Is a high-growth firm the same as a 'scale-up'?

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What separates a tech firm that is scaling from one that is (just) growing?

There's a lot of excitement about high growth firms. For good reason. In Canada, although high growth firms account for only 1.24% of firms, they produce 63% of net job growth.[1]

But recently, the conversation has changed. Now, 'scale-ups' are the new darling of accelerators, incubators, policy-makers and more.

At the Lazaridis Institute, we asked the question: **is a high-growth firm the same as a scale-up?**

Our answer is: **No, it's not. And the difference is important to understand.**

This report draws on the findings of four years of research on Canadian technology firms conducted by the Lazaridis Institute (2016-19).[2]

We tease out differences between a scale-up and a high growth firm, in the context of Canadian technology firms.

To start, we analyze various definitions of a 'scale-up'. We then look at research from the Lazaridis Institute to understand what it means for a firm to have 'scalability'. Finally, we offer some thoughts on measuring high growth for tech firms.

With thanks

Thank you to all of the Canadian technology companies and experts who participated in the Lazaridis Research Program over the last four years. Collecting data directly from you is what allows us to learn and then share that learning.

We are also very grateful to those who read this report while it was in progress. Tackling the issue of 'scaling vs. growing' needed some feedback from others who had been there themselves. Special thanks go to Cassie Roblin, Chris Bryson, Rich Emrich, our two extraordinary Executive Fellows at the Lazaridis Institute, Geoff Baum and Brandon Goldman, and our Managing Director, Kim Morouney.

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All graphic work in this report is done by Carly Gouweloos. She's also one of our Lazaridis MBA grads. Thanks Carly.

[1] Chakarova, R. & Rattan, C. 2019. *Defining Gravity: Building a Scaleup Ecosystem*, Toronto Region Board of Trade & World Trade Centre Toronto. Of note, similar results are reported by the UK's Octopus *High Growth Small Business Report* (2014) where high growth firms account for about 1% of all firms but 68% of new jobs.

[2] Since 2016, we have surveyed over 450 technology firms across Canada. On average, they were about seven years old with 26 employees. About half were SaaS firms with the remainder including hardware, hardware & software, software and marketplace. To analyze the data, we typically use t-tests and linear regression. All analyses control for firm age, size and type.

About the Lazaridis Institute

The mandate of the Lazaridis Institute for the Management of Technology Enterprises is to support Canadian technology companies as they grow to global scale. We do this through programming and direct support through the Lazaridis ScaleUp Program, as well as research and education.

Our mission is to increase domestic prosperity by making Canadian technology entrepreneurs globally competitive. Our vision is to be the global authority on the management of high-growth technology firms.

The Lazaridis Institute is part of the Lazaridis School of Business and Economics at Wilfrid Laurier University in Waterloo, Canada. Our home base anchors us in one of Canada's leading technology ecosystems, the Toronto-Waterloo Corridor.

What *IS* a Scale-Up?

The definition of a scale-up is messy. In the last 4-5 years, we have seen programmes, reports, and institutes from around the world targeting something called a 'scale-up'. Scale-ups are the new start-up and they've quickly become the focus of policy-makers, accelerators and the like.

With this report, the Lazaridis Institute wants to help clarify what 'scale-up' means. We also want to make clear what firms need to realize 'scalability'.

Here are our thoughts based on four years of research. To provide some background, we begin with a summary of how others view the concept of a scale-up.[3]

Let's start with a baseline definition. In 2007, the Organization for Economic Co-operation and Development (OECD) defined 'high-growth' firms. These are:

- All firms with average annualised growth greater than 20% over a three-year period, with 10 or more employees at the beginning of the observation period.
- Growth can be measured by the number of employees or by turnover (i.e. sales revenue).[4]

This definition was widely adopted and received A LOT of attention. It also got a name change in the 2014 publication of The Scale-Up Report on UK Economic Growth by Sherry Coutu, CBE.[5] That is, the Coutu Report replaced 'high-growth' with 'scale-up'.

Et voilà: there was a definition for 'scale-up'.

