

Canada's Technology Ecosystems: How Canada's Different Tech Regions Vary In Maturity.

By: Brad Johns, Partner

Introduction

Vancouver, Toronto and Montreal rank among the top 20 startup ecosystems in the world¹, matching Europe and ranking Canada second only to the United States. While Canada's technology ecosystems of British Columbia, Ontario and Quebec demonstrate fairly robust access to talent, capital and markets, not all provincial regions are at the same point of maturity.

In this article we'll look at how the maturity of Canada's technology ecosystems varies in different provinces and provide observations on the diverse capital needs by region to advance Canada's innovation economy. Watch for a follow up article in early 2017 where we will go deeper into this topic.

Yaletown's prior research has emphasized the post startup, emerging growth stage capital gap. More mature Canadian tech ecosystems have the greatest need for this type of capital, while less mature regions are still building early stage financing capacity.

Maturity of regional ecosystems in Canada

A 2015 report by Compass looked at various innovation ecosystems around the world and calculated an implied valuation for each. To add additional information to the

¹ The Global Startup Ecosystem Ranking 2015, Compass.co

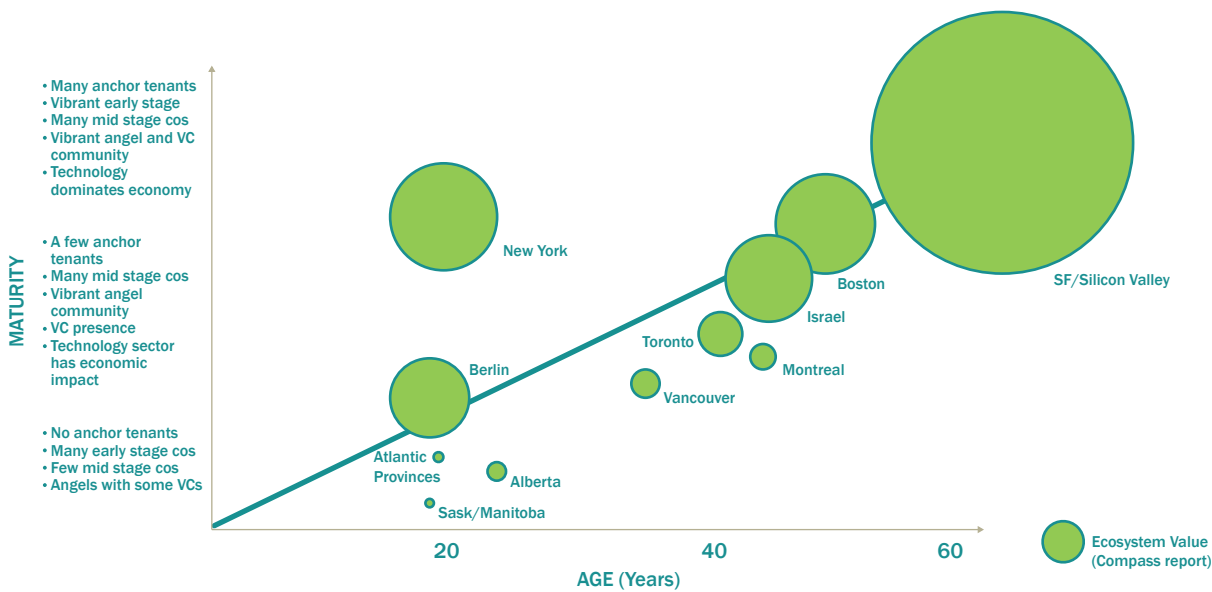
² Canada's Technology Investment Gap, 2016 - <http://www.yaletown.com/research/>

Compass chart below, we plotted these against time (age) and level of maturity. A mature ecosystem is one that has considerable value, with established anchor tenants - large mature technology companies - plus a vibrant community of technology innovators at early stage, mid and later stage. At this point, the ecosystem becomes self-sustaining, attracting and retaining talent, capital and customers.

In the chart, the most valuable technology hubs display as the largest circles below with Silicon Valley, New York, Boston and Israel holding top spots. Toronto, Montreal and Vancouver rank as relatively mature technology ecosystems, indicating British Columbia, Ontario and Quebec are the most advanced innovation economies in Canada.

The chart also examines time to maturity for an ecosystem. If one uses Silicon Valley as the benchmark, the line drawn on the chart indicates the path that this ecosystem took to reach its current state. If other ecosystems fall below the line, then they are maturing slower than Silicon Valley and if they are above the line, they are maturing faster. Based on this, New York has matured faster than Silicon Valley, with most Canadian ecosystems maturing more slowly.

For Canada, what's apparent is that not all Canadian regions are at the same stage of maturity as ecosystems, nor are all regions developing at the same pace. The result is that different capital needs are required for different regions. While population size of different regions does influence their growth and scale, there are other factors at play.



