



Altus Group

**MANAGEMENT'S
DISCUSSION &
ANALYSIS**

2018



Altus Group Limited



Management's Discussion & Analysis December 31, 2018

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The following management's discussion and analysis ("MD&A") is intended to assist readers in understanding Altus Group Limited (the "Company" or "Altus Group"), its business environment, strategies, performance, and outlook and the risks applicable to Altus Group. It should be read in conjunction with our consolidated financial statements and accompanying notes (the "financial statements") for the year ended December 31, 2018, which have been prepared on the basis of International Financial Reporting Standards ("IFRS") and reported in Canadian dollars. Unless otherwise indicated herein, references to "\$" are to Canadian dollars.

Unless the context indicates otherwise, all references to "we", "us", "our" or similar terms refer to Altus Group, and, as appropriate, our consolidated operations.

This MD&A is dated as of February 21, 2019.

Forward-Looking Information

Certain information in this MD&A may constitute "forward-looking information" within the meaning of applicable securities legislation. All information contained in this MD&A, other than statements of current and historical fact, is forward-looking information. Forward-looking information includes, but is not limited to, the discussion of our business and operating initiatives, focuses and strategies, our expectations of future performance for our various business units and our consolidated financial results, and our expectations with respect to cash flows and liquidity. Generally, forward-looking information can be identified by use of words such as "may", "will", "expect", "believe", "plan", "would", "could", "remain" and other similar terminology. All of the forward-looking information in this MD&A is qualified by this cautionary statement.

Forward-looking information is not, and cannot be, a guarantee of future results or events. Forward-looking information is based on, among other things, opinions, assumptions, estimates and analyses that, while considered reasonable by us at the date the forward-looking information is provided, inherently are subject to significant risks, uncertainties, contingencies and other factors that may cause actual results, performance or achievements, industry results or events to be materially different from those expressed or implied by the forward-looking information. The material factors or assumptions that we identified and were applied by us in drawing conclusions or making forecasts or projections set out in the forward-looking information include, but are not limited to: engagement and product pipeline opportunities in Altus Analytics will result in associated definitive agreements; settlement volumes in Property Tax will occur on a timely basis and that assessment authorities will process appeals in a manner consistent with expectations; the successful execution of our business strategies; consistent and stable economic conditions or conditions in the financial markets; consistent and stable legislation in the various countries in which we operate; no disruptive changes in the technology environment; the opportunity to acquire accretive businesses; the successful integration of acquired businesses; and the continued availability of qualified professionals.

Inherent in the forward-looking information are known and unknown risks, uncertainties and other factors that could cause our actual results, performance or achievements, or industry results, to differ materially from any results, performance or achievements expressed or implied by such forward-looking information. Those risks, uncertainties and other factors that could cause actual results to differ materially from the forward-looking information include, but are not limited to: general state of the economy; currency risk; ability to maintain profitability and manage growth; commercial real estate market; competition in the industry; acquisitions; oil and gas sector; ability to attract and retain professionals; information from

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multiple sources; reliance on larger enterprise transactions with longer and less predictable sales cycles; success of new product introductions; ability to respond to technological change and develop products on a timely basis; protection of intellectual property or defending against claims of intellectual property rights of others; ability to implement technology strategy and ensure workforce adoption; information technology governance and security, including cyber security; engagement and product pipeline opportunities do not result in sufficient definitive agreements; property tax assessment regulators do not process appeals in a manner consistent with expectations; fixed-price and contingency engagements; appraisal and appraisal management mandates; Canadian multi-residential market; weather; legislative and regulatory changes; customer concentration and loss of material clients; interest rate risk; credit risk; income tax matters; revenue and cash flow volatility; health and safety hazards; performance of contractual obligations and client satisfaction; risk of legal proceedings; insurance limits; ability to meet solvency requirements to pay dividends; leverage and financial covenants; unpredictability and volatility of common share price; capital investment; and issuance of additional common shares diluting existing shareholders' interests, as described in this document under "Key Factors Affecting the Business".

Given these risks, uncertainties and other factors, investors should not place undue reliance on forward-looking information as a prediction of actual results. The forward-looking information reflects management's current expectations and beliefs regarding future events and operating performance and is based on information currently available to management. Although we have attempted to identify important factors that could cause actual results to differ materially from the forward-looking information contained herein, there are other factors that could cause results not to be as anticipated, estimated or intended. The forward-looking information contained herein is current as of the date of this MD&A and, except as required under applicable law, we do not undertake to update or revise it to reflect new events or circumstances. Additionally, we undertake no obligation to comment on analyses, expectations or statements made by third parties in respect of Altus Group, our financial or operating results, or our securities.

Certain information in this MD&A may be considered as "financial outlook" within the meaning of applicable securities legislation. The purpose of this financial outlook is to provide readers with disclosure regarding Altus Group's reasonable expectations as to the anticipated results of its proposed business activities for the periods indicated. Readers are cautioned that the financial outlook may not be appropriate for other purposes.

Non-IFRS Measures

We use certain non-IFRS measures as indicators of financial performance. Readers are cautioned that they are not defined performance measures, and do not have any standardized meaning under IFRS and may differ from similar computations as reported by other similar entities and, accordingly, may not be comparable to financial measures as reported by those entities. We believe that these measures are useful supplemental measures that may assist investors in assessing an investment in our shares and provide more insight into our performance.

Adjusted Earnings before Interest, Taxes, Depreciation and Amortization, ("Adjusted EBITDA"), represents profit (loss) before income taxes adjusted for the effects of finance costs (income), amortization of intangibles, depreciation of property, plant and equipment, acquisition and related transition costs (income), restructuring costs, share of profit (loss) of associates, unrealized foreign exchange gains (losses), gains (losses) on disposal of property, plant and equipment, gains (losses) on investments, impairment

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charges, non-cash Executive Compensation Plan costs, gains (losses) on hedging transactions, gains (losses) on equity derivatives net of mark-to-market adjustments on related restricted share units ("RSUs") and deferred share units ("DSUs") being hedged and other costs or income of a non-operating and/or non-recurring nature. Adjusted EBITDA margin is Adjusted EBITDA divided by revenues. Refer to page 24 for a reconciliation of Adjusted EBITDA to our financial statements.

Adjusted Earnings (Loss) per Share, ("Adjusted EPS"), represents basic earnings (loss) per share adjusted for the effects of amortization of intangibles acquired as part of business acquisitions, non-cash finance costs (income) related to the revaluation of amounts payable to U.K. unitholders, net of changes in fair value of related equity derivatives, acquisition and related transition costs (income), restructuring costs, share of profit (loss) of associates, unrealized foreign exchange gains (losses), gains (losses) on disposal of property, plant and equipment, gains (losses) on investments, interest accretion on contingent consideration payables, impairment charges, non-cash Executive Compensation Plan costs, gains (losses) on hedging transactions, gains (losses) on equity derivatives net of mark-to-market adjustments on related RSUs and DSUs being hedged and other costs or income of a non-operating and/or non-recurring nature. All of the adjustments are made net of tax. Refer to page 25 for a reconciliation of Adjusted EPS to our financial statements.

Overview of the Business

Altus Group Limited is a leading provider of software, data solutions and independent advisory services to the global commercial real estate ("CRE") industry. Our businesses, Altus Analytics and Altus Expert Services, reflect decades of experience, a range of expertise, and technology-enabled capabilities. Our solutions empower clients to analyze, gain insight and recognize value on their real estate investments. Headquartered in Canada, we have approximately 2,500 employees around the world, with operations in North America, Europe and Asia Pacific. Our clients include some of the world's largest commercial real estate industry participants.

We have three reporting business segments - Altus Analytics, Commercial Real Estate Consulting ("CRE Consulting") and Geomatics.

Altus Analytics

Our Altus Analytics segment consists of revenues from software sold under the ARGUS brand (which includes license sales, maintenance, subscriptions, and related technology services) and from data solutions (that are made available to clients through our Appraisal Management offering, as well as through data subscription products). Altus Analytics clients predominately consist of large owners, managers and investors of CRE assets and CRE funds, as well as other CRE industry participants including service providers, brokers, and developers.

Our ARGUS software solutions are among the most recognized in the CRE industry and are sold globally. Our flagship ARGUS Enterprise ("AE") software is the leading global solution for CRE valuation and portfolio management and is widely recognized as the industry property valuation standard in key CRE markets. AE's suite of functionality enables valuation and cash flow analysis, property budgeting and strategic planning, investment and fund structure forecasting, dynamic reporting capabilities, and scenario sensitivity and risk analysis. Other ARGUS products include ARGUS Developer and ARGUS EstateMaster (software for development feasibility analysis), ARGUS on Demand ("AOD") (a hosted version of AE and ARGUS Developer), ARGUS Voyanta (a cloud-based data management solution), ARGUS Taliance (cloud-

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based solutions for alternative investment firms), and ARGUS Acquire (a cloud-based deal management solution for CRE acquisitions). ARGUS Enterprise, ARGUS Developer and ARGUS EstateMaster are sold as perpetual licenses with ongoing maintenance, or on a subscription basis, and all of our cloud products are sold on a subscription basis.

In addition to our global software solutions, in the U.S., we offer appraisal management solutions with data and analytics functionality that allow institutional real estate investors to perform quarterly performance reviews, benchmarking and attribution analysis of their portfolios with the use of our proprietary data analytics platforms. Through our Appraisal Management offering, we manage the entire valuation process on behalf of our institutional clients, providing independent oversight and expertise while leveraging our data analytics platforms. This offering is also increasingly expanding into Europe and Asia. Our Appraisal Management clients primarily consist of open and closed real estate funds, including large pension funds. The contractual terms of our Appraisal Management agreements are generally for three to five year terms and pricing is primarily based on the number of real estate assets on our platform, adjusted for frequency of valuations and complexity. We enjoy very high contract renewal rates. Our Appraisal Management teams are also engaged from time to time to perform due diligence assignments in connection with CRE transactions.

In Canada, Altus Analytics also includes data subscription products, such as RealNet and Altus InSite, which provide comprehensive real estate information on the Canadian residential, office, industrial and investment markets. Our Canadian data covers new homes, investment transactions and commercial market inventory in key markets, and also provides intelligence on the national housing market and consumer home buying and borrowing patterns.

A significant portion of Altus Analytics revenues is comprised of recurring revenues. Recurring revenues represent revenues related to software and data subscriptions (where the contract value for software subscriptions is recognized ratably over the contract term), maintenance for perpetual licenses, and Appraisal Management contracts. Consistent with recurring revenues disclosed in prior years, this depicts the economics of our renewable contracts.

Commercial Real Estate Consulting

Our CRE Consulting services consist of the Property Tax and Valuation and Cost Advisory business segments. Through our various practice areas, we are well equipped to serve clients with an end-to-end solution that spans the life cycle of CRE assets - from feasibility, development, acquisition, management and disposition. Our professionals possess extensive industry, market and asset-specific knowledge that contribute to our proprietary internal data systems. We have long-standing relationships with the leading CRE market participants - including owner operators, developers, financial institutions, and various CRE asset holders and investors.

Our largest revenue contributor to CRE Consulting is our Property Tax business which operates in Canada, the U.S. and the U.K. Our team of Property Tax professionals help clients minimize the tax burden and reduce the cost of compliance. Our core real estate property tax services include assessment reviews, management and appeals, as well as in the U.S., personal property and state and local tax advisory services. Valuation services, which are predominantly provided in Canada, consist of appraisals of real estate portfolios, valuation of properties for transactional purposes, due diligence and litigation and economic consulting. Our Cost practice, offered in both the private and public sectors in North America and Asia

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Pacific, provides expert services in the areas of construction feasibility studies, budgeting, cost and loan monitoring and project management. Given the strength of our brand, our independence and quality of our work, we enjoy a high rate of client renewals across all of our CRE Consulting businesses. Pricing for our services is based on a fixed fee or time and materials fee basis, and for a significant number of projects in Property Tax, on a contingency basis.

Geomatics

Our Geomatics business operates primarily in Western Canada, with a significant number of clients in the oil and gas exploration and development sector. Geomatics is the practice of recording and managing spatially referenced information, including land surveying, geographic information systems, global positioning systems and light detection and ranging. Our services, performed by highly qualified certified professionals, include land surveys and mapping for setting of property boundaries, route and corridor selection, land settlement, construction developments, and oil field and well-sites. Our competitive advantages include the depth of our team's experience and specialized training, our strong track record of safety, the timeliness and quality of our work, and our geographic strength in Western Canada. Our services are primarily charged on a time and materials fee basis.

Strategy

Real estate investment allocation continues to steadily rise while CRE asset ownership is becoming more institutionalized, complex and globalized. After years of limited investment in technology, there is growing evidence that the CRE market is increasingly embracing technology and starting to better utilize data to optimize assets and mitigate risks. With the increased complexity of the CRE market, there is also a growing need for specialized expert services. Altus Group is at the forefront of this opportunity, with analytics solutions and expert services that help clients navigate the complexities of the CRE market to make better informed decisions and maximize the value of their real estate assets and investments.

We remain competitively positioned to capitalize on the growing demand for CRE technology, data and advisory solutions. Our key competitive strengths in the marketplace are comprised of our industry expertise, our data and software solutions, and the breadth and diversity of our offerings that position us to address a wide range of client needs in the CRE market and our customer base. Our global scale, existing client relationships with some of the world's largest CRE companies, and independence from brokers and asset owners/investors are also key differentiators that enhance our reputation.

Our established industry position and favourable market trends support our long-term growth objectives and our determination to become a global leader in information and data analytics to the CRE market. Our strategy consists of various initiatives that contribute to our broader objective of scaling Altus Group globally with multi-product end-to-end solutions for the CRE market.

Strategic Initiatives

Across the business, we continually identify opportunities for improvement and capitalize on growth prospects to enhance all of our client offerings and internal capabilities. We have a disciplined approach to pursuing investments and prioritize opportunities that support our longer-term growth objectives and help us sustain our market leadership. While we continue to focus on enhancing every business (specifically through data and technology), we are especially focused on the following strategic initiatives for 2019:

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Altus Analytics

Our long-term objective is to transition Altus Analytics from a collection of high value point solutions to an enterprise-grade software and data analytics market leader that unifies valuation and asset management capabilities into a single, cloud-based platform for the CRE industry. To achieve this, we will continue to expand the global adoption of AE while developing a product roadmap aimed at integrating our solutions onto a cloud-based platform that will further enhance recurring revenues.

Our “ARGUS Everywhere” strategy encompasses:

- a) Increasing customer wallet share by broadening the use of AE across the organization and through additional AE modules and ARGUS branded solutions (add-on sales were a significant contributor to total license sales in 2018);
- b) Leveraging our large customer base to drive global adoption of AE, specifically focusing on our largest customers (we are especially focused on our Top 200 global clients, the majority of which have not yet deployed AE globally across their organizations); and
- c) Expanding into new markets (with a specific focus on strengthening our presence in Germany, France and Asia, where our market penetration remains modest).

