KINAXIS INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

FOR THE THREE AND SIX MONTHS ENDED JUNE 30, 2020

DATED: August 5, 2020

*Unless the context requires otherwise, all references in this management's discussion and analysis (the "**MD&A**") to "Kinaxis", "we", "us", "our" and the "Company" refer to Kinaxis Inc. and its subsidiaries as constituted on June 30, 2020. This MD&A has been prepared with an effective date of August 5, 2020.*

*This MD&A for the three and six months ended June 30, 2020 should be read in conjunction with our condensed consolidated interim financial statements and the related notes thereto as at and for the three and six months ended June 30, 2020 and the annual audited consolidated financial statements for the year ended December 31, 2019. The financial information presented in this MD&A is derived from our interim financial statements prepared in accordance with International Financial Reporting Standards ("**IFRS**") as issued by the International Accounting Standards Board ("**IASB**"). This MD&A contains forward-looking statements that involve risks, uncertainties and assumptions, including statements regarding anticipated developments in future financial periods and our future plans and objectives. There can be no assurance that such information will prove to be accurate, and readers are cautioned not to place undue reliance on such forward-looking statements. See "Forward-Looking Statements".*

This MD&A includes trade-marks, such as "Kinaxis", and "RapidResponse", which are protected under applicable intellectual property laws and are the property of Kinaxis. Solely for convenience, our trade-marks and trade names referred to in this MD&A may appear without the ® or ™ symbol, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights to these trade-marks and trade names. All other trade-marks used in this MD&A are the property of their respective owners.

All references to $ or dollar amounts in this MD&A are to U.S. currency unless otherwise indicated.

Additional information relating to Kinaxis Inc., including the Company's most recently completed Annual Information Form, can be found on SEDAR at www.sedar.com.

Non-IFRS Measures

This MD&A makes reference to certain non-IFRS measures such as "Adjusted profit", "Adjusted EBITDA" and "Adjusted diluted earnings per share". These non-IFRS measures are not recognized, defined or standardized measures under IFRS. Our definition of Adjusted profit, Adjusted EBITDA and Adjusted diluted earnings per share will likely differ from that used by other companies and therefore comparability may be limited.

Adjusted profit, Adjusted EBITDA and Adjusted diluted earnings per share should not be considered a substitute for or in isolation from measures prepared in accordance with IFRS. These non-IFRS measures should be read in conjunction with our condensed consolidated interim financial statements and the related notes thereto as at and for the three and six months ended June 30, 2020. Readers should not place undue reliance on non-IFRS measures and should instead view them in conjunction with the most comparable IFRS financial measures. See the reconciliations to these IFRS measures in the "Reconciliation of Non-IFRS Measures" section of this MD&A.

Forward-Looking Statements

This MD&A contains forward-looking statements that relate to our current expectations and views of future events. In some cases, these forward-looking statements can be identified by words or phrases such as "may", "will", "expect", "anticipate", "aim", "estimate", "intend", "plan", "seek", "believe", "potential", "continue", "is/are likely to" or the negative of these terms, or other similar expressions intended to identify forward-looking statements. Forward-looking statements are intended to assist readers in understanding management's expectations as of the date of this MD&A and may not be suitable for other purposes. We have based these forward-looking statements on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements include, among other things, statements relating to:

- our expectations regarding our revenue, expenses and operations;
- our anticipated cash needs;
- our ability to protect, maintain and enforce our intellectual property rights;
- third party claims of infringement or violation of, or other conflicts with, intellectual property rights by us;
- our plans for and timing of expansion of our solutions and services;

- our future growth plans;
- the acceptance by our customers and the marketplace of new technologies and solutions;
- our ability to attract new customers and develop and maintain existing customers;
- our ability to attract and retain personnel;
- our expectations with respect to advancement in our technologies;
- our competitive position and our expectations regarding competition;
- regulatory developments and the regulatory environments in which we operate;
- anticipated trends and challenges in our business and the markets in which we operate; and
- expected impact of COVID-19 on the Company’s future operations and performance.

Forward-looking statements are based on certain assumptions and analysis made by us in light of our experience and perception of historical trends, current conditions and expected future developments and other factors we believe are appropriate. Forward-looking statements are also subject to risks and uncertainties which include:

- risks related to managing our growth;
- our dependence on customer retention and renewals;
- our sales cycle length;
- our reliance on recurring revenue;
- fluctuations in quarterly operating results;
- exchange rate fluctuations;
- risks related to expanding our marketing and sales;
- risks related to our ability to maintain the compatibility of our solutions with third party applications;
- risks related to our ability to adapt to rapid technological change;
- risks related to our ability to meet our contractual commitments;
- risks related to global economic conditions;
- risks related to terrorism, geopolitical crisis, or widespread outbreak of an illness or other health issue;
- risks related to the security of customer information;
- risks related to the protection of our intellectual property;
- risks related to the complexity of our solutions;
- competition in our industry and markets;
- our reliance on key personnel;
- risks related to our ability to continue to develop our direct sales force;
- our reliance on third party service providers;
- the possibility of product defects;
- risks associated with acquisitions and the integration of the acquired businesses;
- risks related to international expansion; and
- risks related to climate change.

These risks are described in further detail in the section entitled “Risk Factors” in our most recently filed Annual Information Form. Although the forward-looking statements contained in this MD&A are based upon assumptions management believes to be reasonable, these risks, uncertainties, assumptions and other factors could cause our actual results, performance, achievements and experience to differ materially from our expectations, future results, performances or achievements expressed or implied by the forward-looking statements. In light of these risks, uncertainties and assumptions, readers should not place undue reliance on forward-looking statements.

On March 3, 2020, COVID-19 was characterized as a pandemic by the World Health Organization. The spread of COVID-19 has significantly impacted the global economy. We are closely monitoring the potential effects and impact on our operations and financial performance; however, the extent of impact is difficult to fully predict at this time due to the rapid evolution of this uncertain situation. We are conducting business with substantial modifications to employee travel, employee work locations and virtualization or cancellation of all sales and marketing events, along with substantially modified interactions with customers and suppliers, among other modifications. We will continue to actively monitor the impact of the COVID-19 pandemic on all aspects of our business, including customer purchasing decisions, and may take further actions that alter our business operations as may be required by governments, or that we determine are in the best interest of our employees, customers, partners, suppliers, and shareholders. It is uncertain and difficult to predict what the potential effects any such alterations or modifications may have on our business including the effects on our customers and prospects, or our financial results and our ability to successfully execute our business strategies and initiatives.

