UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 40-F

☐ **REGISTRATION STATEMENT PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

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

For the fiscal year ended January 31, 2019

Commission File Number: 000-29970

THE DESCARTES SYSTEMS GROUP INC.

(Exact name of Registrant as specified in its charter)

N/A
(Translation of Registrant's name into English (if applicable))

Canada
(Province or other jurisdiction of incorporation or organization)

N/A
(Primary Standard Industrial Classification Code Number (if applicable))

N/A
(I.R.S. Employer Identification Number (if applicable))

120 Randall Drive, Waterloo, Ontario, Canada N2V 1C6
Tel: (519) 746-8110
(Address and telephone number of Registrant's principal executive offices)

Descartes Systems (USA) LLC
Powers Ferry Business Park
2030 Powers Ferry Road SE
Suite 350
Atlanta, GA 30339-5066
Tel: (678) 247-0400
(Name, address (including zip code) and telephone number
(including area code) of agent for service in the United States)

Securities registered or to be registered pursuant to Section 12(b) of the Act.

Title of each class:	Name of each exchange on which registered:
Common Shares, no par value	**Nasdaq**
Rights to purchase Common Shares, no par value	**Nasdaq**

Securities registered or to be registered pursuant to Section 12(g) of the Act.

None
(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.

N/A
(Title of Class)

For annual reports, indicate by check mark the information filed with this Form:

☒ Annual information form ☒ Audited annual financial statements

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

76,864,866 common shares as of January 31, 2019

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

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files).

Yes ☒ No ☐

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 12b-2 of the Exchange Act.
Emerging growth company ☐

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

CERTIFICATIONS

See Exhibits 99.5, 99.6 and 99.7 to this Annual Report on Form 40-F.

CONTROLS AND PROCEDURES

DISCLOSURE CONTROLS AND PROCEDURES

The Registrant, under the supervision and with the participation of the Registrant's management, including the Registrant's Chief Executive Officer (principal executive officer) and Chief Financial Officer (principal financial officer), evaluated the effectiveness of the Registrant's disclosure controls and procedures as of January 31, 2019 (the "Evaluation Date"), pursuant to Rule 13a-15(b) promulgated under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Based upon that evaluation, the Registrant's Chief Executive Officer and Chief Financial Officer concluded that, as of the Evaluation Date, the Registrant's disclosure controls and procedures were effective.

INTERNAL CONTROL OVER FINANCIAL REPORTING

Management's Report on Financial Statements and Internal Control Over Financial Reporting

Management's Report on Financial Statements and Internal Control Over Financial Reporting is contained in the Registrant's 2019 Annual Report filed herewith as Exhibit 99.2 and incorporated herein by reference.

Report of Independent Registered Public Accounting Firm

The report of KPMG LLP with respect to the effectiveness of the Registrant's internal control over financial reporting is contained in the Registrant's 2019 Annual Report filed herewith as Exhibit 99.2 and incorporated herein by reference.

Changes in Internal Control Over Financial Reporting

During the period covered by this Annual Report on Form 40-F, there have been no changes in the Registrant's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Registrant's internal control over financial reporting.

NOTICES PURSUANT TO RULE 104 OF REGULATION BTR

None.

AUDIT COMMITTEE FINANCIAL EXPERT

The Registrant's Audit Committee of the Board of Directors currently consists of three members. The Registrant's Board of Directors has determined that John J. Walker and Eric Demirian are "audit committee financial experts" (as defined in paragraph 8(b) of General Instruction B to Form 40-F). All members of the Audit Committee are independent within the meaning of the Nasdaq Stock Market's ("Nasdaq") director independence standards.

CODE OF ETHICS

The Registrant has adopted a Code of Business Conduct and Ethics (the " Code of Ethics") that applies to the Registrant's principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A copy of the Code of Ethics is posted on the Registrant's corporate website at *www.descartes.com* and is also available at *www.sedar.com*. The Registrant intends to disclose through its website any waivers or amendments to its Code of Ethics that apply to any principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FEES AND SERVICES

The aggregate fees billed in respect of the fiscal years ended January 31, 2019 and January 31, 2018 for professional services rendered by KPMG LLP, the Registrant's Independent Registered Public Accounting Firm for 2019 and 2018, are as follows (all amounts in table are in US dollars — amounts that were billed in Canadian dollars are converted to US dollars at the applicable exchange rate on the last day of the applicable fiscal period):

	Fiscal Year Ended January 31, 2019	**Fiscal Year Ended January 31, 2018**
Audit Fees	$ 579,606	$ 446,131
Audit-Related Fees	$ 2,430	$ 61,782
Tax Fees	$ Nil	$ Nil
All Other Fees	$ Nil	$ 65,034

AUDIT FEES— Audit fees consist of fees for professional services rendered for the audit of the Registrant's annual consolidated financial statements and services provided in connection with statutory audits and regulatory filings or engagements including fees for statutory audit of the Company's foreign subsidiaries.

AUDIT RELATED FEES— Audit related fees consist of fees for assurance and related services that are reasonably related to the performance of the audit or review of the Registrant's financial statements and are not reported as Audit Fees.

ALL OTHER FEES— All other fees consist of fees for non-audit-related advisory services.

PRE-APPROVAL POLICIES AND PROCEDURES

The Registrant's audit committee is responsible for overseeing the work of the independent registered public accounting firm and has adopted a policy requiring its pre-approval of all audit and permissible non-audit services provided by the independent registered public accounting firm. The Registrant's Pre-Approval Policy and Procedure for Engagements of the Independent Auditor is filed as Appendix B to the Registrant's Annual Information Form dated April 22, 2019 filed as Exhibit 99.1 hereto and incorporated by reference herein.

OFF-BALANCE SHEET ARRANGEMENTS

The Registrant does not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on the Registrant's financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that are material to investors.

TABULAR DISCLOSURE OF CONTRACTUAL OBLIGATIONS

The following table presents, as of January 31, 2019, the Registrant's known contractual obligations in respect of operating and capital lease obligations (in millions of U.S. dollars):

	Less than 1 year	1-3 years	4-5 years	More than 5 years	Total
Debt obligations	—	—	25.5	—	25.5
Operating lease obligations	4.6	5.0	2.5	1.7	13.8
Capital lease obligations	0.1	—	—	—	0.1
Total	4.7	5.0	28.0	1.7	39.4

Lease Obligations

The Registrant is committed under non-cancelable operating leases for business premises, computer equipment and vehicles with terms expiring at various dates through 2027. The Registrant also is committed under non-cancelable capital leases for computer equipment expiring at various dates through 2021. The future minimum amounts payable under these lease agreements are outlined in the table above.

Other Obligations

Deferred Share Unit and Cash-Settled Restricted Share Unit Plans

As described in Note 2 to the Registrant's audited consolidated financial statements, the Registrant maintains Deferred Share Unit (" DSU") and Cash-Settled Restricted Share Unit ("CRSU") plans for its 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, the Registrant had an unrecognized aggregate amount for unvested CRSUs and unearned DSUs of $0.8 million and nil, respectively, at January 31, 2019. The ultimate liability for any payment of DSUs and CRSUs is dependent on the trading price of the Registrant's common shares.

IDENTIFICATION OF THE AUDIT COMMITTEE

The Registrant has a separately designated standing audit committee established in accordance with Section 3(a)(58)(A) of the Exchange Act. The members of the audit committee as of the date of the filing of this 40-F are: Mr. John J. Walker (Chair), Ms. Deborah Close and Mr. Eric Demirian.

MINE SAFETY DISCLOSURE

Not applicable.

DISCLOSURE PURSUANT TO THE REQUIREMENTS OF NASDAQ

The Registrant was granted an exemption from Nasdaq Stock Market Rules requiring each issuer to provide for a quorum at any meeting of the holders of common stock of no less than 33 1/3% of the outstanding shares of the issuer's common voting stock. This exemption was granted because Nasdaq's requirements regarding the quorum required for meetings of the holders of common stock are contrary to generally accepted business practices in Canada. In particular, Section 139(1) of the Canada Business Corporations Act provides that a company's by-laws may set the quorum requirements for a meeting of shareholders. The relevant provisions of the Registrant's by-laws state that "Subject to the Act in respect of a majority shareholder, a quorum for the transaction of business at any meeting of shareholders shall be persons not being less than two in number and holding or representing by proxy not less than 20 percent of the issued and outstanding shares of the Corporation for the time being enjoying voting rights at such meeting. If a quorum is present at the opening of any meeting of shareholders, the shareholders present or represented may proceed with the business of the meeting notwithstanding that a quorum is not present throughout the meeting. If a quorum is not present at the opening of any meeting of shareholders, the shareholders present or represented may adjourn the meeting to a fixed time and place but may not transact any other business."

UNDERTAKING

Registrant undertakes to make available, in person or by telephone, representatives to respond to inquiries made by the Commission staff, and to furnish promptly, when requested to do so by the Commission staff, information relating to: the securities in relation to which the obligation to file an annual report on Form 40-F arises; or transactions in said securities.

SIGNATURES

Pursuant to the requirements of the Exchange Act, the Registrant certifies that it meets all of the requirements for filing on Form 40-F and has duly caused this annual report to be signed on its behalf by the undersigned, thereto duly authorized.

THE DESCARTES SYSTEMS GROUP INC.

By: /s/ Michael Verhoeve
Name: Michael Verhoeve
Title: EVP Legal, General Counsel and Corporate Secretary

Date: April 22, 2019

EXHIBIT INDEX

Exhibit Number	Description
99.1	Annual Information Form for the fiscal year ended January 31, 2019
99.2	2019 Annual Report (incorporated herein by reference to Exhibit 99.1 of the Registrant's Form 6-K furnished with the SEC on March 8, 2019)
99.3	Consent of KPMG LLP
99.4	Certification of the Chief Executive Officer pursuant to Rule 13a-14 or 15d-14 of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
99.5	Certification of the Chief Financial Officer pursuant to Rule 13a-14 or 15d-14 of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
99.6	Certifications of the Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101	XBRL Financial Statements

DESCARTES™

THE DESCARTES SYSTEMS GROUP INC.

ANNUAL INFORMATION FORM

APRIL 22, 2019

TABLE OF CONTENTS

ITEM 1	**GENERAL**	**3**
ITEM 2	**CORPORATE STRUCTURE**	**4**
2.1	The Company	4
2.2	Intercorporate Relationships	4
ITEM 3	**GENERAL DEVELOPMENT OF THE BUSINESS**	**5**
3.1	Profile	5
3.2	History and General Development	7
3.3	Trends / Business Outlook	10
ITEM 4	**NARRATIVE DESCRIPTION OF THE BUSINESS**	**13**
4.1	Company Overview	13
4.2	Principal Products & Services	13
4.3	Revenue Sources	24
4.4	Customer Base	25
4.5	Sales and Marketing	25
4.6	Research and Development	26
4.7	Competition	27
4.8	Intellectual Property and Other Proprietary Rights	28
4.9	Contracts	29
4.10	Employees	29
4.11	Risks Associated with Foreign Sales and Exchange Rate Fluctuations	30
4.12	Risks Associated with Cyclical or Seasonal Aspects of Business	30
4.13	Reorganizations	30
4.14	Material Contracts	30
4.15	Code of Business Conduct and Ethics	31
ITEM 5	**RISK FACTORS**	**31**
ITEM 6	**MARKET FOR SECURITIES AND RELATED SECURITYHOLDER MATTERS**	**31**
6.1	Common Shares	31
6.2	Transfer Agent and Registrar	31
6.3	Dividend Policy	31
6.4	Market for Common Shares	32
6.5	Shareholder Rights Plan	32
ITEM 7	**DIRECTORS AND EXECUTIVE OFFICERS**	**33**
7.1	Summary Information	33
7.2	Committees of the Board of Directors	37
7.3	Certain Relationships and Related Transactions	39
ITEM 8	**EXTERNAL AUDITORS**	**39**
ITEM 9	**LEGAL PROCEEDINGS**	**39**
ITEM 10	**ADDITIONAL INFORMATION**	**40**
Appendix A – Audit Committee Charter		**41**
Appendix B – Audit Committee Pre-Approval Policy		**54**

ITEM 1 GENERAL

Information contained herein is provided as at January 31, 2019 and is in United States ("US") dollars, unless otherwise indicated.

Our Annual Information Form ("AIF") contains references to The Descartes Systems Group Inc. using the words "Descartes," "we," "us," "our" and similar words and the reader is referred to using the words "you," "your" and similar words.

This AIF 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 fiscal year that ended on January 31, 2019 is referred to as "fiscal 2019," "2019" or using similar words. Our fiscal year that ended on January 31, 2018 is referred to as "fiscal 2018," "2018" or using similar words. Other fiscal periods are referenced by the applicable year during which the fiscal period ends. For example, 2020 refers to the annual period ending January 31, 2020 and the "fourth quarter of 2020" refers to the quarter ending January 31, 2020.

You should read the AIF in conjunction with our audited consolidated financial statements for 2019 and the management's discussion and analysis thereon ("MD&A"). We prepare and file our consolidated financial statements and MD&A in US dollars and in accordance with US generally accepted accounting principles ("GAAP").

We have prepared the AIF with reference to Form 51-102F2, which sets out the AIF disclosure requirements and which was established under National Instrument 51-102 "Continuous Disclosure Obligations" ("NI 51-102") of the Canadian Securities Administrators.

Additional information about us, including copies of our continuous disclosure materials such as our MD&A, 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.

Certain statements made in this AIF, as well as the MD&A referenced herein, 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 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 our 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: 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; the stability of general economic and market conditions, currency exchange rates, and interest rates; equity and debt markets continuing to provide us with access to capital; our continued ability to identify and source attractive and executable business combination opportunities; 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 the MD&A which is included in our Annual Report to the Shareholders for the fiscal year ended January 31st, 2019, 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.

ITEM 2 CORPORATE STRUCTURE

2.1 The Company

Descartes was continued under the *Canada Business Corporations Act* on July 5, 2006. On July 31, 2006, Descartes was amalgamated under the *Canada Business Corporations Act* pursuant to an amalgamation between Descartes and ViaSafe Inc. On February 1, 2010, Descartes was amalgamated under the *Canada Business Corporations Act* pursuant to an amalgamation between Descartes and Scancode Systems Inc. ("Scancode"). On February 1, 2010, Descartes was amalgamated under the *Canada Business Corporations Act* pursuant to an amalgamation between Descartes and 7322267 Canada Inc. On February 1, 2012, Descartes was amalgamated under the *Canada Business Corporations Act* pursuant to an amalgamation between Descartes and 882976 Ontario Inc.

The Descartes Systems Group Inc. head office and registered office is located at 120 Randall Drive, Waterloo, Ontario, N2V 1C6 and our general corporate phone number is (519) 746-8110.

2.2 Intercorporate Relationships

We beneficially own, control and/or direct 100% of all voting, share or membership interests in our material subsidiaries. Our material subsidiaries, determined as at January 31, 2019, are as follows:

- Descartes U.S. Holdings, Inc., a Delaware subsidiary;
- Descartes Systems (USA) LLC, a Delaware subsidiary;
- MacroPoint, LLC, an Ohio subsidiary;
- Descartes Systems UK Limited, a United Kingdom subsidiary;
- Descartes Systems (Germany) GmbH, a German subsidiary;
- InterCommIT BV, a Netherlands subsidiary; and
- Descartes Systems (Belgium) NV, a Belgian subsidiary.

3.1 Profile

We bring together networks, applications, global trade content, and collaborative multi-modal logistics communities in ways that improve the productivity, performance and security of logistics and supply chain operations. Customers use our modular, cloud-based and data content 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; comply with trade regulations, and complete numerous other logistics processes. Our pricing model provides our customers with flexibility in purchasing our solutions either on a subscription, transactional or perpetual license basis. We also occasionally act as a reseller of hardware devices from third party suppliers which are used by our customers in connection with their transportation and logistics operations and which provide data that may be relevant to our cloud-based solutions. Our primary focus is on serving transportation providers (air, ocean and truck modes), logistics service providers (including third-party logistics providers, freight forwarders, freight brokers, and customs brokers) and manufacturers, retailers, distributors, and business service providers. For these organizations, 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 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 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 changes 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.

These challenges are heightened for suppliers that have end-customers frequently 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 costly, complex and risky for organizations dealing with many trading partners. Further, many of these solutions do not provide the flexibility, and real-time information exchange, 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, many organizations still have manual or antiquated 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 process – 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. The review of people, goods, services and/or commodities against comprehensive lists of restricted or sanctioned parties published by governments and international organizations has become an essential compliance requirement as the penalties for doing business with sanctioned parties can be far-reaching and severe. Our content and compliance solutions help simplify and automate the screening processes.

Complex international supply chains are also affected by logistics service provider performance, capacity, and productivity, as well as regulatory frameworks such as free trade agreements and trade sanctions. We believe our global trade data, denied party screening, trade regulations and free-trade agreement and duty rate and calculation solutions help customers improve their sourcing, compliance, 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. Descartes' Logistics Technology Platform is the simple, elegant synthesis of a network, applications, content and a community.

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 offers a wide array of modular, cloud-based, interoperable web and wireless supply chain and 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 fulfillment;
- Customs & Regulatory Compliance;
- Global Trade Data & Services;
- 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, quick access to partners is critical. 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 many 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.

