New Zealand Startup Ecosystem Analysis

1 About this Research

Early-stage tech startups are highly dependent on their surrounding startup ecosystem. If we can create healthier startup ecosystems, we can generate more successful startups. We can do this by codifying how ecosystems function and evolve quantifying the factors that shape their performance.

Improving startup ecosystem performance requires assessment and quantification. First, we assess an ecosystem against our Lifecycle Model, using metrics to identify its phase of development. This provides a first set of insights into the challenges an ecosystem faces and what policies and practices its leaders ought to focus on. Second, we quantify an ecosystem's overall performance, its score across nine success factors, and the breakdown of each factor score into sub-factors.

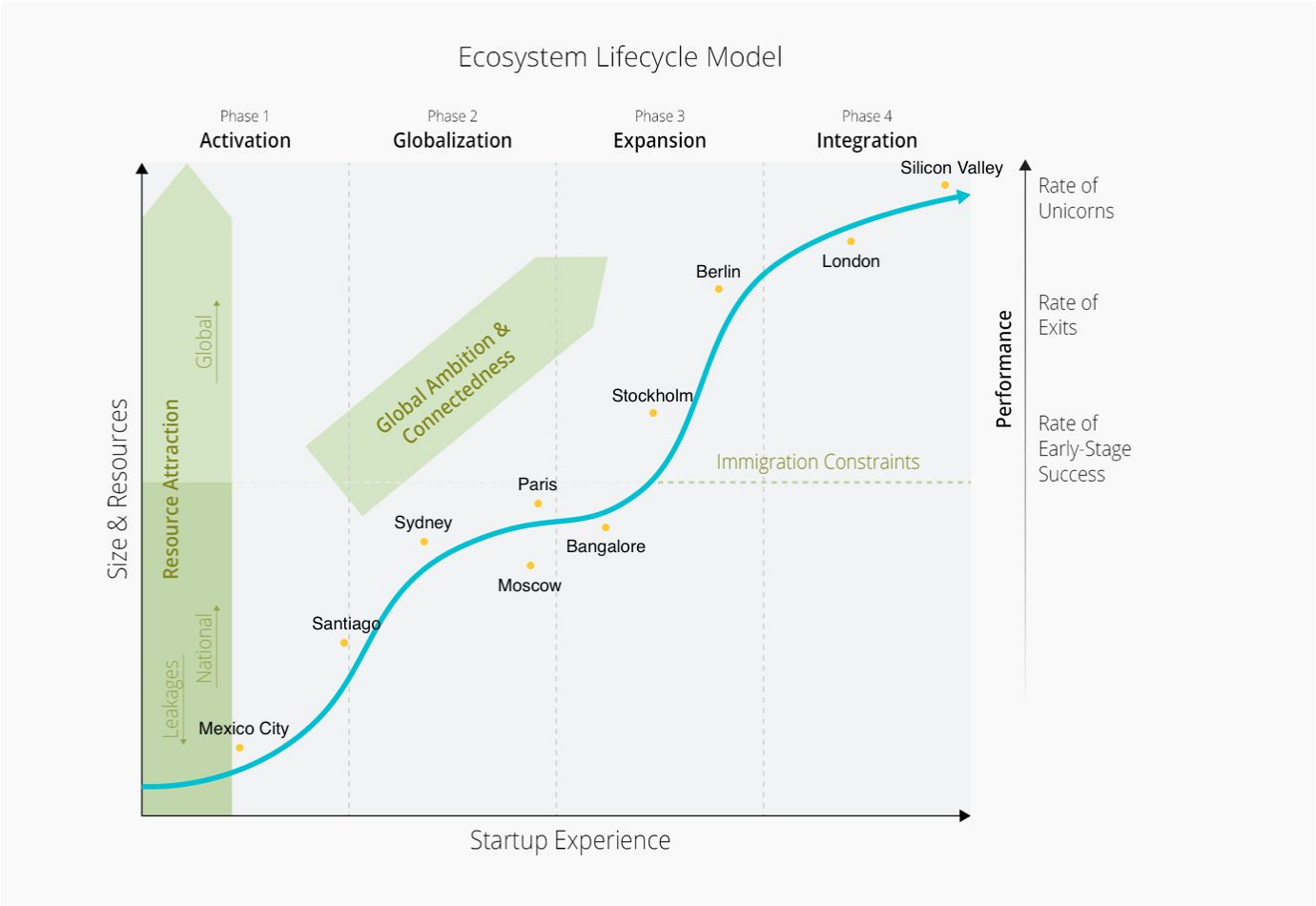
2 The Ecosystem Lifecycle Model

In most areas of economic development, a set of big, old companies dominates for long periods of time. Even in part of the technology sector, large companies such as IBM, HP, Intel, and Microsoft are stable, predictable, and straightforward for regional leaders to grasp. Tech startup ecosystems are not like this. Companies come and go, directions shift rapidly—the largest companies are only 10 to 15 years old, and they're likely to be challenged every five years by a new upstart.

That dynamic, especially with rapidly-changing software technology, makes the evolution of tech startup ecosystems very complex. Like their ecological analogs, they evolve through different phases. Each phase has different features, resource characteristics, and needs. The quantification of the factors that capture and explain their evolution across each phase must account for this complexity It is crucial to the ability of local leaders to focus on the right actions at the right time.

Local resources—whether money, time, or space—are limited, and their application must be aligned with the ecosystem's evolution to maximize impact. It is the only way for smaller ecosystems to accelerate and capture a share of the new economy within the next 10 to 20 years, rather than be left behind. This is why we have developed a new Lifecycle Model of startup ecosystems, based on research and

original data from our global survey of thousands of startups across more than 50 ecosystems (For more detailed information read our Global Startup Ecosystem Report 2017).



As an ecosystem grows, it goes through the following four phases, distinct in their characteristics such as size, strengths and challenges and what triggers them to the next phase.

