



THE DESCARTES SYSTEMS GROUP INC.
QUARTERLY REPORT TO SHAREHOLDERS

US GAAP FINANCIAL RESULTS FOR THE FIRST QUARTER OF FISCAL 2021

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Our Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") contains references to Descartes using the words "we," "us," "our" and similar words and the reader is referred to using the words "you," "your" and similar words.

This MD&A also refers to our fiscal years. Our fiscal year commences on February 1st of each year and ends on January 31st of the following year. Our current fiscal year, which will end on January 31, 2021, is referred to as the "current fiscal year," "fiscal 2021," "2021" or using similar words. Our previous fiscal year, which ended on January 31, 2020, is referred to as the "previous fiscal year," "fiscal 2020," "2020" or using similar words. Other fiscal years are referenced by the applicable year during which the fiscal year ends. For example, 2022 refers to the annual period ending January 31, 2022 and the "fourth quarter of 2022" refers to the quarter ending January 31, 2022.

This MD&A, which is prepared as of May 27, 2020, covers our quarter ended April 30, 2020, as compared to our quarter ended April 30, 2019. You should read the MD&A in conjunction with our unaudited condensed consolidated financial statements for our first quarter of fiscal 2021 that appear elsewhere in this Quarterly Report to Shareholders. You should also read the MD&A in conjunction with our audited annual consolidated financial statements, related notes thereto and the related MD&A for fiscal 2020 that are included in our most recent annual report to shareholders (the "2020 Annual Report"), as filed on March 4, 2020.

We prepare and file our consolidated financial statements and MD&A in United States ("US") dollars and in accordance with US generally accepted accounting principles ("GAAP"). All dollar amounts we use in the MD&A are in US currency, unless we indicate otherwise.

We have prepared the MD&A with reference to the Form 51-102F1 MD&A disclosure requirements established under National Instrument 51-102 "Continuous Disclosure Obligations" ("NI 51-102") of the Canadian Securities Administrators. As it relates to our financial condition and results of operations for the interim period ended April 30, 2020, pursuant to NI 51-102, this MD&A updates the MD&A included in the 2020 Annual Report.

Additional information about us, including copies of our continuous disclosure materials such as our annual information form, is available on our website at <http://www.descartes.com>, through the EDGAR website at <http://www.sec.gov> or through the SEDAR website at <http://www.sedar.com>.

As of the date of this MD&A, the world is experiencing a global pandemic related to the spread of the COVID-19 virus (the "Pandemic"). Businesses in many countries around the globe, including Canada, the United States and other countries in which we operate, have been required to close, or materially alter, their day-to-day operations due to government-ordered or recommended shut-downs and/or "shelter-in-place", or equivalent, restrictions on individuals and businesses which may prevent many businesses from operating. We have implemented measures that allow our employees to work remotely from home locations and for us to continue to operate our business and service our customers. The impact of the Pandemic and various public health protection measures, including travel restrictions, on the business of our customers, and the ongoing demand of those customers for our products and services, is still uncertain at this time, in part due to the uncertainty of the duration and scope of such restrictions on a geography-by-geography basis. However, as of the date of this MD&A, we have observed some customers with reduced shipment volumes across various modes of transportation and we are aware of some customers who have reduced or temporarily suspended operations or are otherwise experiencing financial hardship in their business that may temporarily or permanently impact their demand for our products and services.

We remain well positioned to adjust to market conditions to assist our customers as they work to manage their transportation, logistics and supply chain processes during the Pandemic. As noted above, we've been able to transition our workforce such that the majority of our workforce can work remotely and

continue to service and support our customers and ensure the uninterrupted availability of our various solutions, most of which are delivered by way of a software-as-a-service or cloud-based delivery model. In addition, the nature of the products and services that we provide to the transportation and logistics community have been classified as an “essential service” in the majority of the markets in which we have personnel located which allows us, to the extent necessary, to have requisite personnel safely attend at our various data-centers and hosting facilities to ensure the continuity of our services under state-of-emergency and shelter-in-place orders that may be in place in various jurisdictions globally.

Certain statements made in this Quarterly Report to Shareholders, constitute forward-looking information for the purposes of applicable securities laws (“forward-looking statements”), including, but not limited to: statements in the “Trends / Business Outlook” section and statements regarding our expectations concerning future revenues and earnings, including potential variances from period to period; our assessment of the current and future potential impact of the Pandemic and related public health protection measures on our business; results of operations and financial condition; our expectations regarding the cyclical nature of our business; mix of revenues and potential variances from period to period; our plans to focus on generating services revenues yet to continue to allow customers to elect to license technology in lieu of subscribing to services; our expectations on losses of revenues and customers; our baseline calibration; our ability to keep our operating expenses at a level below our baseline revenues; our future business plans and business planning process; allocation of purchase price for completed acquisitions; our expectations regarding future restructuring charges and cost-reduction activities; expenses, including amortization of intangible assets and stock-based compensation; goodwill impairment tests and the possibility of future impairment adjustments; capital expenditures; acquisition-related costs; our liability with respect to various claims and suits arising in the ordinary course; any commitments referred to in the “Commitments, Contingencies and Guarantees” section of this MD&A; our intention to actively explore future business combinations and other strategic transactions; our liability under indemnification obligations; our reinvestment of earnings of subsidiaries back into such subsidiaries; our dividend policy; the sufficiency of capital to meet working capital, capital expenditure, debt repayment requirements and our anticipated growth strategy; our ability to raise capital; our adoption of certain accounting standards; and other matters related to the foregoing. When used in this document, the words “believe,” “plan,” “expect,” “anticipate,” “intend,” “continue,” “may,” “will,” “should” or the negative of such terms and similar expressions are intended to identify forward-looking statements. These forward-looking statements are subject to risks and uncertainties and are based on assumptions that may cause future results to differ materially from those expected. The material assumptions made in making these forward-looking statements include the following: Descartes' ability to successfully identify and execute on acquisitions and to integrate acquired businesses and assets, and to predict expenses associated with and revenues from acquisitions; the impact of network failures, information security breaches or other cyber-security threats; disruptions in the movement of freight and a decline in shipment volumes including as a result of the Pandemic or other contagious illness outbreaks, a deterioration of general economic conditions or instability in the financial markets accompanied by a decrease in spending by our customers; global shipment volumes continuing to increase at levels consistent with the average growth rates of the global economy; countries continuing to implement and enforce existing and additional customs and security regulations relating to the provision of electronic information for imports and exports; countries continuing to implement and enforce existing and additional trade restrictions and sanctioned party lists with respect to doing business with certain countries, organizations, entities and individuals; our continued operation of a secure and reliable business network; the continued availability of the data and content that is utilized in the delivery of services made available over our network; relative stability of currency exchange rates and interest rates; equity and debt markets continuing to provide us with access to capital; our ability to develop solutions that keep pace with the continuing changes in technology, and our continued compliance with third party intellectual property rights. While management believes these assumptions to be reasonable under the circumstances, they may prove to be inaccurate. Such forward-looking statements also involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements of, or developments in our business or industry, to differ materially from the anticipated results, performance or achievements or developments expressed or implied by such forward-looking statements. Such factors include, but are not limited to, the factors discussed under the heading “**Certain Factors That May Affect Future Results**” in this MD&A and in other documents filed with the Securities and Exchange Commission, the Ontario Securities Commission and other securities commissions across Canada from time to time. If any of such risks actually occur, they could materially adversely affect our business, financial condition or results of operations. In that case, the trading price

of our common shares could decline, perhaps materially. Readers are cautioned not to place undue reliance upon any such forward-looking statements, which speak only as of the date made. Forward-looking statements are provided for the purpose of providing information about management's current expectations and plans relating to the future. Readers are cautioned that such information may not be appropriate for other purposes. Except as required by applicable law, we do not undertake or accept any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements to reflect any change in our expectations or any change in events, conditions, assumptions or circumstances on which any such statements are based.

OVERVIEW

We use technology and networks to simplify complex business processes. We are primarily focused on logistics and supply chain management business processes. Our solutions are predominantly cloud-based and are focused on improving the productivity, performance and security of logistics-intensive businesses. Customers use our modular, software-as-a-service ("SaaS") and data solutions to route, schedule, track and measure delivery resources; plan, allocate and execute shipments; rate, audit and pay transportation invoices; access and analyze global trade data; research and perform trade tariff and duty calculations; file customs and security documents for imports and exports; and complete numerous other logistics processes by participating in a large, collaborative multi-modal logistics community. Our pricing model provides our customers with flexibility in purchasing our solutions either on a subscription, transactional or perpetual license basis. Our primary focus is on serving transportation providers (air, ocean and truck modes), logistics service providers (including third-party logistics providers, freight forwarders and customs brokers) and distribution-intensive companies for which logistics is either a key or a defining part of their own product or service offering, or for which our solutions can provide an opportunity to reduce costs, improve service levels, or support growth by optimizing the use of assets and information.

The impact of the Pandemic on global trade both in the short-term and over the longer-term is uncertain at this time. As of the date of this MD&A, we have observed some reduced shipment volumes across various modes of transportation and are aware of some customers who have reduced or temporarily suspended operations or are otherwise experiencing financial hardship. However, we don't know what the impact of these events will be on overall global trade volumes and the use of Descartes' products and services by its customers and whether an impact will only be temporary or may continue for an extended period of time. It is also not clear at this time whether, as a result of the Pandemic and related events, companies and/or consumers will alter trading, manufacturing and/or buying patterns over the longer-term from the patterns we have observed in the global economy in the past.

The Market

Logistics is the management of the flow of resources between a point of origin and a point of destination – processes that move items (such as goods, people, information) from point A to point B. Supply chain management is broader than logistics and includes the sourcing, procurement, conversion and storage of resources for consumption by an enterprise. Logistics and supply chain management have been evolving over the past several years as companies are increasingly seeking automation and real-time control of their supply chain activities. We believe companies are looking for integrated solutions for managing inventory in transit, conveyance units, people, data and business documents.

We believe logistics-intensive organizations are seeking to reduce operating costs, differentiate themselves, improve margins, and better serve customers. Global trade and transportation processes are often manual and complex to manage. This is a consequence of the growing number of business partners participating in companies' global supply chains and a lack of standardized business processes.

Additionally, global sourcing, logistics outsourcing, imposition of additional customs and regulatory requirements and the increased rate of change in day-to-day business requirements are adding to the overall complexities that companies face in planning and executing in their supply chains. Whether a shipment is delayed at the border, a customer changes an order or a breakdown occurs on the road, there are increasingly more issues that can significantly impact the execution of fulfillment schedules and associated costs.

The rise of e-commerce has heightened these challenges for many suppliers with end-customers increasingly demanding narrower order-to-fulfillment periods, lower prices and greater flexibility in scheduling and rescheduling deliveries. End customers also want real-time updates on delivery status, adding considerable burden to supply chain management as process efficiency is balanced with affordable service.

In this market, the movement and sharing of data between parties involved in the logistics process is equally important to the physical movement of goods. Manual, fragmented and distributed logistics solutions are often proving inadequate to address the needs of operators. Connecting

manufacturers and suppliers to carriers on an individual, one-off basis is too costly, complex and risky for organizations dealing with many trading partners. Further, many of these solutions do not provide the flexibility required to efficiently accommodate varied processes for organizations to remain competitive. We believe this presents an opportunity for logistics technology providers to unite this highly fragmented community and help customers improve efficiencies in their operations.

As the market continues to change, we have been evolving to meet our customers' needs. While the rate of adoption of newer logistics and supply chain management technologies is increasing, a large number of organizations still have manual business processes. We have been educating our prospects and customers on the value of connecting to trading partners through our Global Logistics Network ("GLN") and automating, as well as standardizing, multi-party business processes. We believe that our target customers are increasingly looking for a single source, neutral, network-based solution provider who can help them manage the end-to-end shipment – from researching global trade information, to the booking of a shipment, to the tracking of that shipment as it moves, to the regulatory compliance filings to be made during the move and, finally, to the settlement and audit of the invoice.

Additionally, regulatory initiatives mandating electronic filing of shipment information with customs authorities require companies to automate aspects of their shipping processes to remain compliant and competitive. Our customs compliance technology helps shippers, transportation providers, freight forwarders and other logistics intermediaries to securely and electronically file shipment and tariff/duty information with customs authorities and self-audit their own efforts. Our technology also helps carriers and freight forwarders efficiently coordinate with customs brokers and agencies to expedite cross-border shipments. While many compliance initiatives started in the US, compliance has now become a global issue with significantly more international shipments crossing several borders on the way to their final destinations.

Increasingly, data and content have become central to supply chain planning and execution. Complex international supply chains are affected by logistics service provider performance, capacity, and productivity, as well as regulatory frameworks such as free trade agreements. We believe our

Global Trade Data, Trade Regulations, Free-Trade-Agreement, and duty rate and calculation solutions help customers improve their sourcing, landed cost, and transportation lane and provider selection processes.

Solutions

Descartes' Logistics Technology Platform unites a growing global community of logistics-focused parties, allowing them to transact business while leveraging a broad array of applications designed to help logistics-intensive businesses thrive.

The Logistics Technology Platform fuses our GLN, an extensive logistics network covering multiple transportation modes, with a broad array of modular, interoperable web and wireless logistics management solutions. Designed to help accelerate time-to-value and increase productivity and performance for businesses of all sizes, the Logistics Technology Platform leverages the GLN's multimodal logistics community to enable companies to quickly and cost-effectively connect and collaborate.

Descartes' GLN, the underlying foundation of the Logistics Technology Platform, manages the flow of data and documents that track and control inventory, assets and people in motion. Designed expressly for logistics operations, it is native to the particularities of different transportation modes and country borders. As a state-of-the-art messaging network with wireless capabilities, the GLN helps manage business processes in real-time and in-motion. Its capabilities go beyond logistics, supporting common commercial transactions, regulatory compliance documents, and customer specific needs.

The GLN extends its reach using interconnect agreements with other general and logistics-specific networks, to offer companies access to a wide array of trading partners. With the flexibility to connect and collaborate in unique ways, companies can effectively route or transform data to and from partners and deploy additional Descartes solutions on the GLN. The GLN allows "low tech" partners to act and respond with "high tech" capabilities and connect to the transient partners that exist in many logistics operations. This inherent adaptability creates opportunities to develop logistics business processes that can help customers differentiate themselves from their competitors.

Descartes' Logistics Application Suite offers a wide array of modular, cloud-based, interoperable web and wireless logistics management applications. These solutions embody Descartes' deep domain expertise, not merely "check box" functionality. These solutions deliver value for a broad range of logistics-intensive organizations, whether they purchase transportation, run their own fleet, operate globally or locally, or work across air, ocean or ground transportation. Descartes' comprehensive suite of solutions includes:

- Routing, Mobile and Telematics;
- Transportation Management and e-commerce enablement;
- Customs & Regulatory Compliance;
- Trade Data;
- Global Logistics Network Services; and
- Broker & Forwarder Enterprise Systems.

The Descartes applications forming part of the Logistics Technology Platform are modular and interoperable to allow organizations the flexibility to deploy them quickly within an existing portfolio of solutions. Implementation is streamlined because these solutions use web-native or wireless user interfaces and are pre-integrated with the GLN. With interoperable and multi-party solutions, Descartes' solutions are designed to deliver functionality that can enhance a logistics operation's performance and productivity both within the organization and across a complex network of partners.

Descartes' expanding global trade content offering unites systems and people with trade information to enable organizations to work smarter by making more informed supply chain and logistics decisions. Our content solutions can help customers: research and analyze global trade movements, regulations and trends; reduce the risk of transacting with denied parties; increase trade compliance rates; optimize sourcing, procurement, and business development strategies; and minimize duty spend.

Descartes' GLN community members enjoy extended command of operations and accelerated time-to-value relative to many alternative logistics solutions. Given the inter-enterprise nature of logistics, quickly gaining access to partners is paramount. For this reason, Descartes has focused on growing a community that strategically attracts and retains relevant logistics parties. Upon joining the GLN community, many companies find that a number of their trading partners are already members with an existing connection to the GLN. This helps to minimize the time required to

integrate Descartes' logistics management applications and to begin realizing results. Descartes is committed to continuing to expand community membership. Companies that join the GLN community or extend their participation find a single place where their entire logistics network can exist regardless of the range of transportation modes, the number of trading partners or the variety of regulatory agencies.

Sales and Distribution

Our sales efforts are primarily directed towards two specific customer markets: (a) transportation companies and logistics service providers; and (b) manufacturers, retailers, distributors and mobile business service providers. Our sales staff is regionally based and trained to sell across our solutions to specific customer markets. In North America and Europe, we promote our products primarily through direct sales efforts aimed at existing and potential users of our products. In the Asia Pacific, Indian subcontinent, South America and African regions, we focus on making our channel partners successful. Channel partners for our other international operations include distributors, alliance partners and value-added resellers.

United by Design

Descartes' 'United By Design' strategic alliance program is intended to ensure complementary hardware, software and network offerings are interoperable with Descartes' solutions and work together seamlessly to solve multi-party business problems.

'United By Design' is intended to create a global ecosystem of logistics-intensive organizations working together to standardize and automate business processes and manage resources in motion. The program centers on Descartes' Open Standard Collaborative Interfaces, which provide a wide variety of connectivity mechanisms to integrate a broad spectrum of applications and services.

Descartes has partnering relationships with multiple parties across the following three categories:

- Technology Partners - Complementary hardware, software, network, and embedded technology providers that extend the functional breadth of Descartes' solution capabilities;
- Consulting Partners - Large system integrators and enterprise resource

planning system vendors through to vertically specialized or niche consulting organizations that provide domain expertise and/or implementation services for Descartes' solutions; and

- Channel Partners (Value-Added Resellers) – Organizations that market, sell, implement and support Descartes' solutions to extend access and expand market share into territories and markets where Descartes might not have a focused direct sales presence.

Marketing

Our marketing efforts are focused on growing demand for our solutions and establishing Descartes as a thought leader and innovator across the markets we serve. Marketing programs are delivered through integrated initiatives designed to reach our target customer and prospect groups. These programs include digital and online marketing, trade shows and user group events, partner-focused campaigns, proactive media relations, and direct corporate marketing efforts.

Fiscal 2021 Highlights

On February 21, 2020, Descartes acquired all of the shares of Peoplevox Limited ("Peoplevox"), a UK-based provider of cloud-based ecommerce warehouse management solutions. The purchase price for the acquisition was approximately \$24.1 million, net of cash acquired, which was funded from a combination of cash on hand and drawing on our existing credit facility.

