

EQUITY RESEARCH

November 18, 2021

Industry Update

Canadian AI Update – Bits & Bytes Weekly

Canada Continues To Make Waves In A Hot Market

Our Conclusion

There has been a wave of global tech heavyweights joining the burgeoning Canadian AI industry as regional innovation hubs such as Toronto continue to churn out promising start-ups financed by prominent backers. Both Canadian VC firms and AI start-ups are seeing marquee talent join, with John Megrue Jr., former co-chairman of Bridgwater Associates, recently joining Radical Ventures as a partner. Canada has long been a centre for AI and is currently seeing the third-fastest growth in AI jobs worldwide. We highlight below the diverse AI ecosystem here in Canada, including notable start-ups, recent financings, as well as supportive public funding, government policies, and programs that contribute to Toronto's overall appeal and its superior ability to attract talent.

Key Points

Canada remains an innovation hub for AI start-ups, with 710 public and private entities in the AI ecosystem (as of July 2021). The start-ups range in maturity and focus on a wide range of industries, including biotech, retail, and advanced driver assistance systems. In addition to well-known names like Coveo and Element AI, Canadian AI firms like Tenstorrent (AI processors for machine learning), Algolux (computer vision and image optimization), and Brainbox AI (AI for real estate) have all raised significant venture capital.

Canada's healthy AI industry has been driven, in part, by the government, with Canada the first country to establish a national framework for AI. In 2017, the Canadian federal government introduced a \$125 million Pan-Canadian AI strategy, focused on attracting and retaining AI researchers in the country. The strategy formed partnerships with the Canadian Institute for Advanced Research, and created three centres of excellence in Edmonton (Alberta Machine Intelligence Institute), Montreal (Montreal Institute for Learning Algorithms), and Toronto (Vector Institute). The Canadian government, contributed \$1 billion to the sector as of August 2020, according to a report released by McGill University.

Canada has positioned itself in a fast growing industry, with the IDC forecasting that the AI market will grow at a high-teens CAGR, globally reaching \$554 billion by 2024. AI-focused investment is expected to increase through 2022, with Gartner noting that one-third of surveyed tech providers with AI technology plans said they would invest more than US\$1 million in AI in the next two years. The survey also highlighted the immaturity of the AI market, with 41% of respondents citing AI emerging technologies still in development or early adoption stages.

All figures in Canadian dollars unless otherwise stated.

For required regulatory disclosures please refer to "Important Disclosures" beginning on page 10.

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Sector:
Information Technology

Players In The Canadian Ecosystem

Investments in AI in Canada are on the rise. Radical Ventures is among the venture capital firms focused on primarily on AI and deep tech investments, with the firm securing US\$323 million from high-profile backers such as TD, CPPIB, PSP, and the Weston family. Companies are also getting support at a grass roots level through organizations like Next AI, a not-for-profit venture and tech commercialization program where capital and mentorship is provided to early stage business ideas.

As shown in the table in Exhibit 1, CB Insights' 2021 edition of Annual AI 100 included five Canadian start-ups, with Canada trailing behind only the U.S., the U.K., and China in the number of companies listed. More than 6,000 companies were assessed based on factors including investor profile, competitive landscape, tech novelty, and team strength. DarwinAI was the only holdover from the prior year with the four others being new additions to the list this year. Of note, Coveo, a Quebec City-based AI retail tech start-up, completed its IPO on the TSX this week. Prior to IPO, the company raised \$446 million, from investors including OMERS Growth Equity, Evergreen Coast Capital, and BDC Venture Capital.

The companies on the 2020 annual list boasted US\$5.2 billion in financing since the list's announcements last year, with 16 rounds exceeding the US\$100 million mark. In addition, there were six exits through listings or acquisitions.

Exhibit 1: Five Canadian AI Companies Named In CB Insights' Annual AI 100 List (2021)

Name	Sector	Location	Funds Raised	Latest Series	Backers	Description
Coveo	Retail	QC	US\$339MM	-	10 investors including: Fonds de Solidarite FTQ, Evergreen Coast Capital, OMERS Private Equity, Investissement Quebec, BDC Venture Capital	Designs intelligent enterprise search and predictive insights platforms for businesses.
Algolux	Autonomous Vision	QC	US\$32MM	Series B	15 investors including: Drive Capital, Playground Global, Real Ventures, Intact Ventures, GM Ventures	AI-based perception software; computer vision and image optimization solutions are used in automotive ADAS, autonomous vehicles, fleets, autonomous mobile robots, and video security.
Brainbox AI	Prop Tech	QC	US\$33MM	Series A	5 investors including: Desjardins Capital, Esplanade Ventures	Autonomous HVAC technology for commercial use; its solution allows self-operating buildings for maximum energy efficiency and reduces cost.
Tenstorrent	Hardware	ON	US\$235MM	Series C	7 investors including: Eclipse Ventures, Real Ventures	AI-based computer processors.
DarwinAI	Software	ON	US\$12MM	Seed	5 investors including: Obvious Ventures, Inovia Capital, Honeywell Ventures, Plug and Play Accelerator, ACVC Partners	Deep learning development; facilitates explainable AI that to build AI models with high degree of trust; patented Generative Synthesis™ A.I. which builds understandable AI.