Coutu's definition was adapted by the UK's ScaleUp Institute and other organizations seem to have followed suit. For example, Nordic Innovation (and the Nordic Scalers) use the OECD definition for a 'scale-up' although they add a small twist. For them, a scale-up needs to have both 10 employees AND 2M+ Euro of annual revenue in the start year of observation.[6]

In the US, the Kauffman Foundation sticks with the early OECD definition for a high-growth firm – but they focus solely on revenue and not employee numbers.

They also have a separate definition for a scale-up. The Kauffman Foundation (2017) defines a scale-up as: "an employer business over a year old and less than ten years old that started with fewer than fifty employees and grew to employ fifty or more people in their first ten years of operation."[7] Note that in this particular version, the focus is on number of employees.

[3] For a detailed summary of various definitions, please see the review by Zhao, Dalziel, Barge, Walker and Salminen (2019) conducted by 'The Evidence Network' for Nordic Innovation.
[4] *Eurostat-OECD Manual on Business Demography Statistics* (2007), European Commission.
[5] Coutu, S (2014). *The Scale-Up Report on UK Economic Growth.*
[6] Scale-ups in the Nordics *(2017), Nordic Innovation.*
[7] 2017 *Kauffman Index of Growth Entrepreneurship*, Ewing Marion Kauffman Foundation.

Is it all about numbers?

Well, numbers make it easier to categorize a firm – numbers by revenue, head count and firm age – but can a scale-up be defined by numbers alone?

In 2016, Barclays released their 'Scale-Up UK' report led by Professor Thomas Hellmann (Oxford) and Professor Stelios Kavadias (Cambridge).[8] In it, two important points are made:

1. Scaling can occur in both young companies ***and*** those that are more established.
2. Scale-up is a ***stage*** when a company takes a proven concept and delivers it to a wider audience, often through market penetration and geographic expansion.

At the Lazaridis Institute, we think the 2016 Barclays' report led by Hellmann and Kavadias started to move the definition of 'scale-up' in the right direction.

Our view at the Lazaridis Institute

We DO NOT use the OECD definition of high-growth firms (or any variation of it) to refer to scale-ups.

Why not?

> **"Scaling connotes a certain stage of development and transformation of processes in a company. Growth can refer to any stage..."**
> - Geoff Baum, Executive Fellow, Lazaridis Institute

We believe that simply adapting a high-growth definition to refer to scale-ups DOES NOT account for what it actually means to scale. That is, what it takes for the firm to 'deliver to a wider audience' (Hellmann and Kavadias, 2016).

The OECD definition also misses the basic premise of scaling. That is, to identify and leverage economies of scale. If a firm can do this, it has the potential to grow revenues faster than costs...and this is what it means to scale up an organization. **Scaling is NOT just about high growth.**

[8] Hellmann, T. & Kavadias, S. (2016). *ScaleUp UK: Growing Businesses, Growing our Economy*, Barclays.

What do we mean by stage?