As a result of the Pandemic, many countries across the globe, including Canada, the United States and other countries in which we operate, ordered businesses to close or alter their day-to-day operations. In response, we quickly implemented measures that allow our employees to safely work remotely from home locations, while allowing us to continue to operate our business and service our customers and engage with prospective new customers. In addition, to manage our operating expenses, during the first quarter we have largely suspended hiring and travel and have canceled external marketing events, all measures which we anticipate will remain in place until the uncertainty caused by the Pandemic subsides.

CONSOLIDATED OPERATIONS

The following table shows, for the periods indicated, our results of operations in millions of dollars (except per share and weighted average share amounts):

	First Quarter of	
	2021	2020
Total revenues	83.7	78.0
Cost of revenues	21.9	19.9
Gross margin	61.8	58.1
Operating expenses	31.6	31.3
Other charges	0.8	2.1
Amortization of intangible assets	13.7	12.8
Income from operations	15.7	11.9
Investment income	-	0.1
Interest expense	(0.3)	(2.2)
Income before income taxes	15.4	9.8
Income tax expense		
Current	3.8	1.7
Deferred	0.6	0.8
Net income	11.0	7.3
EARNINGS PER SHARE		
BASIC	0.13	0.09
DILUTED	0.13	0.09
WEIGHTED AVERAGE SHARES OUTSTANDING (thousands)		
BASIC	84,156	77,149
DILUTED	85,456	78,273

Total revenues consist of *license revenues*, *services revenues* and *professional services and other revenues*. License revenues are derived from perpetual licenses granted to our customers to use our software products. Services revenues are comprised of ongoing transactional and/or subscription fees for use of our services and products by our customers and maintenance, which include revenues associated with maintenance and support of our services and products. Professional services and other revenues are comprised of professional services revenues from consulting, implementation and training services related to our services and products, hardware revenues and other revenues.

Our total revenues were \$83.7 million and \$78.0 million for the first quarter of 2021 and 2020, respectively. The principal contributor to the increase in the first quarter of 2021 compared to the same period of 2020 was a full period of contribution from the acquisitions completed in 2020 (all of the assets of the businesses run by the Management Systems Resources Inc. group of companies (collectively, "Visual Compliance"), Core Transport Technologies NZ Limited ("CORE"), Tegmento AG and Contentis AG (collectively, "STEPcom") and BestTransport.com, Inc. ("BestTransport" and collectively, with Visual Compliance, CORE and STEPcom, the "2020 Acquisitions"), which contributed an incremental \$4.8 million in revenue in the first quarter of 2021. The principal contributor to the balance of the increase in revenues in the first quarter of 2021 compared to the same period of 2020 was growth in revenue from new and

existing customers primarily in subscription products partially offset by the weakening of the Canadian dollar, euro and British pound sterling compared to the US dollar.

The following table provides additional analysis of our revenues by type (in millions of dollars and as a percentage of total revenues) generated over each of the periods indicated:

	First Quarter of	
	2021	2020
License	1.8	2.3
<i>Percentage of total revenues</i>	2%	3%
Services	74.1	67.0
<i>Percentage of total revenues</i>	89%	86%
Professional services and other	7.8	8.7
<i>Percentage of total revenues</i>	9%	11%
Total revenues	83.7	78.0

Our **license revenues** were \$1.8 million and \$2.3 million for the first quarter of 2021 and 2020, respectively, representing 2% and 3% of total revenues for the first quarter of 2021 and 2020, respectively. While our sales focus has been on generating services revenues in our SaaS business model, we continue to see a market for licensing the products in our omni-channel retailing and home delivery logistics solutions. The amount of license revenues in a period is dependent on our customers' preference to license our solutions instead of purchasing our solutions as a service and we anticipate variances from period to period.

Our **services revenues** were \$74.1 million and \$67.0 million for the first quarter of 2021 and 2020, respectively, representing 89% and 86% of total revenues for the first quarter of 2021 and 2020, respectively. The increase in the first quarter of 2021 as compared to the same period of 2020 was primarily due to the inclusion of a full period of revenues from the 2020 Acquisitions, which contributed an incremental \$4.7 million in the first quarter of 2021. The principal contributor to the balance of the increase in services revenues in the first quarter of 2021 compared to the same period of 2020 was growth in revenue from new and existing customers primarily in subscription products.

Our **professional services and other revenues** were \$7.8 million and \$8.7 million for the first quarter of 2021 and 2020, respectively, representing 9% and 11% of total revenues for the first quarter of 2021 and 2020, respectively. The decrease in the first quarter of 2021 compared to the same period of 2020 was primarily due to a \$0.5 million decrease in customer-specific software enhancement services.

We operate in one business segment providing logistics technology solutions. The following table provides additional analysis of our revenues by geographic location of customer (in millions of dollars and as a percentage of total revenues):

	First Quarter of	
	2021	2020
United States	53.1	48.8
<i>Percentage of total revenues</i>	63%	63%
Europe, Middle-East and Africa ("EMEA")	21.3	19.4
<i>Percentage of total revenues</i>	26%	25%
Canada	6.1	6.7
<i>Percentage of total revenues</i>	7%	8%
Asia Pacific	3.2	3.1
<i>Percentage of total revenues</i>	4%	4%
Total revenues	83.7	78.0

Revenues from the United States were \$53.1 million and \$48.8 million for the first quarter of 2021 and 2020, respectively. The increase in the first quarter of 2021 as compared to the same period of 2020 was primarily a result of the inclusion of a full period of revenues from the 2020 Acquisitions, which contributed an incremental \$3.5 million.

Revenues from the EMEA region were \$21.3 million and \$19.4 million for the first quarter of 2021 and 2020, respectively. The increase in the first quarter of 2021 as compared to the same period of 2020 was primarily a result of the inclusion of a full period of revenues from the 2020 Acquisitions, which contributed an incremental \$1.8 million.

Revenues from Canada were \$6.1 million and \$6.7 million for the first quarter of 2021 and 2020, respectively. The decrease in the first quarter of 2021 as compared to the same period of 2020 was primarily a result of a \$0.6 million decrease in revenue from the 2020 Acquisitions as a result of a weaker Canadian dollar.

Revenues from the Asia Pacific region were \$3.2 million and \$3.1 million for the first quarter of 2021 and 2020, respectively. The increase in the first quarter of 2021 compared to the same period of 2020 was primarily a result of the inclusion of a full period of revenues from the 2020 Acquisitions.

The following table provides analysis of cost of revenues (in millions of dollars) and the related gross margins for the periods indicated:

	First Quarter of	
	2021	2020
<u>License</u>		
License revenues	1.8	2.3
Cost of license revenues	0.2	0.2
Gross margin	1.6	2.1
<i>Gross margin percentage</i>	89%	91%
<u>Services</u>		
Services revenues	74.1	67.0
Cost of services revenues	17.1	15.4
Gross margin	57.0	51.6
<i>Gross margin percentage</i>	77%	77%
<u>Professional services and other</u>		
Professional services and other revenues	7.8	8.7
Cost of professional services and other revenues	4.6	4.3
Gross margin	3.2	4.4
<i>Gross margin percentage</i>	41%	51%
<u>Total</u>		
Revenues	83.7	78.0
Cost of revenues	21.9	19.9
Gross margin	61.8	58.1
<i>Gross margin percentage</i>	74%	74%

Cost of license revenues consists of costs related to our sale of third-party technology, such as third-party map license fees and royalties.

Gross margin percentage for license revenues was 89% and 91% for the first quarter of 2021 and 2020, respectively. Our gross margin on license revenues is dependent on the proportion of our license revenues that involve third-party technology. Consequently, our gross margin percentage for license revenues is higher when a lower proportion of our license revenues attracts third-party technology costs, and vice versa.

Cost of services revenues consists of internal costs of running our systems and applications and other personnel-related expenses incurred in providing maintenance, including customer support.

Gross margin percentage for services revenues was 77% for both the first quarter of 2021 and 2020.

Cost of professional services and other revenues consists of personnel-related expenses incurred in providing professional services, hardware installation as well as hardware costs.

Gross margin percentage for professional services and other revenues was 41% and 51% for the first quarter of 2021 and 2020, respectively. Hardware and other revenues typically have lower margins than our professional services revenues and as such we anticipate variances in gross margin from period to period as a result of the sales mix. The margin in the first quarter of 2021 compared to the same period of 2020 was negatively impacted by a decreased proportion of professional services revenues compared to hardware and other revenues.

Operating expenses, consisting of sales and marketing, research and development and general and administrative expenses, were \$31.6 million and \$31.3 million for the first quarter of 2021 and 2020, respectively. Operating expenses were higher in the first quarter of 2021 compared to the same period of 2020 primarily because of headcount-related costs from the 2020 Acquisitions, which added approximately \$1.0 million to the 2021 operating expenses. These increased expenses were partially offset by lower marketing expenses in the first quarter of 2021 compared to the same period of 2020.

Net income was \$11.0 million and \$7.3 million for the first quarter of 2021 and 2020, respectively. The 2020 Acquisitions contributed an incremental \$3.7 million to net income in the first quarter of 2021 compared to the same period of 2020 (excluding any interest costs on financing the acquisitions).

The following table provides analysis of operating expenses (in millions of dollars and as a percentage of total revenues) for the periods indicated:

	First Quarter of	
	2021	2020
Total revenues	83.7	78.0
Sales and marketing expenses	9.3	10.1
<i>Percentage of total revenues</i>	11%	13%
Research and development expenses	13.6	12.7
<i>Percentage of total revenues</i>	16%	16%
General and administrative expenses	8.7	8.5
<i>Percentage of total revenues</i>	10%	11%
Total operating expenses	31.6	31.3
<i>Percentage of total revenues</i>	38%	40%

Sales and marketing expenses include salaries, commissions, stock-based compensation and other personnel-related costs, bad debt expenses, travel expenses, advertising programs and services, and other promotional activities associated with selling and marketing our services and products. Sales and marketing expenses were \$9.3 million and \$10.1 million for the first quarter of 2021 and 2020, respectively, representing 11% and 13% of total revenues for the first quarter of 2021 and 2020, respectively. The decrease in sales and marketing expenses in the first quarter of 2021 compared to the same period of 2020 was primarily due to a decline in marketing events, including the cancelation of our annual Descartes Evolution User Group, as a result of the Pandemic.

Research and development expenses consist primarily of salaries, stock-based compensation and other personnel-related costs of technical and engineering personnel associated with our research and product development activities, as well as costs for third-party outsourced development providers. We expensed all costs related to research and development in the first quarter of 2021 and 2020. Research and development expenses were \$13.6 million and \$12.7 million for the first quarter of 2021 and 2020, respectively, representing 16% of total revenues in both the first quarter of 2021 and 2020. The increase in research and development expenses in the first quarter of 2021 compared to the same period of 2020 was primarily due to headcount-related costs from the 2020 Acquisitions, as described in the operating expenses section above.

General and administrative expenses consist primarily of salaries, stock-based compensation and other personnel-related costs of administrative personnel, as well as professional fees and other administrative expenses. General and administrative costs were \$8.7 million and \$8.5 million for the first quarter of 2021 and 2020, respectively, representing 10% and 11% of total revenues for the first quarter

of 2021 and 2020, respectively. The increase in general and administrative expenses in the first quarter of 2021 compared to the same period of 2020 was primarily due to headcount-related costs from the 2020 Acquisitions, as described in the operating expenses section above.

Other charges consist primarily of acquisition-related costs with respect to completed and prospective acquisitions and restructuring charges. Acquisition-related costs primarily include advisory services, brokerage services, administrative costs and retention bonuses, and relate to completed and prospective acquisitions. Restructuring costs relate to the integration of previously completed acquisitions and other cost-reduction activities. Other charges were \$0.8 million and \$2.1 million for the first quarter of 2021 and 2020, respectively.

Amortization of intangible assets is amortization of the value attributable to intangible assets, including customer agreements and relationships, non-compete covenants, existing technologies and trade names, in each case associated with acquisitions completed by us as of the end of each reporting period. Intangible assets with a finite life are amortized to income over their useful life. The amount of amortization expense in a fiscal period is dependent on our acquisition activities. Amortization of intangible assets was \$13.7 million and \$12.8 million in the first quarter of 2021 and 2020, respectively. Amortization expense increased in the first quarter of 2021 compared to the same period of 2020 primarily due to the 2020 Acquisitions. As at April 30, 2020, the unamortized portion of all intangible assets amounted to \$248.5 million.

We test the carrying value of our finite life intangible assets for recoverability when events or changes in circumstances indicate that there may be evidence of impairment. We write down intangible assets or asset groups with a finite life to fair value when the related undiscounted cash flows are not expected to allow for recovery of the carrying value. Fair value of intangible assets or asset groups is determined by discounting the expected related cash flows. No finite life intangible asset or asset group impairment has been identified or recorded for any of the fiscal periods reported.

Investment income was nominal and \$0.1 million in the first quarter of 2021 and 2020, respectively. Investment income is generally earned on excess cash balances.

Interest expense was \$0.3 million and \$2.2 million in the first quarter of 2021 and 2020, respectively. Interest expense is primarily comprised of interest expense on the amount borrowed and outstanding on our revolving debt facility, debt standby charges as well as the amortization of deferred financing charges. Interest expense decreased in 2021 compared to 2020 as a result of lower average interest rates and a lower average debt balance.

Income tax expense is comprised of current and deferred income tax expense. Income tax expense for the first quarter of 2021 and 2020 was 28% and 26% of income before income taxes, respectively, with current income tax expense for the same periods being 25% and 18% of income before income taxes, respectively.

Income tax expense – current was \$3.8 million and \$1.7 million in the first quarter of 2021 and 2020, respectively. Current income taxes arise primarily from income that is not fully sheltered by loss carry-forwards or other tax attributes. Current income tax expense increased in the first quarter of 2021 compared to the same period of 2020 primarily due to newly published tax reform guidance in the US which resulted in an adjustment with respect to income tax of previous periods as well as an increase in non-deductible expenses.

Income tax expense – deferred was \$0.6 million and \$0.8 million in the first quarter of 2021 and 2020, respectively. Deferred income tax expense decreased in the first quarter of 2021 compared to the same period of 2020 primarily due to a recovery of deferred tax attributes in the US partially offset by increased usage of tax attributes in Canada.

QUARTERLY OPERATING RESULTS

The following table provides an analysis of our unaudited operating results (in thousands of dollars, except per share and weighted average number of share amounts) for each of the quarters indicated:

	Fiscal 2019			Fiscal 2020				Fiscal 2021
	Second Quarter	Third Quarter	Fourth Quarter	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	First Quarter
Revenues	67,115	70,008	71,030	78,004	80,540	83,026	84,221	83,703
Gross margin	49,154	50,858	51,731	58,148	59,403	60,893	61,626	61,836
Operating expenses	28,358	29,144	29,258	31,338	31,621	31,932	33,639	31,638
Net income	8,498	7,901	7,892	7,320	8,573	9,666	11,438	11,047
Basic earnings per share	0.11	0.10	0.10	0.09	0.11	0.11	0.14	0.13
Diluted earnings per share	0.11	0.10	0.10	0.09	0.10	0.11	0.13	0.13
Weighted average shares outstanding (thousands):								
Basic	76,816	76,854	76,865	77,149	81,049	84,136	84,154	84,156
Diluted	77,781	77,863	77,842	78,273	82,245	85,342	85,447	85,456

Revenues over the comparative periods have been positively impacted by the eight acquisitions that we have completed since the beginning of fiscal 2019 through the end of the first quarter of fiscal 2021. In addition, we have seen increased revenues as a result of an increase in transactions processed over our GLN business document exchange as we help our customers comply with electronic filing requirements of global security regulations.

Our services revenues continue to have minor seasonal trends. In the first fiscal quarter of each year, we historically have seen slightly lower shipment volumes by air and truck which impact the aggregate number of transactions flowing through our GLN business document exchange. In the second fiscal quarter of each year, we historically have seen a slight increase in ocean services revenues as ocean carriers are in the midst of their customer contract negotiation period. In the third fiscal quarter of each year, we have historically seen shipment and transactional volumes at their highest. In the fourth fiscal quarter of each year, the various international holidays impact the aggregate number of shipping days in the quarter, and historically we have seen this adversely impact the number of transactions our network processes and, consequently, the amount of services revenues we receive during that period. In the second and fourth fiscal quarters of each year, we historically have seen a slight decrease in professional services revenues due to various international holidays and vacation seasons. Overall, the impact of seasonal trends has a relatively minor impact on our revenues quarter to quarter.

In the first quarter of 2021 revenues decreased compared to the fourth quarter of 2020 primarily due a decline in license revenues. In addition, we experienced some declines in our transactional and subscription services in the latter half of the first quarter of 2021 compared to the first half, primarily related to the impact of the Pandemic on our customers' operations. Operating expenses decreased in the first quarter of 2021 compared to the fourth quarter of 2020 primarily due to lower marketing and travel expenses caused by non-attendance at and cancellation of remote marketing events due to the Pandemic. Net income was negatively impacted in the first quarter of 2021 compared to the fourth quarter of 2020 primarily due to higher income tax expense partially offset by lower operating expenses.

LIQUIDITY AND CAPITAL RESOURCES

Cash. We had \$56.0 million and \$44.4 million in cash as at April 30, 2020 and January 31, 2020, respectively. All cash was held in interest-bearing bank accounts, primarily with major Canadian, US and European banks. The cash balance increased from January 31, 2020 to April 30, 2020 by \$11.6 million primarily due to cash generated from operations.

Credit facility. On January 25, 2019, we amended and increased our existing \$150.0 million senior secured revolving credit facility. The amended facility is now a \$350.0 million revolving operating credit facility to be available for general corporate purposes, including the financing of ongoing working capital needs and acquisitions. With the approval of the lenders, the credit facility can be expanded to a total of \$500.0 million. The credit facility has a five-year maturity with no fixed repayment dates prior to the end of the five-year term ending January 2024. Borrowings under the credit facility are secured by a first charge over substantially all of Descartes' assets. Depending on the type of advance, interest rates under the revolving operating portion of the credit facility are based on the Canada or US prime rate, Bankers' Acceptance (BA) or London Interbank Offered Rate (LIBOR) plus an additional 0 to 250 basis points based on the ratio of net debt to adjusted earnings before interest, taxes, depreciation and amortization, as defined in the credit agreement. A standby fee of between 20 to 40 basis points will be charged on all undrawn amounts. The credit facility contains certain customary representations, warranties and guarantees, and covenants.

On July 27, 2017, the Chief Executive of the United Kingdom Financial Conduct Authority ("FCA"), which regulates LIBOR, announced that the FCA will no longer compel banks to submit rates for the calculation of the LIBOR benchmark after 2021. This announcement indicates that LIBOR will not be guaranteed after 2021 and it appears likely that LIBOR will be discontinued or modified by 2021. The credit facility allows for the selection of a replacement rate in the event of the discontinuation of LIBOR. We expect the credit facility will transition to the Secured Overnight Financing Rate ("SOFR") as the replacement rate. Given the Company's historic borrowings and the historic differences between LIBOR and SOFR, we do not expect the discontinuation of LIBOR to have a material impact on future interest expense.

