

The Narwhal List 2020

A banner year for big deals



 NARWHAL PROJECT

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The Narwhal List

2019 was another remarkable year for Canadian Narwhals. In particular, there were 9 financings of Narwhals that exceeded \$100 million (all amounts in \$US). Two of these financings were in healthtech and 7 in computer technology. Of particular note were deals that provided \$388 million to Verafin in St John's, \$270 million to Nuvei out of Montreal, \$250 million to Clio from Vancouver and \$200 million to Toronto's 1 Password. It is interesting that all of these companies are more than 10 years old and none had previously made the Narwhal List cut-off.

Several prominent companies graduated from the list this year. Lightspeed POS had an IPO, Bluerock was acquired by Bayer, and Wealthsimple has been classified as acquired as its largest investor now owns more than 50% of the company.

While Kik Interactive was removed from the list of Unicorns maintained by CBInsights, two new Canadian companies made the list. These were Nuvei with a valuation of \$2 billion and Coveo with a valuation of \$1.1 billion.

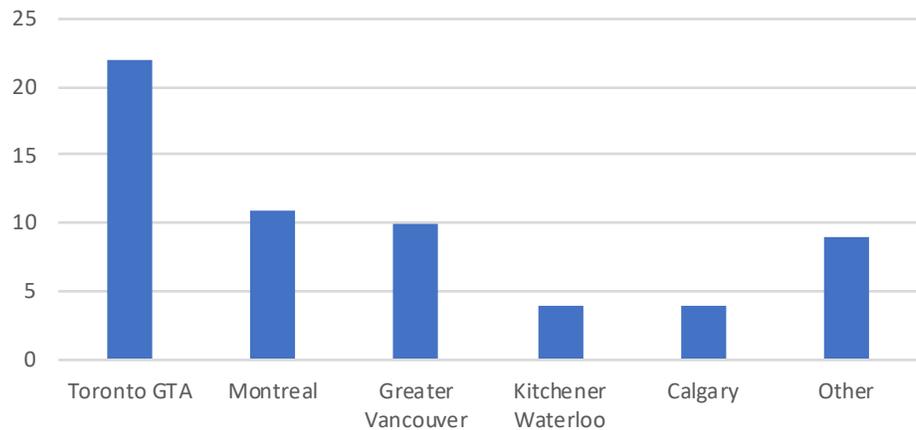
For the first time, we have expanded the list by 10 companies to include cleantech ventures. Exhibit 1 features the ten leading Canadian Narwhals. The full list is published at narwhalproject.org/narwhal-list/

The 2020 Narwhal List Exhibit 1

Rank	Company	Founded	Total Funding (\$US)	Financial Velocity	Sector	City
1	Chinook Therapeutics	2019	65,000,000	65.0	Biotechnology	Vancouver
2	Element AI	2016	257,483,994	64.4	Computer Software	Montreal
3	Repare Therapeutics	2016	150,500,000	37.6	Biotechnology	Saint Laurent
4	Enerkem	2000	616,487,747	30.8	Renewables and Environment	Montreal
5	DalCor Pharmaceuticals	2015	150,000,000	30.0	Pharmaceuticals	Montreal
6	Verafin	2003	453,988,665	26.7	Computer Software	St. John's
7	Fusion Pharmaceuticals	2014	151,000,000	25.2	Biotechnology	Hamilton
8	Stormfisher Biogas	2006	349,787,329	25.0	Renewables and Environment	Toronto
9	Hootsuite	2008	299,693,624	25.0	Marketing and Advertising	Vancouver
10	North	2012	199,632,519	25.0	Consumer Electronics	Kitchener

