecosystem; and
- Strategically acquiring companies that expand our technology portfolio or customer base and increase our recurring revenue.

Our Business Model

We offer our products through a product sales and licensing model or through our services platform, which includes our cloud-based service offerings.

Our solutions are sold worldwide through our direct sales force, as well as through distributors, resellers, systems integrators, and original equipment manufacturers. Our sales force is able to offer customers a choice of an on-site implementation using our traditional on-premises model or a cloud implementation for some solutions using our services platform.

Industry Growth

Economic instability related to the COVID-19 pandemic impacted our results for the year ended December 31, 2021. As economic conditions recover, we believe the global markets for authentication, fraud mitigation, agreement automation, and electronic signature solutions will continue to grow driven by dynamic and growing threat environments, increased focus on the digital experience for mobile and online users, new government regulations, and continued growth in electronic commerce. The rate of growth in each country around the world may vary significantly based on local culture, competitive position, economic conditions, and the use of technology.

Economic Conditions

Our revenue may vary significantly with changes in the economic conditions in the countries in which we currently sell products. With our current concentration of revenue in Europe and specifically in the banking and finance vertical market, significant changes in the economic outlook for the European Banking market and its regulatory framework may have a significant effect on our revenue.

The COVID-19 pandemic and the various responses of governments around the world have caused significant and widespread uncertainty, volatility and disruptions in the U.S. and global economies, including in the regions in which we operate. See Part I, Item 1A – Risk Factors of this Form 10-K for additional information regarding the potential impact of COVID-19 on the Company.

Cybersecurity Risks

Our use of technology is increasing and is critical in three primary areas of our business:

1. Software and information systems that we use to help us run our business more efficiently and cost effectively;

- 2. The products we have traditionally sold and continue to sell to our customers for integration into their software applications contain technology that incorporates the use of secret numbers and encryption technology; and
- 3. New products and services that we introduced to the market are focused on processing information through our servers or in the cloud.

We believe that the risks and consequences of potential incidents in each of the above areas are different.

In the case of the information systems we use to help us run our business, we believe that an incident could disrupt our ability to take orders or deliver product to our customers, but such a delay in these activities would not have a material impact on our overall results. To minimize this risk, we actively use various forms of security and monitor the use of our systems regularly to detect potential incidents as soon as possible.

In the case of products that we have traditionally sold, we believe that the risk of a potential cyber incident is minimal. We offer our customers the ability to either create the secret numbers themselves or have us create the numbers on their behalf. When asked to create the numbers, we do so in a secure environment with limited physical access and store the numbers on a system that is not connected to any other network, including other OneSpan networks, and similarly, is not connected to the Internet.

In the case of our cloud-based solutions, which involve the processing of customer information, we believe a cyber incident could have a material impact on our business. While our revenue from cloud-based solutions comprises a minority of our revenue today, we believe that these solutions will provide substantial future growth. A cyber incident involving these solutions in the future could substantially impair our ability to grow the business and we could suffer significant monetary and other losses and significant reputational harm.

To minimize the risk, we review our product security and procedures on a regular basis. Our reviews include the processes and software code we are currently using as well as the hosting platforms and procedures that we employ. We mitigate the risk of cyber incidents through a series of reviews, tests, tools and training. Certain insurance coverages may apply to certain cyber incidents. Overall, we expect the cost of securing our networks will increase in future periods, whether through increased staff, systems or insurance coverage.

While we are not aware of any cyber incidents during the year ended December 31, 2021 that had a significant impact on our business, it is possible that we could experience an incident in future years, which could result in unanticipated costs.

Currency Fluctuations

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. In 2019, approximately 89% of our revenue and approximately 72% of our operating expenses were generated/incurred 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 revenue and 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, 2021 was denominated in U.S. Dollars. 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 2020, approximately 44% of our revenue was denominated in U.S. Dollars, 51% was denominated in Euros and 5% was denominated in other currencies. In 2019, approximately 47% of our revenue was denominated in U.S. Dollars, 49% was denominated in Euros, and 4% was denominated in other currencies.

In general, to minimize the net impact of currency fluctuations on operating income, we attempt to denominate an amount of billings in a currency such that it would provide a hedge against the operating expenses being incurred in

that currency. We expect that changes in currency rates may also 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 \$3.0 million in 2021, comprehensive gain of \$4.5 million in 2020 and comprehensive gain of \$1.5 million in 2019. 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 gains aggregated less than \$0.1 million and less than \$0.1 million for the years ended December 31, 2021 and December 21, 2020, respectively. We reported foreign exchange transaction losses of \$1.5 million during the year ended December 31, 2019.

Restructuring Plan

During the fourth quarter of 2021, the Board approved a restructuring plan ("Plan") designed to advance the Company's operating model, streamline its business, and enhance its capital resources. The Plan began the first of two phases constituting a multi-year strategic plan on December 16, 2021. The Company did not take any actions or record any charges in connection with the Plan during the year ended December 31, 2021.

Components of Operating Results

Revenue

We generate revenue from the sale of our hardware products, software licenses, subscriptions, maintenance and support, and professional services. 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 hardware products and software licenses, which can be provided on a perpetual or term basis.
- Service and other revenue. Service and other revenue includes subscription solutions (which is our definition of software-as-a-service solutions), 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.
- Cost of service and other revenue. Cost of service and other revenue primarily consists of costs related to subscription solutions, including personnel and equipment costs, and personnel costs of employees providing professional services and maintenance and support.

Gross Profit

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 55% and 65% 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 2021 compared to 2020 resulted in an increase in operating expenses of approximately \$2.4 million in 2021.

The comparison of operating expenses can also be impacted significantly by costs related to our stock-based and long-term incentive plans. For full-year 2021, 2020, and 2019, operating expenses included \$5.2 million, \$6.0 million, and \$5.3 million, respectively, related to stock-based and long-term incentive plans. 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 continue to invest in sales resources in key focus areas, 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 expenses to increase in absolute dollars as we
 continue to invest in our future solutions, although our research and development expenses may fluctuate as a
 percentage of total revenue.
- General and administrative. General and administrative expenses consist primarily of personnel costs, legal and
 other professional fees, and long-term incentive compensation. We expect general and administrative expenses to
 increase in absolute dollars although our general and administrative expenses may fluctuate as a percentage of total
 revenue.
- Amortization/impairment of intangible assets. Acquired intangible assets are amortized over their respective
 amortization periods, and are periodically evaluated for impairment.

Interest Income, Net

Interest income 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"). All our IP in our traditional authentication business is owned by two subsidiaries, one in the U.S. and one in Switzerland. These two subsidiaries have entered into agreements with most of the other OneSpan entities under which those other entities provide services to our U.S. and Swiss subsidiaries on either a percentage of revenue or on a cost plus basis or both. 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 tend to flow to the U.S. company and Swiss company. In 2021, losses flowing to the U.S. company are expected to be taxed at a rate of 21% to 25%, while losses flowing to the Swiss company are expected to be taxed at a rate ranging from 11% to 15%, plus Swiss withholding tax of an additional 5%. A Canadian and UK subsidiary currently sell to and service global customers directly. In addition, many of our OneSpan entities operate as distributors for all of our OneSpan products.

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 geographic mix of earnings of our foreign subsidiaries primarily depends on the level of pretax income of our service provider subsidiaries and the benefit realized in Switzerland through the sales of product. The level of pretax income in our service provider subsidiaries is expected to vary based on:

- the staff, programs and services offered on a yearly basis by the various subsidiaries as determined by management, or
- 2. the changes in exchange rates related to the currencies in the service provider subsidiaries, or
- 3. the amount of revenues that the service provider subsidiaries generate.

For items 1 and 2 above, there is a direct impact in the opposite direction on earnings of the U.S. and Swiss entities. Any change from item 3 is generally expected to result in a larger change in income in the U.S. and Swiss entities in the direction of the change (increased revenues expected to result in increased margins/pretax profits and conversely decreased revenues expected to result in decreased margins/pretax profits).

In addition to the provision of services, the intercompany agreements transfer the majority of the business risk to our U.S. and Swiss subsidiaries. As a result, the contracting subsidiaries' pretax income is reasonably assured while the pretax income of the U.S. and Swiss subsidiaries varies directly with our overall success in the market.

In November 2015, we acquired OneSpan Canada Inc. (formerly eSignLive), a foreign company with substantial IP and net operating losses and other tax carryforwards. The tax benefit of the carryforwards has been fully reserved as realization has not been deemed more likely than not.

In May 2019, we acquired Dealflo Limited ("Dealflo"), a foreign company with substantial IP and net operating losses. The tax benefit of existing loss carryforwards at the time of acquisition was not recorded as the Company determined they were not more likely than not to be realized.

The Company recorded changes in valuation allowance of \$15.0 million and \$2.7 million, as of December 31, 2021 and 2020, 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 2021 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 2021 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.

Results of Operations

The following tables summarize our consolidated results of operations for the periods presented.

Revenue

Revenue by Product: We generate revenue from the sale of our hardware products, software licenses, subscriptions, professional services, and maintenance and support. Product and license revenue includes hardware products and software licenses. Service and other revenue includes subscription solutions (which is our definition of software-as-a-service solutions), maintenance and support, and professional services.

	Years ended December 31,				Change		
	 2021		2020		\$	%	
			(in tho	usands)			
Revenue							
Hardware	\$ 79,501	\$	81,849	\$	(2,348)	(3)%	
Software licenses	40,857		51,137		(10,280)	(20)%	
Subscription	38,213		27,788		10,425	38%	
Professional services	4,634		5,689		(1,055)	(19)%	
Maintenance, support and other	51,276		49,228		2,048	4%	
Total revenue	\$ 214,481	\$	215,691	\$	(1,210)	(1)%	

Total revenue decreased \$1.2 million or 1%, during the year ended December 31, 2021 compared to the year ended December 31, 2020. The overall decrease in revenue was comprised of a \$16.0 million decrease in perpetual software license revenue and a \$2.3 million decrease in hardware revenue, partially offset by an increase in recurring revenue, which is the portion of our revenue subject to future renewal. Recurring revenue, comprised of subscription, term-based software license, and maintenance, support and other revenue, increased \$18.2 million or 18% during the year ended December 31, 2021, compared to the year ended December 31, 2020. An increase in recurring revenue is reflective of the company's strategy to increase its recurring revenue through an expanded recurring revenue customer base.

Product and license revenue decreased \$12.6 million or 9% during the year ended December 31, 2021 compared to the year ended December 31, 2020. The decrease was largely driven by lower perpetual software license sales, partially offset by an increase in term-based software license sales, which we attribute to our strategy focused on growing recurring software revenue over perpetual licenses combined with softened demand as a result of the pandemic.

Services and other revenue increased by \$11.4 million, or 14% during the year ended December 31, 2021 compared to the year ended December 31, 2020. The increase for the year ended December 31, 2021 compared to the same period in 2020 was driven by higher subscription and maintenance revenue, which is reflective of the company's strategy to increase its recurring revenue through an expanded recurring revenue customer base.

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. Factors affecting our results include the size, timing, cancellation or rescheduling of significant orders. Revenue realized from individual customers can also vary widely as their buying patterns can change from period to period. We also experience seasonality or variation across the year in our markets. These trends can include lower sales during the summer months, particularly in EMEA. As a result of the volatility in our business, we believe that the overall strength of our business is best evaluated over a longer term where the impact of transactions in any given period is not as significant as in a quarter-over-quarter comparison.

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 Dece	mber 31,			
	2021 2020		\$ Change	% Change	
	(in thousan	ds)			
Revenue					
EMEA	\$ 104,878	\$ 117,086	(\$ 12,208)	(10)%	
Americas	68,646	53,171	15,475	29%	
APAC	40,957	45,434	(4,477)	(10)%	
Total revenue	\$ 214,481	\$ 215,691	(\$ 1,210)	(1)%	
% of Total Revenue					
EMEA	49%	54%			
Americas	32%	25%			
APAC	19%	21%			

For the year ended December 31, 2021, revenue generated in EMEA was \$12.2 million or 10% lower than the same period in 2020, driven by lower software license revenue and lower hardware revenue.