As at April 30, 2020, \$340.3 million of the revolving operating credit facility remained available for use and the outstanding balance of \$9.7 million was required to be repaid in January 2024. We were in compliance with the covenants of the credit facility as at April 30, 2020 and remain in compliance as of the date of this MD&A.

Short-form base shelf prospectus. On June 6, 2018, we filed a final short-form base shelf prospectus (the "Base Shelf Prospectus"), allowing us to offer and issue the following securities: (i) common shares; (ii) preferred shares; (iii) senior or subordinated unsecured debt securities; (iv) subscription receipts; (v) warrants; and (vi) securities comprised of more than one of the aforementioned common shares, preferred shares, debt securities, subscription receipts and/ or warrants offered together as a unit. These securities may be offered separately or together, in separate series, in amounts, at prices and on terms to be set forth in one or more shelf prospectus supplements. The aggregate initial offering price of securities that may be sold by us (or certain of our current or future shareholders) pursuant to the Base Shelf Prospectus during the 25-month period that the Base Shelf Prospectus, including any amendments thereto, remains valid is limited to an aggregate of \$750 million.

On June 10, 2019, we completed a public offering of common shares in the United States and Canada at a price of \$35.50 per common share pursuant to the short-form base shelf prospectus and related prospectus supplement filed in connection with the offering (the "Offering"). The total offering of 6,900,000 common shares included the exercise in full by the underwriters of the 15% over-allotment option, for aggregate gross proceeds to Descartes of \$245.0 million. Net proceeds to Descartes were approximately \$236.6 million once expenses associated with the Offering were deducted inclusive of the related deferred

tax benefit on share issuance costs. As a result of the Offering, the aggregate balance of securities that may be sold by us pursuant to the Base Shelf Prospectus has been reduced to an aggregate of \$505.0 million.

Working capital. As at April 30, 2020, our working capital surplus (current assets less current liabilities) was \$23.4 million. Current assets primarily include \$56.0 million of cash, \$36.7 million of current trade receivables and \$13.2 million of prepaid assets. Current liabilities primarily include \$42.3 million of deferred revenue, \$30.5 million of accrued liabilities and \$8.9 million of accounts payable. Our working capital has increased from January 31, 2020 to April 30, 2020 by \$12.1 million, primarily due to cash generated from operations.

Historically, we've financed our operations and met our capital expenditure requirements primarily through cash flows provided from operations, issuances of common shares and proceeds from debt. We anticipate that, considering the above, we have sufficient liquidity to fund our current cash requirements for working capital, contractual commitments, capital expenditures and other operating needs. We also believe that we have the ability to generate sufficient amounts of cash in the long term to meet planned growth targets and to fund strategic transactions. Should additional future financing be undertaken, the proceeds from any such transaction could be utilized to fund strategic transactions or for general corporate purposes, including the repayment of outstanding debt. We expect, from time to time, to continue to consider select strategic transactions to create value and improve performance, which may include acquisitions, dispositions, restructurings, joint ventures and partnerships, and we may undertake further financing transactions, including draws on our credit facility or equity offerings, in connection with any such potential strategic transaction.

With respect to earnings of our non-Canadian subsidiaries, our intention is that these earnings will be reinvested in each subsidiary indefinitely. Of the \$56.0 million of cash as at April 30, 2020, \$35.1 million was held by our foreign subsidiaries, most significantly in the United States with lesser amounts held in other countries in the EMEA and Asia Pacific regions. To date, we have not encountered significant legal or practical restrictions on the abilities of our subsidiaries to repatriate money to Canada, even if such restrictions may exist in respect of certain foreign jurisdictions where we have subsidiaries. In the future, if we elect to repatriate the unremitted earnings of our foreign subsidiaries in the form of dividends, or if the shares of the foreign subsidiaries are sold or transferred, then we could be subject to additional Canadian or foreign income taxes, net of the impact of any available foreign tax credits, which would result in a higher effective tax rate. We have not provided for foreign withholding taxes or deferred income tax liabilities related to unremitted earnings of our non-Canadian subsidiaries, since such earnings are considered permanently invested in those subsidiaries, or are not subject to withholding taxes.

The table set forth below provides a summary of cash flows for the periods indicated in millions of dollars:

	Three Months Ended	
	April 30, 2020	April 30, 2019
Cash provided by operating activities	27.5	23.4
Additions to property and equipment	(1.0)	(1.4)
Acquisition of subsidiaries, net of cash acquired	(24.1)	(239.8)
Proceeds from borrowing on credit facility	10.2	241.2
Credit facility repayments	-	(19.9)
Payment of debt issuance costs	-	(1.4)
Issuance of common shares, net of issuance costs	-	0.7
Effect of foreign exchange rate on cash	(1.0)	(0.5)
Net change in cash	11.6	2.3
Cash, beginning of period	44.4	27.3
Cash, end of period	56.0	29.6

Cash provided by operating activities was \$27.5 million and \$23.4 million for the first quarter of 2021 and 2020, respectively. For the first quarter of 2021, the \$27.5 million of cash provided by operating activities resulted from \$11.0 million of net income, plus adjustments for \$17.1 million of non-cash items included in net income and less \$0.6 million of cash used in changes in our operating assets and liabilities. For the first quarter of 2020, the \$23.4 million of cash provided by operating activities resulted from \$7.3 million of net income, plus adjustments for \$15.2 million of non-cash items included in net income and plus \$0.9 million of cash provided from changes in our operating assets and liabilities. Cash provided by operating activities increased in the first quarter of 2021 compared to the same period of 2020 primarily due to an increase in net income adjusted for non-cash items.

Additions to property and equipment were \$1.0 million and \$1.4 million for first quarter of 2021 and 2020, respectively. Additions to property and equipment decreased in the first quarter of 2021 compared to the same period of 2020 due to the timing of investments in computing equipment and software to support our network and continue to enhance our security infrastructure.

Acquisition of subsidiaries, net of cash acquired was \$24.1 million and \$239.8 million for the first quarter of 2021 and 2020, respectively.

Proceeds from borrowing on credit facility were \$10.2 million and \$241.2 million for the first quarter of 2021 and 2020, respectively. In the first quarter of 2021 the borrowings on our credit facility partially financed the acquisition of Peoplevox. In the first quarter of 2020 the borrowings on our credit facility financed the acquisition of Visual Compliance.

Credit facility repayments were nil and \$19.9 million for the first quarter of 2021 and 2020, respectively.

Payment of debt issuance costs were nominal and \$1.4 million for the first quarter of 2021 and 2020, respectively, and relate to costs paid in amending the terms of our credit facility agreement.

Issuance of common shares, net of issuance costs were nominal and \$0.7 million for the first quarter of 2021 and 2020, respectively, as a result of the exercise of employee stock options.

COMMITMENTS, CONTINGENCIES AND GUARANTEES

Commitments

To facilitate a better understanding of our commitments, the following information is provided (in millions of dollars) in respect of our operating obligations as of April 30, 2020:

	Less than 1 year	1-3 years	4-5 years	More than 5 years	Total
Debt obligations	-	-	9.7	-	9.7
Operating lease obligations	4.0	5.4	2.8	0.8	13.0
Total	4.0	5.4	12.5	0.8	22.7

Debt Obligations

The debt obligations are comprised of principal repayments on our credit facility. Interest, not included in the table above, is payable quarterly in arrears based on the applicable variable rate.

Lease Obligations

We are committed under non-cancelable operating leases for buildings, vehicles and computer equipment with terms expiring at various dates through 2029. The undiscounted future minimum amounts payable under these lease agreements are presented in the table above.

Other Obligations

Deferred Share Unit ("DSU") and Cash-settled Restricted Share Unit ("CRSU") Plans

As discussed in Note 2 to the audited consolidated financial statements for 2020 included in our 2020 Annual Report, we maintain DSU and CRSU plans for our directors and employees. Any payments made pursuant to these plans are settled in cash. For DSUs and CRSUs, the units vest over time and the liability recognized at any given consolidated balance sheet date reflects only those units vested at that date that have not yet been settled in cash. As such, we had an unrecognized aggregate amount for the unvested CRSUs of \$1.5 million at April 30, 2020. As at April 30, 2020 there were no unvested DSUs. The ultimate liability for any payment of DSUs and CRSUs is dependent on the trading price of our common shares. To partially offset our exposure to fluctuations in our stock price, we have entered into equity derivative contracts, including floating-rate equity forwards. As at April 30, 2020, we had equity derivatives for 251,422 Descartes common shares and a DSU liability for 252,759 Descartes common shares, resulting in minimal net exposure resulting from changes to our share price.

Contingencies

We are subject to a variety of other claims and suits that arise from time to time in the ordinary course of our business. The consequences of these matters are not presently determinable but, in the opinion of management after consulting with legal counsel, the ultimate aggregate liability is not currently expected to have a material effect on our results of operations or financial position.

Product Warranties

In the normal course of operations, we provide our customers with product warranties relating to the performance of our hardware, software and services. To date, we have not encountered material costs as a result of such obligations and have not accrued any liabilities related to such obligations in our consolidated financial statements.

Business combination agreements

In respect of our acquisitions of PinPoint and CORE, up to \$10.1 million in cash may become payable if certain revenue performance targets are met in the two years following the acquisition. A balance of \$1.9 million is accrued related to the fair value of this contingent consideration as at April 30, 2020.

Guarantees

In the normal course of business, we enter into a variety of agreements that may contain features that meet the definition of a guarantee under ASC Topic 460, "Guarantees". The following lists our significant guarantees:

Intellectual property indemnification obligations

We provide indemnifications of varying scope to our customers against claims of intellectual property infringement made by third parties arising from the use of our products. In the event of such a claim, we are generally obligated to defend our customers against the claim and we are liable to pay damages and costs assessed against our customers that are payable as part of a final judgment or settlement. These intellectual property infringement indemnification clauses are not generally subject to any dollar limits and remain in force for the term of our license agreement with our customer, which license terms are typically perpetual. Historically, we have not encountered material costs as a result of such indemnification obligations.

Other indemnification agreements

In the normal course of operations, we enter into various agreements that provide general indemnities. These indemnities typically arise in connection with purchases and sales of assets, securities offerings or buy-backs, service contracts, administration of employee benefit plans, retention of officers and directors, membership agreements, customer financing transactions, and leasing transactions. In addition, our

corporate by-laws provide for the indemnification of our directors and officers. Each of these indemnities requires us, in certain circumstances, to compensate the counterparties for various costs resulting from breaches of representations or obligations under such arrangements, or as a result of third party claims that may be suffered by the counterparty as a consequence of the transaction. We believe that the likelihood that we could incur significant liability under these obligations is remote. Historically, we have not made any significant payments under such indemnities.

In evaluating estimated losses for the guarantees or indemnities described above, we consider such factors as the degree of probability of an unfavorable outcome and the ability to make a reasonable estimate of the amount of loss. We are unable to make a reasonable estimate of the maximum potential amount payable under such guarantees or indemnities as many of these arrangements do not specify a maximum potential dollar exposure or time limitation. The amount also depends on the outcome of future events and conditions, which cannot be predicted. Given the foregoing, to date, we have not accrued any liability in our consolidated financial statements for the guarantees or indemnities described above.

OUTSTANDING SHARE DATA

We have an unlimited number of common shares authorized for issuance. As of May 27, 2020, we had 84,158,516 common shares issued and outstanding.

As of May 27, 2020, there were 1,429,570 options issued and outstanding, and 3,357,736 remaining available for grant under all stock option plans.

As of May 27, 2020, there were 729,274 performance share units ("PSUs") and 415,792 restricted share units ("RSUs") issued and outstanding, with a potential of up to a further 166,815 PSUs being earned if a maximum 2.0 performance factor is achieved in respect of the outstanding PSU awards. Also, as of May 27, 2020, there were 1,126,263 units remaining available for grant under all performance and restricted share unit plans.

On November 30, 2004, we announced that our board of directors had adopted a shareholder rights plan (the "Rights Plan") to ensure the fair treatment of shareholders in connection with any take-over offer, and to provide our board of directors and shareholders with additional time to fully consider any unsolicited take-over bid. We did not adopt the Rights Plan in response to any specific proposal to acquire control of the Company. The Rights Plan was approved by the TSX and was originally approved by our shareholders on May 18, 2005. The Rights Plan took effect as of November 29, 2004. An amended and restated Rights Plan was ratified by shareholders at our annual shareholders' meeting held on June 1, 2017 and is due for reconsideration and potential renewal by shareholders at our next annual shareholders meetings scheduled for May 28, 2020. We understand that the Rights Plan is similar to plans adopted by other Canadian companies and approved by their shareholders.

APPLICATION OF CRITICAL ACCOUNTING POLICIES

Our consolidated financial statements and accompanying notes are prepared in accordance with GAAP. Preparing financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. These estimates and assumptions are affected by management's application of accounting policies. Estimates are deemed critical when a different estimate could have reasonably been used or where changes in the estimates are reasonably likely to occur from period to period and would materially impact our financial condition or results of operations. Our significant accounting policies are discussed in Note 2 to the audited consolidated financial statements for 2020 included in our 2020 Annual Report.

Our management has discussed the development, selection and application of our critical accounting policies with the audit committee of the board of directors.

The following reflect our more significant estimates, judgments and assumptions which we believe are the most critical to aid in fully understanding and evaluating our reported financial results for the period ended April 30, 2020:

- Revenue recognition, costs to obtain a contract, contract assets and liabilities;
- Impairment of long-lived assets;
- Goodwill;
- Stock-based compensation;
- Income taxes; and
- Business combinations.

The significant accounting policies are unchanged from those disclosed in the Company's 2020 Annual Report.

CHANGE IN / INITIAL ADOPTION OF ACCOUNTING POLICIES

Recently adopted accounting pronouncements

In June 2016, the FASB issued Accounting Standards Update 2016-13, "Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments" ("ASU 2016-13") and issued subsequent amendments to the initial guidance during the 2019 calendar year, collectively referred to as "ASC 326". ASC 326 requires the measurement and recognition of expected credit losses for financial assets held at amortized cost. ASC 326 replaces the existing incurred loss impairment model with an expected loss model which requires the use of forward-looking information to calculate credit loss estimates. ASC 326 is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2019, which is our fiscal year that began on February 1, 2020 (fiscal 2021).

The Company is exposed to credit losses primarily through its trade accounts receivable and contract assets. The provision for credit losses is determined utilizing a model of historical losses data. In estimating the provision for credit losses, we considered the age of the receivable, our historical write-offs and the historical creditworthiness of the customer, among other factors. Should any of these factors change, the estimates made by us will also change accordingly, which could affect the level of our future provisions. The Company adopted ASC 326 as of February 1, 2020 using the cumulative effect method and therefore the comparative information has not been restated. The adoption of ASC 326 did not have a material impact on our results of operations or disclosures.

In January 2017, the FASB issued Accounting Standards Update 2017-04, "Intangibles – Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment" ("ASU 2017-04"). ASU 2017-04 simplifies how an entity is required to test goodwill for impairment. ASU 2017-04 is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2019, which is our fiscal year that began on February 1, 2020 (fiscal 2021). The Company adopted this guidance in the first quarter of fiscal 2021. The adoption of this guidance did not have a material impact on our results of operations or disclosures.

In August 2018, the FASB issued Accounting Standards Update 2018-15, "Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract" ("ASU 2018-15"). ASU 2018-15 aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. ASU 2018-15 is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2019, which is our fiscal year that began on February 1, 2020

(fiscal 2021). The Company adopted this guidance in the first quarter of fiscal 2021. The adoption of this guidance did not have a material impact on our results of operations or disclosures.

Recently issued accounting pronouncements

In December 2019, the FASB issued Accounting Standards Update 2019-12, "Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes" ("ASU 2019-12"). ASU 2019-12 simplifies how an entity accounts for income taxes. ASU 2019-12 is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2020, which will be our fiscal year beginning February 1, 2021 (fiscal 2022). Early adoption is permitted. The Company currently anticipates that it will adopt this guidance in the first quarter of fiscal 2022. We are currently evaluating the impact that the adoption will have on our results of operations, financial position and disclosures.

CONTROLS AND PROCEDURES

During the period beginning on February 1, 2020 and ended on April 30, 2020, no changes were made to the Company's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

TRENDS / BUSINESS OUTLOOK

This section discusses our outlook for fiscal 2021 and in general as of the date of this MD&A and contains forward-looking statements.

The impact of the Pandemic on global trade both in the short-term and over the longer-term is uncertain at this time. As of the date of this MD&A, we have observed some reduced shipment volumes across various modes of transportation and are aware of some customers who have reduced or temporarily suspended operations or are otherwise experiencing financial hardship. However, we don't know what the impact of these events will be on overall global trade volumes and the use of Descartes' products and services by its customers and whether an impact will only be temporary or may continue for an extended period of time. It is also not clear at this time whether, as a result of the Pandemic and related events, companies and/or consumers will alter trading, manufacturing and/or buying patterns from the patterns we have observed in the global economy in the past and if so, for how long.

Despite this uncertainty, we have decided to take proactive measures to position our company to defend against the potential impact of the Pandemic while ensuring that we maintain our flexibility to react quickly when a normalization of business activity returns. As many countries across the globe ordered businesses to close or alter their day-to-day operations due to the Pandemic, we quickly implemented measures that allow our employees to safely work remotely from home locations, while allowing us to continue to operate our business and service our customers and engage with prospective new customers.

In order to manage our operating expenses, during the first quarter we have largely suspended hiring and travel and have canceled external marketing events, all measures which we anticipate will remain in place until the uncertainty caused by the Pandemic subsides. In addition, in order to further address the potential impact of the Pandemic, on May 19, 2020, we implemented a restructuring plan (the "Fiscal 2021 restructuring plan") that will reduce our global workforce by approximately 5% while also providing for the closure of several office facilities across the business where we've determined employees can work remotely or from other Descartes offices. We expect the total cost of this plan to be approximately \$2.0 million and that the plan will be implemented over the next 6 months.