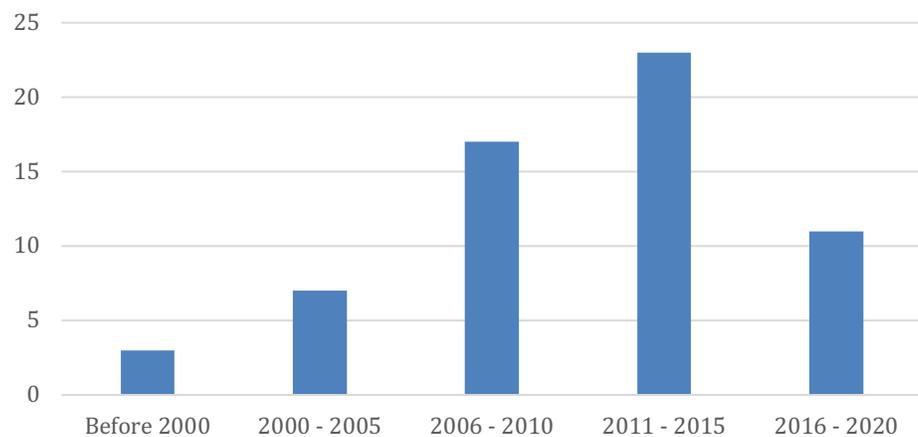
As would be expected, the greatest number of companies on the list is from Toronto with substantial numbers coming from Montreal and Vancouver as well.

Narwhal City of Origin Exhibit 2



In terms of when these companies were founded, the average year of founding is 2010 with more than half founded since then.

Narwhals Founded Exhibit 3



Background

The Narwhal List identifies a set of young Canadian companies that have the potential to become successful on the world stage. It also points to possible financial pathways to turn these companies into Unicorns, which are closer to reaching public financial markets. The transition to the Unicorn scale and possibly public listings may give our firms the ability to compete on their own merits and have the currency necessary in public stock to fund acquisitions throughout the world that will lead to greater scale.

The Narwhal List sheds light on the ability of firms to scale up and reach world-class status. The ranking system is derived from publicly available information and tracks all firms in the country with data in the public domain—not just those that elect to participate by revealing private revenue data. The Narwhal List also enables businesses to benchmark themselves against other Canadian firms, Unicorns, and the competition. Since the Narwhal List includes all private firms with fundraising activity, it is also a useful indicator for how Canada as a whole is faring in business incubation and growth.

The 2020 Narwhal List

The current report builds on our effort started four years ago: we provide here our annual update identifying private Canadian companies with the potential to scale to world-class status. Movements on the list can also tell us whether Canada is making progress at creating a cohort of high-potential companies.

In our first Impact Brief in 2017 (*The Narwhal List, released March 2017*), we identified an approach to measuring the progress of product focussed technology companies through the use of “financial velocity”. This concept enables companies to think easily and quickly about growth. If you have a large market that is ready and willing to purchase your innovation, then your growth is limited only by the capital you have on hand to fuel that growth.

The amount of “fuel” required increases as a business grows; thus, a scaling company requires more and more capital to sustain operations. In most cases, larger companies are more profitable than smaller ones and consequently accumulate retained earnings, which fuels their capital.

Financial velocity measures the speed at which a company acquires and consumes capital to fuel its growth. It is defined simply as the amount of capital a company has raised divided by the number of years it has been in existence:

$$\text{financial velocity} = \text{capital raised} / \text{years in existence}$$

Velocity is measured over time and is expressed in millions of dollars per year. It provides a simple and elegant tool to enable entrepreneurs and investors to gauge the financial attractiveness of young and capital-intensive firms.

Achieving a high financial velocity means a company is raising more and more money over time. It is possible for a firm to have a high velocity in its first year if it raises a significant amount of funding. In each year of its existence, it must raise more and more money to maintain that high velocity.

However, if a business does not raise any money—or raises too little—in any given year, its velocity will decrease; and this may be a sign of stagnant or declining growth. Companies can graduate from the list when they get sold or have an Initial Public Offering. Financial velocity is also handy when comparing firms founded in different years.