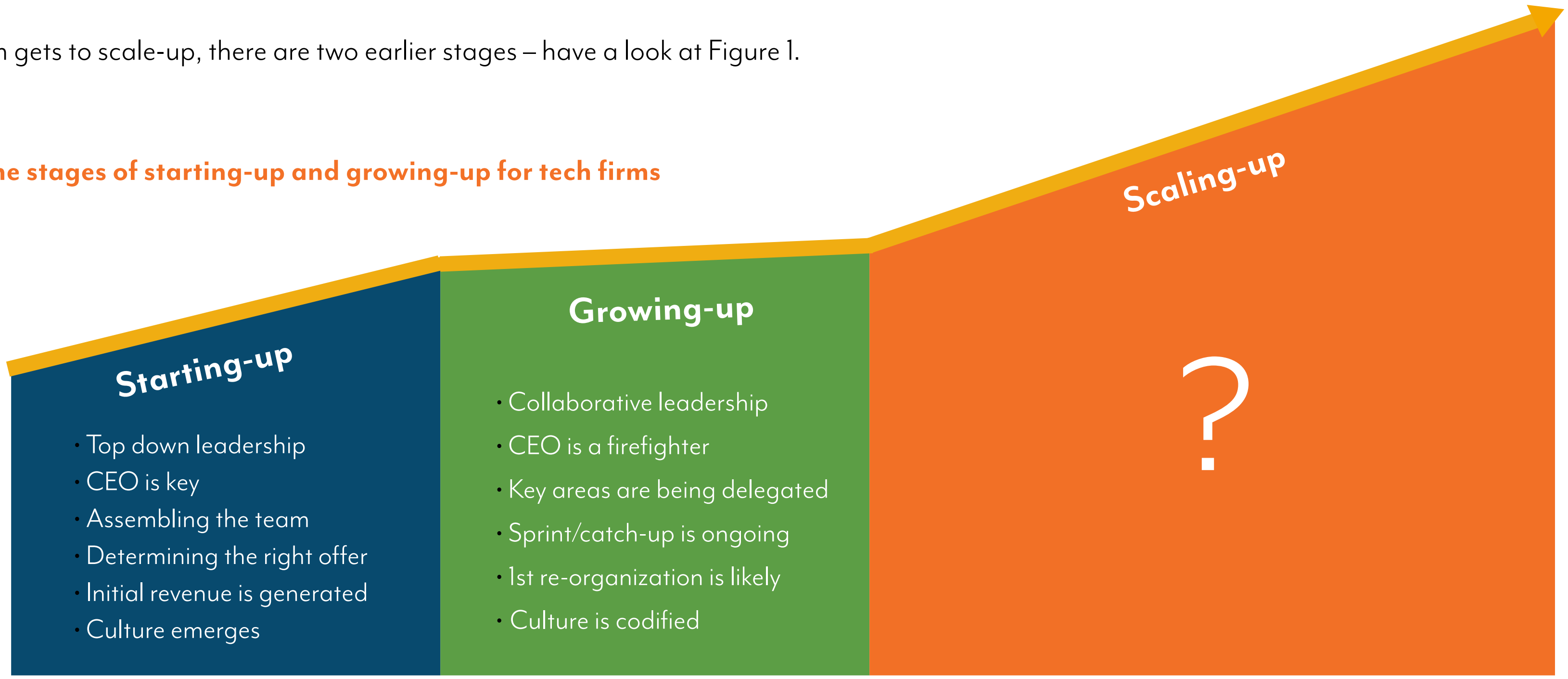
There are a number of interpretations of the stages of development for tech firms.

Our favorite perspective comes from a member of our mentor team at the Lazaridis Institute. He's also an alumnus of our ScaleUp Program: Chris Bryson.

We like how Chris describes different stages of development because when he shares his ideas, CEO's and their team members 'get it'. The leaders of tech firms that are truly trying to scale—regardless of revenue, firm age, or employee numbers--- all recognize themselves in what Chris presents. And that's because being in the scale-up stage is not just about fitting number-based parameters.

Before a firm gets to scale-up, there are two earlier stages – have a look at Figure 1.

Figure 1: The stages of starting-up and growing-up for tech firms



Adopted from Chris Bryson, Unata (Instacart), 2018

What's the take-away from Figure 1? Three things:

1. The focus in each stage is on what's going on inside the firm. It's NOT just about the numbers;
2. There is an important stage between starting-up and scaling-up. It's one where the firm has stayed up and is growing-up. This is when it learns how to transform itself to potentially, become a scale-up.
3. The trajectory of firms in the scaling-up stage is different from the other two. It signals rapid expansion underpinned by the firm's **'scalability'**.

Scalability: How does it affect the firm?