Source: CB Insights, Betakit, Crunchbase, and CIBC World Markets Inc.

News Impacting Our Coverage

Research Highlight: Q4 – Initiating Coverage – Dominant Market Position With Room To Grow:

As of November 17, we initiated coverage on Q4 Inc. with an Outperformer rating and a C\$17 price target based on a 2022E EV/sales multiple of 7.5x. Q4 has a dominant market position in the North American Investor Relations (IR) solutions market, with a stable, blue chip customer base. We foresee multiple avenues for future growth, including expansion within existing customers, new clients in core and emerging verticals, and an extension of IR offerings. [Link to note](#)

Audio-Technica Selects Descartes' Foreign Trade Zone Solution For Customs Clearance

Descartes Systems announced that Audio-Technica, audio equipment designer and manufacturer is using Descartes' foreign trade zone (FTZ) solution to increase supply chain velocity. The solution helps improve customs clearance, lower customs entries costs, and eliminate duties on exports from the U.S. The solution incorporates automation to expedite distribution of goods while ensuring compliance with customs regulation.

CGI Selected For GSA's ASTRO Space And Development/System Integration Pools

CGI has been selected by the General Services Administration (GSA) for the ASTRO 10-year Indefinite-Delivery/Indefinite-Quantity (IDIQ) contract. Leveraging past experience in implementing complex, mission-critical space software systems, CGI will have the opportunity to compete for task orders with an unlimited ceiling value to develop, support, operate platforms, and robotics including satellites and launch vehicles.

Uber Freight Acquires Transplace For US\$2.25 Billion

Uber Freight completed the acquisition of Transplace, a managed transportation services provider with own transportation management systems, for US\$2.25 billion. Meanwhile it received US\$550 million in funding from Abu Dhabi Growth Fund, D1 Capital, and GCM Grosvenor, which helped finance the Transplace deal. The Transplace acquisition is to bring a platform which services shippers with a digital brokerage. In Q3, Uber parent noted the Freight division generated US\$402 million of revenue, up 16% sequentially and up 39% Y/Y.