This strategy complements our focus on pursuing large enterprise transactions with global, multi-product contracts for end-to-end client needs and increasing our recurring revenues through a higher mix of subscription contracts. Our global large client transactions will increasingly also include Appraisal Management solutions. Our product roadmap will continue to focus on integration across all of our capabilities and reflect the addition of functionality, data and applications that will allow clients to increasingly move to a cloud environment. The early phases of our cloud strategy consist of developing new applications that will be cloud-based but synchronized with AE on-premise solutions and AOD through application programming interfaces (API) and portal functionality. These web applications will be sold separately on a SaaS basis.

In addition to our growth strategy for our ARGUS Software business, we remain focused on growing our Appraisal Management offering in the U.S. where favourable market trends support our organic growth initiatives, while expanding our market presence in Europe and Asia Pacific by leveraging our global U.S. relationships. Consistent with past years, we expect growth will be driven by both current customers increasing the number of assets on our platform and net new client additions.

Property Tax

Our Property Tax practice continues to represent an attractive growth area. Our objective is to grow and scale our Property Tax business to a leading, independent global property tax advisory practice that leverages technology and data. Our data and expert knowledge combine to make us a leader in the industry.

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Our strategic initiatives comprise of the following:

- a) Organic growth by leveraging Altus Analytics relationships, and by increasing business development and marketing efforts aimed at increasing market share;
- b) Pursuit of financially accretive acquisitions when opportunities arise - specifically in the U.S. where the market remains fragmented; and
- c) Enhancement of our service offering with technology and data through our Tax Analytics Platform ("TAP") to enhance client value while improving internal efficiencies by automating workflows. In 2019 we plan to leverage TAP in Canada to drive improved performance, while continuing to tailor functionality for the U.S. and U.K. markets for broader adoption in 2020.

Data Opportunity

Our leading Expert Services and Altus Analytics offerings collect valuable and detailed CRE industry data on various asset classes and for many major CRE markets. As ARGUS users increasingly move into a cloud environment, the depth of our data strengthens. This provides us with a unique long-term opportunity to re-purpose and eventually monetize this data to drive differentiation, launch new products and strengthen our recurring revenue streams. We have been laying the groundwork for this opportunity by developing technology that captures and organizes the data that we collect across each of our businesses and through strategic partnerships. In the long term, this infrastructure will enable us to better integrate our current products, to pursue more data-sharing partnerships, and to leverage the data to develop new applications and data-driven products in cloud-based environments.

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Financial and Operating Highlights

Selected Financial Information	Year ended December 31,	
	2018	2017 ⁽¹⁾
<i>In thousands of dollars, except for per share amounts</i>		
Revenues	\$ 510,429	\$ 476,562
Canada	41%	45%
U.S.	36%	38%
Europe	17%	11%
Asia Pacific	6%	6%
Adjusted EBITDA	\$ 70,904	\$ 80,645
Adjusted EBITDA margin	13.9%	16.9%
Profit (loss)	\$ (18,439)	\$ 109,417
Earnings (loss) per share:		
Basic	\$(0.48)	\$2.88
Diluted	\$(0.48)	\$2.83
Adjusted	\$1.05	\$1.11
Dividends declared per share	\$0.60	\$0.60

⁽¹⁾ Restated for the impact of IFRS 15.

Financial Highlights

- Revenues** were \$510.4 million for the year ended December 31, 2018, up 7.1% or \$33.8 million from \$476.6 million in 2017. Acquisitions contributed 4.1% to revenues while organic growth contributed 3.0%. Exchange rate movements against the Canadian dollar impacted revenues by 0.3%. Revenue growth was led by Property Tax and Altus Analytics. Despite experiencing some deferral of revenues from two key markets, Ontario and the U.K., (due to a procedural change), Property Tax revenues grew 11.4%, benefitting from the acquisition of Commercial Valuers & Surveyors Limited ("CVS"), while Altus Analytics grew by 9.7%, boosted by strong growth in subscription revenues. Our Valuation and Cost Advisory businesses also showed positive growth, led by a strong performance from our Canadian Cost practice. Our Geomatics business continued to be negatively impacted by lower activity levels in the oil and gas sector.
- Adjusted EBITDA** was \$70.9 million for the year ended December 31, 2018, down 12.0% or \$9.7 million from \$80.6 million in 2017. Exchange rate movements against the Canadian dollar impacted Adjusted EBITDA by 0.1%. Earnings declined in the year as a result of product roadmap investments at Altus Analytics, and by our Property Tax business which was impacted by procedural changes in two of our largest jurisdictions, Ontario and the U.K., resulting in a high portion of anticipated contingency revenues to be deferred into future quarters.
- Profit (loss)** for the year ended December 31, 2018 was \$(18.4) million, down 116.8% or \$127.8 million from \$109.4 million in 2017. In addition to the impacts on Adjusted EBITDA as discussed above, profit (loss) was impacted by an impairment charge of \$13.7 million booked in Geomatics, in addition to higher amortization of intangibles from recent acquisitions, and offset by a decrease in income tax expense. Additionally, for the year ended December 31, 2017, there was a gain of \$115.2 million related to the partial deemed dispositions and re-measurement of our retained interest in Real Matters Inc. ("Real Matters") that did not reoccur in 2018.

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- For the year ended December 31, 2018, earnings (loss) per share was \$(0.48), basic and diluted, as compared to \$2.88, basic and \$2.83, diluted, in 2017. In 2017, we benefitted from a net gain of \$115.2 million on partial deemed dispositions and re-measurement of our retained interest in Real Matters that did not reoccur in 2018. As a result, our earnings (loss) per share, basic and diluted, declined as compared to 2017.
- For the year ended December 31, 2018, Adjusted EPS was \$1.05, down 5.4% from \$1.11 in 2017.
- We returned \$23.5 million to shareholders in the year through quarterly dividends of \$0.15 per common share, or \$0.60 per share for the year.
- As at December 31, 2018, our bank debt was \$129.2 million, representing a funded debt to EBITDA leverage ratio of 1.79 times (compared to 1.84 times as at December 31, 2017). As at December 31, 2018, cash on hand was \$48.7 million (compared to \$28.1 million as at December 31, 2017).

Operating Highlights

Acquisition of New Market Real Estate Group, LLC

On January 1, 2018, we acquired certain operating assets of New Market Real Estate Group, LLC ("New Market") for \$1.0 million in common shares. Based in Maryland and founded in 2001, New Market offers a full range of commercial real estate services throughout the United States including research, valuation, acquisition, investment analysis and consulting services. New Market was integrated into our Appraisal Management business, part of our Altus Analytics advisory practice.

Acquisition of Aspect Property Consultants LLP

On February 14, 2018, we acquired certain operating assets of Aspect Property Consultants LLP ("Aspect") for £4.3 million (CAD\$7.4 million) in cash, common shares and contingent consideration. As consideration for these assets, we paid cash of £1.8 million (CAD\$3.1 million) and common shares of £0.6 million (CAD\$1.1 million) and we estimated contingent consideration of £1.9 million (CAD\$3.3 million). The purchase agreement provides for maximum contingent consideration of £2.6 million, subject to certain performance targets being achieved over a two-year period from the closing date. With offices located in London, Heathrow and Basingstoke, U.K. and founded in 2009, Aspect is a commercial property consultancy firm specializing in the South East U.K. business space market with a particular focus on the West London warehouse market. This business was integrated into our U.K. Property Tax group.

Acquisition of Taliance Group SAS

On July 1, 2018, we acquired all the issued and outstanding shares of Taliance Group SAS and its subsidiaries ("Taliance") for €20.0 million (CAD\$30.7 million) in cash and common shares, subject to closing adjustments. On closing, €2.2 million (CAD\$3.3 million) of common shares were issued from treasury and the remainder of the purchase price was drawn from the revolving term facility.

Taliance provides cloud-based collaborative business solutions to alternative investment firms globally allowing them to improve their modelling, forecasting and risk management processes in real time. Based in Paris, Taliance also has offices in London and New York. The addition of Taliance, which can be deployed and integrated with ARGUS Enterprise, allows us to expand our position in Europe and to deliver cloud software solutions with a comprehensive investment management capability that provides flexibility

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and transparency to manage the most complex investment structures and scenarios. Taliance also provides a foundation for growth in the fund management segment of the market globally. Taliance is currently sold as a stand-alone offering, ARGUS Taliance, under our Altus Analytics banner.

Restructuring Activities

In Q1 of 2018, we undertook and completed restructuring activities in Geomatics to reduce costs. In connection with these restructuring activities, a total of \$2.9 million in restructuring costs was recorded in the year. These charges relate primarily to employee severance costs and onerous leases.

In Q2 of 2018, we initiated restructuring activities in our Property Tax practice as a result of our integration efforts in the U.K. following the acquisition of CVS. This was completed in Q4 of 2018. In connection with these restructuring activities, a total of \$3.6 million in restructuring costs was recorded in the year. These charges relate primarily to employee severance costs and onerous leases.

Sale of Investment in Real Matters

In September 2018, we sold our shares related to our investment in Real Matters for net proceeds of \$54.2 million. The loss included in other comprehensive income (loss) up to the date of disposition of \$70.8 million was transferred to retained earnings. In October 2018, the proceeds were used to reduce the borrowings under the bank credit facilities.

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Discussion of Operations

Year and Quarter Ended December 31, 2018

<i>In thousands of dollars, except for per share amounts</i>	Year ended December 31,		Quarter ended December 31,	
	2018	2017 ⁽¹⁾	2018	2017 ⁽¹⁾
Revenues	\$ 510,429	\$ 476,562	\$ 130,885	\$ 122,317
Expenses				
Employee compensation	330,612	295,173	87,048	76,031
Occupancy	21,340	20,709	5,399	5,546
Office and other operating	98,037	87,443	26,903	22,609
Depreciation and amortization	49,114	36,444	11,254	10,957
Acquisition and related transition costs	2,394	3,319	137	2,149
Share of loss of associates	-	2,420	-	-
Restructuring costs	6,371	4,739	(87)	-
(Gain) loss on investments	(43)	(115,179)	38	-
Impairment charge	13,700	-	13,700	-
Finance costs, net	6,701	3,633	1,845	1,281
Profit (loss) before income taxes	(17,797)	137,861	(15,352)	3,744
Income tax expense (recovery)	642	28,444	(633)	7,132
Profit (loss) for the period	\$ (18,439)	\$ 109,417	\$ (14,719)	\$ (3,388)

⁽¹⁾ Restated for the impact of IFRS 15.

Revenues

Revenues were \$510.4 million for the year ended December 31, 2018, up 7.1% or \$33.8 million from \$476.6 million in 2017. For the year ended December 31, 2018, exchange rate movements against the Canadian dollar impacted revenues by 0.3%. Acquisitions contributed 4.1% and the remaining 3.0% was organic. The revenue growth was driven by steady performance from our Altus Analytics business and acquisitive growth from Property Tax. Revenues were \$130.9 million for the quarter ended December 31, 2018, up 7.0% or \$8.6 million from \$122.3 million in the same period in 2017. For the quarter ended December 31, 2018, exchange rate movements against the Canadian dollar impacted revenues by 1.4%. Acquisitions contributed 2.1% and the remaining 4.9% was organic. The revenue growth was driven by steady performance from our Altus Analytics business.

Employee Compensation

Employee compensation was \$330.6 million for the year ended December 31, 2018, up 12.0% or \$35.4 million from \$295.2 million in 2017. For the quarter ended December 31, 2018, employee compensation was \$87.0 million, up 14.5% or \$11.0 million from \$76.0 million in the same period in 2017. For the year and quarter ended December 31, 2018, the increase in compensation was mainly due to acquisitions and headcount additions mostly to support product development within Altus Analytics. As a partial offset to the increases, there were lower accruals of variable compensation and a decline in employee compensation at Geomatics, due to reduced activity levels and restructuring. For the year and quarter ended December 31, 2018, employee compensation as a percentage of revenues was 64.8% and 66.5%, as compared to 61.9% and 62.2% in the corresponding periods in 2017, respectively.

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Occupancy

Occupancy was \$21.3 million for the year ended December 31, 2018, up 2.9% or \$0.6 million from \$20.7 million in 2017. For the quarter ended December 31, 2018, occupancy was \$5.4 million, down 1.8% or \$0.1 million from \$5.5 million in the same period in 2017. For the year and quarter ended December 31, 2018, occupancy costs increased as a result of the CVS and Taliance acquisitions. For the year and quarter ended December 31, 2018, occupancy as a percentage of revenues was 4.2% and 4.1%, as compared to 4.3% and 4.5% in the corresponding periods in 2017, respectively.

Office and Other Operating Costs

Office and other operating costs were \$98.0 million for the year ended December 31, 2018, up 12.1% or \$10.6 million from \$87.4 million in 2017. For the quarter ended December 31, 2018, office and other operating costs were \$26.9 million, up 19.0% or \$4.3 million from \$22.6 million in the same period in 2017. For the year and quarter ended December 31, 2018, the increase was from acquisitions and technology-related spend. For the year and quarter ended December 31, 2018, office and other operating costs as a percentage of revenues was 19.2% and 20.6%, as compared to 18.3% and 18.5% in the corresponding periods in 2017, respectively.

Depreciation and Amortization

Depreciation and amortization was \$49.1 million for the year ended December 31, 2018, as compared to \$36.4 million in 2017. For the quarter ended December 31, 2018, depreciation and amortization was \$11.3 million, as compared to \$11.0 million in the same period in 2017. For the year and quarter ended December 31, 2018, the increase in depreciation and amortization was due to amortization of intangibles acquired on recent acquisitions.

Acquisition and Related Transition Costs

Acquisition and related transition costs was \$2.4 million for the year ended December 31, 2018, as compared to \$3.3 million in 2017. For the quarter ended December 31, 2018, acquisition and related transition costs were \$0.1 million, as compared to \$2.1 million in the same period in 2017. For the year and quarter ended December 31, 2018, expenses were primarily related to the acquisition of CVS and Taliance.

Share of Loss of Associates and (Gain) Loss on Investments

Share of loss of associates was \$nil for the year ended December 31, 2018, as compared to \$2.4 million in 2017. For the quarter ended December 31, 2018, share of loss of associates was \$nil, in line with the same period in 2017. In 2017, the amount represents our proportionate share in the loss as well as an amortization charge on acquired intangibles for Real Matters; however, it is not applicable after its initial public offering in Q2 of 2017. Gain on investments was \$nil for the year ended December 31, 2018, as compared to \$115.2 million in 2017. For the quarter ended December 31, 2018, loss on investments was \$nil, in line with the same period in 2017. In 2017, the amount represents the gain on partial deemed dispositions and re-measurement of our retained interest in Real Matters, as compared to revaluations of our investments in partnerships in 2018.