We must note that firms can also acquire capital while not managing to grow their revenue. Although a firm may show strong growth using our proxy metrics, if it does not manage to successfully add revenue, the business will eventually not be able to raise additional capital. Thus, in the long run, any issues with using this metric in cases where firms are unable to secure revenue will resolve themselves naturally as such businesses drop in ranking or disappear entirely from the Narwhal List. Financial velocity is a “leading” metric as increases in capital usually come before increases in revenue.

Becoming a Unicorn

In last Year’s report, (*The Narwhal List, released January 2019*) we identified the threshold financial velocity required to become a Unicorn. We identified 34 US based Unicorns with a valuation of \$1 billion. These companies had financial velocities of 10 to 33. (They had raised \$10 to \$33 million per year of existence.) Based on this, we established a cut-off financial velocity of \$10 million per year as an indicator that a company was on track to become a unicorn.

Initial Public Offerings

While the average financial velocity of software companies going public in 2018 is over 70, for years prior to that, the average velocity was around \$20 million dollars. Of the 44 companies that went public prior to 2018, nine of them had financial velocities below \$10 million a year and 9 had financial velocities above \$30 million a year. (*Plant, The Path to IPO, March 2019*) Thus our cut-off financial velocity of \$10 million per year is also an effective cut-off to use when evaluating a firm’s potential to go public.

Computer Technology

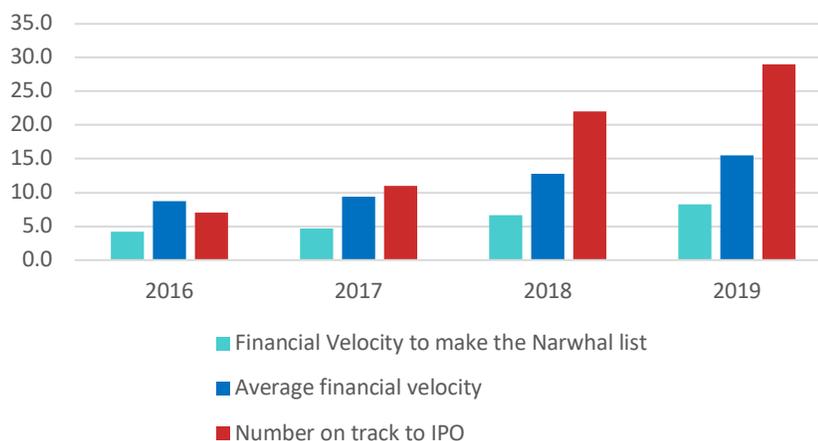
The computer technology sector has continued to show strong growth in the last year and is capping three years of continued growth since the Narwhal List was established. 2019 turned out to be a great year for technology Narwhals; and results show that Canada has made excellent progress at scaling companies. Since last year, 7 new firms have joined the list, replacing those businesses that have not recently secured funding. Exhibit 4 shows some summary statistics about the 40 technology firms on this year's Narwhal List.

Computer Technology Statistics
Exhibit 4

Statistics	2019	2018
Number raising funds	22	15
Amount raised in 2019	2,100,226,798	600,000,000
Average amount raised	95,464,854	40,000,000
Financial Velocity to make the list	8.3	6.7
Average financial velocity	15.5	12.8
Number on track to IPO	29.0	22.0

Over the last three years, the financial velocity required to make the list has increased from 4.2 to 8.3. In the same time frame, the average financial velocity of companies on the list has increased from \$8.7 million to \$15.5 million while the number on track to become Unicorns has grown from 7 to 29. This shows that Canada has made tremendous success at improving its ability to scale companies.

