Startup Ecosystem Report 2012

Part One
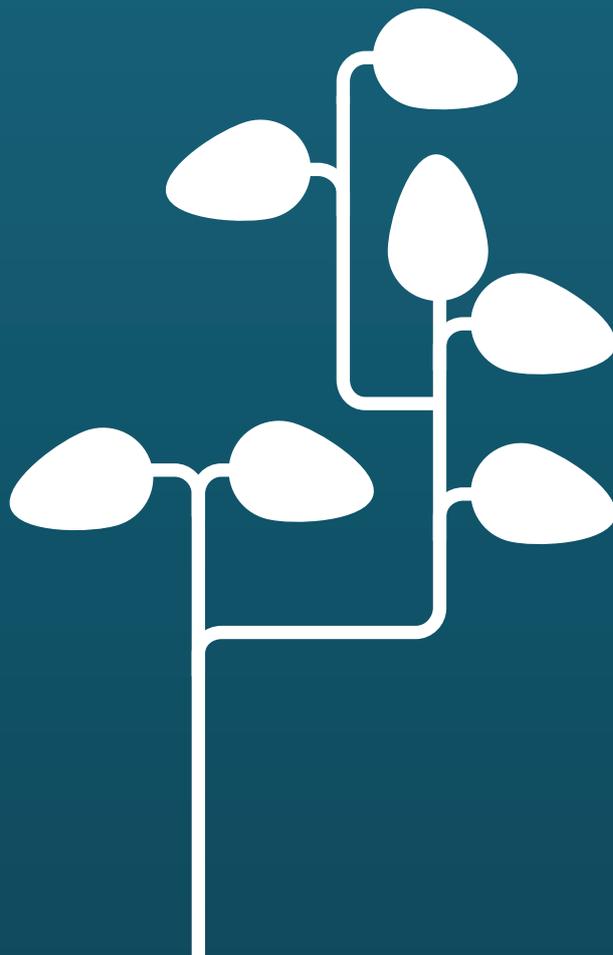
Introduction from the Startup Genome

While nearly all high growth technology startups have historically emerged from no more than 3-4 startup ecosystems, namely Silicon Valley and Boston, this trend appears to have reached its end. Simultaneous with a global explosion of entrepreneurship has been an explosion in the rise of new startup ecosystems around the world, and a new found maturity in others.

As high growth technology startups look to be the primary growth engine of the new information economy, the recent development of startup ecosystems flowering all over the world has big consequences for the future of the global economy. With that in mind, Startup Genome and Telefonica Digital teamed up to take a global look at the state of startups to understand where, outside of the proven testing ground of Silicon Valley, does entrepreneurship take hold?

There are several factors that helped inspire this report, all with the goal of helping entrepreneurs, investors, and policy makers understand where they sit in the global startup ecosystem, how they can improve their odds of success, and where investors might start exploring for new opportunities.

Obviously there are significant implications from this research, which will be unveiled in entirety in Q4 2012. In the meantime, this highly localized look at global entrepreneurship can be represented at a glance in the Global Startup Ecosystem Index, below.

Summary

Overall, the Startup Ecosystem Index paints a glowingly positive picture of the state of entrepreneurship around the world. While Silicon Valley is far and away the strongest ecosystem, just 5 or 10 years ago most of the other ecosystems on this list either barely existed or didn't exist at all. The global startup revolution is going strong, indeed.

Individualized analysis of each ecosystem will be covered in the local reports in the next section, but here are a few observations of the index as a whole.

As the Startup Ecosystem Index endures, we will have to watch how the rise and fall of various startup ecosystems trends over time, and what leading indicators might be.

The Global Startup Ecosystem Index

Ecosystem	Ranking	Startup Output Index	Funding Index	Performance Index	Talent Index	Support Index	Mindset Index	Trendsetter Index	Differentiation from SV Index
Silicon Valley	1	1	1	1	1	1	1	1	1
Tel Aviv	2	2	1	12	5	5	9	17	18
Los Angeles	3	4	6	2	3	13	11	4	11
Seattle	4	19	7	6	2	4	6	11	14
New York City	5	3	4	8	12	9	8	7	8
Boston	6	10	1	7	7	8	7	5	20
London	7	7	5	10	9	2	3	14	17
Toronto	8	6	9	3	10	3	15	12	5
Vancouver	9	13	12	9	4	14	2	9	19
Chicago	10	8	15	5	14	7	13	18	9
Paris	11	14	13	4	17	6	12	15	6
Sydney	12	5	14	16	6	12	16	1	3
Sao Paulo	13	9	10	15	19	11	5	16	4
Moscow	14	16	19	18	11	10	14	8	2
Berlin	15	15	11	13	13	20	18	5	16
Waterloo	16	11	16	14	16	17	17	10	13
Singapore	17	18	8	19	8	16	20	19	12
Melbourne	18	12	17	20	15	18	19	3	15
Bangalore	19	17	18	17	18	15	10	20	10
Santiago	20	20	20	11	20	19	4	13	7