Restructuring Costs

In Q1 of 2018, we undertook and completed restructuring activities in Geomatics to reduce costs. In connection with these restructuring activities, a total of \$2.9 million in restructuring costs were recorded in the year ended December 31, 2018. These charges relate primarily to employee severance costs and onerous leases.

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In Q2 of 2018, we initiated restructuring activities in our Property Tax practice as a result of our integration efforts in the U.K. following the acquisition of CVS. This was completed in Q4 of 2018. In connection with these restructuring activities, a total of \$3.6 million in restructuring costs was recorded in the year. These charges relate primarily to employee severance costs and onerous leases.

In addition, in Q1 of 2018, restructuring provisions made in prior years in the amount of \$0.2 million were released and credited to profit (loss).

Impairment of Geomatics

Impairment charge was \$13.7 million for the year ended December 31, 2018, as compared to \$nil in 2017. On December 2, 2018, the Government of Alberta announced that it is mandating a short-term reduction in oil production in order to draw down the significant storage of raw crude and bitumen. Due to this announcement, the market conditions worsened in Western Canada for Geomatics services, given the impact of oil prices on drilling and pipeline activities. As a result, in the quarter ended December 31, 2018, we recorded a goodwill impairment charge of \$13.7 million (2017 - \$nil) reflecting the worsening market conditions.

Finance Costs, Net

<i>In thousands of dollars</i>	Year ended December 31,			Quarter ended December 31,		
	2018	2017	% Change	2018	2017	% Change
Interest on borrowings	\$ 6,048	\$ 4,912	23.1%	\$ 1,358	\$ 1,332	2.0%
Unwinding of discounts	684	177	286.4%	177	104	70.2%
Change in fair value of amounts payable to U.K. unitholders, net of change in fair value of related equity derivatives	-	32	(100.0%)	-	-	-
Change in fair value of interest rate swaps (not designated as cash flow hedges)	218	(1,362)	(116.0%)	367	(145)	(353.1%)
Finance income	(249)	(126)	97.6%	(57)	(10)	470.0%
Finance costs, net	\$ 6,701	\$ 3,633	84.4%	\$ 1,845	\$ 1,281	44.0%

Finance costs, net for the year ended December 31, 2018 was \$6.7 million, up 84.4% or \$3.1 million from \$3.6 million in 2017. Our finance costs increased due to higher borrowings for acquisitions and an adverse change in the fair value of interest rate swaps compared to the same period in 2017.

For the quarter ended December 31, 2018, finance costs, net was \$1.8 million, up 44.0% or \$0.5 million from \$1.3 million in the same period in 2017. Our finance costs increased due to higher borrowings for acquisitions and an adverse change in the fair value of interest rate swaps compared to the same period in 2017.

Income Tax Expense

Income tax expense for the year ended December 31, 2018 was \$0.6 million, as compared to \$28.4 million in 2017. A significant amount of our earnings is derived outside of Canada and as a result a change in the mix of earnings and losses in countries with differing statutory tax rates have impacted our effective tax rates for the year ended December 31, 2018.

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For the quarter ended December 31, 2018, income tax expense (recovery) was \$(0.6) million, as compared to \$7.1 million in the same period in 2017. A significant amount of our earnings is derived outside of Canada and as a result a change in the mix of earnings and losses in countries with differing statutory tax rates have impacted our effective tax rates for the quarter ended December 31, 2018.

Profit (Loss)

Profit (loss) for the year ended December 31, 2018 was \$(18.4) million and \$(0.48) per share, basic and diluted, as compared to \$109.4 million and \$2.88 per share, basic and \$2.83 per share, diluted, in 2017.

For the quarter ended December 31, 2018, loss was \$14.7 million and \$(0.38) per share, basic and diluted, as compared to \$3.4 million and \$(0.09) per share, basic and diluted, in the same period in 2017.

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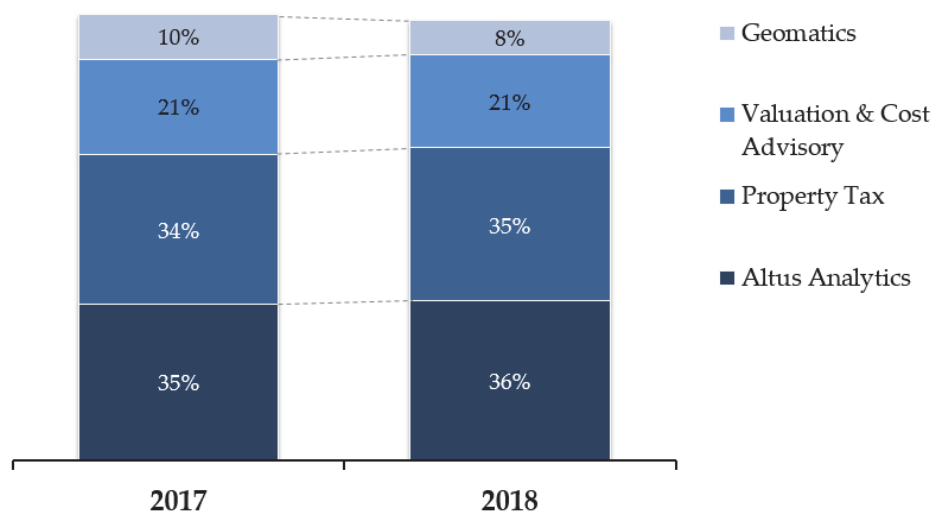
Revenues and Adjusted EBITDA by Business Unit

Revenues <i>In thousands of dollars</i>	Year ended December 31,			Quarter ended December 31,		
	2018	2017 ⁽¹⁾	% Change	2018	2017 ⁽¹⁾	% Change
Altus Analytics	\$ 183,428	\$ 167,660	9.4%	\$ 51,826	\$ 41,482	24.9%
Expert Services:						
Commercial Real Estate Consulting	283,948	261,207	8.7%	67,692	69,405	(2.5%)
Geomatics	43,632	48,536	(10.1%)	11,481	11,589	(0.9%)
Intercompany eliminations	(579)	(841)	31.2%	(114)	(159)	28.3%
Total	\$ 510,429	\$ 476,562	7.1%	\$ 130,885	\$ 122,317	7.0%

Adjusted EBITDA <i>In thousands of dollars</i>	Year ended December 31,			Quarter ended December 31,		
	2018	2017 ⁽¹⁾	% Change	2018	2017 ⁽¹⁾	% Change
Altus Analytics	\$ 41,478	\$ 46,837	(11.4%)	\$ 10,276	\$ 6,747	52.3%
Expert Services:						
Commercial Real Estate Consulting	48,820	52,385	(6.8%)	2,837	7,858	(63.9%)
Geomatics	3,598	3,493	3.0%	877	32	2,640.6%
Corporate	(22,992)	(22,070)	4.2%	1,131	5,312	78.7%
Total	\$ 70,904	\$ 80,645	(12.1%)	\$ 15,121	\$ 19,949	(24.2%)

⁽¹⁾ Restated for the impact of IFRS 15.

Revenue Contribution ⁽¹⁾:



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Altus Analytics

<i>In thousands of dollars</i>	Year ended December 31,			Quarter ended December 31,		
	2018	2017 ⁽¹⁾	% Change	2018	2017 ⁽¹⁾	% Change
Revenues	\$ 183,428	\$ 167,660	9.4%	\$ 51,826	\$ 41,482	24.9%
Adjusted EBITDA ⁽²⁾	\$ 41,478	\$ 46,837	(11.4%)	\$ 10,276	\$ 6,747	52.3%
Adjusted EBITDA Margin ⁽²⁾	22.6%	27.9%		19.8%	16.3%	

⁽¹⁾ Restated for the impact of IFRS 15.

⁽²⁾ Q4 margin includes bonuses which were accrued in quarterly corporate costs in the previous three quarters.

Year End Discussion

Revenues were \$183.4 million for the year ended December 31, 2018, up 9.4% or \$15.7 million from \$167.7 million in 2017. Revenues improved on higher software contract sales (including subscription and renewals), maintenance, appraisal management and software services, offset by lower due diligence assignments. The acquisition of Taliance added 1.5% to revenues. Foreign exchange differences had a negligible impact to revenue growth.

In 2018, we saw significant sales of AE come from add-on sales to existing customers, followed by sales to net new customers and from residual conversions of our legacy ValCap customer base in the U.K. For the year, we also saw a change in the mix of our software revenues from increasing subscription contracts compared to perpetual licenses. The increase in subscription revenues came from both on-premise AE subscription contracts and from AOD sales. In Q2 2018 we benefitted from a new significant multi-year subscription contract, followed by a large, multi-year subscription renewal in Q4 2018. These contracts were deemed "right of use" under IFRS 15, and as a result, a portion of those revenues were recognized upfront at the time of delivery of the license rather than ratably over the term of the subscription contract. The structure of both of these contracts provides us with an opportunity to upsell future products.

In 2018, our Appraisal Management offering also delivered strong year-over-year growth both in existing customer growth and new customer wins, as well as from higher revenues from international markets.

Recurring revenues, as described above in the Overview of the Business, were \$130.1 million for the year ended December 31, 2018, up 10.3% or \$12.1 million from \$118.0 million in 2017.

Adjusted EBITDA was \$41.5 million for the year ended December 31, 2018, down 11.4% or \$5.3 million from \$46.8 million in 2017. Changes in foreign exchange impacted Adjusted EBITDA by (0.7%). Adjusted EBITDA decreased primarily as a result of higher expenses related to investments in ARGUS product development activities (such as cloud functionality), higher marketing spend and increased sales capacity to expand our efforts in enterprise selling and expansion into Europe and Asia. Earnings were also impacted by the acquisition of Taliance.

Quarterly Discussion

Revenues were \$51.8 million for the quarter ended December 31, 2018, up 24.9% or \$10.3 million from \$41.5 million in the same period in 2017. Revenues improved on higher software contract sales (including subscription and renewals), maintenance, appraisal management and software services, offset by lower due diligence assignments. The acquisition of Taliance added 2.9% to revenues. A notable contributor to growth in the fourth quarter was a significant multi-year subscription contract renewal. This contract was

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deemed "right of use" under IFRS 15, and as a result, a portion of its revenues were recognized upfront at the time of delivery of the license rather than ratably over the term of the subscription contract.

Recurring revenues, as described above in the Overview of the Business, were \$34.4 million for the quarter ended December 31, 2018, up 15.1% or \$4.5 million from \$29.9 million in the same period in 2017. Movements in the exchange rate against the Canadian dollar impacted revenues by 3.1%.

Adjusted EBITDA was \$10.3 million for the quarter ended December 31, 2018, up 52.3% or \$3.6 million from \$6.7 million in the same period in 2017. Changes in foreign exchange impacted Adjusted EBITDA by 6.6%. Adjusted EBITDA increased on higher revenues in the quarter, specifically benefitting from the accounting impact from the significant contract renewal as discussed above.

Outlook

Our Altus Analytics business continues to represent an attractive growth area for our company supported by favourable market trends of growing global demand for CRE-related technology and data solutions.

In 2019, we expect our ARGUS software revenues to be driven by global deployment of AE across our clients' organizations, expanding AE into new markets with a specific focus on strengthening our presence in Germany, France and Asia, continued add-on sales (up-selling and cross-selling targeting more users and added functionality), and increasing sales from other ARGUS branded products. We will continue to pursue multi-product enterprise deals to serve the end-to-end needs of large global clients, although these types of contracts have longer sales cycles. We remain focused on increasing our sales focus on enterprise selling, targeting large global transactions and increased subscription contracts. Our product roadmap will continue to prioritize integration across all of our capabilities, cloud functionality, and standard software upgrades to our existing solutions, including upgrading AE with enhanced local functionality for Germany and France.

We expect that growth from our Appraisal Management offering will be driven by current customers adding more assets on our platform and from new clients, in the U.S. and in international markets. We continue to have opportunity for organic growth in the U.S. by expanding our penetration with closed end funds and pension funds, and with expanding our work with our global clients abroad, namely in Europe and Asia Pacific.

For the first quarter of 2019, we expect percentage year-over-year revenue growth to be in the mid-teens.

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Commercial Real Estate Consulting

<i>In thousands of dollars</i>	Year ended December 31,			Quarter ended December 31,		
	2018	2017 ⁽¹⁾	% Change	2018	2017 ⁽¹⁾	% Change
Revenues						
Property Tax	\$ 176,734	\$ 158,696	11.4%	\$ 39,110	\$ 41,972	(6.8%)
Valuation and Cost Advisory	107,214	102,511	4.6%	28,582	27,433	4.2%
Revenues	\$ 283,948	\$ 261,207	8.7%	\$ 67,692	\$ 69,405	(2.5%)
Adjusted EBITDA						
Property Tax	\$ 36,029	\$ 40,346	(10.7%)	\$ 324	\$ 5,064	(93.6%)
Valuation and Cost Advisory	12,791	12,039	6.2%	2,513	2,794	(10.1%)
Adjusted EBITDA ⁽²⁾	\$ 48,820	\$ 52,385	(6.8%)	\$ 2,837	\$ 7,858	(63.9%)
Adjusted EBITDA Margin ⁽²⁾	17.2%	20.1%		4.2%	11.3%	

⁽¹⁾ Restated for the impact of IFRS 15.

⁽²⁾ Q4 margin includes bonuses which were accrued in quarterly corporate costs in the previous three quarters.

Year End Discussion

Revenues were \$283.9 million for the year ended December 31, 2018, up 8.7% or \$22.7 million from \$261.2 million in 2017. Property Tax revenues increased by 11.4%, primarily as a result of acquisitive growth in the U.K., which contributed 1.4% to growth. Overall, although we had organic revenue growth from our various jurisdictions (notably Western Canada in the first half of the year), annual revenues were impacted by procedural changes in Ontario and the U.K., resulting in a significant deferral of anticipated contingency revenues into 2019. Exchange rate fluctuations impacted Property Tax revenues by 0.9%. Our Valuation and Cost Advisory revenues increased by 4.6% driven by strong performance from our Canadian Cost practice. Changes in exchange rates impacted CRE Consulting revenues by 0.3%.

Adjusted EBITDA was \$48.8 million for the year ended December 31, 2018, down 6.8% or \$3.6 million from \$52.4 million in 2017. The decline in earnings resulted primarily from lower earnings from our Property Tax practice, as contingency revenues have a direct impact on earnings, partly offset by the growth in earnings we experienced in our Valuation and Cost Advisory practices. Changes in exchange rates impacted CRE Consulting Adjusted EBITDA by 0.8%.

Quarterly Discussion

Revenues were \$67.7 million for the quarter ended December 31, 2018, down 2.5% or \$1.7 million from \$69.4 million in the same period in 2017. Our Property Tax revenues declined during the fourth quarter as performance continued to be impacted by the process changes in Ontario and the U.K., resulting in a deferral of anticipated contingency revenues into 2019. Although we experienced higher settlement revenues in the fourth quarter than we did in the third, settlement activity levels continued to be below prior year. Our Valuation and Cost Advisory revenues increased by 4.2%, primarily due to strong performance from our Canadian Valuation Advisory practice. Changes in exchange rates impacted CRE Consulting revenues by 0.7%.