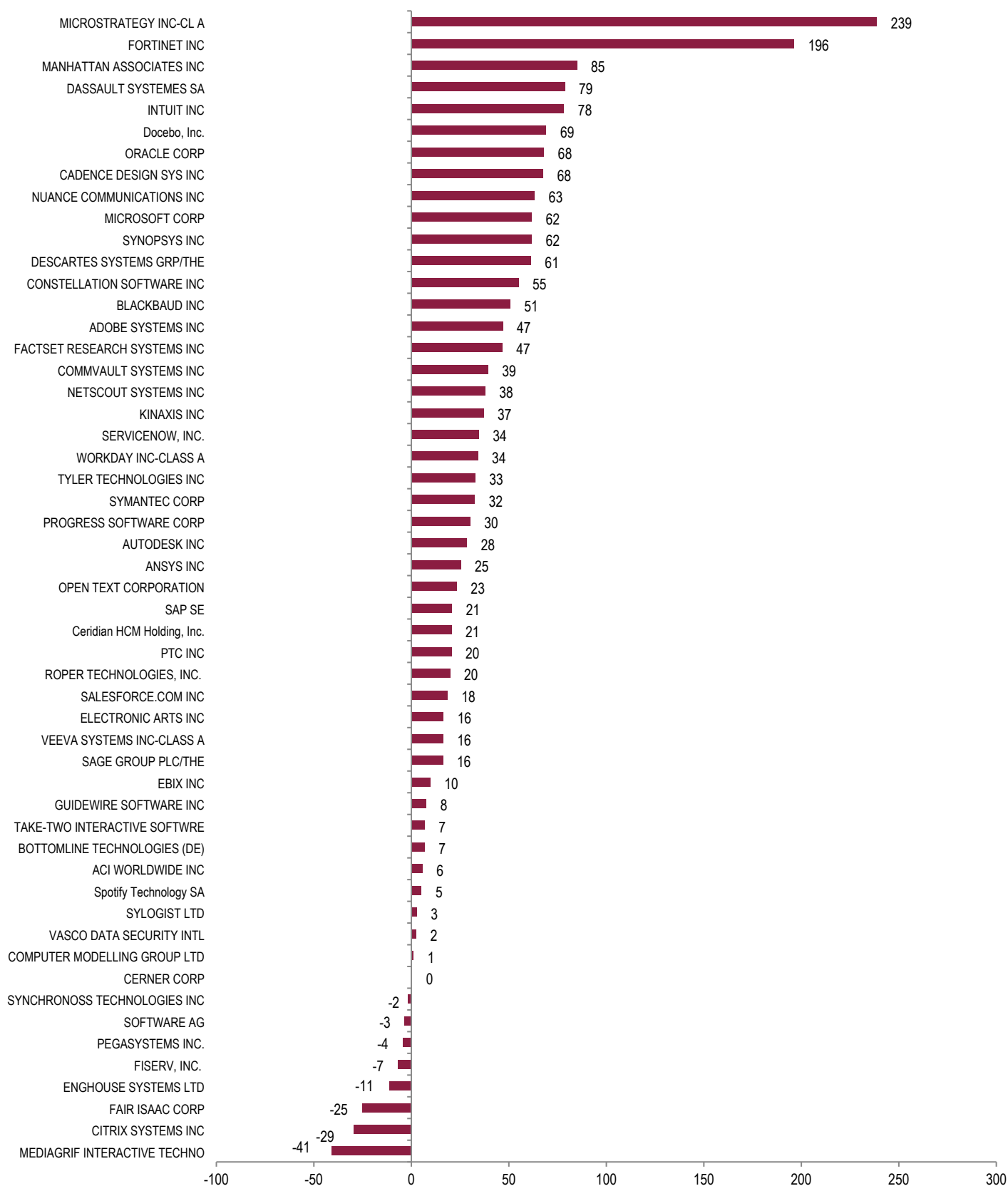
CloudMD Software & Services To Acquire MindBeacon

CloudMD has agreed to acquire MindBeacon, mental health counselling service provider, for \$116 million in cash and stock. CloudMD will pay \$1.22 in cash and issue 2.285 shares for every acquired MindBeacon share. The acquisition price is at a 49% premium to the 7-day volume-weighted average price for MindBeacon as of November 12, 2021.

Exhibit 2: CIBC Software/Services – Coverage Performance, 11/18/2020 - 11/18/2021