Our research on Canadian tech firms shows that if they are high in scalability, they also have:

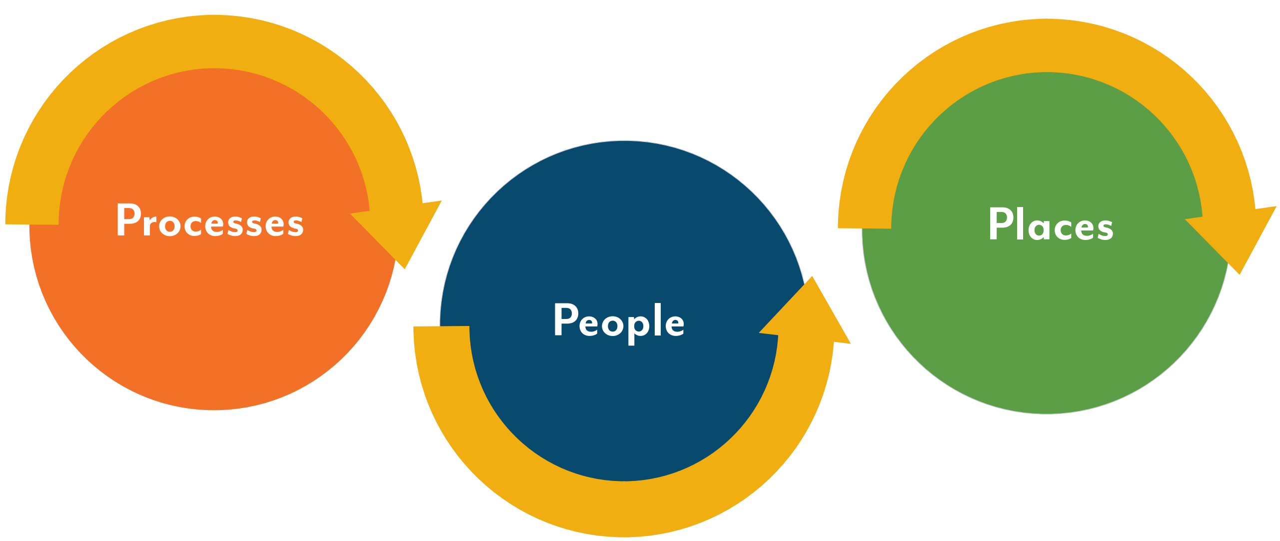
- Increased revenue
- Increased sales growth
- Increased customer retention
- Increased international sales (and this in turn, is the key driver of overall sales growth for Canadian tech firms)

We also find that higher scalability is ***not*** linked to the firm's ability to attract capital. This is something we want to research more fully, but one explanation might be that if a firm is scaling, everything is accelerated. Everything. And that is hard to sustain. Some investors might be wary of a scale-up because they want to see returns over an extended time frame. Another reason might be that if your firm's scalability has a positive impact on revenue, sales growth, retention and markets entered – you might not need to attract capital from outsiders!

What makes a firm scalable?

Our research suggests there are three main areas associated with the scalability of Canadian technology firms. As shown in Figure 2, these areas are intertwined. We talk about each in turn.

Figure 2: The 3 P's of Scalability



Processes

Most tech firms try to build a business model with operational Processes that will let them (for example):

- Use standardized, repeatable practices;
- Automate where possible;
- Sell across multiple verticals or segments; and
- Easily adapt the product/service to meet different regulatory requirements outside the home market.[9]

One example of a firm that has done this well is Shopify. It enables small and large companies to launch and run their own e-commerce business. In 2018, Shopify's revenue was more than USD one billion. In 2019, it reported over one million merchants around the world and $183B worth of global economic activity was generated on Shopify (2016-18).[10] Not only does Shopify operate with a highly scalable set of processes, its fundamental premise is to help other businesses do so too.

But do you have to be a digital firm (like Shopify) to have scalable processes? No.

Intellijoint Surgical is a medtech company that integrates hardware and software to build Smart Tools.[11] These tools improve the accuracy of orthopaedic surgeons, and they improve patient outcomes. They also increase the economic efficiencies of hospitals. So unlike Shopify, Intellijoint 'makes things'. It also took six years to commercialize the firm's flagship product. Yet only three years later (in 2019), Intellijoint achieved 10K total hip replacements, selling through Canada, the US, Australia and New Zealand.

Scalable operational processes are a foundation for scalability. But there is more...