Source – The Global Startup Ecosystem Ranking 2015, Compass.co

Note - Equivalent values for Alberta, Saskatchewan/Manitoba the Atlantic Provinces was not available in the report so an estimate was used.

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Most mature ecosystems - BC, Ontario & Quebec

Canada's most mature ecosystems are based in cities such as Toronto, Kitchener/Waterloo, Ottawa, Montreal and Vancouver. Historically, like most of Canada, these regions were resourced based. But as the region's population grew, their economies began to diversify and this happened earlier than in other parts of the country.

Diversification into heavy industry and manufacturing was followed by the development of a growing innovation sector, which has resulted in the creation of some of Canada's largest technology companies. Nortel's roots formed in Montreal and Ottawa, Bombardier and CAE in Montreal, Blackberry in Waterloo, Opentext in Toronto, and PMC-Sierra in Vancouver, with IBM, Microsoft, and other large US firms establishing centres of excellence throughout these regions. In addition, central Canada has a large population base from which to draw talent and is home to a high number of top universities.

With the technology wave related to Web 1.0/2.0, a new software-centric company can now rent inexpensive cloud servers, utilize sophisticated online application services and data management infrastructure, purchase per-seat subscription licenses for its product

development team, and leverage free open source code. As a result, we've seen the addition of Shopify in Ottawa, Hootsuite in Vancouver, Stingray and Lightspeed in Montreal, and Real Matters in Toronto. The corresponding lower startup costs have also enabled the democratization of startup location, driving a boom in early stage companies and seed financings in new regions. An example of this growth is Hamilton, which now has more than 50 software companies.

With this more diverse economy comes more diverse sources of capital. But as successful early stage companies grow, more emerging growth capital will be required to scale and become attractive to late-stage capital providers.

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Early maturity ecosystems - Prairies and Atlantic Provinces

The economies of Alberta, Saskatchewan, New Brunswick, Nova Scotia and PEI are, for the most part, dominated by resources (mining,

O&G, forestry) and fishing/agriculture, and thus exposed to the volatility of the various commodity cycles. Over the last 10 years, local and provincial governments have been trying to foster the formation of technology and innovation companies in order to stabilize and grow their economies.

Given this relatively recent shift towards an innovation economy, these regions are home to technology companies at more early stage with less medium to large-scale technology companies. Less mature ecosystems typically leverage their local economic sectors, which in turn lends itself more to seed and angel capital, with emerging growth capital only needed as companies gain traction. While these regions have seen their share of successful tech companies (e.g. Q1 Labs and Radian6 in New Brunswick; BioWare, Veer, SMART and Solium in Alberta), at this level of maturity, there are typically very few, if any, anchor tenants, which form the base for larger scale hiring and training. As a result, there tends to be a lack of experienced talent in commercialization areas such as technology sales and marketing or product management. Local software engineering/development talent can also be a challenge.

Maturing the young Prairie and Atlantic Province's ecosystems requires a continued supply of early stage and seed capital. As promising technology companies grow in these regions, growth capital needs will increase.

Alberta Capital Needs Examined

Looking specifically at Alberta, while Canada has seen a sizable increase in financings and capital invested since 2010, Alberta hasn't participated in this growth, indicating a more general capital shortage across all stages. After taking into account the impact from the decline in the oil and gas sector, Alberta's share of capital invested in Canada still fell by half from 10 percent in 2010 to 5 percent in 2015.

Since Alberta's Technology sector is relatively small, investment activity is typically biased to early and seed stage financings because there are fewer medium sized companies. Given the stage of Alberta's technology sectors, solving the capital gap requires focused development of the early stage ecosystem and increasing emerging growth capital for growth-ready companies. A good example of focused investment support for Alberta's ecosystem is Alberta Enterprise Corporation, which invests as a Limited Partner in early stage focused funds such as the Accelerate Fund, as well as in various traditional venture capital funds.

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In Summary

British Columbia, Ontario and Quebec lead in maturity among Canada's technology ecosystems. In those more mature technology ecosystems, early-stage capital tends to be well established and growth capital is the primary gap. Less mature ecosystems including the Prairies and Atlantic Canada are home to more earlier stage companies with capital needs more biased to see and angel investments. It is important to recognize these differences when implementing broad based policy decisions at a government level, and when making individual investments decisions as an angel investor or venture capital partner.

About Yaletown Partners – yaletown.com

Yaletown invests in emerging-growth technology companies in Canada that enhance sustainability and productivity for industrial and enterprise customers. Our investments help Canadian technology companies in their initial growth phase to accelerate their growth, shorten exit timeframes and achieve strong exit premiums. Since 2013, Thomson Reuters' has ranked Yaletown as one of Canada's most active private independent technology investors. Yaletown is led by a team with more than 120 years collective experience building and financing technology companies, and is backed by leading institutional investors and a network of successful technology entrepreneurs, executives and angel investors. Find out more about Yaletown and our portfolio of companies at www.yaletown.com

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