Management's Discussion and Analysis of Financial Condition and Results of Operations

This discussion and analysis contains forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, and we intend that such forward-looking statements be subject to the safe harbors created thereby. Forward-looking statements are statements other than historical information or statements of current condition. Words such as may, expect, believe, plan, anticipate, intend, could, estimate, continue, or similar expressions or the negative of such expressions are intended to identify forward-looking statements. In addition, any statements that refer to expectations, projections or other characterizations of future events and circumstances are considered forward-looking statements. They are not guarantees of future performance and involve risks and uncertainties. Actual results may differ materially from those in forward-looking statements due to various factors including, but not limited to, macroeconomic uncertainty, including trade wars; our ability to successfully integrate businesses that we acquire; capital spending and network deployment levels in the telecommunications industry (including our ability to quickly adapt cost structures to anticipated levels of business and our ability to manage inventory levels with market demand); future economic, competitive, financial and market conditions; consolidation in the global communications test, monitoring and analytics solutions markets and increased competition among vendors; capacity to adapt our future product offering to future technological changes; limited visibility with regard to the timing and nature of customer orders; delay in revenue recognition due to longer sales cycles for complex systems involving customers' acceptance; fluctuating exchange rates; concentration of sales; timely release and market acceptance of our new products and other upcoming products; our ability to successfully expand international operations and to conduct business internationally; and the retention of key technical and management personnel. Assumptions relating to the foregoing involve judgments and risks, all of which are difficult or impossible to predict and many of which are beyond our control. Other risk factors that may affect our future performance and operations are detailed in our Annual Report, on Form 20-F, and our other filings with the U.S. Securities and Exchange Commission and the Canadian securities commissions. We believe that the expectations reflected in the forward-looking statements are reasonable based on information currently available to us, but we cannot assure you that the expectations will prove to have been correct. Accordingly, you should not place undue reliance on these forward-looking statements. These statements speak only as of the date of this document. Unless required by law or applicable regulations, we undertake no obligation to revise or update any of them to reflect events or circumstances that occur after the date of this document. This discussion and analysis should be read in conjunction with the consolidated financial statements.

The following discussion and analysis of financial condition and results of operations is dated November 27, 2018.

All dollar amounts are expressed in US dollars, except as otherwise noted.

COMPANY OVERVIEW

We are a leading provider of test, monitoring and analytics solutions for fixed and mobile communications service providers (CSPs), web-scale operators and network equipment manufacturers (NEMs) in the global communications industry. Our broad portfolio of intelligent hardware and software solutions enable network transformations related to fiber, 5G and 4G/LTE, virtualization and big data analytics. Ultimately, customers rely on our solutions to increase network capacity and improve quality of experience for end-users, while driving operational efficiencies.

Our success has been largely predicated on our core expertise in developing test equipment for fixed networks. These solutions are available as handheld test instruments, portable platforms with related modules, and as rack-mounted chassis with related modules. Our PC-centric, open-ended platforms, combined with cloud-based software applications, can be transformed into a fully connected test environment that allows CSPs to automate complex, labor-intensive tasks like fiber-to-the-antenna (FTTA), distributed antenna system (DAS) and small cell deployments. Leveraging platform connectivity, CSPs can also keep track of their entire test fleet, manage software updates and schedule calibration procedures. All test data can be stored in a central database and used as a point of reference against future measurements. Consequently, this enhanced test environment enables customers to increase productivity and reduce operating expenses.

Over the years, we have expanded our product portfolio into fiber monitoring, IP (Internet protocol) service assurance as well as testing of 2G, 3G, 4G/LTE and soon 5G mobile networks. Our fiber monitoring solution leverages EXFO's expertise and market leadership in optical time domain reflectometry (OTDR) by using this technology as remote test units (RTUs) to monitor an optical plant 24 hours per day, seven days per week. As such, this fiber monitoring solution proactively detects any fiber degradation or locates any fiber cut to optimize quality of service along long-haul, metro and access networks. Our IP service assurance solution is a probe-based hardware and software offering that delivers quality-of-service visibility as well as real-time service monitoring and verification of next-generation IP networks. We have enriched our IP service assurance offering, which can also be virtualized, with infrastructure performance management tools, analytics software and network topology discovery solutions via technology acquisitions.

Following the acquisition of Astellia S.A. in January 2018, EXFO offers monitoring solutions for multi-technology mobile networks (2G, 3G, 4G). The EXFO-Astellia portfolio provides mobile CSPs with capabilities to detect, correlate, analyze, report, geolocate and troubleshoot issues related to network performance, handset behavior and service usage. These solutions can be fully virtualized and combined with information from call traces, third-party probes, CRM, billing, etc., to optimize a big data framework. EXFO intends to integrate fiber monitoring, IP service assurance, as well as mobile network monitoring and analytics solutions into a unified platform to bring a unique value proposition to customers.

Our mobile portfolio also consists of network simulators and optical radio frequency (RF) test solutions. Our network simulators simulate real-world, large-scale network traffic and end-user behavior in a laboratory environment to predict network behavior, uncover faults and optimize networks before mobile networks and services are deployed. Our optical RF test solutions are dedicated to turning up and troubleshooting fiber-based mobile networks. These solutions are critical for locating and analyzing RF interference issues in FTTA, DAS, remote radio heads and baseband units that support 4G/LTE and upcoming 5G networks.

The competitive advantages of our products include a high degree of innovation, modularity (especially wireline products) and ease of use. Our products enable NEMs, CSPs and web-scale operators to design, deploy, troubleshoot and monitor fixed and mobile networks and, in the process, help them reduce the cost of operating their networks.

We have a staff of approximately 1,900 people in 25 countries, supporting more than 2,000 customers around the world. We operate four main manufacturing sites, which are located in Quebec City, Canada, Shenzhen, China, Rennes, France, and Oulu, Finland. We also have five main research and development expertise centers in Montreal, Quebec City, Rennes, Oulu and London, supported by a software development center in India.

We launched seven major solutions in fiscal 2018. New product introductions included a compact 400G test solution for network equipment manufacturers, carrier labs and data centers. EXFO also introduced SkyRAN, a remote access monitoring solution for fiber-based fronthaul networks. Developed in collaboration with tier-1 mobile network operators, SkyRAN provides real-time, on-demand testing and 24/7 monitoring of optical networks and the radio frequency spectrum. Other key product introductions included EX1, a multipurpose test solution for validating bandwidth speeds up to full line rate Gigabit Ethernet and for monitoring quality of experience at customer premises; an optical spectrum analyzer delivering in-service optical signal-to-noise ratio (OSNR) measurements for high-speed networks; and an automated network troubleshooting solution that links performance measurements to network topology to deliver service degradation diagnosis.

Our sales, which include a seven-month contribution from newly acquired Astellia S.A. (Astellia), increased 10.8% to $269.5 million in fiscal 2018 compared to $243.3 million in 2017. Bookings (purchase orders received from customers), which include a seven-month contribution from Astellia, increased 6.3% to $267.7 million in fiscal 2018, for a book-to-bill ratio of 0.99, from $251.8 million in 2017. In fiscal 2018, Astellia sales and bookings amounted respectively to $16.4 million (including $2.1 million for the acquisition-related deferred revenue fair value adjustment) and $16.5 million. Non-IFRS sales, which represent total sales plus acquisition-related deferred revenue fair value adjustment, amounted to $271.6 million in fiscal 2018. See page 24 of this document for a complete reconciliation of non-IFRS sales to IFRS sales.

Net loss attributable to the parent interest amounted to $11.9 million, or $0.22 per share, in fiscal 2018, compared to net earnings of $0.9 million, or $0.02 per diluted share in fiscal 2017. Net loss attributable to the parent interest in fiscal 2018 included net expenses totaling $17.1 million, comprising $9.4 million in after-tax amortization of intangible assets, $1.7 million in stock-based compensation costs, $3.4 million in after-tax restructuring charges, $2.1 million for the acquisition-related deferred revenue fair value adjustment, $0.7 million in positive change in the fair value of the cash contingent consideration, $2.5 million in after-tax acquisition-related costs, and a foreign exchange gain of $1.3 million. Net earnings attributable to the parent interest in fiscal 2017 included net expenses totaling $10.6 million, comprising $2.7 million in after-tax amortization of intangible assets, $1.4 million in stock-based compensation costs, $4.8 million in after-tax restructuring charges, $0.4 million in positive change in the fair value of the cash contingent consideration, $1.1 million in after-tax acquisition-related costs, and a foreign exchange loss of $1.0 million.

Net loss attributable to the parent interest in fiscal 2018 included $12.9 million for the net loss of newly acquired Astellia, which included $5.1 million in after-tax amortization of acquired intangible assets. Excluding Astellia's net loss, our net earnings attributable to the parent interest would have amounted to $1.0 million, or $0.02 per diluted in fiscal 2018.

Adjusted EBITDA (net loss attributable to the parent interest before interest, income taxes, depreciation and amortization, stock-based compensation costs, restructuring charges, acquisition-related deferred revenue fair value adjustment, change in fair value of cash contingent consideration, share in net loss of an associate, gain on the deemed disposal of the investment in an associate, and foreign exchange gain or loss) amounted to $17.2 million, or 6.4% of sales, in fiscal 2018, compared to $22.0 million, or 9.1% of sales in 2017. In fiscal 2018, Astellia negatively impacted adjusted EBITDA by $5.1 million. Adjusted EBITDA is a non-IFRS measure. See page 24 of this document for a complete reconciliation of adjusted EBITDA to IFRS net loss attributable to the parent interest.

On September 8, 2017, we acquired a 33.1% interest in Astellia, a publicly traded company on the NYSE Euronext Paris stock exchange. Astellia is a provider of network and subscriber intelligence enabling mobile operators to drive service quality, maximize operational efficiency, reduce churn and increase revenue. Its vendor-independent, real-time monitoring and troubleshooting solution is used to optimize networks end-to-end from radio to core. The purchase price amounted to €10 per share for a total cash consideration of €8.6 million (US$10.3 million).