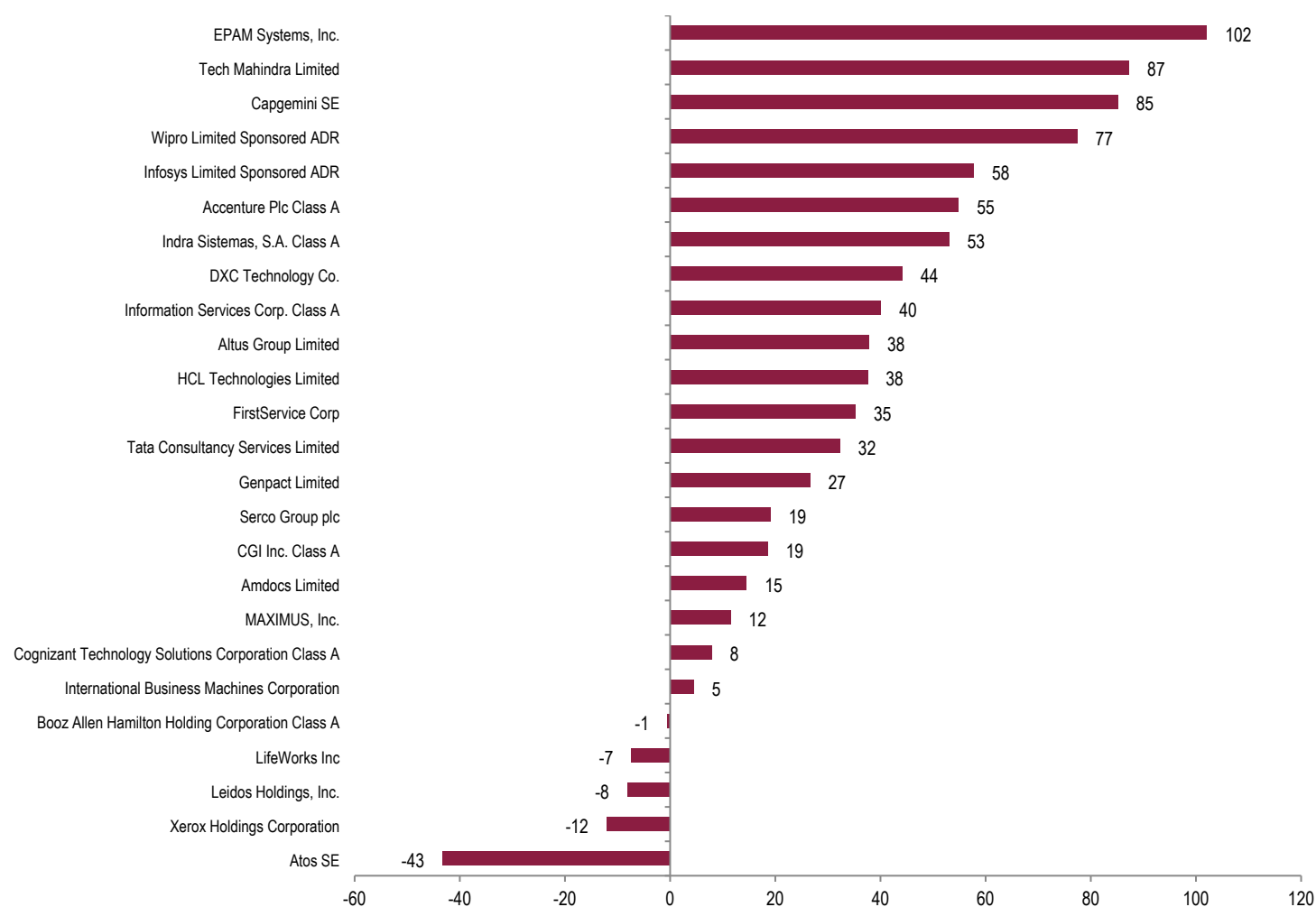
Company	Price	1 Week	1 Month	3 Month	6 Month	1 Year	Year To Date	52 Week High	52 Week Low
Software & Systems									
Constellation Software Inc	2228.44	3.4	0.2	7.5	29.6	54.9	34.8	2270.07	1413.40
Descartes Systems	90.53	5.7	8.7	24.8	57.5	67.5	54.8	91.39	53.79
Dye & Durham	42.25	1.7	11.3	(7.0)	2.4	NA	(16.4)	53.68	21.50
Enghouse Systems Limited	56.37	4.6	0.7	(2.9)	6.7	(11.1)	(8.6)	70.15	48.87
Open Text Corp	52.13	2.6	4.0	(1.4)	13.1	23.2	14.7	55.25	41.96
Kinaxis	223.87	7.9	16.7	23.1	57.8	37.0	24.1	224.17	124.05
Docebo, Inc.	96.38	4.1	1.7	(0.7)	58.7	69.1	16.5	117.55	47.22
Q4 Inc.	10.90	(2.1)	NA	NA	NA	NA	NA	12.05	10.67
Average		3.5	6.2	6.2	32.2	40.1	17.1		
Business Services									
Altus Group Ltd	66.04	1.9	2.2	2.3	15.2	37.9	34.4	70.39	47.10
CGI Group Inc	108.64	(3.2)	(3.4)	(2.5)	0.7	18.6	7.6	116.88	90.37
Information Services Corp	27.54	2.5	(1.7)	(11.2)	3.7	40.2	38.3	33.87	18.70
LifeWorks Inc	26.86	(11.7)	(16.4)	(24.4)	(16.5)	(7.4)	(13.4)	37.56	26.09
Softchoice Corporation	24.30	(6.4)	(16.4)	(27.0)	NA	NA	NA	45.74	19.71
Telus International	43.97	(1.5)	(1.7)	15.4	23.3	NA	NA	49.43	34.00
Average		(3.1)	(6.2)	(7.9)	5.3	22.3	16.7		
Indices									
S&P/TSX Composite Index	21623.96	0.2	3.0	6.5	10.9	28.0	24.0		
S&P 500 Index	4699.83	1.1	4.8	6.8	13.9	31.7	25.1		
S&P/TSX Software Index	234.47	3.7	2.4	3.7	30.6	44.0	28.6		
S&P500 Software Index	6083.34	2.2	8.6	15.2	38.1	53.6	44.8		

Source: Company reports, FactSet and CIBC World Markets Inc.

Exhibit 3: Software Stocks – Return Performance (%), 11/18/2020 - 11/18/2021

Source: Company reports, FactSet and CIBC World Markets Inc.

Exhibit 4: Business Services Stocks – Return Performance (%), 10/21/2020 - 10/21/2021



Source: Company reports, FactSet and CIBC World Markets Inc.