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The index is based on data from more than 50,000 startups around the world who are using the Startup Genome's Startup Compass, an automated analyst in the cloud that helps businesses make better decisions via benchmarks and actionable recommendations.

(Note that the dataset is heavily skewed towards early stage startups, although it does include many later stage companies doing millions of dollars a year in revenue. The dataset contains extensive anonymized data on nearly all aspects of the Startups' businesses, including finances, team, product, sales, marketing, business model, market and demographic & psychographic information about the founders).

The first column in the index is the overall ranking, followed by 8 weighted component indexes that are the inputs to the overall ranking,.

The index isn't perfect, but it is a robust 80% solution that will be optimized in future versions. Feedback is always welcome at feedback@startupcompass.co.

Here is how we define the eight weighted component indexes:

Startup Output Index: The startup output index represents the total activity of entrepreneurship in the region, controlling for population size and the maturity of startups in the region.

Funding Index: The funding index measures how active and how comprehensive the risk capital is in a startup ecosystem.

Company Performance Index: The Company Performance Index measures the total performance and performance potential of startups in a given startup ecosystem, taking into account variables such as revenue, job growth, and potential growth of companies in the startup ecosystem.

Mindset Index: The mindset index measures how well the population of founders in a given ecosystem thinks like a great entrepreneur, where a great entrepreneur is visionary, resilient, has a high appetite for risk, a strong work ethic and an ability to overcome the typical challenges startups face.

Trendsetter Index: The trendsetter index measures how quickly a startup ecosystem adopts new technologies, management processes, and business models. Where startup ecosystems that stay on the cutting edge are expected to perform better over time.

There's a good chance the trendsetter index is a leading indicator of the future success of a Startup Ecosystem. The trendsetter score for example corroborates with the prevailing excitement expressed about the Berlin and Sydney Startup Ecosystems, while also aligning with the anecdotal evidence we have received about the conservative culture and slow pace of adaptation in the Chicago and Tel Aviv startup ecosystems.

Support Index: The support index measures the quality of the startup ecosystem's support network, including the prevalence of mentorship, service providers and types of funding sources.

Talent Index: The talented index basically measures how talented the founders in a given startup ecosystem are, taking into account age, education, startup experience, industry domain expertise, ability to mitigate risk and previous startup success rate.

Differentiation Index: The differentiation index measures how different a startup ecosystem is to Silicon Valley, taking into account the demographics and what types of companies are started there.

Since Silicon Valley is the #1 ecosystem it is assumed that other ecosystems will perform better if they differentiate themselves from Silicon Valley and establish their own strengths.

Deep Dive Into
Selected Top Ecosystems

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Silicon Valley

Local profile (Bay area)

Population
7,150,000

Density
6,984 / km² (18,088 / sq mi)

Entrepreneurs' persona

Age	34.12
Gender (F/M)	10% | 90%
Education (dropout vs. master + PhD)	1 : 2.5
Serial Entrepreneur	56%
Percentage of non-technical founding teams	16%
Working hours per day	9.95
Percentage of founders who lived in SV	100%
Motivation (product vs. impact)	1 : 1
Customer (B2B vs. B2C)	2 : 1
Market (new vs. niche)	4 : 1
Local startup examples	Google, Apple, Facebook, Twitter, Quora, AirBnb

Silicon Valley

Component Index
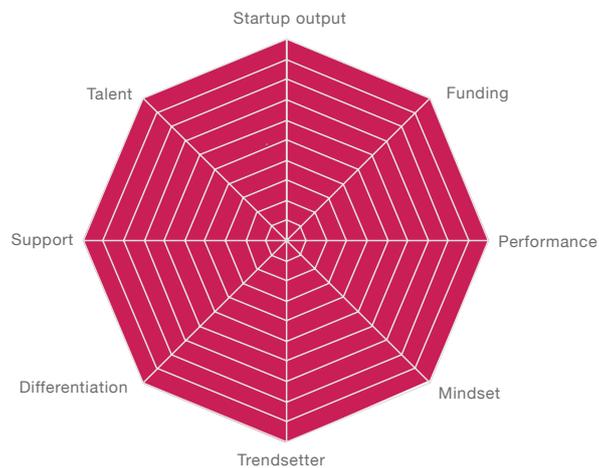
	Silicon Valley
Startup Output Index	1st
Funding Index	1st
Company Performance Index	1st
Talent Index	1st
Support Index	1st
Mindset Index	1st
Trendsetter Index	1st
Differentiation from SV Index	1st