For the year ended December 31, 2021, revenue generated in the Americas was \$15.5 million or 29% higher than the same period in 2020, driven primarily by higher subscription revenue.

For the year ended December 31, 2021, revenue generated in the Asia Pacific region was \$4.5 million or 10% lower than the same period in 2020, driven by lower software license and hardware revenue.

Cost of Goods Sold and Gross Margin

	Years ended Dec			
	2021	2020	\$	% Change
		(in thousands)		
Cost of goods sold				
Product and license	\$ 46,196	\$ 46,013	\$ 183	0%
Services and other	25,350	21,619	3,731	17%
Total cost of goods sold	\$ 71,546	\$ 67,632	\$ 3,914	6%
Gross profit	\$ 142,935	\$ 148,059	(5,124)	(3)%

Gross margin

Product and license	62%	65%	
Services and other	73%	74%	
Total gross margin	67%	69%	

The cost of product and license revenue increased \$0.2 million or 0% during the year ended December 31, 2021 compared to the year ended December 31, 2020. The increase in cost of product and license was driven by higher RASP licensing costs in conjunction with higher software license sales, as well as higher shipping costs for certain hardware products.

The cost of services and other revenue increased by \$3.7 million, or 17% during the year ended December 31, 2021 compared to the year ended December 31, 2020. The increase in cost of services and other revenue is reflective of higher subscription revenue, which has increased cloud-based infrastructure costs and higher third-party app shielding costs.

Gross profit decreased \$5.1 million, or 3% during the year ended December 31, 2021 compared to the year ended December 31, 2020. Gross profit margin was 67% for the year ended December 31, 2021, compared to 69% for the year ended December 31, 2020. The decrease in profit margin for the year ended December 31, 2021 reflects higher cloud-based services costs and increased shipping costs for certain hardware products.

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 increased revenue by \$3.8 million for the year ended December 31, 2021. Had currency rates in 2021 been equal to rates in 2020, the gross profit margins would have been approximately 2 percentage point lower for the year ended December 31, 2021.

Operating Expenses

		Years ended	Decen			
	2021 2020		2020	\$	% Change	
		(in tho	usand			
Operating costs						
Sales and marketing	\$	62,730	\$	56,663	\$ 6,067	11%
Research and development		47,414		41,194	6,220	15%
General and administrative		53,031		46,338	6,693	14%
Amortization of intangible assets		5,888		9,122	(3,234)	(35)%
Total operating costs	\$	169,063	\$	153,317	\$ 15,746	10%

Sales and Marketing Expenses

Sales and marketing expenses increased \$6.0 million, or 11% during the year ended December 31, 2021 compared to the year ended December 31, 2020. The increase was driven by higher headcount and higher expense per head.

Average full-time sales and marketing employee headcount for year ended December 31, 2021 was 368, compared to 356 for year ended December 31, 2020. Average headcount in 2021 was 3% higher than in 2020.

Research and Development Expenses

Research and development expenses increased \$6.2 million, or 15% during the year ended December 31, 2021 compared to the year ended December 31, 2020. The increase in expense for the year ended December 31, 2021 was primarily driven by higher personnel costs due to higher headcount and higher expense per head.

Average full-time research and development employee headcount for year ended December 31, 2021 was 363, compared to 328 for year ended December 31, 2020. Average headcount in 2021 was 11% higher than in 2020.

General and Administrative Expenses

General and administrative expenses increased \$6.7 million, or 14% during the year ended December 31, 2021 compared to the year ended December 31, 2020. The increase in general and administrative expenses was driven by higher personnel costs, outside professional services fees related to our second quarter proxy contest, and consulting fees related to our strategic action plan.

Average full-time general and administrative employee headcount for year ended December 31, 2021 was 135, compared to 125 for the year ended December 31, 2020. Average headcount in 2021 was 8% higher than in 2020.

Amortization of Intangible Assets

Amortization of intangible assets for the year ended December 31, 2021 was \$5.9 million, compared to \$9.1 million for the year ended December 31, 2020, a decrease of \$3.2 million or 35%. The decrease was driven by certain assets acquired in the Silanis acquisition becoming fully amortized.

Interest Income (expense), net

	Years ended Dece	ember 31,		
	2021	2020	\$ Change	% Change
	(in thousan	ids)		
Interest income (expense), net	(\$ 1)	\$ 404	(\$ 405)	NM

Interest income (expense), net was less than \$(0.1) million for the year ended December 31, 2021, compared to \$0.4 million for the year ended December 31, 2020. The decrease in interest income for 2021 compared to 2020 reflects a decrease in our cash equivalents and short-term investment balance.

Other Income (Expense), Net

	Years ended Dece	mber 31,		
	2021	2020	\$ Change	% Change
	(in thousand	ds)		
Other income (expense), net	(\$ 14)	\$ 1,434	(\$ 1,448)	-101%

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, non-recurring expenses.

Other income (expense), net for the year ended December 31, 2021 was less than \$(0.1) million, compared to \$1.4 million for the year ended December 31, 2020. Lower income was driven by losses resulting from exchange losses on transactions.

Provision for income taxes

	Y ears ended Dec	ember 31,		
	2021 2020		\$	% Change
	(in thousa	nds)		
Provision for income taxes	\$ 4,441	\$ 2,035	\$ 2,406	118%

The Company recorded income tax expense for the year ended December 31, 2021 of \$4.4 million compared to \$2.0 million for the year ended December 31, 2020. The increase in expense recorded for the year ended December 31, 2021 was primarily attributable to an increase in the valuation allowance recorded on U.S. deferred tax assets.

Loss Carryforwards Available

At December 31, 2021, we have gross deferred tax assets of \$43.7 million resulting from US, foreign and state NOL carryforwards of \$148.6 million and other foreign deductible carryforwards of \$97.5 million. At December 31, 2021, we have a valuation allowance of \$31.3 million against deferred tax assets related to certain carryforwards. See Note 13 – Income taxes for more information regarding carryforwards and valuation allowances.

Liquidity and Capital Resources

As of December 31, 2021, we had net cash balances (total cash and cash equivalents) of \$63.4 million and short-term investments of \$35.1 million. Short-term investments consist 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. At December 31, 2020, we had net cash balances of \$88.4 million and short-term investments of \$26.9 million.

We are in lease agreements that require letters of credit to secure the obligations. The restricted cash related to these letters of credit is recorded in non-current assets on the Consolidated Balance sheet in the amounts of \$0.8 million and \$0.8 million at December 31, 2021 and December 31, 2020, respectively.

As of December 31, 2021, we held \$45.0 million of cash and cash equivalents in subsidiaries outside of the United States. Of that amount, \$43.9 million is not subject to repatriation restrictions, but may be subject to taxes upon repatriation.

We believe that our financial resources are adequate to meet our operating needs over the next twelve months.

Our cash flows are as follows:

	Years ended Dece	ember 31,
	2021	2020
	(in thousan	ids)
Cash provided by (used in):		
Operating activities	(\$ 2,745)	\$ 14,922
Investing activities	(10,980)	(4,664)
Financing activities	(10,394)	(7,060)
Effect of foreign exchange rate changes on cash and cash equivalents	(895)	914

Operating Activities

Cash generated by (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. 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, 2021, \$2.7 million of cash was used in operating activities. Cash of \$14.9 million and \$18.2 million was provided by operating activities for the years ended December 31, 2020 and 2019, respectively.

Our working capital at December 31, 2021 was \$98.0 million, a decrease of \$33.9 million or 26% from \$131.9 million at December 31, 2020. The decrease is due to a lower operating income driven largely by higher personnel costs and certain non-recurring expenses related to our proxy contest and strategic action plan.

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, 2021 and December 31, 2020 cash of \$11.0 million and \$4.7 million, respectively, was used in investing activities. The increase in cash used in investing activities during the year ended December 31, 2021 compared to the year ended December 31, 2020, was primarily driven by the timing of short-term investment purchases and maturities.

Financing Activities

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

For the year ended December 31, 2021, net cash used in financing activities was \$10.4 million, which was comprised of \$7.5 million of common stock repurchased and \$2.9 million of tax payments for restricted stock issuances.

For the year ended December 31, 2020, net cash used in financing activities was \$7.1 million, which was comprised of \$5.0 million of common stock repurchased and \$2.0 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 \$45.6 million, including \$15.4 million of inventory purchase obligations which are expected to be consummated in the next 12 months, \$26.9 million of committed hosting arrangements which will be used in the next one to three years, and \$3.3 million for other software agreements related to the administration of our business which range from one to five years.

We have operating lease obligations of \$12.7 million which will expire in the next one to eight years The operating lease obligations do not include common area maintenance ("CAM") 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 \$5.6 million due within the next one to three years, which primarily represent deemed repatriation tax from 2017. The Company had \$0.5 million and \$0.5 million of unrecognized tax benefits as of December 31, 2021 and December 31, 2020, respectively, which have been set aside in a reserve in accordance with ASC 740 *Income Taxes*. The amounts are not included in the tax payable amounts above as the timing of payment of such obligations, if any, is not determinable.

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 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 the Company from a customer, are excluded from revenue. Shipping and handling costs associated with outbound freight after 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 software licenses, and Services and Other, which is inclusive of software-as-a-service (which we refer to as "subscription", or "SaaS"), maintenance and support, and professional services.

Product Revenue: 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.

License Revenue: Revenue from the sale of software licenses is recorded upon 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. Contracts with customers for distinct licenses of intellectual property include perpetual licenses, which grant the customer unlimited access to the software, and term licenses which limit the customer's access to the software to a specific time period. We offer term licenses ranging from one to five years in length. Customer payments normally correspond with delivery for perpetual licenses. 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 would 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.

Subscription Revenue: We generate subscription revenues from our digital agreements and digital security 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.

Maintenance, Support and Other: 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: 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.

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 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 standalone 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 method.

Credit Losses

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.

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

In December 2019, the FASB issued ASU 2019-12, *Simplification for Accounting for Income Taxes*, which removes certain exceptions for recognizing deferred taxes for investments, performing intra-period allocation and calculating income taxes in interim periods. The ASU also adds guidance to reduce complexity in certain areas, including recognizing deferred taxes for tax goodwill and allocating taxes to members of a consolidated group. ASU

2020-12 was effective beginning January 1, 2021. The adoption of this standard did not have a material impact on the Company's condensed consolidated financial statements.

In March 2020, the FASB issued ASU 2020-04, Facilitation of the Effects of Reference Rate Reform on Financial Reporting. This update provides optional expedients and exceptions for applying generally accepted accounting principles to certain contract modifications and hedging relationships that reference London Inter-bank Offered Rate (LIBOR) or another reference rate expected to be discontinued. The guidance is effective upon issuance and can be applied through December 31, 2022. The adoption of this standard did not have a material impact on the Company's condensed consolidated financial statements.

In November 2021, the FASB issued ASU 2021-10, *Government Assistance: Disclosures by Business Entities about Government Assistance*, 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. We are currently assessing the effect that the ASU will have on our consolidated financial statements and related disclosures.

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

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

Foreign Currency Exchange Risk – In 2021, approximately 86% 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 statements of operations. Our business transactions are spread across numerous countries and currencies. This geographic diversity reduces the risk to our operating results. 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, 2021. 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, the Company's interest income would increase or decrease approximately \$0.2 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, appearing on pages F-1 through F-38 of this Form 10-K, and in Item 7 under the heading Management's Discussion and Analysis of Financial Condition and Results of Operations.

Item	9 -	Changes	in and	l Disa	greements	with	Accountants on	Accounting	and	Financia	l Disc	closure

None.