To date, the COVID-19 pandemic has not has had a significant impact on our operational and financial performance however, given the uncertainty associated with the duration and spread of the virus, the future impact on our customers and our sales cycle, the impact on business development and marketing activities, and potential delays in customer deployment projects and activities, and the impact on our vendors and partners cannot be predicted. The extent to which the COVID-19 pandemic may impact our financial position or results of operations is uncertain. Due to our subscription-based business model, any impact, if at all, may not be fully reflected in our results of operations until future periods.

The forward-looking statements made in this MD&A relate only to events or information as of the date on which the statements are made in this MD&A and are expressly qualified in their entirety by this cautionary statement. Except as required by law, we do not assume any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, after the date on which the statements are made or to reflect the occurrence of unanticipated events.

All of the forward-looking statements in this MD&A are qualified by these cautionary statements and other cautionary statements or factors contained herein, and there can be no assurance that the actual results or developments will be realized or, even if substantially realized, that they will have the expected consequences to, or effects on, Kinaxis.

Overview

We are a leading provider of cloud-based subscription software that enables our customers to improve and accelerate analysis and decision-making across their supply chain planning and digital operations. The supply chain planning and analytics capabilities of our product, RapidResponse, create the foundation for managing multiple, interconnected supply chain management processes.

Our target market is large global enterprises that have significant unresolved supply chain challenges. We believe this market is growing as a result of a number of factors, including increased complexity and globalization of supply chains, outsourcing, a diversity of data sources and systems, and competitive pressures on our customers.

We have established a consistent financial track record of strong revenue growth, solid earnings performance and cash generation. Our SaaS and subscription term license revenue growth is driven both by contracts with new customers and expansion of our solution and service engagements within our existing customer base. For the three and six months ended June 30, 2020, our Adjusted EBITDA was 37% and 33% of revenue (three and six months ended June 30, 2019 – 27% and 31%), and ending cash and short-term investment balances grew to $260.6 million (December 31, 2019 – $212.6 million).

Our customers are generally large national or multinational enterprises with complex supply chain requirements. We target multiple key industry verticals including high technology and electronics, aerospace and defense, life sciences and pharmaceuticals, industrial, automotive, and consumer products.

We sell our product using a subscription-based model, with the product being delivered from the cloud in the vast majority of cases, from data centers that we operate. Revenue from product delivered from the cloud is recorded as Software as a Service ("**SaaS**") revenue. Certain customers, have licensed our subscription product on an on-premise basis or have retained the option to take the hosted software on-premise as a hybrid subscription. Under IFRS 15, for on-premise and hybrid customers the deemed software component for the applicable subscription term is recognized as "subscription term license revenue" upon initiation or renewal of the subscription contract term, with the remaining maintenance and support component and hosting services for hybrid subscriptions recognized ratably over the term as “maintenance and support revenue”. Our agreements with customers are typically two to five years in length. Our subscription fee generally depends on the size of our customer, the number of applications deployed, the number of users and the number of licensed manufacturing, distribution and inventory sites. The average annual contract value fluctuates from period to period depending on the number and size of new customer arrangements and the extent to which we are successful in expanding adoption of our products by existing customers. We also provide professional services for implementation and configuration of the product, as well as ongoing technical services and training. Professional services are typically billed on a time and material basis.

For the three and six months ended June 30, 2020, our ten largest customers accounted for 36% and 31% of our total revenues (three and six months ended June 30, 2019 – 35% and 37%) with no customer accounting for greater than 10% of total revenues.

Increasing revenues through new customer wins is one of our highest organizational priorities. Our sales cycle can be lengthy, as we generally target very large organizations with significant internal processes for adoption of new systems. We currently pursue a revenue growth model that includes both direct sales through our internal sales force, as well as indirect sales supported by our Strategic, Reseller and other service partners.

Due to the growth in the market and the increasing need for solutions, we expect competition in the industry from new entrants and larger incumbent vendors to increase. In addition to this increased competitive pressure, changes in the global economy may have an impact on the timing and ability of these enterprises to make buying decisions, which may have an impact on our performance.

We continue to drive growth in our business through new customer acquisition and expansion of existing customers through our land and expand strategy. Approximately two-thirds of SaaS revenue growth has been derived from new customers. Our net revenue retention from both SaaS and on-premise subscriptions is greater than 100%, reflecting our longer term contract structure and renewal history.

We continue to invest in our partnerships both from a sales and product implementation perspective. We work with major consulting organizations as Strategic Partners, such as Accenture, Deloitte, and EY, which are able to positively influence the decision making process at major target customers. These partners and others, such as Genpact, mSE Solutions, Crimson and Co., and Cognizant, help customers realize end-to-end supply chain optimization by implementing our industry-leading concurrent planning solution for our customers. Finally, in Asia we work with certain organizations as Reseller Partners, as that is frequently the most effective way to engage accounts in those markets.

We are headquartered in Ottawa, Ontario. We have subsidiaries located in the United States, the Netherlands, the United Kingdom, Hong Kong, Singapore, France, and Ireland and subsidiaries and offices in Seoul, South Korea; Tokyo, Japan; and Chennai, India. We continue to expand our operations internationally. For the three and six months ended June 30, 2020, 69% of our revenues were derived from North American customers (three and six months ended June 30, 2019 – 65% and 68%) and our remaining revenues were derived from European and Asian customers.

On January 31, 2020, we acquired 100% of the outstanding shares of Prana Consulting, Inc. and all of its subsidiaries (“Prana”) in exchange for cash and contingent consideration. Prana provides consulting services for implementation of our software.

On July 2, 2020, we acquired 100% of the outstanding shares of Rubikloud Technologies Inc. and all of its subsidiaries (“Rubikloud”) in exchange for cash. Rubikloud is a provider of Artificial Intelligence solutions that automate supply chain prescriptive analytics and decision-making in the retail and consumer packaged goods industries.

Key Performance Indicators

The key performance indicators that we use to manage our business and evaluate our financial results and operating performance are: total revenue, total new customers, incremental subscription revenue and bookings, net revenue retention, secured subscription backlog, operating expenses, Adjusted profit (as discussed below), Adjusted EBITDA (as discussed below), Adjusted diluted earnings per share (as discussed below), and cash flow from operations. Some of these measures are non-IFRS measures. See “Non-IFRS Measures” above. Management reconciles non-IFRS measures to IFRS measures (See "Reconciliation of Non-IFRS Measures" below). We evaluate our performance by comparing our actual results to budgets, forecasts and prior period results.

Recurring revenue model

Our subscription customers generally enter into two to five year agreements which are paid annually in advance. SaaS and on-premise subscription agreements are generally subject to price increases upon renewal reflecting both inflationary increases and the additional value provided by our solutions. In addition to the expected increase in SaaS and subscription term license revenue from price increases over time, existing customers may subscribe for additional applications, users or sites during the terms of their agreements.