More generally, our business may be impacted from time to time by the cyclical and seasonal nature of particular modes of transportation and the freight market, as well as the cyclical and seasonal nature of the industries that such markets serve. Factors which may create cyclical fluctuations in such modes of transportation or the freight market in general include legal and regulatory requirements, timing of contract renewals between our customers and their own customers, seasonal-based tariffs, vacation periods applicable to particular shipping or receiving nations, weather-related or global health events that impact shipping in particular geographies and amendments to international trade agreements. In particular, the uncertainties arising from the Pandemic and steps taken by governments, businesses, other organizations and private citizens to respond to the Pandemic could adversely impact global shipment volumes in all modes of transportation in fiscal 2021. Since some of our revenues from particular products and services are tied to the volume of shipments being processed, adverse fluctuations in the volume of global shipments, or shipments in any particular mode of transportation, may adversely affect our revenues. Significant declines in shipment volumes could likely have a material adverse effect on our business.

Industry consolidation, rapid technological change and frequent new product introductions and enhancements continue to characterize the software and services industries – particularly for logistics management technology companies. Organizations are increasingly requiring greater levels of functionality and more sophisticated product offerings from their software and services providers.

Increased importance is being placed on leveraging cloud-based technology to better manage logistics processes and to connect and collaborate with trading partners on a global basis, as well as to reuse and share supply chain data in order to accelerate time-to-value. Cloud-based technology also enables business networks to more easily unite and integrate services provided by a broad range of partners and technology alliances to extend functionality and further enhance collaboration between business communities. As a result, we believe there is a trend away from using manual and paper-based supply chain and logistics processes towards electronic processes powered by the exchange of electronic information between logistics and supply chain participants.

Accordingly, we expect that our future success will be dependent upon our ability to enhance current products or develop and introduce new products offering enhanced performance and new functionality at competitive prices. In particular, we believe customers are looking for end-to-end solutions that combine a multi-modal, multi-process network with business document exchange and wireless mobile resource management (“MRM”) applications with end-to-end global trade compliance, trade content and collaborative supply chain execution applications. These applications include freight bookings, contract and rate management, classification of goods for tariff and duty purposes, sanctioned party screening, customs filings and electronic shipment manifest processes, transportation management, routing and scheduling, purchase order to dock door processes, and inventory visibility.

We believe there is a continued acceptance of subscription pricing and SaaS business models in the markets we serve that provide lower up-front cost and easier-to-maintain alternatives than may be available through traditional perpetual license pricing models. In the first quarter of fiscal 2021, our services revenues comprised 89% of our total revenues, with the balance being license, professional services and other revenues. We expect that our focus in fiscal 2021 will remain on generating services revenues, primarily by promoting the use of our GLN (including customs compliance services) and the migration of customers using our legacy license-based products to our services-based architecture. We anticipate maintaining the flexibility to license our products to those customers who prefer to buy the products in that fashion and the composition of our revenues in any one quarter will be impacted by the buying preferences of our customers.

We have significant contracts with our license customers for ongoing support and maintenance, as well as significant service contracts which provide us with recurring services revenues. After their initial term, our service contracts are generally renewable at a customer’s option, and there are generally no mandatory payment obligations or obligations to license additional software or subscribe for additional services. In a typical year, based on our historic experience, we anticipate that over a one-year period we may lose approximately 4% to 6% of our aggregate annualized recurring revenues from the previous year in the

ordinary course, excluding consideration of new customers. For fiscal 2021, given the uncertainty of the impact of the Pandemic on our customers' businesses, we anticipate that the amount of recurring revenues lost from the previous year could be higher than that, however, we can't reliably provide a range of how much higher.

We internally measure and manage our "baseline calibration," a non-GAAP financial measure, which we define as the difference between our "baseline revenues" and "baseline operating expenses". We define our "baseline revenues," a non-GAAP financial measure, as our visible, recurring and contracted revenues. Baseline revenues are not a projection of anticipated total revenues for a period as they exclude any anticipated or expected new sales for a period beyond the date that the baseline revenues are measured. We define our "baseline operating expenses," a non-GAAP financial measure, as our total expenses less interest, investment income, taxes, depreciation and amortization, stock-based compensation (for which we include related costs and taxes), acquisition-related costs and restructuring charges. Baseline operating expenses are not a projection of anticipated total expenses for a period as they exclude any expenses associated with anticipated or expected new sales for a period beyond the date that the baseline expenses are measured. Our baseline calibration is not a projection of net income for a period as determined in accordance with GAAP, or adjusted earnings before interest, taxes, depreciation and amortization for a period as it excludes anticipated or expected new sales for a period beyond the date that the baseline calibration is measured, excludes any costs of goods sold or other expenses associated with such new sales, and excludes the expenses identified as excluded in the definition of "baseline operating expenses," above. We calculate and disclose "baseline revenues," "baseline operating expenses" and "baseline calibration" because management uses these metrics in determining its planned levels of expenditures for a period and we believe this information is useful to our investors. However, because these metrics are limited estimated operating metrics that do not have comparable GAAP measures, we are unable to provide quantitative reconciliations of these measures to GAAP measures without unreasonable efforts and accordingly are omitting this information. These metrics are estimated operating metrics and not projections, nor actual financial results, and are not indicative of current or future performance. These metrics do not have a standardized meaning prescribed by GAAP and are unlikely to be comparable to similarly-titled metrics used by other companies and are not a replacement or proxy for any GAAP measure. At May 19, 2020, using foreign exchange rates of \$0.72 to CAD \$1.00, \$1.09 to EUR 1.00 and \$1.22 to £1.00, and considering our run rate of recurring revenues in April 2020 and incorporating our Fiscal 2021 restructuring plan, we estimate that our baseline revenues for the second quarter of 2021 are approximately \$77.0 million and our baseline operating expenses are approximately \$50.5 million. We consider this to be our baseline calibration of approximately \$26.5 million for the second quarter of 2021, or approximately 34% of our baseline revenues as at May 19, 2020.

We estimate that aggregate amortization expense for existing intangible assets will be \$39.3 million for the remainder of 2021, \$48.5 million for 2022, \$41.2 million for 2023, \$29.5 million for 2024, \$27.6 million for 2025, \$22.7 million for 2026, and \$39.7 million thereafter. Expected future amortization expense is based on the level of existing intangible assets at April 30, 2020, and is subject to fluctuations in foreign exchange rates and assumes no future adjustments or impairment of existing intangible assets.

We anticipate that stock-based compensation expense for the remainder of fiscal 2021 for grants outstanding as at April 30, 2020 will be approximately \$4.6 to \$4.8 million, subject to any necessary adjustments resulting from actual stock-based compensation forfeitures and fluctuations in foreign exchange rates.

We performed our annual goodwill impairment tests in accordance with ASC Topic 350, "Intangibles – Goodwill and Other" ("ASC Topic 350") as at October 31, 2019 and determined that there was no evidence of impairment. We are currently scheduled to perform our next annual impairment test during the third quarter of fiscal 2021. We will continue to perform quarterly analyses of whether any event has occurred that would more likely than not reduce our enterprise value below our carrying amounts and, if so, we will perform a goodwill impairment test between the annual dates. The likelihood of any future impairment increases if our public market capitalization is adversely impacted by global economic, capital market or other conditions for a sustained period of time. Any future impairment adjustment will be recognized as an expense in the period that such adjustment is identified.

In the first quarter of 2021, capital expenditures were \$1.0 million or approximately 1% of revenues, as we continue to invest in computer equipment and software to support our network and build out our infrastructure. We anticipate that we will incur approximately \$4.0 million to \$5.0 million in capital expenditures in the remainder of fiscal 2021 primarily related to investments in our network and security infrastructure.

We conduct business in a variety of foreign currencies and, as a result, our foreign operations are subject to foreign exchange fluctuations. Our businesses operate in their local currency environment and use their local currency as their functional currency. Assets and liabilities of foreign operations are translated into US dollars at the exchange rate in effect at the balance sheet date. Revenues and expenses of foreign operations are translated using daily exchange rates. Translation adjustments resulting from this process are accumulated in other comprehensive income (loss) as a separate component of shareholders' equity. Transactions incurred in currencies other than the functional currency are converted to the functional currency at the transaction date. All foreign currency transaction gains and losses are included in net income. Some of our cash is held in foreign currencies. We currently have no specific hedging program in place to address fluctuations in international currency exchange rates. We can make no accurate prediction of what will happen with international currency exchange rates going forward. However, if the US dollar was to weaken in comparison to foreign currencies, then we anticipate this will increase the expenses of our business and have a negative impact on our results of operations. By way of illustration, 69% of our revenues in the first quarter of fiscal 2021 were in US dollars, 13% in euro, 7% in Canadian dollars, 3% in British pound sterling, and the balance in mixed currencies, while 47% of our operating expenses were in US dollars, 15% in euro, 24% in Canadian dollars, 4% in British pound sterling, and the balance in mixed currencies.

Our tax expense for a period is difficult to predict as it depends on many factors, including the actual jurisdictions in which income is earned, the tax rates in those jurisdictions, the amount of deferred tax assets relating to the jurisdictions and the valuation allowances relating to those tax assets. We can provide no assurance as to the timing or amounts of any income tax expense or recovery, nor can we provide any assurance that our current valuation allowance for deferred tax assets will not need to be adjusted further.

We anticipate that our effective tax rate will be approximately 27% to 30% for the remainder of fiscal 2021.

We intend to continue to actively explore business combinations to add complementary services, products and customers to our existing businesses. We also intend to continue to focus our acquisition activities on companies that are targeting the same customers as us and processing similar data and, to that end, we listen to our customers' suggestions as they relate to acquisition opportunities. Depending on the size and scope of any business combination, or series of business combinations, we may choose or need to use our existing credit facility or need to raise additional debt or equity capital. However, there can be no assurance that we will be able to undertake such a financing transaction. If we use debt in connection with acquisition activity, we will incur additional interest expense from the date of the draw under such facility. Considering the balance of the credit facility as at April 30, 2020, and subject to any further draws or repayments on the credit facility, we anticipate that interest expense will be approximately \$0.9 million to \$1.0 million for the remainder of fiscal 2021, which includes debt standby charges as well as the amortization of deferred financing charges.

Certain future commitments are set out above in the section of this MD&A called "Commitments, Contingencies and Guarantees". We believe that we have sufficient liquidity to fund our current operating and working capital requirements, including the payment of these commitments.

CERTAIN FACTORS THAT MAY AFFECT FUTURE RESULTS

Any investment in us will be subject to risks inherent to our business. Before making an investment decision, you should carefully consider the risks described below together with all other information included in this report. The risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties that we are not aware of or have not focused on, or that we currently deem immaterial, may also impair our business operations. This report is qualified in its entirety by these risk factors.

If any of the risks actually occur, they could materially adversely affect our business, financial condition, liquidity or results of operations. In that case, the trading price of our securities could decline and you may lose all or part of your investment.

The Pandemic has had a significant impact on the global economy and could adversely affect our business, results of operations and financial condition.

The Pandemic and the efforts to respond to it have negatively impacted the global economy, disrupted manufacturing operations and global supply chains and created significant volatility and disruption of financial markets. In addition, the Pandemic has significantly increased economic and demand uncertainty and has the potential to result in a global recession. The Pandemic and resulting significantly weaker global economic conditions could have a negative impact on our future results of operations although the extent of that impact is uncertain at this time.

We expect the significance of the Pandemic, including the extent of its effect on our financial condition and results of operations, to depend on, among other things, its duration, the success of efforts to contain it, its impact on the global economy and on our customers, and the impact of ongoing actions and future actions taken by government authorities and by us in response. While we are not able at this time to estimate the impact of the Pandemic, an extended period of global supply chain and economic disruption could materially and adversely affect our business, results of operations, access to sources of liquidity and financial condition. In addition, an extended global recession caused by the Pandemic could have a further adverse impact on our financial condition and operations.

Catastrophic events, natural disasters, severe weather and disease and similar events could disrupt the demand of our customers for our products and services and our ability to operate our business.

Our business may be negatively impacted to varying degrees by a number of events which are beyond our control, including energy blackouts, pandemics (or other public health crises), terrorist attacks, acts of war, earthquakes, hurricanes, tornados, fires, floods, ice storms or other natural or manmade catastrophes. We cannot be sure that our emergency preparedness, including business continuity planning, to mitigate risks will be effective since such events can evolve very rapidly, and their impacts can be difficult to predict. As such, there can be no assurance that in the event of such a catastrophe that our operations and ability to carry on business will not be disrupted. The occurrence of such events may not release us from performing our obligations to third parties. A catastrophic event, including an outbreak of infectious disease, a pandemic or a similar health threat, such as the current Pandemic, or fear of any of the foregoing, could adversely impact us and our investments. In addition, liquidity and volatility, credit availability and market and financial conditions, all of which have been negatively impacted by the Pandemic, generally could change at any time as a result of any of these events. Any of these events in isolation or in combination, could have a material negative impact on our performance, financial condition, results of operations and cash flows.

We may have difficulties identifying, successfully integrating or maintaining or growing our acquired businesses.

Businesses that we acquire may sell products or services that we have limited experience operating or managing. We may experience unanticipated challenges or difficulties identifying suitable acquisition

candidates, integrating their businesses into our company, maintaining these businesses at their current levels or growing these businesses. Factors that may impair our ability to identify, successfully integrate, maintain or grow acquired businesses may include, but are not limited to:

- Challenges identifying suitable businesses to buy and negotiating the acquisition of those businesses on acceptable terms;
- Challenges completing the acquisitions within our expected time frames and budgets;
- Challenges in integrating acquired businesses with our business;
- Loss of customers of the acquired business;
- Loss of key personnel from the acquired business, such as former executive officers or key technical personnel;
- Non-compatible business cultures;
- For regulatory compliance businesses, changes in government regulations impacting electronic regulatory filings or import/export compliance, including changes in which government agencies are responsible for gathering import and export information;
- Difficulties in gaining necessary approvals in international markets to expand acquired businesses as contemplated;
- Our inability to obtain or maintain necessary security clearances to provide international shipment management services;
- Our failure to make appropriate capital investments in infrastructure to facilitate growth; and
- Other risk factors identified in this report.

We may fail to properly respond to any of these risks, which may have a material adverse effect on our business results.

Investments in acquisitions and other business initiatives involve a number of risks that could harm our business.

We have in the past acquired, and in the future, expect to seek to acquire, additional products, services, customers, technologies and businesses that we believe are complementary to ours. We are unable to predict whether or when we will be able to identify any appropriate products, technologies or businesses for acquisition, or the likelihood that any potential acquisition will be available on terms acceptable to us or will be completed. We also, from time to time, take on investments in other business initiatives, such as the implementation of new systems.

Acquisitions and other business initiatives involve a number of risks, including: substantial investment of funds, diversion of management's attention from current operations; additional demands on resources, systems, procedures and controls; and disruption of our ongoing business. Acquisitions specifically involve risks, including: difficulties in integrating and retaining all or part of the acquired business, its customers and its personnel; assumption of disclosed and undisclosed liabilities; dealing with unfamiliar laws, customs and practices in foreign jurisdictions; and the effectiveness of the acquired company's internal controls and procedures. In addition, we may not identify all risks or fully assess risks identified in connection with an investment. As well, by investing in such initiatives, we may deplete our cash resources or dilute our shareholder base by issuing additional shares. Furthermore, for acquisitions, there is a risk that our valuation assumptions, customer retention expectations and our models for an acquired product or business may be erroneous or inappropriate due to foreseen or unforeseen circumstances and thereby cause us to overvalue an acquisition target. There is also a risk that the contemplated benefits of an acquisition or other investment may not materialize as planned or may not materialize within the time period or to the extent anticipated. The individual or combined effect of these risks could have a material adverse effect on our business.

System or network failures, information security breaches or other cyber-security threats in connection with our services and products could reduce our sales, impair our reputation, increase costs or result in liability claims, and seriously harm our business.

We rely on information technology networks and systems to process, transmit and store electronic information. Any disruption to our services and products, our own information systems or communications networks or those of third-party providers on which we rely as part of our own product offerings could result in the inability of our customers to receive our products for an indeterminate period of time. Our

ability to deliver our products and services depends on the development and maintenance of internet infrastructure by third parties. This includes maintenance of reliable networks with the necessary security, speed, data capacity and bandwidth. While our services are designed to operate without interruption, we have experienced, and may in the future experience, interruptions and delays in services and availability from time to time. In the event of a catastrophic event with respect to one or more of our systems, we may experience an extended period of system unavailability, which could negatively impact our relationship with customers. Our services and products may not function properly for reasons which may include, but are not limited to, the following:

- System or network failure;
- Software errors, failures and crashes;
- Interruption in the supply of power;
- Virus proliferation or malware;
- Communications failures;
- Information or infrastructure security breaches;
- Insufficient investment in infrastructure;
- Earthquakes, fires, floods, natural disasters, or other force majeure events outside our control; and
- Acts of war, sabotage, cyber-attacks, denial-of-service attacks and/or terrorism.

In addition, any disruption to the availability of customer information, or any compromise to the integrity or confidentiality of customer information in our systems or networks, or the systems or networks of third parties on which we rely, could result in our customers being unable to effectively use our products or services or being forced to take mitigating actions to protect their information. Back-up and redundant systems may be insufficient or may fail and result in a disruption of availability of our products or services to our customers or the integrity or availability of our customers' information.

Some jurisdictions have enacted laws requiring companies to notify individuals of data security breaches involving certain types of personal data and in some cases our agreements with certain customers require us to notify them in the event of a security incident. Such mandatory disclosures could lead to negative publicity and may cause our current and prospective customers to lose confidence in the effectiveness of our data security measures. Moreover, if a high-profile security breach occurs with respect to another SaaS provider, customers may lose trust in the security of the SaaS business model generally, which could adversely impact our ability to retain existing customers or attract new ones.

Any actual or perceived threat of disruption to our services or any compromise of customer information could impair our reputation and cause us to lose customers or revenue, or face litigation, necessitate customer service or repair work that would involve substantial costs and distract management from operating our business. Despite the implementation of advanced threat protection, information and network security measures and disaster recovery plans, our systems and those of third parties on which we rely may be vulnerable. If we are unable (or are perceived as being unable) to prevent, or promptly identify and remedy, such outages and breaches, our operations may be disrupted, our business reputation could be adversely affected, and there could be a negative impact on our financial condition and results of operations.

Disruptions in the movement of freight could negatively affect our revenues.

Our business is highly dependent on the movement of freight from one point to another since we generate transaction revenues as freight is moved by, to or from our customers. If there are disruptions in the movement of freight, proper reporting or the overall volume of international shipments, whether as a result of labor disputes, weather or natural disaster, terrorist events, political instability, changes in cross border trade agreements, contagious illness outbreaks (such as the Pandemic), or otherwise, then the traffic volume on our Global Logistics Network will be impacted and our revenues will be adversely affected. As these types of freight disruptions are generally unpredictable, there can be no assurance that our business, results of operations and financial condition will not be adversely affected by such events.

General economic conditions may affect our results of operations and financial condition.