Item 9A - Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, who, respectively, are our principal executive officer and principal financial officer, conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) as of December 31, 2021. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure (i) information required to be disclosed by us in our reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and (ii) information required to be disclosed by us in our reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Based upon that evaluation, our management have concluded that the Company's disclosure controls and procedures are effective as of December 31, 2021, to give reasonable assurance that the information required 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. Internal control over financial reporting is defined in Rule 13a-15(f) and 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, the Company's principal executive and principal financial officers and effected by the Company's board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and 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.

Our management, led by our Chief Executive Officer and Chief Financial Officer, assessed the effectiveness of our internal control over financial reporting as of December 31, 2021, using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control—Integrated Framework (2013).

Management's evaluation of our internal control over financial reporting determined that the Company's internal control over financial reporting was effective based on those criteria as of December 31, 2021.

KPMG LLP, an independent registered public accounting firm, has audited the consolidated financial statements as of and for the year ended December 31, 2021 included in this Annual Report on Form 10-K, and has issued its report on the effectiveness of the Company's internal control over financial reporting as of December 31, 2021, included on page 51 of this annual report.

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, 2021, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting

Limitations on the Effectiveness of Controls

Internal control over financial reporting has inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements will not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate, this risk. 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.

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors OneSpan Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited OneSpan Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2021, 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 Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2021 and 2020, 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, 2021, and the related notes and financial statement schedule II (collectively, the consolidated financial statements), and our report dated February 22, 2022 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. 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 audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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

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inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

Chicago, Illinois February 22, 2022

PART III

Item 10 - Directors, Executive Officers and Corporate Governance

All information in response to this Item is incorporated by reference to the "Directors and Executive Officers" and "Section 16(a) Beneficial Ownership Compliance" sections of OneSpan's Proxy Statement to be filed with the SEC for the 2021 Annual Meeting of Stockholders.

The following sets forth certain information with regard to each executive officer of the Corporation. 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. Prior to joining OneSpan, he spent five years as CEO at Forcepoint, a global leader in cybersecurity. There he was responsible for transforming the company's offerings from predominantly on-premises to a cloud-consumption model. From January 2021 to May 2016, he served as President at Arbor Networks, a subsidiary of Danaher, where he was responsible for building cloud DDoS platforms and network-based advanced threat protection systems. Prior to that, he was the CEO of Veracode from April 2006 to May 2011, a SaaS pioneer of cloud-based software security testing platforms. Earlier in his career, he served as Vice President and General Manager of Symantec's Consumer Division, responsible for serving hundreds of millions of customers while delivering a superior end-user experience. Mr. Moynahan is 52 years old.

JAN KEES VAN GAALEN — Mr. van Gaalen has served as OneSpan's Interim Chief Financial Officer since October 2021. Since December 2019, he has been a consultant to technology companies involved in SaaS, Big Data, AI, IT consulting and outsourced services. He served in chief financial officer roles at C&J Energy Services Inc. from September 2018 through December 2019, at Kennametal Inc. from September 2015 to September 2018, and at Dresser-Rand Inc. from April 2013 to July 2015. Earlier in his career, Mr. van Gaalen held various internationally-based CFO and other finance executive roles. Mr. van Gaalen is 65 years old.

STEVEN R. WORTH —Mr. Worth has served as OneSpan's General Counsel, Chief Compliance Officer and Corporate Secretary since April 2016. Mr. Worth also has executive responsibility for corporate information security and product related security compliance. Prior to joining OneSpan, Mr. Worth spent five years at cloud software company SilkRoad Technology where he served as an Executive Vice President. Prior to that, Mr. Worth served five years as Vice President, General Counsel and Corporate Secretary of Diamond Management and Technology Consultants, an international publicly traded technology services company. Earlier in his career, Mr. Worth practiced law with the international firm Winston & Strawn. Mr. Worth is 51 years old.

Item 11 - Executive Compensation

The information in response to this Item is incorporated by reference to the "Executive Compensation" section of OneSpan's Proxy Statement to be filed with the SEC for the 2022 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 2021 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 2022 Annual Meeting of Stockholders.

Item 14 - Principal Accounting Fees and Services

The information in response to this Item is incorporated by reference to the "Report of the Audit Committee" section of OneSpan's Proxy Statement to be filed with the SEC for the 2022 Annual Meeting of Stockholders.

PART IV

Item 15 - Exhibits and Financial Statement Schedules

- (a) The following documents are filed as part of this 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-38 of this Form 10-K:

Report of Independent Registered Public Accounting Firm

Consolidated Balance Sheets as of December 31, 2021 and 2020

Consolidated Statements of Operations for the Years Ended December 31, 2021, 2020 and 2019

Consolidated Statements of Comprehensive Income (Loss) for the Years Ended December 31, 2021, 2020 and 2019

Consolidated Statements of Stockholders' Equity for the Years Ended December 31, 2021, 2020 and 2019

Consolidated Statements of Cash Flows for the Years Ended December 31, 2021, 2020 and 2019

Notes to Consolidated Financial Statements

(2) The following consolidated financial statement schedule of the company is included on page F-39 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 Form 10-K or incorporated by reference as set forth at the end of the list of exhibits:

Exhibit	
Number	Description

2.1 Agreement for the Sale and Purchase of the Entire Issued Capital of Cronto Limited dated May 20, 2013. (Incorporated by reference – Form 8-K filed May 23, 2013.)

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Exhibit Number	Description
2.2	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 – Form 8-K filed October 13, 2015.)
2.3	Stock Purchase Agreement, dated May 30, 2019 between VASCO Digital Automation Limited and shareholders of Dealflo Limited (incorporated by reference – Form 8-K filed June 1, 2018.)
2.4	Share Sale and Purchase Agreement by and among VASCO Data Security International, Inc., A.O.S. Holding B.V., Filipan Beheer B.V., Mr. Mladen Filipan and Pijnenburg Beheer N.V., dated February 4, 2005 (Incorporated by reference - Form 8-K filed February 8, 2005.)
3.1	Certificate of Incorporation of Registrant, as amended. (incorporated by reference – Form 8-K filed June 1, 2018.)
3.2	Bylaws of Registrant, as amended and restated January 3, 2020. (Incorporated by reference - Form 8-K filed on January 7, 2019.)
4.1	Specimen of Registrant's Common Stock Certificate. (Incorporated by reference to the Registrant's Registration Statement on Form S-4, as amended (Registration No. 333-35563), originally filed on September 12, 1997.)
4.2*	Form of Award Agreement for Restricted Shares under the VASCO Data Security International, Inc. 2009 Equity Incentive Plan with respect to awards granted January 5, 2017. (Incorporated by reference – Form 10-K filed March 10, 2017.)
4.3*	Form of Award Agreement for Restricted Shares under the VASCO Data Security International, Inc. 2009 Equity Incentive Plan with respect to awards granted January 4, 2019. (Incorporated by reference – Form 10-K filed March 8, 2018.)
4.4*	Form of Award Agreement for Performance Shares under VASCO Data Security International, Inc. 2009 Equity Incentive Plan with respect to awards granted January 4, 2019. (Incorporated by reference – Form 10-K filed March 8, 2018.)
4.5*	Fiscal Year 2019 Form of Award Agreement for Deferred Stock under the VASCO Data Security International, Inc. 2009 Equity Incentive Plan. (Incorporated by reference – Form 10-K filed March 8, 2018.)
4.6*	Form of Award Agreement for Restricted Stock Units under the OneSpan Inc. 2020 Omnibus Incentive Plan. (Incorporated by reference – Form 10-K filed March 16, 2020.)
4.7*	Form of Award Agreement for Performance-based Restricted Stock Units under the OneSpan Inc. 2020 Omnibus Incentive Plan. (Incorporated by reference – Form 10-K filed March 16, 2020.)
4.8*	Form of Award Agreement for Restricted Stock Units for Non-Employee Directors under the OneSpan Inc. 2020 Omnibus Incentive Plan. (Incorporated by reference – Form 10-K filed March 16, 2020.)
4.9*	OneSpan Inc. Cash Award Long-Term Incentive Plan Agreement under the OneSpan Inc. 2020 Omnibus Incentive Plan. (Incorporated by reference – Form 10-K filed March 16, 2020.)
10.1*	VASCO Data Security International, Inc. 2009 Equity Incentive Plan, effective December 19, 2008. (Incorporated by reference to the Registrant's Definitive Proxy Statement pursuant to Schedule 14A, filed with the SEC on April 30, 2009.)
10.2*	Employment Agreement, effective November 29, 2021, by and between OneSpan Inc. and Matthew P. Moynahan. (Incorporated by reference – Form 8-K filed November 15, 2021.)

 Services Agreement, dated as of October 5, 2021, by and between ONESPAN North America Inc. van Gaalen. (Incorporated by reference – Form 8-K filed October 8, 2021.) Employment Agreement, dated April 18, 2016 by and between VASCO Data Security Internation Steven Worth. (Incorporated by reference – Form 10-K filed February 25, 2021.) OneSpan Inc. 2019 Omnibus Incentive Plan (incorporated by reference from Attachment A to the Definitive Proxy Statement filed with the Securities and Exchange Commission on April 26, 2019. Amended Corporate Governance Guidelines of the Board of Directors of One Span Inc. and Subsic (Incorporated by reference – Form 10-K filed February 25, 2021.) 	Registrant's
 10.4* Employment Agreement, dated April 18, 2016 by and between VASCO Data Security Internation Steven Worth. (Incorporated by reference – Form 10-K filed February 25, 2021.) 10.5* OneSpan Inc. 2019 Omnibus Incentive Plan (incorporated by reference from Attachment A to the Definitive Proxy Statement filed with the Securities and Exchange Commission on April 26, 2019. 14.1 Amended Corporate Governance Guidelines of the Board of Directors of One Span Inc. and Subside 	Registrant's
Steven Worth. (Incorporated by reference – Form 10-K filed February 25, 2021.) 10.5* OneSpan Inc. 2019 Omnibus Incentive Plan (incorporated by reference from Attachment A to the Definitive Proxy Statement filed with the Securities and Exchange Commission on April 26, 2019. 14.1 Amended Corporate Governance Guidelines of the Board of Directors of One Span Inc. and Subside	Registrant's
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(Incorporated by reference – Form 10-K filed February 25, 2021.)	y 25, 2021.)
	y 25, 2021.)
14.2 OneSpan Inc. Code of Conduct and Ethics. (Incorporated by reference – Form 10-K filed February	
Subsidiaries of Registrant. (Incorporated by reference – Form 10-K filed February 25, 2021.)	
23 <u>Consent of KPMG LLP.</u>	
31.1 Rule 13a-14(a)/15d-14(a) Certification of Principal Executive Officer pursuant to Section 302 of the	he Sarbanes-
Oxley Act of 2002, dated February 22, 2022.	
31.2 Rule 13a-14(a)/15d-14(a) Certification of Principal Financial Officer pursuant to Section 302 of th	ne Sarbanes-
Oxley Act of 2002, dated February 22, 2022.	
32.1 Section 1350 Certification of Principal Executive Officer pursuant to Section 906 of the Sarbanes-	-Oxley Act of
2002, dated February 22, 2022.	
32.2 Section 1350 Certification of Principal Financial Officer pursuant to Section 906 of the Sarbanes-C	Oxley Act of
2002, dated February 22, 2022.	
101.INS XBRL Instance Document – the instance document does not appear in the Interactive Data File be	ecause 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	
The cover page interactive data file does not appear in the Interactive Data File because its XBRL embedded within the Inline XBRL document	tags are

^{*} Management contract or compensatory plan or arrangement required to be filed as an exhibit to this Annual Report on Form 10-K.