Our subscription model results in a high proportion of recurring revenue, which includes SaaS and maintenance and support revenue (see "Significant Factors Affecting Results of Operations – Revenue"). While the underlying contracts for on-premise subscription agreements are typically structured in the same manner as for our cloud-delivered customers, including contracted, recurring annual payments, under IFRS 15 for on-premise customers we are required to separately report revenue as two components: the deemed software component and the maintenance and support component. The deemed software component for the entire term of these on-premise subscriptions is recognized as revenue upon contract term commencement or renewal (as a subscription term license). The amount and timing of any recurring subscription term license revenue from on-premise subscription agreements is subject to the timing and length of renewal term of the agreement.

We believe the power of the subscription model is only fully realized when a vendor has high retention rates. High customer retention rates generate a long customer lifetime and a very high lifetime value of the customer. Our annual net revenue retention rates remain over 100%, which includes sales of additional applications, users and sites to existing customers.

The recurring nature of our revenue provides high visibility into future performance, and upfront payments result in cash flow generation in advance of revenue recognition. Typically, approximately 80% of our annual SaaS and maintenance and support revenue is recognized from customers that are in place at the beginning of the year (excluding the effect of renewals) and this continues to be our target model going forward. However, this also means that agreements with new customers or agreements with existing customers purchasing additional applications, users or sites in a quarter may not contribute significantly to revenue in the current quarter. For example, a new customer who enters into an agreement late in a quarter will typically have limited contribution to the revenue recognized in that quarter.

Significant Factors Affecting Results of Operations

Our results of operations are influenced by a variety of factors, including:

Revenue

Our revenue consists of SaaS revenue, subscription term license revenue, professional services revenue, and maintenance and support revenue.

SaaS revenue is primarily comprised of fees for provision of RapidResponse as software as a service in our hosted, cloud environment. This includes hosting services and maintenance and support for the solution over the term of the contract when the product is provided from the cloud under a SaaS arrangement.

Subscription term license revenue is comprised of fees for the implied software component for on-premise subscriptions, which is recognized as revenue upon term commencement.

Professional services revenue is comprised of fees charged to assist organizations to implement and integrate our solution and train their staff to use and deploy our solution. Professional service engagements are contracted on a time and materials basis including billable travel expenses and are billed and recognized as revenue as the service is delivered. In certain circumstances, we enter into arrangements for professional services on a fixed price basis; in these cases, revenue is recognized by reference to the stage of completion of the contract.

Maintenance and support revenue is comprised of fees for the implied maintenance and support component for on-premise and hybrid subscriptions as well as a small amount of maintenance and support for certain legacy customers who licensed our software on a perpetual basis prior to our conversion to a SaaS model in 2005. Over time, maintenance and support for legacy customers is expected to decline as more customers eventually convert to our more comprehensive, subscription based service or customers choose to let their support contracts lapse.

Cost of revenue

Cost of revenue consists of personnel, travel and other overhead costs related to implementation teams supporting initial deployments, training services and subsequent stand-alone engagements for additional services. Cost of revenue also includes personnel and overhead costs associated with our customer support team, depreciation related to our computer hardware and leased data center facilities where we physically host our SaaS solution, and network connectivity costs for the provisioning of hosting services under SaaS arrangements.

Selling and marketing expenses

Selling and marketing expenses consist primarily of personnel and related costs for our sales and marketing teams, including salaries and benefits, contract acquisition costs including commissions earned by sales personnel and partner referral fees, partner programs support and training, and trade show and promotional marketing costs.

We plan to continue to invest in sales and marketing by expanding our domestic and international selling and marketing activities, building brand awareness, developing partners, and sponsoring additional marketing events. We expect that in the future, selling and marketing expenses will continue to increase.

Research and development expenses

Research and development expenses consist primarily of personnel and related costs for the teams responsible for the ongoing research, development and product management of RapidResponse. These expenses are recorded net of any applicable scientific research and experimental development investment tax credits ("**investment tax credits**") earned for expenses incurred in Canada against eligible projects. We only record non-refundable tax credits to the extent there is reasonable assurance we will be able to use the investment tax credits to reduce current or future tax liabilities. As the Company has an established history of profits, we do expect to realize the benefit of these tax credits in the near term. Further, we anticipate that spending on research and development will also be higher in absolute dollars as we expand our research and development and product management teams.

General and administrative expenses

General and administrative expenses consist primarily of personnel and related costs associated with administrative functions of the business including finance, human resources and internal information system support, as well as legal, accounting and other professional fees. We expect that, in the future, general and administrative expenses will increase in absolute dollars as we invest in our infrastructure and we incur additional employee-related costs and professional fees related to the growth of our business and international expansion.

Foreign exchange

Our presentation and functional currency is USD with the exception of our subsidiaries in South Korea (Korean Won), Japan (Japanese Yen), the Netherlands, France, and Ireland (Euro), the United Kingdom (British Pound), and India (Indian Rupee). We derive most of our revenue in USD. Our head office and a significant portion of our employees are located in Ottawa, Canada, and as such approximately 40% of our expenses are incurred in Canadian dollars.

Results of Operations

The following table sets forth a summary of our results of operations:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	(In thousands of USD, except earnings per share)			
Statement of Operations				
Revenue	$ 61,373	$ 42,352	$ 114,128	$ 88,106
Cost of revenue	15,634	12,984	31,470	25,175
Gross profit	45,739	29,368	82,658	62,931
Operating expenses	30,618	24,368	59,202	47,742
	15,121	5,000	23,456	15,189
Foreign exchange gain (loss)	(5)	85	44	(85)
Net finance income	152	821	825	1,586
Profit before income taxes	15,268	5,906	24,325	16,690
Income tax expense	6,264	1,905	9,740	5,723
Profit	$ 9,004	$ 4,001	$ 14,585	$ 10,967
Adjusted profit(1)	$ 12,727	$ 7,582	$ 22,084	$ 17,620
Adjusted EBITDA(1)	$ 22,471	$ 11,555	$ 37,523	$ 27,493
Basic earnings per share	$ 0.34	$ 0.15	$ 0.55	$ 0.42
Diluted earnings per share	$ 0.32	$ 0.15	$ 0.53	$ 0.41
Adjusted diluted earnings per share(1)	$ 0.46	$ 0.28	$ 0.80	$ 0.66

Note:
(1) Adjusted profit, Adjusted EBITDA and Adjusted diluted earnings per share are non-IFRS measures. See “Non-IFRS Measures”. For a reconciliation of these measures to the closest IFRS measure, where a comparable IFRS measure exists, see “Reconciliation of Non-IFRS Measures” below.