[9] Lund M. & Nielsen, C. 2018. The concept of business model scalability. *Journal of Business Models*, 6(1): 1-18. Also Stampfl, G., Prügl, R., & Osterloh, V. 2013. An explorative model of business model scalability. *International Journal of Product Development*, 18(3/4): 226-248.
[10] https://www.shopify.com/about/economic-impact
[11] https://www.intellijointsurgical.com/news-and-events/

People

Our research indicates that firms with higher scalability have two important characteristics associated with People.

First, the top management team (TMT) is made up of people from a range of backgrounds and with different types of expertise (see Figure 3).[12] This diversity makes TMTs more innovative and creative.

Think of a salad as a metaphor. A lettuce-only salad is pretty unsatisfying. But throw in some almonds, blueberries, feta cheese, chopped broccoli and pomegranates. Then a little maple syrup dressing. Wow! Now you have a whole different experience. The same thing applies to TMTs.

Figure 3: Elements of a Diverse Top Management Team

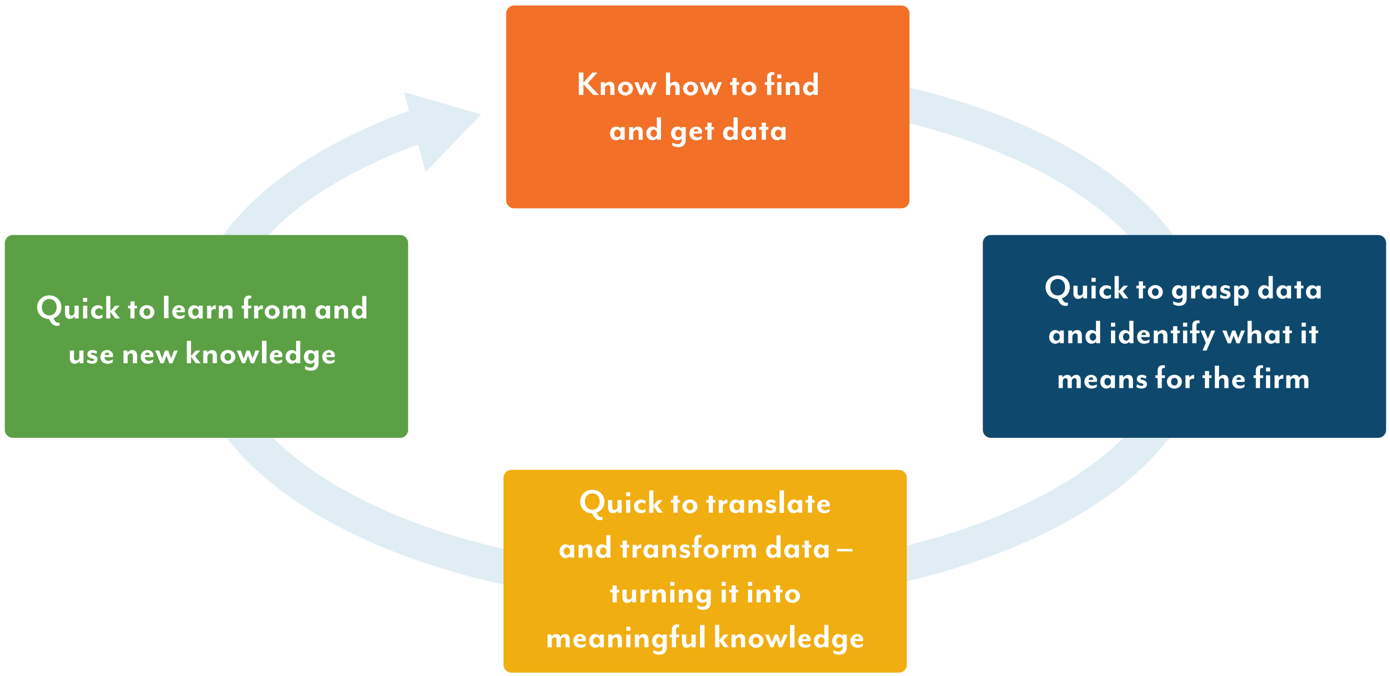
Second, firms with higher scalability have something called 'absorptive capacity' or ACAP.[13] This is a strong predictor of innovation and knowledge transfer.[14]

Is ACAP just academic jargon? Nope. ACAP refers to the different ways that your firm gets, grasps and translates different types of data into knowledge, and then makes use of that knowledge. This capacity sits with your people within the firm—the talent you hire.