Activation:

- Low Output (number of startups), around 1,000 or fewer
- Limited local experience
- Generalized resource gaps causing resource leakages

Globalization:

- Large exits (over $100 million) place the ecosystem on the map as one of the best places in the state, province, or nation to build a startup, attracting resources and startups from nearby regions
- Growing towards 2,000 startups (and more in very large metropolitan areas) through National Resource Attraction, but important resource gaps still exist across several factors

Expansion:

- Several multi-million dollar exits and unicorns have elevated the ecosystem to the global stage and made the world its pool of resources
- Growing past 2,000 startups, with more abundant resources but still some gaps in Funding and Global Connectedness, its ability to produce a rhythm of billion-dollar startups

Integration:

- Grown past 2,000 startups or many more, resources are balanced and competitive with other top ecosystems.

A review of the New Zealand Ecosystem Size, Resources, Attraction and Startup Experience results indicates that it is in the Activation phase. The main factors determining this position are its Startup Output of 400-600 startups and its Startup Experience, with very few large exit over the last years.

The following pages look into these factors at a more specific level.

2.1 Startup Experience

Ecosystem size, and later its performance, is driven by Startup Experience. Over time an ecosystem and its labor force accumulate know-how through the successful development of startups. This experience is generally captured by exits (and unicorns) but also includes different aspects. At the very beginning this includes entrepreneurs sharing that experience and knowledge of forming and structuring a startup, the Customer Development and Lean Startup methodologies, etc. Later it is about sharing expertise on how to grow and scale a startup, both technically and from a business perspective. This expertise is built in the ecosystem through the accumulation of significant exits which, over time, drives up ecosystem performance.

As typical for ecosystems in the Activation Phase, the Ecosystem Startup Experience of New Zealand is comparatively low (see section 3.6 for in-depth discussion).

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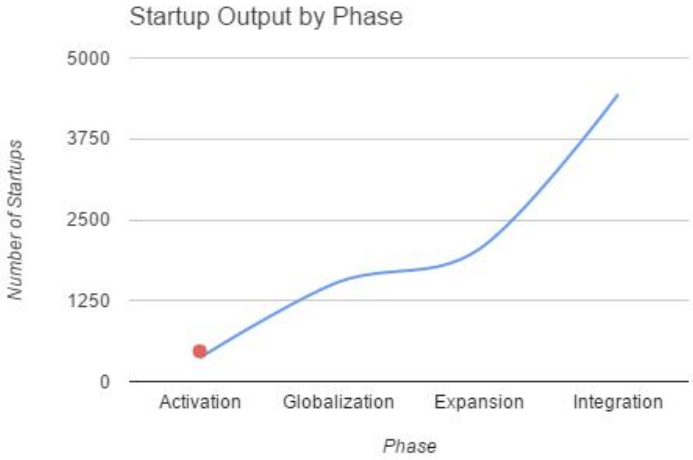
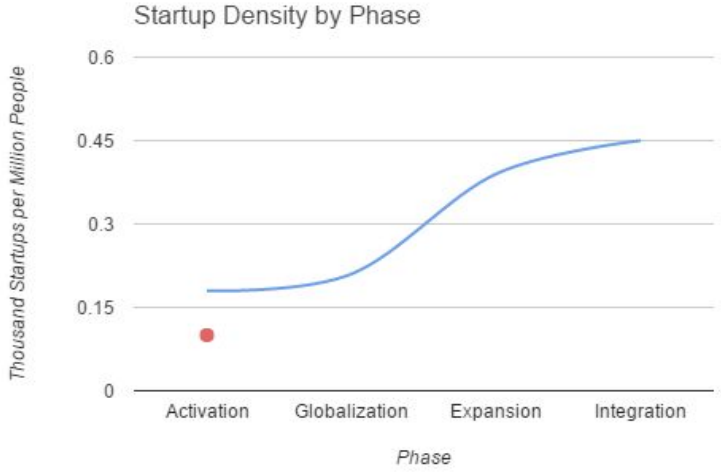
See section 3.6

2.2 Ecosystem Size

Ecosystem size is a multi-faceted concept that can be captured by Output (the number of startups) but also by ecosystem Startup Valuation. Output is the most useful measure of size because it precedes both the growth of other resources, such as talent and capital and a reliable increase in ecosystem performance. At an early phase (e.g. Activation) Output varies according to other factors such as the size of its population. For this reason the concept of Density, which is the number of thousand startups per million people, is also useful in framing the size of an ecosystem. The charts below show how an ecosystem evolves through the lifecycle.

New Zealand's Startup Output is on par with its peers in the Activation Phase. Startup Density is comparatively low.