On October 10, 2017, we reached an agreement with Astellia to acquire Astellia's remaining shares, at a share price of €10, for a total consideration of €17.3 million (US$21.4 million) by way of a public tender offer. The public offering opened on December 15, 2017 and closed on January 26, 2018.

On December 21 and 22, 2017, we acquired additional interests of 6.0% and 1.2% respectively in Astellia at a purchase price of €10 per share for a total cash consideration of €1.9 million (US$2.2 million), which brought our investment in Astellia to 40.3%.

On January 26, 2018, upon the closing of the public tender offer, we acquired an additional interest of 48.1% in Astellia at a purchase price of €10 per share for a total cash consideration of €12.5 million (US$15.5 million), which brought our investment in Astellia to 88.4%, and provided us with control over Astellia.

We re-opened the public tender offer to acquire the remaining shares of Astellia from February 9, 2018 to February 22, 2018. During that period, we acquired an additional interest of 8.9% in Astellia at a purchase price of €10 per share for a total cash consideration of €2.3 million (US$2.8 million), which brought our investment in Astellia to 97.3%.

Finally, on February 28, 2018, we entered into a squeeze-out process to acquire the remaining 2.7% interest in Astellia at a share price of €10, for a total consideration of €0.7 million (US$0.8 million). The binding terms of the squeeze-out process gave us control over Astellia's remaining shares as at February 28, 2018 and consequently, as of that date we controlled 100% of Astellia's shares.

The fair value of the total consideration for all shares of Astellia amounted to €25.9 million (US$32.1 million) and consisted of €21.1 million (US$26.2 million), net of Astellia's cash of €4.8 million (US$5.9 million) at the date of acquisition of control.

From September 8, 2017 to January 25, 2018, the investment in Astellia provided us with significant influence over Astellia, and it was therefore accounted for under the equity method as required by IAS 28, "*Investments in Associates and Joint Ventures*". Under this method, on initial recognition this investment was recognized at cost, and the carrying amount decreased to recognize our share of the net loss of Astellia after the acquisition date. Included in the consolidated statement of earnings for fiscal 2018 is an equity loss pick-up of $2.1 million.

Upon the acquisition of an additional 48.1% interest in Astellia on January 26, 2018 (the "acquisition date"), the acquisition has been considered a business combination, and the acquisition was accounted for by applying the acquisition method as required by IFRS 3, "*Business Combinations*", and the requirements of IFRS 10, "*Consolidated Financial Statements*". Consequently, the fair value of the total consideration transferred was allocated to the assets acquired and liabilities assumed based on management's estimate of their fair value as at the acquisition date. The results of operations of the acquired business have been included in the consolidated financial statements of the company since January 26, 2018. The company recognized the non-controlling interest in Astellia at fair value. At the acquisition date, the carrying value of the 40.3% interest in Astellia held prior to the business combination was re-measured at fair value, that is, €10 per share, and was deemed to have been disposed of on that date. This re-measurement resulted in a gain of $2.1 million that was accounted for in the consolidated statement of earnings for fiscal 2018. In addition, upon the successive acquisitions of the non-controlling interest in February 2018, we recorded a gain in the amount of $0.4 million in shareholders' equity, representing the excess of the carrying value of the non-controlling interest and the purchase price paid.

On October 2, 2017, we acquired all issued and outstanding shares of Yenista Optics S.A.S., renamed EXFO Optics Inc. (EXFO Optics), a privately held company located in France and a supplier of advanced optical test equipment for the research and development and manufacturing markets. The acquisition-date fair value of the total consideration amounted to €9.4 million (US$11.1 million) and consisted of €8.1 million (US$9.5 million) in cash, net of EXFO Optics' cash of €1.3 million (US$1.5 million) at the acquisition date. This acquisition was accounted for by applying the acquisition method as required by IFRS 3, "*Business Combinations*", and the requirements of IFRS 10, "*Consolidated Financial Statements*"; consequently, the fair value of the total consideration transferred was allocated to the assets acquired and liabilities assumed based on management's estimate of their fair value as at the acquisition date. The results of operations of the acquired business have been included in our consolidated financial statements since October 2, 2017, being the date of acquisition.

On October 25, 2017, we modified certain credit facilities whereby existing lines of credit that provided advances up to CA$4.8 million (US$3.7 million) and up to US$6.0 million for operating purposes were cancelled and replaced with a credit facility of CA$28.9 million (US$22.2 million) mainly for the acquisition of the remaining shares of Astellia under the public tender offer.

In addition, on December 21, 2017, we cancelled and replaced this renewed credit facility (that provided advances up to CA$28.9 million (US$22.2 million)), with new revolving credit facilities of up to CA$70.0 million (US$53.6 million) and US$9.0 million. These modified credit facilities were used to finance a portion of the acquisition of Astellia's remaining shares and are used to finance working capital and for other general corporate purposes. As at August 31, 2018, an amount of $11.8 million was drawn from these credit facilities for bank loan and letters of guarantee.

On August 21, 2018, we announced a restructuring plan to accelerate the integration of our newly acquired monitoring and analytics technologies from Astellia and simplify our cost structure and optimize resources as we converge toward fewer sites and reduce our workforce.

This plan will result in pre-tax expenses of approximately $8 million, mainly for severance expenses, costs for remaining non-cancellable operating leases, write-off of research and development income tax credits and impairment of long-lived assets, net of related income taxes. During the fourth quarter of fiscal 2018, we recorded severance expenses of $2.1 million, costs for remaining non-cancelable operating lease of $1.1 million, write-off of research and development income tax credits of $1.2 million and impairment of long-lived assets of $0.2 million, net of related income taxes of $1.2 million, for total after-tax restructuring charges of $3.4 million. The remainder of the restructuring charges, which mainly comprise severance expenses, will be recorded in the first half of fiscal 2019.

In September 2018, as part of our fiscal 2018 restructuring plan and the shutdown of our operations in Toronto, Canada, we entered into a binding agreement to sell one of our buildings for net proceeds of $3.3 million. The transfer of ownership is expected to occur in the second quarter of fiscal 2019 and will result in a pre-tax gain of $1.9 million that will be recorded in our consolidated statement of earnings for that quarter.

Adjusted EBITDA outlook

Short-term targets

Fiscal 2018

In fiscal 2017, we had established an adjusted EBITDA target of $26 million for fiscal 2018, which represented an increase of 18% compared to $22.0 million in 2017. This short-term adjusted EBITDA target had been established based on expected sales increases for both the physical-layer and protocol-layer product lines in fiscal 2018, expected cost savings following our restructuring plan implemented at the end of fiscal 2017, general inflation over our cost of sales and operating expenses, as well as constant currencies. This adjusted EBITDA target excluded the effect of newly acquired Astellia.

In the second quarter of fiscal 2018, considering the recent acquisition of Astellia, the significant impact its integration was expected to have on our business, as well as the seasonality of its sales and profitability, which are typically lower in the first half of the calendar year and stronger in the second half of the calendar year, we expected Astellia to have a negative impact our adjusted EBITDA by approximately $4 million in fiscal 2018, and consequently, in the second quarter of fiscal 2018, we revised our adjusted EBITDA target to $22 million for fiscal 2018.

In the third quarter of fiscal 2018, considering lower than expected sales for the fourth quarter of 2018, we further revised our adjusted EBITDA target to approximately $20 million for the fiscal year.

Actual adjusted EBITDA amounted to $17.2 million in fiscal 2018, below our revised target of $20 million, as actual sales were lower than expected and Astellia's adjusted EBITDA was $1.1 million lower in fiscal 2018 than anticipated.

Fiscal 2019

For fiscal 2019, considering results achieved in fiscal 2018 were below expectations, and the fact we expect a larger proportion of our sales to be subject to longer sales and revenue cycles, we have revised our adjusted EBITDA from at least $30 million to $24 million for that year.

Medium-term target

In fiscal 2017, we established an adjusted EBITDA margin target of 15% of sales for the next three years (2018 to 2020). This medium-term adjusted EBITDA target was established based on an expected sales increase mainly from our protocol-layer product line (which represented 34% of sales in fiscal 2017). This product line delivers a significantly higher gross margin before depreciation and amortization than our physical-layer product line (which represented 66% of our sales in fiscal 2017), due to its richer software content. In addition, we expect higher growth from our protocol-layer product line over the next three years, as it represents a much larger addressable market ($2 billion+) compared to our physical-layer product line ($600 million) and for which our market share is lower compared to our physical-layer product line. This growth is expected to come from organic growth as well as through acquisitions, like those completed in fiscal 2017 and 2018 (Absolute Analysis Inc., Ontology Partners Limited and Astellia) and from related synergies. Furthermore, this sales growth should result in better absorption of our fixed manufacturing costs, which would increase our gross margin before depreciation and amortization and our adjusted EBITDA. A large portion of our operating costs is fixed mainly for research and development expenses as well as administrative expenses. Our adjusted EBITDA target also takes into account constant currencies.

In the second quarter of fiscal 2018, considering the size of the acquisition of Astellia and the period of time required to fully integrate this new acquisition and fully materialize our expected synergies, we extended our medium-term adjusted EBITDA margin target of 15% to fiscal 2021.

These short-term and medium-term adjusted EBITDA targets are forward-looking statements. In addition, as they exclude items that pertain to future events that are not currently estimable with a reasonable degree of accuracy, such as foreign exchange gain or loss and income taxes, no corresponding IFRS measure has been provided.

Sales

We sell our products to a diversified customer base in approximately 100 countries through our direct sales force and channel partners, such as sales representatives and distributors. Most of our sales are denominated in US dollars, euros and Canadian dollars.

In fiscal 2016 and 2018, no customer accounted for more than 10% of our sales, with our top customer representing 7.1% and 9.1% of our sales respectively. In fiscal 2017, our top customer represented 10.1% of our sales.

We believe that we have a vast array of products, a diversified customer base and a good spread across geographical areas, which provides us with reasonable protection against concentration of sales and credit risk.