Computer Technology Progress
Exhibit 5



Computer Technology Narwhals Exhibit 6

Rank	Company	Founded	Total Funding (\$US)	Financial Velocity	Sector	City
1	Element AI	2016	257,483,994	64.4	Computer Software	Montreal
2	Verafin	2003	453,988,665	26.7	Computer Software	St. John's
3	Hootsuite	2008	299,693,624	25.0	Marketing and Advertising	Vancouver
4	North	2012	199,632,519	25.0	Consumer Electronics	Kitchener
5	Clio	2008	276,000,000	23.0	E-Learning	Vancouver
6	Coveo	2005	339,350,323	22.6	Computer Software	Quebec
7	TouchBistro	2010	209,220,000	20.9	Computer Software	Toronto
8	Assent Compliance	2011	183,629,304	20.4	Information Technology	Ottawa
9	Dapper Labs	2018	38,850,000	19.4	Computer Software	Vancouver
10	Nuvei	2003	330,000,000	19.4	Financial Services	Montreal
11	Ritual	2014	112,861,186	18.8	Consumer Services	Toronto
12	Blockstream	2014	101,000,000	16.8	Computer Software	Victoria
13	Integrate.ai	2017	49,625,000	16.5	Computer Software	Toronto
14	Breather	2012	122,500,000	15.3	Real Estate	Montreal
15	Drop	2015	75,000,000	15.0	Consumer Services	Toronto
16	ecobee	2007	192,250,000	14.8	Consumer Electronics	Toronto
17	Hopper	2007	183,404,247	14.1	Internet	Montreal
18	Dialogue	2016	56,000,000	14.0	Health	Montreal
19	Plusgrade	2009	150,631,220	13.7	Aviation	Montreal
20	Vena Solutions	2011	120,032,004	13.3	Computer Software	Toronto
21	1Password	2005	200,000,000	13.3	Computer Security	Toronto
22	League	2014	76,139,506	12.7	Information Technology	Toronto
23	Borrowell	2014	72,444,769	12.1	Financial Services	Toronto
24	Fiix Software	2015	57,970,000	11.6	Information Technology	Toronto
25	D-Wave Systems	1999	238,850,000	11.4	Computer Hardware	Burnaby
26	Ranovus	2012	89,874,000	11.2	Telecommunications	Ottawa
27	ApplyBoard	2015	54,213,950	10.8	Higher Education	Waterloo
28	AlayaCare	2014	62,230,000	10.4	Computer Software	Montreal
29	MOJIO	2012	80,730,172	10.1	Automotive	Vancouver
30	eSentire	2001	187,900,000	9.9	Computer Security	Kitchener
31	KOHO Financial	2014	57,547,548	9.6	Financial Services	Toronto
32	PointClickCare	1995	229,978,522	9.2	Computer Software	Mississauga
33	Visier	2010	91,500,000	9.2	Computer Software	Vancouver
34	LeddarTech	2007	117,000,000	9.0	Automotive	Quebec
35	Trulioo	2011	80,765,410	9.0	Internet	Vancouver
36	Tenstorrent	2016	34,050,000	8.5	Computer Hardware	Toronto
37	MindBridge AI	2015	42,300,000	8.5	Financial Services	Ottawa
38	Wattpad	2006	117,800,000	8.4	Internet	Toronto
39	Vidyard	2011	75,650,000	8.4	Online Media	Kitchener
40	Properly	2018	16,648,139	8.3	Real Estate	Toronto

Health Technology

The healthtech sector is holding its own although it is not progressing as rapidly as the computer technology sector. The biggest change on the list is that Bluerock was acquired by Bayer and Turnstone Biologics appears to have moved to New York. New to the list this year are Chinook Therapeutics, which raised \$65 million in its first year of existence, Geneseeq, Deep Genomics, and Lungpacer Medical, the first medical device company to hit the list.