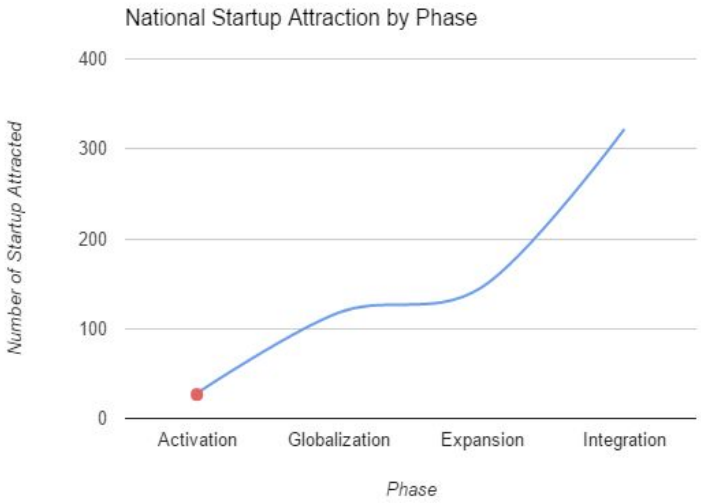


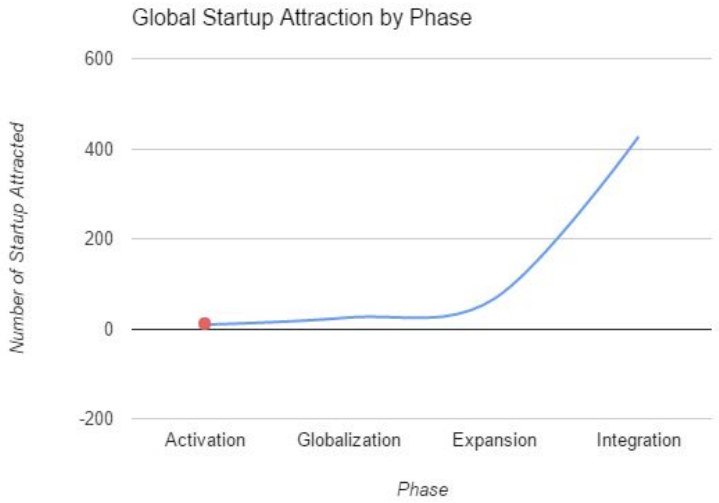
2.3 Resources and Resource Attraction:

Ecosystem growth highly depends on the ability to activate Local Resources and, more importantly, to attract Global Resources. Exits often act as triggers that initiate this process (see 2.5). Large exits act as a beacon to the rest of a country or the world, putting an ecosystem on the map and conveying to all entrepreneurs that "it can be done here." In this way exits trigger an important effect that is a key characteristics of the lifecycle evolution of startup ecosystems: Resource Attraction from other locations.

In tech ecosystems large companies are built more successfully in regions where an ecosystem provides a complete set of resources. A large success tells entrepreneurs, talent, and investors, that the complex conditions required to successfully build a startup are present. Entrepreneurs and startups are attracted to these ecosystems from locations perceived as having less resource, to the point some or many of them move.

New Zealand's overall Startup Attraction is low, on par with peer ecosystems in the Activation Phase.

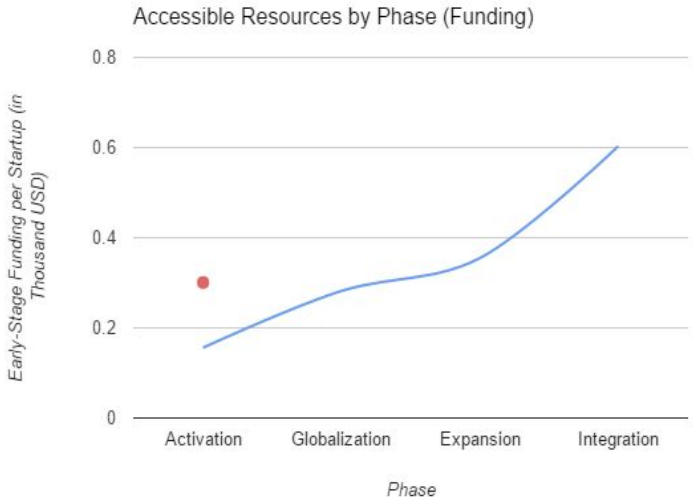


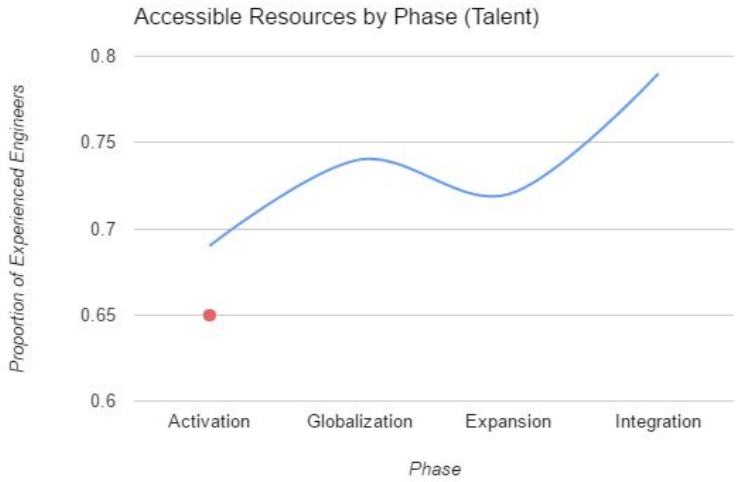


During the Activation phase, ecosystem resources grow at an organic rate, i.e. local (city) resources grow and become activated to participate in its nascent tech sector. Because of leakages this can be a very slow process. During the Globalization and Expansion phase, not only does early-stage funding increase rapidly, but also early-stage funding per startup increases. From the Globalization phase startups are formed at a faster pace locally, plus they move in from national and international locations.

Global Resource Attraction has an acute impact on capital because it can flow in large amounts from all over the world without investors having to move. This is not the case for Talent. Engineers (at least most of them) have to move to work for a startup at the Expansion phase. Accordingly, despite the Global and National Resource Attraction that ecosystems at the Expansion phase enjoy, the growth in startups through increased local entrepreneurial activity and Global and National Attraction of startups is so high that startup access to experienced engineers goes down. In other words, the number of engineers that early-stage startups have access to (now that they also compete with more scale-ups) grows more slowly than Output. This suggests that from the Expansion Phase, Global Attraction of engineers becomes extremely important, which requires proactive immigration policy and the removal of other immigration barriers.

New Zealand startups have better Access to Funding than most of their peers in other Activation Phase ecosystems. Access to Talent is below peer-average.