3.2 History and General Development

Our origins were in providing logistics-focused software designed to optimally plan and manage routes for direct delivery and retail customers with private fleets. Supply chain management has evolved as companies across industry verticals have increasingly sought real-time control over their supply chain. We have established a network-based business model and are consolidating technology to provide our customers with a shared-services environment that assists our customers in gathering and exchanging source data for logistics. We have also designed value-added services that enable shippers, transportation companies and logistics intermediaries to use that information to make better business decisions and deliver better service to their own customers.

Key developments in our business over the last three fiscal years, described beginning with the most recent, are as follows:

Fiscal 2019 and Part of Fiscal 2020 through tc April 22, 2019

On January 28, 2019, we announced that we had entered in to a definitive agreement to acquire the businesses run by the Management Systems Resources Inc. group of companies operating under the names "Visual Compliance," "eCustoms" and "MSR" (collectively, "Visual Compliance") pursuant to a Purchase and Sale Agreement (the "Purchase Agreement") entered into on January 27, 2019 with MSR Customs & Commodity Tax Group, Management Systems Resources Inc, MSR International Inc. and MSR Customs Corporation (collectively, the "Sellers"). The Purchase Agreement contains customary representations and warranties for a transaction of this type. The Purchase Agreement also contains customary covenants, including a covenant providing for each of the parties to use reasonable efforts to cause the transactions to be consummated. Subject to certain limitations and exceptions, the Sellers, on the one hand, and Descartes, on the other hand, have agreed to indemnify each other for certain matters, including certain breaches of representations, warranties and covenants. These indemnification obligations are subject to certain limitations other than in the case of fraud or wilful misconduct. Descartes has purchased representations and warranties insurance to which it has recourse in the event of a breach of representations and warranties of any of the Sellers contained in the Purchase Agreement. The Visual Compliance transaction was completed on February 12, 2019 and involved a total purchase price of approximately $250 million, which was satisfied in part by way of approximately $9 million in common shares of Descartes and the balance of approximately $240 million paid in cash, primarily drawn from our amended and restated revolving credit facility as referenced below.

On January 28, 2019 we also announced that we had amended and increased our existing US $150 million senior secured revolving credit facility to a US $350 million revolving operating credit facility pursuant to the Third Amended and Restated Credit Agreement dated as of January 25, 2019 among *inter alia* Descartes and certain parties advising Bank of Montreal ("BMO") as Arranger, Sole Bookrunner and Administrative Agent (the "Credit Facility"), with BMO acting as sole lead and arranger for the increased credit facility. The Credit Facility is available for general corporate purposes, including the financing of ongoing working capital needs and acquisitions, including the Visual Compliance transaction. With the approval of the lenders, the Credit Facility can be further expanded to a total of US $500 million. The Credit Facility has a five-year maturity with no fixed repayment dates prior to the end of the five-year term ending in January 2024. Borrowings under the Credit Facility are secured by a first charge over substantially all of Descartes' assets.

On August 21, 2018, we acquired PinPoint GPS Solutions, Inc. ("PinPoint"), a Toronto, Ontario based provider of fleet-tracking and mobile-workforce solutions. PinPoint is primarily a reseller of technology solutions that gather real-time location and performance information on trucks and other mobile assets, which information can be used in several other Descartes applications. The total up-front purchase price for the acquisition was approximately CAD$15 million, which was satisfied from a combination of cash on hand and CAD$2 million in common shares of Descartes, plus potential performance-based consideration of up to an additional CAD$3 million.

On June 22, 2018, we acquired substantially all of the assets of Velocity Mail, LLC ("Velocity Mail"). Velocity Mail is a US-based operator of an electronic transportation network that provides global air carriers with mail and parcel shipment scanning and tracking solutions. The Velocity Mail acquisition adds to the breadth of solutions that Descartes can offer to its global air carrier customers and prospects over the Descartes GLN. The total purchase price for the acquisition was approximately $25.5 million, which was satisfied from cash on hand.

On February 2, 2018, we acquired Aljex Software, Inc. ("Aljex"), a leading US-based provider of cloud based back-office transportation management solutions for freight brokers and transportation providers. Aljex serves approximately 400 customers in North America and supports the execution of nearly 3 million freight moves per year. The Aljex solution helps customers automate business processes and create electronic documents used in executing freight movements. The solution allows customers to manage the lifecycle of a shipment from order creation through execution. The total purchase price for the acquisition was approximately $32.4 million, net of cash acquired, which was funded from Descartes' existing acquisition line of credit.

Fiscal 2018

On August 15, 2017, we acquired MacroPoint, LLC ("MacroPoint"), the leading provider in North America of location-based truckload shipment visibility and predictive freight capacity data. MacroPoint operates a network of over two million connected trucking assets and drivers to provide data that helps transportation brokers, logistics services providers and shippers track the location and status of deliveries in trucks. MacroPoint connects to on-board electronic logging devices (ELDs), transportation management systems, GPS-enabled smart phone applications and location-based mobile phone triangulation to provide up-to-date and accurate status information on truck locations. The total purchase price for the acquisition was approximately $107 million, of which $87 million was satisfied in cash and $20 million was satisfied in common shares of Descartes. Of the $87 million cash component, $7 million was satisfied from cash on hand and the balance from Descartes' existing acquisition line of credit.

On June 2, 2017, we acquired substantially all of the assets of PCSTrac, Inc. and certain assets of a related company, Progressive Computer Services Inc., dba PCS Technologies (collectively "PCSTrac"). PCSTrac is a US-based provider of carton-level shipment visibility and management solutions for speciality retailers and their logistics services providers to manage shipments from distribution centers to retail stores. The PCSTrac acquisition complements Descartes' 2015 acquisition of BearWare Inc. and builds upon Descartes' expertise and footprint in the field of pooled distribution, which assists retailers in reducing logistics costs and minimizing store disruptions through consolidated deliveries. The total purchase price for the acquisition was approximately $11.25 million, which was satisfied from cash on hand.

On May 19, 2017, we acquired Z-Firm LLC dba ShipRush ("ShipRush"), a US-based provider of e-commerce multi-carrier parcel shipping management solutions for small-to-medium sized businesses. ShipRush helps e-commerce businesses and omni-channel retailers execute parcel shipments for last-mile delivery to customers. With existing integrations to over 60 different business systems, including ERP, e-commerce and supply chain platforms, the ShipRush platform helps customers streamline the shipping process by automatically importing orders from those systems, comparing carrier rates, printing shipping labels for all major carriers and supporting tracking through final delivery. The ShipRush acquisition added to the breadth of solutions Descartes can provide to omni-channel retailers and small-to-medium sized business customers to address their parcel shipping needs. The total purchase price for the acquisition was approximately $14 million, which was satisfied from cash on hand, plus potential performance-based consideration of up to an additional $3 million.

Fiscal 2017

On December 23, 2016, we acquired The Datamyne, Inc. ("Datamyne"), a leading US-based provider of cloud-based trade data content solutions used by customers to analyze import and export trade activity across certain markets, commodities, trade lanes and other parameters. Datamyne, which operates primarily in the US and South America, collects, cleanses and commercializes logistics trade data from over 50 nations across five continents, including key markets in North America, Latin America, Asia, Africa and the European Union ("EU"). More than 100 million records are gathered each year from official filings with various customs authorities and trade ministries and subscribers can then use Datamyne's web-based solutions and business intelligence tools to augment, speed-up and simplify trade data research and to shape global marketing, prospecting and sourcing strategies. The total purchase price for the acquisition was approximately $52.7 million, net of cash acquired, which was funded with cash on hand.

On November 11, 2016, we acquired 4Solutions Information Technology Pty Ltd. ("4Solutions"), a leading Australian-based provider of cloud-based business-to-business ("B2B") supply chain integration solutions that delivers B2B integration as a cloud service for the healthcare sector in Australia. 4Solutions operates the Health Supply Network, Australia's foremost electronic document exchange network for the healthcare community. As part of this community, large multi-national, local pharmaceutical manufacturers and wholesalers can connect and collaborate to automate a wide array of supply chain processes spanning sourcing to delivery. The total purchase price for the acquisition was AUD $3.5 million (approximately $2.7 million as of November 11, 2016), net of cash acquired, which was funded with cash on hand.

On October 12, 2016, we acquired Appterra LLC (“Appterra”), a leading US-based provider of cloud-based B2B supply chain integration solutions that delivers B2B integration as a cloud service to help customers automate supply chain processes and enhance collaboration and visibility among global trading partners. The solutions help manage and streamline a wide array of complex, mission-critical business documents found in typical procure-to-pay and order-to-cash processes. The total purchase price for the acquisition consisted of approximately $5.8 million paid at closing with cash on hand plus potential performance-based cash consideration of up to an additional $1.6 million.

On April 29, 2016, we acquired all outstanding shares of privately-held pixi Software GmbH (“pixi”), a leading German-based provider of technology solutions for e-commerce order fulfillment and warehouse management. The pixi system helps its customers automate e-commerce processes originating from on-line orders by collecting information from an e-commerce webfront and translating that in to a scanner- enabled pick and pack process within a warehouse, initiating shipment to the customer and synchronizing the information with the customer’s financial system for invoicing and shipment tracking. The total purchase price for the acquisition was EUR 9.2 million (approximately $10.4 million as of April 29, 2016), net of cash acquired, which was paid on closing.

On April 18, 2016, we filed a final short-form 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 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 could be sold by us (or certain of our current or future shareholders) pursuant to this base shelf prospectus during the 25-month period that the base shelf prospectus, including any amendments thereto, remains valid was limited to $500 million.

On March 2, 2016, we had amended our $77.0 million revolving debt facility with a new senior secured credit facility, which facility has now been replaced by the Credit Facility referenced above as of January 28, 2019.

3.3 Trends / Business Outlook

Industry consolidation, rapid technological change and frequent new product introductions and enhancements continue to characterize the software, content and network services industries – particularly for logistics management technology companies. Organizations are increasingly requiring greater levels of functionality, more sophisticated product offerings and access to industry-specific data 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 and on-premises solution deployments towards electronic processes powered by the exchange of cloud-based 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 and collaborative supply chain execution applications. These applications include freight bookings, contract and rate management, content solutions for trade research and 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, e-commerce fulfilment, warehouse

management and inventory visibility. Further, customers are increasingly seeking “big data” content and insight solutions for analyzing global logistics trends and activity.

We believe that there continues to be a growing acceptance of subscription pricing and cloud-based 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.

TRENDS IN GLOBAL TRADE

With both global trade and counter-terrorism efforts on the rise, the role of many customs agencies around the world has evolved far beyond statistical reporting and collection of import duties and excise taxes to a growing focus on the protection of society through augmented border security and much deeper cargo security. To that end, the World Customs Organization (“WCO”) is playing a leading role in helping member agencies enhance the efficiency and effectiveness of their operations through the development, promotion and implementation of modern customs systems and procedures. One of the WCO’s principal instruments is the SAFE Framework of Standards to Secure and Facilitate Global Trade (“SAFE Framework”) which the WCO adopted in 2005.

The SAFE Framework is a non-binding instrument that contains supply chain security and facilitation standards for goods being traded internationally. Its goal is to enable better visibility, improve capabilities to detect high-risk shipments, and facilitate more integrated supply chain management across all modes of transport through enhanced technology and data transmission practices, networking arrangements between customs administrations, and better cooperation between customs and the business community.

As more countries adopt and enhance SAFE Framework initiatives, importers, exporters and their trading partners must comply with new and stricter security and customs regulations, which often mandate the use of electronic logistics messaging. Descartes’ customs and regulatory compliance solutions connect importers, exporters, logistics providers and regulatory authorities to enable efficient data transmission, cargo security screening, customs declaration filings and compliance across multiple regulatory requirements and industry-sponsored initiatives affecting international transportation. As such, our business may be impacted as regulations affecting domestic and international trade are introduced, modified or repealed.

USA: The Automated Commercial Environment (“ACE”) was designed by US Customs and Border Protection (“CBP”) to enhance US national security through more accurate, readily available data to promote seamless trade processing. ACE is the “single window” or the primary system through which the trade community will electronically report all imports and exports and the government will determine admissibility and duties. In February 2018, CBP deployed the last of the major scheduled core ACE deployments. The import manifest, cargo release, post release, export, and Participating Government Agency (“PGA”) integration functionality scheduled for delivery in ACE has been made available. CBP is continuing to work through ongoing demand for additional ACE enhancements emerging from industry, government agency, and congressional stakeholders.

One such initiative is export manifest that CBP is developing for air, rail, ocean and truck transportation modes. These export manifest functionalities are scheduled to be rolled out as pilot programs pending publication of Federal Regulation Notices (“FRNs”) announcing the pilot programs by transportation modes and allowing for electronic filing of export manifests. CBP’s stated goal of this initiative is to help close the loop between import and export process and bring more modernized standards to labor-intensive export procedures. CBP also hopes that an electronic export manifest will enable it to better identify potential security concerns earlier in the supply chain while speeding the flow of compliant shipments.

On June 12, 2018, the Air Cargo Advance Screening (“ACAS”) Program went into effect. A previously voluntary process, it mandates the submission of advanced air cargo information on shipments arriving in the United States from a foreign location. Participating air carriers must submit a subset of required pre-arrival air cargo data to CBP at the earliest point practicable and prior to loading the cargo onto aircraft destined to or transiting through the United States.

Canada: The Canada Border Services Agency's ("CBSA") Single Window Initiative ("SWI") is intended to streamline the sharing of commercial data between the government of Canada and the trade community. The Advanced Commercial Information ("ACI") electronic manifest ("e-Manifest") program were launched by CBSA to provide more effective risk management processes and tools to identify threats to health, safety, and security prior to the arrival of cargo and conveyances in Canada. Compliance requirements extend to air, marine, highway and rail carriers, as well as, freight forwarders and warehouse operators.

Currently, a voluntary compliance period is in effect for ACI eManifest for forwarders. Freight forwarders must electronically transmit advance house bill data on consolidated freight to the CBSA, which receives and validates the data within time frames that differ by mode.

European Union: In 2011, the EU launched advance manifest compliance initiatives similar to the US regime, called the Import Control System ("ICS") and Export Control System ("ECS"). Then in May 2016, updates to the Union Customs Code (UCC) were launched affecting customs legislation across the EU, which introduced significant changes to long-established procedures.

Most recently, the ongoing lack of clarity around the UK's Brexit withdrawal agreement continues to create uncertainty and risk for trade. While the situation remains fluid, Descartes is making the necessary adjustments within our customs applications in the UK and across Europe.

Other Countries Around the World: Many nations have or are in the process of adopting various forms of advance filing requirements for shipments destined for a port of that country, including, Argentina, Abu Dhabi, Bahrain, Colombia, Cuba, Ghana, India, Israel, Jamaica, Japan, Kenya, Lebanon, Mexico, Nicaragua, Nigeria, Paraguay, Peru, and Oman.

TRENDS IN USE OF GLOBAL TRADE DATA

Another key trend is the growing importance of global trade data content to minimize duty spend, reduce the risk of transacting with denied parties, and utilize market research to better compete. Trade departments within international shippers and/or their brokers are being required to manage import/export compliance for a growing number of countries, covering everything from import (harmonized tariff) classifications, export classifications, Other government agency information and special trade programs and valuation methodologies going into the destination countries. Importers, exporters, and their logistics providers are using global trade data to better manage supply chain sourcing and risk, track products, monitor competitors, and discover new market opportunities.

Denied party screening ("DPS") is the review of intellectual property, goods, services, and connectivity prior to an import, export or transaction. Governments and international organizations maintain a variety of lists of people, organizations and countries with whom it is illegal or restricted to transact business. Failure to comply can result in significant fines, loss of export privileges, negative media coverage and reputational damage. As sanctions policies are in constant flux, many businesses engaged in international trade are increasingly seeking access to affordable, flexible and configurable DPS services to remain in compliance while limiting operational disruption.

TRENDS IN MOBILE RESOURCE MANAGEMENT

The mobile resource management ("MRM") market is also impacted by changing regulatory trends and limited driver availability. Several countries, including the United States, have adopted legislation that requires automated telematics device-based reporting on various information related to the operation of vehicle fleets, including monitoring drivers' hours of service, distance travelled, speed and equipment inspections. We believe that these types of initiatives will continue to evolve and that customers in this field are increasingly looking for technology service providers to help them manage these complex compliance requirements. With aging driver workforces in North America and Europe, companies are looking for solutions that can improve their existing workforce productivity while complying with the increasing number of regulatory mandates.

We also believe there is a trend in the MRM market towards adoption of solutions that specialize in enabling home delivery, delivery reservations and delivery route optimization that leverages GPS and other real-time available information about a delivery resource in motion. With firms such as Amazon and Home Depot making home delivery a differentiating feature of the buying experience, more retailers and distributors are focusing on re-engineering their logistics processes to provide customers with cost-effective delivery alternatives, including home/job site delivery and value-added services, with tight delivery time windows. In addition, we believe there is an increased proliferation of real-time information that is available about delivery resources in motion and that customers are seeking delivery resource management solutions that can leverage this information for their customers' benefit.

GENERAL TRENDS

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 ongoing developments in and changes to legal and regulatory requirements related to both international and domestic trade, 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 in the US or internationally likely would have a material adverse effect on our business.