Adjusted EBITDA was \$2.8 million for the quarter ended December 31, 2018, down 63.9% or \$5.1 million from \$7.9 million in the same period in 2017, resulting from a decrease in revenues from our Property Tax

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business as contingency revenues have a direct impact on earnings. Changes in exchange rates impacted CRE Consulting Adjusted EBITDA by 1.2%.

Outlook

Our Property Tax business continues to represent an attractive growth area for our company driven by a steady demand for our specialized services. In 2019, we expect to benefit from a rebound of activity in two key markets, Ontario and the U.K., both of which are in year three of their respective four-year cycles that began in 2017. Both of these markets have been impacted by government-driven process changes that caused a deferral of appeal settlements, where a high portion of revenues are derived on a contingency basis.

We continue to expect 2019 to be a record revenue year for our Property Tax practice. Although we expect lower revenues in the first quarter than the prior year, we expect revenues to increase beginning in the second quarter, in part impacted by some seasonality trends in the U.K. On a comparative basis, the first quarter of 2018 benefitted from strong performance in Western Canada and a spill-over of case settlements from the previous cycles in both Ontario and the U.K. Given the nature of this business (as discussed in more detail in the cyclical and seasonal trends), we expect to experience typical quarterly variability in our financial performance.

Our Valuation and Cost Advisory practices enjoy significant market share and as a result, are expected to continue growing modestly. Growth is expected to be driven by operating leverage, enhanced efficiency and productivity from technology, and improved cross-selling across the organization.

Geomatics

<i>In thousands of dollars</i>	Year ended December 31,			Quarter ended December 31,		
	2018	2017 ⁽¹⁾	% Change	2018	2017 ⁽¹⁾	% Change
Revenues	\$ 43,632	\$ 48,536	(10.1%)	\$ 11,481	\$ 11,589	(0.9%)
Adjusted EBITDA ⁽²⁾	\$ 3,598	\$ 3,493	3.0%	\$ 877	\$ 32	2,640.6%
Adjusted EBITDA Margin ⁽²⁾	8.2%	7.2%		7.6%	0.3%	

⁽¹⁾ Restated for the impact of IFRS 15.

⁽²⁾ Q4 margin includes bonuses which were accrued in quarterly corporate costs in the previous three quarters.

Year End Discussion

Revenues were \$43.6 million for the year ended December 31, 2018, down 10.1% or \$4.9 million from \$48.5 million in 2017. We experienced lower revenues as activity levels remain depressed in oil drilling and gas exploration.

Adjusted EBITDA was \$3.6 million for the year ended December 31, 2018, up 3.0% or \$0.1 million from \$3.5 million 2017. Earnings increased marginally over prior year as we adjusted our operating capacity to current market conditions.

Quarterly Discussion

Revenues were \$11.5 million for the quarter ended December 31, 2018, down 0.9% or \$0.1 million from \$11.6 million in the same period in 2017. Revenues were comparable to prior year.

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Adjusted EBITDA was \$0.9 million for the quarter ended December 31, 2018, up 2,640.6% or \$0.9 million from \$0.03 million in the same period in 2017. Earnings improved significantly on comparable revenues, and improved operating costs more aligned to current market conditions.

In addition, excluded from Adjusted EBITDA is a Geomatics goodwill impairment charge of \$13.7 million reflecting the challenging environment.

Outlook

Our Geomatics business continues to be impacted by the market downturn in the oil and gas industry. Given our strong revenue exposure to the oil and gas industry in Western Canada, we continue to be impacted by reduced capital spending in this sector and ongoing pricing pressures. Following various cost cutting and optimization initiatives undertaken in 2018, we expect Geomatics to remain profitable in 2019.

Corporate Costs

Year End Discussion

Corporate costs (recovery) were \$23.0 million for the year ended December 31, 2018, as compared to \$22.1 million in 2017. Corporate costs increased primarily on higher technology-related spend. For the year ended December 31, 2018, corporate costs as a percentage of revenues was 4.5%, as compared to 4.6% in 2017.

Quarterly Discussion

Corporate costs (recovery) were \$1.1 million for the quarter ended December 31, 2018, as compared to \$5.3 million in the same period in 2017. In the first three quarters of the year, bonuses were accrued in the Corporate segment, subject to the overall finalization of bonuses at year-end. In the fourth quarter, bonuses were allocated to the business units which led to the recovery. For the quarter ended December 31, 2018, corporate costs as a percentage of revenues was 0.8%, as compared to 4.3% in the same period in 2017.

Liquidity and Capital Resources

Cash Flow	Year ended December 31,	
	2018	2017 ⁽¹⁾
<i>In thousands of dollars</i>		
Net cash related to operating activities	\$ 49,491	\$ 57,842
Net cash related to financing activities	(42,971)	9,713
Net cash related to investing activities	10,976	(81,589)
Effect of foreign currency translation	3,172	(1,569)
Change in cash position during the year	\$ 20,668	\$ (15,603)
Dividends paid	\$ 18,798	\$ 21,806

⁽¹⁾ Restated for the impact of IFRS 15.

We expect to fund operations with cash derived from operating activities. Deficiencies arising from short-term working capital requirements and capital expenditures may be financed on a short-term basis with bank indebtedness or on a permanent basis with offerings of securities. Significant erosion in the general state of the economy could affect our liquidity by reducing cash generated from operating activities or by limiting access to short-term financing as a result of tightening credit markets.

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Cash from Operating Activities

Working Capital			
<i>In thousands of dollars</i>	December 31, 2018		December 31, 2017 ⁽¹⁾
Current assets	\$	209,535	\$ 178,438
Current liabilities		125,180	105,920
Working capital	\$	84,355	\$ 72,518

⁽¹⁾ Restated for the impact of IFRS 15.

Current assets are composed primarily of cash and cash equivalents, trade receivables and other and income taxes recoverable. Current liabilities are composed primarily of trade payables and other, income taxes payable and borrowings.

As at December 31, 2018, trade receivables, net and unbilled revenue on customer contracts net of deferred revenue was \$105.9 million, up 3.9% or \$3.9 million from \$102.0 million as at December 31, 2017. As a percentage of the trailing 12-month revenues, trade receivables and unbilled revenue on customer contracts net of deferred revenue, was 20.6% as at December 31, 2018, in line with December 31, 2017 (restated for the impact of IFRS 15).

Our Days Sales Outstanding ("DSO") was 74 days as at December 31, 2018, as compared to 73 days as at December 31, 2017 (restated for the impact of IFRS 15). We calculate DSO by taking the five-quarter average balance of trade receivables, net and unbilled revenue on customer contracts net of deferred revenue and the result is then divided by the trailing 12-month revenues plus any pre-acquisition revenues, as applicable, and multiplied by 365 days. Our method of calculating DSO may differ from the methods used by other issuers and, accordingly, may not be comparable to similar measures used by other issuers. We believe this measure is useful to investors as it demonstrates our ability to convert trade receivables and unbilled revenue into cash.

Current and long-term liabilities include amounts owing to the vendors of acquired businesses on account of excess working capital, deferred purchase price payments and other closing adjustments. As at December 31, 2018, the amounts owing to the vendors of acquired businesses were \$14.2 million, as compared to \$12.5 million as at December 31, 2017. We intend to satisfy the payments with the revolving term facility (as described below) or cash on hand.

We are able to satisfy the balance of our current liabilities through the realization of our current assets.

Cash from Financing Activities

Our revolving term facility is a senior secured revolving term facility used for general corporate purposes that will mature on April 28, 2020. In June 2018, we increased our borrowing capacity under the revolving term facility from \$200.0 million to \$220.0 million in accordance with certain provisions of the agreement. The borrowing capacity can be further increased to \$250.0 million. All other terms of the bank credit facilities remain the same.

As at December 31, 2018, our total borrowings on our revolving term facility amounted to \$129.2 million, a decrease of \$21.2 million from December 31, 2017.

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We also have outstanding letters of credit under our bank credit facilities in the total amount of \$0.8 million (December 31, 2017 - \$0.6 million).

The cost of our bank credit facilities is tied to the Canadian Prime rates, Canadian Bankers' Acceptance rates, U.S. Base rates or LIBOR rates. As at December 31, 2018, \$65.0 million was subject to interest rate swap agreements to fix the interest rate. We are obligated to pay the counterparty to the swap agreements an amount based upon a fixed interest rate of 1.48% per annum and the counterparty is obligated to pay us an amount equal to the Canadian Bankers' Acceptance rate. These agreements expire on May 15, 2020. These interest rate swaps are not designated as cash flow hedges. The effective annual rate of interest for the year ended December 31, 2018 on our bank credit facilities was 3.48%, as compared to 3.03% in 2017.

As at December 31, 2018, we were in compliance with the financial covenants of our bank credit facilities, which are summarized below:

	December 31, 2018
Funded debt to EBITDA (maximum of 3.00:1)	1.79:1
Fixed charge coverage (minimum of 1.20:1)	4.92:1
Funded debt to capitalization (maximum of 55%)	24%

Other than long-term debt and letters of credit, we are subject to other contractual obligations such as operating leases, finance leases and amounts owing to the vendors of acquired businesses as discussed above.

Contractual Obligations ⁽¹⁾	Payments Due by Period (undiscounted)				
	Total	Less than			
<i>In thousands of dollars</i>		1 year	1 to 3 years	4 to 5 years	Over 5 years
Bank credit facilities	\$ 129,178	\$ 578	\$ 128,600	\$ -	\$ -
Leasehold improvement loans	513	94	148	148	123
Operating lease obligations	101,216	18,808	29,962	24,002	28,444
Finance lease obligations	279	202	69	8	-
Contingent consideration payables	14,754	11,509	3,245	-	-
Other liabilities	84,957	76,088	4,152	912	3,805
Total contractual obligations	\$ 330,897	\$ 107,279	\$ 166,176	\$ 25,070	\$ 32,372

⁽¹⁾ Contractual obligations exclude aggregate unfunded capital contributions of \$1.2 million to certain partnerships as the amount and timing of such payments are uncertain.

Cash from Investing Activities

We invest in property, plant and equipment and intangible assets to support the activities of the business. Capital expenditures for accounting purposes include property, plant and equipment in substance and in form, including assets under finance leases and intangible assets.

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Capital expenditures are reconciled as follows:

Capital Expenditures	Year ended December 31,	
<i>In thousands of dollars</i>	2018	2017
Property, plant and equipment additions	\$ 11,545	\$ 11,789
Intangibles additions	826	624
Proceeds from disposal of property, plant and equipment and intangibles	(271)	(449)
Capital expenditures	\$ 12,100	\$ 11,964

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Reconciliation of Adjusted EBITDA to Profit (Loss)

The following table provides a reconciliation between Adjusted EBITDA and profit (loss):

<i>In thousands of dollars</i>	Year ended December 31,		Quarter ended December 31,	
	2018	2017 ⁽¹⁾	2018	2017 ⁽¹⁾
Adjusted EBITDA	\$ 70,904	\$ 80,645	\$ 15,121	\$ 19,949
Depreciation and amortization	(49,114)	(36,444)	(11,254)	(10,957)
Acquisition and related transition costs	(2,394)	(3,319)	(137)	(2,149)
Share of loss of associates	-	(2,420)	-	-
Unrealized foreign exchange gain (loss) ⁽²⁾	981	(849)	405	(40)
Loss on disposal of property, plant and equipment ⁽²⁾	(1,617)	(862)	(473)	(235)
Non-cash Executive Compensation Plan costs ⁽³⁾	(5,867)	(4,638)	(1,560)	(1,181)
Gain (loss) on equity derivatives net of mark-to-market adjustments on related RSUs and DSUs being hedged ⁽³⁾	(1,276)	41	(300)	306
Gain (loss) on derivatives ⁽²⁾	268	(21)	-	(21)
Restructuring costs	(6,371)	(4,739)	87	-
Gain (loss) on investments ⁽⁴⁾	43	115,179	(38)	-
Impairment of Geomatics	(13,700)	-	(13,700)	-
Other non-operating and/or non-recurring costs ⁽⁵⁾	(2,953)	(1,079)	(1,658)	(647)
Finance costs, net	(6,701)	(3,633)	(1,845)	(1,281)
Profit (loss) before income taxes	(17,797)	137,861	(15,352)	3,744
Income tax expense	(642)	(28,444)	633	(7,132)
Profit (loss) for the period	\$ (18,439)	\$ 109,417	\$ (14,719)	\$ (3,388)

⁽¹⁾ Restated for the impact of IFRS 15.

⁽²⁾ Included in office and other operating expenses in the consolidated statements of comprehensive income (loss).

⁽³⁾ Included in employee compensation expenses in the consolidated statements of comprehensive income (loss).

⁽⁴⁾ Gain (loss) on investments for the year ended December 31, 2018 relate to changes in fair value of investments in partnerships. Gain (loss) on investments for the year ended December 31, 2017 relate to the partial deemed dispositions of our investment in Real Matters and re-measurement of our retained interest.

⁽⁵⁾ Other non-operating and/or non-recurring costs for the year ended December 31, 2018 relate to (i) non-recurring legal matters and related costs, (ii) transactional costs for tax planning and restructuring of legal entities within the group and (iii) costs related to the departures of certain senior executives. Other non-operating and/or non-recurring costs for the year ended December 31, 2017 relate to non-recurring legal matters and related costs. These are included in office and other operating expenses in the consolidated statements of comprehensive income (loss).

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Adjusted Earnings (Loss) Per Share

<i>In thousands of dollars, except for per share amounts</i>	Year ended December 31,		Quarter ended December 31,	
	2018	2017 ⁽¹⁾	2018	2017 ⁽¹⁾
Profit (loss) for the period	\$ (18,439)	\$ 109,417	\$ (14,719)	\$ (3,388)
Amortization of intangibles of acquired businesses	38,816	26,463	8,547	8,195
Non-cash finance costs (income) related to amounts payable to U.K. unitholders, net of changes in fair value of related equity derivatives	-	32	-	-
Share of loss of associates	-	2,420	-	-
Unrealized foreign exchange loss (gain)	(981)	849	(405)	40
Loss on disposal of property, plant and equipment	1,617	862	473	235
Non-cash Executive Compensation Plan costs	5,867	4,638	1,560	1,181
Loss (gain) on equity derivatives net of mark-to-market adjustments on related RSUs and DSUs being hedged	1,276	(41)	300	(306)
Interest accretion on contingent consideration payables	648	168	155	102
Restructuring costs	6,371	4,739	(87)	-
Loss (gain) on hedging transactions, including currency forward contracts and interest expense (income) on swaps not designated as cash flow hedges	(50)	(1,362)	367	(145)
Acquisition and related transition costs	2,394	3,319	137	2,149
Loss (gain) on investments	(43)	(115,179)	38	-
Impairment of Geomatics	13,700	-	13,700	-
Other non-operating and/or non-recurring costs	2,953	1,079	1,658	647
Tax impact on above	(13,260)	5,235	(3,871)	(2,874)
Adjusted earnings for the period	\$ 40,869	\$ 42,639	\$ 7,853	\$ 5,836
Weighted average number of shares - basic	38,763,613	38,027,573	38,968,108	38,388,937
Weighted average number of restricted shares	310,751	346,252	298,926	339,058
Weighted average number of shares - adjusted	39,074,364	38,373,825	39,267,034	38,727,995
Adjusted earnings (loss) per share	\$1.05	\$1.11	\$0.20	\$0.15

⁽¹⁾ Restated for the impact of IFRS 15.