Cost of Sales

The cost of sales includes raw materials, salaries and related expenses for direct and indirect manufacturing personnel and professional services, as well as overhead costs. Excess, obsolete and scrapped materials are also included in the cost of sales. However, the cost of sales is presented exclusive of depreciation and amortization, which are shown separately in the consolidated statements of earnings.

Operating Expenses

We classify our operating expenses into three main categories: selling and administrative expenses, research and development expenses, as well as depreciation and amortization expenses.

Selling and administrative expenses consist primarily of salaries and related expenses for personnel, sales commissions, travel expenses, marketing programs, professional services, information systems, human resources and other corporate expenses.

Gross research and development expenses consist primarily of salaries and related expenses for engineers and other technical personnel, material component costs as well as fees paid to third-party consultants. We are eligible to receive research and development tax credits on research and development activities carried out in Canada and France. All related research and development tax credits are recorded as a reduction of gross research and development expenses.

RESULTS OF OPERATIONS

(in thousands of US dollars, except per share data, and as a percentage of sales for the years indicated)

Consolidated statement of earnings data [1]:	**2018**	2017	2016	**2018**	2017	2016
Sales	**$ 269,546**	$ 243,301	$ 232,583	**100.0 %**	100.0 %	100.0 %
Cost of sales [2]	**105,004**	94,329	87,066	**39.0**	38.8	37.4
Selling and administrative	**98,794**	86,256	82,169	**36.7**	35.5	35.3
Net research and development	**57,154**	47,168	42,687	**21.2**	19.4	18.4
Depreciation of property, plant and equipment	**5,444**	3,902	3,814	**2.0**	1.6	1.6
Amortization of intangible assets	**10,327**	3,289	1,172	**3.8**	1.4	0.5
Change in fair value of cash contingent consideration	**(670)**	(383)	–	**(0.3)**	(0.2)	–
Interest and other (income) expense	**1,378**	303	(828)	**0.5**	0.1	(0.4)
Foreign exchange (gain) loss	**(1,309)**	978	(161)	**(0.5)**	0.4	–
Share in net loss of an associate	**2,080**	–	–	**0.8**	–	–
Gain on deemed disposal of the investment in an associate	**(2,080)**	–	–	**(0.8)**	–	–
Earnings (loss) before income taxes	**(6,576)**	7,459	16,664	**(2.4)**	3.0	7.2
Income taxes	**5,678**	6,608	7,764	**2.1**	2.7	3.4
Net earnings (loss) for the year	**(12,254)**	851	8,900	**(4.5)**	0.3	3.8
Net loss for the year attributable to non-controlling interest	**(352)**	–	–	**(0.1)**	–	–
Net earnings (loss) for the year attributable to the parent interest [3]	**$ (11,902)**	$ 851	$ 8,900	**(4.4)%**	0.3 %	3.8 %
Basic net earnings (loss) attributable to the parent interest per share	**$ (0.22)**	$ 0.02	$ 0.17			
Diluted net earnings (loss) attributable to the parent interest per share	**$ (0.22)**	$ 0.02	$ 0.16			
Other selected information:						
Gross margin before depreciation and amortization [4]	**$ 164,542**	$ 148,972	$ 145,517	**61.0 %**	61.2 %	62.6 %
Research and development data:						
Gross research and development	**$ 65,243**	$ 53,124	$ 47,875	**24.2 %**	21.8 %	20.6 %
Net research and development	**$ 57,154**	$ 47,168	$ 42,687	**21.2 %**	19.4 %	18.4 %
Restructuring charges included in:						
Cost of sales	**$ 517**	$ 1,697	$ –	**0.2 %**	0.7 %	– %
Selling and administrative expenses	**$ 673**	$ 1,150	$ –	**0.2 %**	0.5 %	– %
Net research and development expenses	**$ 3,219**	$ 2,232	$ –	**1.2 %**	0.9 %	– %
Adjusted EBITDA [4,5,6]	**$ 17,198**	$ 22,041	$ 22,039	**6.4 %**	9.1 %	9.5 %
Consolidated balance sheet data [1]:						
Total assets	**$ 282,623**	$ 259,241	$ 237,793			

(1) Consolidated statement of earnings and balance sheet data has been derived from our consolidated financial statements prepared according with IFRS, as issued by the IASB, except for non-IFRS measures [4].
(2) The cost of sales is exclusive of depreciation and amortization, shown separately.
(3) Includes net loss of Astellia of $12.9 million or 4.8% of sales in fiscal 2018 (nil in 2016 and 2017).
(4) Refer to page 24 for non-IFRS measures.
(5) Astellia negatively impacted the adjusted EBITDA by $5.1 million or 1.9% of sales in fiscal 2018 (nil in 2016 and 2017).
(6) Includes acquisition-related costs of $2.2 million or 0.8% of sales in fiscal 2018 and $1.1 million or 0.4% of sales in 2017 (nil in 2016).

RESULTS OF OPERATIONS

Sales and Bookings

The following tables summarize sales and bookings by product line, in thousands of US dollars:

Sales

	Years ended August 31,		
	2018	**2017**	**2016**
Physical-layer product line	**$ 172,912**	$ 161,864	$ 151,910
Protocol-layer product line	**95,759**	81,905	83,324
	268,671	243,769	235,234
Foreign exchange gains (losses) on forward exchange contracts	**875**	(468)	(2,651)
Total sales	**$ 269,546**	$ 243,301	$ 232,583

Bookings

	Years ended August 31,		
	2018	**2017**	**2016**
Physical-layer product line	**$ 172,094**	$ 165,886	$ 155,320
Protocol-layer product line	**94,724**	86,348	87,631
	266,818	252,234	242,951
Foreign exchange gains (losses) on forward exchange contracts	**875**	(468)	(2,651)
Total bookings	**$ 267,693**	$ 251,766	$ 240,300

Sales by geographic region

The following table summarizes sales by geographic region:

	Years ended August 31,		
	2018	**2017**	**2016**
Americas	**50 %**	55 %	55 %
Europe, Middle-East and Africa (EMEA)	**32**	26	25
Asia-Pacific (APAC)	**18**	19	20
	100 %	100 %	100 %

Fiscal 2018 vs. 2017

In fiscal 2018, our sales increased 10.8% to $269.5 million, compared to $243.3 million in 2017, while our bookings increased 6.3% year-over-year to $267.7 million in 2018 from $251.8 million in 2017, for a book-to-bill ratio of 0.99.

Sales

In fiscal 2018, the increase in total sales year-over-year comes from our physical-layer product line, the positive effect of our recent acquisitions of Astellia (seven-month contribution) and EXFO Optics (eleven-month contribution), as well as the positive currency impact. In fiscal 2018, total sales included $16.4 million from newly acquired Astellia. Otherwise, in fiscal 2018, excluding the positive effect of the recent acquisitions and the positive currency impact, our total sales would have been flat year-over-year, since the year-over-year increase in sales of our physical-layer product line was offset by the decrease of our protocol-layer product line.

In fiscal 2018, sales of our physical-layer product line (optical and copper testing) increased 6.8% year-over-year mainly due to the recent acquisition of EXFO Optics and the positive currency impact. In addition, we reported increased sales in the EMEA region, where we experienced higher sales for our copper-testing solutions and our network quality fiber-monitoring systems (NQMS) (a subgroup within our physical-layer product line) amongst other, as well as increased sales in the Americas for our optical product line, and increased in sales in the APAC region where we also experienced higher sales for our NQMS. Sales of copper-testing solutions and NQMS are characterized by large intermittent orders from customers.

Sales of our protocol-layer product line increased 16.9% year-over-year in fiscal 2018, due to the positive effect of the recent acquisition of Astellia, which contributed $16.4 million in sales, as well as the positive currency impact. Otherwise, sales of our protocol-layer product line decreased in all regions year-over-year mainly due to the streamlining of our passive monitoring product line in the second half of fiscal 2017, as well as the year-over-year decrease in sales of our legacy active monitoring product line.

Bookings

In fiscal 2018, the 6.3% increase in total bookings year-over-year comes from the positive effect of our recent acquisitions of Astellia (seven-month contribution), EXFO Optics (eleven-month contribution) and Ontology (full contribution in 2018 versus six-month contribution in 2017), a solid performance of our NQMS worldwide, as well as the positive currency impact, offset in part by lower bookings from our Transport and Datacom and passive monitoring product lines. In fiscal 2018, total bookings included $16.5 million from newly acquired Astellia.

In fiscal 2018, bookings of our physical-layer product line increased 3.7% year-over-year, due to higher bookings for our NQMS worldwide, the positive effect of the recent acquisition of EXFO Optics, as well as the positive currency impact year-over-year. Otherwise, bookings decreased year-over-year in APAC for both our optical (mainly in China due to delayed investments from NEMs as they prepare for 5G investments) and copper-access product lines, as well as in the Americas for our copper-access product line. Bookings of copper-testing solutions and NQMS are characterized by large intermittent orders from customers.

Bookings of our protocol-layer product line increased 9.7% year-over-year in fiscal 2018, due to the positive effect of the recent acquisitions of Astellia, which contributed $16.5 million in bookings, as well as the positive currency impact. Otherwise, bookings of our protocol-layer product line decreased year-over-year in the APAC region for our Transport and Datacom product line (a subgroup within our protocol-layer product line), which had delivered strong bookings in fiscal 2017 in this region. In addition, bookings of our protocol-layer product line decreased year-over-year in the EMEA region, mainly due to the streamlining of our passive-monitoring product line in the second half of fiscal 2017. Otherwise, despite streamlining of our passive-monitoring product line in 2017, bookings of our protocol-layer product line slightly increased year-over-year in the Americas, which offset in part the decrease in the EMEA and APAC regions.

As we gradually evolve from a supplier of dedicated test instruments to a supplier of end-to-end system-based solutions, our quarterly sales and bookings are becoming increasingly subject to quarterly fluctuations, as we are managing more complex, multimillion-dollar deals that have prolonged sales and revenue recognition cycles related to our protocol-layer products. This has been amplified with the recent acquisitions of Astellia and Ontology.