ITEM 4 NARRATIVE DESCRIPTION OF THE BUSINESS

4.1 Company Overview

We are a global provider of cloud, device, and data content-based solutions focused on improving the productivity, performance and security of logistics-intensive businesses. Customers use our modular, cloud-based and data content solutions to route, schedule, track and measure delivery resources; plan, allocate and execute shipments; rate, audit and pay transportation invoices; access global trade data; 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 models provide our customers with flexibility in purchasing our solutions either on subscription, transactional or perpetual license basis. Our solutions help transportation providers (air, ocean, rail and truck modes), logistics service providers (including third-party logistics providers, freight forwarders and customs brokers) and logistics-intensive manufacturers, retailers, distributors and mobile service providers reduce costs, improve operational performance, save time, comply with regulatory requirements and enhance the service that they deliver to their own customers.

4.2 Principal Products & Services

We believe that our customers prefer a technology provider that understands the unique requirements of logistics organizations and can provide a comprehensive set of solutions. Our customers are looking for collaborative solutions that help connect their enterprise to the multiple trading partners, logistics services providers and carriers that work with them. The Logistics Technology Platform helps our customers address those needs and provide a base for continuous innovation.

Logistics Technology Platform

The Logistics Technology Platform combines a network, applications, content and a community. It is a comprehensive technology infrastructure that Descartes customers and their trading partners use to extend the command of their logistics operations.



Network

Descartes' GLN is the foundation on which our applications and community are built. It was designed with logistics operations in mind. It is differentiated by its management of data semantics, message delivery, transformation of data pertaining to regional or global operations and its ability to work across wired and wireless technologies.

Content

Descartes' global trade content solutions offer comprehensive access to market leading data and tools to research, analyze and act on import/export movements, trade regulations and market trends; reduce the risk of transacting with denied or sanctioned parties; increase trade compliance rates; optimize sourcing, procurement, and business development strategies; and minimize duty spend.

Community

Our global logistics community is a large, multi-modal network of logistics-intensive companies. We have historically enhanced our current solutions and added additional applications and community members through both organic growth and acquisitions of similarly-focused complementary businesses to strengthen our Logistics Technology Platform.

Applications

With the GLN as the connectivity foundation, we have been expanding our logistics application functional footprint to offer a broad array of modular, interoperable web-based and wireless logistics management solutions.

We provide applications that help companies better manage their logistics book-to-bill process and purchase order-to-dock process, track inventory, meet regulatory requirements, optimize fleet performance, manage deliveries, and effectively communicate and collaborate with their logistics partners. These applications can be principally categorized as: (i) Routing, Mobile & Telematics; (ii) Transportation Management; (iii) Customs & Regulatory Compliance; (iv) GLN Services; (v) Broker & Forwarder Enterprise Systems, and (vi) Global Trade Content Solutions.

(i) Routing, Mobile & Telematics

Descartes' Routing, Mobile & Telematics suite supports the closed-loop process associated with planning, tracking, measuring, delegating and optimizing the use of assets and people that are involved in the movement of goods. These solutions can improve productivity and reduce fuel, vehicle and labor costs. The suite helps address business challenges including the following: (1) strategic planning; (2) daily planning; (3) pickup/delivery reservations; (4) dispatch and vertical specific mobile solutions; (5) commercial fleet navigation; (6) reporting and measuring; (7) sales and merchandiser management; and (8) telematics and compliance.

(1) Strategic Planning: ***Descartes Sales & Territory Planner™ and Descartes Area Planner™***

For strategic planning of recurring pickups or deliveries, Descartes Sales & Territory Planner performs complex service scheduling that simultaneously considers daily, weekly and multi-week deliveries, as well as holidays and other non-working days. It also evaluates geographic distribution and sales potential for each customer to help establish optimal territories and routes. Factors considered include minimizing travel time and related costs, and balancing opportunities across members of the sales team. Additional parameters such as stops, distance and sales volume can also be used to help determine routes and route schedules for sales, delivery or both.

For strategic planning of highly variable pickups and deliveries, Descartes Area Planner utilizes historical demand with algorithms to create models of demand density patterns. Those patterns are used to create territory and route plans. Descartes Area Planner takes into account service levels and delivery product types and is able to test the territory and route plan's resilience to change. Descartes Area Planner typically is used to generate multiple plans to fit daily, seasonal or business cycle driven demand variability.

(2) Daily Planning: ***Descartes Route Planner™, Descartes Route Planner RS™, Descartes Route Planner On-demand™*** **and** ***Winroute™***

Descartes provides a number of daily planning solutions to address the range of customer requirements from the most complex to simple needs. Descartes Route Planner™ takes in new orders as they are placed, optimizes them in real-time, allocating resources to help maximize operating efficiencies, deliver priority service to the most profitable accounts and routes, and maintain overall customer service objectives. Our other daily planning solutions optimize orders in groups, balancing service with costs and operational constraints. Our daily planning solutions are designed to integrate with existing order management or transportation planning systems and can help companies reduce costs as a result of shorter routes, reduce fuel consumption and enhance fleet utilization. Descartes' comprehensive offering addresses a broad range of operational environments that can vary across different industries.

(3) Pickup/Delivery Reservations: ***Descartes Reservations™***

Descartes Reservations facilitates on-line scheduling of deliveries or service — either for self-service or as a decision support tool for customer service agents. It helps companies to effectively tailor service to the demands of key customers while helping to achieve internal profitability goals. Descartes Reservations also confirms that requests can be met and schedules in the appointment, making Descartes Reservations an effective capable-to-promise tool.

(4) Descartes Execution and Mobile Solutions: ***Descartes Route Planner Dispatch™, Descartes Route Planner OnDemand Dispatch, Descartes MobileLink™, Descartes Food Perform™, Descartes Distribution Perform™, and Descartes Transport Perform™***

Descartes Execution solutions (Descartes Route Planner OnDemand Dispatch, Descartes Route Planner Automated Vehicle Locator™, Descartes Route Planner OnDemand AVL™) manage routes in progress, tracking their performance, addressing route exceptions as they occur and capturing delivery and pickup status updates. Descartes Execution Solutions facilitate the assignment and execution of pre-planned and same-day pick-ups and deliveries. Descartes Mobile solutions (Descartes MobileLink™, Descartes Food Perform™, Descartes Distribution Perform™, and Descartes Transport Perform™) provide integrated two-way wireless communication and supports active and passive monitoring capabilities for enhanced logistics execution. By combining route planning and a free flow of information between dispatchers and the field, Descartes Mobile solutions extend the traditional route planning process and provide real-time visibility into the execution of the plan. The combination of Descartes' Daily Planning solutions with Descartes Execution and Descartes Mobile solutions form the core of plan versus actual performance evaluation and continuous logistics improvement.

Descartes Food Perform, Distribution Perform, and Transport Perform are cloud-based mobile solutions that automate traditional paper-based processes and help streamline complex 'last mile' logistics processes. These solutions have been tailored to support 'last mile' commercial processes unique to each industry. They provide configurable, feature-rich mobile technology and advanced electronic proof of delivery operating on a hand-held device carried by drivers and other field personnel.

(6) Reporting and Measuring: ***Descartes Reporting Services***™

Descartes Reporting Services helps companies create and distribute reports within an organization or to suppliers, vendors, sub-contractors or carriers. It provides a simple, secure way to create customized delivery statistics and metrics. It can help simplify the creation and management of supply chain scorecards and, as a byproduct, can help identify best practices.

(7) Sales and Merchandiser Management: ***Descartes Sales and Merchandiser Management***™

Descartes Sales and Merchandiser Management enables resource planning, route building and optimization, and tracking across delivery operations and mobile workforces, including sales representatives, territory managers and merchandisers. Descartes Sales and Merchandiser Management facilitates weekly activity planning, delivery status visibility for merchandisers and sales representatives, actual distance driven, in-store time calculation and work data collection, and consolidated performance reporting. Performance data can be uploaded to corporate payroll and expense reporting systems to ensure appropriate payments are being made for resource performance. Descartes Sales and Merchandiser Management helps our customers improve sales and merchandising productivity, cut costs and improve customer service.

(8) Telematics and Compliance: ***Descartes Telematics and Compliance™, Descartes Smartanalysis, Descartes SmartLicence™, and Descartes Driver Vehicle Inspection Reports™***

Descartes' Telematics and Compliance solutions offer next generation mobile handheld devices that can continuously monitor performance of vehicles and drivers. Robust functionality for tracking vehicles, monitoring and scoring driving behavior and automation of driver logs and reporting on driver hours for "hours of service" regulatory compliance helps increase workforce productivity and safety, prevents "hours of service" violations and reduces or eliminates excess paperwork and processing times. Descartes' 2018 acquisition of PinPoint adds depth, breadth and domain expertise to our offering by enhancing Descartes' ability to implement, collect and leverage real-time vehicle and trailer information through reseller relationships with Geotab (for telematics devices) and SkyBitz (for trailer tracking devices).

In Europe, Descartes' Smartanalysis product is a leading tachograph analysis and compliance management solution. It is used by road transport operators of all sizes to meet legal obligations and comply with Europe's complex driver working time regulations. Descartes SmartLicence is a comprehensive online tool for fleet operators in the UK for electronically managing driving licenses and verifying license details with the UK's Driver and Vehicle Licensing Agency.

Descartes' Driver Vehicle Inspection Reports (DVIR) is a configurable, cloud-based, enterprise-class solution for assuring compliance with routine driver vehicle safety checks required or recommended by the United States Federal Motor Carrier Safety Administration, Canadian Provincial Ministries of Transportation, and the United Kingdom Driver and Vehicle Standards Agency.

(ii) Transportation Management

Descartes' Transportation Management solutions provide robust, network-based, modular, end-to-end multimodal functionality that spans the entire shipment lifecycle. We streamline and support our customers' ability to turn purchase or sales order fulfillment into transport orders, manage carrier contracts, optimize and execute transportation plans, execute cross-docked and pooled shipments,

connect to trading partners, control the flow of prepaid freight, track shipments and inventory, audit freight and manage supplier/carrier performance. The suite of products addresses unique requirements across truck, air, ocean and parcel modes.

Descartes Transportation Manager™
Descartes Transportation Manager facilitates efficient planning and execution of shipping across air, ocean, truck and parcel modes at multiple touch-points in the distribution process. It helps logistics managers, shippers and third parties simultaneously evaluate shipment alternatives to find efficient shipping methods. It is a solution that scales from the loading dock to the enterprise, providing up-to-date rates that allow the customer to both make efficient shipment decisions and comply with carrier communications, manifesting and labeling requirements. The pick, pack and ship capability helps our customers manage small parcel shipments with postal services, a variety of small-package delivery carriers and over 150 less-than-truckload carriers. It evaluates and optimizes transportation purchases across modes for both operational effectiveness and cost efficiency, and helps answer tough questions such as: "How can I effectively use all of my carrier contracts?"; "Who is the most suitable carrier in this mode to handle my shipment?"; "What shipments can I combine to lower my costs?"; and, "What shipment consolidation should I use - aggregation, multi-stop routes or pooling to reduce costs while meeting service requirements?".

Descartes Dock Appointment Scheduling™
Descartes Dock Appointment Scheduling is a collaborative solution that enables shippers, carriers and consignees to schedule dock door appointments. It streamlines the dock appointment process by distributing the responsibility for scheduling from the warehouse to carriers and suppliers. By ensuring all supply chain partners are involved in the process and have visibility into requested, scheduled and rescheduled dock orders and appointments, this solution is designed to optimize shipping and receiving operations at a warehouse.

Descartes Yard Management™
A module of Descartes Transportation Manager, Descartes Yard Management enables shipping and receiving staff, gate guards and yard jockeys to more effectively manage the movement of trailers and identify inventory in the yard. Designed to work seamlessly with Descartes Transportation Manager, Descartes Yard Management provides command and control of yards of all sizes.

Descartes Rate Builder™
Descartes Rate Builder is a solution that helps carriers and non-vessel owning common carriers ("NVOCCs") manage global rates, contracts and rate agreements more efficiently and meet regulatory obligations. Descartes Rate Builder enables companies to create, revise, store and distribute rates via the Internet. Once they are generated, Descartes Rate Builder stores all rates in a central database with controlled access privileges. Carriers can designate a "contract owner" who can allow multiple users to contribute during the drafting of a new contract or amendment. NVOCCs can effectively manage a global rate network and help enable logistics service providers ("LSPs") to create and manage both buy-side and sell-side rates digitally, enforce a standardized global pricing policy and implement a global rate request process. Descartes Rate Builder also supports the audit of ocean bills of lading.

Descartes Retail Distribution™
The Descartes Retail Distribution portfolio provides visibility, reduces cost and removes bottlenecks as a retailer's products move from a shipper's Distribution Center ("DC"), consolidation point, or DC bypass facility through third-party transportation provider networks and ultimately to its stores. The portfolio includes:

(1) Descartes PCSTrac™ is an inventory control and management solution for retail distributors designed to manage multiple retailer accounts, varying label types, and specific requirements of each retailer – such as custom delivery bills of lading ("BOL"),

pallet scanning, out-of-area return processes, store-to-store transfers and EDI overage, shortage and damage (OS&D) files.

(2) ***Descartes Retail Distribution System™*** is a carton-level freight tracking system used by third-party specialty retail pool distributors for receiving, sorting, scanning, and delivering retail freight to a shipper's stores.

(3) ***Descartes Retail Claims System***™ is a claims management system integrated with the retail distribution tracking solution and the visibility tools in Descartes WebTMS. It also works in tandem with the payment cycles of the retail payment solution.

(4) ***Descartes Retail Payment System***™ is a freight payment system for shippers to pay linehaul and pool distribution transportation providers.

(5) ***Descartes ScanTrac***™ enables "smart scanning" at delivery with any mobile device. Drivers use a Bluetooth attachment or their mobile phone camera to scan against the delivery manifest. If no cellular or WiFi connection is available, the data is transmitted as soon as a connection is restored.

(6) ***Descartes StoreTrac***™ allows users to create and maintain visibility, down to the item level, from the moment the inventory leaves the DC all the way through to receipt at the store.

(7) ***Descartes WebTMS***™ is a web-based visibility tool that allows a retailer to see its entire outbound distribution supply chain and reverse logistics operations.

Descartes Bookings and Reservations™
Descartes' centralized booking portals provide visibility into rates, contracts, and shipment details from global locations to enable more informed decision-making and contract development. Carriers can distribute product, routing, capacity and rate information to forwarders 24/7 in real-time, while forwarders can access carrier information and make electronic bookings via a simple web browser. Integration of cost tables with contracts also allows for deeper analysis to improve asset utilization and overall margins. Additionally, our host-to-host service enables forwarders to execute bookings from within their own in-house systems. Descartes Bookings and Reservations services include the Descartes Global Freight Exchange and Descartes CargoBooker.

Descartes OzLink™
Descartes OzLink is a platform for integrating and extending ERP, accounting, e-commerce, and WMS systems to streamline order management, inventory control, and shipping. The solution functions as a complement to core business systems where gaps exist in the flow of data and/or system automation. Descartes OzLink's standard integration modules and business process extensions can help seamlessly move data between systems and automate tasks to eliminate labor-intensive clerical work, error-prone data entry, lead time delays, and compromised customer service. The solution can flexibly connect systems that run in the cloud, operate on premise or within a hosted environment to address an extensive range of e-Commerce, warehousing, and shipping processes.

Descartes pixi eCommerce Fulfillment/ Warehouse Management
Descartes pixi eCommerce Fulfillment/Warehouse Management helps customers automate ecommerce processes originating from online orders. Integrated with hundreds of ecommerce sites in Europe, the solution enables small-to-medium sized businesses and large retailers looking to enhance their online presence to support the growing consumer demand for omnichannel deliveries. The solution collects order information from ecommerce websites, translates it into a scanner-driven pick and pack process within the warehouse, initiates the shipment to the customer, and synchronizes all of this information with the customer's financial system for invoicing and shipment tracking.

Descartes ShipRush™
Descartes ShipRush helps customers ship efficiently and cost-effectively by integrating with front-end commerce systems and parcel shipping providers for seamless package labelling, rating, tracking and postage processing. With integrations to over 70 business systems, including leading ERP, ecommerce and supply chain platforms, the ShipRush platform helps customers to streamline their supply chain and reduce transportation costs. Using the solution, companies can automatically import orders; compare carrier rates in real-time to get the best options every time; print shipping labels for FedEx, UPS, USPS, and other major U.S. and global carriers; and track shipments through to final delivery.

Descartes MacroPoint™
Descartes MacroPoint is a multimodal freight visibility platform for shippers, brokers and 3PLs to get real-time visibility and predictive analytics for in-transit freight. Our industry-leading visibility network is connected to over 100,000 carriers and millions of assets and drivers through integrations with on-board ELDs, GPS telematics devices, carrier transportation management systems (TMS), GPS-enabled smartphone applications and location-based mobile phone triangulation.

Descartes MacroPoint™ for Capacity Matching
Descartes MacroPoint™ for Capacity Matching provides freight brokers with greater visibility to the transportation capacity available within their network of carriers and cooperating brokers. By accessing previously unused freight capacity using advanced visualization and analytical capabilities, freight brokers can cover more loads, build stronger carrier relationships and reduce costs.