Demand for our products depends in large part upon the level of capital and operating expenditures by many of our customers. Decreased capital and operational spending could have a material adverse effect on the demand for our products and our business, results of operations, cash flow and overall financial condition. Disruptions in the financial markets may adversely impact the availability of credit already arranged and the availability and cost of credit in the future, which could result in the delay or cancellation of projects or capital programs on which our business depends. In addition, disruptions in the financial markets may also have an adverse impact on regional economies or the world economy, which could negatively impact the capital and operating expenditures of our customers. Decreased capital and operational spending or disruptions in the financial markets could be caused by the outbreak of a contagious illness, such as the Pandemic (and any intensification thereof). Any of these conditions may reduce the willingness or ability of our customers and prospective customers to commit funds to purchase our products and services, or their ability to pay for our products and services after purchase.

Our existing customers might cancel contracts with us, fail to renew contracts on their renewal dates, and/or fail to purchase additional services and products, and we may be unable to attract new customers.

We depend on our installed customer base for a significant portion of our revenues. We have significant contracts with our license customers for ongoing support and maintenance, as well as significant service contracts that provide recurring services revenues to us. In addition, our installed customer base has historically generated additional new license and services revenues for us. Service contracts are generally renewable at a customer's option and/or subject to cancellation rights, and there are generally no mandatory payment obligations or obligations to license additional software or subscribe for additional services.

If our customers fail to renew their service contracts, fail to purchase additional services or products, or we are unable to attract new customers, then our revenues could decrease and our operating results could be adversely affected. Factors influencing such contract terminations could include changes in the financial circumstances of our customers, dissatisfaction with our products or services, our retirement or lack of support for our legacy products and services, our customers selecting or building alternate technologies to replace us, the cost of our products and services as compared to the cost of products and services offered by our competitors, our ability to attract, hire and maintain qualified personnel to meet customer needs, consolidating activities in the market, and changes in our customers' business or in regulation impacting our customers' business that may no longer necessitate the use of our products or services, general economic or market conditions, or other reasons. Further, our customers could delay or terminate implementations or use of our services and products or be reluctant to migrate to new products. Such customers will not generate the revenues we may have anticipated within the timelines anticipated, if at all, and may be less likely to invest in additional services or products from us in the future. We may not be able to adjust our expense levels quickly enough to account for any such revenue losses. In addition, loss of one or more of our key customers could adversely impact our competitive position in the marketplace and hurt our credibility and ability to attract new customers.

Our success depends on our ability to continue to innovate and to create new solutions and enhancements to our existing products

We may not be able to develop and introduce new solutions and enhancements to our existing products that respond to new technologies or shipment regulations on a timely basis. If we are unable to develop and sell new products and new features for our existing products that keep pace with rapid technological and regulatory change as well as developments in the transportation logistics industry, our business, results of operations and financial condition could be adversely affected. We intend to continue to invest significant resources in research and development to enhance our existing products and services and introduce new high-quality products that customers will want. If we are unable to predict or quickly react to user preferences or changes in the transportation logistics industry, or its regulatory requirements, or if we are unable to modify our products and services on a timely basis or to effectively bring new products to market, our sales may suffer.

In addition, we may experience difficulties with software or hardware development, design, integration with third-party software or hardware, or marketing that could delay or prevent our introduction, deployment or implementation of new solutions and enhancements. The introduction of new solutions by competitors, the emergence of new industry standards or the development of entirely new technologies to replace existing offerings could render our existing or future solutions obsolete.

We may not have sufficient resources to make the necessary investments in software development and our technical infrastructure, and we may experience difficulties that could delay or prevent the successful development, introduction or marketing of new products or enhancements. In addition, our products or enhancements may not meet increasingly complex customer requirements or achieve market acceptance at the rate we expect, or at all. Any failure by us to anticipate or respond adequately to technological advancements, customer requirements and changing industry standards, or any significant delays in the development, introduction or availability of new products or enhancements, could undermine our current market position and negatively impact our business, results of operations or financial condition.

We may not remain competitive. Increased competition could seriously harm our business.

The market for supply chain technology is highly competitive and subject to rapid technological change. We expect that competition will increase in the future. To maintain and improve our competitive position, we must continue to develop and introduce in a timely and cost-effective manner new products, product features and services to keep pace with our competitors. We currently face competition from a large number of specific market entrants, some of which are focused on specific industries, geographic regions or other components of markets we operate in.

Current and potential competitors include supply chain application software vendors, customers that undertake internal software development efforts, value-added networks and business document exchanges, enterprise resource planning software vendors, regulatory filing companies, trade data vendors and general business application software vendors. Many of our current and potential competitors may have one or more of the following relative advantages:

- Established relationships with existing customers or prospects that we are targeting;
- Superior product functionality and industry-specific expertise;
- Broader range of products to offer and better product life cycle management;
- Larger installed base of customers;
- Greater financial, technical, marketing, sales, distribution and other resources;
- Better performance;
- Lower cost structure and more profitable operations;
- Greater investment in infrastructure;
- Greater worldwide presence;
- Early adoption of, or adaptation to changes in, technology; or
- Longer operating history; and/or greater name recognition.

Further, current and potential competitors have established, or may establish, cooperative relationships and business combinations among themselves or with third parties to enhance their products, which may result in increased competition. In addition, we expect to experience increasing price competition and competition surrounding other commercial terms as we compete for market share. In particular, larger competitors or competitors with a broader range of services and products may bundle their products, rendering our products more expensive and/or less functional. As a result of these and other factors, we may be unable to compete successfully with our existing or new competitors.

If we fail to attract and retain key personnel, it would adversely affect our ability to develop and effectively manage our business.

Our performance is substantially dependent on the performance of our highly qualified management, technical expertise, and sales and marketing personnel, which we regard as key individuals to our business. We do not maintain life insurance policies on any of our employees that list Descartes as a loss payee. Our success is highly dependent on our ability to identify, hire, train, motivate, promote, and retain key individuals. Significant competition exists for management and skilled personnel. If we fail to cross train key employees, particularly those with specialized knowledge it could impair our ability to provide

consistent and uninterrupted service to our customers. If we are not able to attract, retain or establish an effective succession planning program for key individuals it could have a material adverse effect on our business, results of operations, financial condition and the price of our common shares.

We have in the past, and may in the future, make changes to our executive management team or board of directors. There can be no assurance that any such changes and the resulting transition will not have a material adverse effect on our business, results of operations, financial condition and the price of our common shares.

Changes in government filing or screening requirements for global trade may adversely impact our business.

Our regulatory compliance services help our customers comply with government filing and screening requirements relating to global trade. The services that we offer may be impacted, from time to time, by changes in these requirements, including potential future changes as a consequence of Brexit or the ratification of the Canada-United States-Mexico Agreement. Changes in requirements that impact electronic regulatory filings or import/export compliance, including changes adding or reducing filing requirements, changes in enforcement practices or changes in the government agency responsible for such requirements could adversely impact our business, results of operations and financial condition.

Emergence or increased adoption of alternative sources for trade data may adversely impact our business.

With recent acquisitions in the area of supplying trade data and content, an increasing portion of our business relates to the supply of trade data and content that is often used by our customers in other systems, such as enterprise resource planning systems. Emergence or increased adoption of alternative sources of this data and content could have an adverse impact on our customers' needs to obtain this data and content from us and/or the need for certain of the third-party system vendors in this field to refer customers to us for this data and content, each of which could adversely impact upon the revenues and income we generate from these areas of our business.

If we need additional capital in the future and are unable to obtain it or can only obtain it on unfavorable terms, our operations may be adversely affected, and the market price for our securities could decline.

Historically, we have financed our operations primarily through cash flows from our operations, the sale of our equity securities and borrowing under our credit facility. In addition to our current cash and available debt facilities, we may need to raise additional debt or equity capital to repay existing debt, fund expansion of our operations, to enhance our services and products, or to acquire or invest in complementary products, services, businesses or technologies. However, there can be no assurance that we will be able to undertake incremental financing transactions. If we raise additional funds through further issuances of convertible debt or equity securities, our existing shareholders could suffer significant dilution and any new equity securities we issue could have rights, preferences and privileges superior to those attaching to our common shares. Our current credit facility contains, and any debt financing secured by us in the future could contain restrictive covenants relating to our capital-raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. In addition, we may not be able to obtain additional financing on terms favorable to us, if at all. If adequate funds are not available on terms favorable or at all, our operations and growth strategy may be adversely affected and the market price for our common shares could decline.

Changes in the value of the U.S. dollar, as compared to the currencies of other countries where we transact business, could harm our operating results and financial condition.

Historically, the largest percentage of our revenues has been denominated in U.S. dollars. However, the majority of our international expenses, including the wages of our non-U.S. employees and certain key supply agreements, have been denominated in Canadian dollars, euros and other foreign currencies. Therefore, changes in the value of the U.S. dollar as compared to the Canadian dollar, the euro and other foreign currencies may materially affect our operating results. We generally have not implemented hedging programs to mitigate our exposure to currency fluctuations affecting international accounts

receivable, cash balances and inter-company accounts. We also have not hedged our exposure to currency fluctuations affecting future international revenues and expenses and other commitments. Accordingly, currency exchange rate fluctuations have caused, and may continue to cause, variability in our foreign currency denominated revenue streams, expenses, and our cost to settle foreign currency denominated liabilities.

We may have exposure to greater than anticipated tax liabilities or expenses.

We are subject to income and non-income taxes in various jurisdictions, our tax structure is subject to review by both domestic and foreign taxation authorities and we currently have tax audits open in a number of jurisdictions in which we operate. On a quarterly basis, we assess the status of these audits and the potential for adverse outcomes to determine whether a provision for income and other taxes is appropriate. The timing of the resolution of income tax audits is highly uncertain, and the amounts ultimately paid, if any, upon resolution of the issues raised by the taxing authorities may differ from any amounts that we accrue from time to time. The actual amount of any change could vary significantly depending on the ultimate timing and nature of any settlements. We cannot currently provide an estimate of the range of possible outcomes.

The determination of our worldwide provision for income taxes and other tax liabilities requires judgment. In the ordinary course of a global business, there are many transactions and calculations where the ultimate tax outcome is uncertain. Any audit of our tax filings could materially change the amount of current and deferred income tax assets and liabilities. We have recorded a valuation allowance against a portion of our net deferred tax assets. If we achieve a consistent level of profitability, the likelihood of further reducing our deferred tax valuation allowance for some portion of the losses incurred in prior periods in one of our jurisdictions will increase. We calculate our current and deferred tax provision based on estimates and assumptions that could differ from the actual results reflected in income tax returns filed during subsequent years. Adjustments based on filed returns are generally recorded in the period when the tax returns are filed and the global tax implications are known. Our estimate of the potential outcome for any uncertain tax issue is based on a number of assumptions. Any further changes to the valuation allowance for our deferred tax assets would also result in an income tax recovery or income tax expense, as applicable, on the consolidated statements of operations in the period in which the valuation allowance is changed.

Changes to earnings resulting from past acquisitions may adversely affect our operating results.

Under ASC Topic 805, "Business Combinations", we allocate the total purchase price to an acquired company's net tangible assets, intangible assets and in-process research and development based on their values as of the date of the acquisition (including certain assets and liabilities that are recorded at fair value) and record the excess of the purchase price over those values as goodwill. Management's estimates of fair value are based upon assumptions believed to be reasonable but which are inherently uncertain. After we complete an acquisition, the following factors, among others, could result in material charges that would adversely affect our operating results and may adversely affect our cash flows:

- Impairment of goodwill or intangible assets;
- A reduction in the useful lives of intangible assets acquired;
- Identification of assumed contingent liabilities after we finalize the purchase price allocation period;
- Charges to our operating results to eliminate certain pre-merger activities that duplicate those of the acquired company or to reduce our cost structure; and
- Charges to our operating results resulting from revised estimates to restructure an acquired company's operations after we finalize the purchase price allocation period.

Routine charges to our operating results associated with acquisitions include amortization of intangible assets, acquisition-related costs and restructuring charges. Acquisition-related costs primarily include retention bonuses, advisory services, brokerage services and administrative costs with respect to completed and prospective acquisitions.

We expect to continue to incur additional costs associated with combining the operations of our acquired companies, which may be substantial. Additional costs may include costs of employee redeployment, relocation and retention, including salary increases or bonuses, accelerated stock-based compensation expenses and severance payments, reorganization or closure of facilities, taxes, and termination of contracts that provide redundant or conflicting services. These costs would be accounted for as expenses and would decrease our net income and earnings per share for the periods in which those adjustments are made.

As we continue to increase our international operations we increase our exposure to international business risks that could cause our operating results to suffer.

While our headquarters are in Canada, we currently have direct operations in the U.S., EMEA, Asia Pacific and South American regions. We anticipate that these international operations will continue to require significant management attention and financial resources to localize our services and products for delivery in these markets, to develop compliance expertise relating to international regulatory agencies, and to develop direct and indirect sales and support channels in those markets. We face a number of risks associated with conducting our business internationally that could negatively impact our operating results. These risks include, but are not limited to:

- The risk of continued or increased limitations of travel advisories or travel restrictions related to the outbreak of contagious illnesses, such as the Pandemic that is currently impacting global travel, could impact our ability to operate in certain markets and/or manage our operations in those markets;
- Longer collection time from foreign clients, particularly in the EMEA region and the Asia Pacific region;
- Difficulty in repatriating cash from certain foreign jurisdictions;
- Language barriers, conflicting international business practices, and other difficulties related to the management and administration of a global business;
- Increased management, travel, infrastructure and legal compliance costs associated with having international operations;
- Difficulties and costs of staffing and managing geographically disparate direct and indirect operations;
- Volatility or fluctuations in foreign currency and tariff rates;
- Multiple, and possibly overlapping, tax structures;
- Complying with complicated and widely differing global laws and regulations in areas such as employment, tax, privacy and data protection;
- Trade restrictions;
- Enhanced security procedures and requirements relating to certain jurisdictions;
- The need to consider characteristics unique to technology systems used internationally;
- Economic or political instability in some markets; and
- Other risk factors set out herein.

We may not be able to compensate for downward pricing pressure on certain products and services by increased volumes of transactions or increased prices elsewhere in our business, ultimately resulting in lower revenues.

Some of our products and services are sold to industries where there is downward pricing pressure on the particular product or service due to competition, general industry conditions or other causes. If we cannot offset any such downward pricing pressure, then the particular customer may generate less revenue for our business or we may have less aggregate revenue. This could have an adverse impact on our operating results.

From time to time, we may be subject to litigation or dispute resolution that could result in significant costs to us and damage to our reputation.

From time to time, we may be subject to litigation or dispute resolution relating to any number or type of claims, including claims for damages related to undetected errors or malfunctions of our services and products or their deployment, claims related to previously-completed acquisition transactions or claims relating to applicable securities laws. Litigation may seriously harm our business because of the costs of defending the lawsuit, diversion of employees' time and attention and potential damage to our reputation.

Further, our services and products are complex and often implemented by our customers to interact with third-party technology or networks. Claims may be made against us for damages properly attributable to those third-party technologies or networks, regardless of our lack of responsibility for any failure resulting in a loss, even if our services and products perform in accordance with their functional specifications. We may also have disputes with key suppliers for damages incurred which, depending on resolution of the disputes, could impact the ongoing quality, price or availability of the services or products we procure from the supplier. Limitation of liability provisions in certain third-party contracts may not be enforceable under the laws of some jurisdictions. As a result, we could be required to pay substantial amounts of damages in settlement or upon the determination of any of these types of claims and incur damage to our reputation and products. The likelihood of such claims and the amount of damages we may be required to pay may increase as our customers increasingly use our services and products for critical business functions, or rely on our services and products as the systems of record to store data for use by other customer applications. Our insurance may not cover potential claims or may not be adequate to cover all costs incurred in defense of potential claims or to indemnify us for all liability that may be imposed. A claim brought against us that is uninsured or underinsured could result in unanticipated costs, thereby harming our operating results and leading analysts or potential investors to lower their expectations of our performance, which could reduce the trading price of our common shares.

Increases in fuel prices and other transportation costs may have an adverse effect on the businesses of our customers resulting in them spending less money with us.

Our customers are all involved, directly or indirectly, in the delivery of goods from one point to another, particularly transportation providers and freight forwarders. As the costs of these deliveries become more expensive, whether as a result of increases in fuel costs or otherwise, our customers may have fewer funds available to spend on our products and services. There can be no assurance that these companies will be able to allocate sufficient funds to use our products and services. In addition, rising fuel costs may cause global or geographic-specific reductions in the number of shipments being made, thereby impacting the number of transactions being processed by our Global Logistics Network and our corresponding network revenues.

Our success and ability to compete depend upon our ability to secure and protect patents, trademarks and other proprietary rights.

We consider certain aspects of our internal operations, products, services and related documentation to be proprietary, and we primarily rely on a combination of patent, copyright, trademark and trade secret laws and other measures to protect our proprietary rights. Patent applications or issued patents, as well as trademark, copyright, and trade secret rights may not provide adequate protection or competitive advantage and may require significant resources to obtain and defend. We will also not be able to protect our intellectual property if we are unable to enforce our rights or if we do not detect unauthorized use of our intellectual property. Despite our precautions, it may be possible for unauthorized third parties to copy our products and use information that we regard as proprietary to create products and services that compete with ours. We also rely on contractual restrictions in our agreements with customers, employees, outsourced developers and others to protect our intellectual property rights. There can be no assurance that these agreements will not be breached, that we will have adequate remedies for any breach, or that our patents, copyrights, trademarks or trade secrets will not otherwise become known. Through an escrow arrangement, we have granted some of our customers a contingent future right to use our source code for software products solely for their internal maintenance services. If our source code is accessed through an escrow, the likelihood of misappropriation or other misuse of our intellectual property may increase.

Moreover, the laws of some countries do not protect proprietary intellectual property rights as effectively as do the laws of the U.S. and Canada. Protecting and defending our intellectual property rights could be costly regardless of venue. In order to protect our intellectual property rights, we may be required to spend significant resources to monitor and protect these rights. The Company is currently involved in, and expects to remain involved in, certain litigation to protect its intellectual property from infringement by third parties. In addition, further litigation may be necessary in the future to enforce our intellectual property rights, to protect our trade secrets, to determine the validity and scope of the intellectual property rights of others or to defend against claims of infringement or invalidity. Litigation brought to protect and

enforce our intellectual property rights could be costly, time consuming and distracting to management and could result in the impairment or loss of portions of our intellectual property. Furthermore, our efforts to enforce our intellectual property rights may be met with defenses, counterclaims and countersuits attacking the validity and enforceability of our intellectual property rights and/or exposing us to claims for damages in any related counterclaims or countersuits. Our inability to protect our proprietary technology against unauthorized copying or use, as well as any costly litigation or diversion of our management's attention and resources, could delay further sales or the implementation of our solutions, impair the functionality of our solutions, delay introductions of new solutions, result in our substituting inferior or more costly technologies into our solutions, or injure our reputation.