Exhibit 5: Software Stocks – Comp Table, 2020 - 2022E

	Enterprise Value	EV/S			EV/EBITDA			P/E		
		C20	C21E	C22E	C20	C21E	C22E	C20	C21E	C22E
Enterprise Application Software										
Constellation Software Inc.*	37,454	9.4x	7.4x	6.6x	30.5x	25.1x	22.4x	44.9x	>50	33.5x
BlackBerry Limited*	6,159	6.4x	6.3x	5.7x	30.8x	>50	NEG	44.5x	>50	NEG
Sage Group plc	8,260	4.4x	4.4x	4.2x	17.7x	19.4x	18.3x	30.3x	33.6x	30.2x
Tyler Technologies, Inc.	21,579	19.3x	13.6x	11.6x	>50	>50	43.0x	>50	>50	>50
Roper Technologies, Inc.	61,141	11.0x	10.4x	9.9x	30.7x	27.3x	25.8x	38.4x	34.2x	31.9x
Enghouse Systems Limited	2,920	5.7x	6.1x	5.9x	15.5x	17.4x	17.1x	28.2x	35.6x	33.6x
Oracle Corporation	298,706	7.5x	7.2x	6.9x	15.2x	14.5x	14.0x	21.8x	20.2x	19.0x
SAP SE	161,786	5.9x	5.9x	5.6x	17.2x	18.2x	17.5x	23.1x	19.7x	23.3x
Enterprise Application Software Average		8.7x	7.7x	7.0x	22.5x	20.3x	22.6x	33.0x	28.6x	28.6x
Extended ERP										
Adobe Inc.	319,838	24.4x	20.0x	17.4x	49.8x	40.1x	35.1x	>50	>50	46.7x
Open Text Corporation	16,483	5.0x	4.8x	4.7x	12.9x	13.0x	12.3x	16.0x	16.6x	15.2x
Manhattan Associates, Inc.	10,489	17.9x	16.0x	14.9x	>50	>50	>50	>50	>50	>50
Pegasystems Inc.	9,696	9.5x	7.8x	6.5x	>50	>50	>50	NEG	>50	>50
Software AG	2,422	2.9x	2.9x	2.7x	12.6x	14.7x	12.0x	21.1x	25.8x	20.5x
Fiserv, Inc.	86,754	6.2x	5.6x	5.2x	15.9x	13.5x	12.3x	22.7x	18.0x	15.5x
Extended ERP Average		11.0x	9.5x	8.6x	22.8x	20.3x	17.9x	20.0x	20.2x	24.4x
Software As A Service										
Descartes Systems Group Inc.	7,540	21.6x	17.9x	16.3x	>50	41.3x	37.2x	>50	>50	>50
Kinaxis, Inc.*	4,661	20.8x	18.8x	15.1x	>50	>50	>50	>50	>50	>50
Docebo, Inc.*	2,293	36.4x	21.9x	15.1x	NEG	NEG	NEG	NEG	NEG	NEG
Lightspeed Commerce Inc*	8,710	44.2x	19.1x	13.0x	NEG	NEG	NEG	NEG	NEG	NEG
Veeva Systems Inc Class A	45,708	31.9x	25.3x	21.2x	>50	>50	>50	>50	>50	>50
Shopify, Inc. Class A	202,711	>50	44.3x	33.3x	>50	>50	>50	>50	>50	>50
Q4 Inc*	301	7.5x	5.5x	4.3x	NEG	NEG	NEG	NEG	NEG	NEG
Ceridian HCM Holding, Inc.	18,163	21.6x	17.9x	15.3x	>50	>50	>50	>50	>50	>50
ServiceNow, Inc.	134,820	29.8x	22.9x	18.2x	>50	>50	>50	>50	>50	>50
Workday, Inc. Class A	72,494	17.0x	14.4x	12.1x	>50	>50	>50	>50	>50	>50
Software As A Service Average		25.6x	20.8x	16.4x	NA	41.3x	37.2x	>50	>50	>50
Infrastructure Vendors										
Citrix Systems, Inc.	11,583	3.6x	3.6x	3.4x	10.1x	10.7x	10.7x	13.8x	17.0x	15.8x
Microsoft Corporation	2,515,086	16.1x	13.8x	11.9x	33.8x	27.7x	23.6x	49.6x	39.8x	34.6x
Infrastructure Vendors Average		9.9x	8.7x	7.7x	22.0x	19.2x	17.2x	31.7x	28.4x	25.2x
Software Average										
		15.4x	13.2x	11.0x	22.5x	21.8x	21.5x	29.5x	26.1x	26.6x

*Share Price Converted to USD

Source: Company reports, FactSet and CIBC World Markets Inc.