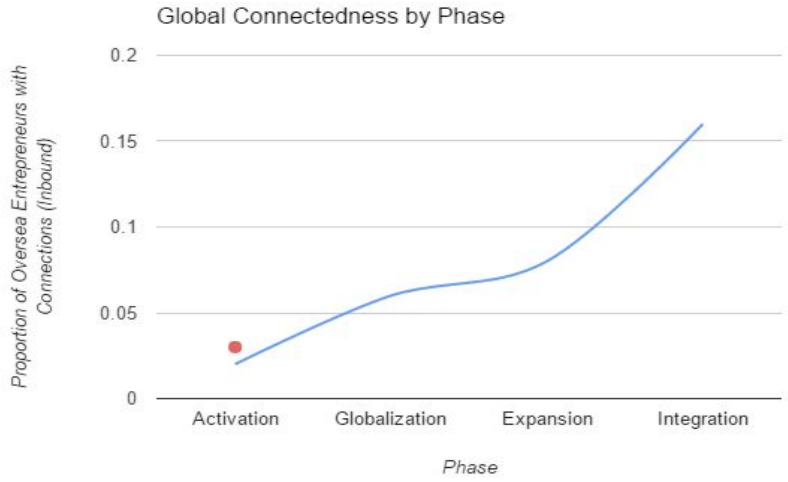




2.4 Global Connectedness

Another benefit of Resource Attraction is that it increases entrepreneurs' Global Connectedness, which, as demonstrated in our report (see the Global Connectedness Section), leads to an increase in a startup's ability to develop globally leading products and business models and to attract foreign customers. Establishing more relationships between founders and executives in other parts of the world brings in more ideas and more innovation, resulting in faster startup growth and more vibrant ecosystems. Startups thrive on relationships and the exchange of ideas—with customers, investors, corporations, and, especially, other startups. These ideas include "hard" knowledge such as technical ideas about product improvement, new scientific ideas, and how to sell into different markets. But Global Connectedness also brings the benefits of a global network to startups and their ecosystems, including giving introductions and being exposed to a pay-it-forward mentality. The exchange of this knowledge occurs through personal relationships, and more relationships leads to faster-growing startups. The broader those connections are, the better the growth outcomes will be for startups and their ecosystems.

New Zealand entrepreneurs show a level of Global Connectedness that is slightly above the average of Activation Phase ecosystems.



2.5 Triggers

Triggers are the externally impressive exits and high startup valuations that spark a sharp increase in Resource Attraction, driving the growth of an ecosystem and its evolution to the next phase of the Lifecycle. The number and size of exits needed to trigger Resource Attraction varies with:

- the relative attractiveness, geographic distance, and number of other ecosystems in the country (relative National Attraction), or continent and the rest of the world (relative Global Attraction)
- the rhythm of follow-on exits (one per year rather than one-offs)
- immigration barriers
- the type of exit (IPO and unicorns often creating more Attraction)
- the attractiveness of the sub-sector (exits in some sectors may create more Attraction than other sectors).

The analysis demonstrates that over the last ten years, exits greater than $100 million have triggered an ecosystem's move into Globalization and National Resource Attraction. But over the years they have done so at a reducing rate as they have become less and less "relatively impressive". Exits of over $1 billion and the creation of unicorns have triggered Globalization phase ecosystems into Expansion and Global Resource Attraction, but also at a reduced rate.

New Zealand has not yet produced large exits on a regular basis. As a result, National and Global Startup Attraction is comparatively low (see section 3.5).

3 Assessment

The following section contains an overview of New Zealand's relative performance across our nine startup ecosystem Factors: Performance, Funding, Market Reach, Global Connectedness, Resource Attraction, Startup Experience, Talent, Corporate Involvement and Founder.

Each Factor is divided into different Sub-Factors and Metrics. Relative ecosystem performance can be derived from:

1. The Global Rank: The position of New Zealand in the global context. For each Metric we ranked all 56 ecosystems that are included in our assessment.
2. Example Peers: The performance of three selected peer ecosystems.
3. The Global Median: The average performance of all ecosystems in scope.

New Zealand Factor Ranks

3.1 Performance

Our analysis of Performance captures the actual leading, current, and lagging indicators of ecosystem performance. It looks at the Sub-Factors of Ecosystem Value, Exit Value, Output, Startup Value and Unicorns. The Performance factor, including its five Sub-Factors generally favors larger ecosystems.

3.1.1 Performance Metrics

Sub-Factor	Metric	Description
Ecosystem Value	Ecosystem Value ($B)	Sum of Startup Value + Exit Value 2014 to 1H16
Exit Value	Exit Value ($B)	Sum of exit valuations 2014 to 1H16
	Exit Value Growth Index	Index (0 to 9) based the Growth in Exit Value over the last 2 years
Output	Output Range	Estimated number of startups
	Output Growth Index	Index (-4 to 4) based the Growth in Startup Output over the last 2 years
	Density	Number of startups normalized to the population of the metropolitan region (Thousand Startups / Million People)
Startup Value	Startup Valuations ($B)	Sum of valuations of pre-exit startups 2014 to 1H16
Unicorns	Rate Unicorns	Rate of success at creating Unicorns from Series A: unreliable ratio for smaller ecosystems due to the low rate of capture of funding rounds vs. exits.
	# Unicorns	Number of Unicorns in existence.

3.1.2 Performance Assessment

Sub-Factor	Metric	Global Rank New Zealand	Value New Zealand	Peer 1	Peer 2	Peer 3	Global Median
				Melbourne	Sydney	Boston	
Ecosystem Value	Ecosystem Value ($B)	44	0.8	1.6	6.6	29.9	4.1
Exit Value	Exit Value ($B)	38	0.3	0.8	5.2	12.1	1.5
	Exit Value Growth Index	34	4.3	4.8	6.7	4.5	4.5
Output	Output Range	43	400-600	900-1300	1300-2100	2900-3900	1,045
	Output Growth Index	15	0.3	0.6	-0.5	-1.1	-0.2
	Density	40	0.1	0.2	0.5	0.7	0.2
Startup Value	Startup Valuations ($B)	44	0.5	0.8	1.3	17.8	1.6
Unicorns	Rate Unicorns	n/a	0.0%	0.0%	0.0%	1.6%	0.0%
	# Unicorns	n/a	0.0	0.0	0.0	6.0	0.0

3.2 Funding

This Factor quantifies funding metrics important to the success of early-stage startups. Our analysis of the Funding factor looks at: Access, through metrics of total and per startup early-stage investments; and, Funding Quality through the presence of experienced VC firms. In the early phases of an ecosystem local investors will lead a high share of seed rounds. As ecosystems evolve through the lifecycle and attract outside investors, that share will go down, in turn increasing Funding Quality.