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Summary of Quarterly Results

In thousands of dollars, except for per share amounts	2018					2017				
	Fiscal 2018	Dec 31	Sep 30	Jun 30	Mar 31	Fiscal 2017 ⁽¹⁾	Dec 31 ⁽¹⁾	Sep 30 ⁽¹⁾	Jun 30 ⁽¹⁾	Mar 31 ⁽¹⁾
Results of Operations										
Revenues	\$ 510,429	\$ 130,885	\$ 120,636	\$ 134,218	\$ 124,690	\$ 476,562	\$ 122,317	\$ 117,072	\$ 127,880	\$ 109,293
Adjusted EBITDA	\$ 70,904	\$ 15,121	\$ 16,504	\$ 23,771	\$ 15,508	\$ 80,645	\$ 19,949	\$ 23,310	\$ 24,017	\$ 13,369
Adjusted EBITDA margin	13.9%	11.6%	13.7%	17.7%	12.4%	16.9%	16.3%	19.9%	18.8%	12.2%
Profit (loss) for the period	\$ (18,439)	\$ (14,719)	\$ (1,723)	\$ 330	\$ (2,327)	\$ 109,417	\$ (3,388)	\$ 7,327	\$ 104,927	\$ 551
Earnings (loss) per share:										
Basic	\$(0.48)	\$(0.38)	\$(0.04)	\$0.01	\$(0.06)	\$2.88	\$(0.09)	\$0.19	\$2.75	\$0.01
Diluted	\$(0.48)	\$(0.38)	\$(0.04)	\$0.01	\$(0.06)	\$2.83	\$(0.09)	\$0.19	\$2.72	\$0.01
Adjusted	\$1.05	\$0.20	\$0.22	\$0.40	\$0.23	\$1.11	\$0.15	\$0.34	\$0.40	\$0.22
Weighted average number shares (‘000s):										
Basic	38,764	38,968	38,879	38,700	38,500	38,028	38,389	38,324	38,108	37,273
Diluted	38,764	38,968	38,879	39,085	38,500	38,374	38,728	38,872	38,591	37,755

⁽¹⁾ Restated for the impact of IFRS 15.

Certain segments of our operations are subject to seasonal and cyclical variations which may impact overall quarterly results. For instance:

- Our Altus Analytics business (which makes up approximately 36% of total consolidated revenues) experiences some seasonality. ARGUS software products sold as perpetual licenses tend to have a stronger fourth quarter in revenues, a trend that is common in many other software companies. Also, Appraisal Management could experience some seasonal patterns around the second and fourth quarters, associated with some clients' practices of bi-annual and annual appraisals. It should also be noted that our Altus Analytics revenues may exhibit revenue variability as a result of our revenue recognition under IFRS 15. Under IFRS 15 accounting, for on-premise ARGUS software solutions that are sold on a subscription basis in a right to use license arrangement, a portion of the revenues will be recognized at the time of delivery of the distinct license rather than ratably over the term of the subscription. This is expected to result in more variability in revenues based on the timing of contracts. Certain arrangements are for a right to access and revenues will continue to be recognized ratably over the term of the subscription. Revenue recognition may vary based on contract specific terms.
- Our global Property Tax practice (which makes up approximately 35% of total consolidated revenues) can experience significant fluctuations on a quarterly basis as a result of the timing of contingency settlements and other factors such as the wide-ranging variety of tax cycles across our various jurisdictions (which range from annual to seven year cycles). We also experience some seasonal peaks in the U.K. and U.S. markets, where the second quarter benefits from annuity billing from the U.K. practice (starting the second year of a new cycle), and in the U.S. we tend to experience higher volumes of settlements related to specific deadlines for our personal property revenue stream. It should also be noted that since a higher portion of our revenues come from contingency contracts, the front-end of a cycle typically requires a ramp-up period in preparation for the appeals and therefore tends to have lower earnings than later in the cycles when more settlements are made and those revenues flow directly to the bottom line.

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- Our Cost Advisory practice (which makes up approximately 10% of total consolidated revenues) experiences some cyclicity associated with their significant exposure to the CRE construction and development activities in the key markets that we serve. For instance, revenues will generally be higher in periods of economic prosperity and expansion in our key markets in Canada and Asia Pacific.
- Our Geomatics business (which makes up less than 10% of total consolidated revenues) engages in projects that tend to be on remote undeveloped land in Western Canada which is most accessible in the winter and summer months and least accessible in the spring months when ground conditions are soft and wet. Revenues for Geomatics tend to peak in the third and fourth quarters of the year in line with higher activity levels during these periods. Also, given Geomatics' significant client exposure to the oil and gas sector, revenues will be impacted by cyclical trends related to that sector, specifically driven by capital spending.

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Selected Annual Information

Selected Financial Information	For the year ended December 31,		
<i>In thousands of dollars, except for per share amounts</i>	2018	2017 ⁽¹⁾	2016 ⁽²⁾
Operations			
Revenues	\$ 510,429	\$ 476,562	\$ 442,891
Adjusted EBITDA	\$ 70,904	\$ 80,645	\$ 74,088
Adjusted EBITDA margin	13.9%	16.9%	16.7%
Profit (loss)	\$ (18,439)	\$ 109,417	\$ 14,268
Earnings (loss) per share:			
Basic	\$(0.48)	\$2.88	\$0.39
Diluted	\$(0.48)	\$2.83	\$0.38
Adjusted	\$1.05	\$1.11	\$1.15
Dividends declared per share	\$0.60	\$0.60	\$0.60

Balance Sheet	At December 31,		
	2018	2017 ⁽¹⁾	2016 ⁽²⁾
Total assets	\$ 658,182	\$ 726,115	\$ 590,851
Long-term liabilities (excluding deferred income taxes)	158,334	180,557	136,360

⁽¹⁾ Restated for the impact of IFRS 15.

⁽²⁾ Reported financial information has not been restated for the impact of IFRS 15, *Revenue from Contracts with Customers*. Refer to Note 4 - Adoption of Recent Accounting Pronouncements to the financial statements for further discussion.

Revenues were \$510.4 million for the year ended December 31, 2018, up 7.1% from 2017, of which approximately 2.1% was from acquisitions. Adjusted EBITDA was \$70.9 million for the year, a margin of 13.9%, down 12.1% from 2017, and loss for the year was \$18.4 million.

Revenues were \$476.6 million for the year ended December 31, 2017, up 7.6% from 2016, of which approximately 1.8% was from acquisitions. Adjusted EBITDA was \$80.6 million for the year, a margin of 16.9%, up 8.9% from 2016, and profit for the year was \$109.4 million.

Revenues were \$442.9 million for the year ended December 31, 2016, up 6.4% from 2015, of which approximately 1.7% was from acquisitions. Adjusted EBITDA was \$74.1 million for the year, a margin of 16.7%, up 16.9% from 2015, and profit for the year was \$14.3 million.

In each of the past three years we have declared and paid quarterly dividends totaling \$0.60 annually, per common share to the shareholders.

Selected Highlights for 2017

Altus Analytics New Product Launches and Upgrades

In the first quarter of 2017, we launched ARGUS Enterprise 11.6 ("AE 11.6"), an upgraded version of our industry-leading CRE and investment management platform. Enhancements in AE 11.6 included improved user experience (simplified for key transaction and valuation roles), advanced user productivity features, and more powerful reporting capabilities.

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In the second quarter of 2017, we launched ARGUS Developer 7.7, an upgraded version of our industry leading software that models, forecasts, manages, analyzes and reports on development project costs and cash flows. Enhancements included increased language functionality through the addition of German and Spanish languages, as well as other user improvements.

Acquisition of Axiom Cost Consulting Inc.

On February 1, 2017, we acquired all the issued and outstanding shares of Axiom Cost Consulting Inc. ("Axiom") for \$0.9 million in cash and common shares, subject to working capital adjustments. With operations in Calgary, Edmonton and Vancouver, Axiom specializes in cost management and loan monitoring. Axiom was integrated with our Cost Consulting practice under our Valuation and Cost Advisory segment.

Acquisition of EstateMaster Group Holdings Pty Limited

On March 1, 2017, we acquired all the issued and outstanding shares of EstateMaster and its subsidiaries for \$20.1 million in cash and common shares, subject to working capital adjustments. EstateMaster is an Australian-based property development feasibility and management software provider. With a leading market position in Australia and the Middle East, the EstateMaster Development Feasibility software is the accepted market standard for the production of feasibility reports in the Australian property markets. The acquisition of EstateMaster broadens our product offerings with software solutions complementary to our ARGUS Developer product, while adding market share in our growth regions, including Australia and the Middle East. The EstateMaster software has been subsequently rebranded ARGUS EstateMaster and is sold as part of the Altus Analytics suite of software solutions.

Strategic Investment in Waypoint Building Group

Consistent with our strategy of building and scaling our technology and data offerings through partnerships and direct investments, on March 17, 2017, we advanced US\$3.0 million to Waypoint Building Group, Inc. ("Waypoint") in the form of a promissory note, with simple interest accrued at a rate of 5% and payable on maturity, 24 months from the date of issuance. The promissory note includes conversion features which are applicable on maturity or upon the occurrence of certain events such as an equity financing or corporate transaction.

Waypoint is an early-stage data analytics company. Founded in 2009, Waypoint is a San Francisco-based commercial real estate technology company that provides real-time local market operating expense information and benchmarking solutions to the North American commercial real estate market.

Early Redemption of Outstanding 6.75% Convertible Debentures

The outstanding 6.75% convertible debentures ("2012 convertible debentures") were redeemed by the Company on May 3, 2017, in accordance with the terms of the convertible debenture indenture and have been delisted from the Toronto Stock Exchange. The aggregate principal amount of the 2012 convertible debentures outstanding as of December 31, 2016 was \$6.1 million, of which \$5.7 million was converted into 570,900 common shares issued from treasury at a conversion price of \$10.00 per common share. The remaining principal amount of \$0.4 million of the 2012 convertible debentures was redeemed using available cash on hand.

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Investment in Real Matters

On May 11, 2017, Real Matters completed its initial public offering at \$13.00 per common share. As a result, our equity interest in Real Matters was diluted to 12.0%. The partial deemed disposition of our investment and re-measurement of our retained interest resulted in an accounting gain of \$115.7 million in the second quarter. At that time, the ongoing accounting treatment of our investment in Real Matters changed from equity accounting to an available-for-sale investment. Since then, gains or losses from mark-to-market adjustments were reflected directly in other comprehensive income (loss). Certain items such as dividends and impairment losses are recognized in profit or loss. When our investment was derecognized as a result of a sale or impairment, the cumulative gain or loss previously recognized in other comprehensive income (loss) was reclassified to profit or loss.

Restructuring Activities

In the first quarter of 2017, we undertook company-wide restructuring activities under a corporate program to further optimize operations. This restructuring plan was completed in Q2 of 2017. In connection with these restructuring activities, a total of \$4.7 million in restructuring costs were recorded for the year ended December 31, 2017. These charges relate primarily to employee severance costs.

Acquisition of Commercial Valuers & Surveyors Limited

On November 1, 2017, we acquired CVS, a property tax service provider in the U.K. that specializes in business rates services. The acquisition of CVS positions Altus Group as the largest business rates advisor in the U.K. based on volume of appeals filed, and more than doubles the size of our legacy business in the U.K. CVS's team of approximately 230 professionals were added to our U.K. Property Tax division, strengthening our business rates expertise. As the acquisition provides us with greater scale and synergistic opportunities, it positions us for growth and expands our database on comparable property information in a key real estate market, allowing us to better serve our clients in appeals and lease negotiations.

Altus Group paid a total of £30.3 million (CAD\$51.6 million) in cash on closing with an additional £6.0 million (CAD\$10.2 million) payable in two years from the closing date, subject to compliance with certain terms and conditions. On closing, £25.3 million (CAD\$43.1 million) was from cash on hand and £5.0 million (CAD\$8.5 million) was drawn from our revolving term facility. Based on the estimated Adjusted EBITDA to be derived from the 2017 assessment cycle, the average Adjusted EBITDA multiple for this transaction was estimated at 5.5 times. Given the annuity revenue model of this business, revenue is expected to grow in a compounding manner as appeals are settled over the 4-year term of the cycle, and likewise earnings contribution increases throughout the cycle as majority of the revenues are on a contingency basis.

Selected Highlights for 2016

Altus Analytics

On March 1, 2016, we announced the formation of a new business unit, Altus Analytics, which combined ARGUS Software with Research, Valuation & Advisory's U.S. and European Appraisal Management and Voyanta operations, as well as our Canadian market data products. The combination of our data, software and analytics offerings into one business unit enhances our ability to innovate and integrate our current solutions faster and more effectively for our clients. This strengthens the coordination of our sales, marketing, customer support, product development and services teams leading to a more compelling value proposition for clients. In line with the formation of Altus Analytics, restructuring activities were undertaken to consolidate the organizational leadership roles and increase operational alignment.

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Altus Analytics New Product Launches and Upgrades

In 2016, we expanded our core offerings with new and upgraded product releases.

In February of 2016, we launched a new product, AOD, a hosted subscription-based online service that provides access to AE and ARGUS Developer. This solution reduces the total cost of ownership and facilitates easy collaboration, rapid deployment and flexible user management for brokers, appraisers, developers and those involved with asset and investment management.

In 2016, we released two upgrades to our ARGUS Enterprise platform. AE 11.0, launched in January, added new portfolio management functionality unique to Europe and Asia Pacific and new functionality that reduces transactional cycle times for investment brokers, lenders and appraisers. AE 11.5, released in October, delivered more robust debt and risk management functionality along with enhanced ease of use capabilities.

In June of 2016, we launched ARGUS Developer 7.5, an upgrade to improve the management of the entire development life cycle.

Restructuring Activities

In 2016, we undertook restructuring activities as part of the formation of Altus Analytics and a reorganization within the Property Tax practice in the U.S. In connection with these restructuring activities, a total of \$4.1 million in restructuring costs were recorded for the year ended December 31, 2016. These charges relate primarily to employee severance costs.

Technology Integration Partnership with Hightower Inc.