Descartes Aljex™
The Descartes Aljex solution provides back-office transportation management for freight brokers and transportation providers. These solutions help customers automate business processes and create electronic documents critical for executing transportation moves. In addition, customers can manage the lifecycle of a shipment from order creation through execution, including real-time tracking with connectivity to the Descartes MacroPoint network.

(iii) Customs & Regulatory Compliance

Our Customs & Regulatory Compliance solutions help companies meet regulatory requirements for international shipments and the necessary customs declarations and security initiatives. We offer different methods to transmit shipment information directly to customs authorities or to the carriers who may be compiling data for security filing, which helps to ensure the smooth delivery of cargo as it moves through ports and airports, and ultimately to the end customer.

Descartes Global Cargo Security ™
For carriers, freight forwarders, NVOCCs and shippers, Descartes Global Cargo Security Suite offers solutions which help customers comply with electronic manifest filing initiatives across a broad number of countries that have adopted various advance security filing requirements spanning different modes of transportation. To accommodate customers' varying technical capabilities, we offer options that range from user-friendly web portals that permit manual entry of cargo manifest information through to tightly integrated system-to-system electronic data interchange ("EDI") connections. Descartes' offerings in this area include the Descartes Importer Security Filing™, Descartes ACI eManifest™, Descartes Advance Electronic Information (AEI)™, Descartes ACAS Solution™ and others.

Descartes Export Compliance™
Descartes Export Compliance suite offers denied party screening, license validation and audit for all international trading partners. Screening parties for acceptability for receipt of product and the proper use of export licenses is essential to support compliance with the US and EU requirements for export.

Descartes Border Compliance™
Descartes Border Compliance provides customs compliance services to assist transportation providers and LSPs with imports and/or exports to Canada, the US, India and the Netherlands. Through our Viatrade Service, the GLN offers an enhanced range of services to help carriers and LSPs negotiate increasingly complex document exchange requirements brought about by international security initiatives and tightened borders. In addition, Descartes Border Compliance services enable customs brokers to receive electronic manifests and invoices from transportation carriers so that the manifest can be mapped to the Canadian and US customs release systems.

Descartes Ocean Tariff Compliance™
Descartes Ocean Tariff Compliance helps ocean carriers comply with US Federal Maritime Commission requirements, and also helps manage the rate information for cargo that moves according to the terms of a privately-negotiated service contract or NVOCC Service Arrangement rather than the public rates of a tariff.

Descartes Electronic In-Bond™
Specifically designed for transportation carriers, Descartes Electronic In-Bond helps transmit the necessary advance electronic cargo information to CBP regarding inbound shipments prior to their arrival in the US. Using approved EDI protocols for the transmission of advance cargo information, we help carriers complete the requirements for filing, and receive in-bond movement authorization within minutes instead of hours or even days.

Descartes Customs Warehouse Management™
Descartes Customs Warehouse Management solution can play an integral role in simplifying procedures associated with customs warehousing, while taking advantage of the maximum available benefits. This on-demand solution is specifically designed to allow users to manage goods stored under the customs warehouse procedure, by storing information on imported goods and accounts, tracking all movement and activity, and enabling more accurate and timely electronic declaration processing. Customs warehousing is used by many organizations as a means to suspend/defer import duties and/or value-added tax on goods entering the EU. It is an effective and efficient means of enabling importers to choose an optimum time to clear goods and pay duties or re-export them outside of the EU.

Descartes Global Customs & Transport™
Descartes' Global Customs & Transport ("GCT") suite provides its customers with European-centric customs declaration, security filing, transportation management and freight forwarding technology solutions on both a cloud-based basis and a deployed model. The GCT platform supports fiscal customs filings in 18 countries and security filings in all 28 EU member states.

Descartes Pentant™
Descartes Pentant™ is a Community System Provider ("CSP") in the UK providing manufacturers, retailers, distributors and logistics service provider customers with a reliable and secure connection to both CDS (the UK's central system for customs declarations) and the EU's ICS to streamline declaration, cargo security and clearance processes. Pentant also helps customers meet UK Revenue & Customs requirements for imports and exports to be managed through a fully approved inventory control system for the ports of Dover, Portland, Poole, Plymouth, Teignmouth, Bideford, Scrabster, as well as London City and Warton airports.

Descartes e-customs™
Descartes e-customs™ is a modular, cloud-based solution offering that helps manufacturers, retailers, distributors and logistics service providers to cost-effectively comply with UK and fiscal security filing requirements. It is designed to reduce complexity, increase automation, and facilitate the end-to-end customs declaration process. Importers and exporters can leverage default and client-specific standing data, declaration templates, historical filings, on-screen tips and system validations to increase speed and accuracy in the filing process.

(iv) Global Logistics Network Services

GLN services simplify cargo and freight management by providing electronic services to the cargo industry and to companies who engage in international and domestic transportation activities. GLN provides a secure and reliable transaction exchange plus connectivity services that include trading partner on-boarding programs, data standards and protocol conversion, transportation-specific document compliance, audit and error checking, and archiving. We offer several document management, connectivity and community services, including:

Descartes CargoAssist™

Freight forwarders use Descartes CargoAssist to improve freight booking, send electronic waybills and ensure that consignments are handled quickly and efficiently at freight terminals around the world. We provide freight forwarders with access that connects them with their customers and logistics partners.

Descartes e-Pouch™

As part of the Descartes air cargo solution suite, Descartes e-Pouch integrates with applications for bookings, shipment monitoring, quality performance reporting and customs filing to provide a central repository that enhances electronic document exchange connections between back-office system and trading partners. Descartes e-Pouch provides users with the functionality to facilitate the sharing of information with approved parties, automate routine interactions, help flag problems at an early stage and provide a repository for retrieval of completed deliveries.

Descartes webDocs™

Freight forwarders use Descartes webDocs web forms to help improve air freight booking processes, send electronic waybills and distribute freight messages with the required information directly to the air carriers. Descartes webDocs gives forwarders access to electronic web forms that enables quick and easy creation of the various documents and electronic messages that are dictated by the industry, such as the International Air Transport Association's ("IATA") e-freight requirements. The solution also provides forwarders with the ability to easily create messaging documents such as master airway bill, house airway bill and labels and transmit these documents electronically to the air carrier.

Descartes Data Integrity Services™

Descartes Data Integrity Services continuously monitors messages and their delivery to trading partners to identify and report errors. Once an error is identified, we contact trading partners and coordinate the correction of inaccuracies and re-submission of corrected data. The service also provides periodic summary reports by trading partner, message type and error type.

Descartes Cargo iQ™ (formerly Cargo 2000™)

Descartes Cargo iQ allows customers to monitor shipments at a master air waybill level from airport to airport, assisting customers in complying with IATA Cargo 2000 certification process. Information provided by the system includes quality report compilation, shipment status, exception alerts, route map creation, and departure time reporting. This information enables better decision-making for fulfilling customer expectations and ensures standardized processes for improved service levels.

Descartes Carrier Portal™

Descartes Carrier Portal is a cost-effective and efficient solution designed to help carriers without EDI capabilities, shippers, and freight payment agencies ("FPAs") realize all the benefits of EDI capabilities without the complexity of in-house solutions. The solution is a web-based information service that facilitates the collaboration and automation of load tendering and freight payment between highway carriers and shippers (or FPAs representing them). The carrier portal bridges the gap between EDI-enabled back office systems of shippers and FPAs and less automated carriers.

Descartes Supplier Portal™
Descartes Supplier Portal enables suppliers without EDI capabilities to electronically communicate and collaborate with EDI enabled carriers, logistics service providers and shippers by providing capabilities to schedule pick-ups, automate tendering, and track the status of shipments.

Descartes GLN eArchiving™
Descartes GLN eArchiving enables customers to store and archive electronic documents in an "electronic safe". This electronic safe is accessible from the GLN via which relevant documents can be forwarded to customer's data warehouse to comply with standards and document retention policies.

Descartes Port Community Services™
Descartes Port Community Services assist in improving cargo clearance and management operations for local port communities and their trading partners by connecting and streamlining information exchange between ocean carriers, inland carriers, forwarders, shippers, terminal operators, and port and customs authorities.

Descartes Global Data Catalog Connect™
Descartes' Global Data Catalog Connect provides retail/supplier collaboration, product catalog management and electronic business-to-business messaging. It is a web-based application that helps in the upload, management and exchange of data. It offers the ability to integrate with industry standard data pools like GS1DAS for automation of electronic product catalogue functionality.

Descartes B2B Integration™
Descartes B2B Integration™ solution provides cloud-based supply chain connectivity capabilities to a wide range of systems and platforms using most any protocol or method. Our advanced solutions automate supply chain processes, enhance collaboration and add visibility among global trading partners. Customers are able to electronically manage and streamline a wide array of complex, mission-critical documents found in typical procure-to-pay and order-to-cash processes. Users can benefit from cost-effective transaction management, automated purchase to pay capabilities, connectivity to multiple ERP systems and more.

Descartes Velocity Mail™
Descartes Velocity Mail is an air mail and parcel management and tracking solution that leverages mobile devices to automate the entire air mail process from route generation to accounting reconciliation with real-time tracking and delivery visibility.

(v) Broker & Forwarder Enterprise Systems

Descartes' Broker & Forwarder Enterprise Systems are designed to help brokers and forwarders more efficiently run complex international operations. Our on-demand solutions enable large and small organizations to take advantage of robust capabilities for bookings, security filings and customs entries, shipment and financial management. They automate the collection of shared data and multi-party shipment processes as well as help brokers and forwarders extend the command of operations with their logistics partners to help meet their delivery performance objectives.

Descartes ITMR4™ Canadian Customs Brokerage Suite
Descartes ITMR4 Canadian Customs Brokerage Suite is an on-demand, enterprise level software solution that handles functions that a customs broker, freight forwarder or self-filing importer typically uses to manage its operations. Those operations include documentation filing, accounting, financial reports, imaging, e-billing and web tools for tracking and tracing, reporting and data entry related to Canadian customs declarations.

Descartes EDItrade™ Customs Link
Descartes EDItrade Customs Link allows custom brokers and self-filing importers to collect data and prepare it for US customs ACE entries, including cargo release, remote location filing and

post-entry compliance and supportive modules and the range of PGA documentation and data requirements to streamline the customs process and create accurate declarations.

Descartes European Brokerage and Declaration
Descartes European Brokerage & Declaration helps simplify the complexities of customs clearance in the European market. Descartes' solution is Authorized Economic Operator compliant. It has a variety of modules to handle export management, import management, creation of the Single Administrative Document for normal or simplified procedures, incoming and outgoing transit declarations, connectivity to the New Computerized Transit System and facilitates compliance with different member state customs authorities' requirements.

Descartes OneView™ Forwarder Enterprise & Customs House Brokerage Solution
Descartes OneView Forwarder Enterprise & Customs House Brokerage Solution allows freight forwarders, NVOCCs and third-party logistics service providers to effectively coordinate air, truck and ocean import/export shipments. It supports end-to-end planning and execution of international shipments, including leveraging system data to prepare and submit customs entries and cargo security filings to CBP.

Descartes ForwarderLogic™
Descartes ForwarderLogic is a cloud-based solution that provides comprehensive back-office functionality and real-time information exchange for LSPs handling all modes (air, ocean and land), inland/international import and export shipments from purchase orders all the way through to final delivery.

Descartes Shipment Portal™
Descartes Shipment Portal™ is a web-based portal that helps forwarders and shippers collaborate for shipment creation and status tracking throughout the shipment's lifecycle. Powered by the Descartes GLN with extensive existing EDI connectivity, the solution aggregates information from these parties and enables forwarders and their customers to build dashboard views of their transportation portfolio for up-to-the minute information on a wide range of data points. The solution also features purchase order management tools that support extensive collaboration between shippers, suppliers and transportation providers, and centralizes transportation request processes so forwarders can offer their customers a single point for up-to-date information on their global shipments.

(vi) Global Trade Content Solutions & Services

Descartes' global trade content solutions help customers research and make informed supply chain decisions; monitor and evaluate potential growth opportunities, logistics partners, and competitors; classify goods appropriately to ensure compliance while minimizing duties and tariffs; and reduce the risk of transacting business with denied parties while establishing an audit trail of reasonable care practices. Global trade content from Descartes can also be used on a service basis, to directly populate ERP and global trade management systems to enhance automation and compliance processes.

Descartes Customs Info™
Descartes Customs Info helps customers research and make better classification decisions while providing a record of the process to support classification determinations. This robust global trade content offering provides various levels of access to millions of reference documents, including cross-referenced and searchable duty rates, customs rulings, regulations, WCO Explanatory Notes, WCO Opinions, Commodity Export Codes, Other Government Agency information, Customs Directives, Export Control Classification Number locators and more.

Descartes Datamyne™
With a comprehensive database of accurate, up-to-date import-export information, Descartes Datamyne delivers actionable intelligence for market research, sales insight, supply chain management, enhanced security and competitive strategy. The Descartes Datamyne solution includes one of the largest searchable resources of trade activity. Manufacturers, shippers,

wholesalers, transport and logistics service providers, management consultants, legal practitioners, industry analysts and others use this data and the analysis tools to evaluate growth strategies, explore new markets, benchmark performance, monitor commodity volumes and values, simplify trade data research, discover buyer-seller relationships and refine sourcing strategies.

Descartes MK Denied Party Screening™
Descartes MK Denied Party Screening provides easy-to-use options to quickly and efficiently screen customers, suppliers and trading partners against a comprehensive database of international restricted and denied party lists. Customers can tailor screening processes to fit their unique risk parameters and flag potential compliance issues for resolution.

Descartes Visual Compliance™
Descartes Visual Compliance offers more robust solutions for restricted and denied party screening, classification, automation, and export license management. These intuitive solutions to enhance compliance and mitigate risk include capabilities for integrated screening, visually-driven compliance workflow management, and robust export control and documentation.

Consulting, Implementation and Training Services

Our consulting team provide a variety of professional services to customers. These services include project management and consulting services to assist in configuration, implementation and deployment of our solutions. We offer a variety of site-specific technical and consulting services to assist in all phases of the implementation process. We also provide assistance in integrating our products with the customer's existing software. In addition, we offer training services that provide customers with a formalized program to ensure that applications are implemented and utilized in an efficient and cost-effective manner.

Customer Service and Support and Maintenance

We provide worldwide support to our customers through our central support system. Our customer support program is conducted via telephone, online customer portal and/or email and with our extended support options can be available 24-hours-a-day, 7-days-per-week.

4.3 Revenue Sources
We generate our revenues from sales of each of the services and products identified in the previous section, which are sometimes sold on a stand-alone basis and sometimes sold as bundles of services and products. As such, we do not measure our revenues by the particular services or products referenced above. Instead, we measure our revenue performance based on whether the customer is buying a license to our technology or is buying technology services or other services from us. Based on this, our revenues are measured in three categories: license revenues; services revenues; and professional services and other revenues. Services revenues are comprised of ongoing transactional and/or subscription fees for use of our services and products by our customers and maintenance fees, which include revenues associated with our provision of maintenance and support for 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.

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 business segment providing logistics technology solutions. The following table provides revenue information by revenue source for fiscal 2019 and 2018:

Revenues	Fiscal year ended January 31			
	2019		2018	
	Amount (in millions)	Percentage of Total Revenues	Amount (in millions)	Percentage of Total Revenues
License	$5.9	2%	$8.1	3%
Services	241.5	88%	204.4	86%
Professional services and other	27.8	10%	24.9	11%
Total revenues	**$275.2**	**100%**	**$237.4**	**100%**

4.4 Customer Base

Our customers are globally diverse, located in the Americas, Europe, Middle East and Africa ("EMEA") and Asia Pacific regions. Our customers range from small- and medium-sized enterprises to established "blue-chip" leaders across a variety of industry verticals. We have a large customer base of transportation carriers, third-party logistics providers, freight forwarders, NVOCCs and customs brokers. Other customers include government customs and census agencies, manufacturers, retailers, consumer products suppliers, wholesale distributors, and companies in industries such as healthcare, recycling/waste management, pharmaceuticals and oil and gas.

The following table provides revenue information by geographic region based on the location of our customers:

Revenues	Fiscal year ended January 31			
	2019		2018	
	Amount (in millions)	Percentage of Total Revenues	Amount (in millions)	Percentage of Total Revenues
United States	$165.1	60%	$133.3	56%
Europe, Middle-East and Africa	80.1	29%	77.6	33%
Canada	18.2	7%	15.6	6%
Asia Pacific	11.8	4%	10.9	5%
Total revenues	**$275.2**	**100%**	**$237.4**	**100%**

4.5 Sales and Marketing

(a) Sales Force

Our sales force is expected to sell across our solutions, targeting specific industry verticals and geographies. At present, we sell most of our products and services through a direct sales team that is focused primarily on the North American and EMEA markets. We have a limited direct sales presence in Asia Pacific with resources in China, Hong Kong and Japan. As at January 31, 2019, we employed a total of 178 individuals in sales and marketing roles and had active relationships with approximately 69 distributors and resellers.