Quality of Public Funding Data: An important issue that affects the analysis of the Funding Factor is the lack of funding data becoming public and making it to Crunchbase, Dealroom or other public and global databases. This issue negatively impacts your (and our) ability to showcase your ecosystem as having lots of interesting startup activity. It makes your work harder and makes your ecosystem look smaller and less interesting from the point of view of investors, entrepreneur and talent. This can affect your global exposure and resource attraction programs more than you think because entrepreneurs, talent and investors look at databases to get a sense of how much success there is and how much expertise and activity they can find in their space before making a decision to go visit or move to your ecosystem.

Our estimates of the minimal proportion of missing funding data for your ecosystem, based on the average across Global ecosystems, are

- **48% of Seed rounds**
- **25% of Series A rounds**

The following metrics were calculated based on the available funding data.

3.2.1 Funding Metrics

Sub-Factor	Metric	Description
Access	Early-Stage Funding ($M)	Sum of all seed and Series A investments in tech companies in Crunchbase, Dealroom, local lists provided by partners and our survey, corrected for obviously missing rounds.
	Early-Stage Funding per Startup ($M)	Sum of all seed and Series A investments in tech companies divided by the number of tech startups
	% Local Seed Funding	Percentage of seed funding invested by investors from the same ecosystem as the startup (survey data); a low percentage indicates a problem for ecosystems at an early phase of development as startups must travel out to raise money. Ecosystems at a late phase of development like Silicon Valley have a low percentage because they attract investors from other ecosystem, a positive trait.

	% Local Lead Investor	Percentage of seed funding rounds led by investors from the same ecosystem as the startup (survey data). This metric must be analyzed in combination with other funding metrics to understand whether it indicates a lack of local lead investors.
	Early-Stage Funding Growth Index	Index (0-10) showing the growth of the ecosystem Early-Stage Funding
	VC-Investment Total ($B)	Sum of all VC investments in Crunchbase, Dealroom, local lists provided by partners and our survey.
	VC-Investment Tech ($B)	Sum of all VC investments in tech companies in Crunchbase, Dealroom, local lists provided by partners and our survey.
	Seed Median Amount ($M)	Median seed amount in the ecosystem during 2nd half of 2013 through 1st half of 2016
	Series A Median Amount ($M)	Median Series A amount in the ecosystem during 2nd half of 2013 through 1st half of 2016
Quality	Experienced VC Firm Index	Index of the presence of experienced VC firms (founded 5+ years ago) in total and proportion to all firms

3.2.2 Funding Assessment

Sub-Factor	Metric	Global Rank New Zealand	Value New Zealand	Peer 1	Peer 2	Peer 3	Global Median
				Melbourne	Sydney	Boston	
Access	Early-Stage Funding	33	141	173	434	1,686	194
	Early-Stage Funding per Startup ($M)	19	0.30	0.16	0.25	0.49	0.24
	% Local Seed Funding	23	66%	59%	92%	66%	67%
	% Local Lead Investor	53	74%	64%	69%	53%	50%
	Early-Stage Funding Growth Index	13	5.2	7.1	6.7	4.5	4.6
	VC-Investment Total ($B)	35	0.32	0.26	0.70	9.96	0.69
	VC-Investment Tech ($B)	39	0.19	0.17	0.53	5.32	0.56
	Seed Median Amount ($M)	47	0.29	0.56	0.40	0.94	0.55
	Series A Median Amount ($M)	32	3.5	2.1	3.0	6.5	4.0
Quality	Experienced VC Firm Index	31	4.8	4.6	5.4	6.6	5.1

3.3 Market Reach

When we analyze an ecosystem's Market Reach, we want to know how well its startups can "go global" and reach international markets. The sub-factors for this are Global and Local Reach, based on the startups' proportion of foreign customers and the National GDP.

3.3.1 Market Reach Metrics

Sub-Factor	Metric	Description
Global Reach	% Other Region Customer	Percentage of foreign customers outside of the ecosystem's continent. This is often a more comparable metric than the percentage of Foreign Customers because the latter is negatively correlated with national GDP. Percentage of Other Region Customers is a better metric to compare the ability of startups from the same continent to go global.
	% Foreign Customer	Percentage of foreign customers outside of the ecosystem's country.
Local Reach	Country GDP ($B)	Gross domestic product of the ecosystem country

3.3.2 Market Reach Assessment

Sub-Factor	Metric	Global Rank New Zealand	Value New Zealand	Peer 1	Peer 2	Peer 3	Global Median
				Melbourne	Sydney	Boston	
Global Reach	% Other Region Customer	2	32%	24%	20%	20%	13%
	% Foreign Customer	15	32%	24%	20%	20%	20%
Local Reach	Country GDP ($B)	52	179	1,257	1,257	18,562	1,651.0

3.4 Global Connectedness

Global Connectedness quantifies the valuable international relationships that exist between startup leaders, and how they were developed. The factor is highly correlated with the percentage of foreign customers, indicating how global connections are important to the understanding and penetration of global customers. Global Connectedness is also highly correlated with Global Resource Attraction. This means cities that see a large flow of startups and entrepreneurs move into the ecosystem benefit from this flow, capitalizing on it through global relationships which enhances the ability to "go global."