Fiscal 2017 vs. 2016

In fiscal 2017, our sales increased 4.6% to $243.3 million, compared to $232.6 million in 2016, while our bookings increased 4.8% year-over-year to $251.8 million in 2017 from $240.3 million in 2016, for a book-to-bill ratio of 1.03.

Sales

In fiscal 2017, we made progress in sales (6.6%) for our physical-layer product line, mainly in the Americas, compared to 2016, mostly due to our leadership position in portable optical testing, a 100G investment cycle among CSPs in this region, and growing business with web-scale operators for their data center interconnects. In addition, in fiscal 2017, we benefited to some extent from calendar year-end budget spending on the part of some CSPs in the Americas, versus a nominal amount in 2016. To a lesser extent, sales of our physical-layer product line increased in EMEA despite the negative currency impact year-over-year, which had to some extent a negative impact on our sales and bookings to this region in 2017 compared to 2016. In the APAC region, sales of our physical-layer product line decreased year-over-year in fiscal 2017, especially in China, mainly due to delayed investments from NEMs.

In fiscal 2017, sales of our protocol-layer product line decreased 1.7% year-over-year, mainly in the Americas, despite the positive impact of newly acquired Absolute. In fiscal 2016, we also had recognized a large order from a North American Tier-1 network operator for our EXFO Xtract solution, and we did not close any such large order in fiscal 2017. In addition, the streamlining of our passive monitoring product line in fiscal 2017 had a negative impact on our sales in 2017 compared to 2016. Furthermore, in fiscal 2016, our Transport and Datacom product line (a subgroup within our protocol-layer product line) benefited, to a greater extent, from the 100G investment cycle, especially in the United States, compared to 2017. Otherwise, sales of our protocol-layer product line increased in the EMEA year-over-year, mainly due to the positive impact of recently acquired Ontology, despite the negative currency impact year-over-year. Sales of our protocol-layer product line were flat overall in APAC year-over-year in fiscal 2017.

Finally, in fiscal 2017, we reported lower losses on our forward exchange contracts, which had a $2.2 million positive impact on our total sales year-over-year.

Bookings

In fiscal 2017, we reported a year-over-year increase in total bookings, which mainly comes from the Americas for our physical-layer product line and from the EMEA for our protocol-layer product line, despite negative currency impacts.

In fiscal 2017, our physical-layer product line reported a significant year-over-year increase in bookings in the Americas as we benefited from heightened penetration of mobile network operators for their fronthaul and backhaul networks, increased traction with fixed network operators for their 100G long-haul and metro links and growing business with web-scale operators for their data center interconnects. In addition, as mentioned earlier, in fiscal 2017, we benefited to some extent from calendar year-end budget spending on the part of some CSPs in the Americas, versus a nominal amount in 2016. Otherwise, bookings for our physical-layer product line were flat in the EMEA and APAC year-over-year. The EMEA was to some extent negatively impacted by the decrease in the average value of the British pound and the euro compared to the US dollar year-over-year. In APAC, bookings were negatively impacted by the decrease in bookings in China, mainly due to delayed investments from NEMs, offset by traction gained in the rest of APAC.

Our protocol-layer product lines reported a decrease in total bookings in fiscal 2017 compared to 2016 (-1.5%). Most of the decrease comes from the Americas, despite the positive impact our newly acquired Absolute and Ontology businesses, as our Transport and Datacom product line (a subgroup within our protocol-layer product line) did not reach the same level of orders from the 100G investment cycle, especially in the United States compared to 2016. In addition, in 2016, we received a large order from a North American Tier 1 network operator for our EXFO Xtract solution, and we did not close any such large order in 2017. Otherwise, we made progress in bookings in the EMEA thanks to the recent acquisition of Ontology. In addition, in fiscal 2017, bookings in APAC slightly increased year-over-year. Finally, the streamlining of our passive monitoring product line in fiscal 2017 negatively impacted the bookings of our protocol-layer product line compared to 2016.

GROSS MARGIN BEFORE DEPRECIATION AND AMORTIZATION
(non-IFRS measure – refer to page 24 of this document)

Gross margin before depreciation and amortization amounted to 61.0%, 61.2% and 62.6% of sales in fiscal 2018, 2017 and 2016 respectively.

Fiscal 2018 vs. 2017

In fiscal 2018, gross margin before depreciation and amortization included a negative impact of 0.3% of sales for the acquisition-related deferred revenue fair value adjustment from the acquisition of Astellia (nil in 2017).

In fiscal 2018, gross margin before depreciation and amortization included $0.5 million, or 0.2% of sales in restructuring charges for severance expenses, compared to $1.7 million or 0.7% of sales in 2017.

However, in fiscal 2018, we recorded in our sales foreign exchange gains on our forward exchange contracts, compared to foreign exchange losses in 2017, which contributed to an increase of 0.2% in gross margin before depreciation and amortization year-over-year.

Excluding these items, gross margin before depreciation and amortization would have amounted to 61.3% of sales in fiscal 2018, compared to 61.9% of sales in 2017, slightly lower (0.6%) year-over-year.

In fiscal 2018, newly acquired Astellia, a subgroup within our protocol-product line, delivered lower margins than our typical average margin, and we recorded slightly higher write-offs (excluding those in restructuring expenses) compared to 2017, which had a negative impact on our gross margin before depreciation and amortization year-over-year.

Fiscal 2017 vs. 2016

In fiscal 2017, gross margin before depreciation and amortization included $1.7 million or 0.7% of sales in restructuring charges for severance expenses and inventory writeoffs. Excluding those charges, gross margin before depreciation and amortization would have amounted to 61.9% of sales in fiscal 2017, slightly lower (0.7%) compared to 2016.

In fiscal 2017, our gross margin before depreciation and amortization (excluding the impact of our restructuring charges) was unfavorably affected by product mix within both product lines compared to 2016. In particular, in fiscal 2016, we recognized a large order with a Tier-1 network operator for our EXFO Xtract solution, which had a positive impact on our gross margin before depreciation and amortization during that year as this product delivers strong margins. We did not have any such high-margin deals this year. In addition, in fiscal 2017, our physical-layer product line represented a larger portion of our sales year-over-year, and this product line delivers lower margins than our protocol-layer product line (protocol-layer products have a richer software content), which had a negative impact on our gross margin before depreciation and amortization year-over-year.

However, in fiscal 2017, we recorded in our sales lower foreign exchange losses on our forward exchange contracts, compared to 2016, which contributed to increasing our gross margin before depreciation and amortization by 0.3% year-over-year.

In addition, in fiscal 2017, we recorded lower inventory writeoffs compared to 2016, which contributed to increase our gross margin before depreciation and amortization by an additional 0.2% year-over-year.

SELLING AND ADMINISTRATIVE EXPENSES

Selling and administrative expenses amounted to $98.8 million, $86.3 million and $82.2 million for fiscal 2018, 2017 and 2016 respectively. As a percentage of sales, selling and administrative expenses amounted to 36.7%, 35.5% and 35.3% for fiscal 2018, 2017 and 2016 respectively.

Fiscal 2018 vs. 2017

In fiscal 2018, our selling and administrative expenses increased $12.5 million year-over-year, mainly due to additional expenses following the acquisitions of Astellia (seven-month contribution), EXFO Optics (eleven-month contribution) and Ontology (full contribution in 2018 versus six-month contribution in 2017), inflation, salary increases, as well as increased acquisition-related costs of $1.1 million following the recent business acquisitions. In addition, in fiscal 2018, the decrease in the average value of the US dollar compared to other currencies had a negative impact on our selling and administrative expenses year-over-year.

However, in fiscal 2018, selling and administrative expenses included $0.7 million in restructuring charges compared to $1.2 million in 2017. In addition, the positive impact of our 2017 restructuring plan reduced our selling and administrative expenses year-over-year in fiscal 2018.

Excluding restructuring charges and acquisition-related costs for business combinations, our selling and administrative expenses would have represented 35.7% of sales, 1.1% higher compared to 34.6% of sales in 2017, due to the impact of the recent acquisitions and the negative currency impact.

Fiscal 2017 vs. 2016

In fiscal 2017, our selling and administrative expenses increased $4.1 million year-over-year due to restructuring charges of $1.2 million, additional expenses following the acquisitions of Absolute and Ontology and to support the growth of our business, inflation, salary increases, as well as acquisition-related costs of $1.1 million following the recent business acquisitions.

Excluding restructuring charges and acquisition-related costs for business combinations, which represent 0.9% of sales, our selling and administrative expenses would have represented 34.6% of sales, lower compared to 35.3% of sales in 2016.

RESEARCH AND DEVELOPMENT EXPENSES

Gross research and development expenses

Gross research and development expenses totaled $65.2 million, $53.1 million and $47.9 million for fiscal 2018, 2017 and 2016 respectively. As a percentage of sales, gross research and development expenses amounted to 24.2%, 21.8% and 20.6% for fiscal 2018, 2017 and 2016 respectively, while net research and development expenses accounted for 21.2%, 19.4% and 18.4% of sales for these respective years.

Fiscal 2018 vs. 2017

In fiscal 2018, our gross research and development expenses increased $12.1 million year-over-year, mainly due to additional expenses following the acquisitions of Astellia (seven-month contribution), EXFO Optics (eleven-month contribution) and Ontology (full contribution in 2018 versus six-month contribution in 2017), as well as inflation and salary increases.

In addition, in fiscal 2018, our gross research and development expenses included $3.2 million in restructuring charges compared to $2.2 million in 2017.

Finally, in fiscal 2018, the decrease in the average value of the US dollar compared to other currencies had a negative impact on our gross research and development expenses year-over-year.

However, our gross research and development expenses decreased year-over-year due to the positive impact of our 2017 recent restructuring plan.