	As at June 30, 2020	As at December 31, 2019
	(In thousands of USD)	
Total assets	$ 394,049	$ 350,743
Total non-current liabilities	18,578	13,910

Reconciliation of Non-IFRS Measures

Adjusted profit and Adjusted diluted earnings per share

Adjusted profit represents profit adjusted to exclude our equity compensation plans. Adjusted diluted earnings per share represents diluted earnings per share using Adjusted profit. We use Adjusted profit and Adjusted diluted earnings per share to measure our performance as these measures better align with our results and improve comparability against our peers.

Adjusted EBITDA

Adjusted EBITDA represents profit adjusted to exclude our equity compensation plans, income tax expense, depreciation and amortization, foreign exchange loss (gain) and net financing (income) expense. We use Adjusted

EBITDA to provide readers with a supplemental measure of our operating performance and thus highlight trends in our core business that may not otherwise be apparent when relying solely on IFRS financial measures.

We believe that securities analysts, investors and other interested parties frequently use non-IFRS measures in the evaluation of performance. Management also uses non-IFRS measures in order to facilitate operating performance comparisons from period to period, prepare annual operating budgets and assess our ability to meet our capital expenditure and working capital requirements.

We have reconciled Adjusted profit and Adjusted EBITDA to the most comparable IFRS financial measure as follows:

	Three months ended June 30,		Six months ended June 30,	
	2020	**2019**	**2020**	**2019**
	(In thousands of USD)			
Profit	$ 9,004	$ 4,001	$ 14,585	$ 10,967
Share-based compensation	3,723	3,581	7,499	6,653
Adjusted profit	$ 12,727	$ 7,582	$ 22,084	$ 17,620
Income tax expense	6,264	1,905	9,740	5,723
Depreciation and amortization	3,627	2,974	6,568	5,651
Foreign exchange loss (gain)	5	(85)	(44)	85
Net finance income	(152)	(821)	(825)	(1,586)
	9,744	3,973	15,439	9,873
Adjusted EBITDA	$ 22,471	$ 11,555	$ 37,523	$ 27,493
Adjusted EBITDA as a percentage of revenue	37%	27%	33%	31%

Revenue

	Three months ended June 30,		2019 to 2020	Six months ended June 30,		2019 to 2020
	2020	**2019**	**%**	**2020**	**2019**	**%**
	(In thousands of USD)					
SaaS	$ 35,741	$ 28,283	26%	$ 69,736	$ 55,625	25%
Professional services	12,400	8,358	48%	23,073	15,270	51%
Subscription term license	10,003	2,414	314%	14,907	10,820	38%
Maintenance and support	3,229	3,297	(2%)	6,412	6,391	0%
	61,373	42,352	45%	114,128	88,106	30%

Total revenue for the three months ended June 30, 2020 was $61.4 million, an increase of $19.0 million compared to the same period in 2019. This increase was due to a 314% increase in subscription term license revenue, a 48% increase in professional services revenue, and a 26% increase in SaaS revenues, partly offset by lower maintenance and support revenue. Total revenue for the six months ended June 30, 2020 was $114.1 million, an increase of $26.0 million compared to the same period in 2019. The increase was due to a 51% increase in professional services revenue, a 38% increase in subscription term license revenue and a 25% increase in SaaS revenue.

SaaS revenue

SaaS revenue for the three and six months ended June 30, 2020 was $35.7 million and $69.7 million, an increase of $7.5 million and $14.1 million compared to the same periods in 2019. This increase was due to contracts secured with new customers, as well as expansion of existing customer subscriptions.

Professional services revenue

Professional services revenue for the three and six months ended June 30, 2020 was $12.4 million and $23.1 million, an increase of $4.0 million and $7.8 million compared to the same periods in 2019. Professional services revenue varies quarter to quarter due to the size, timing and scheduling of customer engagements and the level of partner led engagements.

Subscription term license revenue

Subscription term license revenue for the three and six months ended June 30, 2020 was $10.0 million and $14.9 million, an increase of $7.6 million and $4.1 million compared to the same periods in 2019. Subscription term license revenue varies quarter to quarter due to the timing of new contracts, expansions and renewals for on-premise and hybrid subscription arrangements.

Maintenance and support revenue

Maintenance and support revenue for the three months ended June 30, 2020 was $3.2 million a decrease of $0.1 million compared to the same period in 2019. Maintenance and support revenue for the six months ended June 30, 2020 was $6.4 million, consistent with the same period in 2019.

Cost of Revenue

	Three months ended June 30,		2019 to 2020	Six months ended June 30,		2019 to 2020
	2020	2019	%	2020	2019	%
			(In thousands of USD)			
Cost of revenue	$ 15,634	$ 12,984	20%	$ 31,470	$ 25,175	25%
Gross profit	45,739	29,368	56%	82,658	62,931	31%
Gross profit percentage	75%	69%		72%	71%	

Cost of revenue for the three and six months ended June 30, 2020 was $15.6 million and $31.5, an increase of $2.7 million and $6.3 million compared to the same periods in 2019. In January 2020, we acquired Prana and expanded our professional services head count and capabilities. Cost of revenue increased due to higher headcount and related compensation costs. Cost of revenue also increased due to higher partner and third-party service provider costs and higher depreciation costs associated with the expansion of data center capacity. In 2019 and 2020, we expanded existing data centers to support new and ongoing customer engagements as well as global expansion.

Gross profit for the three months ended June 30, 2020 was $45.7 million, an increase of $16.4 million compared to the same period in 2019. Gross profit for the six months ended June 30, 2020 was $82.7 million, an increase of $19.7 million compared to the same period in 2019. The increase was due to the increase in SaaS, subscription term license and professional services revenue, partly offset by the increase in cost of revenue.

As a percentage of revenue, gross profit was 75% and 72% for the three and six months ended June 30, 2020, compared to 69% and 71% for the same periods in 2019. The gross profit percentage was higher for the three months and six months ended June 30, 2020 due to the increased level of subscription term license revenue compared to the same periods in 2019. Subscription term license revenue carries a higher gross margin than revenue recognized ratably over the term.

Selling and Marketing Expenses

	Three months ended June 30,		2019 to 2020	Six months ended June 30,		2019 to 2020
	2020	2019	%	2020	2019	%
			(In thousands of USD)			
Selling and marketing	$ 12,253	$ 10,446	17%	$ 24,228	$ 19,761	23%
As a percentage of revenue	20%	25%		21%	22%	

Selling and marketing expenses for the three and six months ended June 30, 2020 was $12.2 million and $24.2 million, an increase of $1.8 million and $4.5 million compared to the same periods in 2019. The increase in selling and marketing expenses was due to higher headcount and related compensation costs and commissions expense, partially offset by a decrease in travel expense. We continue to expand our sales and marketing team, as well as our partner network.