3.4.1 Global Connectedness Metrics

Sub-Factor	Metric	Description
Drivers	Local Meeting	Average number of startup leaders from Silicon Valley, NYC, London, Berlin, Tel Aviv, Singapore and Shanghai that entrepreneurs from your ecosystem have met locally (this shows the degree to which entrepreneurs from top ecosystem travel to your ecosystem).
	International Travel	Percentage of startup leaders who have traveled 2 or more time to Silicon Valley, NYC, London, Berlin, Tel Aviv, Singapore or Shanghai in the last 2 years.
Relationship	International Outbound	Average number of significant relationships startup leaders have with entrepreneurs from Silicon Valley, NYC, London, Berlin, Tel Aviv, Singapore and Shanghai.
	International Inbound	Percentage of entrepreneurs from international ecosystems (outside of your country) who report having a significant relationship with 2 or more entrepreneurs in your ecosystem.
	International Partner	Average number of startups from Silicon Valley, NYC, London, Berlin, Tel Aviv, Singapore and Shanghai that helped or received help from startups in your ecosystem. This is another indicator of global connectedness.

3.4.2 Global Connectedness Assessment

Sub-Factor	Metric	Global Rank New Zealand	Value New Zealand	Peer 1	Peer 2	Peer 3	Global Median
				Melbourne	Sydney	Boston	
Drivers	Local Meeting	39	2.2	4.6	9.5	1.7	4.0
	International Travel	16	4.2%	3.1%	3.1%	0.7%	2.5%
Relationship	International Outbound	36	4.8	8.6	10	5	5.8
	International Inbound	34	3.0%	7.0%	12.0%	8%	4.0%
	International Partner	23	2.0	2.2	1.9	0.4	1.9

3.5 Resource Attraction

Resource Attraction is a Factor to quantify the movement of startups and entrepreneurs between ecosystems, as well as the attraction of secondary offices of VC firms. The set of metrics measures an ecosystem's gravitational pull by the attraction of entrepreneurs who moved specifically to form a startup, the attraction of existing startups, the opening of secondary VC offices, and the intent of a startup leader to move the startup. Knowing where the person or startup moved from allows us to compute negative attraction, in addition to breaking down attraction into national and international, a much more powerful metric.

3.5.1 Resource Attraction Metrics

Sub-Factor	Metric	Value
Entrepreneur	Global Entrepreneur Attraction %	Percent of entrepreneurs that moved to the ecosystem from another country to start a startup in the ecosystem.
	Global Entrepreneur Attraction #	Number of entrepreneurs that moved to the ecosystem from another country to start a startup in the ecosystem. This indicates the absolute number of entrepreneurs attracted to the ecosystem.
	National Entrepreneur Attraction %	Percent of entrepreneurs that moved to the ecosystem from another city within the same country to start a startup in the ecosystem.
	National Entrepreneur Attraction #	Number of entrepreneurs from the same country that moved to the ecosystem to start a startup in the ecosystem. This indicates the absolute number of attracted entrepreneurs.
	Entrepreneur Leakage %	Relative indicator of the degree to which entrepreneurs from one ecosystem moved out of the ecosystem.
Startup	Global Startup Attraction %	Percent of startups that moved to the ecosystem from another country.
	Global Startup Attraction #	Number of startups that moved to the ecosystem from another country. This indicates the absolute number of startups attracted to the ecosystem.
	National Startup Attraction %	Percent of startups that moved to the ecosystem from within the country
	National Startup Attraction #	Number of startups from the same country that moved to the ecosystem. This indicates the absolute number of startups attracted to the ecosystem.
	Startup Leakage %	Relative indicator of the degree to which startups from one ecosystem moved out of the ecosystem.
	Startup Leakage Intent %	Percentage of startups that expressed the intent to move out of the ecosystem.
	Startup Net Attraction %	Percentage of Resource Attraction (Startups) minus Leakages

3.5.2 Resource Attraction Assessment

Sub-Factor	Metric	Global Rank New Zealand	Value New Zealand	Peer 1	Peer 2	Peer 3	Global Median
				Melbourne	Sydney	Boston	
Entrepreneur	Global Entrepreneur Attraction %	9	23%	24%	18%	12%	18%
	Global Entrepreneur Attraction #	37	110	260	314	416	178
	National Entrepreneur Attraction %	25	2.8%	1.2%	1.0%	5.4%	2.6%
	National Entrepreneur Attraction #	33	13	13	17	184	16
	Entrepreneur Leakage %	37	13%	8%	7%	14%	8%
Startup	Global Startup Attraction %	23	2.4%	0.5%	3.9%	5.1%	2.0%
	Global Startup Attraction #	35	11	5	67	174	15
	National Startup Attraction %	25	6%	2.3%	2.0%	6.3%	5%
	National Startup Attraction #	38	27	25	33	216	47
	Startup Leakage %	50	19.7%	4.2%	0.9%	5.0%	4.1%
	Startup Leakage Intent %	31	20%	18%	27%	14%	18%
	Startup Net Attraction %	49	-12%	-1%	5%	6%	2%

3.6 Startup Experience

In startup ecosystems, experience matters—it is the pool of knowledge and networks that startups can draw on. Our Startup Experience Factor captures how well an ecosystem "recycles" experience into future startup performance. The analysis relies on two sub-factors: Team Experience and Ecosystem Experience. The former is based on founder hyper-growth or unicorn experience, advisors with equity, and startups providing options to all their employees. Option grants to employees reflect a founder's knowledge of aligning incentives, as well as whether employees value stock options, indicating a strong startup culture in the ecosystem. Ecosystem Experience is based on the number of exits above $50 million achieved within the last 10 years.

3.6.1 Startup Experience Metrics

Sub-Factor	Metric	Description
Ecosystem	$ Exits > $50M ($B, last 10 years)	Total Value of Exits above $50M over the last 10 years.
	# Exits > $50M (last 10 years)	Number of Exits above $50M over the last 10 years.
	$ Exits per Startups > $50M ($K, last 10 years)	Total Value of Exits above $50M over the last 10 years divided by the number of startups.
Team	Advisors with Equity	Average number of advisors with equity.
	Stock Options to All Employees	Percentage of startups that offer an Employee Stock Option Plan to all employees.
	Founder Hypergrowth Experience	Percentage of startups that have founders with prior Hypergrowth or Unicorn Experience.
	Founder 2 Years Experience	Percentage of startup founders with 2 or more years experience in a startup as an employee prior to founding their current startup.