In June of 2016, we entered into a partnership with Hightower Inc. ("Hightower") to integrate their leasing management platform with AE to enable a seamless flow of data between Hightower's leasing management platform and AE. (On November 29, 2016, Hightower was merged with VTS and is now operating under the VTS brand.)

Acquisition of R2G Limited

On August 1, 2016, we acquired all the issued and outstanding shares of R2G Limited ("R2G") and its subsidiaries for \$6.1 million in cash, common shares and contingent consideration, subject to working capital adjustments. Based in Hertfordshire, U.K., but operating nationally since 2002, R2G specialized in tax representation for all types of commercial real estate. The addition of R2G expanded our market share for our U.K. Property Tax business and added regional scale.

Dilution of our Investment in Real Matters

On April 1, 2016, our investment in Real Matters was diluted due to a private placement and issuance of common shares in connection with an acquisition completed by Real Matters. These transactions reduced our equity interest from 16.4% to 13.9%. The partial deemed disposition of our investment resulted in a gain of \$9.9 million with a corresponding increase to the carrying value of our investment in Real Matters. In January 2017, Real Matters issued 1,500,000 common shares, which further diluted our investment to 13.8%.

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Redemption of Altus UK LLP Class B and Class D Limited Liability Partnership Units

In 2016, 78,227 Class B limited liability partnership units and 24,593 Class D limited liability partnership units of Altus UK LLP were redeemed at an average value of \$20.05 per unit. As a result, the equity derivative which was set to expire on November 16, 2016 was settled on April 1, 2016.

Geomatics Severance and Impairment

In 2016, the market conditions in Western Canada for Geomatics services continued to be adversely impacted by low oil prices and reduced drilling and pipeline activities and impacted our performance. As a result, we recorded a goodwill impairment charge of \$12.5 million.

Share Data

As at February 18, 2019, 39,092,398 common shares were outstanding and are net of 286,543 treasury shares. These treasury shares are shares held by Altus Group, which are subject to restrictive covenants and may or may not vest for employees. Accordingly, these shares are not included in the total number of common shares outstanding for financial reporting purposes and are not included in basic earnings per share calculations.

As at December 31, 2018, there were 1,518,670 share options outstanding (December 31, 2017 - 946,708 share options outstanding) at a weighted average exercise price of \$27.96 per share (December 31, 2017 - \$25.70 per share) and 495,894 share options were exercisable (December 31, 2017 - 268,038). All share options are exercisable into common shares on a one-for-one basis.

In 2013, we implemented a Dividend Reinvestment Plan ("DRIP") for our shareholders who are resident in Canada. Under the DRIP, participants may elect to automatically reinvest quarterly dividends in additional Altus Group common shares.

Pursuant to the DRIP, and in the case where common shares are issued from treasury, cash dividends will be reinvested in additional Altus Group common shares at the weighted average market price of our common shares for the five trading days immediately preceding the relevant dividend payment date, less a discount, currently set at 4%. In the case where common shares will be purchased on the open market, cash dividends will be reinvested in additional Altus Group common shares at the relevant average market price paid in respect of satisfying this reinvestment plan.

For the year ended December 31, 2018, 158,481 common shares (2017 - 37,406 common shares) were issued under the DRIP.

Financial Instruments and Other Instruments

Financial instruments held in the normal course of business included in our consolidated balance sheet as at December 31, 2018 consist of cash and cash equivalents, trade receivables and other (excluding deferred costs to obtain customer contracts and prepayments), trade payables and other (excluding lease inducements and contract liabilities), income taxes recoverable and payable, investments, borrowings and derivative financial instruments. We do not enter into financial instrument arrangements for speculative purposes.

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The fair values of the short-term financial instruments approximate their carrying values. The fair values of borrowings are not significantly different than their carrying values, as these instruments bear interest at rates comparable to current market rates. The fair values of other long-term assets and liabilities, promissory notes receivable and contingent consideration payables are measured using a discounted cash flow analysis of expected cash flows in future periods. The investments in equity instruments are measured based on valuations of the respective entities. Investments in partnerships are measured in relation to the fair value of assets in the respective partnerships.

The fair value of the liabilities for cash-settled plans as at December 31, 2018 was approximately \$8.8 million, based on the published trading price on the TSX for our common shares.

We are exposed to interest rate risk in the event of fluctuations in the Canadian Prime rates, Canadian Bankers' Acceptance rates, U.S. Base rates or LIBOR rates as the interest rates on the bank credit facilities fluctuate with changes in these rates.

To mitigate our exposure to interest rate fluctuations, we have entered into interest rate swap agreements in connection with our bank credit facilities.

In 2015, we entered into interest rate swap agreements for a total notional amount of \$65.0 million and a fixed interest rate of 1.48% per annum. This agreement expires on May 15, 2020. As at December 31, 2018, we have a total notional amount of \$65.0 million outstanding and the fair value of these swaps were \$0.6 million in our favor.

We are exposed to price risk as the liabilities for cash-settled plans are classified as fair value through profit or loss, and linked to the price of our common shares.

Since 2014, we entered into equity derivatives to manage our exposure to changes in the fair value of RSUs and DSUs, issued under their respective plans, due to changes in the fair value of our common shares. Changes in the fair value of these derivatives are recorded as employee compensation expense and offset the impact of mark-to-market adjustments on the RSUs and DSUs that have been accrued.

As at December 31, 2018, we have equity derivatives relating to RSUs and DSUs outstanding with a notional amount of \$10.0 million. The fair value of these derivatives is \$0.5 million in our favor.

We are exposed to credit risk with respect to our cash and cash equivalents, trade receivables and other and derivative financial instruments. Credit risk is not concentrated with any particular customer. In certain parts of Asia, it is often common business practice to pay invoices over an extended period of time and/or at the completion of the project. The risk of non-collection of trade receivables is greater in Asia Pacific compared to North American or European countries.

Liquidity risk is the risk that we will not be able to meet our financial obligations as they become due. We manage liquidity risk through the management of our capital structure and financial leverage. We also manage liquidity risk by continuously monitoring actual and projected cash flows, taking into account the seasonality of our revenues and receipts and maturity profile of financial assets and liabilities. Our Board of Directors review and approve our operating and capital budgets, as well as any material transactions

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outside the ordinary course of business, including proposals on mergers, acquisitions or other major investments.

Contingencies

From time to time, we or our subsidiaries are involved in legal proceedings, claims and litigation in the ordinary course of business with customers, former employees and other parties. Although it is not possible to determine the final outcome of such matters, based on all currently available information, management believes that liabilities, if any, arising from such matters will not have a material adverse effect on our financial position or results of operations and have been adequately provided for in the consolidated financial statements.

In the ordinary course of business, we are subject to tax audits from various government agencies relating to income and commodity taxes. As a result, from time to time, the tax authorities may disagree with the positions and conclusions we made in our tax filings, which could lead to assessments and reassessments. These assessments and reassessments may have a material adverse effect on our financial position or results of operations.

Critical Accounting Estimates and Judgments

The preparation of the consolidated financial statements requires management to make estimates and assumptions concerning the future. It also requires management to exercise its judgment in applying our accounting policies. Estimates and judgments are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Accounting estimates will, by definition, seldom equal the actual results. The following discussion sets forth management's most significant estimates and assumptions in determining the value of assets and liabilities and the most significant judgments in applying accounting policies.

Revenue recognition and determination and allocation of the transaction price

We estimate variable consideration for contingency arrangements on a project-by-project basis. Variable consideration is not constrained only to the extent that it is highly probable that the amount will not be subject to significant reversal when the uncertainty is resolved, which is when savings are realized by the customer, unless the contractual terms provide for an enforceable right to payment for performance completed.

The transaction price is allocated on the basis of the relative standalone selling prices for contracts with more than one performance obligation. Estimation of the standalone selling price involves reasonably available data points, market conditions, entity-specific factors and information about the customer or class of customer. Where the observable price is not available, based on the specific facts and circumstances, either the adjusted market assessment or expected cost plus a margin approach is applied.

Impairment of trade receivables and contract assets

The impairment provisions for trade receivables and contract assets determined under IFRS 9 are based on assumptions about risk of default and expected loss rates. We use judgment in making these assumptions and selecting the inputs to the impairment calculation based on our past history, existing market conditions and forward-looking estimates at the end of each reporting period. Such estimates and judgments could

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impact trade receivables, contract assets for unbilled revenue on customer contracts and office and other operating expenses.

Allowance for doubtful accounts

Under International Accounting Standard 39, *Financial Instruments: Recognition and Measurement*, estimates are used in determining the allowance for doubtful accounts related to trade receivables. The estimates are based on management's best assessment of the collectability of the related receivable balance based, in part, on the age of the specific receivable balance and the credit worthiness of the customer. An allowance is established when the likelihood of collecting the account has significantly diminished.

Estimated impairment of goodwill

We test at least annually whether goodwill is subject to any impairment. Goodwill impairment is evaluated between annual tests upon the occurrence of events or changes in circumstances. Goodwill is allocated to cash-generating units ("CGUs") for the purpose of impairment testing. The allocation is made to those CGUs or group of CGUs that are expected to benefit from synergies of the business combination in which the goodwill arose. Goodwill is tested for impairment in the groups of CGUs for which it is monitored by management. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount for any CGU is determined based on the higher of fair value less costs to sell and value in use. Both of the valuation approaches require the use of estimates. Significant erosion in the general state of the economy could result in increased impairment losses. For the year ended December 31, 2018, a goodwill impairment charge of \$13.7 million was recorded (2017 - \$nil).

Intangibles

Intangibles are acquired assets that lack physical substance and that meet the specified criteria for recognition separately from goodwill. The determination of the recoverable amount requires the use of management's best assessment of the related inputs into the valuation models, such as future cash flows and discount rates. Significant erosion in the general state of the economy could result in increased impairment losses. For the year ended December 31, 2018, there was no intangible impairment charge (2017 - \$nil).

Determination of purchase price allocations and contingent consideration

Estimates are made in determining the fair value of assets and liabilities, including the valuation of separately identifiable intangibles acquired as part of an acquisition. Further, estimates are made in determining the value of contingent consideration payments that should be recorded as part of the consideration on the date of acquisition and changes in contingent consideration payable in subsequent reporting periods. Contingent consideration payments are generally based on acquired businesses achieving certain performance targets. The estimates are based on management's best assessment of the related inputs used in the valuation models, such as future cash flows and discount rates. Future performance results that differ from management's estimates could result in changes to liabilities recorded, which are recorded as they arise through profit or loss.

Income taxes

We are subject to income taxes in numerous jurisdictions. Significant judgment is required in determining the provision for income taxes. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will impact the current and deferred income taxes in the period in which such determination is made.

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Changes in Accounting Policies Including Initial Adoption of New Accounting Pronouncements

Adoption of Recent Accounting Pronouncements

We adopted the new accounting standards for revenue recognition and financial instruments effective January 1, 2018. These new standards had a material impact on our consolidated financial statements as at and for the year ended December 31, 2017. Beginning with the first quarter of 2018, our financial results reflect adoption of the standards with prior periods restated accordingly. Refer to Note 4 - Adoption of Recent Accounting Pronouncements in the notes to financial statements for further discussion.

IFRS 15, *Revenue from Contracts with Customers*, impacts us if our customers choose to license our on-premise versions rather than licensing hosted versions of ARGUS software solutions. The associated revenue will shift from being recognized over the contract term for the entire contract value to a portion of the contract value being recognized at the time of delivery of the distinct license and the remainder over the contract term.

IFRS 9, *Financial Instruments*, impacts the accounting for expected credit losses of financial assets, more specifically, trade receivables and contract assets for unbilled revenue on customer contracts. Under IFRS 9, we will apply an expected loss model that assesses the risk a financial asset will default rather than whether a loss has been incurred. This will result in losses being recognized earlier.

Future Accounting Pronouncements

International Financial Reporting Standard 16, Leases

IFRS 16, *Leases*, which was issued in January 2016, replaces IAS 17, *Leases*. IFRS 16 was issued to increase transparency and comparability. Lessees are required to recognize assets and liabilities for most leases on the balance sheet regardless of the former classification under IAS 17. These assets and liabilities will be amortized and accreted with a different pattern of expense being recognized in the statement of profit and loss. Under the new standard, enhanced disclosures are expected to give users of financial statements a basis to assess the effects of leases. IFRS 16 is effective for annual periods beginning on or after January 1, 2019, using either a full or modified retrospective application. The standard will impact the operating leases for offices and equipment.

Throughout the year, we compiled the existing operating and finance leases reviewing them to assess the relevant data points. Simultaneously, we reviewed existing service contracts in order to determine if they contained embedded lease arrangements and whether they were in scope of IFRS 16.

We have developed a valuation approach to discount the identified population of leases and have implemented a software solution to assist with the increased accounting and disclosure requirements arising from the new standard and have implemented the necessary internal controls over the new processes.

We intend to apply this standard on a modified retrospective basis and expect to recognize on January 1, 2019, lease liabilities in the range of \$80.5 million - \$85.5 million and right of use assets in the range of \$70.5 million - \$75.5 million (after reclassification of approximately \$10.0 million of accrued and deferred lease

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payments recognized at December 31, 2018). The standard will result in a reduction in occupancy expense for lease costs under operating leases, but result in an increase in depreciation expense related to right of use assets capitalized, and an increase in finance costs due to interest costs on the lease liabilities. We expect to be in compliance with our existing financial covenants upon adoption of this standard. Our Q1 2019 interim condensed consolidated financial statements will include the effects of applying this standard.

As a lessor, we do not expect any significant impact on adoption due to their subleasing arrangements.

International Financial Reporting Interpretations Committee 23, Uncertainty over Income Tax Treatments

In June 2017, the IASB published IFRIC 23, *Uncertainty over Income Tax Treatments*, effective for annual periods beginning on or after January 1, 2019. The interpretation requires an entity to assess whether it is probable that a tax authority will accept an uncertain tax treatment used, or proposed to be used, by an entity in its income tax filings and to exercise judgment in determining whether each tax treatment should be considered independently or whether some tax treatments should be considered together. We do not anticipate any significant impact of this standard on our consolidated financial statements.

International Financial Reporting Standard 3, Business Combinations

In October 2018, the IASB issued amendments to the guidance in IFRS 3, *Business Combinations*, that revises the definition of a business. To be considered a business, an acquisition would have to include an input and a substantive process that together significantly contribute to the ability to create outputs. The new guidance provides a framework to evaluate when an input and a substantive process are present. To be a business without outputs, there will now need to be an organized workforce. Under the new standard, the changes to the definition of a business will likely result in more acquisitions being accounted for as asset acquisitions.

The amendments to IFRS 3 are effective to business combinations and asset acquisitions for which the acquisition date is on or after the first annual reporting periods beginning on or after January 1, 2020. We have not yet determined the impact of this standard on our consolidated financial statements.