As a percentage of revenue, selling and marketing expenses were 20% and 21% for the three and six months ended June 30, 2020, compared to 25% and 22% for the same periods in 2019. Selling and marketing expenses as a percentage of revenue were lower for the three and six months ended June 30, 2020 due to the higher level of subscription term license revenue compared to the same period in 2019.

Research and Development Expenses

	Three months ended June 30,		2019 to 2020	Six months ended June 30,		2019 and 2020
	2020	2019	%	2020	2019	%
			(In thousands of USD)			
Research and development	$ 10,257	$ 8,101	27%	$ 19,934	$ 16,095	24%
As a percentage of revenue	17%	19%		17%	18%	

Research and development expenses for the three and six months ended June 30, 2020 was $10.3 million and $19.9 million, an increase of $2.2 million and $3.8 million compared to the same periods in 2019. The increase in research and development expenses was due to higher headcount and related compensation costs. The investment in headcount supports ongoing programs to drive further innovation in our RapidResponse platform and ensure sustainable market leadership.

General and Administrative Expenses

	Three months ended June 30,		2019 to 2020	Six months ended June 30,		2019 to 2020
	2020	2019	%	2020	2019	%
			(In thousands of USD)			
General and administrative	$ 8,108	$ 5,821	39%	$ 15,040	$ 11,886	27%
As a percentage of revenue	13%	14%		13%	13%	

General and administrative expenses for the three and six months ended June 30, 2020 was $8.1 million and $15.0 million, an increase of $2.3 million and $3.2 million compared to the same periods in 2019. The increase in general and administrative expenses was due to higher headcount and related compensation costs as well as higher professional services costs. These increases reflect investments in corporate infrastructure and capability to support our global expansion and growth strategy.

Other Income and Expense

	Three months ended June 30,		2019 to 2020	Six months ended June 30,		2019 to 2020
	2020	**2019**	**%**	**2020**	**2019**	**%**
			(In thousands of USD)			
Other income (expense):						
Foreign exchange gain (loss)	$ (5)	$ 85	–[1]	$ 44	$ (85)	–[1]
Net finance income	152	821	(81%)	825	1,586	(48%)
Total other income	147	906	(84%)	869	1,501	(42%)

Note:
(1) The percentage change has been excluded as it is not meaningful.

Total other income for the three and six months ended June 30, 2020 was $0.1 million and $0.9 million, a decrease of $0.8 million and $0.6 million compared to the same periods in 2019. The decrease in other income was due to lower interest rates earned on cash and short-term investments.

Income Taxes

	Three months ended June 30,		2019 to 2020	Six months ended June 30,		2019 to 2020
	2020	**2019**	**%**	**2020**	**2019**	**%**
			(In thousands of USD)			
Income tax expense	$ 6,264	$ 1,905	229%	$ 9,740	$ 5,723	70%
As a percentage of profit before income taxes	41%	32%		40%	34%	

Income tax expense for the three and six months ended June 30, 2020 was $6.3 million and $9.7 million, an increase of $4.4 million and $4.0 million compared to the same periods in 2019. The increase in income tax expense was due to higher profit before income taxes. As a percentage of profit before taxes, income tax expense was 41% and 40% for the three and six months ended June 30, 2020, compared to 32% and 34% for the same periods in 2019.

Income tax expense as a percentage of profit before income taxes has increased due to an increase in share-based compensation as a percentage of profit before tax, which is not considered deductible for income tax purposes in Canada.

Profit

	Three months ended June 30, 2020	Three months ended June 30, 2019	2019 to 2020 %	Six months ended June 30, 2020	Six months ended June 30, 2019	2019 to 2020 %
	(In thousands of USD except earnings per share)					
Profit	$ 9,004	$ 4,001	125%	$ 14,585	$ 10,967	33%
Adjusted profit(1)	12,727	7,582	68%	22,084	17,620	25%
Adjusted EBITDA(1)	22,471	11,555	94%	37,523	27,493	36%
Basic earnings per share	$0.34	$0.15		$0.55	$0.42	
Diluted earnings per share	$0.32	$0.15		$0.53	$0.41	
Adjusted diluted earnings per share(1)	$0.46	$0.28		$0.80	$0.66	

Note:
(1) Adjusted profit, Adjusted EBITDA and Adjusted diluted earnings per share are non-IFRS measures. See "*Non-IFRS Measures*". For a reconciliation of these measures to the closest IFRS measure, where a comparable IFRS measure exists, see "*Reconciliation of Non-IFRS Measures*" above.

Profit for the three months ended June 30, 2020 was $9.0 million or $0.34 per basic share and $0.32 per diluted share, compared to $4.0 million or $0.15 per basic share and $0.15 per diluted share for the same period in 2019. Profit for the six months ended June 30, 2020 was $14.6 million or $0.55 per basic share and $0.53 per diluted share compared to $11.0 million or $0.42 per basic share and $0.41 per diluted share for the same period in 2019. The increase in profit was due to an increase in revenues, partly offset by an increase in operating expenses.

Adjusted EBITDA for the three and six months ended June 30, 2020 was $22.5 million and $37.5 million, compared to $11.6 million and $27.5 million for the same periods in 2019. The increase in adjusted EBITDA was due to an increase in revenue and gross profit, partly offset by an increase in operating expenses.

Key Balance Sheet Items

	As at June 30, 2020	As at December 31, 2019
	(In thousands of USD)	
Total assets	$ 394,049	$ 350,743
Total liabilities	130,570	120,641

An analysis of the key balance sheet items driving the change in total assets and liabilities is as follows:

Trade and other receivables

	As at June 30, 2020	As at December 31, 2019
	(In thousands of USD)	
Trade accounts receivable	$ 31,502	$ 65,406
Unbilled receivables	21,520	13,880
Taxes receivable	–	382
Other	1,742	977
Loss allowance	–	(22)
Total trade and other receivables	54,764	80,623

Trade and other receivables at June 30, 2020 were $31.5 million, a decrease of $33.9 million compared to December 31, 2019 due to variances in the timing of billings and collections on receivables. The balance at any point in time is impacted by the timing of the annual subscription billing cycle for each customer and when new customer contracts are secured. Unbilled receivables at June 30, 2020 were $21.5 million, an increase of $7.6 million compared to December 31, 2019 due to renewals and expansion of on-premise subscription agreements resulting in recognition of subscription term license revenue in advance of invoicing under the respective agreements. The aging of trade receivables is generally current or within 30 days past due and overdue amounts do not reflect any credit issues.