We are dependent on certain key vendors for the availability of hardware devices, which could impede our development and expansion.

We currently have relationships with a small number of hardware device vendors over which we have no operational or financial control and no influence in how these vendors conduct their businesses. Suppliers of hardware devices could among other things, extend delivery times, raise prices and limit supply due to their own shortages and business requirements. Interruption in the supply of equipment from these vendors could delay our ability to maintain, grow and expand our telematics solutions business and those areas of our business that interact with telematics units. If our relationships with any of these unit vendors were to terminate, there is no guarantee that our remaining unit vendors would be able to handle the increased equipment supply required to maintain and grow our expansive networks at our desired rates. There is also no guarantee that business relationships with other key unit vendors could be entered into on terms desirable or favorable to us, if at all. Fewer key vendors might mean that existing or potential customers are unable to meaningfully communicate using our Global Logistics Network, which may cause existing and potential customers to move to competitors' products. Such equipment supply issues could adversely affect our business, results of operations and financial condition.

Concerns about the environmental impacts of greenhouse gas emissions and global climate change may result in environmental taxes, charges, regulatory schemes, assessments or penalties, which could restrict or negatively impact our operations or reduce our profitability.

The impacts of human activity on global climate change have attracted considerable public and scientific attention, as well as the attention of the U.S. and other governments. Efforts are being made to reduce greenhouse gas emissions and energy consumption, including those from automobiles and other modes of transportation. The added cost of any environmental regulation, taxes, charges, assessments or penalties levied or imposed on our customers in light of these efforts could result in additional costs for our customers, which could lead them to reduce use of our services. There are also a number of legislative and environmental regulatory initiatives internationally that could restrict or negatively impact our operations or increase our costs. Additionally, environmental regulation, taxes, charges, assessments or penalties could be levied or imposed directly on us. Any enactment of laws or passage of regulations regarding greenhouse gas emissions by Canada, the U.S., or any other jurisdiction we conduct our business in, could adversely affect our operations and financial results.

The general cyclical and seasonal nature of the freight market may have a material adverse effect on our business, results of operations and financial condition.

Our business may be impacted from time to time by the general cyclical and seasonal nature of particular modes of transportation and the freight market in general, as well as the cyclical and seasonal nature of the industries that such markets serve. Factors which may create cyclical fluctuations in such modes of transportation or the freight market in general include legal and regulatory requirements, timing of contract renewals between our customers and their own customers, seasonal-based tariffs, vacation periods applicable to particular shipping or receiving nations, weather-related events that impact shipping in particular geographies and amendments to international trade agreements. Since some of our revenues from particular products and services are tied to the volume of shipments being processed, adverse fluctuations in the volume of global shipments or shipments in any particular mode of transportation may adversely affect our revenues. Declines in shipment volumes would likely have a material adverse effect on our business.

If we are unable to generate broad market acceptance of our services, products and pricing, serious harm could result to our business.

We currently derive substantially all of our revenues from our federated network and global logistics technology solutions and expect to do so in the future. Broad market acceptance of these types of services and products, and their related pricing, is therefore critical to our future success. The demand for, and market acceptance of, our services and products is subject to a high level of uncertainty. Some of our services and products are often considered complex and may involve a new approach to the conduct of business by our customers. The market for our services and products may weaken, competitors may develop superior services and products that perform logistics services on a global scale or within a particular geographic region, or we may fail to develop or maintain acceptable services and products to address new market conditions, governmental regulations or technological changes. Any one of these events could have a material adverse effect on our business, results of operations and financial condition.

Claims that we infringe third-party proprietary rights could trigger indemnification obligations and result in significant expenses or restrictions on our ability to provide our products or services.

Competitors and other third parties have claimed, and in the future, may claim, that our current or future services or products infringe their proprietary rights or assert other claims against us. Many of our competitors have obtained patents covering products and services generally related to our products and services, and they may assert these patents against us. Such claims, whether with or without merit, could be time consuming and expensive to litigate or settle and could divert management attention from focusing on our core business.

As a result of such a dispute, we may have to pay damages, incur substantial legal fees, suspend the sale or deployment of our services and products, develop costly non-infringing technology, if possible, or enter into license agreements, which may not be available on terms acceptable to us, if at all. Any of these results would increase our expenses and could decrease the functionality of our services and products, which would make our services and products less attractive to our current and/or potential customers. We have agreed in some of our agreements, and may agree in the future, to indemnify other parties for any expenses or liabilities resulting from claimed infringements of the proprietary rights of third parties. If we are required to make payments pursuant to these indemnification agreements, such payments could have a material adverse effect on our business, results of operations and financial condition.

Our results of operations may vary significantly from quarter to quarter and therefore may be difficult to predict or may fail to meet investment community expectations.

Our results of operations may vary from quarter to quarter in the future due to a variety of factors, many of which are outside of our control. Such factors include, but are not limited to:

- Volatility or fluctuations in foreign currency exchange rates;
- Volatility or fluctuations in interest rates;
- Timing of acquisitions and related costs;
- Timing of restructuring activities;
- The introduction of enhanced products and services from competitors;
- Our ability to introduce new products and updates to our existing products on a timely basis;
- The termination of any key customer contracts, whether by the customer or by us;
- Recognition and expensing of deferred tax assets;
- Legal costs incurred in bringing or defending any litigation with customers or third-party providers, and any corresponding judgments or awards;
- Legal and compliance costs incurred to comply with regulatory requirements;
- Fluctuations in the demand for our services and products;
- The impact of stock-based compensation expense;
- Price and functionality competition in our industry;
- Changes in legislation and accounting standards;
- Our ability to satisfy contractual obligations in customer contracts and deliver services and products to the satisfaction of our customers; and
- Other risk factors discussed in this report.

Although our revenues may fluctuate from quarter to quarter, significant portions of our expenses are not variable in the short term, and we may not be able to reduce them quickly to respond to decreases in revenues. If revenues are below expectations, this shortfall is likely to adversely and/or disproportionately affect our operating results. If this occurs, the trading price of our common shares may fall substantially.

Privacy laws and regulations are extensive, open to various interpretations, complex to implement and may reduce demand for our products, and failure to comply may impose significant liabilities.

Our customers can use our products to collect, use, process and store information regarding their transactions with their customers. Federal, state and foreign government bodies and agencies have been increasingly adopting new laws and regulations regarding the collection, use, processing, storage and disclosure of such information obtained from consumers and individuals. In addition to government regulatory activity, privacy advocacy groups and the technology industry and other industries may consider various new, additional or different self-regulatory standards that may place additional burdens directly on our customers and target customers, and indirectly on us. Our products are expected to be capable of use by our customers in compliance with such laws and regulations. The functional and operational requirements and costs of compliance with such laws and regulations may adversely impact our business, and failure to enable our products to comply with such laws and regulations could lead to significant fines and penalties imposed by regulators, as well as claims by our customers or third parties. Additionally, all of these domestic and international legislative and regulatory initiatives could adversely affect our customers' ability or desire to collect, use, process and store shipment logistics information, which could reduce demand for our products.

The price of our common shares has in the past, including recently, been volatile and may also be volatile in the future.

The trading price of our common shares may be subject to fluctuation in the future. This may make it more difficult for you to resell your common shares when you want at prices that you find attractive or make it more difficult for us to raise capital through the issuance of common shares. Increases in our common share price may also increase our compensation expense pursuant to our existing director, officer and employee compensation arrangements. We enter into equity derivative contracts including floating-rate equity forwards to partially offset the potential fluctuations of certain share-based compensation expenses. Fluctuations in our common share price may be caused by events unrelated to our operating performance and beyond our control. Factors that may contribute to fluctuations include, but are not limited to:

- Revenue or results of operations in any quarter failing to meet the expectations, published or otherwise, of the investment community;
- Changes in recommendations or financial estimates by industry or investment analysts;
- Changes in management or the composition of our board of directors;
- Outcomes of litigation or arbitration proceedings;
- Announcements of technological innovations or acquisitions by us or by our competitors;
- Introduction of new products or significant customer wins or losses by us or by our competitors;
- Developments with respect to our intellectual property rights or those of our competitors;
- Fluctuations in the share prices of other companies in the technology and emerging growth sectors;
- General market conditions; and
- Other risk factors set out in this report.

If the market price of our common shares drops significantly, shareholders could institute securities class action lawsuits against us, regardless of the merits of such claims. Such a lawsuit could cause us to incur substantial costs and could divert the time and attention of our management and other resources from our business.

Fair value assessments of our intangible assets required by GAAP may require us to record significant non-cash charges associated with intangible asset impairment.

Significant portions of our assets, which include customer agreements and relationships, non-compete covenants, existing technologies and trade names, are intangible. We amortize intangible assets on a straight-line basis over their estimated useful lives. We review the carrying value of these assets at least annually for evidence of impairment. In accordance with ASC Topic 360-10-35, "Property, Plant, and Equipment: Overview: Subsequent Measurement" an impairment loss is recognized when the estimate of undiscounted future cash flows generated by such assets is less than the carrying amount. Measurement of the impairment loss is based on the present value of the expected future cash flows. Future fair value assessments of intangible assets may require impairment charges to be recorded in the results of operations for future periods. This could impair our ability to achieve or maintain profitability in the future.

If our common share price decreases to a level such that the fair value of our net assets is less than the carrying value of our net assets, we may be required to record additional significant non-cash charges associated with goodwill impairment.

We account for goodwill in accordance with ASC Topic 350, "Intangibles – Goodwill and Other", which among other things, requires that goodwill be tested for impairment at least annually. We have designated October 31st for our annual impairment test. Should the fair value of our net assets, determined by our market capitalization, be less than the carrying value of our net assets at future annual impairment test dates, we may have to recognize goodwill impairment losses in our results of operations in future periods. This could impair our ability to achieve or maintain profitability in the future.

We have a substantial accumulated deficit and may incur losses in the future.

As at April 30, 2020, our accumulated deficit was \$124.7 million, which has been accumulated from 2005 and prior fiscal periods. Although the Company has been profitable since 2005, there can be no assurance that we will not incur losses again in the future. If we fail to maintain profitability, the market price of our common shares may decline.

THE DESCARTES SYSTEMS GROUP INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(US DOLLARS IN THOUSANDS; US GAAP; UNAUDITED)

	April 30, 2020	January 31, 2020 (Audited)
ASSETS		
CURRENT ASSETS		
Cash	55,976	44,403
Accounts receivable (net)		
Trade (Note 5)	36,659	35,118
Other (Note 6)	6,324	7,294
Prepaid expenses and other	13,231	12,984
Inventory (Note 7)	170	411
	112,360	100,210
OTHER LONG-TERM ASSETS (Note 19)	13,466	13,520
PROPERTY AND EQUIPMENT, NET (Note 8)	12,435	13,731
RIGHT-OF-USE ASSETS (Note 13)	11,768	12,877
DEFERRED INCOME TAXES	18,768	21,602
INTANGIBLE ASSETS, NET (Note 9)	248,460	256,956
GOODWILL (Note 10)	529,700	523,690
	946,957	942,586
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	8,851	7,667
Accrued liabilities (Note 11)	30,451	34,876
Lease obligations (Note 13)	3,636	3,928
Income taxes payable	3,698	1,329
Deferred revenue (Note 19)	42,324	41,143
	88,960	88,943
LONG-TERM DEBT (Note 12)	9,701	-
LEASE OBLIGATIONS (Note 13)	8,641	9,477
DEFERRED REVENUE (Note 19)	788	920
INCOME TAXES PAYABLE	6,320	6,470
DEFERRED INCOME TAXES	15,103	15,067
	129,513	120,877
COMMITMENTS, CONTINGENCIES AND GUARANTEES (Note 14)		
SHAREHOLDERS' EQUITY (Note 15)		
Common shares – unlimited shares authorized; Shares issued and outstanding totaled 84,157,016 at April 30, 2020 (January 31, 2020 – 84,156,316)	524,175	524,154
Additional paid-in capital	460,433	459,269
Accumulated other comprehensive loss	(42,441)	(25,944)
Accumulated deficit	(124,723)	(135,770)
	817,444	821,709
	946,957	942,586

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

THE DESCARTES SYSTEMS GROUP INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(US DOLLARS IN THOUSANDS, EXCEPT PER SHARE AND WEIGHTED AVERAGE SHARE AMOUNTS; US GAAP;
UNAUDITED)

	Three Months Ended	
	April 30, 2020	April 30, 2019
REVENUES	83,703	78,004
COST OF REVENUES	21,867	19,856
GROSS MARGIN	61,836	58,148
EXPENSES		
Sales and marketing	9,322	10,132
Research and development	13,579	12,728
General and administrative	8,737	8,478
Other charges (Note 20)	783	2,064
Amortization of intangible assets	13,713	12,777
	46,134	46,179
INCOME FROM OPERATIONS	15,702	11,969
INTEREST EXPENSE	(320)	(2,159)
INVESTMENT INCOME	44	71
INCOME BEFORE INCOME TAXES	15,426	9,881
INCOME TAX EXPENSE (Note 18)		
Current	3,815	1,735
Deferred	564	826
	4,379	2,561
NET INCOME	11,047	7,320
EARNINGS PER SHARE (Note 16)		
Basic	0.13	0.09
Diluted	0.13	0.09
WEIGHTED AVERAGE SHARES OUTSTANDING (thousands)		
Basic	84,156	77,149
Diluted	85,456	78,273

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

THE DESCARTES SYSTEMS GROUP INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(US DOLLARS IN THOUSANDS; US GAAP; UNAUDITED)

	Three Months Ended	
	April 30, 2020	April 30, 2019
Comprehensive income		
Net Income	11,047	7,320
Other comprehensive loss:		
Foreign currency translation adjustment, net of income tax expense (recovery) of \$144 for the period ended April 30, 2020 (April 30, 2019 – (\$102))	(16,497)	(2,514)
Total other comprehensive loss	(16,497)	(2,514)
COMPREHENSIVE (LOSS) INCOME	(5,450)	4,806

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

THE DESCARTES SYSTEMS GROUP INC.
CONDENSED CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(US DOLLARS IN THOUSANDS; US GAAP; UNAUDITED)

	Three Months Ended	
	April 30, 2020	April 30, 2019
Common shares		
Balance, beginning of period	524,154	276,753
Stock options and share units exercised	21	916
Acquisitions (Note 3)	-	9,045
Balance, end of period	524,175	286,714
Additional paid-in capital		
Balance, beginning of period	459,269	454,722
Stock-based compensation expense (Note 17)	1,168	939
Stock options and share units exercised	(4)	(183)
Balance, end of period	460,433	455,478
Accumulated other comprehensive loss		
Balance, beginning of period	(25,944)	(25,201)
Other comprehensive loss, net of income taxes	(16,497)	(2,514)
Balance, end of period	(42,441)	(27,715)
Accumulated deficit		
Balance, beginning of period	(135,770)	(172,767)
Net income	11,047	7,320
Balance, end of period	(124,723)	(165,447)
Total Shareholders' Equity	817,444	549,030

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

THE DESCARTES SYSTEMS GROUP INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(US DOLLARS IN THOUSANDS; US GAAP; UNAUDITED)

	Three Months Ended	
	April 30, 2020	April 30, 2019
OPERATING ACTIVITIES		
Net income	11,047	7,320
Adjustments to reconcile net income to cash provided by operating activities:		
Depreciation	1,580	892
Amortization of intangible assets	13,713	12,777
Stock-based compensation expense (Note 17)	1,168	939
Other non-cash operating activities	78	(171)
Deferred tax expense	564	826
Changes in operating assets and liabilities (Note 21)	(617)	852
Cash provided by operating activities	27,533	23,435
INVESTING ACTIVITIES		
Additions to property and equipment	(1,022)	(1,398)
Acquisition of subsidiaries, net of cash acquired (Note 3)	(24,137)	(239,863)
Cash used in investing activities	(25,159)	(241,261)
FINANCING ACTIVITIES		
Proceeds from borrowing on the credit facility	10,196	241,206
Credit facility repayments	-	(19,932)
Payment of debt issuance costs	(38)	(1,382)
Issuance of common shares for cash, net of issuance costs (Note 15)	16	732
Cash provided by financing activities	10,174	220,624
Effect of foreign exchange rate changes on cash	(975)	(546)
Increase in cash	11,573	2,252
Cash, beginning of period	44,403	27,298
Cash, end of period	55,976	29,550
Supplemental disclosure of cash flow information:		
Cash paid during the period for interest	51	2,086
Cash paid during the period for income taxes	624	1,065

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

THE DESCARTES SYSTEMS GROUP INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(TABULAR AMOUNTS IN THOUSANDS OF US DOLLARS, EXCEPT PER SHARE AMOUNTS OR AS OTHERWISE INDICATED;
US GAAP; UNAUDITED)

Note 1 - Description of the Business

The Descartes Systems Group Inc. ("Descartes," "Company," "our" or "we") is a provider of global logistics technology solutions. Customers use our modular, software-as-a-service ("SaaS") and data solutions to route, schedule, track and measure delivery resources; plan, allocate and execute shipments; rate, audit and pay transportation invoices; access and analyze global trade data; research and perform trade tariff and duty calculations; file customs and security documents for imports and exports; and complete numerous other logistics processes by participating in a large, collaborative multi-modal logistics community. Our pricing model provides our customers with flexibility in purchasing our solutions either on a subscription, transactional or perpetual license basis. Our primary focus is on serving transportation providers (air, ocean and truck modes), logistics service providers (including third-party logistics providers, freight forwarders and customs brokers) and distribution-intensive companies for which logistics is either a key or a defining part of their own product or service offering, or for which our solutions can provide an opportunity to reduce costs, improve service levels, or support growth by optimizing the use of assets and information.

Note 2 -Basis of Presentation

The accompanying unaudited condensed consolidated financial statements are presented in United States ("US") dollars and are prepared in accordance with generally accepted accounting principles in the US ("GAAP") and the rules and regulations of the Canadian Securities Administrators and US Securities and Exchange Commission ("SEC") for the preparation of condensed interim financial statements. Accordingly, these unaudited condensed consolidated financial statements do not include all of the information and notes required for compliance with GAAP for annual financial statements. These statements should be read in conjunction with our audited annual consolidated financial statements prepared in accordance with GAAP for the fiscal year ended January 31, 2020.