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

Report of Independent Registered Public Accounting Firm	F-2
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The following consolidated financial statement schedule is included herein:	
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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.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of OneSpan Inc. and subsidiaries (the Company) as of December 31, 2021 and 2020, 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, 2021, and the related notes and financial statement schedule II (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2021, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 22, 2022 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the 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 audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

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

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arrangements to identify the distinct performance obligations. The Company recognized total revenue of \$214 million, a portion of which related to contracts containing software licenses, for the year ended December 31, 2021.

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 22, 2022

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

	De	ecember 31,	D	ecember 31,
ACCEPTED		2021		2020
ASSETS				
Current assets	Ф	62.200	Ф	00.204
Cash and equivalents	\$	63,380	\$	88,394
Short term investments		35,108		26,859
Accounts receivable, net of allowances of \$1,419 in 2021 and \$4,135 in 2020		56,612		57,537
Inventories, net		10,345		13,093
Prepaid expenses		7,594		7,837
Contract assets		4,694		7,202
Other current assets		9,356		6,256
Total current assets		187,089		207,178
Property and equipment, net		10,757		11,835
Operating lease right-of-use assets		9,197		11,356
Goodwill		96,174		97,552
Intangible assets, net of accumulated amortization		21,270		27,196
Deferred income taxes		3,786		7,030
Contract assets - non-current		195		1,877
Other assets		13,803		11,179
Total assets	\$	342,271	\$	375,203
LIABILITIES AND STOCKHOLDERS' EQUITY				
Current liabilities				
Accounts payable	\$	8,204	\$	5,684
Deferred revenue		54,617		43,417
Accrued wages and payroll taxes		16,607		13,649
Short-term income taxes payable		1,103		2,618
Other accrued expenses		7,668		8,334
Deferred compensation		877		1,602
Total current liabilities		89,076		75,304
Long-term deferred revenue		9,125		11,730
Long-term lease liabilities		10,180		12,399
Other long-term liabilities		7,770		10,423
Long-term income taxes payable		5,054		6,095
Deferred income taxes		1,286		1,912
Total liabilities		122,491		117,863
Stockholders' equity		122,171		117,003
Preferred stock: 500 shares authorized, none issued and outstanding at December				
31, 2021 and December 31, 2020				
Common stock: \$.001 par value per share, 75,000 shares authorized; 40,593 and 40,353				
shares issued; 40,001 and 40,103 shares outstanding at December 31, 2021 and				
December 31, 2020, respectively		40		40
Additional paid-in capital		100,250		98,819
Treasury stock, at cost, 592 and 250 shares outstanding at December 31, 2021 and		100,230		70,017
December 31, 2020, respectively		(12,501)		(5,030)
Retained earnings		143,173		173,731
Accumulated other comprehensive loss		(11,182)		(10,220)
Total stockholders' equity	ø	219,780	¢.	257,340
Total liabilities and stockholders' equity	\$	342,271	\$	375,203

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

		For the years ended December 31,					
	_	2021		2020		2019	
Revenue							
Product and license	\$	120,358	\$	132,986	\$	183,313	
Services and other		94,123		82,705		70,171	
Total revenue		214,481		215,691		253,484	
Cost of goods sold							
Product and license		46,196		46,013		67,077	
Services and other		25,350		21,619		18,569	
Total cost of goods sold	_	71,546		67,632		85,646	
Gross profit		142,935		148,059		167,838	
Operating costs							
Sales and marketing		62,730		56,663		57,819	
Research and development		47,414		41,194		42,463	
General and administrative		53,031		46,338		43,897	
Amortization of intangible assets		5,888		9,122		9,470	
Total operating costs	_	169,063		153,317		153,649	
Operating income (loss)		(26,128)		(5,258)		14,189	
Interest income (expense), net		(1)		404		747	
Other income (expense), net	_	(14)		1,434		(527)	
Income (loss) before income taxes		(26,143)		(3,420)		14,409	
Provision for income taxes		4,441		2,035		6,545	
Net income (loss)	<u>\$</u>	(30,584)	\$	(5,455)	\$	7,864	
Net income (loss) per share							
Basic	\$	(0.77)	\$	(0.14)	\$	0.20	
Diluted	\$	(0.77)	\$	(0.14)	\$	0.20	
Weighted average common shares outstanding							
Basic		39,614		40,035		40,050	
Diluted		39,614		40,035		40,136	

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

	For the years ended December 31,				
	2021	2020	2019		
Net income (loss)	\$ (30,584)	\$ (5,455)	\$ 7,864		
Other comprehensive loss					
Cumulative translation adjustment, net of tax	(2,997)	4,534	1,543		
Pension adjustment, net of tax	2,056	(1,459)	(1,551)		
Unrealized losses on available-for-sale securities	(21)				
Comprehensive income (loss)	\$ (31,546)	\$ (2,380)	\$ 7,856		

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

	Commo				Retained	Co	ccumulated Other mprehensive		Total ckholders				
Description Balance at December 31,	Shares	Amou	nt S	hares	_	Amount	Capital		Earnings	ln	come (Loss)	_	Equity
2018	40,225	4	Λ				02 210		171 576		(12 207)		251 620
Net income (loss)	40,223	4	U			_	93,310		171,576 7,864		(13,287)		251,639 7,864
Foreign currency	-						<u> </u>		7,004				7,804
translation adjustment, net													
of tax		_	_			_			_		1,543		1,543
Stock-based compensation		_	_				3,368				1,545		3,368
Tax payments for stock							3,300						3,300
issuances	(18)	_	_	_		_	(569)		_		_		(569)
Pension adjustment, net of	(10)						(00)						(00)
tax	_	_	_	_			_		_		(1,551)		(1,551)
Balance at December 31,					_	_				-	(1,001)	_	(1,001)
2019	40,207	\$ 4	0	_	\$	— \$	96,109	\$	179,440	\$	(13,295)	\$ 2	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	40,103	\$ 4	0	250	\$	(5,030)\$	98,819	\$	173,731	\$	(10,220)	\$ 2	257,340
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)
Share repurchase	(342)	_	-	342		(7,471)	_		_		_		(7,471)
Pension adjustment, net of													
tax	_	-	-	—		_	_		_		2,056		2,056
Unrealized gain (loss) on													
available-for-sale securities					_					_	(21)	_	(21)
Balance at December 31,	40.001	Φ.	0	500	Ф	(10.501) #	100.050	Ф	1.40.170	Ф	(11.102)	Φ.	210.700
2021	40,001	\$ 4	<u> </u>	592	\$	(12,501)\$	100,250	\$	143,173	\$	(11,182)	\$ 2	219,780

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

	Twelve months ended December 31,							
		2021	2020	2019				
Cash flows from operating activities:								
Net loss from operations	\$	(30,584)	\$	(5,455)	\$	7,864		
Adjustments to reconcile net loss from operations to net cash								
provided by (used in) operations:								
Depreciation and amortization of intangible assets		8,926		12,003		11,545		
Loss on disposal of assets		13		118		69		
Deferred tax benefit		2,823		(1,487)		(1,624)		
Stock-based compensation		4,354		4,740		3,368		
Changes in operating assets and liabilities:								
Accounts receivable		2,047		5,181		(4,786)		
Allowance for doubtful accounts		(2,705)		1,611		1,372		
Inventories, net		2,209		6,725		(5,391)		
Contract assets		3,787		(191)		1,740		
Accounts payable		2,716		(5,237)		3,628		
Income taxes payable		(2,525)		(5,642)		158		
Accrued expenses		3,089		(3,124)		(1,286)		
Deferred compensation		(725)		574		(334)		
Deferred revenue		9,713		8,342		1,465		
Other assets and liabilities		(5,883)		(3,236)		456		
Net cash provided by (used in) operating activities		(2,745)		14,922		18,244		
Cash flows from investing activities:								
Purchase of short term investments		(59,925)		(34,060)		(33,839)		
Maturities of short term investments		51,149		32,630		31,399		
Additions to property and equipment		(2,169)		(3,101)		(7,453)		
Additions to intangible assets		(35)		(133)		_		
Net cash used in investing activities		(10,980)		(4,664)		(9,893)		
Cash flows from financing activities:								
Repurchase of common stock		(7,471)		(5,030)		_		
Tax payments for restricted stock issuances		(2,923)		(2,030)		(569)		
Net cash used in financing activities		(10,394)		(7,060)		(569)		
Effect of exchange rate changes on cash		(895)		914		(208)		
Net increase (decrease) in cash		(25,014)		4,112		7,574		
Cash, cash equivalents, and restricted cash, beginning of period		89,241		85,129		77,555		
Cash, cash equivalents, and restricted cash, end of period (1.)	\$	64,227	\$	89,241	\$	85,129		
		<u> </u>		<u> </u>		-		
Supplemental cash flow disclosures:								
Cash paid for income taxes	\$	7,700	\$	9,442	\$	7,839		
Cash paid for interest	\$		\$	_	\$	_		

^(1.) End of period cash, cash equivalents, and restricted cash includes \$0.8 million, \$0.9 million and \$0.8 million of restricted cash at December 31, 2021, 2020, and 2019, respectively.

OneSpan Inc. NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

Note 1 – Description of the Company and Basis of Presentation

Description of the Company

OneSpan Inc. and its wholly owned subsidiaries design, develop, market and support hardware and software security systems that manage and secure access to information assets. OneSpan has operations in Austria, Belgium, Brazil, Canada, China, France, Japan, The Netherlands, Singapore, Switzerland, the United Arab Emirates, the United Kingdom (U.K.), and the United States (U.S.).

In accordance with ASC 280, Segment Reporting, our operations are reported as a single operating segment. The chief operating decision maker is the Chief Executive Officer who reviews the statement of operations of the Company on a consolidated basis, makes decisions and manages the operations of the Company as a single operating segment.

Impact of COVID-19 pandemic

We continue to actively address the effects of the COVID-19 pandemic and its impact globally Due to economic uncertainty connected to the COVID-19 pandemic, we have experienced lengthened sales cycles and reduced demand for some of our security solutions. While we hope that the negative consequences on our business associated with the COVID-19 pandemic will subside, we cannot predict the impact with certainty.

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 accounting principles generally accepted in the U.S. 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.

Note 2 - Summary of Significant Accounting Policies

Cash and Cash Equivalents

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. We are in 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 Condensed Consolidated Balance Sheet in the amounts of \$0.8 million and \$0.8 million at December 31, 2021 and December 31, 2020, respectively.

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. The Company adopted ASU 2016-13, *Measurement of Credit Losses on Financial Instruments*, on January 1, 2020, which amended our accounting for available-for-sale debt securities. Credit impairments are recorded through an allowance rather than a direct write-down of the security 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 gain/(loss) in 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, 2021 and December 31, 2020, 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, 2021 and 2020, our financial instruments were cash and equivalents, short-term investments, accounts receivable, accounts payable and accrued liabilities. The estimated fair value of our financial instruments has been determined by using available market information and appropriate valuation methodologies, as defined in ASC 820, *Fair Value Measurements*. The fair values of the financial instruments were not materially different from their carrying amounts at December 31, 2021 and 2020. 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. We write down inventory when it appears that the carrying cost of the inventory may not be recovered through subsequent sale of the inventory. We analyze 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 our inventory. If the sales volume or sales price of a specific model declines significantly, additional write downs may be required.

Property and Equipment

Property and equipment 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 our leases are operating leases.

The Company adopted ASC Topic 842, *Leases* as of January 1, 2019, using the modified retrospective approach. In addition, 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;
- We have lease agreements that contain lease and non-lease components. For automobile leases, we account for lease and non-lease components together. For office leases, we account for these components separately using a relative standalone selling basis; and
- We apply 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 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. We assess the impairment of goodwill annually or whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Our 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.

We operate in one reporting unit and had no goodwill impairment recorded for the years ended December 31, 2021, 2020, and 2019.