We are headquartered in Waterloo, Ontario, Canada, with additional representative offices in Canada in Ottawa, Ontario; Toronto, Ontario; Windsor, Ontario; and Montreal, Quebec. Our primary representative

offices in the United States are in Irvine, California; Boulder, Colorado; Denver, Colorado; Miami, Florida; Atlanta, Georgia; Owing Mills, Maryland; Silver Spring, Maryland; Westborough, Massachusetts; Minneapolis, Minnesota; Livingston, New Jersey; Midland Park, New Jersey; Cleveland, Ohio; Pittsburgh, Pennsylvania; Trevose, Pennsylvania; and Seattle, Washington. In Europe, our primary representative offices are in Ghent, Belgium; Lier, Belgium; Glostrup, Denmark; Antony, France; Munich, Germany; Leipzig, Germany; Amersfoort, Netherlands; Woerden, Netherlands; Oslo, Norway; Fredrikstaad, Norway; Zilina, Slovakia; Ljubljana, Slovenia; Madrid, Spain; Stockholm, Sweden; Malmo, Sweden; Goteborg, Sweden; Murten, Switzerland; Chippenham, UK; Aylesbury, UK; Reading, UK; and Totton, UK. In South America, our primary representative offices are in Montevideo, Uruguay; Buenos Aires, Argentina; and Sao Paulo, Brazil. In Asia Pacific, our primary representative offices are in Makati City, Philippines; Hong Kong; Tokyo, Japan; Suzhou, China; and Shanghai, China.

(b) Strategic Marketing Alliances

Through our United by Design alliance program, we also form strategic partnerships with various companies in different geographic markets, in different industries and for different products with the goal of expanding our market base. Typically, an alliance participant will market our products in certain geographic and vertical markets and refer customers to us, in exchange for a fee in respect of new customers generated by the alliance participant. Additionally, we have established several working relationships with telecommunication companies, management consulting firms, and complementary hardware and software firms.

Our various channel partners, including a variety of distributors and value-added resellers, play a central role in our strategy to address global customers, particularly in the Asia Pacific region and in Latin America with our delivery management solutions.

4.6 Research and Development

We believe that our future success depends in large part on our ability to maintain and continually enhance our current product lines and form tight integrations with our applications on our Logistics Technology Platform. Accordingly, we invest in product development to ensure that sufficient resources are focused on developing new products or enhancing our existing products. We also believe that it is important that our technology keeps pace with evolutions in hardware, applications and services that enable us to operate and deliver our own services at lower cost. In 2019, we incurred research and development expenses of approximately $47.9 million, or approximately 17% of our annual consolidated revenues for 2019.

We continue to make substantial investments in research and development based on our belief that our ability to enhance existing applications, develop and introduce new applications that keep pace with technological advances, meet changing customer requirements, respond to competitive products and achieve market acceptance is important to our growth and future financial performance.

Our research and development program requires in-depth knowledge of logistics, supply chain and customer know-how from business analysis, network operations and design, technical design, and quality assurance. Particular expertise in solving operations research or logistics problems is a benefit to us, as is practical experience in dealing with the day-to-day challenges that our customers face in dealing with logistics providers and deliveries in general. We believe that we are well positioned to address our customers' requirements with our existing complement of resources; however, we evaluate our staffing levels on an ongoing basis particularly in those areas where we see ways we might expand or expedite our development processes as necessary to meet market opportunities or changes.

To build applications, we have implemented an application development process based on size, deployment mode and complexity. For our smaller, less complex applications as well as for our network services and SaaS solutions, we have adopted an approach centered on frequent, smaller application updates. With the applications and solutions being deployed in our own, known environment and technology infrastructure, we are able to minimize development time otherwise needed to accommodate the myriad of platforms that an application may be used over. Using this approach, the majority of these applications, network services and SaaS solutions were updated in fiscal 2019.

For our larger more complex applications and solutions, we have adopted a four- to twelve-month release cycle. While we generally use the same underlying development methodology, building in smaller incremental blocks, we apply a more traditional process for review and quality assurance testing as well as bundling of several of these incremental blocks into each generally available release. Using this four- to twelve-month release schedule, most of our larger and more complex generally available applications and solutions were enhanced in fiscal 2019.

Enhancements not yet generally commercially available are typically subject to internal testing and, where applicable, additional testing may be conducted with select customers, following which we release the enhancements for general commercial use.

We continue to build and develop our network infrastructure to enhance our delivery of services to our customers. We continue to execute on our internal 'One Networked Enterprise' initiative whereby we are consolidating legacy network infrastructure acquired as part of previous acquisition activities. We anticipate continuing this initiative through fiscal 2020, including the advancement of additional integration activities resulting from new acquisitions. To facilitate these advancements in integration activities, we continue to invest in our integration platform with a specific focus on decoupling business logic from the presentation layer.

We estimate that the costs for our planned research and development activities in fiscal 2020 will not result in any significant increase relative to our historical expenditures on research and development activities.

4.7 Competition

Although we have experienced limited competition to-date from companies with broad application suites with comparable capabilities, the market for our applications is nevertheless highly competitive and subject to rapid technological change. As such, we expect competition to increase in the future. On an application-by-application basis, especially in markets where similar technology has been available for some time, such as routing software and value-added networks, we do experience competition from established vendors. However, we have found that our particular expertise in solving complex logistics problems on a network basis has enabled us to remain competitive. On a geographic basis, we experience competition from both multinational companies and local competitors. We face some disadvantage in entering new markets where competitors may have existing solutions with user interfaces that are advanced in local language presentation. To maintain and improve our competitive position on a global basis, we continue to develop and introduce new applications with the functionality to be easily adapted to local user interface needs (either by Descartes or its distributors in a particular region).

We compete or may compete, directly or indirectly, with the following: (i) application software vendors, including supply chain planning and execution software vendors, that may broaden their product offerings by internally developing, or by acquiring or partnering with, independent developers of supply chain network solutions, particularly on the execution (rather than planning) side, such as Manhattan Associates, Omnitracs, Verizon (formerly, Telogis) and Ortec; (ii) enterprise resource planning software vendors who may expand their current offerings into supply chain network service offerings, some of whom may from time to time jointly market our products as a complement to their own systems, such as SAP AG, Oracle and Infor Global Solutions; (iii) internal development efforts by corporate information technology departments; (iv) middleware software and service vendors that provide integration software, such as Software AG and SPS Commerce; (v) telematics solution providers, such as Verizon (formerly, Fleetmatics), Omnitracs and Trimble Navigation; (vi) other value-added messaging and visibility networks, such as those offered by Kleinschmidt, OpenText GXS, CHAMP Cargosystems, FourKites and Project 44; (vii) other cargo booking portals, such as Cargo Portal Services operated by Unisys Corporation and INTTRA; (viii) other customs compliance and forwarder back-office solution providers, such as Blu-Jay Solutions (formerly, Kewill) and WiseTech; (ix) other customs and security declaration providers, often specialized in particular domestic markets, such as AEB GmbH and MIC Datenverabeitung GmbH; and (x) other trade data providers who may either bundle their data with a global trade management system, such as Amber Road, or sell trade data content on a standalone basis, such as Thomson Reuters. We also expect to face additional competition as other established and emerging companies enter the market for

logistics technology solutions and new products and technologies are introduced and as we expand to new businesses. In addition, current and potential competitors may make strategic acquisitions or establish co-operative relationships among themselves or with third parties, thereby increasing the ability of their products to address the needs of our prospective customers.

We believe the principal competitive factors affecting the market for our solutions include vendor and product reputation; expertise and experience in implementing products in the customer's industry sector; product architecture, functionality and features; cost of ownership; ease and speed of implementation; customer support; product quality, price and performance; and product attributes such as flexibility, scalability, compatibility, functionality and ease of use. In order to be successful in the future, we believe we must continue to respond promptly and effectively to technological change and competitors' innovations.

4.8 Intellectual Property and Other Proprietary Rights

We believe our success depends significantly on our proprietary technology. Through our internal research and development and our acquisitions we have continued to enhance the breadth of our intellectual property portfolio. We continue to rely primarily on a combination of patent, copyright, trademark and trade secret laws, license agreements, non-disclosure agreements and other contractual provisions to establish, maintain and protect our proprietary rights in our products and technology. Some registered forms of protection, such as patents, copyright and trademark registrations, have a limited period of protection determined by the applicable law governing the registration. Other contractual forms of protection, such as license and non-disclosure agreements, have a limited contractual period of protection. The source codes and routing algorithms for our applications and technology are protected both as trade secrets and as unregistered copyrighted works with indefinite periods of protection. We have an extensive portfolio of patents, both over technologies we have developed internally and patents that have been acquired through our various acquisitions where patents were already held by the acquired companies or were pending. We continue to invest in the ongoing expansion of our patent portfolio. Each of these patents offer a limited period of protection determined by the applicable laws governing the patents. We have registered or applied for registration of certain trademarks and service marks with limited periods of protection and will continue to evaluate the registration of additional trademarks and service marks as appropriate.

We also utilize certain other software technologies, such as geographic data, shipping rate data, shipping mile data, sailing schedule data and global tariff and duty data, translation applications and business intelligence applications that we license from third parties, generally on a non-exclusive basis, including software that is integrated with internally developed software and used in our products to perform key functions. These third-party licenses generally require the payment of royalties based on sales of the product in which the technology is used.

Our network customers may use electronic logistics information generated by the customer, or by third parties on behalf of the customer, in connection with the customer’s use of our network services. Our customers are responsible for procuring and paying for the generation of such electronic logistics information and the right to use such electronic logistics information in connection with our network services.

Many of our data content solutions rely on data being available to us from various public sources. This data is available on a non-exclusive basis and generally available without the payment of fees except in certain cases where we may choose to obtain the data through third party data providers who may have pre-processed or aggregated the data in a manner that is more efficient or effective for our purposes. This data is similarly available to other parties and may allow other parties to develop competitive offerings. Our ability to maintain our market position is dependent upon our continued innovation in the ability to organize the data and provision of tools that facilitate the use of the data while continuing to expand and enhance the data.

4.9 Contracts

(a) Customer Contracts

We provide our GLN services and access to our data content services to our customers primarily by way of written subscription agreement. The subscription agreement sets out the applicable terms and restrictions on use of the service, the length of time the customer can use the service, and the applicable fees to be paid by the customer. Typically, these subscription agreements renew at a customer's option and, in some cases, are subject to earlier termination by the customer on appropriate notice.

We license our software products to our customers primarily by way of written license agreements. The license agreements specify the applicable terms and restrictions on use of the software, the terms and conditions of any enrolment by the customer in our software maintenance program, and the applicable fees to be paid by the customer.

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 there are generally no mandatory payment obligations or obligations to license additional software or subscribe for additional services.

If our customers terminate their subscription agreements, fail to renew their service contracts, fail to purchase or license additional services or products, or consolidate contracts with acquired companies, then our revenues could decrease and our operating results could be materially adversely affected. Factors influencing such contract terminations and non-renewals 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 ours, 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 revenues losses. Our business may also be materially adversely affected by market trends impacting our customer base, such as consolidation activity.

(b) Outsourcing Contracts

We deliver some of our GLN services over our proprietary networks, which are hosted by commercial public cloud and co-location providers such as, Microsoft, Q9 Networks Inc., InterXion and CenturyLink. These hosting and co-location contracts, on which we are substantially dependent as they relate to the delivery of our network services, typically contemplate services to be provided for a term at a defined service level, with applicable rights of termination and renewal. We typically pay monthly fees under these contracts, some of which are based on the volume of network activity flowing through the hosting provider. If any of these contracts were terminated without our consent, we could incur substantial costs in migrating to an alternate hosting provider. In such an event, the costs and related management effort could materially adversely affect our operating results and the services that we provide to our customers.

4.10 Employees

As at January 31, 2019, the Company employed 1,378 employees including 1,334 full-time staff. Of the 1,334 full-time staff, 392 of the individuals were engaged in customer service roles (which includes customer support, activations and implementation services), 435 were in research and development roles, 173 were engaged in sales and marketing roles, 217 in network and product support roles and 117 were in general administration roles. Geographically, 750 employees were located in North America, 462 were located in Europe, 62 were located in the Asia Pacific region and 60 were located in South America.

4.11 Risks Associated with Foreign Sales and Exchange Rate Fluctuations

In fiscal 2019, sales outside of the Americas accounted for approximately 33% of our total revenues. Our international revenues are subject to risks associated with foreign sales, including longer collection times from foreign customers, difficulty in repatriating cash from foreign jurisdictions, unexpected changes in legal and regulatory requirements, export restrictions, changes in tariffs, exchange rates and other trade barriers, political and economic instability, difficulties in accounts receivable collection, difficulties in management of distributors or representatives, difficulties in staffing and managing foreign operations, difficulties in protecting our intellectual property, seasonality of sales, language issues and potentially adverse tax consequences. There can be no assurance that any of these factors will not have a material adverse effect on our business, results of operations and financial condition.

During fiscal 2019, 68% of our revenues were denominated in US dollars, and historically the majority of our revenues have been denominated in US dollars. However, a significant portion of our expenses, including the wages of our non-US employees and obligations under certain key supply agreements, have been denominated in Canadian dollars, euros and other foreign currencies. Therefore, changes in the value of the US dollar as compared to the Canadian dollar, the euro, British pound sterling 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.

4.12 Risks Associated with Cyclical or Seasonal Aspects of Business

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 in the US or internationally likely would have a material adverse effect on our business.

4.13 Reorganizations

In 2019, 2018 and 2017, we completed various integration and reorganization activities in connection with our acquisitions of PinPoint, VelocityMail, Aljex, MacroPoint, PCSTrac, ShipRush, Datamyne, 4Solutions, Appterra, Pixi, Oz, MK Data and Bearware, including merging or consolidating various legal entities and operations, eliminating redundant management positions and canceling certain ongoing operating contracts.

4.14 Material Contracts

The Company has determined that the definitive agreement for the purchase of Visual Compliance entered in to as of January 28, 2019 and the amended and expanded credit facility agreement of the Company announced on January 28, 2019 would both constitute “material contracts” of the Company and has filed copies of both agreements on SEDAR at www.sedar.com. Particulars of those contracts are disclosed in “Item 3 - General Developments of the Business” of this AIF. Other than those two agreements, as of January 31, 2019, the Company had not otherwise entered into any material contracts, other than contracts entered into in the ordinary course of business, within the past year, or entered into before the most recently completed fiscal year that are still in effect.

4.15 Code of Business Conduct and Ethics

Our Board of Directors has adopted our Code of Business Conduct and Ethics ("the Code") applicable to our directors, officers and employees. The Code is reviewed on a regular basis by our Board of Directors and may be updated from time to time. The most recent version of the Code is available on our website at http://www.descartes.com and has been filed on and is accessible through the SEDAR website at http://www.sedar.com. The Code sets out in detail the core values and principles by which the Company is governed and addresses topics such as: honest and ethical conduct; conflicts of interest; compliance with applicable laws and our policies and procedures; public disclosure and books and records; use of corporate assets and opportunities; confidentiality of corporate information; reporting responsibilities and procedures; health and safety; anti-corruption; and non-retaliation.

ITEM 5 RISK FACTORS

Reference is made to the section entitled "Certain Factors That May Affect Future Results" in the "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in our 2019 Annual Report for the year ended January 31, 2019, made available to all of our shareholders and filed with various securities regulators, which section is incorporated herein by reference. This information is available through the EDGAR website at http://www.sec.gov or through the SEDAR website at http://www.sedar.com.

ITEM 6 MARKET FOR SECURITIES AND RELATED SECURITYHOLDER MATTERS

6.1 Common Shares

We are authorized to issue an unlimited number of common shares for unlimited consideration. The common shares are not redeemable or convertible. Each common share carries the right to receive notice of and one vote at a meeting of shareholders; the right to participate in any distribution of our assets on liquidation, dissolution or winding up; and the right to receive dividends if, as and when declared by the Board of Directors. As at April 22, 2019, there were 77,222,956 common shares outstanding. The common shares are listed on the TSX under the symbol "DSG" and listed on NASDAQ under the symbol "DSGX".

6.2 Transfer Agent and Registrar

The register of transfers of common shares is located in the offices of our stock transfer agent: Computershare Investor Services Inc., 100 University Avenue, Toronto, Ontario, Canada, M5J 2Y1.

6.3 Dividend Policy

We have not paid any dividends on our common shares to date. We may consider paying dividends on our common shares in the future when operational circumstances permit, having regard to, among other things, our earnings, cash flow and financial requirements as well as relevant legal and business considerations. We are prohibited by the Credit Facility from making a distribution (which includes a dividend) when there is an uncured event of default pursuant to the Credit Facility. At present there is no such event of default.