Excluding restructuring charges, which represent 1.2% of sales in fiscal 2018 compared to 0.9% of sales in 2017, our gross research and development expenses would have represented 23.0% of sales in 2018, 2.1% higher compared to 20.9% of sales in 2017, due to the impact of the recent acquisitions and the negative currency impact.

Fiscal 2017 vs. 2016

In fiscal 2017, our gross research and development expenses increased $5.2 million year-over-year due to restructuring charges of $2.2 million, additional expenses following the acquisitions of Absolute and Ontology and to support the growth of our business, inflation, salary increases, as well as a shift in the mix and timing of research and development projects, compared to 2016.

Excluding restructuring charges, which represent 0.9% of sales, our gross research and development expenses would have represented 20.9% of sales, almost flat compared to 20.6% of sales in 2016.

Tax Credits and Grants

We are entitled to tax credits for eligible research and development activities conducted in Canada and France.

Tax credits and grants for research and development activities were $8.1 million, $6.0 million and $5.2 million for fiscal 2018, 2017 and 2016 respectively. As a percentage of gross research and development expenses, tax credits and grants reached 12.4%, 11.2% and 10.8% for fiscal 2018, 2017 and 2016 respectively.

Fiscal 2018 vs. 2017

The increase in our tax credits and grants in fiscal 2018, compared to 2017, mainly comes from newly acquired Astellia (seven-month contribution) and EXFO Optics (eleven-month contribution) that are entitled to tax credits and grants on research and development activities carried out in France. This also explains the increase in tax credits and grants as a percentage of gross research and development expenses year-over-year.

Fiscal 2017 vs. 2016

The increase in our tax credits and grants in fiscal 2017, compared to 2016, mainly results from the increase in our gross research and development expenses year-over-year.

In fiscal 2017, the increase in tax credits and grants as a percentage of gross research and development expenses, compared to 2016, mainly comes from the shift in the mix of eligible projects.

DEPRECIATION OF PROPERTY, PLANT AND EQUIPMENT

Depreciation of property, plant and equipment totaled $5.4 million, $3.9 million and $3.8 million for fiscal 2018, 2017 and 2016 respectively.

In fiscal 2018, the year-over-year increase in our depreciation expense, compared to 2017, is due to the acquisitions of Astellia (seven-month contribution), EXFO Optics (eleven-month contribution) and Ontology (full contribution in 2018 compared to six-month contribution in 2017) as well as the decrease in the average value of the US dollar compared to other currencies year-over-year.

AMORTIZATION OF INTANGIBLE ASSETS

In conjunction with the business combinations we completed, we recorded intangible assets primarily consisting of core technologies and customer relationships. In addition, intangible assets include software and brand names. These intangible assets resulted in amortization expenses of $10.3 million, $3.3 million and $1.2 million for fiscal 2018, 2017 and 2016 respectively.

Fiscal 2018 vs. 2017

The increase in our amortization expense in fiscal 2018, compared to 2017, is due to the acquisitions of Astellia (seven-month contribution), EXFO Optics (eleven-month contribution) and Ontology (full contribution in 2018 compared to six-month contribution in 2017), as well as the decrease in the average value of the US dollar compared to other currencies year-over-year.

Fiscal 2017 vs. 2016

The increase in our amortization expense in fiscal 2017, compared to 2016, was due to the acquisitions of Absolute (ten-month contribution in 2017) and Ontology (six-month contribution).

FOREIGN EXCHANGE GAIN (LOSS)

Foreign exchange gains and losses are mainly the result of the translation of operating activities denominated in currencies other than our functional currency, which is the Canadian dollar. A portion of our foreign exchange gains or losses results from the translation of cash balances and deferred income taxes denominated in US dollars. We manage our exposure to currency risk in part with forward exchange contracts. In addition, some of our entities' operating activities are denominated in US dollars, euros and British pounds, which further hedges this risk. However, we remain exposed to a currency risk; namely, any increase in the value of the Canadian dollar compared to the US dollar would have a negative impact on our operating results.

We reported a foreign exchange gain of $1.3 million in fiscal 2018 compared to a loss of $1.0 million in 2017 and a gain of $0.2 million in 2016.

Fiscal 2018

In fiscal 2018, the period-end value of the Canadian dollar decreased versus the US dollar, compared to the previous year-end, which resulted in a foreign exchange gain of $1.3 million during that year. The period-end value of the Canadian dollar decreased 4.0% versus the US dollar to CA$1.3055 = US$1.00 in fiscal 2018, compared to CA$1.2536 = US$1.00 at the end of the previous year. In fiscal 2018, the average value of the Canadian dollar versus the US dollar was CA$1.2768 = US$1.00.

Fiscal 2017

In fiscal 2017, the period-end value of the Canadian dollar increased versus the US dollar compared to the previous year-end, which resulted in a foreign exchange loss of $1.0 million during the year. The period-end value of the Canadian dollar increased 4.6% versus the US dollar to CA$1.2536 = US$1.00 in fiscal 2017 compared to CA$1.3116 = US$1.00 at the end of the previous year. In fiscal 2017, the average value of the Canadian dollar versus the US dollar was CA$1.3212 = US$1.00.

Fiscal 2016

In fiscal 2016, we witnessed some volatility in the value of the Canadian dollar as it fluctuated compared to the US dollar, which overall resulted in a foreign exchange gain of $0.2 million during that period. The period-end value of the Canadian dollar slightly increased 0.3% versus the US dollar to CA$1.3116 = US$1.00 in fiscal 2016 compared to CA$1.3157 = US$1.00 at the end of the previous year. In fiscal 2016, the average value of the Canadian dollar versus the US dollar was CA$1.3278 = US$1.00.

Foreign exchange rate fluctuations also flow through the P&L line items as portions of our sales are dominated in Canadian dollars and euros and significant portions of our cost of sales and operating items are denominated in Canadian dollars, euros, Indian rupees and British pounds, and we report our results in US dollars. In fiscal 2018, the decrease in the average value of the US dollar compared to the Canadian dollar, the euro and the British pound year-over-year, resulted in a negative impact on our financial results. The average value of the US dollar decreased 3.4%, 8.0% and 6.1% respectively year-over-year, compared to the Canadian dollar, the euro and the British pound.

INCOME TAXES

In fiscal 2018, we reported income tax expenses of $5.7 million on a loss before income taxes of $6.6 million, compared to income tax expenses of $6.6 million on earnings before income taxes of $7.5 million in 2017 and income tax expenses of $7.8 million on earnings before income taxes of $16.7 million in 2016.

On December 22, 2017, the US tax reform ("Tax Cuts and Jobs Act") was substantively enacted and reduced the maximum corporate income tax rate from 35% to 21%, effective January 1, 2018. Based on our estimate of deferred tax assets expected to be used in fiscal 2018 and beyond against taxable income in the United States, we recorded a deferred income tax expense of $1.5 million in the consolidated statement of earnings for fiscal 2018 to account for the effect of this new substantively enacted tax rate.

Excluding this one-time income tax expense in fiscal 2018, our distorted tax rates for all periods mainly resulted from the fact that we did not recognize deferred income tax assets for some of our subsidiaries at loss and acquisition-related costs for business combinations are non-deductible for tax purposes. In addition, we had some other non-deductible losses and expenses, such as stock-based compensation costs. However, a significant portion of our foreign exchange gain was a result of the translation of the financial statements of our foreign subsidiaries from their local currency to the functional currency and was therefore non-taxable. Otherwise, our effective tax rate would have been closer to the combined Canadian and provincial statutory tax rate of 27% for this year.

Please refer to note 20 to our consolidated financial statements for a full reconciliation of our income tax provision.

LIQUIDITY AND CAPITAL RESOURCES

Cash Requirements and Capital Resources

As at August 31, 2018, cash and short-term investments totaled $15.0 million, while our working capital was at $32.3 million. Our cash and short-term investments decreased $24.2 million in fiscal 2018, compared to 2017.

The following table summarizes the decrease of cash and short-term investments in fiscal 2018 in thousands of US dollars:

Cash flows provided by operating activities	$	14,370
Bank loan		11,061
Acquisition of Astellia (including non-controlling interest)		(25,767)
Acquisition of EXFO Optics		(9,540)
Acquisition of Ontology (contingent consideration)		(480)
Purchases of capital assets		(10,452)
Repayment of long-term debt and other liabilities		(3,137)
Unrealized foreign exchange loss on cash and short-term investments		(225)
	$	(24,170)

The unrealized foreign exchange loss resulted from the translation, in US dollars, of our Canadian-dollar-denominated cash and short-term investments and was included in accumulated other comprehensive income in the consolidated balance sheet.

Our short-term investments consist of debt instruments issued by high-credit quality corporations; therefore, we consider the risk of non-performance of these financial instruments to be limited. These debt instruments are not expected to be affected by a significant liquidity risk. For the purpose of managing our cash position, we have established a cash management policy, which we follow and monitor on a regular basis.

We believe that our cash balances and short-term investments totaling $15.0 million, combined with our available revolving credit facilities of up to $52.7 million, will be sufficient to meet our liquidity and capital requirements for the foreseeable future, including any possible working capital requirements from our new acquisitions. In addition to these assets and credit facilities, we have unused available lines of credit of $25.1 million for foreign currency exposure related to forward exchange contracts. However, possible operating losses, additional restructuring costs and/or possible investments in or acquisitions of complementary businesses, products or technologies may require additional financing. There can be no assurance that additional debt or equity financing will be available when required or, if available, that it can be secured on satisfactory terms.

Sources and Uses of Cash

We finance our operations and meet our capital expenditure requirements through a combination of cash flows from operating activities, the use of our cash and short-term investments, borrowing under our existing credit facilities as well as the issuance of subordinate voting shares.

Operating activities

Cash flows provided by operating activities were $14.4 million in fiscal 2018, compared to $12.9 million in 2017 and $24.4 million in 2016.