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

We apply the equity method of accounting to our investment in Promon AS (Promon), because we exercise significant influence, but not controlling interest, in the investee. Promon is a technology company headquartered in Norway that specializes in mobile app security, whose solutions focus largely on Runtime Application Self-Protection (RASP). We exercise significant influence over Promon as a result of our 17% ownership interest in Promon, our representation on Promon's Board of Directors, and the significance to Promon of our business activities with them. We integrate Promon's RASP technology into our software solutions, which are licensed to our customers. Under the equity method of accounting, the Company's proportionate share of the net earnings (losses) of Promon is reported in other income (expense), net in our consolidated Statements of Operations. The impact of the proportionate share of net earnings (losses) were immaterial for the years ended December 31, 2021, 2020 and 2019 as were the relative size of Promon's assets and operations in relation to the Company's. The carrying value of our equity method investment is reported in other noncurrent assets in the consolidated Balance Sheets and is reported originally at cost and adjusted each period for the Company's share of the investee's earnings (losses) and dividends paid, if any. The Company also assesses the investment for impairment whenever events or changes in circumstances indicate that the carrying value of the investment may not be recoverable. There were no qualitative factors that indicated that the carrying value of the investment may not be recoverable. The Company did not record any impairment charges during the years ended December 31, 2021, 2020 or 2019. The Company recorded \$4.0 million and \$2.5 million in costs of sales during the years ended December 31, 2021 and 2020, respectively for license fees owed to Promon for use of their software and technology. The Company owed Promon \$1.5 million and \$2.2 million as of December 31, 2021 and December 31, 2020, respectively, which is included in accounts payable and accrued liabilities.

Share Repurchase Program

During the year ended December 31, 2020, the Board of Directors authorized a share repurchase program ("program"), pursuant to which the Company can repurchase up to \$50.0 million of 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. During the year ended December 31, 2021, \$7.5 million of issued and outstanding stock was repurchased under the program. The authorization is effective until June 10, 2022 unless the total amount has been used or authorization has been cancelled.

During the year ended December 31, 2021, the Company repurchased 0.3 million shares of the Company's stock for \$7.5 million in the aggregate at an average cost of \$21.82 per share under its repurchase program.

Revenue Recognition

On January 1, 2019, we adopted FASB Accounting Standards Codification (ASC) Topic 606, "Revenue from Contracts with Customers", or "Topic 606" using the modified retrospective method applied to those contracts which were not completed as of January 1, 2019. Results for reporting periods beginning after January 1, 2019 are presented under Topic 606. We recorded a net increase to opening Retained Earnings of \$11.9 million, net of tax, as of January 1, 2019 due to the cumulative impact of adopting Topic 606, with the impact primarily related to the accounting impacts of our customer contracts that include a term license to our software, as well as the impact of accounting for costs incurred

to obtain our contracts. See Note 5 - Revenue for further details. 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 the Company from a customer, are excluded from revenue. Shipping and handling costs associated with outbound freight after 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 software licenses, and Services and Other, which is inclusive of software-as-a-service (which we refer to as "subscription", or "SaaS"), maintenance and support, and professional services.

Product Revenue: 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.

License Revenue: Revenue from the sale of software licenses 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. Contracts with customers for distinct licenses of intellectual property include perpetual licenses, which grant the customer unlimited access to the software, and term licenses which limit the customer's access to the software to a specific time period. We offer term licenses ranging from one to five years in length. Customer payments normally correspond with delivery for perpetual licenses. 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 would 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.

Subscription Revenue: We generate subscription revenues from our digital agreements and digital security 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.

Maintenance, Support and Other: 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: 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.

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 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 standalone 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 method.

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 subscription solutions, including personnel and equipment costs, and personnel costs of employees providing professional services and maintenance support.

Research and Development Costs

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.

Software Development Costs

Software development costs are accounted for in accordance with ASC 985-20, *Costs of Software to be Sold, Leased, or Marketed.* Research costs and software development costs, prior to the establishment of technological feasibility, determined based upon the creation of a working model, are expensed as incurred. Our software capitalization policy defines technological feasibility as a functioning beta test prototype with confirmed manufacturability (a working model), within a reasonably predictable range of costs. Additional criteria include receptive customers, or potential customers, as evidenced by interest expressed in a beta test prototype, at some suggested selling price. Our policy is to amortize capitalized costs by the greater of (a) the ratio that current gross revenue for a product bears to the total of current and anticipated future gross revenue for that product or (b) the straight-line method over the remaining estimated economic life of the product, generally two to five years, including the period being reported on.

Stock-Based Compensation

We have stock-based employee compensation plans, described in Note 14 – Stock Compensation. ASC 718, *Stock Compensation* requires us 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

We record 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. We review our 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 our consolidated financial statements using a December 31 measurement date.

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

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.

Foreign Currency Translation and Transactions

The financial position and results of operations of the majority of the Company's foreign subsidiaries are measured using the local currency as the functional currency. Accordingly, assets and liabilities are translated into U.S. Dollars using current exchange rates as of the balance sheet date. Revenues 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 less than \$0.1 million, less than \$0.1 million, and \$(1.5) million in 2021, 2020, and 2019, respectively, and are included in other income (expense), net in the consolidated statements of operations.

The financial position and results of our operations in Singapore, Switzerland, and Canada are measured in U.S. Dollars. For these subsidiaries, gains and losses that result from foreign currency transactions are included in the consolidated statements of operations in other income (expense), net.

Recently Issued Accounting Pronouncements

In December 2019, the FASB issued ASU 2019-12, *Simplification for Accounting for Income Taxes*, which removes certain exceptions for recognizing deferred taxes for investments, performing intra-period allocation and calculating income taxes in interim periods. The ASU also adds guidance to reduce complexity in certain areas, including recognizing deferred taxes for tax goodwill and allocating taxes to members of a consolidated group. ASU 2020-12 was effective beginning January 1, 2021. The adoption of this standard did not have a material impact on the Company's condensed consolidated financial statements.

In March 2020, the FASB issued ASU 2020-04, Facilitation of the Effects of Reference Rate Reform on Financial Reporting. This update provides optional expedients and exceptions for applying generally accepted accounting principles to certain contract modifications and hedging relationships that reference London Inter-bank Offered Rate (LIBOR) or another reference rate expected to be discontinued. The guidance is effective upon issuance and can be applied through December 31, 2022. The adoption of this standard did not have a material impact on the Company's condensed consolidated financial statements.

In November 2021, the FASB issued ASU 2021-10, *Government Assistance: Disclosures by Business Entities about Government Assistance*, 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. We are currently assessing the effect that the ASU will have on our consolidated financial statements and related disclosures.

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

Note 3 - Revision of Previously Issued Financial Statements

We have revised amounts reported in previously issued financial statements for the periods presented in this Annual Report on Form 10-K related to immaterial errors. The errors relate to certain costs directly related to the production and distribution of hardware products. The costs were not properly categorized in prior periods, which led to an understatement of product and license cost of goods sold and an overstatement of sales and marketing expense. There was no impact to previously reported revenue or net income.

We evaluated the aggregate effects of the errors to our previously issued financial statements in accordance with SEC Staff Accounting Bulletins No. 99 and No. 108 and, based upon quantitative and qualitative factors, determined that the errors were not material to the previously issued financial statements and disclosures included in our Annual Reports on Form 10-K for the years ended December 31, 2020 and 2019, or for any quarterly periods included therein or through our Quarterly Report on Form 10-Q for the quarterly periods ended September 30, 2021, June 30, 2021, and March 31, 2021.

The following tables present the effects of the aforementioned revisions on our consolidated statements of operations for the years ended December 31, 2020 and 2019.

Consolidated Statements of Operations

Year E	nded December	31, 2020	Year Ended December 31, 2019					
As Previously Reported	Adjustments	As Revised	As Previously Reported	Adjustments	As Revised			
\$ 41,820	\$ 4,193	\$ 46,013	\$ 63,393	\$ 3,684	\$ 67,077			
63,439	4,193	67,632	81,962	3,684	85,646			
152,252	(4,193)	148,059	171,522	(3,684)	167,838			
60,856	(4,193)	56,663	61,503	(3,684)	57,819			
157,510	(4,193)	153,317	157,333	(3,684)	153,649			
	As Previously Reported \$ 41,820 63,439 152,252 60,856	As Previously Reported Adjustments \$ 41,820 \$ 4,193 63,439 4,193 152,252 (4,193) 60,856 (4,193)	Previously Reported Adjustments As Revised \$ 41,820 \$ 4,193 \$ 46,013 63,439 4,193 67,632 152,252 (4,193) 148,059 60,856 (4,193) 56,663	As Previously Reported Adjustments As Revised As Previously Reported \$ 41,820 \$ 4,193 \$ 46,013 \$ 63,393 63,439 4,193 67,632 81,962 152,252 (4,193) 148,059 171,522 60,856 (4,193) 56,663 61,503	As Previously Reported Adjustments As Revised As Previously Reported Adjustments \$ 41,820 \$ 4,193 \$ 46,013 \$ 63,393 \$ 3,684 63,439 4,193 67,632 81,962 3,684 152,252 (4,193) 148,059 171,522 (3,684) 60,856 (4,193) 56,663 61,503 (3,684)			

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:

		2021		2020	
	· <u> </u>	(in thousands)			
Component parts	\$	3,841	\$	5,439	
Work-in-process and finished goods		6,504		7,654	
Total	\$	10,345	\$	13,093	

Note 5 – Revenue

We recognize revenue in accordance with ASC 606 "Revenue from Contracts with Customers" ("Topic 606"), as described below.

Disaggregation of Revenues

The following tables present our revenues disaggregated by major products and services, geographical region and timing of revenue recognition.

Revenue by major products and services (in thousands)

	2021		2020			2019
Hardware products	\$	79,501	\$	81,849	\$	127,005
Software licenses		40,857		51,137		56,308
Subscription		38,213		27,788		22,280
Professional services		4,634		5,689		5,759
Maintenance, support, and other		51,276		49,228		42,132
Total Revenue	\$	214,481	\$	215,691	\$	253,484

Revenue by location of customer for the years ended December 31, 2021, 2020, and 2019 (in thousands)

	_	EMEA	 Americas	 APAC	_	Total
Total Revenue:						
2021	\$	104,878	\$ 68,646	\$ 40,957	\$	214,481
2020	\$	117,086	\$ 53,171	\$ 45,434	\$	215,691
2019	\$	145,942	\$ 61,577	\$ 45,965	\$	253,484
Percent of Total:						
2021		49 %	32 %	19 %		100 %
2020		54 %	25 %	21 %		100 %
2019		58 %	24 %	18 %		100 %

Timing of revenue recognition (in thousands)

	Years ended December 31,								
	2021 2020				2019				
Products and Licenses transferred at a point in time	\$ 120,358	\$	132,986	\$	183,313				
Services transferred over time	94,123		82,705		70,171				
Total Revenue	\$ 214,481	\$	215,691	\$	253,484				

Contract balances (in thousands)

The following table provides information about receivables, contract assets and contract liabilities from contracts with customers.

	Dece	mber 3	1,
in thousands	2021		2020
Receivables, inclusive of trade and unbilled	\$ 56,612	\$	57,537
Contract Assets (current and non-current)	\$ 4,889	\$	9,079
Contract Liabilities (Deferred Revenue current and non-current)	\$ 63,742	\$	55,147

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 1-5 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, we do not adjust the promised amount of consideration for the effects of a significant financing component when we expect, at contract inception, that the period between our 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. We do not typically include extended payment terms in our contracts with customers.