Disclosure Controls and Procedures and Internal Controls over Financial Reporting

Management is responsible for establishing and maintaining disclosure controls and procedures ("DC&P") and internal controls over financial reporting ("ICFR"), as those terms are defined in National Instrument 52-109 - Certification of Disclosure in Issuers' Annual and Interim Filings ("NI 52-109").

Management has caused such DC&P to be designed under its supervision to provide reasonable assurance that our material information, including material information of our consolidated subsidiaries, is made known to our Chief Executive Officer and our Chief Financial Officer for the period in which the annual and interim filings are prepared. Further, such DC&P are designed to provide reasonable assurance that information we are required to disclose in our annual filings, interim filings or other reports we have filed or submitted under securities legislation is recorded, processed, summarized and reported within the time periods specified in applicable securities legislation.

Management has caused such ICFR to be designed under its supervision using the framework established in Internal Control - Integrated Framework (2013) published by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") to provide reasonable assurance regarding the

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reliability of financial reporting and the preparation of the consolidated financial statements for external purposes in accordance with IFRS.

Section 3.3(1)(b) of NI 52-109 allows an issuer to limit its design of DC&P and ICFR to exclude controls, policies and procedures of a business that the issuer acquired not exceeding 365 days from the date of acquisition.

Management has limited the scope of the design of DC&P and ICFR, consistent with previous practice, to exclude controls, policies and procedures of Taliance acquired on July 1, 2018.

Financial information of the business acquired is summarized below.

Balance sheet data for Taliance:

<i>In thousands of dollars</i>	December 31, 2018
Assets	\$ 30,983
Liabilities	(4,253)
Equity	26,730

Income statement data for Taliance:

<i>In thousands of dollars</i>	Period ended December 31, 2018
Revenues	\$ 2,504
Expenses	4,422
Profit (loss)	(1,918)

Management has caused to be evaluated under its supervision the effectiveness of its DC&P as of December 31, 2018 and has concluded that the design and effectiveness of these controls and procedures provide reasonable assurance that material information relating to Altus Group, including our consolidated subsidiaries, was made known to management on a timely basis to ensure adequate disclosure.

Management has caused to be evaluated under its supervision the effectiveness of its ICFR as of December 31, 2018 using the COSO framework. Management has concluded that the overall design and effectiveness of these controls provide reasonable assurance of the reliability of financial reporting and the preparation of the consolidated financial statements for external purposes in accordance with IFRS.

There have been no significant changes in our internal controls over financial reporting that occurred for the quarter ended December 31, 2018, the most recently completed interim period, that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

We implemented internal controls to ensure we adequately evaluated our contracts and properly assessed the impact of the new accounting standards related to revenue recognition and financial instruments on our financial statements to facilitate their adoption on January 1, 2018. There were no significant changes to our internal control over financial reporting due to the adoption of the new standards.

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The audit committee and our Board of Directors have reviewed and approved this MD&A and the consolidated financial statements for the year ended December 31, 2018.

Key Factors Affecting the Business

The risks and uncertainties that could significantly affect our financial condition and future results of operations are summarized below.

General state of the economy

The businesses operated by us are affected by general economic conditions, including international, national, regional and local economic conditions, all of which are outside of our control. Economic slowdowns or downturns, adverse economic conditions, cyclical trends, increases in interest rates, variations in currency exchange rates, reduced client spending and other factors could have a material adverse effect on our business, financial condition and results of operations. Although our operations are functionally and geographically diversified, significant erosion in levels of activity in any segment in which we operate could have a negative impact on our business, financial condition and results of operations.

Currency risk

Our reporting currency is the Canadian dollar.

We have operations in Canada, the U.S., the U.K., Australia and various countries throughout Asia. Our exposure to foreign currency risk is primarily in the following areas:

- Profit (loss) generated by operations in foreign countries, which are translated into Canadian dollars using the average exchange rate;
- Net assets of foreign subsidiaries, which are translated into Canadian dollars using the period end exchange rate with any gains or losses recorded under accumulated other comprehensive income (loss) within shareholders' equity; and
- Non-Canadian dollar denominated monetary assets and liabilities, which are translated into Canadian dollars using the period end exchange rate with any gains or losses recorded through profit (loss).

The exchange rate between the Canadian dollar and the U.S. dollar ranged from \$1.2551 at December 31, 2017 to \$1.3630 at December 31, 2018. The exchange rate between the Canadian dollar and the British pound ranged from \$1.6932 at December 31, 2017 to \$1.7357 at December 31, 2018. The exchange rate between the Canadian dollar and the Australian dollar ranged from \$0.9796 at December 31, 2017 to \$0.9613 at December 31, 2018.

Ability to maintain profitability and manage growth

Our ability to achieve revenue growth and sustain profitability in future periods depends on our ability to execute our strategic plan and effectively manage our growth. A failure to do so could have a material adverse effect on our business, financial condition and results of operations.

Commercial real estate market

The businesses we operate are affected by the state of commercial real estate as an investment asset class. Economic slowdowns triggered by credit liquidity, interest rates, regulatory policy, tax policy, etc., could negatively impact the market and result in fewer appraisals, cost assignments and license and subscription

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sales. This could have a material adverse effect on our business, financial condition, liquidity and results of operations.

Competition in the industry

We face competition from other service, software and data analytics providers. Competition for our professional services includes a broad mix of competitors, ranging from smaller, locally-based professional service firms to national, multi-regional professional service providers and to large engineering, accounting and law firms. Software providers also compete with us in respect of real estate asset management, valuation, budgeting, forecasting, reporting and lease management solutions. There are also new companies entering the market with competitive data analytics solutions. These competitive forces could result in a material adverse effect on our business, financial condition and results of operations by reducing our relative share in the markets we serve.

Acquisitions

We intend to make acquisitions as part of our strategy to grow our business. Acquisitions may increase the size of our operations, as well as increase the amount of indebtedness that we may have to service. The successful integration and management of acquired businesses involve numerous risks and there is no assurance that we will be able to successfully integrate our acquisitions. Such failure could adversely affect our business, financial condition and results of operations.

Oil and gas sector

The land survey practice of Geomatics has significant client exposure in the oil and gas industry in Western Canada and is impacted by the associated capital spending from that sector. The risks to the outlook for the land survey practice in Western Canada arise from world markets for oil and gas and the associated impact on capital spending. Historically, the prices for oil and gas have been volatile and subject to wide fluctuations in response to changes in the supply of and demand for oil and gas, market uncertainty and a variety of additional factors beyond our control. We cannot predict future oil and gas price movements. If oil and gas prices experience a prolonged decline, there could be a material adverse effect on our business, financial condition, liquidity and operating results.

Ability to attract and retain professionals

Our success and ability to grow are dependent on the expertise, experience and efforts of our professionals. Competition for employees with the qualifications we desire, particularly with commercial real estate technology experience, is intense and puts upward pressure on compensation costs. We expect that competition for qualified professionals will continue to increase, thereby causing compensation costs to escalate. Should we be unable to attract and retain professionals that meet the desired level of skills and ability, our business may be jeopardized.

Information from multiple sources

The quality of our databases supporting certain of our products depends substantially on information provided by a number of sources, including commercial real estate brokers, agents and property owners, trade associations, tax assessors, deed recorders, municipal planners, corporate web sites, the business and trade press, and selected third party vendors of business information. If we are unable to collect information from a significant number of these sources this could negatively affect certain of our products and may potentially result in subscriber cancellations and failure to acquire new subscribers.

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Reliance on larger enterprise transactions with longer and less predictable sales cycles

The ability to meet revenue targets is becoming more dependent on larger transactions which have longer sales cycles. The presence or absence of one or more of these transactions may have a material positive or negative effect on anticipated revenue in any given period.

Success of new product introductions

As new products are developed and introduced to the marketplace, client adoption may not achieve anticipated levels. As a result, revenue expectations may not be achieved. If cash flows from new products do not reach sufficient levels, asset impairments may need to be taken on any capitalized costs related to the development of the products.

Ability to respond to technological change and develop products on a timely basis

Our ability to generate future revenues from software is dependent upon meeting the changing needs of the market and evolving industry standards through new product introductions and product enhancements. In order to maintain or enhance product market share over the long-term, it is imperative to anticipate and develop products that meet client and industry needs. In the short to medium term, the ability to complete product developments on a timely basis is important to achieving revenue and cost targets.

Protection of intellectual property or defending against claims of intellectual property rights of others

We rely on protecting our intellectual property rights including copyrights, trademarks, trade secrets, databases and methodologies, which have been important factors in maintaining our competitive position. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to obtain and use information that we regard as proprietary. There can be no assurance that we will be successful in protecting our proprietary rights and, if we are not, our business, financial condition, liquidity and results of operations could be materially adversely affected. Additionally, we may be subject to claims by third parties regarding technology infringement. Responding to such claims could result in substantial expense and may result in damages or injunctive relief. We may also be required to indemnify customers pursuant to our indemnification obligations, enter into licensing agreements on unfavourable terms or redesign or stop selling affected products, which could materially disrupt the conduct of our business.

Ability to implement technology strategy and ensure workforce adoption

Our business relies on the use of information technology systems to deliver expert services, data and software solutions to our clients. If we are unable to effectively implement our information technology strategies or adopt new technologies and technology-enabled processes relevant to our offerings in a timely or cost-effective manner, or if our employees fail to adopt in an effective and timely manner new technologies or technology-enabled processes, then our ability to deliver services and solutions that meet client needs or our ability to remain competitive in the market may be materially impaired.

Information technology governance and security, including cyber security

In the ordinary course of our business, we collect, store, process and/or transmit sensitive data belonging to clients, partners, vendors, employees and contractors as well as our own proprietary business information and intellectual property. The secure processing, maintenance and transmission of this information is critical to our workflow operations and delivery of products and services to our clients. We have implemented a secure operating framework which includes policies and governance, prevention and detection technologies, back-up and recovery processes and other procedures and technology in the

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protection of our data, software and infrastructure assets from loss, theft, unauthorized access, vandalism, cyber attacks, or events such as power outages or surges, floods, fires or other natural disasters. We have also implemented a major incidence process whereby breaches or unauthorized access to our systems are assessed and reported based on established communication protocols. Despite our security measures, our data, systems and infrastructure may be vulnerable to cyber attacks or breached due to employee error, malfeasance or other disruptions. These security breaches could materially compromise our information, disrupt our business operations or cause us to breach our client obligations thereby exposing us to liability, reputational harm and/or significant remediation costs. A theft, loss, corruption, exposure, fraudulent use or misuse of client information whether by third parties or as a result of employee malfeasance could result in significant remediation and other costs, fines, litigation or regulatory actions against us, as well as cause reputational harm, negatively impact our competitive position and affect our financial results. We are increasingly relying on third-party data storage providers, including cloud storage solution providers, resulting in less direct control over our data and system processing. Such third parties may also be vulnerable to security breaches for which we may not be indemnified and which could cause materially adverse harm to our reputation and competitive position and affect our financial results.

Engagement and product pipeline opportunities do not result in sufficient definitive agreements

Our forecast is built on a pipeline of client opportunities at varying stages within the sales process. Our ability to achieve the forecast is dependent on completion of the sales cycle and client acceptance of mutually agreeable terms. Certain factors are beyond our control, including our clients' evaluation of our offerings, budgetary constraints, timing of their approval processes, etc. Our pipeline of opportunities may not close on terms and timing in line with our forecast. This may have a material positive or negative effect on anticipated revenue in any given period.

Property tax assessment regulators do not process appeals in a manner consistent with expectations

Our Property Tax practice is significantly influenced by property tax assessment regulators and their appeal settlement processes. The timing and volume of appeals processed and whether the outcomes are favourable may cause fluctuations on a quarterly and annual basis, in addition to spillover effects outside any particular valuation cycle. This may have a material positive or negative effect on anticipated revenue in any given period.

Fixed-price and contingency engagements

A portion of our revenues comes from fixed-price engagements. A fixed-price engagement requires us to either perform all or a specified part of work under the engagement for a specified lump sum payment. Fixed-price engagements expose us to a number of risks not inherent in cost-plus engagements, including underestimation of costs, ambiguities in specifications, unforeseen or changed costs or difficulties, problems with new technologies, delays beyond our control, failures of subcontractors to perform and economic or other changes that may occur during the term of engagement. Increasing reliance on fixed-price engagements and/or increases in the size of such engagements would increase the exposure to this risk. Economic loss under fixed-price engagements could have a material adverse effect on our business.

We are also engaged to provide services on a contingency basis, meaning that we receive our fees only if certain results are achieved. We may experience adverse financial effects from having devoted professional and other resources to a project, which, due to a failure to meet the contingency goals, are not recouped through fees.

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Appraisal and appraisal management mandates

Some clients rotate their appraisal mandates to different service providers. As a result, we may be rotated out of an appraisal engagement.

Canadian multi-residential market

A significant part of the Canadian Cost practice area's annual revenues are derived from the rental apartment and condominium sectors of the multi-residential development market. Any significant decline in the multi-unit residential development market could have a material adverse effect on our Cost practice's operating results.

Weather

The level of activity in the oilfield services industry and natural resources industry are influenced by seasonal weather patterns and natural or other disasters, such as floods and forest fires. Spring break-up often experienced during the second quarter leaves many secondary roads temporarily incapable of supporting the weight of field equipment, which results in severe restrictions in the provision of field work for Geomatics' survey services and land-use consulting. The timing and duration of spring break-up are dependent on regional weather patterns but generally occur in April and May.

The demand for survey services and forestry and land-use services may also be affected by the severity of Canadian winters, and excessively rainy periods or forest fires, thereby adversely affecting operations. The uncertainty of weather and temperature can therefore create unpredictability in activity and utilization rates.

Legislative and regulatory changes

Changes to any of the laws, rules, regulations or policies affecting our business would have an impact on our business. Certain elements of our business are influenced by the regulatory environment of our clients, such as the requirement for pension fund managers to obtain property valuations on an annual basis. In addition, elements of our business, such as our Property Tax practice area, are significantly influenced by the regulatory regime and any changes thereto. Any change to laws, rules, regulations or policies may significantly and adversely affect our operations and financial performance.

Customer concentration and loss of material clients

Although we are not dependent on one or a small number of clients, certain of our business segments have significant clients. Loss of any significant client that contributes a substantial portion to that business segments' revenues could have a negative impact on our revenues and could impact our ability to attract and retain other clients.

Interest rate risk

We are exposed to fluctuations in interest rates under our borrowings. Increases in interest rates may have an adverse effect on our earnings.

Credit risk

We may be materially and adversely affected if the collectability of our trade receivables is impaired for any reason. In certain parts of Asia, it is often common business practice to pay invoices over an extended period of time and/or at the completion of the project. This practice increases the risk and likelihood of

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future bad debts. In addition, the risk of non-collection of trade receivables is greater in Asia Pacific compared to North American or European countries.