Fiscal 2018 vs. 2017

Cash flows provided by operating activities in fiscal 2018 were attributable to net earnings after items not affecting cash of $8.4 million, and the positive net change in non-cash operating items of $6.0 million; this was mainly due to the positive effect on cash of the decrease of $7.3 million in our accounts receivable due to the timing of receipts and sales during the year, and the increase of $1.0 million in our accounts payable and accrued liabilities and provisions due to timing of purchases and payments during the year. These positive effects on cash were offset in part by the negative effect on cash of the $1.0 million increase in our inventories to meet future demand and the negative effect on cash of the $1.3 million increase in our other assets due to the timing of payments during the year.

Fiscal 2017 vs. 2016

Cash flows provided by operating activities in fiscal 2017 were attributable to net earnings after items not affecting cash of $13.0 million, slightly offset by the negative net change in non-cash operating items of $0.1 million; this was mainly due to the positive effect on cash of the decrease of $4.0 million in our accounts receivable due to the timing of receipts and sales during the year and by the positive effect on cash of the decrease of $0.9 million in our inventories due to improved inventory turns during the year; these positive effects on cash were more than offset by the negative effect on cash of the $2.4 million increase in our income tax and tax credits recoverable due to tax credits earned during the year not yet recovered, the negative effect on cash of the increase of $0.9 million in our prepaid expenses due to timing of payments during the year, and by the negative effect on cash of the decrease of $1.7 million in our accounts payable, accrued liabilities and provisions due to timing of purchases and payments during the year.

Investing activities

Cash flows used by investing activities amounted to $43.9 million in fiscal 2018, compared to $16.5 million in 2017 and $7.0 million in 2016.

Fiscal 2018

In fiscal 2018, we made cash payments of $10.5 million and $32.1 million respectively for the purchase of capital assets and the acquisitions of EXFO Optics and Astellia. In addition, we acquired (net of disposal) $1.3 million worth of short-term investments during the year.

Fiscal 2017

In fiscal 2017, we made cash payments of $12.8 million and $7.2 million respectively for the acquisitions of Absolute and Ontology and the purchase of capital assets. Otherwise, we disposed (net of acquisitions) of $3.5 million worth of short-term investments.

Fiscal 2016

In fiscal 2016, we paid $4.4 million for the purchase of capital assets, and we acquired (net of disposal) $2.6 million worth of short-term investments.

Financing activities

Cash flows provided by financing activities amounted to $4.3 million in fiscal 2018, compared to cash flows used of $1.5 million in 2017 and $1.6 million in 2016.

Fiscal 2018

In fiscal 2018, our bank loan increased by $11.1 million, but we repaid $3.1 million of our long-term debt and other liabilities and paid $3.7 million for the purchase of the non-controlling interest in Astellia.

Fiscal 2017

In fiscal 2017, we repaid the long-term debt of $1.5 million assumed as part of the acquisition of Ontology.

Fiscal 2016

In fiscal 2016, we redeemed share capital under our share repurchase program for a cash consideration of $1.6 million.

Contractual obligations

We are committed under the terms of contractual obligations which have various expiration dates, primarily for the rental of premises and equipment, licensing of intellectual property and long-term debt. The following table summarizes our contractual obligations, on an undiscounted basis, as at August 31, 2018 in thousands of US dollars:

	Long-term debt	Operating leases	Licensing agreements	Total
No later than one year	$ 2,921	$ 3,365	$ 1,492	$ 7,778
Later than one year and no later than five years	5,745	9,519	1,982	17,246
Later than five years	162	502	–	664
	$ 8,828	$ 13,386	$ 3,474	$ 25,688

In addition, on August 31, 2018, we had letters of guarantee amounting to $1.7 million for our own selling and purchasing requirements, which were reserved from our lines of credit; these letters of guarantee expire at various dates through fiscal 2022.

FORWARD EXCHANGE CONTRACTS

We are exposed to currency risk as a result of our export sales of products manufactured in Canada, China, France, and Finland, the majority of which are denominated in US dollars and euros. In addition, we are exposed to currency risk as a result of our research and development activities in India (Indian rupees). These risks are partially hedged by forward exchange contracts. Forward exchange contracts, which are designated as cash flow hedging instruments, qualify for hedge accounting.

As at August 31, 2018, we held forward exchange contracts to sell US dollars for Canadian dollars and Indian rupees at various forward rates, which are summarized as follows:

US dollars – Canadian dollars

Expiry dates	Contractual amounts	Weighted average contractual forward rates
September 2018 to August 2019	$ 26,400,000	1.3029
September 2019 to August 2020	15,700,000	1.2756
September 2020 to May 2021	3,700,000	1.2703
Total	$ 45,800,000	1.2909

US dollars – Indian rupees

Expiry dates	Contractual amounts	Weighted average contractual forward rates
September 2018 to May 2019	$ 4,600,000	67.68

The carrying amount of forward exchange contracts is equal to fair value, which is based on the amount at which they could be settled based on estimated current market rates. The fair value of forward exchange contracts amounted to net gains of $2.3 million and net losses of $0.5 million as at August 31, 2017 and 2018 respectively. The US dollar – Canadian dollar year-end exchange rate was CA$1.3055 = US$1.00 as at August 31, 2018.

SHARE CAPITAL

As at November 12, 2018, EXFO had 31,643,000 multiple voting shares outstanding, entitling to 10 votes each and 23,590,515 subordinate voting shares outstanding. The multiple voting shares and the subordinate voting shares are unlimited as to number and without par value.

OFF-BALANCE SHEET ARRANGEMENTS

As at August 31, 2018, our off-balance sheet arrangements consisted of letters of guarantee amounting to $1.7 million for our own selling and purchasing requirements, which were reserved from our lines of credit; these letters of guarantee expire at various dates through fiscal 2022.

STRUCTURED ENTITIES

As at August 31, 2018, we did not have interests in any structured entities.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The preparation of financial statements in accordance with IFRS requires us to make judgments, estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses and the disclosures of contingent assets and liabilities at the date of the financial statements. On an ongoing basis, we evaluate these estimates and assumptions, including those related to the fair value of assets and liabilities acquired in business combinations, the fair value of financial instruments, the allowance for doubtful accounts receivable, the amount of tax credits recoverable, the provision for excess and obsolete inventories, the estimated useful lives of capital assets, the valuation of long-lived assets, the impairment of goodwill, the recoverable amount of deferred income tax assets, the amount of certain accrued liabilities, provisions and deferred revenue as well as stock-based compensation costs. We base our estimates and assumptions on historical experience and on other factors that we believe to be reasonable under the circumstances.

Critical Judgments in Applying Accounting Policies

(a) Determination of functional currency

We operate in multiple countries and generate revenue and incur expenses in several currencies, namely the Canadian dollar, the US dollar, the euro, the British pound, the Indian rupee and the CNY (Chinese currency). The determination of the functional currency of EXFO and its subsidiaries may require significant judgment. In determining the functional currency of EXFO and its subsidiaries, we take into account primary, secondary and tertiary indicators. When indicators are mixed, and the functional currency is not obvious, we use our judgment to determine the functional currency.

(b) Determination of cash generating units and allocation of goodwill

For the purpose of impairment testing, goodwill must be allocated to each cash-generating unit (CGU) or group of CGUs that are expected to benefit from the synergies of the business combination. Initial allocation and possible reallocation of goodwill to a CGU or a group of CGUs requires judgment.

Critical Estimates and Assumptions

(a) Inventories

We state our inventories at the lower of cost, determined on an average cost basis and net realizable value, and we provide reserves for excess and obsolete inventories. We determine our reserves for excess and obsolete inventories based on the quantities on hand at the reporting dates compared to foreseeable needs, taking into account changes in demand, technology or market. It is possible that additional inventory reserves may occur if future sales are less than our forecasts or if there is a significant shift in product mix compared to our forecasts, which could adversely affect our results.

(b) Income taxes

We are subject to income tax laws and regulations in several jurisdictions. Under these laws and regulations, uncertainties exist with respect to the interpretation of complex tax regulations and the amount and timing of future taxable income. We maintain provisions for uncertain tax positions that we believe appropriately reflect our risk based on our interpretation of laws and regulations. In addition, we make reasonable estimates and assumptions to determine the amount of deferred tax assets that can be recognized in our consolidated financial statements, based upon the likely timing and level of anticipated future taxable income together with tax planning strategies. The ultimate realization of our deferred income tax assets is dependent upon the generation of sufficient future taxable income during the periods in which those assets are expected to be realized.

(c) Tax credits recoverable

Tax credits are recorded provided that there is reasonable assurance that we have complied and will comply with all the conditions related to the tax credits and that the tax credits will be received. The ultimate recovery of our Canadian non-refundable tax credits is dependent upon the generation of sufficient future taxable income during the tax credits carry-forward periods. We have made reasonable estimates and assumptions to determine the amount of non-refundable tax credits that can be recognized in our consolidated financial statements, based upon the likely timing and level of anticipated future taxable income together with tax planning strategies.

As at August 31, 2018, our Canadian non-refundable research and development tax credits recognized in the consolidated balance sheet amounted to $40.0 million. To recover these non-refundable research and development tax credits, we need to generate approximately $267 million (CA$348 million) in pre-tax earnings at the Canadian federal level. To generate $267 million in pre-tax earnings at the Canadian federal level over the estimated recovery period of 15 years, we must generate a pre-tax earnings compound annual growth rate of 2%, which we believe is probable. Our non-refundable research and development tax credits can be carried forward over a twenty-year period.

(d) Impairment of non-financial assets

Impairment exists when the carrying value of an asset or group of assets (cash generating unit (CGU)) exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The fair value less costs of disposal calculation for our CGUs is based on a market approach that relies on input from implicit valuation multiples and recent transactions for comparable assets or businesses, within the same industry. We apply judgment in making adjustments for factors such as size, risk profile or profitability and also consider EXFO's value derived from its market capitalization considering a control premium based on comparable situations. Depending on the market evidence available, we, from time to time, may further supplement this market approach with an income approach that considers discounted cash flows to determine fair value less costs of disposal, as well as the nature and magnitude of research and development activities carried out by the CGU.