3.6.2 Startup Experience Assessment

Sub-Factor	Metric	Global Rank New Zealand	Value New Zealand	Peer 1	Peer 2	Peer 3	Global Median
				Melbourne	Sydney	Boston	
Ecosystem	$ Exits > $50M ($B, last 10 years)	43	0.3	0.6	5.2	28.1	1.4
	# Exits > $50M (last 10 years)	31	3	3	6	56	4
	$ Exits per Startups > $50M ($K, last 10 years)	39	0.7	0.6	3.0	8.2	1.6
Team	Advisors with Equity	9	1.6	0.7	1.4	1.6	1.1
	Stock Options to All Employees	21	31%	14%	31%	48%	25%
	Founder Hypergrowth Experience	42	12%	16%	14%	17%	21%
	Founder 2 Years Experience	49	14%	26%	19%	39%	28%

3.7 Talent

This factor assesses the talent early-stage startups have access to. Now that platforms services allow startups to rapidly focus on developing the product rather than investing heavily in coding the back end, high quality developers can be found anywhere in the world. However, startups have to compete with large tech companies on quality hires. For this factor, we analyzed Access, Cost, and Quality of Talent.

3.7.1 Talent Metrics

Sub-Factor	Metric	Description
Access	Ratio Engineers/Developers	Average ratio of developers with a software engineering degree to the total number of developers.
	Experienced Engineers	Percentage of engineers with at least 2 years of startup experience prior to joining this startup.
	Time to Hire Engineer	Average number of days it takes to hire an engineer.
	Recent Graduate Engineers	Percentage of engineers who are recent graduates. This can indicate a difficulty in hiring more experienced engineers.
	Local Graduate Engineers	Percentage of engineers who are local graduates.
	Visa Success Rate	Success rate of startups at obtaining a work visa for a foreign candidate.
	Days to Visa	Average number of days required to obtain a response to a work visa application
	Experienced Growth Employees	Percentage of growth (customer acquisition) employees with at least 2 years of startup experience prior to joining this startup.
	Foreign Engineers	Percentage of engineers who were born in another country.
Cost	Engineer Salary ($K)	Average salary of a software engineer (all levels of experience).
Quality	Online Coding Scores	Average performance of the country in different online coding competitions.
	Scaling Experience	Index (-4 to 4) based on the number of exits above $100M over the last 10 years
	Resource Attraction	Percent of startups that moved to the ecosystem from another country.

3.7.2 Talent Assessment

Sub-Factor	Metric	Global Rank New Zealand	Value New Zealand	Peer 1	Peer 2	Peer 3	Global Median
				Melbourne	Sydney	Boston	
Access	Ratio Engineers/Developers	22	0.8	0.8	0.7	0.8	0.8
	Experienced Engineers	45	65%	73%	79%	80%	73%
	Time to Hire Engineer	42	53	34	42	48	45
	Recent Graduate Engineers	26	7%	3%	1%	2%	7%
	Local Graduate Engineers	5	51%	56%	53%	68%	70%
	Visa Success Rate	5	68%	37%	60%	40%	38%
	Days to Visa	16	32	74	57	55	55
	Experienced Growth Employees	51	48%	56%	53%	72%	59%
	Foreign Engineers	10	34%	26%	37%	48%	15%
Cost	Engineer Salary ($K)	30	52	64	64	95	48
Quality	Online Coding Scores	48	-0.9	0.1	0.1	0.2	0.1
	Scaling Experience	31	-0.6	-0.6	0.4	3.6	-0.2
	Resource Attraction	23	2.4%	0.5%	3.9%	5.1%	2.0%

3.8 Corporate Involvement

This Factor is immature and under development by Startup Genome, so the results are considered unreliable and unactionable.

This Factor measures the perception that corporations are interested in working with startups. The Sub-Factor Metrics measure the Level of Positive or Negative / Competitive Experience that startups have with local corporates.

3.8.1 Corporate Involvement Metrics

Sub-Factor	Metric	Description
Interest	Level Positive Involvement	Percentage of startups that rated corporate interest as being high: "Many show interest and most or a few want to know more".
	Level Negative Involvement	Percentage of startups that rated corporate interest as being low: "Some are interested but rarely want to know more" or "Most look at us as a competitor".
	Level Competition	Percentage of startups that rated corporations as mostly viewing startups as competitors.

3.8.2 Corporate Involvement Assessment

Sub-Factor	Metric	Global Rank New Zealand	Value New Zealand	Peer 1	Peer 2	Peer 3	Global Median
				Melbourne	Sydney	Boston	
Interest	Level Positive Involvement	7	65%	51%	61%	57%	56%
	Level Negative Involvement	34	10%	3%	7%	7%	7%
	Level Competition	17	1%	4%	6%	3%	2%

3.9 Founder

This Factor measures the ambition and the Go-Global Strategy of startup founders. It furthermore looks at the demographics of the local founding teams.

3.9.1 Founder Metrics

Sub-Factor	Metric	Value
Ambition	Globally Leading Product	Percentage of startups that are developing a new product.
	Locally Customized Product	Percentage of startups that are developing a local version of an existing product.
Go-Global Strategy	Targeting Global Market First	Percentage of startups that are first targeting global markets. Either immediate going-global or targeting one of the global markets of innovation - US or UK.
	Targeting Global Market Later	Percentage of startups that indicated an ambition to attack global markets.
	# Product Languages	Average number of product languages offered by the startup.
	Growth Leader Global Experience	Percentage of growth leaders who are experienced in the US or UK market.
	Product Global Focus	Average percentage of startups that developed their product to the needs of US, UK or global customers.
	Growth Team Global Focus	Average percentage of startups with employees or consultants in the top US or UK ecosystems.
Team	% Startups with 2 or 3 Founders	Percentage of founding team with 2 or 3 founders. The first Startup Genome reports established that startups with 1 or 4+ founders are significantly less successful.
	% Serial Founders	Percentage of founders that founded a startup prior to this one
	% Immigrant Founders	Percentage of founders who are immigrant.
	% Founders Undergrad	Percentage of founders with undergraduate degree.
	% Founders Grad	Percentage of founders with Masters degree or a PhD.
	% Founders 30+	Percentage of founders who are 30 years old or older
	Founder Age	Average age of founders (16-80 years old).
	% Female Founders	Percentage of founders who are women.
	% Technical Founder Teams	Percentage of founders with technical background.