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Overview

Silicon Valley is by far the biggest, most important and influential startup ecosystem to which all other ecosystems look up to. Silicon Valley's total output of startups sets the baseline to which all other ecosystems are compared. Although a staggering number of startup ecosystems have been established around the world, Silicon Valley remains top of list in all dimensions.

Findings

Here is how SV compares to the global average of all startup ecosystems:

- Capital raised in SV is 32% higher across all stages of a startup's development

- SV has 20% more mentors

- SV has 35% more serial entrepreneurs

- In SV entrepreneurs are 54% less likely to engage in on-the-side consulting activities

- In SV startups are 13% more likely to have a subscription based revenue model

- Entrepreneurs are 22% less likely to experience building the product as a major challenge

- Silicon Valley entrepreneurs are much more ambitious, shown by how they:

- Entrepreneur's ambition in Silicon Valley is paramount compared to entrepreneur's ambition on average across all other ecosystems.

- work longer hours daily.

- are more committed to work full time.

- are 19% more likely to motivate themselves by the vision of changing the world, rather than just building a good product

- are 30% less likely to tackle 'niche' markets.

Silicon Valley

Investor Perspective

"You get this feeling that you need to be out here."

Jessica Livingston, Partner at Y Combinator

Entrepreneur Perspective

Silicon Valley has given birth to more billion dollar companies than any other ecosystem because of its plentiful risk capital, world class talent, inclusion of the headquarters of many giant public companies, a vibrant support ecosystem, and an open-minded, trust, "pay it forward", change the world culture. It's only significant downsides are its high living costs, and hyper-competitive talent market, that forces startups to not just compete against the other best startups, but against perk-laden large companies like Google and Facebook.

"People in Silicon Valley really believe in "pay it forward". It's not all transactional and tit-for-tat. Folks help each other and those not as far along as them. It's also very accepting of failure; if you have some real catastrophes on your resume, that's considered a badge of honor - there are not a lot of places on the planet that's true. It's also the easiest place in the world to start a company. Everyone is here to help you kick ass."

David Weekly, Founder of PBworks

"I moved my first company, Tickle.com, from Boston to San Francisco in 2000. As a Boston-area native, I feel like most people from back east are highly protective of their ideas. I was amazed to find people in Silicon Valley to be openly sharing ideas, even if another entrepreneur may steal it. It took me several years to really get it. Silicon Valley is full of great ideas, but ideas are cheap... and execution is the hard part. If you think you have a great unique idea, I'd bet 5 other people in Silicon Valley already thought of it. It's because we share ideas, we riff off each other and sometime great companies are born. But the key to taking a new born idea to an IPO is the ability to execute. Silicon Valley has the best combination of factors to provide for that success including the highest concentration of VC's, highest density of tech entrepreneurs and engineers, great schools pumping out more smart grads every year, countless hugely successful VC-backed world-changing companies, pride in a merit-based system that rewards intelligence and hard work and above all... an attitude that supports collaboration to build incredible things. It's extremely hard to replicate all of that in another location, especially the belief that we, in Silicon Valley, can change the world through innovation."

Rick Marini, Founder of Branchout

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Policy Maker Perspective

The only support Silicon Valley needs from local Policy Makers is legislation that continues to remove friction in the ecosystem, which includes things like:

1) Decreasing the payroll tax to support high-head count low revenue tech companies (http://www.reuters.com/article/2012/10/29/us-sanfrancisco-conway-idUSBRE89S05F20121029)

2) Supporting the development of new "collaborative consumption" startups, such as AirBnB, by deregulating lodging ordinances that protect hotels and bed and breakfasts, and Lyft, by deregulating traditional transportation services like taxi cabs to support ride sharing services.