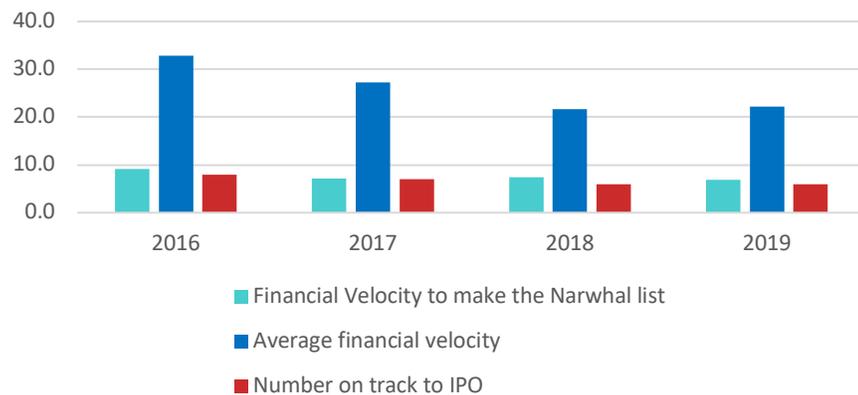
The results for the last year show the sector as being very promising for the future. Six companies out of the ten raised an average of \$72 million and 6 are on track to IPO if they maintain their current trajectory.

Health Technology Statistics
Exhibit 7

Statistics	2019	2018
Number raising funds	6	2
Amount raised in 2019	429,455,581	223,000,000
Average amount raised	71,575,930	111,500,000
Financial Velocity to make the list	6.9	7.4
Average financial velocity	22.2	21.7
Number on track to IPO	6	6

The list of health technology Narwhals does not show the same forward momentum that the list of computer technology companies does. This is due to the fact that there has been considerable turnover in companies on the list. From the original 2017 list which contained 13 companies, Zymeworks and Clementia Pharmaceuticals went public and Bluerock was sold.

Health Tech Sector Progress
Exhibit 8



Health Technology Narwhals
Exhibit 9

Rank	Company	Founded	Total Funding (\$US)	Financial Velocity	Sector	City
1	Chinook Therapeutics	2019	65,000,000	65.0	Biotechnology	Vancouver
2	Repare Therapeutics	2016	150,500,000	37.6	Biotechnology	Saint Laurent
3	DalCor Pharmaceuticals	2015	150,000,000	30.0	Pharmaceuticals	Montreal
4	Fusion Pharmaceuticals	2014	151,000,000	25.2	Biotechnology	Hamilton
5	Ironshore/Highland	2008	257,000,000	21.4	Biotechnology	Toronto
6	Geneseeq	2008	135,806,798	11.3	Biotechnology	Toronto
7	Deep Genomics	2014	56,700,000	9.5	Biotechnology	Toronto
8	Northern Biologics	2014	47,300,000	7.9	Biotechnology	Toronto
9	PreciThera	2016	28,709,690	7.2	Biotechnology	Montreal
10	Lungpacer Medical	2009	75,380,000	6.9	Medical Device	Vancouver

Clean Technology

For the first time, we have included a section on clean technologies. This sector is slightly different from other sectors as it comprised not just of product companies but of companies such as Enerkem which transforms waste into transportation biofuels, renewable chemicals, and everyday products as well as others such as Amp Solar which is a global developer of flexible clean energy infrastructure.

The results for the last year show the sector as being very promising for the future. Four companies out of the ten raised an average of \$44 million and 7 are on track to IPO if they maintain their current trajectory.

Exhibit 10 Clean Technology Statistics

Statistics	
Number raising funds	4
Amount raised in 2019	177,000,000
Average amount raised	44,250,000
Average financial velocity	14.5
Number on track to IPO	7