Have a look at Figure 4 to see what everyone needs to be able to do. All the time. Quickly.

[12] You might be asking: what about gender diversity? A great question and an important issue. However, because we focused on the TMT's work-related background, our data does not include gender.
[13] Adapted from Zahra, S. & George, G. 2002. Absorptive capacity: A review, reconceptualization and extension. *Academy of Management Review*, 27(2): 185-203.
[14] Zou, T., Ertug, G., & George, G. 2018. The capacity to innovate: A meta-analysis of absorptive capacity. *Innovation*, 20(2): 87-121.

Figure 4: How people create knowledge in a scalable firm



Places

Finally, the nature of your firm's product or service determines the Place(s) where you work and sell to.

Firms with higher scalability seem to be those that ***move quickly into international markets***. Typically, this means within 1-3 years of founding.

Sometimes of course, your offer needs regulatory approval to be sold in different markets. This can slow things down a bit. Nevertheless, for a tech firm to scale, chances are high that it needs to sell outside Canada.

We also know that for international success, tech firms need to:

1. Learn from potential customers that are trying to pull them into international markets
2. Put their best people overseas to gauge market potential, build relationships and manage international expansion

Finally, Canadian tech firms also need to ***build the right type of footprint in the right types of places.***

This means setting up your firm in the best possible place(s) for scaling. You might be able to serve the world from your head office in Canada. Or perhaps you need an office for sales in Sydney and Dublin and one for product development at home in Canada. Or maybe it means having most of your employees in Canada, complementing them with select international offices and a couple thousand remote employees working from home, around the world.

What's common across these options is that firms with higher scalability are relatively 'asset-light' in international markets.

The higher the level of digitalization in the firm, the lower the need for a physical footprint in international markets. Likewise, the higher the tangibility of your product, the higher the need for that footprint.

A good example of this comes from North. Founded as Thalmic Labs in 2012, the company's major pivot in 2018 revealed a new name and product: smartglasses (Focals by North). To get fitted for the smartglasses, customers initially needed to visit a Toronto or NYC store, or catch the North trailer as it was on tour through North America. These types of 'locations' create the firm's (potentially expensive) physical footprint.

When Focals launched, the fitting process involved taking a 3D model of the customer's head, followed weeks later by an optician check. But within just a year, North introduced the Focals Showroom app that uses Apple's camera technology to do a 3D scan. This increased level of digitalization makes it very easy for customers to buy smartglasses virtually. And this means that North can growth without having to have a big (expensive) physical footprint in every target market.