The national government could vastly improve Startup Ecosystems in the United States by supporting the Startup Visa Act and making it easier for International entrepreneurs to stay in the country and create jobs and wealth for other American citizens. (http://startupvisa.com/)

Silicon Valley

Key Characteristics

Capital

ACTUAL STAGE DISTRIBUTION

11%	74%	9%	6%

- ■ 1. Discovery
- ■ 2. Validation
- ■ 3. Efficiency
- ■ 4. Scale

Funding grant total on average: **$3,036,721**

FUNDING PER STAGE

	$657,059	$2,338,802	$3,114,814	$7,939,342
	1. Discovery	2. Validation	3. Efficiency	4. Scale

FUNDING SOURCES

- Self-Funded ($15k+) 13%
- Bank 1%
- VC 16%
- Super Angel/Mini VC 12%
- Angel 25%
- Incubator 6%
- Friends & Family 22%
- Accelerator 5%
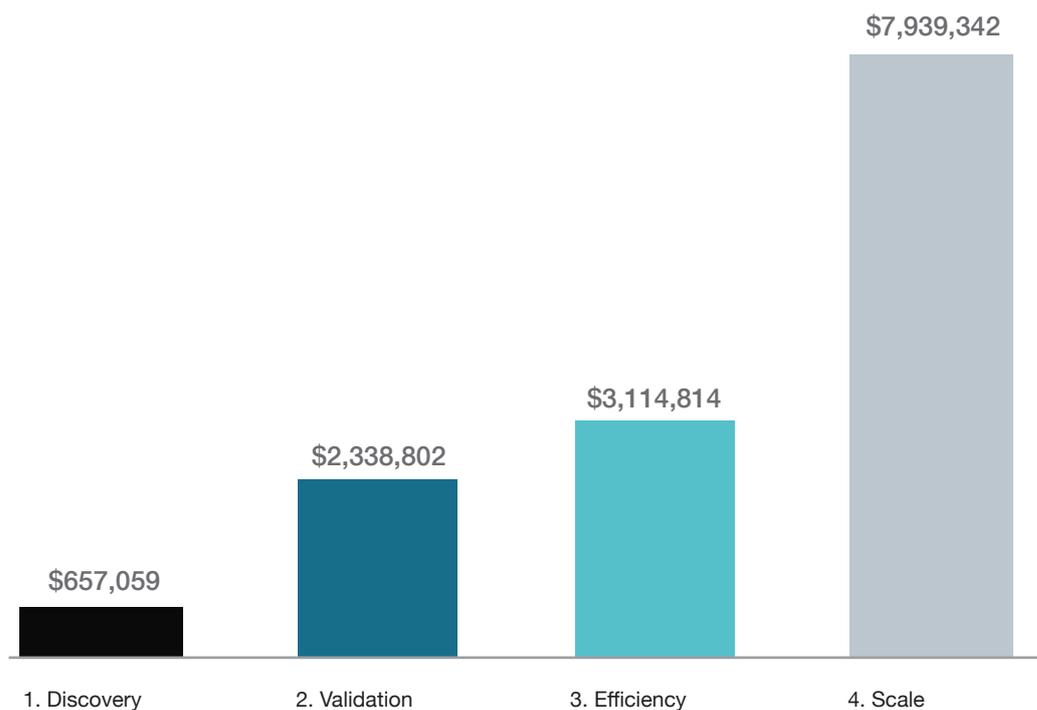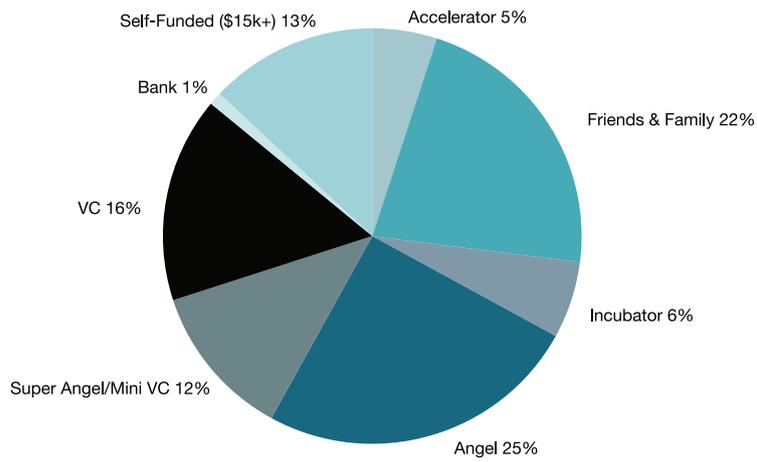
Economic Performance