Exhibit 6: Business Services Stocks – Comp Table, 2020 - 2022E

		Enterprise Value	EV/EBITDA			P/E			EV/S		
			C20	C21E	C22E	C20	C21E	C22E	C20	C21E	C22E
Business & IT Services											
CGI Inc. Class A	28,332	11.6x	11.5x	11.2x	21.8x	19.7x	18.2x	2.3x	2.3x	2.2x	
TELUS International (CDA), Inc.	10,322	26.1x	19.0x	16.3x	49.3x	35.7x	29.0x	6.2x	4.7x	4.1x	
Accenture Plc Class A	229,907	26.5x	23.2x	21.0x	46.9x	40.2x	35.5x	5.0x	4.4x	3.9x	
Booz Allen Hamilton	13,414	16.4x	14.8x	13.8x	23.5x	21.0x	19.2x	1.7x	1.6x	1.5x	
CACI International Inc Class A	8,507	13.7x	12.5x	12.0x	17.8x	15.0x	14.3x	1.4x	1.4x	1.3x	
DXC Technology Co.	11,958	4.4x	4.4x	4.3x	9.8x	9.4x	7.6x	0.7x	0.7x	0.7x	
Genpact Limited	10,934	16.1x	14.7x	13.5x	24.2x	21.1x	19.1x	2.9x	2.7x	2.5x	
International Business Machines	156,726	10.3x	8.6x	8.2x	14.1x	11.6x	10.6x	2.1x	2.1x	2.2x	
Atos SE	6,168	4.2x	5.3x	4.8x	5.9x	10.4x	8.1x	0.6x	0.6x	0.5x	
Capgemini SE	42,194	17.3x	14.4x	13.1x	29.8x	25.8x	22.3x	2.7x	2.3x	2.2x	
Sopra Steria Group SA	4,754	10.4x	9.1x	8.2x	22.2x	15.9x	13.4x	1.1x	1.0x	1.0x	
Business & IT Services Average		14.3x	12.5x	11.5x	24.1x	20.5x	17.9x	2.4x	2.2x	2.0x	
HR Outsourcing		EV/EBITDA			P/E			EV/S			
LifeWorks Inc	2,394	12.0x	11.7x	10.9x	33.7x	NEG	31.8x	2.4x	2.3x	2.2x	
Ceridian HCM Holding, Inc.	18,163	>50	>50	>50	>50	>50	>50	21.6x	17.9x	15.3x	
Willis Towers Watson	33,139	13.4x	12.7x	13.6x	19.6x	17.8x	16.6x	3.5x	3.5x	3.5x	
Aon Plc Class A	73,001	22.2x	18.9x	17.7x	30.2x	25.4x	22.6x	6.6x	5.9x	5.6x	
Automatic Data Processing, Inc.	100,929	27.6x	25.5x	23.3x	39.7x	37.1x	33.4x	6.8x	6.5x	6.0x	
Paychex, Inc.	45,146	26.8x	25.0x	23.1x	41.5x	38.2x	34.9x	11.1x	10.6x	9.9x	
HR Outsourcing Average		20.4x	18.7x	17.7x	32.9x	29.6x	27.9x	8.7x	7.8x	7.1x	
Information Services		EV/EBITDA			P/E			EV/S			
Broadridge Financial Solutions, Inc.	24,084	22.7x	20.6x	18.2x	32.3x	28.6x	25.6x	5.0x	4.6x	4.2x	
Dye & Durham Ltd.	3,070	NEG	18.8x	14.6x	NEG	>50	>50	35.3x	8.1x	6.3x	
Deluxe Corporation	2,196	6.0x	5.5x	4.9x	7.2x	7.5x	7.2x	1.2x	1.1x	1.0x	