Pulling it all together

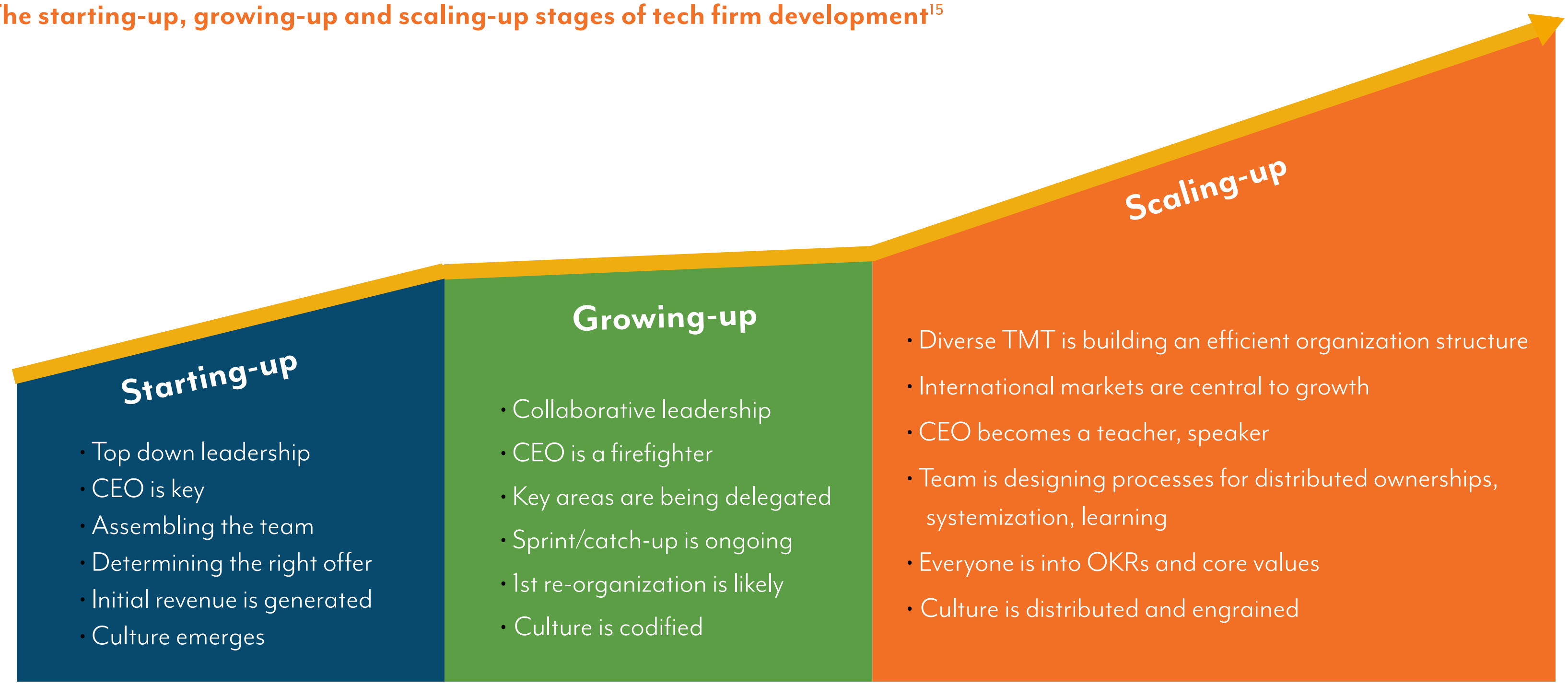
So back to the stages that a tech firm might move through. **The terms 'scale-up' and 'scaling' are NOT interchangeable with 'high growth'!**

As we show in Figure 5, scaling-up is a ***stage*** of growth where the firm:

1. leverages economies of scale; and
2. is characterized by transformation in its processes, people and places.

We finish by adding the scaling-up stage to Figure 5. And because these stages of development are all action-based, we refer to them as **starting**, **growing** and **scaling-up**.

Figure 5: The starting-up, growing-up and scaling-up stages of tech firm development[15]



Adopted from Chris Bryson, Unata (Instacart), 2018 and the Lazaridis Institute, 2019

Some final comments on growing vs. scaling a tech firm

As you read earlier, the OECD established the 20% rule of thumb to indicate high growth. Is that relevant for your tech firm? Research done by the Impact Centre signals that for technology companies, especially SaaS firms, growth rates are much higher.[16] Based on our research at the Lazaridis Institute and the firms in our ScaleUp Program, we agree.

To understand growth, let's look at Deloitte's annual Fast 50 competition.[17] The Deloitte ranking recognizes the 50 fastest growth technology firms at a national level. The assessment criteria are straightforward.

[15] There are many views of organizational development. Here, we focus on clarifying what it means for the company to be in the scaling-up stage rather than the starting-up or growing-up stages.
[16] Plant, C. (2018). Scaling Up: Growth Metrics for Software Companies, Impact Centre.