JOB CREATION

Total on average measured as full time employees not including the co-founders

1.74   3.43   14.26   34.07

- 1. Discovery
- 2. Validation
- 3. Efficiency
- 4. Scale
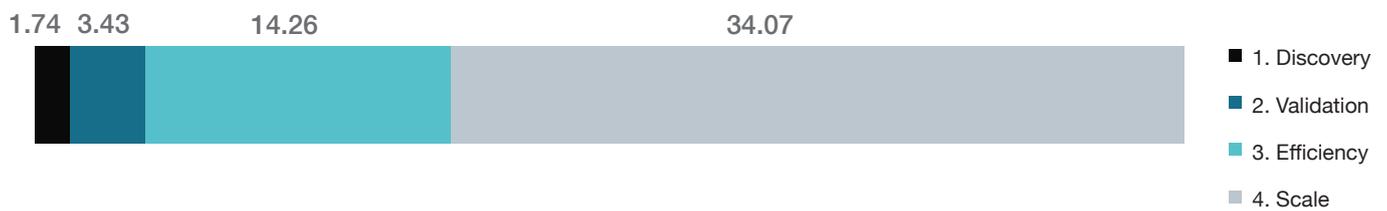
Silicon Valley

Economic Performance continued

TAM
(Total Addressable Market in $)

$10bn+
36,72%

Less than $1bn
31.77%

$1bn - $10bn
31.51%
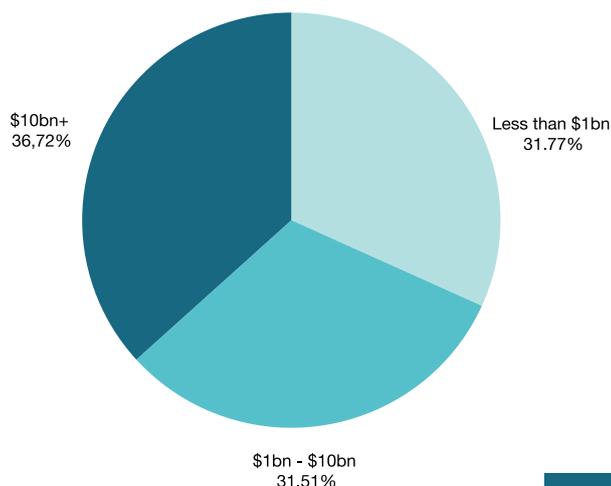
19% OF TOTAL USER BASE ARE PAYING CUSTOMERS

43% OF STARTUPS HAVE NO PAYING CUSTOMERS

48% OF STARTUPS HAVE NO REVENUES

TRENDSETTER

REVENUE STREAM EXPECTATIONS

Other 20%

License Fee 6%

Advertising: 8%

Transaction Fee 17%

Subscription 48%

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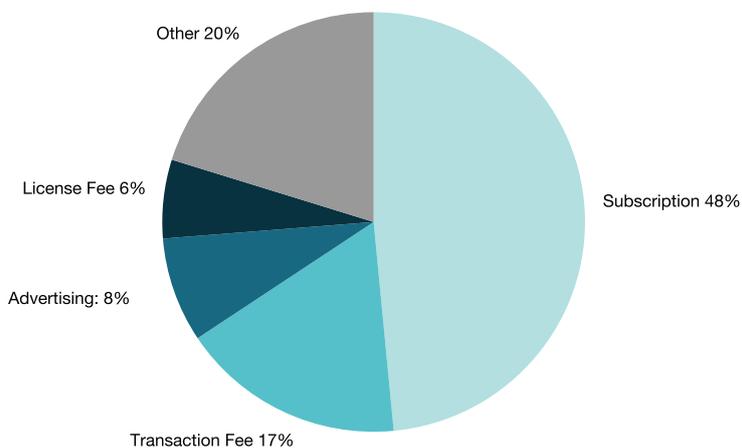
35% STARTUPS MEASURE ACTIVATION/RETENTION OF CUSTOMERS

REVIEW METRICS (NO 42%; YES 58%)