Information Services Corp	533	11.2x	8.1x	8.0x	18.9x	14.6x	13.7x	3.9x	3.3x	3.2x	
Information Services Average		13.3x	13.2x	11.4x	19.5x	16.9x	15.5x	11.4x	4.2x	3.7x	
Financial Services Technology		EV/EBITDA			P/E			EV/S			
Fidelity National Information Services	85,346	16.2x	13.8x	12.5x	20.1x	16.6x	14.5x	6.8x	6.1x	5.7x	
Fiserv, Inc.	86,754	15.9x	13.5x	12.3x	22.7x	18.0x	15.5x	6.2x	5.6x	5.2x	
Jack Henry & Associates, Inc.	11,410	20.4x	19.1x	17.5x	38.2x	34.6x	30.9x	6.6x	6.2x	5.8x	
ACI Worldwide, Inc.	4,922	13.7x	12.9x	12.2x	>50	29.2x	25.3x	3.8x	3.6x	3.5x	
Temenos AG	11,020	27.2x	25.7x	22.7x	39.6x	35.0x	31.0x	12.2x	11.2x	10.2x	
Global Payments Inc.	45,060	15.0x	12.5x	11.1x	19.8x	15.5x	13.2x	6.7x	5.8x	5.3x	
Bottomline Technologies	2,139	21.9x	20.8x	19.0x	40.2x	41.1x	38.4x	4.7x	4.3x	3.9x	
Financial Services Technology Average		18.6x	16.9x	15.3x	30.1x	27.1x	24.1x	6.7x	6.1x	5.6x	
Diversified Real Estate Services		EV/EBITDA			P/E			EV/S			
Colliers International Group Inc.	7,313	20.2x	14.0x	12.7x	34.0x	24.6x	23.0x	2.6x	1.9x	1.8x	
Altus Group Limited	2,980	30.1x	28.1x	24.5x	39.9x	40.2x	48.3x	5.3x	4.8x	4.3x	
CBRE Group, Inc. Class A	35,685	19.2x	12.8x	12.0x	30.6x	18.8x	17.4x	1.5x	1.3x	1.2x	
Jones Lang LaSalle Incorporated	15,560	18.1x	11.4x	10.9x	27.5x	14.9x	14.1x	1.7x	1.4x	1.3x	
Diversified Real Estate Services Average		21.9x	16.6x	15.0x	33.0x	24.6x	25.7x	2.8x	2.4x	2.1x	
Software Focused IT Solutions/VARs		EV/EBITDA			P/E			EV/GP			
Softchoice Corporation*	1,674	25.6x	25.2x	16.8x	37.9x	43.2x	29.7x	7.0x	6.1x	5.3x	
Softcat Plc*	3,782	30.3x	22.0x	21.5x	40.6x	29.5x	29.2x	12.7x	9.8x	9.0x	
Crayon Group Holding ASA*	14,482	>50	>50	>50	>50	>50	>50	>50	42.2x	32.2x	
Bytes Technology Group Plc*	1,366	33.0x	22.8x	21.0x	44.8x	30.0x	28.2x	14.0x	9.8x	8.9x	
SoftwareONE Holding Ltd.*	2,676	13.9x	10.3x	8.7x	16.6x	21.7x	17.2x	12.0x	2.9x	2.6x	
Bytes Technology Group Plc* Average		25.7x	20.1x	17.0x	35.0x	31.1x	26.1x	11.4x	14.2x	11.6x	
Business Services Average		18.2x	15.7x	14.2x	28.5x	24.5x	22.3x	6.3x	5.7x	5.0x	