Income tax matters

In the ordinary course of business, we may be subject to audits by tax authorities. While management anticipates that our tax filing positions will be appropriate and supportable, it is possible that tax matters, including the calculation and determination of revenue, expenditures, deductions, credits and other tax attributes, taxable income and taxes payable, may be reviewed and challenged by the authorities. If such challenge were to succeed, it could have a material adverse effect on our tax position. Further, the interpretation of and changes in tax laws, whether by legislative or judicial action or decision, and the administrative policies and assessing practices of tax authorities, could materially adversely affect our tax position.

Revenue and cash flow volatility

Our revenue, cash flow, operating results and profitability may experience fluctuations from quarter to quarter, based on project terms and conditions for billing and rendering of services.

Health and safety hazards

Our employees are sometimes required to attend client worksites, including construction worksites in the case of both Cost and Geomatics and remote, wilderness areas in the case of Geomatics. The activities at these worksites may involve certain operating hazards that can result in personal injury and loss of life. We have implemented health and safety policies and procedures as well as provide required employee health and safety training programs. Despite these programs, there can be no assurance that our insurance will be sufficient or effective under all circumstances or against all claims or hazards to which we may be subject or that we will be able to continue to obtain adequate insurance protection. A successful claim for damage resulting from a hazard for which it is not fully insured could adversely affect our results of operations.

Performance of contractual obligations and client satisfaction

Our success depends largely on our ability to fulfill our contractual obligations and ensure client satisfaction. If we fail to properly define the scope of our work, communicate the boundaries or use of the advice and reports we provide, define the limits of our liability, satisfactorily perform our obligations, or make professional errors in the advice or services that we provide, clients could terminate projects, refuse payment for our services or take legal action for the loss or harm they suffer, thereby exposing us to legal liability, loss of professional reputation, enhanced risk of loss and/or reduced profits.

Risk of legal proceedings

We are threatened from time to time with, or are named as a defendant in, or may become subject to various legal proceedings in the ordinary course of conducting our business, including lawsuits based upon professional errors and omissions. A significant judgment against us, or the imposition of a significant fine or penalty as a result of a finding that we have failed to comply with laws, regulations, contractual obligations or other arrangements or professional standards, could have a significant adverse impact on our financial performance. Should any indemnities made in our favor in respect of certain assignments fail to be respected or enforced, we may suffer material adverse financial effects.

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Insurance limits

Management believes that our professional errors and omissions insurance coverage and directors' and officers' liability insurance coverage address all material insurable risks, provide coverage that is similar to that which would be maintained by a prudent operator of a similar business and are subject to deductibles, limits and exclusions, which are customary or reasonable given the cost of procuring insurance and current operating conditions. However, there can be no assurance that such insurance will continue to be offered on an economically affordable basis, that all events that could give rise to a loss or liability are insurable or that the amounts of insurance will at all times be sufficient to cover each and every loss or claim that may occur involving our assets or operations.

Ability to meet solvency requirements to pay dividends

Our ability to pay dividends is dependent on our operations and assets, and is subject to various factors including our financial performance, our obligations under applicable bank credit facilities, fluctuations in our working capital, the sustainability of our margins and our capital expenditure requirements.

Leverage and financial covenants

Our ability to pay dividends or make other payments or advances is subject to applicable laws and contractual restrictions contained in the instruments governing any indebtedness owed by us or our subsidiaries (including the bank credit facilities). The degree to which we are leveraged could have important consequences to our shareholders. For example, our ability to obtain additional financing for working capital, capital expenditures or acquisitions in the future may be limited; a significant portion of our cash flow from operations may be dedicated to the payment of principal and interest on our indebtedness, thereby reducing funds available for future operations; certain of our borrowings will be subject to variable rates of interests, which exposes us to the risk of increased interest rates; and we may be more vulnerable to economic downturns and be limited in our ability to withstand competitor pressures.

The bank credit facilities contain numerous financial covenants that limit the discretion of our management with respect to certain business matters. These covenants place significant restrictions on, among other things, our ability to create liens or other encumbrances, to pay dividends or make certain other payments, investments, loans and guarantees and to sell or otherwise dispose of assets and merge or consolidate with another entity. In addition, the bank credit facilities contain a number of financial covenants that require us to meet certain financial ratios and financial condition tests. Failure to comply with the obligations provided in the bank credit facilities could result in a default which, if not cured or waived, could result in the termination of dividends paid by us and accelerate the repayment of the relevant indebtedness. If repayments of indebtedness under the bank credit facilities were to be accelerated, there can be no assurance that our assets would be sufficient to repay the relevant indebtedness in full. There can be no assurance that future borrowings or equity financing will be available to us or available on acceptable terms, in an amount sufficient to fund our needs. If we are unable to obtain financing on the expiration of the bank credit facilities or are unable to obtain financing on favourable terms, our ability to pay dividends may be adversely affected.

Unpredictability and volatility of common share price

Our common shares do not necessarily trade at prices determined by reference to the underlying value of our business and cannot be predicted. The market price of the common shares may be subject to significant fluctuations in response to variations in quarterly operating results and other factors. In addition, securities markets have experienced significant price and volume fluctuations from time to time in recent years that

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are often unrelated or disproportionately related to the operating performance of particular issuers. These broad fluctuations may adversely affect the market price of our common shares.

Capital investment

The timing and amount of capital expenditures made by us or any of our subsidiaries indirectly affects the amount of cash available for investments, debt payments or dividend payments. Dividends may be reduced, or even eliminated, at times when we deem it necessary to make significant capital or other expenditures.

Issuance of additional common shares diluting existing shareholders' interests

We are authorized to issue an unlimited number of common shares for such consideration and on such terms and conditions as may be determined by the Board of Directors without shareholder approval, except as required by the TSX. An issuance such as this may dilute the interests of current shareholders.

Environmental, Social and Governance

For Altus Group, Environmental, Social and Governance ("ESG") matters are cornerstones of our strategy and corporate culture, and contribute to our success and long-term financial sustainability. We identified the following ESG factors in particular to be important to our sustainability: corporate governance, environmental impact, social impact, corporate philanthropy, human capital, diversity and inclusion, and cybersecurity.

Corporate Governance

Altus Group is committed to maintaining high standards of governance and ethics throughout our company. We believe strong stewardship and good governance are essential to operating our business effectively and are important to our shareholders, employees and other stakeholders.

The Board has adopted the following corporate governance guidelines and framework to protect Altus Group's interests and to align our objectives with those of our shareholders: Corporate Governance Guidelines, Board Mandate and Committee Charters, Written Position Descriptions, Director Independence, Directors' Equity Ownership Requirements, Directors' Equity Ownership Interests, Prohibition on Hedging and Equity Monetization Policy, Code of Business Conduct and Ethics, Whistleblower Policy, Timely Disclosure and Confidentiality Policy, Board Diversity Policy, and Advance Notice By-Law.

Some of our governance highlights include:

- We were early adopters of a Board Diversity Policy and today three of our eight directors are women (representing almost 40% of our total members).
- We believe that we have shareholder-friendly executive compensation plans that align performance with compensation, and align the objectives of our executives with the long-term interests of the company and its shareholders, while ensuring that we remain competitive in the market, and continue to attract, retain and motivate top talent.
- The composition of our Board has evolved to better suit our strategic direction, providing the ideal mix of industry knowledge, diversity, international experience and financial expertise, as well as a range of director age and tenure that provides the Board with a diversity of opinion and experience.

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Our corporate governance policies, procedures and practices are designed to ensure that our Board can fulfill its statutory mandate to supervise the management of our business and affairs in accordance with the highest standards of ethical conduct and in the best interests of all of our stakeholders. We strive to put governance practices in place that not only comply with regulatory requirements in accordance with prevailing market practices, but exceed them. We are committed to effective and sound practices in corporate governance and regularly assess opportunities for improvement. More information related to our governance practices and guidelines is available on our corporate website under the Investor Relations tab.

Environmental Impact

As the majority of our revenues are derived from services and software, we do not consider our business to have a material environmental footprint. We are committed to protecting the environment and reducing waste by promoting the efficient use of energy and natural resources. We strive to implement recycling programs wherever it is available in our offices, including reducing use of bottled water by installing drinking water filtrations systems, installing energy efficient lighting in many of our offices, and encouraging employees to save paper and only print documents when necessary. Our head office in Toronto is also LEED certified, and as we expand our geographical presence we strive to choose offices that have similar environmental certifications.

Social Impact

Altus Group has a number of social policies that govern our conduct and speak to our corporate culture and values. Our Altus Group Employee Handbook(s), Code of Conduct and Ethics policy, Workplace Anti-Violence Unlawful Discrimination and Bullying policy, and health and safety training all contribute to ensuring a safe workplace - both physically and culturally. We mandate training of employees on a number of related topics, such as preventing harassment and violence in the workplace, IT security, and Code of Conduct.

All of our employees are required to participate in health and safety training based on jurisdictional requirements which we routinely review with a view to improve efficacy and meet prevailing market standards.

Our Code of Business Conduct and Ethics policy contains principles and guidelines in the following areas: complying with applicable laws (including insider trading laws and timely disclosure); conflicts of interest; protection of corporate assets and corporate opportunities; gifts and entertainment; payments to government personnel; government relations; fair dealing; outside directorships; confidentiality, propriety information and trade secrets; workplace environment; and reporting violations of the Code or other company policies. Altus Group employees who violate the standards in this Code are subject to disciplinary action, which may include the termination of their employment.

As a reflection of our commitment to uphold high professional standards, Altus Group became the first company to be globally regulated by the Royal Institution of Chartered Surveyors ("RICS"), the world's leading qualification for professional standards in land, property and construction. RICS is the global professional body that promotes and enforces the highest international standards in the valuation, management and development of land, real estate, construction and infrastructure.

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To our best knowledge, we remain the only Canadian publicly-traded company regulated by RICS. Among other things, RICS requires us to adhere to certain valuation standards that take into account sustainability factors, such as environment and climate change, health and well-being and corporate responsibility. With our commitment to regulation by RICS, the Company aligns itself with RICS' recognition of the growing relevance of sustainability factors as a market influence.

Corporate Philanthropy

We are committed to support the communities in which our employees live and work, through both financial support and volunteer commitments. Our "Altus Cares" Committee meets regularly to plan and facilitate volunteerism and fundraising initiatives to add value to our communities. Directionally, we have committed our charitable focus on organizations that help children and their families dealing with challenging situations. We are proud that we continue to attract significant employee participation in our ongoing initiatives throughout the course of the year. In September (our Month of Caring), Altus Group employees around the world volunteer their time to support their local communities. A pillar event for our Canadian office has been our volunteerism with Ronald McDonald Houses to support families with ill children. Over the years, our Month of Caring has evolved to include a variety of charities (Juvenile Diabetes, Ride for Cancer, etc.) to promote our mandate of helping children and their families.

Human Capital

One of our key competitive advantages is our industry expertise. As such, our employees are our most valuable asset. In order to deliver on our clients' needs and provide the level of service our clients expect, we are dependent on being able to attract, retain and motivate qualified individuals. We have been successful in attracting and retaining talented professional staff due to, among other things, our global scale and position as an industry leader. This gives us the ability to offer professionals the opportunity to develop a broad and unique skill set through participation in a variety of projects, practice areas and high profile assignments.

Our dependence on being able to attract and retain employees is also one of our material risks. We strive to mitigate this risk by providing competitive benefits and compensation packages. We regularly benchmark our practices to those of our peers to ensure our benefits remain competitive and continue to meet our employees' needs. At our most senior levels, not only do we offer participation in our Long-Term Incentive Plan, but we also award a portion of our annual bonus in the form of equity. We offer flexible working arrangements that help improve our employees' work-life balance and overall wellness, and we provide a wide array of training, including technical, leadership and personal development aimed at empowering our employees to advance their careers within our company. In 2018 we launched a pilot program focused on training for new managers to equip them to successfully transition from a team member to a team leader. The response to the pilot was extremely positive and we have adopted the program globally and will roll out sessions across the globe regularly to support our new leaders.

We regularly review our talent and succession pipeline, giving visibility of our top talent to our Executive team across the business. We highlight and apprise our Board regularly in regards to our key talent and ensure the Board has direct exposure to these individuals.

Diversity and Inclusion

As a global organization, the ability to draw on a wide range of viewpoints, backgrounds, skills, and experience is critical to our success. Altus Group's global growth plans requires an agile culture, and

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competitively, Altus Group needs to continue to develop an attractive employment proposition that appeals to a wide range of talent that will help the Company sustain its advantage. Diversity and inclusion are integral to Altus Group being successful and a key facet to an effective team of senior leaders. At Altus Group, diversity is about more than just gender. We embrace our employees' unique and diverse characteristics and think beyond traditional definitions of diversity. Altus Group realizes that age, ethnicity and geographic background, language, thinking styles, life experiences, personal style, sexual orientation, educational background, religion and more all enrich both the working environment and in turn what we can offer both our fellow employees and clients alike. It's all about the varied perspectives people can bring to our collective table. Diversity in our workforce is a differentiator that improves our ability to innovate and to drive improved performance. We believe that Altus Group is a better company when our workforce reflects the diversity of the communities in which we live and work, and that putting our unique differences to work across the company will drive growth and innovation.

While always a cornerstone at Altus Group, 2018 saw formal Diversity and Inclusion Committees formed globally. Sponsored by the CEO and the CHRO, employees from all levels are participating in these committees. They meet regularly to educate, increase awareness and promote a wide variety of activities furthering Altus Group's diversity and inclusion efforts. These committees have been developing plans and strategies while embracing an even wider range of activities to more visibly encourage and celebrate our diversity. Additionally, we hosted International Women's Day with events around the globe in March of 2018, and we continued to participate in forums such as the Commercial Real Estate Women's (CREW) Network.

Furthermore, we remain committed to continuing to increase the diversity of our workforce and continue to make solid progress. In relation to our diversity initiatives, we recognize the importance of increasing women's representation in executive and senior leadership roles and we are focused on developing this talent "pipeline". Today, just under 40% of our global workforce are women. Our current Global Executive is comprised of 20% women and similarly we currently have women in 19% of our global leadership team positions.

Cybersecurity

We have developed a cyber and information security program and implemented a variety of practices that safeguard our intellectual property and our client's data. We have an Information Security Policy and have implemented a framework of standards, controls, practices, processes and technologies in an information security management system ("ISMS") based on the ISO/IEC 27001:2013 international standard. Following industry best practices, our cyber and security controls are applied using a risk-based approach, following the principles of defense in depth and least privileged. Our cyber and information security measures focus on people, processes and technology, and address operational aspects such as training, systems development, access right, suppliers, cryptography, protection against malware, patching and many more.

Additional Information

Additional information relating to Altus Group Limited, including our Annual Information Form, is available on SEDAR at www.sedar.com and on our corporate website at www.altusgroup.com under the Investors tab.

Our common shares trade on the Toronto Stock Exchange under the symbol "AIF".



Altus Group

LISTINGS

Toronto Stock Exchange
Stock trading symbol: AIF

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