6.4 Market for Common Shares

Please see the following table that identifies the marketplaces on which our common shares trade, as well as the fiscal 2019 monthly price ranges and volume traded on each exchange:

	Common Shares - TSX		Common Shares – NASDAQ	
Month	**Price Range (CAD$)**	**Volume**	**Price Range (US$)**	**Volume**
February 2018	$31.39 – 35.50	3,531,299	$24.85 – 28.85	1,342,996
March 2018	$33.25 – 38.66	3,093,605	$25.90 – 29.90	1,716,904
April 2018	$35.86 – 39.16	3,069,205	$27.98 – 30.55	1,757,090
May 2018	$37.74 – 40.52	2,456,243	$29.25 – 31.40	1,189,254
June 2018	$38.39 – 42.95	2,700,715	$29.65 – 32.65	1,675,273
July 2018	$41.20 – 45.81	3,050,712	$31.55 – 34.90	1,202,045
August 2018	$41.58 – 46.61	2,551,339	$32.00 – 35.87	2,858,671
September 2018	$43.17 – 46.20	2,989,357	$32.70 – 35.68	1,745,422
October 2018	$37.98 – 44.03	3,766,990	$28.89 – 34.37	2,334,414
November 2018	$35.08 – 41.60	2,793,179	$26.47 – 31.79	1,553,277
December 2018	$34.25 – 39.77	3,270,689	$25.21 – 30.13	1,995,551
January 2019	$33.96 – 41.31	3,134,482	$25.19 – 31.26	1,860,750

6.5 Shareholder Rights Plan

On November 29, 2004, our Board of Directors approved a shareholder rights plan (the “Rights Plan”) which was approved by the TSX and was approved by our shareholders on May 18, 2005. The primary objectives of the Rights Plan are to ensure that to the extent possible, in the context of an unsolicited take-over bid for of the common shares of our Company, that all shareholders of the Company are treated fairly and to ensure that the Board of Directors is provided with sufficient time to evaluate any such bid and to assess alternatives to maximize shareholder value that may include, without limitation, the continued implementation of the Company’s long-term strategic plans, as those may be modified by the Company from time to time. The Rights Plan is specifically designed to ensure that the following occurs following an unsolicited take-over bid: (i) there is adequate time for competing bids to emerge; (ii) shareholders have an equal opportunity to participate in such a bid; (iii) shareholders are provided with adequate time to properly assess the bid; and (iv) a reduction in the pressure to tender which may be encountered by a shareholder in the course of a bid. The Rights Plan creates a right that attaches to each present and subsequently issued common share. Until the separation time, which typically occurs at the time of an unsolicited take-over bid, whereby an offeror (including persons acting jointly or in concert with the offeror) acquires or attempts to acquire 20% or more of our common shares, the rights are not separable from the common shares, are not exercisable and no separate rights certificates are issued. Each right entitles the holder, other than the 20% offeror, from and after the separation time and before the expiration time, to acquire one of our common shares at 50% of the market price at the time of exercise. The continuation of the Rights Plan must be approved by shareholders every three years. On each of June 2, 2011, May 29, 2014 and June 1, 2017, our shareholders approved certain amendments to the Rights Plan and approved the continued effectiveness of the Rights Plan. The Rights Plan will expire

at the termination of our annual meeting of the shareholders to be held in the 2020 calendar year, unless its continued existence is approved by the shareholders before such expiration.

ITEM 7 DIRECTORS AND EXECUTIVE OFFICERS

7.1 Summary Information

The following table sets forth the name, location of residence and office held by each of our executive officers and directors as at April 22, 2019. Each director is elected at the annual meeting of shareholders or appointed pursuant to the provisions of our by-laws and applicable laws to serve until the next annual meeting or until a successor is elected or appointed, subject to earlier resignation by the director.

Name and Location of Residence	Office Held
Eric A. Demirian(1)(3) Toronto, Ontario, Canada	Chair of the Board
David I. Beatson(2)(4) Hillsborough, California, USA	Director
Deborah Close(1)(2) Calgary, Alberta Canada	Director
Chris Hewat(3) Toronto, Ontario, Canada	Director
Dennis Maple (2)(4) Malvern, Pennsylvania, USA	Director
Jane O'Hagan(2)(3)(4) Calgary, Alberta, Canada	Director
John J. Walker(1)(4) Wyckoff, New Jersey, USA	Director
Edward J. Ryan Fort Washington, Pennsylvania, USA	Director and Chief Executive Officer
J. Scott Pagan Cambridge, Ontario, Canada	President and Chief Operating Officer
Allan Brett Kleinburg, Ontario, Canada	Chief Financial Officer
Raimond Diederik Waterloo, Ontario, Canada	Executive Vice President, Information Services
Ed Gardner London, England	Executive Vice President, Corporate Development
Chris Jones Boston, Massachussetts, USA	Executive Vice President, Marketing and Services
Robert Parker Barrie, Ontario, Canada	Executive Vice President, Customer Support and Client Services
Andrew Roszko Montreal, Quebec, Canada	Executive Vice President, Global Sales
Michael Verhoeve Waterloo, Ontario, Canada	Executive Vice President, Legal, General Counsel and Corporate Secretary
Kenneth Wood Fort Myers, Florida, USA	Executive Vice President, Product Management

Notes:

(1)	Member of the Audit Committee.
(2)	Member of the Compensation Committee.
(3)	Member of the Corporate Governance Committee.
(4)	Member of the Nominating Committee

Information about each of our directors and executive officers, including his or her respective principal occupation during at least the five years preceding January 31, 2019, is as follows:

Eric A. Demirian has been a member of our Board of Directors since June 2011. Mr. Demirian was appointed Chairman of the Board in May 2014 and previously acted as Chair of the Corporation's audit committee. Mr. Demirian is a Chartered Professional Accountant, Certified General Accountant and a Chartered Accountant. Since 2003, Mr. Demirian has served as president of Parklea Capital, Inc. ("**Parklea**"), a boutique financial and strategy advisory firm providing services to small- and mid-market public and private companies, and President of Demicap Inc., a private investment firm. Prior to Mr. Demirian's position at Parklea, he held the position of Executive Vice President of Group Telecom, Inc. from 2000 to 2003. From 1983 to 2000, Mr. Demirian was with PricewaterhouseCoopers LLP ("**PwC**") where he was a partner and head of the Information and Communications Practice. Mr. Demirian serves on the boards of Enghouse Systems Ltd. (TSX:ENGH), Redline Communications Inc. (TSX:RDL), and Imax Corporation (NYSE:IMAX). Mr. Demirian is a former director and chair of the audit committees of a number of public companies. Mr. Demirian holds a Bachelor of Business Management degree from Ryerson University.

David I. Beatson has been a member of our Board of Directors since March 2006. Since August 2001, Mr. Beatson has been head of Ascent Advisors, LLC, a San Francisco Bay-Area consulting firm focusing on strategic planning and mergers and acquisitions. From December 2006 to October 2012, Mr. Beatson was Chief Executive Officer of GlobalWare Solutions, a full-service provider of e-commerce services along with digital and physical supply chain management solutions with operations in North America, Europe and Asia. From June 2003 to April 2005, Mr. Beatson was President and Chief Executive Officer of North America for Panalpina, Inc., a world-leading global transportation and logistics supplier based in Basel, Switzerland. Previously, Mr. Beatson served as Chairman, President and Chief Executive Officer of Circle International Group, Inc., a global transportation and logistics company, and as President and Chief Executive Officer of US-based air and ocean freight forwarder Emery Worldwide. Mr. Beatson serves on the board of directors, chair of the audit committee and member of the compensation committee of PFSweb, Inc. (NASDAQ: PFSW); on the board of directors of Pilot Freight Services, Ltd. a global transportation and logistics company; on the Executive Board of ATL Partners, a private equity fund based in New York City, and on several other corporate and industry boards. Mr. Beatson received his BS in Business Administration from The Ohio State University and his MBA from The University of Cincinnati and also serves on the Dean's Advisory Council at The Fisher School of Business, The Ohio State University.

Deborah Close has been a member of our Board of Directors since May 2015. Ms. Close held the position of President of the Production Services division of Tervita Corporation from 2010 until 2016. Tervita Production Services, now High Artic Energy Services (TSX:HWO), delivers engineering and field-based services to the oil and gas industry. From 2002 to 2010, Ms. Close was the Executive Vice President of DO2 Technologies (now Transzap, Inc.), a software company providing electronic invoicing to the oil and gas industry. During Ms. Close's tenure, DO2 grew from a start-up to the leading provider of e-invoicing to oil and gas companies and their suppliers. Prior to DO2, Ms. Close served in a number of Regional Vice President roles in Halliburton Corporation's software division, Landmark Graphics. She held executive roles in several of Landmark's largest regions, including VP of Strategic Accounts, Regional VP of North America and Regional VP of Europe and the Former Soviet Union. During Ms. Close's 12 years at Halliburton, she worked in Canada, the US and Europe. Ms. Close also currently serves on the board of directors of a private oil and gas company. Ms. Close holds a Bachelor of Arts from the University of Calgary and the ICD.D designation from the Institute of Corporate Directors and Rotman School of Management.

Chris Hewat has been a member of our Board of Directors since June 2000. Mr. Hewat has been a partner at the law firm of Blake, Cassels & Graydon LLP ("**Blakes**") since 1993, having joined the firm in 1987. Mr. Hewat's practice consists of advising on securities and business law matters, with focus on mergers and acquisitions, corporate finance and private equity transactions. He has particular expertise in advising issuers, investment dealers and investors in the technology sector. Mr. Hewat has served as a director of a number of private and public companies and was formerly a member of the Securities Advisory Committee to the Ontario Securities Commission. Mr. Hewat has Juris Doctor and Masters of Business Administration degrees from Western University, and a Bachelor of Arts degree from Queen's University. Blakes provided legal services to us during the fiscal year ended January 31, 2019 and has been providing, and is expected to continue to provide, legal services to us in the fiscal year ending January 31, 2020.

Dennis Maple was elected to our Board of Directors on June 1, 2017. Since January 2014, Mr. Maple has been the President of First Student, Inc., a subsidiary of United Kingdom based publicly-traded First Group plc. First Group plc is the leading transport operator in the United Kingdom and North America, providing solutions encompassing student bus transportation and public rail. Mr. Maple's portfolio at First Student includes 57,000 employees focused on providing more than 5.5 million passenger journeys daily across the US and Canada. Prior to serving as President of First Group, from 2006 to January 2014, Mr. Maple was President of Aramark Education where he had responsibility for more than 15,000 employees serving more than 4,500 US schools with food preparation, facilities management and related services. Prior to his role as President of Aramark Education, from 2003 to 2006, Mr. Maple held senior executive management positions at Aramark. Prior to serving in an executive role at Aramark, from 1994 to 2003, Mr. Maple served as an Area Vice President at Coors Brewing and in several other management roles. Prior to 1994, Mr. Maple held roles at Kraft-General Foods, PepsiCola and The Quaker Oats Company. Mr. Maple has a Bachelor of Science, Business Administration, Accounting from the University of Tennessee. Mr. Maple has served on numerous charitable and community-based boards and has been an active participant in organizations supporting primary and secondary schools and communities across North America.

Jane O'Hagan has been a member of our Board of Directors since May 2014. From 2010 until 2014, Ms. O'Hagan was the Executive Vice President and Chief Marketing Officer of Canadian Pacific Railway Limited ("**CP Rail**"). Ms. O'Hagan also held various roles at CP including Senior Vice President, Strategy and Yield, Vice President, Strategy and External Affairs and Assistant Vice President, Strategy and Research. Ms. O'Hagan also serves as a director of USD Partners GP LCC, the general partner of USD Partners LP (NYSE:USDP), an acquirer, developer and operator of energy-related rail terminals and other complementary mid-stream assets, where Ms. O'Hagan serves as the Chair of USD Partners GP LLC board's conflicts committee and as a member of the audit committee. In 2018, Ms. O'Hagan joined the board of Pinnacle Renewable Holdings (TSX:PL), a supplier of industrial wood pellets based in Richmond, BC and serves as a member of the audit and risk committees. Ms. O'Hagan has a Bachelor of Arts (Hons.) and a Bachelor of Administrative and Commercial Studies from the University of Western Ontario (London, Ontario, Canada) and has completed graduate studies in Program and Policy Studies from the University of Western Ontario. In December, 2012, Ms. O'Hagan was named one of Canada's Top 100 Most Powerful Women by the Women's Executive Network. Ms. O'Hagan is also a holder of the ICD.D designation from the Institute of Corporate Directors, which she achieved in June 2016 and earned the CERT Certificate in Cyber Risk Oversight issued by Carnegie Mellon University and the National Association of Corporate Directors in February 2018.

John J. Walker has been a member of our Board of Directors since September 2011. Mr. Walker is a Certified Public Accountant and a Chartered Global Management Accountant with 37 years overall financial and executive management experience including twenty-one years of experience as a Chief Financial Officer with both public and private companies. Since December 2018, Mr. Walker is also a member of the Board of Directors, Chair of the Audit Committee and member of the Compensation and Nominating Committees of Schultze Special Purpose Acquisition Corp. (Nasdaq: SAMAU; SAMA and SAMAW). Previously, he served as Chief Financial Officer, and Senior Vice President of Bowne & Company, a New York Stock Exchange-listed provider of services to help companies produce and manage their shareholder, investor and marketing & business communications, from 2006 until its acquisition by R.R. Donnelley & Sons in 2010. Prior to Bowne & Company, from 1988 to 2006, Mr. Walker was an executive with Loews

Cineplex Entertainment Corporation a motion picture theatre exhibition chain, including sixteen years as Chief Financial Officer. Prior thereto, Mr. Walker served for six years as Controller and Principal Accounting Officer of Corporate Property Investors, then one of the largest real estate investment trusts in the United States. Mr. Walker also served for six years as Treasurer and Assistant Corporate Controller of Princess Hotels International a company involved in the ownership and operation of luxury resort hotels, real estate and timesharing developments. Mr. Walker started his career in the New York office of then-Price Waterhouse. Mr. Walker is a member of the American Institute of Certified Public Accountants and the New York State Society of CPAs.

Edward J. Ryan is our Chief Executive Officer and has been a member of our Board of Directors since May 2014. Mr. Ryan joined Descartes in February 2000 in connection with our acquisition of E-Transport Incorporated. Since then, Mr. Ryan has occupied various senior management positions within Descartes, with particular focus on our network and recurring business. Mr. Ryan was appointed General Manager, Global Logistics Network in June 2004 and then appointed Executive Vice President, Global Field Operations in July 2007. He was appointed Chief Commercial Officer in June 2011 and appointed Chief Executive Officer in November 2013.

J. Scott Pagan is our President and Chief Operating Officer. Mr. Pagan joined our legal department in May 2000. Mr. Pagan was appointed Corporate Secretary in May 2003, General Counsel & Corporate Secretary in June 2004, and Executive Vice President, Corporate Development in July 2007. He was appointed Chief Corporate Officer in June 2011 and appointed President and Chief Operating Officer in November 2013. Prior to joining Descartes, Mr. Pagan was in private legal practice.

Allan Brett is our Chief Financial Officer. Mr. Brett is a Chartered Professional Accountant and is an experienced public company executive, who served as Chief Financial Officer of Aastra Technologies Limited from 1996 through to its sale to Mitel Networks Corporation in 2014. Mr. Brett was appointed Chief Financial Officer of Descartes in May 2014.

Raimond Diederik is our Executive Vice President, Information Services. Mr. Diederik joined Descartes in July 1998 in connection with our acquisition of Calixon N.V. Since then, Mr. Diederik has occupied various senior management positions within Descartes, with particular focus on our information technology infrastructure and technology development activities. Mr. Diederik was appointed SVP, Network Operations & Information Technology in June 2006 and then appointed Executive Vice President, Information Services in September 2009.

Ed Gardner is our Executive Vice President, Corporate Development. Mr. Gardner joined Descartes in 2003 where he first held a number of senior roles within our corporate finance organization. In his current role as Executive Vice President, Corporate Development, Mr. Gardner is responsible for the development and execution of our M&A strategy. Mr. Gardner's previous experience includes both practical logistics experience where he worked in a senior leadership position at a third-party logistics provider as well as deal execution and integration experience as part of Ernst & Young's Transaction Advisory Services practice in London, England.

Chris Jones is our Executive Vice President, Marketing & Services. Mr. Jones joined Descartes in May 2005 and served as Executive Vice President, Solutions & Markets until his appointment to Executive Vice President, Solutions & Services in September 2006. Mr. Jones was appointed Executive Vice President, Services in February 2011 and Executive Vice-President, Marketing & Services in June 2011. From November 2003 until he joined Descartes, Mr. Jones was Senior Vice President in Aberdeen Group's Value Chain Research division where he was responsible for creating a market-leading supply chain and manufacturing research and advisory research practice. Prior to Aberdeen, from September 1998 to January 2003, Mr. Jones was Executive Vice President of Marketing and Corporate Development for SynQuest, Inc., a provider of supply chain planning solutions. Before joining SynQuest, from May 1994 to September 1998, Mr. Jones was Vice President and Research Director for Enterprise Resource Planning Solutions at the Gartner Group.

Robert Parker is our Executive Vice President, Customer Support and Client Services. Mr. Parker joined Descartes in 2009 as part of the acquisition of Scancode where he had held the role of VP, Operations for

10 years. Mr. Parker leads Descartes' global customer support and client services organization and brings over 20 years of senior management and logistics consulting experience to Descartes.

Andrew Roszko was appointed Executive Vice President, Global Sales in February 2019. Mr. Roszko joined Descartes in November 2006 as part of the acquisition of CubeRoute, where he was a founder and held both engineering and operational leadership roles. Prior to CubeRoute, Mr. Roszko ran a consulting practice and since joining Descartes, he has held progressively increasing senior sales leadership roles until his most recent appointment to an Executive Vice President role.

Michael Verhoeve is our Executive Vice President, Legal, General Counsel and Corporate Secretary. Mr. Verhoeve was previously our Associate General Counsel from 1998 through to 2003, following which, from 2003 to 2014, he acted as General Counsel and Corporate Secretary at two other Canadian-based international publicly traded technology companies: ATS Automation Tooling Systems Inc. (TSX:ATA) and Sandvine Corporation (TSX: SVC). Mr. Verhoeve re-joined Descartes in May 2014 in his current role.