*Software Focused IT Solutions/VARs uses EV/GP metric.

Source: Company reports, FactSet and CIBC World Markets Inc.

Exhibit 7: SaaS Stocks – Comp Table, 2020 - 2022E

	LTM Revenue Growth	LTM FCF Margin	NTM Revenue Growth	NTM FCF Margin	LTM Rule Of 40	NTM Rule Of 40	Enterprise Value (\$MM)	EV/S		
								C20	C21E	C22E
Tier 1 SaaS (Rule of 40 > 60)										
Zoom Video Communications	170%	46%	18%	38%	217%	56%	74,166	29.9x	19.0x	15.8x
CrowdStrike Holdings, Inc.	74%	33%	46%	23%	107%	69%	60,438	71.8x	44.5x	32.0x
Shopify, Inc.	71%	11%	33%	15%	82%	48%	200,234	68.4x	43.7x	32.9x
Zscaler, Inc.	56%	25%	41%	23%	81%	64%	48,852	91.6x	61.9x	45.3x
Lightspeed POS, Inc.	142%	-29%	59%	-5%	113%	54%	9,271	47.1x	20.4x	13.8x
DocuSign, Inc.	54%	22%	33%	19%	76%	52%	52,690	37.3x	25.9x	19.8x
Veeva Systems Inc	30%	46%	20%	38%	75%	59%	46,750	32.6x	25.9x	21.7x
Atlassian Corp. Plc	31%	37%	21%	27%	68%	48%	110,645	59.6x	47.1x	38.0x
Twilio, Inc.	65%	-2%	34%	-2%	63%	32%	51,572	29.3x	18.6x	14.1x
ServiceNow, Inc.	31%	29%	26%	31%	60%	57%	135,342	29.9x	23.0x	18.3x
HubSpot, Inc.	45%	18%	32%	12%	63%	45%	39,152	44.3x	30.4x	23.6x
Tier 1 SaaS (Rule of 40 > 60) Average								49.3x	32.8x	25.0x
	LTM Revenue Growth	LTM FCF Margin	NTM Revenue Growth	NTM FCF Margin	LTM Rule Of 40	NTM Rule Of 40	Enterprise Value (\$MM)	EV/S		
								C20	C21E	C22E
Tier 2 SaaS (Rule of 40 b/w 40-60)										
Docebo, Inc.	53%	6%	66%	2%	59%	67%	2,279	36.2x	21.8x	15.0x
Qualys, Inc.	13%	43%	13%	37%	56%	50%	5,067	14.0x	12.4x	10.9x
Descartes Systems	15%	41%	16%	38%	56%	54%	7,537	23.1x	21.6x	17.9x
Avalara Inc	40%	7%	24%	1%	47%	24%	12,679	25.3x	18.4x	15.0x
Five9, Inc.	41%	0%	25%	4%	41%	29%	11,300	26.0x	18.8x	15.1x
Dropbox, Inc.	13%	34%	10%	32%	47%	42%	10,258	5.4x	4.8x	4.4x
Mimecast Limited	20%	28%	14%	23%	47%	37%	5,569	11.5x	9.8x	8.5x
Wix.com Ltd.	36%	8%	25%	4%	44%	29%	10,269	10.4x	8.1x	6.7x
Workday, Inc.	17%	26%	19%	24%	43%	43%	72,720	17.1x	14.4x	12.1x
VMware, Inc.	8%	34%	8%	28%	42%	36%	90,896	7.8x	7.1x	6.6x
Tier 2 SaaS (Rule of 40 b/w 40-60) Average								17.7x	13.7x	11.2x
	LTM Revenue Growth	LTM FCF Margin	NTM Revenue Growth	NTM FCF Margin	LTM Rule Of 40	NTM Rule Of 40	Enterprise Value (\$MM)	EV/S		
								C20	C21E	C22E
Tier 3 SaaS (Rule of 40 b/w 28-40)										
BlackLine, Inc.	21%	17%	20%	11%	38%	32%	7,007	19.9x	16.5x	13.7x
Zendesk, Inc.	28%	12%	27%	9%	40%	36%	12,671	12.3x	9.5x	7.6x
MongoDB, Inc.	40%	-5%	32%	-6%	35%	26%	37,807	65.6x	47.6x	36.1x
LivePerson, Inc.	30%	-3%	24%	-15%	27%	9%	3,096	8.4x	6.6x	5.2x
Rapid7 Inc.	27%	8%	24%	3%	35%	27%	7,628	18.5x	14.4x	11.7x
Paylocity Holding Corp.	19%	16%	25%	14%	36%	40%	14,406	24.0x	19.8x	15.9x
Q2 Holdings, Inc.	25%	-3%	18%	3%	22%	21%	5,032	12.4x	10.1x	8.6x
Akamai Technologies, Inc.	9%	21%	8%	23%	30%	31%	19,522	6.1x	5.6x	5.2x
Tier 3 SaaS (Rule of 40 b/w 28-40) Average								20.9x	16.3x	13.0x
	LTM Revenue Growth	LTM FCF Margin	NTM Revenue Growth	NTM FCF Margin	LTM Rule Of 40	NTM Rule Of 40	Enterprise Value (\$MM)	EV/S		
								C20	C21E	C22E
Tier 4 SaaS (Rule of 40 <28)										
RingCentral, Inc.	34%	3%	26%	6%	38%	31%	23,634	20.0x	14.9x	12.0x
Teradata Corporation	5%	20%	0%	19%	26%	19%	5,296	2.9x	2.8x	2.7x
Anaplan, Inc.	29%	-2%	25%	0%	27%	25%	8,581	19.5x	15.2x	12.2x
Zuora, Inc.	11%	5%	12%	0%	16%	12%	2,711	8.9x	8.0x	7.0x
New Relic, Inc.	12%	-3%	18%	4%	8%	22%	7,540	11.6x	10.0x	8.7x
Kinaxis, Inc.	-1%	10%	25%	13%	9%	38%	4,628	20.6x	18.6x	14.9x
Yext, Inc.	12%	-4%	11%	-1%	8%	10%	1,378	3.9x	3.6x	3.1x
Splunk Inc.	3%	-3%	16%	7%	0%	23%	23,382	10.4x	9.2x	7.7x
Tier 4 SaaS (Rule of 40 <28) Average								12.2x	10.3x	8.5x
SaaS Average								26.6x	19.2x	15.1x

Source: Company reports, FactSet and CIBC World Markets Inc.

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