**59% OF STARTUPS DIRECTLY MONETIZE THEIR USERS**

PROGRAMMING LANGUAGE

Other 9%
.NET 6%
PHP 22%
Python 18%
Java 17%
Ruby 28%

TYPE OF STARTUP

Software (non-web) 3%
Web/Mobile + Consulting 7%
Mobile 17%
Web 73%
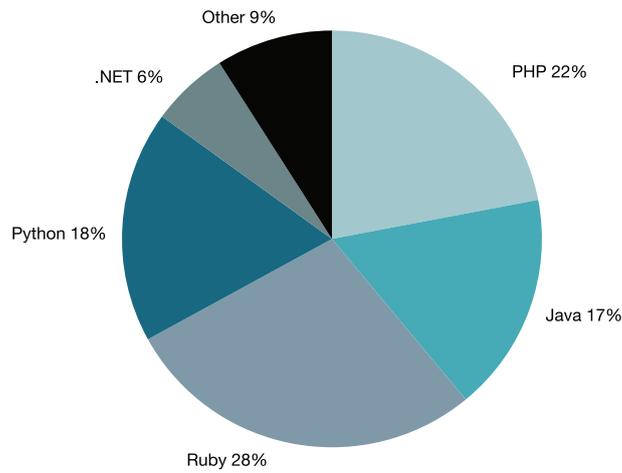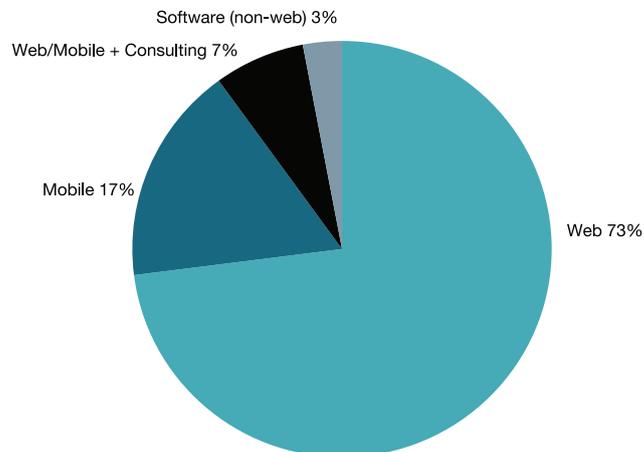
Silicon Valley

Market Differentiation

MARKET TYPE

Niche 11.79%

Better 32.56%

Cheaper 9.49%

New 46.15%

TYPE

Type 3 18.09%

Type 1 39.01%

Type 2 21.28%

Type 1N 21.63%
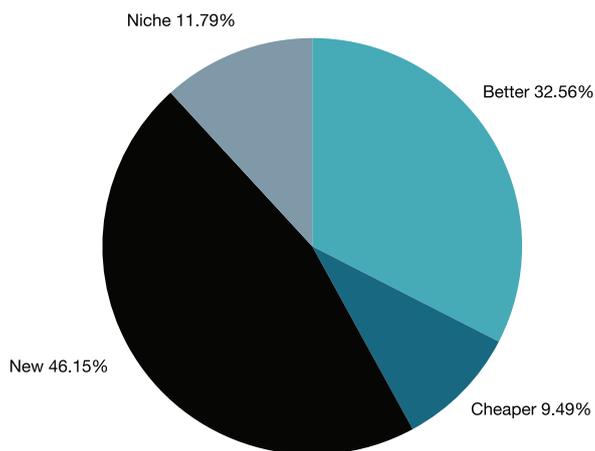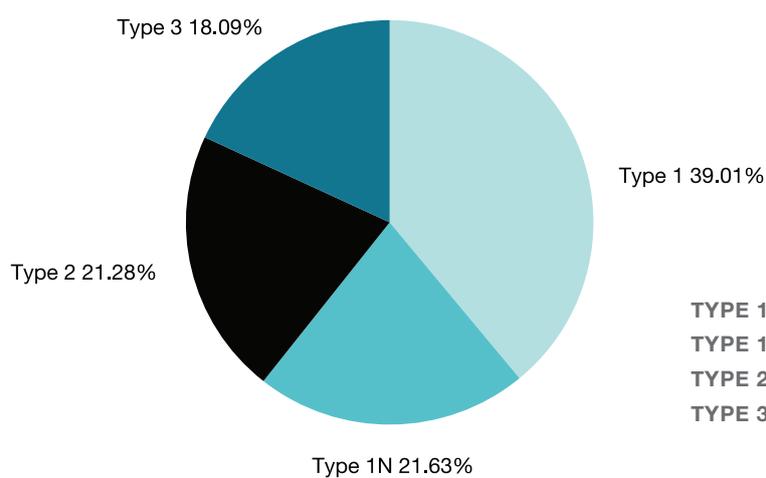
TYPE 1: AUTOMATOR
TYPE 1N : SOCIAL TRANSFORMER
TYPE 2 : INTEGRATOR
TYPE 3 : CHALLENGER