Revenue recognized during the year ended December 31, 2021 included \$41.3 million that was included on the December 31, 2020 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

The following table includes estimated revenue expected to be recognized in the future related to performance obligations that are unsatisfied (or partially unsatisfied) at the end of the reporting period.

in thousands	2022	2023	2024	Bey	yond 2024	Total
Future revenue related to current						
unsatisfied performance obligations	\$ 31,626	\$ 15,608	\$ 7,514	\$	2,498	\$ 57,246

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. Under Topic 606, the Company capitalizes commissions associated with certain new contracts and amortizes the costs over a period of benefit based on the transfer of goods or services that we have determined to be up to seven years. We determined the period of benefit by taking into consideration our customer contracts, our technology and other

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factors, including customer attrition. Commissions and amortization expense are included in Sales and Marketing expenses on 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 Sales and Marketing expense in the consolidated statements of operations.

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

in thousands	Decembe	r 31, 2021 Dec	ember 31, 2020
Capitalized costs to obtain contracts, current	\$	2,134 \$	1,222
Capitalized costs to obtain contracts, non-current	\$	8,675 \$	5,464

	-	Twelve months e	ended December,
in thousands	_	2021	2020
Amortization of capitalized costs to obtain contracts	\$	1,555	\$ 904
Impairments of capitalized costs to obtain contracts	\$	_	\$ -

Note 6 – Goodwill

Goodwill activity for the two years ended December 31, 2021 consisted of the following:

in thousands	
Net balance at December 31, 2019	\$ 94,612
Net foreign currency translation	 2,940
Net balance at December 31, 2020	\$ 97,552
Net foreign currency translation	 (1,378)
Net balance at December 31, 2021	\$ 96,174

Certain portions of goodwill are denominated in local currencies and are subject to currency fluctuations. No impairment of goodwill was recorded during the years ended December 31, 2021, 2020, or 2019.

Note 7 – Intangible Assets

Intangible asset activity for the two years ended December 31, 2021 is detailed in the following table;

in thousands	Acquired Technology	Customer Relationships	Other	Total Intangible Assets
Net balance at December 31, 2019	\$ 5,454	26,884	3,871	36,209
Additions	46	_	87	133
Disposals	_	_	(58)	(58)
Net foreign currency translation	53	(58)	39	34
Amortization expense	(3,276)	(3,626)	(2,220)	(9,122)
Net balance at December 31, 2020	2,277	23,200	1,719	27,196
Additions	15	_	20	35
Disposals	_	_	(21)	(21)
Net foreign currency translation	2	(46)	(8)	(52)
Amortization expense	(1,541)	(3,993)	(354)	(5,888)
Net balance at December 31, 2021	\$ 753	\$ 19,161	\$ 1,356	\$ 21,270
December 31, 2021 balance at cost	\$ 43,034	\$ 39,814	\$ 13,549	\$ 96,397
Accumulated amortization	(42,281)	(20,653)	(12,193)	(75,127)
Net balance at December 31, 2021	\$ 753	\$ 19,161	\$ 1,356	\$ 21,270

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

Expected amortization of the intangible assets for the years ended:

December 31, 2022	\$ 4,678
December 31, 2023	4,049
December 31, 2024	4,046
December 31, 2025	3,046
December 31, 2026	2,327
Thereafter	2,368
Subject to amortization	20,514
Trademarks	756
Total intangible assets	\$ 21,270

Note 8 – Property and Equipment

The major classes of property and equipment are as follows:

in thousands	Decem	December 31, 2021		nber 31, 2020
Office equipment and software	\$	14,327	\$	13,540
Leasehold improvements		10,296		10,593
Furniture and fixtures		4,223		3,827
Total	·	28,846		27,960
Accumulated depreciation		(18,089)		(16,125)
Property and equipment, net	\$	10,757	\$	11,835

Depreciation expense was \$3.0 million, \$2.9 million, and \$2.1 million for the years ended December 31, 2021, 2020, and 2019, 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 Company classifies its investments in debt securities as available-for-sale. We review 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, 2021 and December 31, 2020.

The estimated fair value of our 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 assets that are measured at fair value on a recurring basis as of December 31, 2021 and December 31, 2020:

			Fair Value Measurement at Reporting Date Using					
in thousands Assets:	<u>Decembe</u>	er 31, 2021	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)			
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	-			

			Fair Value Measurement at Reporting Date Using				
in thousands	Dec	ember 31, 2020	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	\$	4,951	- \$	4,951	-		
Corporate Notes / Bonds	\$	8,780	- \$	8,780	-		
Commercial Paper	\$	4,098	- \$	4,098	-		
U.S. Treasury Bills	\$	5,292	- \$	5,292	-		
U.S. Government Agencies	\$	3,738	- \$	3,738	-		

Note 10 - Allowance for Credit Losses

The change in the allowance for credit losses during the years ended December 31, 2020 and 2021 were as follows:

in thousands		
Balance at December 31, 2019	\$	2,524
Impact of ASU 2016-13 adoption		288
Balance at January 1, 2020		2,812
Provision		2,306
Write-offs		(994)
Net foreign currency translation		11
Balance at December 31, 2020	\$	4,135
Provision		(16)
Write-offs		(2,689)
Net foreign currency translation	<u></u>	(11)
Balance at December 31, 2021	\$	1,419

During the year ended December 31, 2021, we wrote off \$2.7 million 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 our 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 our 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, 2021, December 31, 2020, and December 31, 2019 are as follows:

	Years ended December 31,					
	2021		2020			2019
				(in thousands)		
Building rent	\$	2,564	\$	2,978	\$	3,397
Automobile rentals		1,505		1,576		1,531
Total net operating lease costs	\$	4,069	\$	4,554	\$	4,928

Short-term lease costs and variable lease costs recognized during the years ended December 31, 2021, December 31, 2020, and December 31, 2019 are immaterial.

Supplemental consolidated balance sheet information related to our operating leases is as follows:

	Decer	nber 31, 2021	December 31, 2020
in thousands			
Leases			
Assets		9,197	11,356
Operating lease right-of-use assets	\$	9,197	\$ 11,356
Liabilities			
Current			
Operating lease liabilities	\$	2,476	\$ 2,855
Noncurrent			
Operating lease liabilities		10,180	12,399
Total lease liabilities	\$	12,656	\$ 15,254

The weighted average remaining lease term for our operating leases is 6.4 years. The weighted-average discount rate for our operating leases is 5%.

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

	Years ended December 31,						
		2021 2020			2019		
	(in \$ thousands)						
Supplemental cash flow and other information related to leases:							
Operating cash payments from operating leases	\$	3,630	\$	3,835	\$	3,731	
ROU assets obtained in exchange for new operating lease liabilities	\$	589	\$	3,549	\$	4,924	

Maturities of our operating leases are as follows:

	As of December	As of December 31, 2021		
	(in \$ thous	ands)		
2022	\$	3,040		
2023		2,599		
2024		1,823		
2025		1,693		
2026		1,629		
Later years		4,352		
Less imputed interest		(2,480)		
Total lease liabilities	\$	12,656		

Note 12 – Quarterly Results of Operations (unaudited)

The quarterly results of operations are summarized in the following select income statement line items:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2021				
Total revenues	\$ 50,775	\$ 52,277	\$ 52,276	\$ 59,153
Product and license cost of goods sold (1.)	10,752	10,565	9,502	15,377
Gross profit	34,242	34,831	36,395	37,467
Sales and marketing expense (1.)	17,168	15,021	14,449	16,092
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)	\$ (0.35)
Diluted	\$ (0.23)	\$ (0.17)	\$ (0.02)	\$ (0.35)
			·	
2020				
Total revenues	\$ 56,370	\$ 54,954	\$ 51,439	\$ 52,928
Product and license cost of goods sold (1.)	11,764	13,689	11,071	9,489
Gross profit	39,274	35,616	34,954	38,215
Sales and marketing expense (1.)	13,833	13,581	13,569	15,680
Operating costs	38,449	37,303	37,309	40,256
Operating income (loss)	825	(1,687)	(2,355)	(2,041)
Provision (benefit) for income taxes	690	973	95	277
Net income (loss)	4	(2,025)	(1,678)	(1,756)
Net income/(loss) per share:				
Basic	\$ (0.00)	\$ (0.05)	\$ (0.04)	\$ (0.04)
Diluted	\$ (0.00)	\$ (0.05)	\$ (0.04)	\$ (0.04)

(1.) We have revised certain period previously issued financial statements to reflect immaterial reclassification adjustments of expenses directly attributable to the production and distribution of hardware products. Certain sales and marketing expenses were reclassified to product and license cost of goods sold. For the first, second, and third quarters of 2021, product and license cost of goods sold increased by \$1.2 million, \$1.0 million, and \$1.0 million, respectively. For the first, second, and third quarters of 2021, gross profit, sales and marketing expense, and total operating costs decreased by \$1.2 million, \$1.0 million, and \$1.0 million, respectively.

For the first, second, third and fourth quarters of 2020, product and license cost of goods sold increased by \$1.0 million, \$1.1 million, \$1.0 million and \$1.0 million, respectively. For the first, second, third and fourth quarters of 2020, gross profit, sales and marketing expense, and total operating costs decreased by \$1.0 million, \$1.1 million, \$1.0 million and \$1.0 million, respectively.

The adjustments had no impact on previously reported revenue or net income. See Note 3 – Revision of Previously Issued Financial Statements for additional detail.

Note 13 – Income Taxes

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

	For the ye	For the year ended December 31,					
	2021	2021 2020		2021 2020		2019	
U.S.	\$ (15,056)	\$	1,046	\$	3,223		
Non-U.S.	(11,087)		(4,466)		11,186		
Total	\$ (26,143)	\$	(3,420)	\$	14,409		

For the years ended December 31, 2021, 2020, and 2019, domestic income excludes intercompany dividend income of \$0 million, \$38.0 million, and \$6.3 million, respectively. The provision (benefit) for income taxes consists of the following:

		For the year ended December 31,				
		2021		2020		2019
Current:						
Federal	\$	(11)	\$	1,715	\$	433
State		(23)		49		107
Foreign		2,478		1,758		7,629
Total current	_	2,444		3,522		8,169
Deferred:						
Federal		3,774		1,385		(970)
State		(3)		(24)		24
Foreign		(1,774)		(2,848)		(678)
Total deferred	_	1,997		(1,487)		(1,624)
Total	\$	4,441	\$	2,035	\$	6,545
			_			

For 2021, 2020, and 2019, our 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:

	For the year ended December 31,					
	2021	2020	2019			
Expected tax at statutory rate	\$ (5,490)	\$ (718)	\$ 3,026			
Foreign taxes at other rates	307	(309)	(914)			
Valuation allowance changes	15,019	2,617	2,042			
Global intangible low-taxed income inclusion	_	339	(27)			
State income taxes, net of federal benefit	(811)	32	108			
Uncertain tax positions	12	235	1,845			
Research credits	(3,466)	(1,029)				
Disallowed expenses and other	(1,130)	868	465			
Total	\$ 4,441	\$ 2,035	\$ 6,545			

Significant components of our deferred tax assets and liabilities are as follows:

	As of December 31,			
		2021		2020
Deferred tax assets:				
Stock and long-term compensation plans	\$	1,337	\$	2,450
Foreign NOL & other carryforwards		38,153		29,267
US and state NOL carryforwards		5,539		718
Deferred revenue		2,068		671
Pension liability		1,547		2,074
Amortization and depreciation		257		167
Lease liability		3,171		3,837
Accrued expenses and other		1,157		1,264
Total gross deferred tax assets		53,229		40,448
Less: Valuation allowance		(34,979)		(19,992)
Net deferred income tax assets	\$	18,250	\$	20,456
Deferred tax liabilities:				
Accruals	\$	231	\$	286
Tax on unremitted foreign earnings		1,357		1,809
Right of use asset		2,872		3,251
Intangible assets		5,225		6,135
Tax on credits		3,439		2,241
Contract acquisition costs		2,626		1,616
Deferred tax liabilities	\$	15,750	\$	15,338
Net deferred tax assets (liabilities)	\$	2,500	\$	5,118

Deferred tax assets and liabilities are netted by tax jurisdiction.