Right-of-use assets & Lease obligations

	As at June 30, 2020	As at December 31, 2019
	(In thousands of USD)	
Right-of-use assets	$ 14,085	$ 8,671
Lease obligations:		
Current	3,657	2,288
Non-current	11,013	6,818
	14,670	9,106

The right-of-use assets and lease obligations relate to our leases for office space and data centers. Right-of-use assets at June 30, 2020 were $14.1 million, an increase of $5.4 million compared to December 31, 2019. This increase is due to data centre expansions in Europe, Japan and Canada, partly offset by regular amortization. Lease obligations at June 30, 2020 were $14.7 million, an increase of $5.6 million compared to December 31, 2019. This increase is due to a new Japan lease and data centre expansions, partly offset by regular lease payments.

Contract acquisition costs

	As at June 30, 2020	As at December 31, 2019
	(In thousands of USD)	
Contract acquisition costs	$ 15,306	$ 15,497

Contract acquisition costs are capitalized and amortized over the expected life of the customer upon commencement of the related revenue. Contract acquisition costs consist of sales commissions paid to employees and third party referral fees. Contract acquisition costs at June 30, 2020 were $15.3 million, a decrease of $0.2 million compared to December 31, 2019. This decrease was due to regular amortization, partly offset by commissions recognized in the period.

Deferred revenue

	As at June 30, 2020	As at December 31, 2019
	(In thousands of USD)	
Deferred revenue	$ 79,308	$ 83,673

Deferred revenue at June 30, 2020 was $79.3 million, a decrease of $4.4 million compared to December 31, 2019. We generally bill our customers annually in advance for SaaS agreements resulting in initially recording the amount billed as deferred revenue which is subsequently drawn down to revenue over the agreement term. The change in deferred revenue was due to variances in the timing of billings for new and existing customer contracts. There was no deferred revenue relating to subscription term periods beyond one year.

Summary of Quarterly Results

The following table summarizes selected results for the eight most recent completed quarters to June 30, 2020.

	Three months ended							
	June 30, 2020	**March 31, 2020**	**December 31, 2019**	**September 30, 2019**	**June 30, 2019**	**March 31, 2019**	**December 31, 2018**	**September 30, 2018**
Revenue:								
SaaS	$ 35,741	$ 33,995	$ 32,006	$ 31,229	$ 28,283	$ 27,342	$ 25,492	$ 24,489
Professional services	12,400	10,673	8,931	9,348	8,358	6,912	7,447	8,657
Subscription term license	10,003	4,904	12,120	3,278	2,414	8,406	2,390	508
Maintenance and support	3,229	3,183	3,255	3,276	3,297	3,094	2,970	2,931
	61,373	52,755	56,312	47,131	42,352	45,754	38,299	36,585
Cost of revenue	15,634	15,836	14,872	13,803	12,984	12,191	12,390	12,014
Gross profit	45,739	36,919	41,440	33,328	29,368	33,563	25,909	24,571
Operating expenses	30,618	28,584	29,695	27,810	24,368	23,374	22,418	20,660
	15,121	8,335	11,745	5,518	5,000	10,189	3,491	3,911
Foreign exchange gain (loss)	(5)	49	(40)	(101)	85	(170)	22	(177)
Net finance income	152	673	610	841	821	765	1,208	264
Profit before income taxes	15,268	9,057	12,315	6,258	5,906	10,784	4,721	3,998
Income tax expense	6,264	3,476	4,484	1,725	1,905	3,818	1,796	1,333
Profit	$ 9,004	$ 5,581	$ 7,831	$ 4,533	$ 4,001	$ 6,966	$ 2,925	$ 2,665
Share-based compensation	3,723	3,776	3,177	3,537	3,581	3,072	2,924	2,959
Adjusted profit(1)	$ 12,727	$ 9,357	$ 11,008	$ 8,070	$ 7,582	$ 10,038	$ 5,849	$ 5,624
Income tax expense	6,264	3,476	4,484	1,725	1,905	3,818	1,796	1,333
Depreciation and amortization(2)	3,627	2,941	3,212	3,045	2,974	2,677	2,571	2,483
Foreign exchange loss (gain)	5	(49)	40	101	(85)	170	(22)	177
Net finance income	(152)	(673)	(610)	(841)	(821)	(765)	(1,208)	(264)
	9,744	5,695	7,126	4,030	3,973	5,900	3,137	3,729
Adjusted EBITDA(1) (2)	$ 22,471	$ 15,052	$ 18,134	$ 12,100	$ 11,555	$ 15,938	$ 8,986	$ 9,353
Basic earnings per share	$ 0.34	$ 0.21	$ 0.30	$ 0.17	$ 0.15	$ 0.27	$ 0.11	$ 0.10
Diluted earnings per share	$ 0.32	$ 0.20	$ 0.29	$ 0.17	$ 0.15	$ 0.26	$ 0.11	$ 0.10
Adjusted diluted earnings per share(1)	$ 0.46	$ 0.34	$ 0.40	$ 0.30	$ 0.28	$ 0.37	$ 0.22	$ 0.21

Note:

(1) Adjusted profit, Adjusted EBITDA and Adjusted diluted earnings per share are non-IFRS measures. See "Non-IFRS Measures". For a reconciliation of these measures to the closest IFRS measure, where a comparable IFRS measure exists, see "Reconciliation of Non-IFRS Measures" above.

(2) Figures have been adjusted for the three months ended September 30, 2018 as a result of adjustments identified in connection with issuing our consolidated financial statements for the year ended December 31, 2018. Certain variable lease payments previously recorded as lease assets and obligations have been recorded as operating expenses. These adjustments were not considered material and did not affect our consolidated revenue or consolidated profit.

Our quarterly revenue has generally trended upwards over the past eight quarters, primarily due to sales of new subscriptions for RapidResponse as well as new customer deployment activity. Subscription term license revenue varies quarter to quarter due to the timing of new contracts, expansions and renewals for on-premise and hybrid subscription arrangements.

Cost of revenue has increased as we continue to invest in the personnel and data center capacity to support the growth in our business. Gross margin has ranged from 67% to 75% of revenue, with fluctuations due to the varying subscription term license revenue in each quarter. Operating expenses have increased for the majority of the periods presented primarily due to the addition of personnel in connection with the expansion of our business. As a significant component of our operating expenses are denominated in Canadian dollars, fluctuations in the foreign exchange rate with the U.S. dollar have had a generally positive impact on operating expenses and quarterly profit from 2018 to 2020.

Liquidity and Capital Resources

Our primary source of cash flow is sales of subscriptions for our software and sales of professional services. Our approach to managing liquidity is to ensure, to the extent possible, that we always have sufficient liquidity to meet our liabilities as they come due. We do so by continuously monitoring cash flow and actual operating expenses compared to budget.

	As at June 30, 2020	As at December 31, 2019
	(In thousands of USD)	
Cash and cash equivalents	$ 184,992	$ 182,284
Short-term investments	75,571	30,319
	260,563	212,603

Cash and cash equivalents increased $2.7 million to $185.0 million at June 30, 2020. Short-term investments increased $45.3 million to $75.6 million at June 30, 2020. Total cash and cash equivalents and short-term investments increased $48.0 million to $260.6 million at June 30, 2020.