Kenneth Wood is our Executive Vice President of Product Management. Mr. Wood joined Descartes in July 2001 in connection with our acquisition of Centricity. Mr. Wood provides leadership in defining our product strategy, developing roadmaps, and working with all aspects of product delivery. He brings deep domain expertise in supply chain management, transportation management, fleet management, mobile solutions and supply chain planning. Mr. Wood's previous experience included leadership roles in development, consulting and product management with leading supply chain software providers such as CAPS Logistics, i2 Technologies, and Centricity.

To our knowledge, as at April 22, 2019, our directors and executive officers as a group beneficially owned, or controlled or directed, directly or indirectly, 288,433 of our common shares, representing approximately 0.4% of the common shares then outstanding.

7.2 Committees of the Board of Directors

Our Board of Directors currently has four committees: the Audit Committee; the Compensation Committee; the Corporate Governance Committee; and the Nominating Committee. The committees, their mandates and membership are discussed below.

Audit Committee

The primary functions of the Audit Committee are to oversee the accounting and financial reporting practices of the Company and the audits of the Company's financial statements, including assisting the Board in fulfilling its responsibilities in reviewing: financial disclosures and internal controls over financial reporting; monitoring the system of internal control and overall enterprise risk management; monitoring the Company's compliance with Applicable Requirements (as defined in Descartes' Audit Committee charter); overseeing internal audit functions; selecting the auditors for shareholder approval; reviewing the qualifications, independence and performance of the auditors; and reviewing the qualifications, independence and performance of the Company's financial management.

The Board of Directors has adopted an amended Audit Committee charter setting out the scope of the Audit Committee's functions, responsibilities and membership requirements. A copy of that charter is attached as Appendix "A" to this AIF.

The Audit Committee is currently composed of three outside and independent directors: Mr. John J. Walker (Chair), Ms. Deborah Close and Mr. Eric Demirian. The Board of Directors has resolved that Mr. Walker and Mr. Demirian are each an "audit committee financial expert" as defined in paragraph 8(b) of General Instruction B to Form 40-F promulgated by the Securities and Exchange Commission and that each is financially sophisticated for the purposes of NASDAQ Rule 5605(c)(2)(A).

The following sets out the education and experience of the members of the Audit Committee, each of whom is independent and financially literate:

> ***John J. Walker*** C.P.A., C.G.M.A., B.S. – Mr. Walker is a Certified Public Accountant and a Chartered Global Management Accountant with experience as a Chief Financial Officer with public

companies, including Bowne & Company, a New York Stock Exchange-listed company and Loews Cineplex Entertainment Corporation, a New York Stock Exchange-listed company and a Toronto Stock Exchange-listed company. Prior to Loews, Mr. Walker served as Controller of Corporate Property Investors and a financial executive at Princess Hotels International. Mr. Walker received his B.S. in Accounting from the University of Scranton. Mr. Walker started his career in the New York office of then Price Waterhouse. Mr. Walker is a member of the American Institute of Certified Public Accountants and the New York State Society of CPA's.

Deborah Close B.A., ICD.D – Ms. Close is formerly the President of the Production Services division of Tervita Corporation, a position she held for five years during which she held full P&L responsibility for a division with 1,000 employees; represented the division in financial disclosure and reporting reviews for the corporation; and sat on the executive risk management committee. Ms. Close has held numerous senior executive positions in the oil and gas industry over the course of her 40-year career, including 12 years with Halliburton Corporation in various capacities across Canada, the US and Europe. Ms. Close holds a Bachelor of Arts from the University of Calgary and the ICD.D designation from the Institute of Corporate Directors and Rotman School of Management.

Eric A. Demirian BBM., C.P.A., C.G.A, C.A.– Mr. Demirian is the Chair of the Corporation's Board of Directors and was previously the Chair of the Corporation's audit committee. Mr. Demirian is a Chartered Professional Accountant, Certified General Accountant and a Chartered Accountant. Mr. Demirian is a seasoned business executive with a unique blend of financial, operational and board governance experience. Since 2003, Mr. Demirian has served as president of Parklea Capital, Inc. ("Parklea"), a boutique financial and strategy advisory firm providing services to small- and mid-market public and private companies, and President of Demicap Inc., a private investment firm. Prior to Mr. Demirian's position at Parklea, he held the position of Executive Vice President of Group Telecom, Inc. from 2000 to 2003. From 1983 to 2000, Mr. Demirian was with PricewaterhouseCoopers LLP ("PwC") where he was a partner and head of the Information and Communications Practice. Mr. Demirian serves on the boards of Enghouse Systems Ltd. (TSX:ESL), Redline Communications Inc. (TSX:RDL), and Imax Corporation (NYSE:IMAX). Mr. Demirian is a former director and chair of the audit committees of a number of public companies, including Menu Foods Income Fund (2005-2010) and Keystone North America Inc. (2007-2010). Mr. Demirian holds a Bachelor of Business Management degree from Ryerson University.

The Audit Committee has adopted specific policies and procedures for the engagement of non-audit services from our independent auditor. Those procedures are attached at Appendix "B" to this AIF.

Compensation Committee
The Compensation Committee is appointed by the Board of Directors to discharge the Board's duties and responsibilities relating to the compensation of the Company's Chief Executive Officer and senior management, as well as to review the human resource policies and practices that cover the Company's employees. The Compensation Committee is currently composed of four outside and independent directors: Ms. Deborah Close (Chair), Mr. David Beatson, Mr. Dennis Maple and Ms. Jane O'Hagan.

Corporate Governance Committee
The Corporate Governance Committee is primarily responsible for overseeing Descartes' corporate governance policies and activities. The Corporate Governance Committee reviews and maintains the Board of Directors governing documents in compliance with the Code of Business Conduct and Ethics. The Corporate Governance Committee is currently composed of three outside directors: Ms. Jane O'Hagan (Chair), Mr. Eric Demirian, and Mr. Chris Hewat, of whom Ms. Jane O'Hagan and Mr. Eric Demirian are considered independent.

Nominating Committee
The primary function of the Nominating Committee is to assist the Board of Directors in identifying, recruiting and nominating suitable candidates to serve on the Board of Directors. The Nominating Committee is currently composed of four outside and independent directors: Mr. David Beatson (Chair), Mr. Dennis Maple, Ms. Jane O'Hagan and Mr. John Walker.

7.3 Certain Relationships and Related Transactions

Blake, Cassels & Graydon LLP, of which Mr. Hewat is a partner, provided legal services to us during fiscal 2019 and has been providing, and is expected to continue to provide, legal services to us in fiscal 2020. For fiscal 2019, we incurred fees of approximately CAD$455,399 for legal services rendered by Blake, Cassels & Graydon LLP. For fiscal 2018, we incurred fees of approximately CAD$157,891 for legal services rendered by Blake, Cassels & Graydon LLP. The increase in fees incurred with Blake, Cassels & Graydon LLP from 2018 to 2019 was primarily the result of legal services provided in connection with the Visual Compliance acquisition.

ITEM 8 EXTERNAL AUDITORS

For the fiscal year ended January 31, 2019, our external auditors were KPMG LLP, Independent Registered Public Accounting Firm. KPMG LLP has been our external auditors since April 16, 2015. KPMG LLP have confirmed that they are independent with respect to the Company with the meaning of the relevant rules and related interpretations prescribed by the relevant professional bodies in Canada and any applicable legislation or regulations and also that they are independent accountants with respect to the Company under all relevant US professional and regulatory standards.

The following table sets forth the fees we have incurred in using the services of KPMG LLP in respect of the applicable fiscal years noted (all amounts in the table are in US dollars – amounts that were billed in Canadian dollars are converted to US dollars at the applicable exchange rate on the last day of the applicable fiscal period):

Fiscal Year Ended	Audit Fees	Audit-Related Fees	All Other Fees	Total
January 31, 2019	$579,606	$2,430	Nil	$582,036
January 31, 2018	$446,131	$61,782	$65,034	$572,947

“Audit Fees” relate to professional services rendered for the audit of the Company’s annual consolidated financial statements and reviews of our interim consolidated financial statements for the first three quarters of the year, fees associated with a statutory audit of two of our subsidiaries in a foreign jurisdiction and fees associated with the audit of our base-shelf prospectus.

“Audit-Related Fees” consist of fees for assurance and related services that are reasonably related to the performance of the audit or review of the Corporation’s financial statements and are not reported as “Audit Fees”.

“All Other Fees” consist of fees for non-audit-related advisory services.

The above amounts are exclusive of any disbursements and related taxes.

ITEM 9 LEGAL PROCEEDINGS

The Company and its subsidiaries are subject to a variety of claims and suits that arise from time to time in the ordinary course of our business and are typical in our industry. The consequences of these matters are not presently determinable but, in the opinion of management, the ultimate liability is not expected to have a material effect on our annual results of operations, financial position or capital resources. None of these proceedings involves a claim for damages, exclusive of interest and costs, that exceeds 10% of our current assets.

ITEM 10 ADDITIONAL INFORMATION

Additional information about us is available at our website at http://www.descartes.com, on SEDAR at http://www.sedar.com and on EDGAR at http://www.sec.gov. Additional information, including directors' and officers' remuneration and indebtedness, principal holders of our securities and securities authorized for issuance under equity compensation plans, where applicable, is contained in our Management Information Circular for our annual meeting of shareholders held on May 31, 2018. Additional financial information is provided in the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements, the notes thereto and the report of independent registered public accounting firm thereon contained in our Annual Report to the Shareholders for the year ended January 31, 2019.

THE DESCARTES SYSTEMS GROUP INC.

CHARTER FOR
THE AUDIT COMMITTEE OF
THE BOARD OF DIRECTORS

1. PURPOSE

1. The primary functions of the Audit Committee are to oversee the accounting and financial reporting practices of The Descartes Systems Group Inc. (the "**Company**") and the audits of the Company's financial statements and to exercise the responsibilities and duties set forth below, including, but not limited to, assisting the Board of Directors (the "**Board**") in fulfilling its responsibilities in reviewing the following: financial disclosures and internal controls over financial reporting; monitoring the system of internal control and compliance with Applicable Requirements (as defined below); selecting the auditors for shareholder approval; and reviewing the qualifications, independence and performance of the auditors and the qualifications, independence and performance of the Company's financial management.

2. MEMBERSHIP AND ORGANIZATION

1. **Composition** - The Audit Committee shall consist of not less than three independent members of the Board. At the invitation of the Audit Committee, members of the Company's management and others may attend Audit Committee meetings as the Audit Committee considers necessary or desirable.

2. **Appointment and Removal of Audit Committee Members** - Each member of the Audit Committee shall be appointed by the Board on an annual basis and shall serve at the pleasure of the Board, or until the earlier of (a) the close of the next annual meeting of the Company's shareholders at which the member's term of office expires, (b) the death of the member, or (c) the resignation, disqualification or removal of the member from the Audit Committee or from the Board. The Board may fill a vacancy in the membership of the Audit Committee.

3. **Chair** - At the time of the annual appointment of the members of the Audit Committee, the Board shall appoint a Chair of the Audit Committee. The Chair

shall: be a member of the Audit Committee, preside over all Audit Committee meetings that he or she attends, coordinate the Audit Committee's compliance with this mandate, work with management to develop the Audit Committee's annual work-plan and provide reports of the Audit Committee to the Board.

4. **Independence** - Each member of the Audit Committee shall meet the requirements of applicable law and any applicable requirements promulgated by any exchange upon which securities of the Company are traded, or any governmental or regulatory body exercising authority over the Company, as are in effect from time to time (collectively, the "**Applicable Requirements**") related to independence and audit committee composition.

5. **Financial Expertise** - At the time of his or her appointment to the Audit Committee, each member of the Audit Committee shall be able to read and understand fundamental financial statements, including a balance sheet, cash flow statement and income statement, be "**financially literate**" as defined under Applicable Requirements, and shall not have participated in the preparation of the financial statements of the Company or any current subsidiary of the Company at any time during the preceding three years. At least one member of the Audit Committee shall have past employment experience in financing or accounting, requisite professional certification in accounting, or other comparable experience or background which results in the individual's financial sophistication, including being or having been a Chief Executive Officer, Chief Operating Officer, Chief Financial Officer or other senior officer with financial oversight responsibilities. Further, at least one member of the Audit Committee shall qualify as an "**audit committee financial expert**" (as such term is defined under the Securities and Exchange Commission's rules).

3. MEETINGS

1. **Meetings** - The members of the Audit Committee shall hold meetings as are required to carry out this mandate, and in any case no less than four meetings annually. The external auditors are entitled to attend and be heard at each quarterly Audit Committee meeting scheduled to consider the Company's financial statements. The Chair, any member of the Audit Committee, the external auditors, the Chairman of the Board, the Lead Director, the Chief Executive

Officer or the Chief Financial Officer may call a meeting of the Audit Committee by notifying the Company's Corporate Secretary who will notify the members of the Audit Committee. The Chair shall chair all Audit Committee meetings that he or she attends, and in the absence of the Chair, the members of the Audit Committee present may appoint a chair from their number for a meeting.

2. **Secretary and Minutes** - The Corporate Secretary, his or her designate or any other person the Audit Committee requests, shall act as secretary at Audit Committee meetings. Minutes of Audit Committee meetings shall be recorded and maintained by the Corporate Secretary and subsequently presented to the Audit Committee for approval.

3. **Quorum** - A majority of the members of the Audit Committee shall constitute a quorum.

4. **Access to Management and Outside Advisors** - The Audit Committee shall have unrestricted access to the Company's management and employees and the books and records of the Company, and, from time to time may hold unscheduled or regularly scheduled meetings or portions of regularly scheduled meetings with the auditor, the Chief Financial Officer, the Chief Operating Officer, President or the Chief Executive Officer. The Audit Committee shall have the authority to conduct investigations into any matters within its scope of responsibilities, retain external legal counsel, consultants or other advisors to assist it in fulfilling its responsibilities and to set and pay the respective compensation for these advisors without consulting or obtaining the approval of the Board or any Company officer. The Company shall provide appropriate funding, as determined by the Audit Committee, for the services of these advisors.

5. **Meetings Without Management** - The Audit Committee shall hold unscheduled or regularly scheduled meetings, or portions of regularly scheduled meetings, at which management is not present.

4. FUNCTIONS AND RESPONSIBILITIES

The Audit Committee shall have the functions and responsibilities set out below as well as any other functions that are specifically delegated to the Audit Committee by the Board and that the Board is authorized to delegate by applicable laws and regulations. In

addition to these functions and responsibilities, the Audit Committee shall perform the duties required of an audit committee by the Applicable Requirements.

1. **Financial Reports**

    a. General - The Audit Committee is responsible for overseeing the Company's accounting and financial reporting practices and the audits of the Company's financial statements. Management is responsible for the preparation, presentation and integrity of the Company's financial statements and financial disclosures and for the appropriateness of the accounting principles and the reporting policies used by the Company. The auditors are responsible for auditing the Company's annual consolidated financial statements and for reviewing the Company's unaudited interim financial statements.

    b. Review of Annual Financial Reports - The Audit Committee shall review the annual consolidated audited financial statements of the Company prepared by management, the auditors' report thereon and the related management's discussion and analysis of the Company's financial condition and results of operation ("**MD&A**"). After completing its review, if advisable, the Audit Committee shall approve and recommend for Board approval the annual financial statements and the related MD&A.

    c. Review of Interim Financial Reports - The Audit Committee shall review the interim consolidated financial statements of the Company prepared by management, the auditors' review report thereon and the related MD&A. After completing its review, if advisable, the Audit Committee shall approve and recommend for Board approval the interim financial statements and the related MD&A.

    d. Review Considerations - In conducting its review of the annual financial statements or the interim financial statements, the Audit Committee shall:

        i. meet with management and the auditors to discuss the financial statements and MD&A;

        ii. review the disclosures in the financial statements;

iii. review the audit report or review report prepared by the auditors;

iv. review the qualitative judgments of the auditors about the appropriateness, not just the acceptability, of accounting principles and financial disclosure practices used or proposed to be adopted by the Company;

v. discuss with management, the auditors and internal legal counsel, as requested, any litigation claim or other contingency that could have a material effect on the financial statements;

vi. review the accounting policies followed and critical accounting and other significant estimates and judgments underlying the financial statements as presented by management;

vii. review any material effects of regulatory accounting initiatives or off-balance sheet structures on the financial statements as presented by management;

viii. review any material changes in accounting policies and any significant changes in accounting practices and their impact on the financial statements as presented by management;

ix. review the methods used to account for significant unusual transactions;

x. review the effect of significant accounting policies in controversial or emerging areas for which there is a lack of authoritative guidance or consensus;

xi. review significant recorded and unrecorded audit adjustments;

xii. review any material accounting issues among management and the auditors;

xiii. review management's report on the effectiveness of internal controls over financial reporting;

xiv. review the factors identified by management as factors that may affect future financial results;

xv. review results of the Company's audit committee hotline program; and

xvi. review any other matters, related to the financial statements, that are brought forward by the auditors, management or which are required to be communicated to the Audit Committee under accounting policies, auditing standards or Applicable Requirements.

e. Approval of Other Financial Disclosures - The Audit Committee shall review and, if advisable, approve and recommend for Board approval financial disclosure in a prospectus or other securities offering document of the Company, press releases disclosing financial results of the Company and any other material financial disclosure, including financial guidance provided to analysts, rating agencies or otherwise publicly disseminated.