At December 31, 2021, we had foreign and state net operating loss (NOL) carryforwards and other foreign deductible carryforwards as shown in the following table:

	Ca	rryforward	Expiration
NOL Carryforward			
Canada	\$	40,759	2027-2039
United States		19,113	None
United Kingdom		9,730	None
Switzerland		10,688	2028
Other foreign		6,501	None
Canada province		40,730	2027-2039
U.S. states		21,091	2021-2041
		148,612	
Other Carryforwards			
United States credit		390	2031
Canada		36,141	None
Canada province		50,272	None
Capital loss		407	None
Canada credits		7,227	2023-2041
Canada province credits		3,052	2036-2041
		97,489	
		· · · · · · · · · · · · · · · · · · ·	
	\$	246,101	
	÷	, -	

The valuation allowance against the net deferred tax assets as of December 31, 2021 and 2020 was \$35.0 million and \$20.0 million, respectively.

The Company recorded changes in valuation allowance of \$15.0 million and \$2.7 million, as of December 31, 2021 and 2020, 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 2021 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 2021 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.

Our policy is to record interest and penalties on income taxes as income tax expense. We provided less than \$0.1 million in 2021, less than \$0.1 million in 2020 and \$0.2 million during 2019.

ASC 740, Income Taxes sets a "more likely than not" criterion for recognizing the tax benefit of uncertain tax positions. As of December 31, 2021, 2020, and 2019, we had reserves of \$0.5 million, \$0.5 million, and \$2.9 million, respectively.

	As of year ended December 31,						
	2	2021		2020		2019	
Reserve at beginning of year	\$	500	\$	2,923	\$	427	
Increases related to prior year tax positions		12		277		2,500	
Decreases related to prior year tax positions		_		(37)		_	
Lapse of statute of limitations		_		_		(4)	
Settlement		_		(2,663)			
Total	\$	512	\$	500	\$	2,923	

We file income tax returns in the U.S. federal jurisdiction and in many state and foreign jurisdictions. We are subject to examination of our income tax returns by the IRS and other tax authorities.

We believe 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 our tax audits are resolved in a manner not consistent with management's expectations, we could be required to adjust our provision for income taxes in the period such resolution occurs. Included in the balance of unrecognized tax benefits as of December 31, 2021 is \$0.5 million, of tax benefits that, if recognized, would affect the effective tax rate.

We estimate that our unrecognized tax benefits as of December 31, 2021 could decrease by as much as \$0.5 million in the next 12 months.

Our primary tax jurisdictions and the earliest tax year subject to audit are presented in the following table.

2013
2015
2017
2017
2016
2016
2019
2019
2017

Note 14 - Stock Compensation Plans

The Company has a share-based compensation plan, the OneSpan Inc. 2019 Omnibus Incentive Plan ("Plan"), which was approved by its Shareholders in June 2019 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, 2021, the remaining number of shares allowed to be issued under the Plan was 3.4 million shares of the company's common stock, representing 9% 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, 2021, 2020, and 2019.

	For th	For the year ended December 31,					
	2021		2020		2019		
in thousands							
Stock-based compensation	\$ 4,354	\$	4,740	\$	3,368		
Other long-term incentive plan compensation	848		1,262		1,955		
Total compensation	\$ 5,202	\$	6,002	\$	5,323		

Time-Based Restricted Stock Awards (sharecounts in thousands)

Time-based restricted stock awards granted to certain executive officers under the OneSpan Inc. 2009 Equity Plan vest in equal semi-annual installments over four years. Awards granted to certain other employees vest ratably over a four-year period with the first one-fourth of the grant vesting one year after the date of the grant. Shares are subject to forfeiture if the service period requirement is not met. Compensation expense was \$0.3 million, \$0.7 million, and \$0.5 million for 2021, 2020, and 2019, respectively. Tax benefit related to the compensation expense was less than \$0.1 million, \$0.2 million, and \$0.2 million for 2021, 2020, and 2019, respectively. The following table summarizes the time-based restricted stock activity for the year ended December 31, 2021.

		Weighted- average remaining	:	eighted- average ant date
(in thousands)	Shares	term (years)	fa	ir value
Outstanding at January 1, 2021	56	0.89	\$	14.60
Shares vested	(40)			14.91
Shares forfeited	(9)			14.91
Outstanding at December 31, 2021	7	0.42	\$	16.23

The unamortized future compensation expense for time-based restricted stock awards was less than \$0.1 million at December 31, 2021.

Time-Based Restricted Stock Units (sharecounts in thousands)

Beginning in 2019, 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 to certain executive officers vest in equal semi-annual installments over four years. Awards granted to certain other employees vest over two-year to four-year period. Shares are subject to forfeiture if the service period is not met. Compensation expense was \$3.7 million, \$2.5 million, and \$1.0 million for 2021, 2020, and 2019, respectively, and the related tax benefit was \$0.1 million, \$0.5 million, and \$0.3 million, respectively. The following table summarizes the time-based restricted stock activity for the year ended December 31, 2021:

		Weighted- average remaining	á	eighted- everage ant date
(in thousands)	Shares	term (years)	fa	ir value
Unearned, January 1, 2021	379	2.55	\$	16.87
Shares vested	(196)			18.50
Shares awarded	573			21.21
Shares forfeited	(197)			20.51
Unearned, December 31, 2021	559	3.08	\$	19.30

The unamortized future compensation expense for time-based restricted stock awards was \$9.0 million at December 31, 2021.

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 three year performance criteria established by the Board of Directors Under certain grants, earned shares related to three-year targets cliff vest upon fulfillment of the performance criteria and completion of the three-year 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, 2021 will be earned if the performance criteria and service period are met at the end of the three-year performance period. None of the restricted stock units subject to the achievement of future performance criteria awarded during the year ended December 31, 2020 were earned, and the related expense was reversed during the year ended December 31, 2020. Certain restricted stock units subject to the achievement of future performance criteria awarded during the year ended December 31, 2019 are not expected to be earned. The compensation cost recorded for 81 unvested shares issued during the year ended December 31, 2019 subject to performance criteria no longer considered probable of achievement was reversed during the year ended December 31, 2020. Approximately 9 additional restricted stock units issued during the year ended December 31, 2019, subject to the achievement of performance criteria, are no longer considered probable of achievement and the related compensation expense will be reversed upon recommendation of the Compensation Committee.

Compensation expense in 2021, 2020, and 2019 was \$0.3 million, \$1.1 million, and \$1.8 million. Tax benefit related to the compensation expense was less than \$0.1 million, \$0.2 million, and \$0.2 million for 2021, 2020, and 2019, respectively.

The following table summarizes activity related to unvested performance restricted stock shares during 2021:

	Total Unvested	Weighted- average remaining	á	eighted- everage ant date
(in thousands)	Shares	term (years)	fa	ir value
Unearned, January 1, 2021	459	0.83	\$	15.29
Shares vested	(93)			15.16
Shares awarded	144			24.92
Shares forfeited	(389)			17.09
Unearned, December 31, 2021	121	3.29	\$	17.30

Unamortized future compensation expense for performance-based restricted stock was \$0.6 million at December 31, 2021.

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, 2021 and December 31, 2020 was less than \$0.1 million and \$0.4 million, respectively, and the related tax benefit was \$0 million and \$0.1 million, respectively.

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

		Weighted- average remaining	Weighted- average grant date
(in thousands)	Shares	term (years)	fair value
Unearned, January 1, 2021	52	2.00	\$ 28.44
Shares awarded	291		20.09
Shares forfeited	(60)		32.17
Unearned, December 31, 2021	283	3.43	\$ 19.06

Unamortized future compensation expense for market-based restricted stock was \$4.4 million at December 31, 2021.

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, 2021 and December 31, 2020, diluted net loss per share for these periods exclude the effects of all common stock equivalents, which are anti-dilutive. For the year ended December 31, 2019, the anti-dilutive effect of our securities is immaterial.

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

For the year ended December 31,					
2021	2020	2019			
\$ (30,584)	\$ (5,455)	\$ 7,864			
39,614	40,035	40,050			
_	_	86			
39,614	40,035	40,136			
\$ (0.77)	\$ (0.14)	\$ 0.20			
\$ (0.77)	\$ (0.14)	\$ 0.20			
	2021 \$ (30,584) 39,614 ————————————————————————————————————	2021 2020 \$ (30,584) \$ (5,455) 39,614 40,035 — — 39,614 40,035 \$ (0.77) \$ (0.14)			

Note 16 - Employee Benefit Plans

U.S. Plan

We maintain 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, 2021, 2020, and 2019, we expensed contributions of \$0.3 million, \$0.3 million, and \$0.3 million, respectively.

Non-U.S. Plans

We are subject to national mandatory pension systems and other compulsory plans, or make contributions to social pension funds based on local regulations. When our obligation is limited to the payment of the contribution into these plans or funds, the recognition of such liabilities is not required.

In addition, we have, 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.

We also maintain a pension plan for our Belgian employees, in compliance with Belgian law. Contributions to Belgian 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 prescribed 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:

	Year ended December 31,							
	2021	2021 2		2020			2019	
Service cost (gross)	\$ 1,587	\$	1,549	\$	1,164			
Interest cost	53		106		234			
Expected return on plan assets	(302)		(271)		(242)			
Amortization of unrecognized actuarial gain	(12)		(40)		(22)			
Net periodic pension cost	\$ 1,326	\$	1,344	\$	1,134			
Interest cost Expected return on plan assets Amortization of unrecognized actuarial gain	\$ 53 (302) (12)	\$	106 (271) (40)	\$	(:			

The net unfunded status of the Non-U.S. pension plans is as follows:

	 As of December 31,			
	2021		2020	
Fair value of plan assets	\$ 17,394	\$	17,290	
Projected benefit obligation	(24,855)		(27,431)	
Net unfunded benefit obligation	\$ (7,461)	\$	(10,141)	

Net unfunded benefit obligation is recorded as other long-term liabilities in our consolidated Balance Sheets.

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

	Year ended December 31,				
		2021		2020	
Fair value of plan assets at January 1	\$	17,290	\$	14,159	
Employee contributions		499		512	
Actual return on plan assets		46		441	
Benefits (paid), net of transfers		(492)		(251)	
Employer contributions		1,049		1,088	
Foreign exchange adjustment		(998)		1,341	
Fair value of plan assets at December 31	\$	17,394	\$	17,290	

The change in benefit obligations is as follows:

	Y	Year ended December 31,			
		2021		2020	
Benefit obligations at January 1	\$	27,431	\$	21,759	
Gross service cost		1,587		1,549	
Interest cost		53		106	
Employee contributions		499		512	
Actuarial (gains)/losses		(2,185)		1,694	
Plan amendment		(432)		_	
Benefits (paid), net of transfers		(492)		(251)	
Foreign exchange adjustment		(1,606)		2,062	
Benefit obligations at December 31	\$	24,855	\$	27,431	

The decrease in benefit obligations at December 31, 2021 compared to December 31, 2020 was primarily driven by service costs, actuarial gains and foreign exchange adjustments, driven by the weakened Euro and Swiss Franc currencies. The increase in benefit obligations at December 31, 2020 compared to December 31, 2019 was primarily driven by an increase in actuarial losses and the impact of foreign exchange adjustments.

Our investment policy meets our responsibility under local social legislation and aligns plan assets with liabilities, while minimizing risk. For the years ended December 31, 2021 and 2020, 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, 2021 was determined using Level 3 inputs as defined by ASC 820, Fair Value Measurements. Changes in our plan assets are attributable to benefit payments and contributions as we have not actively traded our assets during the years ended December 31, 2021 and December 31, 2020.