In addition to the cash and short-term investment balances, we have a $20.0 million CAD revolving demand facility available to meet ongoing working capital requirements. No amounts have been drawn against this facility. Our principal cash requirements are for working capital and capital expenditures. Excluding deferred revenue, working capital at June 30, 2020 was $291.4 million. Given the ongoing cash generated from operations and our existing cash and credit facilities, we believe there is sufficient liquidity to meet our current contractual obligations of $86.5 million and finance our longer-term growth and fund our $60.0 million all cash purchase of Rubikloud.

The following table provides a summary of cash inflows and outflows by activity:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	(In thousands of USD)			
Cash inflow (outflow) by activity				
Operating activities	$ 30,813	$ 8,761	$ 51,773	$ 27,520
Investing activities	(9,496)	(802)	(58,815)	10,806
Financing activities	5,444	466	9,863	811
Effects of exchange rates	83	103	(113)	231
Net cash inflows	26,844	8,528	2,708	39,368
Net purchase (redemption) of short-term investments	–	(7,499)	45,200	(20,000)
Net inflows from cash and short-term investments	26,844	1,029	47,908	19,368

Cash provided by operating activities

Cash generated by operating activities for the three months ended June 30, 2020 was $30.8 million, compared to $8.8 million for the same period in 2019. The increase was due to an increase in profit before income taxes and the change in net operating assets and liabilities primarily due to collection of accounts receivable. Cash generated by operating activities for the six months ended June 30, 2020 was $51.8 million, compared to $27.5 million for the same period in 2019. The increase was due to an increase in profit before income taxes and the change in net operating assets and liabilities due to collections of accounts receivable and lower income tax payments.

Cash provided by (used in) investing activities

Cash provided by/used in investing activities is driven by net redemption of short-term investments as well as purchases of property and equipment primarily related to computer equipment for use in our hosting facilities and to support research and development requirements. Cash used in investing activities for the three months ended June 30, 2020 was $9.5 million, compared to cash used in investing activities of $0.8 million for the same period in 2019. The change was due to increase in purchase of property and equipment offset by a decrease in net redemption of short-term investments. We expect to continue to invest in additional property and equipment to support the growth in our customer base and to take advantage of new and advanced technology. Cash used in investing activities for the six months ended June 30, 2020 was $58.8 million, compared to cash provided by investing activities of $10.8 million for the same period in 2019. The change was due to net purchases of short-term investments for the six month period in 2020 compared to net redemptions for the same period in 2019, as well as the acquisition of Prana and investments in property and equipment.

Cash provided by financing activities

Cash provided by financing activities for the three and six months ended June 30, 2020 was $5.4 million and $9.9 million, compared to $0.5 million and $0.8 million for the same periods in 2019. The increase was due to higher proceeds from stock options exercised.

Contractual Obligations

Our operating lease commitments are primarily for office premises and secure data center facilities with expiry dates that range from October 2020 to February 2037. The largest lease commitment relates to a new head office in Ottawa, Canada, the lease of which commences in 2021 and expires in 2037. Given the ongoing cash generated from operations and our existing cash and credit facilities, we believe there is sufficient liquidity to meet our contractual obligations.

The following table summarizes our contractual obligations as at June 30, 2020, including commitments relating to leasing contracts:

	Less than 1 year	1 to 3 years	3 to 5 years (In thousands of USD)	More than 5 years	Total amount
Commitments					
Operating lease agreements	$ 5,251	$ 13,720	$ 6,665	$ 31,809	$ 57,445
Financial Obligations					
Trade payables and accrued liabilities	29,027	–	–	–	29,027
Total Contractual Obligations	$ 34,278	$ 13,720	$ 6,665	$ 31,809	$ 86,472

The following table summarizes our contractual obligations as at December 31, 2019, including commitments relating to leasing contracts:

	Less than 1 year	1 to 3 years	3 to 5 years (In thousands of USD)	More than 5 years	Total amount
Commitments					
Operating lease agreements	$ 4,437	$ 13,182	$ 5,572	$ 34,757	$ 57,948
Financial Obligations					
Trade payables and accrued liabilities	20,770	–	–	–	20,770
Total Contractual Obligations	$ 25,207	$ 13,182	$ 5,572	$ 34,757	$ 78,718

Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements, other than variable payments related to operating leases and operating leases with terms of twelve months or less (which have been included in the disclosed obligations under "*Liquidity and Capital Resources - Contractual Obligations*"), that have, or are likely to have, a current or future material effect on our consolidated financial position, financial performance, liquidity, capital expenditures or capital resources.

Transactions with Related Parties

We did not have any transactions during the three and six months ended June 30, 2020 and 2019 between the Company and a related party outside the normal course of business.

Financial Instruments and Other Instruments

We recognize financial assets and liabilities when we become party to the contractual provisions of the instrument. On initial recognition, financial assets and liabilities are measured at fair value plus transaction costs directly attributable to the financial assets and liabilities, except for financial assets or liabilities at fair value through profit and loss, whereby the transactions costs are expensed as incurred. The carrying amounts of our financial instruments approximate fair market value due to the short-term maturity of these instruments.

Credit risk

Credit risk is the risk of an unexpected loss if a customer or counterparty to a financial instrument fails to meet its contractual obligations. Our credit risk is primarily attributable to trade and other receivables.

The nature of our subscription based business results in payments being received in advance of the majority of the services being delivered; as a result, our credit risk exposure is low.

We invest our excess cash in short-term investments with the objective of maintaining safety of principal and providing adequate liquidity to meet all current payment obligations and future planned capital expenditures with the secondary objective of maximizing the overall yield of the investment. We manage our credit risk on investments by dealing only with major Canadian banks and investing only in instruments that we believe have high credit ratings. Given these high credit ratings, we do not expect any counterparties to these investments to fail to meet their obligations.

Currency risk

A portion of our revenues and operating costs are realized in currencies other than our functional currency, such as the Canadian dollar, Japanese Yen, Euro, and British Pound. As a result, we are exposed to currency risk on these transactions. Also, additional earnings volatility arises from the translation of monetary assets and liabilities, investment tax credits recoverable and deferred tax assets and liabilities denominated in foreign currencies at the rate of exchange on each date of our consolidated statements of financial position; the impact of which is reported as a foreign exchange gain or loss or as income tax expense for deferred tax assets and liabilities.

Our objective in managing our currency risk is to minimize exposure to currencies other than our functional currency. We do not engage in hedging activities. We manage currency risk by matching foreign denominated assets with foreign denominated liabilities.

Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate due to changes in market interest rates. We believe that interest rate risk is low for our financial assets as the majority of investments are made in fixed rate instruments. We do have interest rate risk related to our credit facilities. The rates on our Revolving Facility are variable to Royal Bank prime rate and Royal Bank US base rate.

Capital management

Our capital is composed of shareholders' equity which includes our common shares. Our objective in managing our capital is financial stability and sufficient liquidity to increase shareholder value through organic growth and investment in sales, marketing and product development. Our senior management team is responsible for managing the capital through regular review of financial information to ensure sufficient resources are available to meet operating requirements and investments to support our growth strategy. The Board of Directors is responsible for overseeing this process. In order to maintain or adjust our capital structure, we could issue new shares, repurchase shares, approve special dividends or issue debt.

Critical Accounting Policies and Estimates

See our annual consolidated financial statements for the year ended December 31, 2019 and the related notes thereto for a discussion of the accounting policies and estimates that are critical to the understanding of our business operations and the results of our operations. In addition, we applied the following accounting policies and estimates in relation to our acquisition of Prana:

Business combinations

We account for business combinations using the acquisition method. Goodwill arising on acquisitions is measured as the fair value of the consideration transferred less the net recognized amount of the estimated fair value of identifiable assets acquired and liabilities assumed, all measured as of the acquisition date. Transaction costs that we incur in connection with a business combination are expensed as incurred.

We use our best estimates and assumptions to reasonably value assets acquired and liabilities assumed at the acquisition date as well as contingent consideration, where applicable, and these estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, we may record adjustments to the assets acquired and liabilities assumed with a corresponding offset to goodwill. Upon conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded in profit or loss.

Acquired intangible assets

Our intangible assets consist of customer relationships acquired in a business combination. These intangible assets are recorded at their fair value at the acquisition date. We estimate the fair value based on the present value of expected future cash flows. After initial recognition, intangible assets are measured at cost less any accumulated amortization and impairment losses.

Intangible assets with finite useful lives are amortized on a straight-line basis over their estimated useful lives. The estimated useful life for customer relationships is three years.

Intangible assets are tested for impairment annually and whenever there is an indication that the asset may be impaired. An impairment loss is recognized if the recoverable amount of the asset is less than the carrying amount. The recoverable amount is the higher of fair value less costs to sell and value in use.

Goodwill

Goodwill arises from a business combination as the excess of the consideration transferred over the identifiable net assets acquired. After initial recognition, goodwill is measured at cost less any accumulated impairment losses.

For the purpose of impairment testing, goodwill is allocated to the cash-generating unit that is expected to benefit from the related business combination. The Company as a whole has been assessed as a single cash-generating unit ("CGU"). The cash-generating unit is tested for impairment annually and whenever there is an indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than the carrying amount of the unit, the impairment loss is first allocated to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit. The impairment testing methodology is based on a comparison between the higher of fair value less costs to sell and value-in-use of the CGU and the net asset carrying value (including goodwill). The recoverable amount is the higher of fair value less costs to sell and value in use. An impairment loss is recognized immediately in profit or loss. Any impairment loss in respect of goodwill is not reversed.

Estimate of contingent consideration

We measure the contingent consideration payable in a business combination at the estimated fair value at each reporting date. The fair value is estimated based on the range of possible outcomes and our assessment of the likelihood of each outcome.

Estimate of fair value of acquired intangible assets

We estimate the fair value of customer relationships acquired in a business combination based on the present value of expected future cash flows. This valuation involves subjectivity and estimation uncertainty, including assumptions related to future revenues attributable to customer relationships, customer attrition rates, future expenses, and discount rates.

Controls and Procedures

Disclosure Controls and Procedures

The Company's Chief Executive Officer ("**CEO**") and Chief Financial Officer ("**CFO**") are responsible for establishing and maintaining our disclosure controls and procedures. We maintain a set of disclosure controls and procedures designed to provide reasonable assurance that information required to be publicly disclosed is recorded, processed, summarized and reported on a timely basis. Our CEO and CFO have evaluated the design of our disclosure controls and procedures at the end of the quarter and based on the evaluation have concluded that the disclosure controls and procedures are effectively designed.

Internal Controls over Financial Reporting

Our internal controls over financial reporting ("**ICFR**") are designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. Our management is responsible for establishing and maintaining adequate ICFR. Management, including our CEO and CFO, does not expect that our ICFR will prevent or detect all errors and all fraud or will be effective under all future conditions. A control system is subject to inherent limitations and even those systems determined to be effective can provide only reasonable, but not absolute, assurance that the control objectives will be met with respect to financial statement preparation and presentation.

National Instrument 52-109 of the Canadian Securities Administrators requires our CEO and CFO to certify that they are responsible for establishing and maintaining ICFR and that those internal controls have been designed and are effective in providing reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with IFRS. Our CEO and CFO are also responsible for disclosing any changes to our internal controls during the most recent period that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. Our management under the supervision of our CEO and CFO has evaluated the design of our ICFR based on the Internal Control – Integrated Framework issued in 2013 by the Committee of Sponsoring Organizations of the Treadway Commission. As at June 30, 2020, management assessed the design of our ICFR and concluded that our ICFR is appropriately designed and there are no material weaknesses that have been identified. Other than additional controls to address accounting for business combinations, there were no significant changes to our ICFR for the three and six months ended June 30, 2020.

Outstanding Share Information

As of June 30, 2020, our authorized capital consists of an unlimited number of common shares with no stated par value. Changes in the number of common shares, options, restricted share units and deferred share units outstanding for the six months ended June 30, 2020 and as of August 5, 2020 are summarized as follows:

Class of Security	Number outstanding at December 31, 2019	Net issued	Number outstanding at June 30, 2020	Net issued	Number outstanding at August 5, 2020
Common shares	26,403,004	434,843	26,837,847	2,090	26,839,937
Stock options	2,228,738	(39,344)	2,189,394	(2,090)	2,187,304
Restricted Share Units	60,722	68,796	129,518	−	129,518
Deferred Share Units	45,086	10,842	55,928	−	55,928

Our outstanding common shares increased by 434,843 shares in first six months of 2020 due to the exercise of stock options.

Our outstanding stock options decreased by 39,344 options in the first six months of 2020 due to the grant of 397,999 options less 434,843 options exercised and 2,500 options forfeited. Each option is exercisable for one common share.

Our outstanding restricted share units increased by 68,796 units in the first six months of 2020 due to units granted. Our outstanding deferred share units increased by 10,842 units in the first six months of 2020 due to units granted. Upon vesting, each restricted share unit and deferred share unit can be paid out or settled in cash, an equivalent number of common shares, or a combination thereof, as elected by the Compensation Committee of the Board of Directors.