For the 2019 competition in Canada, a firm must have been:

- In business for at least four years (on or prior to December 31, 2015)
- Headquartered in Canada or Canadian-controlled, with both management and research and development (R&D) teams also located in Canada
- Investing a minimum of five percent of gross revenues in R&D
- Generating a significant proportion of operating revenue via proprietary technology and/or intellectual property
- Able to prove minimum revenues of $50,000 in 2015 and $5 million in 2018.
- Participating in one of the following five sub-sectors:
    - Emerging technologies
    - Hardware/semiconductor
    - Software
    - Telecommunications/wireless
    - Digital media

Firms self-nominate to the Fast 50 competition by completing an application form and providing four years of financial data. Of course, this means that not every firm self-nominates, and firms might come and go from the ranking if they don't apply in a given year. In November 2019, Deloitte released the latest Fast 50 results. Table 1 shows the three-year revenue growth rates for the Top 10 Canadian firms for 2017-2019.

Table 1: Growth rates for Deloitte Canada's Fast50 Top 10 firms (2017-2019)

RANK	2017 Top 10	2018 Top 10	2019 Top 10
1	92,881%	19,342%	12,526%
2	18,933%	11,950%	10,247%
3	16,791%	10,942%	7,914%
4	12,814%	9,875%	7,680%
5	10,970%	5,599%	6,186%
6	10,301%	4,460%	4,056%
7	9,278%	4,373%	3,245%
8	7,038%	2,387%	2,732%
9	5,482%	1,859%	2,038%
10	5,411%	1,757%	1,700%

[17] https://www2.deloitte.com/ca/en/pages/fast-50/topics/canada-technology-fast-50.html

There are some remarkable characteristics in this data.

1. These growth rates look crazy! But are they?
    - If we compare them to (e.g.) how the OECD and others define growth, the Deloitte Fast 50 results are off the charts.
    - But keep CONTEXT in mind. The Deloitte Fast 50 is for tech firms. The OECD and ScaleUp Institute in the UK are interested in all firms that have the potential to grow.

2. Most of these firms (28 of the 30) are fully digitalized. They are also young. On average, the companies on this list were founded just six years ago. This means that the Deloitte Fast 50 typically have a scalable business model because it's digital. PLUS, their financials reflect very low revenues at the start of the assessment period.[18]

3. Are these growth rates sustainable? It's hard to tell.
    - Eight of the 2017 firms made it to the 2018 list – but only three are in the Top 10.
    - Six of the 2018 firms made it to the 2019 list – but only one is in the Top 10.
    - It may be that some firms decide not to apply to the Fast 50 competition every year, but it looks pretty tough to keep growing that these rates. For example, the 2018 winner reported a three-year revenue growth of 19,342%. Compare this to 492.9% in 2019.

If sustained growth through scaling is your goal, what's a good example?

Here's a company we have learned alot from. It's a different kind of star from the Deloitte Fast 50 results: PointClickCare.

PointClickCare is the leading electronic health record technology partner to North America's long-term post-acute care and senior care industry.

From 2007-2014, PointClickCare appeared six times on the Deloitte Fast50 list. Never in the top 10 or even top 20. But always in the top 50 for Canada. Consistent high growth.

And for three years, the TMT won Deloitte's Leadership award. This recognizes elite members of the Canadian tech industry based on factors ***additional to*** financial performance. Examples include their competitive advantage, market attractiveness and management effectiveness.

[18] Two of the 30 firms in Table 2 'make things': Intellijoint (#2 in 2019) and Vanrx Pharmasystems (#1 in 2018). This type of firm is harder to scale and also slower to scale. For example, Intellijoint was founded in 2010, and Vanrx in 2007. But they are still scalable!

Have a look at the patterns for PointClickCare in Table 2.

This is an example of meaningful and sustained growth by a firm that has scaled up. PointClickCare integrates processes, people and place to optimize scalability.

Table 2: Fast50 history for PointClickCare

Year	Growth Rate	Rank
2007	509%	36
2008	397%	35
2009	325%	46
2012	241%	40
2013	251%	31
2014	275%	32

Year	Recognition
2012	Leadership Award
2014	Leadership Award
2017	Leadership Award

Our last words?

1. You can't be a scale-up without growing BUT...
2. You can be growing and NOT be a scale-up.
3. Understand what stage your firm is in.

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Questions or comments?

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