In the fourth quarter of fiscal 2018, we performed our annual goodwill impairment test for all CGUs.

For the purposes of the impairment test, goodwill has been allocated to the lowest level within the company at which it is monitored by management to make business decisions, which are the following CGUs:

EXFO CGU	$	13,185,000
Brix CGU		13,327,000
Ontology CGU		7,471,000
Yenista CGU		3,562,000
Astellia CGU		2,347,000
Total	$	39,892,000

In performing the goodwill impairment review of our CGUs, we determined the recoverable amount of goodwill based on fair value less costs of disposal. In estimating the recoverable amount of our CGUs, we used a market approach, which is based on sales multiples, within the range of 1.7 to 3.4 times sales, for comparable businesses with similar operations within the same industry over the past year. We applied judgment in making certain adjustments for factors such as size, risk profile or profitability of the comparable businesses, when compared to our CGU. In addition, for the Brix CGU, we used a liquidation approach based on the level of research and development expenses incurred over the last three years.

As at August 31, 2018, the recoverable amount for all CGUs exceeded their carrying value.

(e) Purchase price allocation in business combinations

The fair value of the total consideration transferred in business combinations (purchase price) must be allocated based on the estimated fair value of acquired net assets at the date of acquisition. Allocating the purchase price requires management to make estimates and judgments to determine assets acquired and liabilities assumed, useful lives of certain long-lived assets and the respective fair value of assets acquired, and liabilities assumed; this may require the use of unobservable inputs, including management's expectations of future revenue growth, operating costs and profit margins as well as discount rates.

i) Growth rates

The assumptions used are based on acquired companies' historical growth, expectations of future revenue growth, expected synergies as well as industry and market trends.

ii) Discount rate

We use a discount rate to calculate the present value of estimated future cash flows, which represents our weighted average cost of capital (WACC).

NEW IFRS PRONOUNCEMENTS NOT YET ADOPTED

Financial Instruments

The final version of IFRS 9, "*Financial Instruments*", was issued in July 2014 and will replace IAS 39, "*Financial Instruments: Recognition and Measurement*". IFRS 9 uses a single approach to determine whether a financial asset is measured at amortized cost or fair value, replacing the multiple rules in IAS 39. The approach in IFRS 9 is based on how an entity manages its financial instruments in the context of its business model and the contractual cash flow characteristics of its financial assets. Most of the requirements in IAS 39 for classification and measurement of financial liabilities were carried forward unchanged to IFRS 9. The new standard also requires a single impairment method to be used, replacing the multiple impairment methods in IAS 39. Requirements relating to hedge accounting, representing a new hedge accounting model, have also been added to IFRS 9. The new standard is effective for annual periods beginning on or after January 1, 2018 and must be applied retrospectively. We will adopt this new standard on September 1, 2018, and its adoption will not have a significant impact on our consolidated financial statements.

Revenue from Contracts with Customers

IFRS 15, "*Revenue from Contracts with Customers*", was issued in May 2014. The objective of this new standard is to provide a single, comprehensive revenue recognition model for all contracts with customers to improve comparability. This new standard contains principles that an entity will apply to determine the measurement of revenue and timing of when it is recognized. The underlying principle is that an entity will recognize revenue to depict the transfer of goods or services to customers at an amount that the entity expects to be entitled to in exchange for those goods or services. This new standard is effective for annual periods beginning on or after January 1, 2018. We will adopt this new standard on September 1, 2018 using the modified retrospective method, with the cumulative effect of the initial application of the standard recognized as an adjustment to the opening balance of retained earnings as at the date of initial application. We will apply this standard retrospectively only to contracts that are not completed at the date of initial application.

We performed an assessment to identify significant areas of impact between our current accounting treatment under IAS 18, "*Revenue*" and the new requirements of IFRS 15. Based on the assessment, we concluded that the main areas of impact relate to the allocation of the transaction price to the various performance obligations under the contracts, the timing of revenue recognition for sales arrangement that contain customer acceptance clauses, and the sale of licenses that provide customers with the "right to use" our intellectual property.

We performed a quantitative analysis of the main areas of impact as of September 1, 2018, and we do not expect the new standard to materially impact our consolidated financial statements.

Leases

IFRS 16, "*Leases*", was issued in January 2016. IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract, that is the customer (lessee) and the supplier (lessor). IFRS 16 will supersede IAS 17, "*Leases*", and related Interpretations. This new standard is effective for annual periods beginning on or after January 1, 2019, with earlier adoption permitted if IFRS 15, "*Revenue from Contracts with Customers*", is also applied. We have not yet assessed the impact that the new standard will have on our consolidated financial statements.

Foreign Currency Transactions and Advance Consideration

IFRIC 22, "*Foreign Currency Transactions and Advance Consideration*", was issued in December 2016. IFRIC 22 addresses how to determine the date of the transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it) and on the derecognition of a non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration in a foreign currency. IFRIC 22 is effective for annual periods beginning on or after January 1, 2018. Early adoption is permitted. We will adopt this interpretation on September 1, 2018 and its adoption will not have a material impact on our consolidated financial statements.

Uncertainty over Income Tax Treatments

IFRIC 23, "*Uncertainty over Income Tax Treatments*", was issued in June 2017. IFRIC 23 provides guidance on how to value uncertain income tax positions based on the probability of whether the relevant tax authorities will accept the company's tax treatments. A company is to assume that a taxation authority with the right to examine any amounts reported to it will examine those amounts and will have full knowledge of all relevant information when doing so. IFRIC 23 is effective for annual periods beginning on or after January 1, 2019. We will adopt this interpretation on September 1, 2019 and are currently assessing the impact that it will have on our consolidated financial statements.

INTERNAL CONTROL

The Chief Executive Officer and the Chief Financial Officer have limited the scope of their design of disclosure controls and procedures and internal control over financial reporting to exclude controls, policies and procedures of the EXFO Optics and Astellia business acquisitions, which were completed on October 2, 2017 and January 26, 2018 respectively, as permitted by the Canadian Securities Administrators' National Instrument 52-109 for 365 days following an acquisition.

Refer to note 3 to our consolidated financial statements for fiscal 2018, for summary financial information about these business acquisitions.

RISKS AND UNCERTAINTIES

Over the past several years, we have managed our business in a difficult environment; gradually evolved from a supplier of dedicated test instruments to a supplier of end-to-end solutions, focused on research and development programs for new and innovative solutions aimed at expected growth pockets in our sector; continued the development of our domestic and international markets; and made strategic acquisitions such as the recent acquisitions of Astellia, EXFO Optics, and Ontology. However, we operate in a highly competitive and complex sector that is in constant evolution, and, as a result, we encounter various risks and uncertainties that must be given appropriate consideration in our strategic management plans and policies.

While strategic acquisitions, like those we made in fiscal 2017 and 2018, and possibly others in the future, are essential to our long-term growth, they also expose us to certain risks and uncertainties related to the rapid and effective integration of these businesses, their products, technologies and personnel as well as key personnel retention. Finally, integration of new acquisitions requires the dedication of management resources, which may attract management's attention away from our day-to-day business and operations.

Our business is subject to the effects of general global and regional economic conditions, particularly conditions in the telecommunications test, service assurance and analytics markets. In the past, our operating results have been adversely affected as a result of unfavorable economic conditions and reduced or delayed capital spending in the Americas, EMEA and APAC. Global and regional economic conditions continue to be volatile and uncertain as reflected by Britain's decision to exit the European Union and trade actions by the US Government. If global and/or regional economic and market conditions, or economic conditions in key markets, remain uncertain or deteriorate, we may experience material adverse impacts on our business. Unfavorable and/or uncertain economic and market conditions may result in lower capital spending or delayed spending by our customers on network test, service assurance and analytics solutions and, therefore, demand for our products could decline and adversely impact our revenue.

Our functional currency is the Canadian dollar. We are exposed to a currency risk because of our export sales of products manufactured in Canada, China, France and Finland, the majority of which are denominated in US dollars and euros, while a significant portion of our cost of sales and operating expenses are denominated in Canadian dollars and currencies such as the euro, British pound, rupee (India) and CNY (China). As a result, even though we manage our exposure to currency risk to some extent with forward exchange contracts (by selling US dollars for Canadian dollars and US dollars for Indian rupees) and certain cost of sales and operating expenses are denominated in currencies other than the Canadian dollar, namely the US dollar and euro, we are exposed to fluctuations in the exchange rates between the Canadian dollar on one hand and the US dollar, euro and other currencies on the other. Any increase in the value of the Canadian dollar relative to the US dollar and other currencies, or any unfavorable variance between the value of the Canadian dollar and the contractual rates of our US dollar - Canadian dollar forward exchange contracts, could result in foreign exchange losses and have a material adverse effect on our operating results. Foreign exchange rate fluctuations also flow through the consolidated statement of earnings line items as a significant portion of cost of sales and our operating expenses are denominated in Canadian dollars, euros and Indian rupees, and we report our results in US dollars. Any decrease in the value of the US dollar relative to the Canadian dollar and other currencies, could have a material adverse effect on our operating results.

Risks and uncertainties related to the communications test, monitoring and analytics industry involve the rapid and timely development of new products that may have short lifecycles and require extensive research and development; the difficulty of adequately predicting market size, trends and customer needs; the ability to quickly adapt our cost structure to changing market conditions to achieve profitability; and the challenge of retaining highly skilled employees.

Given our strategic goals for growth and competitive positioning in our industry, we are continually expanding into international markets, such as the operation of our manufacturing facilities in China and our software development center in India as well as operating other subsidiaries in many countries. This exposes us to certain risks and uncertainties, namely changes in local laws and regulations, multiple technological standards, protective legislation, inter-company transfer price audits, pricing pressure, cultural differences and the management of operations in different countries.