	% Business Founder Teams	Percentage of founders with business background.
	% Biz & Tech Founders	Percentage of founders with mixed business and technical backgrounds.

3.9.2 Founder Assessment

Sub-Factor	Metric	Global Rank New Zealand	Value New Zealand	Peer 1	Peer 2	Peer 3	Global Median
				Melbourne	Sydney	Boston	
Ambition	Globally Leading Product	17	40%	40%	44%	40%	35%
	Locally Customized Product	44	16%	8%	12%	4%	11%
Go-Global Strategy	Targeting Global Market First	37	32%	28%	29%	100%	48%
	Targeting Global Market Later	38	54%	62%	60%	50%	63%
	# Product Languages	41	1.2	1.2	1.2	1.4	1.4
	Growth Leader Global Experience	17	22%	6%	12%	19%	16%
	Product Global Focus	38	48%	44%	42%	59%	57%
	Growth Team Global Focus	38	33%	25%	39%	42%	38%
Team	% Startups with 2 or 3 Founders	36	61%	66%	58%	69%	64%
	% Serial Founders	46	63%	73%	75%	60%	72%
	% Immigrant Founders	13	25%	23%	31%	30%	16%
	% Founders Undergrad	8	56%	54%	52%	46%	43%
	% Founders Grad	54	23%	33%	42%	46%	47%
	% Founders 30+	44	68%	83%	81%	73%	80%
	Founder Age	30	35.0	37	37	37	36.0
	% Female Founders	8	21%	18%	22%	16%	15%
	% Technical Founder Teams	47	76%	81%	65%	82%	83%
	% Business Founder Teams	26	65%	66%	78%	65%	65%
	% Biz & Tech Founders	43	38%	38%	29%	49%	48%

4 Conclusion

Every startup ecosystem naturally begins in the Activation phase with some baseline level of tech startup activity. For a startup ecosystem to successfully emerge, the inception process requires crossing a threshold of critical mass. Accordingly, growing the Output (number of startups) is the #1 objective of this phase. The ecosystem is usually growing at a slow, organic growth rate, i.e. all the resources come from within the metropolitan city. In order to accelerate the growth of the burgeoning ecosystem, local leaders need to focus on activating its local resources.

How to stimulate the community and accelerate its growth has been the subject of a great deal of attention, with Brad Feld's *Startup Communities* book being the most high-profile example.

It is useful to break down the different issues before developing a plan of action that specifically addresses each of the,

Foundational issues of startup ecosystems, and therefore a primary focus of those at the Activation Phase, are:

- Entrepreneurial Spirit of the population and how it manifests into Entrepreneurial Activity;
- Mindset of the entrepreneur class

The above issues are complex and merit focused research to understand what are specific local problems, for instance is there great aversion to risk among the local population, is failure acceptable, or is there a problem with ambition, seeing big and believing one can become #1 in the world? And what about the level of resourcefulness, free-thinking, and the culture of conforming versus disagreeing with others?

The following issues are called Focal issues of the Activation Phase: leaders must invest in addressing them very early because they have a multiplicative impact on ecosystem performance--and conversely will hold back ecosystem growth if they are not correctly addressed.

The first focal issue is Local Connectedness. Relationships between entrepreneurs, investors and other ecosystem stakeholders are the multiplier of any resource that can be shared. It means every internal and external resource, such as a local advisor or expert as well as every global relationship that a startup may develop will be shared by more members of the startup community and thereby create more value. Local Connectedness breaks down into a) relationships between entrepreneurs with frequent interactions, relationship between different types of stakeholders (entrepreneurs, investors, mentors who have done it before, experts, customers); and a sense of

community between all of them leading to a pay-it-forward attitude including helping each other by sharing knowledge, advice, and contacts (e.g. customer and investor introductions), etc.

The second focal issue is closing the Seed-Funding Gap. Ecosystems at the Activation phase are always held-back by a major gap in early-stage capital. The issue isn't that there is little local capital. There are high-net-worth individuals and institutional capital in every city in the world. However, tech investing is very different from other types of investments, and requires a great deal of specific expertise and experience. In addition, while capital is generally mobile enough that high-quality startups will attract funding from other cities, investors value track record and large deal flow so they normally will not pay attention to startups from smaller ecosystems with fewer successful exits. This result in a very low proportion of startups obtaining seed funding in Activation phase ecosystems. If not tackled aggressively by local leaders, this issue will persist through the Globalization phase and hold the ecosystem back. A well-designed government funding program can help fill a funding gap and cultivate local investor expertise. Once seed funding policies and programs are in place, Series A funding must be addressed through investments in and attraction of institutional venture firms.

Once other programs to address the above Focal and Foundational Issues are well under way and the ecosystem has grown to more than 500 startups (and more in bigger metropolitan areas) the Mid-Phase focal point of the Activation Phase is Global Know-How. The normal trigger for an ecosystem to progress from the Activation to the Globalization phase is a set of exits of over $100 million within a short period (one or two years) followed by a rhythm of such exits. In order to generate those exits on a regular basis, entrepreneurs must have access to global know-how about how to develop a startup and what global customer needs are so they effectively tackle globally-relevant problems that are yet to be solved.