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PRIMARY PAYER

SMEs 30.14%

Consumers 33.69%

Enterprise 36.17%
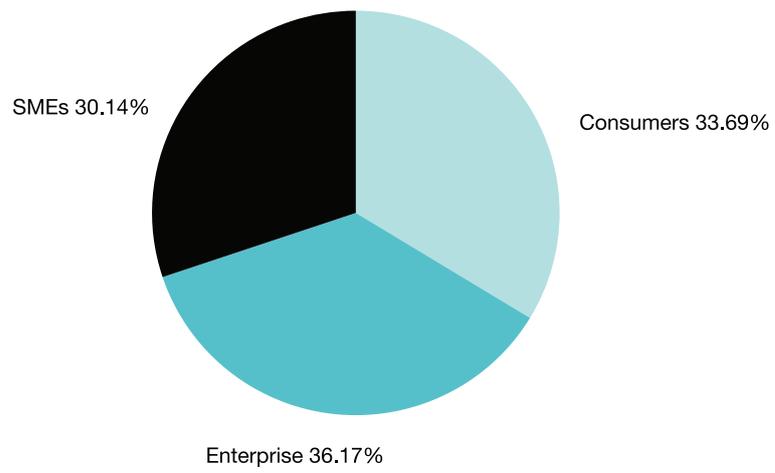
Tel Aviv

Local profile

Population
2,375,000

Density
2,193/km² (5,682/sq mi)

Entrepreneur persona

		SILICON VALLEY
Age	36.16	34.12
Gender (F/M)	9% | 91%	10% | 90%
Education (dropout vs. master + PhD)	1 : 2.33	1 : 2.5
Serial Entrepreneur	47%	56%
Percentage of non-technical founding teams	11%	16%
Working hours per day	9.42	9.95
Percentage of founders who lived in SV	13%	100%
Motivation (product vs. impact)	1.5 : 1	1 : 1
Customer (B2B vs. B2C)	1.6 : 1	2 : 1
Market (new vs. niche)	4 :1	4 : 1
Local startup examples	Mirabilies, Babylon, SunDisk, Jajah, Fring, Waze	

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Tel Aviv

Component Index

Tel Aviv
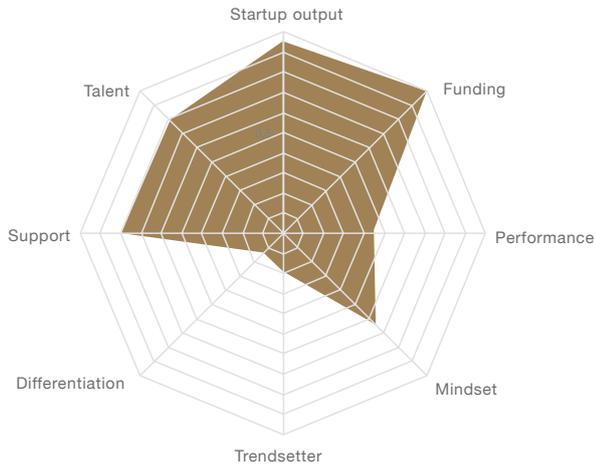
Silicon Valley
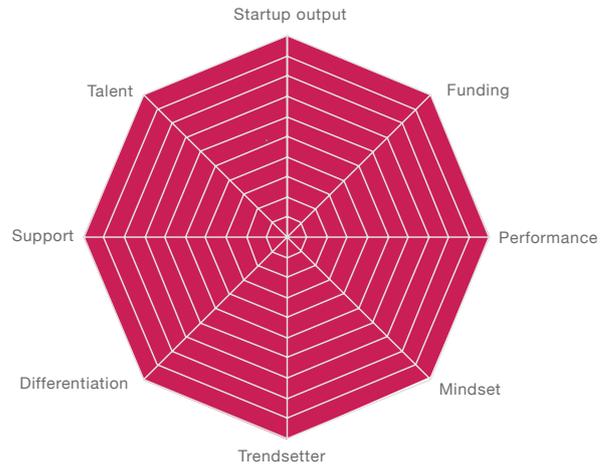
	Tel Aviv	Silicon Valley
Startup Output Index	2nd	1st
Funding Index	1st	1st
Company Performance Index	12th	1st
Talent Index	5th	1st
Support Index	5th	1st
Mindset Index	9th	1st
Trendsetter Index	17th	1st
Differentiation from SV Index	18th	1st

Overview

As a country, Israel may be only 60 years old and have a population of around 7 million but it has the highest density of tech startups in the world. In 2009, 63 Israeli companies were listed on the tech-orientated NASDAQ - which is more than Europe, Japan, Korea, India, and China combined. Almost every major tech company today has some kind of subsidiary in Israel, including Intel, Microsoft, Google and Cisco to name just a few. Consequently, 39% of Israeli high-tech employees work in the R&D departments of multinational companies.