Other

The accumulated benefit obligation for the plans were \$22.9 million and \$25.1 million as of December 31, 2021 and 2020, 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, 2021, 2020, and 2019 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:

	As of Dece	As of December 31,			
	2021	2020			
	(%	6)			
Discount rates	0.20 - 0.90	0.05 - 0.60			
Inflation	0.90 - 1.90	0.90 - 1.80			
Expected return on plan assets	1.25 - 2.00	1.25 - 2.00			
Rate of salary increases	1.90 - 2.80	1.90 - 2.80			

Projected future pension benefits as of December 31, 2021:

2022	\$ 872
2023	719
2024	628
2025	769
2026	1,393
Beyond	4,579

Note 17 – Geographic, Customer and Supplier Information

We classify our sales by our 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, Latin and South America and Canada; and 3) Asia Pacific, which includes Australia and India.

We have recast the below EMEA gross profit amounts for the years ended December 31, 2020 and 2019 for immaterial errors, consistent with the impacts disclosed in Note 3 – Revision of Previously Issued Financial Statements. For the years ended December 31, 2020 and 2019, EMEA gross profit decreased by \$4.2 million and \$3.7 million, respectively.

	M	Europe, liddle East,			.i. Diei.		Total
2021	AIF	ica (EMEA)	 mericas	A	sia Pacific	_	Total
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
2019							
Revenue	\$	145,942	\$ 61,577	\$	45,965	\$	253,484
Gross profit		95,069	41,667		31,102		167,838
Long-lived assets		8,085	13,240		709		22,034

For the years 2021, 2020, and 2019, our top 10 customers contributed 22%, 21% and 29%, respectively, of total worldwide revenue. The majority of our 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, 2021, we have purchase obligations of \$45.6 million, including \$15.4 million of inventory purchase obligations which are expected to be consummated in the next 12 months, \$26.9 million of committed hosting arrangements which will be used in the next one to three years, and \$3.3 million for other software agreements related to the administration of our business which range from one to three years.

We are a party to or have intellectual property subject to litigation and other proceedings that arise in the ordinary course of our business. These types of matters could result in fines, penalties, compensatory or treble damages or non-monetary sanctions or relief. We believe the probability is remote that the outcome of each of these matters, including the legal proceedings described below, will have a material adverse effect on the corporation as a whole, notwithstanding that the unfavorable resolution of any matter may have a material effect on our financial results in any particular interim reporting period. Among the factors that we consider in this assessment are the nature of existing legal proceedings and claims, the asserted or possible damages or loss contingency (if estimable), the progress of the case, existing law and precedent, the opinions or views of legal counsel and other advisers, our experience in similar cases and the experience of other companies, the facts available to us at the time of assessment and how we intend to respond to the proceeding or claim. Our assessment of these factors may change over time as individual proceedings or claims progress.

Although we cannot predict the outcome of legal or other proceedings with certainty, where there is at least a reasonable possibility that a loss may have been incurred, U.S. GAAP requires us to disclose an estimate of the reasonably possible loss or range of loss or make a statement that such an estimate cannot be made. We follow a process in which we seek to estimate the reasonably possible loss or range of loss, and only if we are unable to make such an estimate do we conclude and disclose that an estimate cannot be made. Accordingly, unless otherwise indicated below in our discussion of legal proceedings, a reasonably possible loss or range of loss associated with any individual legal proceeding cannot be estimated.

We include various types of indemnification clauses in our customer agreements. These indemnifications may include, but are not limited to, infringement claims related to our intellectual property, direct damages and consequential damages. The type and amount of such indemnifications vary substantially based on our assessment of risk and reward associated with each agreement. We believe the estimated fair value of these indemnification clauses is minimal, and we cannot determine the maximum amount of potential future payments, if any, related to such indemnification provisions. We have no liabilities recorded for these clauses as of December 31, 2021.

A complaint was filed on August 20, 2020 against OneSpan and certain of its officers, asserting claims for purported violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 (the "Exchange Act"), and SEC Rule 10b-5 promulgated thereunder, based on certain alleged material misstatements and omissions. The case is captioned Almendariz v. OneSpan Inc., et al., No. 1:20-cv-04906 (N.D. Ill.) (the "Securities Class Action"). Specifically, the plaintiff in the Securities Class Action alleges, among other things, that certain statements about OneSpan's business were misleading because of defendants' failure to disclose that OneSpan purportedly had inadequate internal procedures and controls over financial reporting and related disclosures; and OneSpan purportedly downplayed the negative impacts of immaterial errors in its financial statements. On April 28, 2021, the Securities Class Action was dismissed by the court without prejudice.

A complaint, related in subject matter to the Securities Class Action, was filed on October 23, 2020 against certain of OneSpan's officers and directors, and names OneSpan as a nominal defendant. The case is captioned Klein v. Boroditzky, et al., No. 1:20-cv-06310 (N.D. Ill.) (the "Derivative Action" and, collectively with the Securities Class

Action, the "Litigation"). The plaintiff asserts claims for breach of fiduciary duty, abuse of control and corporate waste, as well as a claim for contribution under Sections 10(b) and 21D of the Exchange Act, based on the same alleged wrongdoing pled in the Securities Class Action. On February 16, 2021, on the parties' agreed motion, the court stayed the action pending a decision on the then-anticipated motion to dismiss in the Securities Class Action. On June 28, 2021 the Klein case was dismissed by the court without prejudice.

On April 2, 2021, a different purported shareholder of the Company, represented by one of the same law firms representing plaintiff in the Klein case, filed second derivative suit in the Northern District of Illinois arising out of the same events that led to the filing of the Securities Class Action. The case is captioned Herrera v. Boroditsky, et al., 1:21-cv-01789 (N.D. Ill.). The factual allegations are substantially similar to those in Klein, except that the complaint does not contain express allegations regarding the pendency of the Securities Class Action and only one cause of action, for breach of fiduciary duty, is asserted. On June 28, 2021 the Herrera case was dismissed by the court without prejudice.

From time to time, we have been involved in litigation and claims incidental to the conduct of our business, such as compensation claims from current or former employees or commercial disputes with vendors. We expect that to continue. Excluding matters specifically disclosed above, we are not a party to any lawsuit or proceeding that, in management's opinion, is likely to have a material adverse effect on its business, financial condition or results of operations.

From time to time, we have been involved in litigation and claims incidental to the conduct of our business, such as compensation claims from current or former employees in Europe. We expect that to continue. Excluding matters specifically disclosed above, we are not a party to any lawsuit or proceeding that, in management's opinion, is likely to have a material adverse effect on its business, financial condition or results of operations.

Note 19 – Restructuring Plan

During the fourth quarter of 2021, the Board approved a restructuring plan ("Plan") designed to advance the Company's operating model, streamline its business, and enhance its capital resources. The Plan began the first of two phases constituting a multi-year strategic plan on December 16, 2021. The Company did not take any actions or record any charges in connection with the Plan during the year ended December 31, 2021.

Note 20 - Related Party

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 2020. 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, 2021 and 2020 was \$0.3 million and \$0.1 million, respectively, and is included in subscription revenue. The amount receivable as of December 31, 2021 and 2020 was \$0 million and \$0.4 million.

The company purchases subscription SMS services from Twilio, Inc. Marc Boroditsky is the Chief Revenue Officer of Twilio, Inc. and has a direct ownership interest in 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, 2021 was \$0.8 million and is included in cost of goods sold. The amount payable at December 31, 2021 was less than \$0.1 million. The total amount paid to Twilio, Inc. during the year ended December 31, 2020 was \$0.4 million and the amount payable at December 31, 2020 was less than \$0.1 million

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Note 21 - Subsequent Events

As mentioned in Note 2 – Summary of Significant Accounting Policies, we had an equity interest of 17% in Promon AS as of December 31, 2021. Promon is a technology company headquartered in Norway that specializes in mobile app security, whose solutions focus largely on Runtime Application Self-Protection (RASP). We integrate Promon's RASP technology into our software solutions, which are licensed to our customers.

On January 31, 2022, we sold our equity interest in Promon for \$18.9 million, and will record the gain on sale of \$14.8 million in other income (expense) on the Consolidated Statement of Operations during the three months ended March 31, 2022.

We intend to continue to purchase and integrate Promon's RASP technology into our customer software solutions.

SCHEDULE II ONESPAN INC. VALUATION AND QUALIFYING ACCOUNTS

Credit losses for trade receivables.

For the year ended December 31,	eginning Balance	Provision for Bad Debts	Chargeoffs	Foreign Currency Translation	Ending Balance
2021	\$ 4,135	(16)	(2,689)	(11)	\$ 1,419
2020	\$ 2,812 (1)	2,306	(994)	11	\$ 4,135
2019	\$ 1,152	2,215	(843)	_	\$ 2,524

(1) Includes the \$288 impact of the initial ASU 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, on February 22, 2022.

OneSpan Inc.

/s/ Matthew P. Moynahan Matthew P. Moynahan Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed by the following persons on behalf of the Registrant in the capacities indicated on February 22, 2022.

POWER OF ATTORNEY

Each of the undersigned, in his capacity as an officer or director, or both, as the case may be, of OneSpan Inc. does hereby appoint Matthew Moynahan, and each of them severally, his true and lawful attorneys or attorney to execute in his name, place and stead, in his 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, 2021 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.

SIGNATURE	TITLE
/s/ Matthew P. Moynahan Matthew P. Moynahan	President and Chief Executive Officer (Principal Executive Officer)
/s/ Jan Kees van Gaalen Jan Kees van Gaalen	Interim Chief Financial Officer (Principal Financial Officer)
/s/ John Bosshart John Bosshart	Chief Accounting Officer (Principal Accounting Officer)
/s/ Alfred Nietzel Alfred Nietzel	——— Chairman
/s/ Marc D. Boroditsky Marc D. Boroditsky	——— Director
/s/ Garry Capers Garry Capers	——— Director
/s/ Sarika Garg Sarika Garg	——— Director
/s/ Jean K. Holley Jean K. Holley	——— Director
/s/ Marianne Johnson Marianne Johnson	——— Director
/s/ Michael McConnell Michael McConnell	——— Director
/s/ Marc Zenner Marc Zenner	——— Director

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the registration statements (No. 333-234406) on Form S-3 and (Nos 333-62829, 333-161158 and 333-232207) on Form S-8 of our reports dated February 22, 2022, with respect to the consolidated financial statements of OneSpan Inc. and the effectiveness of internal control over financial reporting.

/s/ KPMG LLP

Chicago, Illinois February 22, 2022

Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Matthew Moynahan, certify that:

- 1. I have reviewed this annual report on Form 10-K of OneSpan Inc.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in 3. all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be (a) designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared; and
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles; and
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by the report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
- The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - Any fraud, whether or not material, that involves management or other employees who have a significant role in (b) the registrant's internal control over financial reporting.

Dated: February 22, 2022 /s/ Matthew Moynahan Matthew Moynahan

President and Chief Executive Officer (Principal Executive Officer)

Certification of Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Jan Kees van Gaalen, certify that:

- 1. I have reviewed this annual report on Form 10-K of OneSpan Inc.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared; and
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles; and
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by the report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
- 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: February 22, 2022 /s/ Jan Kees van Gaalen

Jan Kees van Gaalen Interim Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)

CERTIFICATION OF CHIEF EXECUTIVE OFFICER Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the filing with the Securities and Exchange Commission of the Annual Report of OneSpan Inc. (the company) on Form 10-K for the period ended December 31, 2021 (the Report), I, Matthew Moynahan, President and Chief Executive Officer of the company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

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

/s/ Matthew Moynahan
Matthew Moynahan
President and Chief Executive Officer
February 22, 2022

CERTIFICATION OF CHIEF FINANCIAL OFFICER Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the filing with the Securities and Exchange Commission of the Annual Report of OneSpan Inc. (the company) on Form 10-K for the period ended December 31, 2021 (the Report), I, Jan Kees van Gaalen, Interim Chief Financial Officer of the company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

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

/s/ Jan Kees van Gaalen
Jan Kees van Gaalen
Interim Chief Financial Officer

February 22, 2022