Clean Technology Narwhals Exhibit 11

Rank	Company	Founded	Total Funding (\$US)	Financial Velocity	Sector	City
1	Enerkem	2000	616,487,747	30.8	Renewables and Environment	Montreal
2	Stormfisher Biogas	2006	349,787,329	25.0	Renewables and Environment	Toronto
3	Grasshopper Solar	2007	210,320,668	16.2	Renewables and Environment	Mississauga
4	Amp Solar Group	2009	153,480,044	14.0	Renewables and Environment	Port Credit
5	Kineticor	2013	80,000,000	11.4	Oil and Energy	Calgary
6	Velvet Energy	2011	100,000,000	11.1	Oil and Energy	Calgary
7	General Fusion	2002	192,133,043	10.7	Renewables and Environment	Burnaby
8	Carbon Engineering	2009	107,355,246	9.8	Renewables and Environment	Squamish
9	BluEarth Renewables	2010	81,000,000	8.1	Renewables and Environment	Calgary
10	Eavor	2017	24,270,543	8.1	Renewables and Environment	Calgary

Methodology

This study looked at the fundraising statistics of over 1,000 private Canadian technology businesses listed on Crunchbase and CBInsights as at December 31, 2019.

To accumulate the data, all Canadian companies in the database that would have a financial velocity of above 5 were downloaded from Crunchbase. This totalled 250 companies. Companies were reviewed for eligibility and certain ones were excluded including:

- Closed companies
- Companies that were still in business but that have had significant reversals
- Public companies
- Those whose business was not primarily technology
- Companies that are now headquartered in the US.

Amounts reported for total funding were adjusted where large discrepancies between the two databases exist. All amounts were converted to US dollars.

The data were only collected from public sources and may therefore be incomplete. Despite our best efforts, we may have omitted a company that belongs on the Narwhal List or may have included one that does not fit. All efforts were made to check the veracity of the data. Please note that all readers are encouraged to report errors or omissions. If we have made a mistake in reporting any company statistics or have inadvertently left off a company, please contact us and we will be pleased to update the list in a subsequent release.

About this report

The Narwhal Project The Narwhal Project, the publisher of this report, was established to conduct research in order to discover the underlying factors that are essential to create world-class technology companies. Our objective is to understand how companies can accelerate their growth and how governments, companies, and academia can identify and adopt best practices in technology commercialization.

Read our collection of reports: narwhalproject.org

Charles Plant Charles Plant, the founder of the Narwhal Project and author of this report, is a serial entrepreneur who has been an officer, director or investor in over a dozen technology companies. He was co-founder and CEO for 15 years of Synamics, a telecommunications software firm that provided mass calling platforms to telcos. Charles has been a corporate banker, an investment banker and served as a Managing Director and CFO of MaRS and MaRS Innovation.

As an educator, Charles spent seven years on the faculty of York's Schulich School of Business teaching in the MBA program and was a Senior Fellow at the Impact Centre and taught in the faculty of Arts and Science at the University of Toronto. He is a CPA/CA, has an MBA in Marketing, and is pursuing PhD in Economics.

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Partners

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Communitech was founded in 1997 by a group of entrepreneurs committed to making Waterloo Region a global innovation leader. At the time it was crazy talk, but somehow this community managed to pull it off. Today, Communitech is a public- private innovation hub that supports a community of more than 1400 companies — from startups to scale-ups to large global players.

For more information on Communitech: communitech.ca

Invest Ottawa

Invest Ottawa is the lead economic development agency for knowledge-based industries in Canada's Capital, facilitating economic growth and job creation in the City of Ottawa. Guided by a vision to help realize Ottawa's full potential as a globally-recognized, innovative and future-ready city, and the best place to learn, work, live, and play, Invest Ottawa delivers venture development and global expansion programs and services that catalyze the growth and success of entrepreneurs and firms. These include: small business training; mentorship; acceleration for technology firms; foreign business and investment attraction; local business retention and expansion in targeted sectors; commercialization; and marketing Ottawa's diversified economy and high quality of life.

For more information on Communitech: investottawa.ca

MaRS

MaRS brings together the innovation community to grow the economy and make an impact.

From advisory services to connections to talent, capital, customers and more, MaRS offers a range of high-value services that help high-growth companies succeed. We also provide access to the MaRS ecosystem, a curated community of entrepreneurs, investors, corporates, academics and government partners.

For more information on MaRS: marsdd.com

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