The economic environment of our industry could also result in some of our customers experiencing difficulties, which, consequently, could have a negative effect on our results, especially in terms of future sales and recoverability of accounts receivable. However, the sectorial and geographic diversity of our customer base provides us with a reasonable level of protection in this area. Finally, other financial instruments, which potentially subject us to credit risks, consist mainly of cash, short-term investments and forward exchange contracts. Our short-term investments consist of debt instruments issued by high-credit quality corporations. Our cash and forward exchange contracts are held with or issued by high-credit quality financial institutions; therefore, we consider the risk of non-performance on these instruments to be limited.

We depend on a single supplier or a limited number of suppliers for some of the parts used to manufacture our products for which alternative sources may not be readily available. In addition, all our orders are placed through individual purchase orders, and, therefore, our suppliers may experience difficulties, suffer from natural disasters, delays or stop supplying parts to us at any time. The reliance on a single source or limited number of suppliers could result in increased costs, delivery problems and reduced control over product pricing and quality. Any interruption or delay in the supply of any of these parts could significantly harm our ability to meet scheduled product deliveries to our customers and cause us to lose sales. Furthermore, the process of qualifying a new manufacturer for complex parts designed to our specifications, such as our optical, electronic or mechanical parts, is lengthy and would consume a substantial amount of time for our technical personnel and management. If we were required to change a supplier in a short period of time, our business would be disrupted. In addition, we may be unsuccessful in identifying a new supplier capable of meeting and willing to meet our needs on terms that we would find acceptable.

For a more complete understanding of risk factors that may affect us, please refer to the risk factors set forth in our Annual Report, on Form 20-F published with securities commissions at www.EXFO.com, or at www.sedar.com in Canada or www.sec.gov/edgar.shtml in the U.S.

NON-IFRS MEASURES

We provide non-IFRS measures (non-IFRS sales, gross margin before depreciation and amortization and adjusted EBITDA) as supplemental information regarding our operational performance. Non-IFRS sales represent total sales plus acquisition-related deferred revenue fair value adjustment. Gross margin before depreciation and amortization represents sales, less cost of sales, excluding depreciation and amortization. Adjusted EBITDA represent net earnings (loss) attributable to the parent interest before interest, income taxes, depreciation and amortization, stock-based compensation costs, restructuring charges, acquisition-related deferred revenue fair value adjustment, change in fair value of cash contingent consideration, share in net loss of an associate, gain on the deemed disposal of the investment in an associate, and foreign exchange gain or loss.

These non-IFRS measures eliminate the effect on our IFRS results of non-cash and/or non-operating statement of earnings elements, as well as elements subject to significant volatility such as foreign exchange gain or loss. We use these measures for evaluating our historical and prospective financial performance, as well as our performance relative to our competitors. These non-IFRS measures are also used by financial analysts that evaluate and compare our performance against that of our competitors and industry players in our sector.

Finally, these measures help us plan and forecast future periods as well as make operational and strategic decisions. We believe that providing this information to our investors, in addition to the IFRS measures, allows them to see the company's results through the eyes of management, and to better understand our historical and future financial performance. More importantly, it enables the comparison of our performance on a relatively similar basis against that of other public and private companies in our industry worldwide.

The presentation of this additional information is not prepared in accordance with IFRS. Therefore, the information may not necessarily be comparable to that of other companies and should be considered as a supplement to, not a substitute for, the corresponding measures calculated in accordance with IFRS.

The following table summarizes the reconciliation of non-IFRS sales to IFRS sales, in thousands of US dollars:

	Years ended August 31,		
	2018	**2017**	**2016**
IFRS sales	**$ 269,546**	$ 243,301	$ 232,583
Acquisition-related deferred revenue fair value adjustment	**2,095**	–	–
Non-IFRS sales	**$ 271,641**	$ 243,301	$ 232,583

The following table summarizes the reconciliation of adjusted EBITDA to IFRS net earnings (loss) attributable to the parent interest, in thousands of US dollars:

	Years ended August 31,		
	2018	**2017**	**2016**
IFRS net earnings (loss) attributable to the parent interest for the year	**$ (11,902)**	$ 851	$ 8,900
Add (deduct):			
Depreciation of property, plant and equipment	**5,444**	3,902	3,814
Amortization of intangible assets	**10,327**	3,289	1,172
Interest and other (income) expense	**1,378**	303	(828)
Income taxes	**5,678**	6,608	7,764
Stock-based compensation costs	**1,748**	1,414	1,378
Restructuring charges	**4,409**	5,079	–
Change in fair value of cash contingent consideration	**(670)**	(383)	–
Acquisition-related deferred revenue fair value adjustment	**2,095**	–	–
Share in net loss of an associate	**2,080**	–	–
Gain on deemed disposal of the investment in an associate	**(2,080)**	–	–
Foreign exchange (gain) loss	**(1,309)**	978	(161)
Adjusted EBITDA for the year (1)(2)	**$ 17,198**	$ 22,041	$ 22,039
Adjusted EBITDA in percentage of total sales	**6.4%**	9.1%	9.5%

(1) Astellia negatively impacted adjusted EBITDA by $5.1 million in fiscal 2018 (nil in 2017).

(2) Include acquisition-related costs of $1.1 million and $2.2 million in fiscal 2017 and 2018 respectively.

QUARTERLY SUMMARY FINANCIAL INFORMATION (1)
(tabular amounts in thousands of US dollars, except per share data)

	1st quarter	2nd quarter	3rd quarter	4th quarter	Year ended August 31,
2018					
Sales	$ 63,391	$ 64,722	$ 72,217	$ 69,216	$ 269,546
Cost of sales (2)	$ 23,289	$ 25,326	$ 28,963	$ 27,426	$ 105,004
Net earnings (loss) attributable to the parent interest	$ 2,679	$ (4,660)	$ (5,970)	$ (3,951)	$ (11,902)
Basic and diluted net earnings (loss) attributable to the parent interest per share (3)	$ 0.05	$ (0.08)	$ (0.11)	$ (0.07)	$ (0.22)

	1st quarter	2nd quarter	3rd quarter	4th quarter	Year ended August 31,
2017					
Sales	$ 61,785	$ 60,030	$ 58,505	$ 62,981	$ 243,301
Cost of sales (2)	$ 22,813	$ 22,989	$ 24,555	$ 23,972	$ 94,329
Net earnings (loss) attributable to the parent interest	$ 3,303	$ 1,008	$ (4,304)	$ 844	$ 851
Basic and diluted net earnings (loss) attributable to the parent interest per share	$ 0.06	$ 0.02	$ (0.08)	$ 0.02	$ 0.02

(1) Quarterly financial information has been derived from our unaudited condensed interim consolidated financial statements, which are prepared in accordance with IFRS, as issued by the IASB, applicable to the preparation of interim financial statements, including IAS 34, "*Interim Financial Reporting*". The presentation currency is the US dollar, which differs from the functional currency of the company (Canadian dollar).
(2) The cost of sales is exclusive of depreciation and amortization.
(3) Per share data is calculated independently for each quarter presented. Therefore, the sum of this quarterly information does not equal the corresponding annual information.

Quarterly Sales Analysis

Overall in fiscal 2018, our sales increased 10.8% to $269.5 million compared to $243.3 million in 2017. Refer to section ''Sales and bookings'' elsewhere in this document for explanations about the year-over-year annual increase in sales. On a quarterly basis, our sales fluctuate from quarter to quarter due to timing and magnitude of orders.

Fourth-Quarter Results

Gross margin before depreciation and amortization

In the fourth quarter of fiscal 2018, our gross margin before depreciation and amortization reached 60.4%, 1.5% lower compared to 61.9% for the same period last year.

In the fourth quarter of fiscal 2018, gross margin before depreciation and amortization included $0.5 million, or 0.7% of sales in restructuring charges for severance expenses, compared to $0.1 million or 0.2% of sales in the same period last year.

Excluding restructuring charges, gross margin before depreciation and amortization would have amounted to 61.1% of sales in the fourth quarter of fiscal 2018, compared to 62.1% of sales during the same period last year, 1.0% lower year-over-year.

In the fourth quarter of fiscal 2018, our physical-layer product line represented a larger portion of our sales year-over-year, and this product line delivers lower margins than our protocol-layer product line (protocol-layer products have a richer software content), which had a negative impact on our gross margin before depreciation and amortization year-over-year. In addition, in the fourth quarter of fiscal 2018, our gross margin before depreciation and amortization was unfavorably affected by product mix within our protocol-layer product line (excluding Astellia) compared to the same period last year, which further reduced our gross margin before depreciation and amortization year-over-year. Finally, newly acquired Astellia (a sub-group of our protocol-layer product line) delivered lower margins than our typical average margin.

However, in the fourth quarter of fiscal 2018, we recorded lower inventory writeoffs compared to the same period last year, which increased our gross margin before depreciation and amortization by 0.3% year-over-year.

Net earnings (loss) attributable to the parent interest

Net loss attributable to the parent interest amounted to $4.0 million, or $0.07 per share, in the fourth quarter of fiscal 2018 compared to net earnings attributable to the parent interest of $0.8 million, or $0.02 per diluted share, for the same period last year.

First, in the fourth quarter of fiscal 2018, we recorded net restructuring charges of $3.4 million compared to $1.3 million in the same period last year.

In addition, in the fourth quarter of fiscal 2018, our net loss attributable to the parent interest included a net loss of newly acquired Astellia of $3.9 million compared to nil for the same period last year.

Furthermore, in the fourth quarter of fiscal 2018, excluding restructuring charges and the impact of newly acquired Astellia, our operating expenses (selling, administrative, net research and development, depreciation and amortization expenses) were $1.2 million higher compared to the same period last year, mainly due to general inflation and salary increases as well as the impact of our other recent acquisitions, despite the positive effects of our fiscal 2017 restructuring plan.

Finally, in the fourth quarter of fiscal 2018, we recorded a nominal positive change in the fair value of the cash contingent consideration payable for the acquisition of Ontology, compared to $0.4 million for the same period last year.

However, in the fourth quarter of fiscal 2018, we incurred a foreign exchange loss of $0.1 million compared to $2.9 million in the same period last year due to the fluctuation of the period-end foreign exchange rates.