The unaudited condensed consolidated financial statements reflect all adjustments, which are, in the opinion of management, necessary for a fair presentation of results for the interim periods presented. The preparation of these unaudited condensed consolidated financial statements requires management to make estimates and assumptions that affect the amounts reported in the unaudited condensed consolidated financial statements and the accompanying notes. Actual results could differ from these estimates and the results of operations for the interim period should not be considered indicative of results to be expected for the full year ending January 31, 2021.

Our fiscal year commences on February 1st of each year and ends on January 31st of the following year. Our fiscal year, which ends on January 31, 2021, is referred to as the "current fiscal year", "fiscal 2021", "2021" or using similar words. Our previous fiscal year, which ended on January 31, 2020, is referred to as the "previous fiscal year", "fiscal 2020", "2020" or using similar words. Other fiscal years are referenced by the applicable year during which the fiscal year ends. For example, "2022" refers to the annual period ending January 31, 2022 and the "fourth quarter of 2022" refers to the quarter ending January 31, 2022.

Except for the changes below, the significant accounting policies used in preparing these condensed consolidated financial statements are unchanged from those disclosed in the Company's fiscal 2020 annual consolidated financial statements and have been applied consistently to all periods presented in these condensed consolidated financial statements.

Property & Equipment

Effective February 1, 2020, we changed our accounting method for property & equipment from the declining balance method of depreciation to the straight-line method of depreciation to better reflect the

consumption of the assets' economic benefits. Our change in the method of depreciation is considered a change in accounting estimate effected by a change in accounting principle and has been applied prospectively. The change in the method of depreciation did not have a material impact on our results of operations.

Recently adopted accounting pronouncements

In June 2016, the FASB issued Accounting Standards Update 2016-13, "Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments" ("ASU 2016-13") and issued subsequent amendments to the initial guidance during the 2019 calendar year, collectively referred to as "ASC 326". ASC 326 requires the measurement and recognition of expected credit losses for financial assets held at amortized cost. ASC 326 replaces the existing incurred loss impairment model with an expected loss model which requires the use of forward-looking information to calculate credit loss estimates. ASC 326 is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2019, which is our fiscal year that began on February 1, 2020 (fiscal 2021).

The Company is exposed to credit losses primarily through its trade accounts receivable and contract assets. The provision for credit losses is determined utilizing a model of historical losses data. In estimating the provision for credit losses, we considered the age of the receivable, our historical write-offs and the historical creditworthiness of the customer, among other factors. Should any of these factors change, the estimates made by us will also change accordingly, which could affect the level of our future provisions. The Company adopted ASC 326 as of February 1, 2020 using the cumulative effect method and therefore the comparative information has not been restated. The adoption of ASC 326 did not have a material impact on our results of operations or disclosures.

In January 2017, the FASB issued Accounting Standards Update 2017-04, "Intangibles – Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment" ("ASU 2017-04"). ASU 2017-04 simplifies how an entity is required to test goodwill for impairment. ASU 2017-04 is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2019, which is our fiscal year that began on February 1, 2020 (fiscal 2021). The Company adopted this guidance in the first quarter of fiscal 2021. The adoption of this guidance did not have a material impact on our results of operations or disclosures.

In August 2018, the FASB issued Accounting Standards Update 2018-15, "Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract" ("ASU 2018-15"). ASU 2018-15 aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. ASU 2018-15 is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2019, which is our fiscal year that began on February 1, 2020 (fiscal 2021). The Company adopted this guidance in the first quarter of fiscal 2021. The adoption of this guidance did not have a material impact on our results of operations or disclosures.

Recently issued accounting pronouncements

In December 2019, the FASB issued Accounting Standards Update 2019-12, "Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes" ("ASU 2019-12"). ASU 2019-12 simplifies how an entity accounts for income taxes. ASU 2019-12 is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2020, which will be our fiscal year beginning February 1, 2021 (fiscal 2022). Early adoption is permitted. The Company currently anticipates that it will adopt this guidance in the first quarter of fiscal 2022. We are currently evaluating the impact that the adoption will have on our results of operations, financial position and disclosures.

Note 3 – Acquisitions

Fiscal 2021 Acquisitions

On February 21, 2020, Descartes acquired all of the shares of Peoplevox Limited (“Peoplevox”), a UK-based provider of cloud-based ecommerce warehouse management solutions. The purchase price for the acquisition was approximately \$24.1 million, net of cash acquired, which was funded from a combination of cash on hand and drawing on Descartes’ existing credit facility. The gross contractual amount of trade receivables acquired was \$0.4 million with a fair value of \$0.4 million at the date of acquisition. Our acquisition date estimate of contractual cash flows not expected to be collected was nominal. The completion of the initial purchase price allocation is pending the finalization of the fair value for trade receivables, accrued liability balances as well as potential unrecorded liabilities. We expect to finalize the purchase price allocation on or before February 21, 2021.

For the business acquired during fiscal 2021, we incurred acquisition-related costs of \$0.4 million for the three month period ended April 30, 2020. The acquisition-related costs were primarily for advisory services and are included in other charges in our condensed consolidated statements of operations. During the three month period ended April 30, 2020, we have recognized revenues of \$1.0 million, and a net loss (excluding any interest costs on financing the acquisition) of \$0.1 million from Peoplevox since the date of acquisition in our condensed consolidated statements of operations.

The preliminary purchase price allocation for the business acquired during 2021, which has not been finalized, is as follows:

	<u>Peoplevox</u>
Purchase price consideration:	
Cash, less cash acquired related to Peoplevox (\$1,634)	24,137
Net working capital adjustments (receivable) / payable	11
	<u>24,148</u>
Allocated to:	
Current assets, excluding cash acquired	509
Current liabilities	(758)
Deferred revenue	(737)
Deferred income tax liability	(1,615)
Net tangible assets (liabilities) assumed	<u>(2,601)</u>
Finite life intangible assets acquired:	
Customer agreements and relationships	3,631
Existing technology	7,651
Non-compete covenants	285
Goodwill	<u>15,182</u>
	<u>24,148</u>

The above transaction was accounted for using the acquisition method in accordance with ASC Topic 805, “Business Combinations”. The purchase price allocation in the table above represents our estimates of the allocation of the purchase price and the fair value of net assets acquired. The preliminary purchase price allocation may differ from the final purchase price allocation, and these differences may be material. Revisions to the allocation will occur as additional information about the fair value of assets and liabilities becomes available. The final purchase price allocation will be completed within one year from the acquisition date.

The acquired intangible assets are being amortized over their estimated useful lives as follows:

	<u>Peoplevox</u>
Customer agreements and relationships	10 years
Existing technology	6 years
Non-compete covenants	5 years

The goodwill on the Peoplevox acquisition arose as a result of the combined strategic value to our growth plan. The goodwill arising from the Peoplevox acquisition is not deductible for tax purposes.

Fiscal 2020 Acquisitions

On February 12, 2019, Descartes acquired substantially all of the assets of the businesses run by the Management Systems Resources Inc. group of companies (collectively, "Visual Compliance"), a provider of software solutions and services to automate customs, trade and fiscal compliance processes including denied and restricted party screening processes and export licensing. The purchase price for the acquisition was approximately \$248.9 million, net of cash acquired, which was funded from a combination of drawing on Descartes' existing credit facility and issuing to the sellers 0.3 million Descartes common shares from treasury. The gross contractual amount of trade receivables acquired was \$6.4 million with a fair value of \$5.2 million at the date of acquisition. Our acquisition date estimate of contractual cash flows not expected to be collected was \$1.2 million. The purchase price was finalized in the three month period ended January 31, 2020 with no adjustments.

On May 10, 2019, Descartes acquired all of the shares of Core Transport Technologies NZ Limited ("CORE"), an electronic transportation network that provides global air carriers and ground handlers with shipment scanning and tracking solutions. The purchase price for the acquisition was approximately \$21.8 million, net of cash acquired, which was funded from drawing on Descartes' existing credit facility. Additional contingent consideration of up to \$9.0 million in cash is payable if certain revenue performance targets are met by CORE in the two years following the acquisition. The fair value of the contingent consideration was valued at \$1.5 million at the acquisition date. The gross contractual amount of trade receivables acquired was \$0.4 million with a fair value of \$0.4 million at the date of acquisition. Our acquisition date estimate of contractual cash flows not expected to be collected was nominal. The purchase price was finalized in the three month period ended April 30, 2020 with no adjustments.

On June 27, 2019, Descartes acquired all of the shares of Tegmento AG and Contentis AG (collectively, "STEPcom"), a business-to-business supply chain integration network based in Switzerland. The purchase price for the acquisition was approximately \$18.6 million, net of cash acquired, which was funded from drawing on Descartes' existing credit facility. The gross contractual amount of trade receivables acquired was \$0.9 million with a fair value of \$0.8 million at the date of acquisition. Our acquisition date estimate of contractual cash flows not expected to be collected was \$0.1 million. The completion of the initial purchase price allocation is pending the finalization of the fair value for trade receivables, accrued liability balances as well as potential unrecorded liabilities. We expect to finalize the purchase price allocation on or before June 27, 2020.

On August 20, 2019, Descartes acquired all of the shares of BestTransport.com, Inc. ("BestTransport"), a cloud-based transportation management system provider focused on flatbed-intensive manufacturers and distributors. The purchase price for the acquisition was approximately \$11.7 million, net of cash acquired, which was funded from drawing on Descartes' existing credit facility. The gross contractual amount of trade receivables acquired was \$0.6 million with a fair value of \$0.6 million at the date of acquisition. Our acquisition date estimate of contractual cash flows not expected to be collected was nominal. The completion of the initial purchase price allocation is pending the finalization of the fair value for trade receivables, accrued liability balances as well as potential unrecorded liabilities. We expect to finalize the purchase price allocation on or before August 20, 2020.

Pro Forma Results of Operations (Unaudited)

The financial information in the table below summarizes selected results of operations on a pro forma basis as if we had acquired Peoplevox, BestTransport, STEPcom, CORE and Visual Compliance as of February 1, 2019.

This pro forma information is for information purposes only and does not purport to represent what our results of operations for the periods presented would have been had the acquisitions of Peoplevox, BestTransport, STEPcom, CORE and Visual Compliance occurred at February 1, 2019, or to project our results of operations for any future period.

	Three Months Ended	
	April 30, 2020	April 30, 2019
Revenue	84,414	83,993
Net income	11,085	7,236
Earnings per share		
Basic	0.13	0.09
Diluted	0.13	0.09

Note 4 – Fair Value Measurements

ASC Topic 820 “Fair Value Measurements and Disclosures” (Topic 820) defines fair value as the price that would be received upon sale of an asset or paid upon transfer of a liability in an orderly transaction between market participants at the measurement date and in the principal or most advantageous market for that asset or liability. The fair value, in this context, should be calculated based on assumptions that market participants would use in pricing the asset or liability, not on assumptions specific to the entity. In addition, the fair value of liabilities should include consideration of non-performance risk, including our own credit risk.

Topic 820 establishes a fair value hierarchy which prioritizes the inputs used in the valuation methodologies in measuring fair value into three levels:

- Level 1—inputs are based upon unadjusted quoted prices for identical instruments traded in active markets.
- Level 2—inputs are based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3—inputs are generally unobservable and typically reflect management’s estimates of assumptions that market participants would use in pricing the asset or liability. The fair values are therefore determined using model-based techniques that include option pricing models, discounted cash flow models, and similar techniques.

The carrying amounts of the Company’s cash, accounts receivable (net), accounts payable, accrued liabilities and income taxes payable approximate their fair value (a Level 2 measurement) due to their short maturities.

The Company enters into equity derivative contracts including floating-rate equity forwards to partially offset the potential fluctuations of certain future share-based compensation expenses. The Company does not hold derivatives for speculative purposes. As at April 30, 2020, we had equity derivatives for 251,422 Descartes common shares with a weighted average price of \$21.28.

The following table shows the Company's derivative instruments measured at fair value on a recurring basis as of April 30, 2020:

	Fair Value of Derivatives Designated as Hedge Instruments	Fair Value of Derivatives Not Designated As Hedge Instruments	Fair Value
Derivative assets:			
Equity contracts	-	5,233	5,233

The following table shows the Company's derivative instruments measured at fair value on a recurring basis as of January 31, 2020:

	Fair Value of Derivatives Designated as Hedge Instruments	Fair Value of Derivatives Not Designated As Hedge Instruments	Fair Value
Derivative assets:			
Equity contracts	-	5,656	5,656

The fair value of equity contract derivatives is determined utilizing a valuation model based on the quoted market value of our common shares at the balance sheet date (Level 2 fair value inputs). The fair value of equity contract derivatives is recorded as other current assets and gains and losses are recorded in general and administrative expenses in the condensed consolidated financial statements. For the three month periods ended April 30, 2020 and April 30, 2019, we recognized an expense (recovery) in general and administrative expenses of \$0.1 million and (\$2.6) million, respectively.

Note 5 – Trade Accounts Receivable

	April 30, 2020	January 31, 2020
Trade accounts receivable	38,927	37,121
Less: Provision for credit losses	(2,268)	(2,003)
	36,659	35,118

Included in accounts receivable are unbilled receivables in the amount of \$1.1 million as at April 30, 2020 (\$1.4 million as at January 31, 2020).

The following table presents the changes in the provision for credit losses as follows:

	Provision for Credit Losses
Balance at January 31, 2020	2,003
Current period provision for expected losses	502
Write-offs charged against the provision	(216)
Effect of movements in foreign exchange	(21)
Balance at April 30, 2020	2,268

Note 6 – Other Receivables

Other receivables were comprised of receivables related to sales and use taxes, income taxes, non-trade receivables and contract assets and totaled \$6.3 million at April 30, 2020 (\$7.3 million at January 31, 2020).

Note 7 – Inventory

At April 30, 2020 and January 31, 2020, inventory is entirely comprised of finished goods inventory. Finished goods inventory consists of hardware and related parts for mobile asset units held for sale. For both the three month periods ended April 30, 2020 and April 30, 2019, no provision for excess or obsolete inventories has been recorded in cost of revenues.

Note 8 – Property and Equipment

	April 30,	January 31,
	2020	2020
Cost		
Computer equipment and software	33,076	34,442
Furniture and fixtures	1,414	1,432
Leasehold improvements	755	778
Equipment installed with customers	1,296	1,289
Assets under construction	1,017	829
	37,558	38,770
Accumulated depreciation		
Computer equipment and software	23,617	23,730
Furniture and fixtures	909	816
Leasehold improvements	302	290
Equipment installed with customers	295	203
	25,123	25,039
Net	12,435	13,731

Note 9 - Intangible Assets

	April 30,	January 31,
	2020	2020
Cost		
Customer agreements and relationships	226,084	226,514
Existing technology	261,675	262,614
Trade names	8,433	8,582
Non-compete covenants	10,034	9,985
	506,226	507,695
Accumulated amortization		
Customer agreements and relationships	100,808	98,241
Existing technology	146,812	142,757
Trade names	5,199	5,124
Non-compete covenants	4,947	4,617
	257,766	250,739
Net	248,460	256,956

Intangible assets related to our acquisitions are recorded at their fair value at the acquisition date. The change in intangible assets during the three month period ended April 30, 2020 is primarily due to the acquisition of Peoplevox offset by amortization. The balance of the change in intangible assets is due to foreign currency translation.

Intangible assets with a finite life are amortized into income over their useful lives. Amortization expense for existing intangible assets is expected to be \$248.5 million over the following periods: \$39.3 million for the remainder of 2021, \$48.5 million for 2022, \$41.2 million for 2023, \$29.5 million for 2024, \$27.6 million for 2025, \$22.7 million for 2026, and \$39.7 million thereafter. Expected future amortization expense is subject to fluctuations in foreign exchange rates and assumes no future adjustments to acquired intangible assets.

Note 10 – Goodwill

Goodwill is recorded when the consideration paid for an acquisition of a business exceeds the fair value of identifiable net tangible and intangible assets acquired. The following table summarizes the changes in goodwill since January 31, 2019:

	April 30, 2020	January 31, 2020
Balance at beginning of period	523,690	378,178
Acquisition of Visual Compliance	-	118,785
Acquisition of CORE	-	12,670
Acquisition of STEPcom	-	10,019
Acquisition of BestTransport	-	5,513
Acquisition of Peoplevox	15,182	-
Adjustments on account of foreign exchange	(9,172)	(1,475)
Balance at end of period	529,700	523,690

Note 11 - Accrued Liabilities

	April 30, 2020	January 31, 2020
Accrued compensation and benefits	18,017	20,613
Accrued professional fees	1,159	1,010
Other accrued liabilities	11,275	13,253
	30,451	34,876

Other accrued liabilities include accrued expenses related to third party resellers and royalties, suppliers, accrued restructuring charges and accrued contingent acquisition purchase consideration.

Note 12 – Long-Term Debt

On January 25, 2019, we amended and increased our existing \$150.0 million senior secured revolving credit facility. The amended facility is now a \$350.0 million revolving operating credit facility to be available for general corporate purposes, including the financing of ongoing working capital needs and acquisitions. With the approval of the lenders, the credit facility can be expanded to a total of \$500.0 million. The credit facility has a five-year maturity with no fixed repayment dates prior to the end of the five-year term ending January 2024. Borrowings under the credit facility are secured by a first charge over substantially all of Descartes' assets. Depending on the type of advance, interest rates under the revolving operating portion of the credit facility are based on the Canada or US prime rate, Bankers' Acceptance (BA) or London Interbank Offered Rate (LIBOR) plus an additional 0 to 250 basis points based on the ratio of net

debt to adjusted earnings before interest, taxes, depreciation and amortization, as defined in the credit agreement. A standby fee of between 20 to 40 basis points will be charged on all undrawn amounts. The credit facility contains certain customary representations, warranties and guarantees, and covenants.

Long-term debt is comprised of the following:

	April 30, 2020	January 31, 2020
Credit facility	9,701	-
Available for use	340,299	350,000

As at April 30, 2020, the outstanding balance of \$9.7 million was required to be repaid in January 2024. We were in compliance with the covenants of the credit facility as of April 30, 2020.

As at April 30, 2020, we had outstanding letters of credit of approximately \$0.2 million (\$0.2 million as at January 31, 2020), which were not related to our credit facility.

Note 13 – Leases

We have operating leases for buildings, vehicles and computer equipment. Our leases have remaining terms of 1 to 9 years, some of which include options to extend the leases for up to 5 years.