2. **Independent Auditors**

a. General -The Audit Committee shall be responsible for oversight of the work of the auditors, including the auditors' work in preparing or issuing an audit report, performing other audit, review or attest services or any other related work.

b. Appointment and Compensation - The Audit Committee shall review and, if advisable, select and recommend for Board and shareholder approval the appointment of the auditors. The Audit Committee shall have ultimate authority to approve all audit engagement terms and fees, including the auditors' audit plan.

c. Resolution of Disagreements – Review all reportable events, including any disagreements, unresolved issues and consultations (as those terms are defined by Applicable Requirements), with the Company's auditors, whether or not there is to be a change of auditors.

d. Change of Auditors – When the Audit Committee determines to recommend a change of auditors or the auditors are otherwise terminated or resign, the Audit Committee shall review all issues related to the

change of auditors, including the information required to be disclosed by applicable legal requirements and the planned steps for an orderly transition.

e. Discussions with Auditors – At least annually, the Audit Committee shall discuss with the auditors such matters as are required by applicable auditing standards to be discussed by the auditors with the audit committee, including the matters required to be discussed by applicable auditing standards.

f. Audit Plan - At least annually, the Audit Committee shall review a summary of the auditors' annual audit plan. The Audit Committee shall consider and review with the auditors any material changes to the scope of the plan.

g. Quarterly Review Report - The Audit Committee shall review a report prepared by the auditors in respect of each of the interim financial statements of the Company.

h. Independence of Auditors - At least annually, and before the auditors issue their report on the annual financial statements, the Audit Committee shall: obtain from the auditors a formal written statement describing all relationships between the auditors and the Company; discuss with the auditors any disclosed relationships or services that may impact the objectivity and independence of the auditors; and obtain written confirmation from the auditors that they are objective and independent within the meaning of the applicable Rules of Professional Conduct/Code of Ethics adopted by the provincial institute or order of chartered accountants to which it belongs and other Applicable Requirements. The Audit Committee shall take appropriate action to oversee the independence of the auditors.

i. Evaluation and Rotation of Lead Partner - At least annually, the Audit Committee shall review the qualifications and performance of the lead partner(s) of the auditors. The Audit Committee shall obtain a report from the auditors annually verifying that the lead partner of the auditors has

served in that capacity for no more than five fiscal years of the Company and that the engagement team collectively possesses the experience and competence to perform an appropriate audit.

j. Evaluation of performance and audit quality – the Audit Committee shall review and evaluate the performance of the external auditor to assess the quality of the audit and the services performed by the external auditor.

k. Requirement for Pre-Approval of Non-Audit Services - The Audit Committee shall approve in advance any retainer of the auditors to perform any non-audit service to the Company that it deems advisable in accordance with Applicable Requirements, and Board approved policies and procedures. The Audit Committee may delegate pre-approval authority to a member of the Audit Committee. The decisions of any member of the Audit Committee to whom this authority has been delegated must be presented to the full Audit Committee at its next scheduled Audit Committee meeting.

l. Review of Professional Services - The Audit Committee shall review reports from management at each quarterly Audit Committee meeting scheduled to consider the Company's financial statements concerning expenses incurred in the quarter for the services of any accounting firm (other than the appointed auditor) engaged to provide services to the Company, in each case to the extent that the amount of such expenses in respect of any such firm exceeds $100,000.

m. Approval of Hiring Policies - The Audit Committee shall review and approve the Company's hiring policies regarding partners, employees and former partners and employees of the present and former external auditors of the Company.

3. **Internal Controls**

a. General - The Audit Committee shall review reports from management on the nature, establishment, monitoring and effectiveness of the Company's system of internal control over financial reporting and disclosure controls and procedures (as those terms are defined in the Applicable

Requirements).

b. Establishment, Review and Approval - The Audit Committee shall require management to establish and m aintain appropriate systems of internal control over financial reporting and disclosure controls and procedures in accordance with Applicable Requirements and guidance and to review, evaluate and approve these controls and procedures. At least annually, the Audit Committee shall consider and review with management and the auditors:

   i. the effectiveness of, or weaknesses or deficiencies in the design or operation of the Company's internal control over financial reporting and disclosure controls and procedures, and the impact of any identified weaknesses in these controls and procedures on management's conclusions;

   ii. any significant changes in internal control over financial reporting that are disclosed, or considered for disclosure, including those in the Company's periodic regulatory filings;

   iii. the auditors' report on the Company's internal control over financial reporting;

   iv. any material issues raised by any inquiry or investigation by the Company's regulators;

   v. the Company's fraud prevention and detection program, including deficiencies in internal controls that may impact the integrity of financial information, or may expose the Company to other significant internal or external fraud losses and the extent of those losses and any disciplinary action in respect of fraud taken against management or other employees who have a significant role in financial reporting; and

   vi. any related significant issues and recommendations of the auditors together with management's responses thereto, including the timetable for implementation of recommendations to correct weaknesses in internal controls over financial reporting and

disclosure controls.

4. Risk Management

a. General – In addition to being responsible for overseeing risks related to the Company's accounting, financial statements, financial reporting process and internal controls related to financial reporting, the Audit Committee is also responsible for overseeing management's implementation and operation of the enterprise risk management program, as documented in the Risk Management Policy established by the Board of Directors. The risk oversight process is the means by which the Board of Directors determines that the Company has in place an effective process for identifying, assessing, managing and monitoring key risks in the business on a continuous basis as the business evolves.

b. Management Responsibilities - Management is responsible for:

   i. ensuring the development and implementation of the Risk Management process. Risk Management is the framework required to identify, assess and develop strategies to manage and monitor control risks;

   ii. the design and implementation of the actions, measures and/or processes to mitigate to an appropriate level all material risks in the business (the "**Risk Controls**") including the design and implementation of appropriate crisis preparedness, business continuity and disaster recovery plans; and

   iii. monitoring overall compliance with and adherence to the Risk Management Policy as established by the Board of Directors.

c. Audit Committee Responsibilities - The Audit Comm
ittee is responsible for:

   i. at least annually, reviewing the effectiveness of the Risk Management program that is in place. As part of its review, the Audit Committee will review reports prepared by management that

assess the risks in the business, identifies the Risk Controls that are in place to mitigate and manage these risks to an appropriate level, and evaluate the residual risk in the business (the risk that remains after implementation of the Risk Controls);

ii. periodically monitor risk and risk management capabilities within the Company including crisis preparedness, business continuity and disaster recovery plans; and

iii. reporting to the Board of Directors on its oversight of the Company's Risk Management program, including an assessment of whether the program is being followed and is effective.

d. Computerized Information Systems - The Audit Committee shall review reports from the Company's management containing its assessment of the adequacy of the Company's computerized information system controls and security and related risks, including cybersecurity risk.

5. **Internal Audit** – the Audit Committee may choose to establish and maintain an Internal Audit function from time to time. If so established, the internal audit function will report directly to the Chair of the Audit Committee and administratively to the Chief Financial Officer. In relation to the internal audit function, if so established and maintained, the Audit Committee shall:

a. Establish an internal audit charter and review and approve any necessary revisions to such charter on an annual basis;

b. review and evaluate the effectiveness of the internal audit function;

c. review the operating budget for the internal audit function including staffing levels and resources; and
d. On a regular basis, meet with the head of the internal audit function without other members of management present.

6. **Compliance with Legal and Regulatory Requirements** - The Audit Committee shall review reports from the Company's Corporate Secretary and other management members on: legal or compliance matters that may have a material

impact on the Company; the effectiveness of the Company's compliance policies; and any material communications received from regulators. The Audit Committee shall review management's evaluation of and representations relating to compliance with specific Applicable Requirements, and management's plans to remediate any deficiencies identified.

7. **Audit Committee Hotline Procedures** - The Audit Committee shall establish procedures for (a) the receipt, retention, and treatment of complaints received by the Company regarding accounting, internal accounting controls, or auditing matters; and (b) the confidential, anonymous submission by employees of the Company of concerns regarding questionable accounting or auditing matters. Any such complaints or concerns that are received shall be reviewed by the Audit Committee and, if the Audit Committee determines that the matter requires further investigation, it will direct the Chair of the Audit Committee to engage outside advisors, as it deems necessary or appropriate, to investigate the matter and will work with management and the Company's general counsel to reach a satisfactory conclusion.

8. **Audit Committee Disclosure** - The Audit Committee shall prepare, review and approve any audit committee disclosures required by Applicable Requirements in the Company's disclosure documents.

9. **Requirement for Review and Approval of the CEO Business Expenses** - The Chair of the Audit Committee shall review and approve the reimbursable business expenses incurred by the Chief Executive Officer of the Company in connection with the performance of his duties. Such approval may be provided subsequent to reimbursement of such expenses.

10. **Review of Audit Committee Charter -** On at least an annual basis, the Audit Committee shall, in conjunction with the Corporate Governance Committee, review and reassess the adequacy of this Audit Committee Charter.

11. **Delegation** - The Audit Committee may, to the extent permissible by Applicable Requirements, designate a sub-committee to review any matter within this mandate as the Audit Committee deems appropriate.

6. REPORTING TO THE BOARD

1. The Chair shall report to the Board, as required by Applicable Requirements or as deemed necessary by the Audit Committee or as requested by the Board, on matters arising at Audit Committee meetings and, where applicable, shall present the Audit Committee's recommendation to the Board for its approval.

7. GENERAL

1. The Audit Committee shall, to the extent permissible by Applicable Requirements, have such additional authority as may be reasonably necessary or desirable, in the Audit Committee's discretion, to exercise its powers and fulfill the duties under this mandate.

8. CURRENCY OF THE AUDIT COMMITTEE CHARTER

1. This charter was last approved by the Audit Committee and Board on March 4, 2018.

PRE-APPROVAL POLICY AND PROCEDURE FOR ENGAGEMENTS OF THE INDEPENDENT AUDITOR

The responsibilities of the Company's audit committee are set out in the Company's Audit Committee Charter, which responsibilities include pre-approving audit and non-audit services provided by the independent auditors in order to ensure the services do not impair the auditors' independence. Applicable securities commissions and accounting standards boards have issued rules specifying the permissible services independent auditors may provide to audit clients, as well as the pre-approval of fees. Accordingly, the Company's Audit Committee has adopted the following Pre-Approval Policy and Procedure.

Under the Audit Committee's approach, an annual program of work will be approved each year for the following categories of services: Audit, Audit-Related, and Tax. Each engagement or category of service will be presented in appropriate detail by business function and geographic area to provide the Audit Committee sufficient understanding of the services provided. Additional engagements may be brought forward from time to time for pre-approval by the Audit Committee.

The Audit Committee will consider whether any service to be obtained from the independent auditors is consistent with applicable rules on auditor independence. Also, the Audit Committee will consider the level of Audit and Audit-Related fees in relation to all other fees paid to the independent auditors, and will review such level each year. In carrying out this responsibility, the Audit Committee may obtain input from Company management on the general level of fees, and the process for determining and reporting fees from the numerous locations where the Company operates and the independent auditors provide services.

The term of any pre-approval applies to the Company's financial year. Thus, Audit fees for the financial year may include work performed after the close of the calendar year. The pre-approval for Audit-Related and Tax fees is on a calendar-year basis. Unused pre-approval amounts will not be carried forward to the next financial year. Pre-approvals will apply to engagements within a category of service, and cannot be transferred between categories. If fees might otherwise exceed pre-approved amounts for any category of permissible services, then time will be scheduled so that incremental amounts can be reviewed and pre-approved prior to commitment.

Audit Services

Audit services include the annual financial statement audit engagement (including required quarterly reviews), affiliate and subsidiary statutory audits, and other procedures required to be performed by the independent auditors to render an opinion on the Company's consolidated financial statements. Audit services also include information systems reviews, tests performed on the system of internal controls, and other procedures necessary to support the independent auditors' attestation of management's report on

internal controls for financial reporting consistent with applicable securities legislation, as applicable.

The independent auditors are responsible for cost-effectively providing audit services and confirming that audit services are not undertaken prior to review and pre-approval by the Audit Committee. The independent auditors and Company management will jointly manage a process for collecting and reporting Audit fees billed by the independent auditors to Company each year.

Audit-Related Services

Audit-Related services include services that are reasonably related to the review of the Company's financial statements. These services include benefit plan and joint venture audits, attestation procedures related to cost certifications and government compliance, consultations on accounting issues, and due diligence procedures. Each year the Audit Committee will review the proposed services to ensure the independence of the independent auditors is not impaired.

Pre-approval will occur each year coincident with pre-approval of Audit services. Company management will monitor the engagement of the independent auditors for Audit-Related services using designated process owners. This process will help provide assurance that the aggregate dollar amount of services obtained does not exceed pre-approval amounts at any time, and that new engagements not initially identified are pre-approved prior to commitment.

Tax Services

The Audit Committee concurs that the independent auditors may provide certain Tax services without impairing independence. These services include preparing local tax filings and related tax services, tax planning, preparing individual employee expatriate tax returns, and other services permitted by applicable securities regulations. The Audit Committee will not permit engaging the independent auditors (1) in connection with a transaction, the sole purpose of which may be impermissible tax avoidance, or (2) for any tax services that may be prohibited by applicable securities rules now or in the future. Company management will monitor the engagement of the independent auditors or other firms for such Tax services to help provide assurance that aggregate dollar amounts of services obtained from the independent auditors do not exceed pre-approval amounts at any time.

All Other Services

The Company does not envision obtaining other services from the independent auditors, except for the Audit, Audit-Related, and Tax services described previously. If permissible other services are requested by the Company, each engagement must be pre-approved by the Audit Committee. Such requests should be supported by endorsement of the Chief Financial Officer prior to review with the Audit Committee.

Prohibited Services

Current securities regulations specify that independent auditors may not provide the following prohibited services: Bookkeeping, Financial Information Systems Design and Implementation, Appraisals or Valuation (other than Tax), Fairness Opinions, Actuarial Services, Internal Audit Outsourcing, Management Functions, Human Resources such as Executive Recruiting, Broker-Dealer Services, Legal Services, or Expert Services such as providing expert testimony or opinions where the purpose of the engagement is to advocate the client's position in an adversarial proceeding. Company personnel may not under any circumstances engage the independent auditors for prohibited services. Potential engagements not clearly permissible should be referred to the Chief Financial Officer.

Delegation

The Audit Committee may delegate pre-approval authority to one or more of its members. The member or members to whom such authority is delegated shall report any pre-approval decisions to the Audit Committee at its next scheduled meeting. The Audit Committee may not delegate to management the Audit Committee’s responsibilities to pre-approve services performed by the independent auditor.

EXHIBIT 99.3

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (No. 333-225174) on Form F-10/A of The Descartes Systems Group Inc. of our report dated March 6, 2019 on the consolidated financial statements of The Descartes Systems Group Inc., which comprise the consolidated balance sheets as of January 31, 2019 and January 31, 2018, the related statements of operations, comprehensive income, shareholders' equity and cash flows for each of the years in the three-year period ended January 31, 2019, and the related notes and our report dated March 6, 2019 on the effectiveness of internal control over financial reporting as of January 31, 2019, which reports appear in the 2019 Annual Report of The Descartes Systems Group Inc., incorporated by reference in this annual report on Form 40-F, for the fiscal year ended January 31, 2019, and further consent to the use of such reports in this annual report on Form 40-F.

/s/ KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants
Toronto, Canada
April 22, 2019

EXHIBIT 99.4

CERTIFICATION PURSUANT TO RULE 13a-14 or 15d-14 OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Edward J. Ryan, certify that:

1. I have reviewed this annual report on Form 40-F of The Descartes Systems Group Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the issuer as of, and for, the periods presented in this report;

4. The issuer's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the issuer and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by this report that has materially affected, or is reasonably likely to materially affect, the issuer's internal control over financial reporting; and

5. The issuer's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Dated: April 22, 2019

By: /s/ Edward J. Ryan
Name: Edward J. Ryan
Title: Chief Executive Officer

EXHIBIT 99.5

CERTIFICATION PURSUANT TO RULE 13a-14 or 15d-14 OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Allan Brett, certify that:

1 I have reviewed this annual report on Form 40-F of The Descartes Systems Group Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the issuer as of, and for, the periods presented in this report;

4. The issuer's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the issuer and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by this report that has materially affected, or is reasonably likely to materially affect, the issuer's internal control over financial reporting; and

5. The issuer's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Dated: April 22, 2019

By: /s/ Allan Brett
Name: Allan Brett
Title: Chief Financial Officer

EXHIBIT 99.6

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

In connection with the annual report of The Descartes Systems Group Inc., a Canadian company and foreign private issuer (the "Company"), on Form 40-F for the fiscal year ended January 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Edward J. Ryan and Allan Brett, do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to our knowledge, that:

1. This Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in this Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Edward J. Ryan
Edward J. Ryan
Chief Executive Officer

/s/ Allan Brett
Allan Brett
Chief Financial Officer

April 22, 2019

This certification is being submitted solely for the purpose of complying with Section 1350 of Chapter 63 of Title 18 of the United States Code. This certification is not to be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liability of that section, nor will the certification be deemed incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent that the Registrant specifically incorporates it by reference.