The components of operating lease expense were as follows:

	Three Months Ended	
	April 30, 2020	April 30, 2019
Operating lease cost	1,209	1,182
Short-term lease cost	148	296
Total operating lease cost	1,357	1,478

Supplemental cash flow information related to operating leases was as follows:

	Three Months Ended	
	April 30, 2020	April 30, 2019
Operating cash outflows from operating leases included in measurement of lease liabilities	1,196	805
Increase in ROU asset from non-cash activities, including lease modifications and new leases	226	1,020

Supplemental information related to operating leases was as follows:

	April 30, 2020	January 31, 2020
Weighted average remaining lease term (years)	4.1	4.3
Weighted average discount rate (%)	2.8	2.8

Maturities of operating lease liabilities were as follows as of April 30, 2020:

	Operating Leases
Years Ended January 31,	
Remainder of 2021	4,019
2022	3,129
2023	2,330
2024	1,738
2025	1,118
2026 and thereafter	792
Total lease payments	13,126
Less: imputed interest	(849)
Total lease obligations	12,277
Current	3,636
Long-term	8,641

Note 14 - Commitments, Contingencies and Guarantees

Commitments

As described in Note 2 to the audited consolidated financial statements for 2020 included in our 2020 Annual Report, we maintain deferred share unit ("DSU") and cash-settled restricted share unit ("CRSU") plans for our directors and employees. Any payments made pursuant to these plans are settled in cash. For DSUs and CRSUs, the units vest over time and the liability recognized at any given consolidated balance sheet date reflects only those units vested at that date that have not yet been settled in cash. As such, we had an unrecognized aggregate liability for the unvested CRSUs of \$1.5 million at April 30, 2020. As at April 30, 2020 there were no unvested DSUs. The ultimate liability for any payment of DSUs and CRSUs is dependent on the trading price of our common shares. To partially offset our exposure to fluctuations in our stock price, we have entered into equity derivative contracts, including floating-rate equity forwards. As at April 30, 2020, we had equity derivatives for 251,422 Descartes common shares and a DSU liability for 252,759 Descartes common shares, resulting in minimal net exposure resulting from changes to our share price.

Contingencies

We are subject to a variety of other claims and suits that arise from time to time in the ordinary course of our business. The consequences of these matters are not presently determinable but, in the opinion of management after consulting with legal counsel, the ultimate aggregate potential liability is not currently expected to have a material effect on our results of operations or financial position.

Product Warranties

In the normal course of operations, we provide our customers with product warranties relating to the performance of our hardware, software and services. To date, we have not encountered material costs as a result of such obligations and have not accrued any liabilities related to such obligations in our condensed consolidated financial statements.

Business combination agreements

In respect of our acquisitions of PinPoint and CORE, up to \$10.1 million in cash may become payable if certain revenue performance targets are met in the two years following the acquisition. A balance of \$1.9 million is accrued related to the fair value of this contingent consideration as at April 30, 2020.

Guarantees

In the normal course of business, we enter into a variety of agreements that may contain features that meet the definition of a guarantee under ASC Topic 460, "Guarantees". The following lists our significant guarantees:

Intellectual property indemnification obligations

We provide indemnifications of varying scope to our customers against claims of intellectual property infringement made by third parties arising from the use of our products. In the event of such a claim, we are generally obligated to defend our customers against the claim and we are liable to pay damages and costs assessed against our customers that are payable as part of a final judgment or settlement. These intellectual property infringement indemnification clauses are not generally subject to any dollar limits and remain in force for the term of our license agreement with our customer, which license terms are typically perpetual. Historically, we have not encountered material costs as a result of such indemnification obligations.

Other indemnification agreements

In the normal course of operations, we enter into various agreements that provide general indemnities. These indemnities typically arise in connection with purchases and sales of assets, securities offerings or buy-backs, service contracts, administration of employee benefit plans, retention of officers and directors, membership agreements, customer financing transactions, and leasing transactions. In addition, our corporate by-laws provide for the indemnification of our directors and officers. Each of these indemnities requires us, in certain circumstances, to compensate the counterparties for various costs resulting from breaches of representations or obligations under such arrangements, or as a result of third party claims that may be suffered by the counterparty as a consequence of the transaction. We believe that the likelihood that we could incur significant liability under these obligations is remote. Historically, we have not made any significant payments under such indemnities.

In evaluating estimated losses for the guarantees or indemnities described above, we consider such factors as the degree of probability of an unfavorable outcome and the ability to make a reasonable estimate of the amount of loss. We are unable to make a reasonable estimate of the maximum potential amount payable under such guarantees or indemnities as many of these arrangements do not specify a maximum potential dollar exposure or time limitation. The amount also depends on the outcome of future events and conditions, which cannot be predicted. Given the foregoing, to date, we have not accrued any liability in our condensed consolidated financial statements for the guarantees or indemnities described above.

Note 15 – Share Capital

On June 6, 2018, we filed a final short-form base shelf prospectus (the "Base Shelf Prospectus"), allowing us to offer and issue the following securities: (i) common shares; (ii) preferred shares; (iii) senior or subordinated unsecured debt securities; (iv) subscription receipts; (v) warrants; and (vi) securities comprised of more than one of the aforementioned common shares, preferred shares, debt securities, subscription receipts and/ or warrants offered together as a unit. These securities may be offered separately or together, in separate series, in amounts, at prices and on terms to be set forth in one or more shelf prospectus supplements. The aggregate initial offering price of securities that may be sold by us (or certain of our current or future shareholders) pursuant to the Base Shelf Prospectus during the 25-month period that the Base Shelf Prospectus, including any amendments thereto, remains valid was limited to an aggregate of \$750 million.

On June 10, 2019, we completed a public offering of common shares in the United States and Canada at a price of \$35.50 per common share pursuant to the short-form base shelf prospectus and related prospectus supplement filed in connection with the offering (the "Offering"). The total offering of 6,900,000 common shares included the exercise in full by the underwriters of the 15% over-allotment option, for aggregate gross proceeds to Descartes of \$245.0 million. Net proceeds to Descartes were approximately \$236.6 million once expenses associated with the Offering were deducted inclusive of the related deferred tax benefit on share issuance costs. As a result of the Offering, the aggregate balance of securities that may be sold by us pursuant to the Base Shelf Prospectus has been reduced to an aggregate of \$505.0 million.

For the three month periods ended April 30, 2020 and April 30, 2019, cash flows provided from stock options and share units exercised were nominal and \$0.7 million.

Note 16 - Earnings Per Share

The following table sets forth the computation of basic and diluted earnings per share ("EPS") (number of shares in thousands):

	Three Months Ended	
	April 30, 2020	April 30, 2019
Net income for purposes of calculating basic and diluted earnings per share	11,047	7,320
Weighted average shares outstanding	84,156	77,149
Dilutive effect of employee stock options	337	288
Dilutive effect of restricted and performance share units	963	836
Weighted average common and common equivalent shares outstanding	85,456	78,273
Earnings per share		
Basic	0.13	0.09
Diluted	0.13	0.09

For the three month periods ended April 30, 2020 and April 30, 2019, nil and 361,264 options, respectively, were excluded from the calculation of diluted EPS as those options had an exercise price greater than or equal to the average market value of our common shares during the applicable periods and their inclusion would have been anti-dilutive. For the three month periods ended April 30, 2020 and April 30, 2019, the application of the treasury stock method excluded 664,521 and nil options, respectively, from the calculation of diluted EPS as the assumed proceeds from the unrecognized stock-based compensation expense of such options that are attributed to future service periods made such options anti-dilutive.

Additionally, for the three month periods ended April 30, 2020 and April 30, 2019, the application of the treasury stock method excluded PSUs and RSUs of 58,735 and 91,340, respectively, from the calculation of diluted EPS as the unrecognized stock-based compensation expense of such PSUs and RSUs that are attributed to future service periods made such PSUs and RSUs anti-dilutive.

Note 17 - Stock-Based Compensation Plans

Total estimated stock-based compensation expense recognized in our condensed consolidated statement of operations was as follows:

	Three Months Ended	
	April 30, 2020	April 30, 2019
Cost of revenues	58	44
Sales and marketing	171	127
Research and development	77	56
General and administrative	862	712
Effect on net income	1,168	939

Differences between how GAAP and applicable income tax laws treat the amount and timing of recognition of stock-based compensation expense may result in a deferred tax asset. We have recorded a valuation allowance against any such deferred tax asset except for \$0.7 million (\$0.7 million at January 31, 2020)

recognized in the United States. We realized a nominal tax benefit in connection with stock options exercised during both the three month periods ended April 30, 2020 and April 30, 2019.

Stock Options

As of April 30, 2020, we had 1,326,570 stock options granted and outstanding under our shareholder-approved stock option plan and 3,355,736 remained available for grant. In addition, we had 106,500 stock options outstanding pursuant to option grants made outside of our shareholder-approved stock option plan as permitted under the rules of the Toronto Stock Exchange in certain circumstances.

As of April 30, 2020, \$5.7 million of total unrecognized compensation costs related to non-vested stock option awards is expected to be recognized over a weighted average period of 3.1 years. The total fair value of stock options vested during the three month period ended April 30, 2020 was nil.

The total number of options granted during the three month periods ended April 30, 2020 and April 30, 2019 was 308,948 and 361,264, respectively. The weighted average grant-date fair value of options granted during the three month periods ended April 30, 2020 and April 30, 2019 was \$9.17 and \$8.94 per option, respectively.

The weighted-average assumptions were as follows:

	Three Months Ended	
	April 30, 2020	April 30, 2019
Expected dividend yield (%)	-	-
Expected volatility (%)	26.1	23.5
Risk-free rate (%)	0.8	1.4
Expected option life (years)	5	5

A summary of option activity under all of our plans is presented as follows:

	Number of Stock Options Outstanding	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life (years)	Aggregate Intrinsic Value (in millions)
Balance at January 31, 2020	1,127,822	\$26.82	4.6	\$20.2
Granted	308,948	\$37.51		
Exercised	(700)	\$23.78		
Forfeited	(3,000)	\$27.62		
Balance at April 30, 2020	1,433,070	\$28.35	4.9	\$20.4
Vested or expected to vest at April 30, 2020	1,433,070	\$28.35	4.9	\$20.4
Exercisable at April 30, 2020	717,469	\$22.05	3.7	\$14.7

The total intrinsic value of options exercised during the three month periods ended April 30, 2020 and April 30, 2019 was nominal and \$1.5 million, respectively.

Performance Share Units

A summary of PSU activity is as follows:

	Number of PSUs Outstanding	Weighted- Average Granted Date Fair Value	Weighted- Average Remaining Contractual Life (years)	Aggregate Intrinsic Value (in millions)
Balance at January 31, 2020	629,874	\$21.19	5.0	\$28.2
Granted	58,735	\$46.76		
Performance units issued	40,665	\$28.30		
Balance at April 30, 2020	729,274	\$22.98	5.3	\$31.0
Vested or expected to vest at April 30, 2020	729,274	\$22.98	5.3	\$31.0
Exercisable at April 30, 2020	562,459	\$16.75	4.3	\$23.9

The aggregate intrinsic value represents the total pre-tax intrinsic value (the aggregate closing share price of our common shares on April 30, 2020) that would have been received by PSU holders if all PSUs had been vested on April 30, 2020.

As of April 30, 2020, \$4.9 million of total unrecognized compensation costs related to non-vested awards is expected to be recognized over a weighted average period of 1.8 years. The total fair value of PSUs vested during the three month period ended April 30, 2020 was \$1.2 million.

Restricted Share Units

A summary of RSU activity is as follows:

	Number of RSUs Outstanding	Weighted- Average Granted Date Fair Value	Weighted- Average Remaining Contractual Life (years)	Aggregate Intrinsic Value (in millions)
Balance at January 31, 2020	374,677	\$16.57	5.0	\$16.8
Granted	41,115	\$37.51		
Balance at April 30, 2020	415,792	\$18.10	5.3	\$17.7
Vested or expected to vest at April 30, 2020	415,792	\$18.10	5.3	\$17.7
Exercisable at April 30, 2020	336,921	\$14.04	4.4	\$14.3

The aggregate intrinsic value represents the total pre-tax intrinsic value (the aggregate closing share price of our common shares on April 30, 2020) that would have been received by RSU holders if all RSUs had been vested on April 30, 2020.

As of April 30, 2020, \$2.5 million of total unrecognized compensation costs related to non-vested awards is expected to be recognized over a weighted average period of 2.1 years. The total fair value of RSUs vested during the three month period ended April 30, 2020 was nil.

Deferred Share Unit Plan

As at April 30, 2020, the total number of DSUs held by participating directors was 252,759 (251,422 at January 31, 2020), representing an aggregate accrued liability of \$10.6 million (\$11.3 million at January 31, 2020). During the three month period ended April 30, 2020, 1,337 DSUs were granted. The fair value of the DSU liability is based on the closing price of our common shares at the balance sheet date. The total compensation cost (recovery) related to DSUs recognized during the three month periods ended April 30, 2020 and April 30, 2019 was (\$0.1) million and \$2.7 million, respectively.

Cash-Settled Restricted Share Unit Plan

A summary of activity under our CRSU plan is as follows:

	Number of CRSUs Outstanding	Weighted- Average Remaining Contractual Life (years)
Balance at January 31, 2020	42,727	1.6
Granted	26,254	
Vested and settled in cash	(7,280)	
Forfeited	(248)	
Balance at April 30, 2020	61,453	2.0
Non-vested at April 30, 2020	61,453	2.0

We recognize the compensation cost of the CRSUs ratably over the service/vesting period relating to the grant and have recorded an aggregate accrued liability of \$1.1 million at April 30, 2020 (\$0.8 million at January 31, 2020). As at April 30, 2020, the unrecognized aggregate liability for the unvested CRSUs was \$1.5 million (\$1.1 million at January 31, 2020). The fair value of the CRSU liability is based on the closing price of our common shares at the balance sheet date. The total compensation cost related to CRSUs recognized during the three month periods ended April 30, 2020 and April 30, 2019 was \$0.2 million and \$0.3 million, respectively.

Note 18 - Income Taxes

The effective tax rate (which is the provision for income taxes expressed as a percentage of income before income taxes) was 28% and 26% for the three month periods ended April 30, 2020 and 2019, respectively. The increase in the three month period ended April 30, 2020 compared to the three month period ended April 30, 2019 was primarily due to newly published tax reform guidance in the US which resulted in an adjustment with respect to income tax of previous periods as well as an increase in non-deductible expenses. The remainder of the differences are due to normal course movements and non-material items.

Note 19 – Contract Balances, Performance Obligations and Contract Costs

Deferred Revenue

The following table presents the changes in the deferred revenue balance as follows:

	<u>Deferred Revenue</u>
Balance at January 31, 2020	42,063
Recognition of previously deferred revenue	(28,727)
Deferral of revenue	30,328
Increases from business combinations, net	7
Effect of movements in foreign exchange	(559)
Balance at April 30, 2020	<u>43,112</u>
Current	42,324
Long-term	<u>788</u>

Performance Obligations

As of April 30, 2020, approximately \$228.3 million of revenue is expected to be recognized in the future related to performance obligations that are unsatisfied (or partially unsatisfied) at the end of the reporting period. We expect to recognize revenue on approximately 80% of these remaining performance obligations over the next 24 months with the balance recognized thereafter.

Contract Assets

The following table presents the changes in the contract assets balance as follows:

	<u>Contract Assets</u>
Balance at January 31, 2020	1,107
Transfers to trade receivables from contract assets	(137)
Increases as a result of delivered term licenses recognized as revenue during the period, net of amounts transferred to trade receivables	96
Effect of movements in foreign exchange	(19)
Balance at April 30, 2020	<u>1,047</u>

Contract Costs

Capitalized contract costs net of accumulated amortization is \$10.1 million at April 30, 2020 (\$9.8 million at January 31, 2020). Capitalized contract costs are amortized consistent with the pattern of transfer to the customer for the goods and services to which the asset relates. For the three month periods ended April 30, 2020 and April 30, 2019, the total contract cost amortization included in sales and marketing expenses was \$0.8 million and \$0.5 million, respectively. For both the three month periods ended April 30, 2020 and April 30, 2019, there was no impairment loss in relation to the capitalized contract costs.

Note 20 - Other Charges

Other charges are comprised of acquisition-related costs and restructuring initiatives which have been undertaken from time to time under various restructuring plans. Acquisition-related costs primarily include advisory services, brokerage services, administrative costs and retention bonuses to employees joining by way of an acquisition, and collectively relate to completed and prospective acquisitions.

For the three month periods ended April 30, 2020 and April 30, 2019, other charges were comprised of acquisition-related costs of \$0.8 million and \$2.1 million, respectively.

Note 21 – Supplemental Cash Flow Information

The following tables presents the cash flow changes in operating asset and liabilities:

	Three Months Ended	
	April 30, 2020	April 30, 2019
Trade accounts receivable	(1,221)	2,660
Other accounts receivable	1,020	(429)
Prepaid expenses and other	(863)	(3,484)
Inventory	181	(3)
Accounts payable	1,417	288
Accrued liabilities	(2,302)	3,779
Income taxes payable	2,267	200
Operating leases	13	383
Deferred revenue	(1,129)	(2,542)
	(617)	852

Note 22 - Segmented Information

We review our operating results, assess our performance, make decisions about resources, and generate discrete financial information at the single enterprise level. Accordingly, we have determined that we operate in one reportable business segment providing logistics technology solutions. The following tables provide our disaggregated revenue information by geographic location of customer and revenue type:

	Three Months Ended	
	April 30, 2020	April 30, 2019
Revenues		
United States	53,110	48,804
Europe, Middle-East and Africa	21,303	19,404
Canada	6,080	6,704
Asia Pacific	3,210	3,092
	83,703	78,004

	Three Months Ended	
	April 30, 2020	April 30, 2019
Revenues		
Services	74,131	67,004
Professional services and other	7,830	8,679
License	1,742	2,321
	83,703	78,004

License revenues are derived from perpetual licenses granted to our customers to use our software products. Services revenues are comprised of ongoing transactional and/or subscription fees for use of our services and products by our customers and maintenance, which include revenues associated with maintenance and support of our services and products. Professional services and other revenues are comprised of professional services revenues from consulting, implementation and training services related to our services and products, hardware revenues and other revenues.

The following table provides information by geographic area of operation for our long-lived assets. Long-lived assets represent property and equipment and intangible assets that are attributed to geographic areas.

	April 30, 2020	January 31, 2020
Total long-lived assets		
United States	109,404	114,980
Europe, Middle-East and Africa	39,090	31,299
Canada	100,204	111,264
Asia-Pacific	12,197	13,144
	260,895	270,687

Note 23 – Subsequent Event

On May 19, 2020 we implemented a restructuring plan that will reduce our global workforce by approximately 5% while also providing for the closure of several office facilities. We expect the total cost of this plan to be approximately \$2.0 million and that the plan will be implemented over the next 6 months.

CORPORATE INFORMATION

Stock Exchange Information

Our common stock trades on the Toronto Stock Exchange under the symbol DSG and on The Nasdaq Stock Market under the symbol DSGX.

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