In the Startup Ecosystem Index, Tel Aviv ranks second globally, because it has the second highest output index of startups with a healthy funnel of startups across the developmental lifecycle, a highly developed funding ecosystem, a strong entrepreneurial culture, a vibrant support ecosystem and a plentiful supply of talent.

Tel Aviv has an impressive history of entrepreneurship and the ecosystem is still expanding. Yet although we gave it the ranking of Expansion: Sustaining, they are some warning signs that they may enter the ossification stage of expansion sometime soon. Technology startups tackle two kinds of risk: technology risk and market risk. And the Tel Aviv ecosystem is highly dependent on small technology-driven exits, rather than on big market winners.

Findings

Tel Aviv entrepreneurs are similarly educated to SV entrepreneurs (40% Master & PhD vs. 42% in SV)

Startups in Tel Aviv employ as many people per stage as startups in Silicon Valley.

27% of the user base of Israeli startups is paying, 46% more than in SV.

There is no funding gap in Tel Aviv, it has a healthy capital funnel throughout the startup lifecycle.

Funding Sources are slightly more focused on angels, and less on family/friends than in SV.

Tel Aviv entrepreneurs and SV entrepreneurs both tackle large total addressable markets, and concentrate on new markets and niche markets in equal proportion.

The average working hours in Tel Aviv are similar to SV.

Tel Aviv startups are less "ambitious":

- Israeli startups are 46% more likely to tackle smaller markets than startups in SV.

- They are 5% less likely to tackle $1Billion to $10 Billion markets, and 33% less likely to tackle markets greater than $10 Billion.

- They are 9% less committed to work full time before product market fit.

- They care more about "building a great product" than "changing the world".

Israel's technology adoption rate is far behind SV. Israeli entrepreneurs are 87% less likely to use Ruby, and 27% less likely to use Python, whereas they are 54% more likely to use of Java, and 5.8x more likely to use more of .NET than entrepreneurs in SV.

Tel Aviv

Findings continued

Key challenges are significantly different to SV: challenges are 67% less likely to be around the team, and 39% more likely to be around the product .

Israeli startups rely 19% less on subscription, and 43% more on advertising as a revenue stream than their peers in SV. They rely 10% more on transaction fees, and 2.9x less on license fees.

Tel Aviv startups are as data driven as SV startups.

The Tel Aviv ecosystem has the same healthy mix of startups targeting consumers, enterprise, and SME customers as SV.

Israeli startups outsource less product development than their peers in SV.

In Israel, less than 5% of product development is outsourced.

In terms of market experience, founders in Israel are equally experienced as their counterparts in SV.

Founders in Israel are equally as likely to have previous experience with the market they are tackling as founders in SV.

Israeli Startups are 19% less likely to focus on web and 15% more on mobile compared to SV. Israeli entrepreneurs focus 4x less on non-web software.

Israeli startups have half as many mentors per startup on average (2 vs. 4)

There are 17% fewer serial entrepreneurs proportionally in Tel Aviv as compared to SV.

Policy Maker Perspective

"The great irony of the Start-Up Nation story is that Israel has transformed the challenges it has faced into assets that form the cornerstones of its culture of innovation. Adversity of all kinds, such as being under attack, small, isolated, and lacking resources, have forced Israelis to be resourceful, to do more with less, to innovate, and to be global from day one. The fact that Israel specializes in adversity is most dramatically seen in downturns."

Dan Senor and Saul Singer, Author of The Startup Nation

On Company Performance: Tel Aviv is the center of a small country with a population of 7M, and therefore lacks a local market or even a regional market. For this reason, startups in Tel Aviv face different challenges than startups in other ecosystems and they have different considerations when it comes to scaling and growth in contrast to exits. Many also move their operations to the US at some point.
The ecosystem is very tight and many of the local talents come from similar professional backgrounds. On the one hand, this allows the creation of close knit highly efficient teams, but on the other hand this means we often lack the diversity which allows for the exchange of know-how and adoption of a range of skills and technologies.

On Trendsetter Index: As startups become more consumers facing, the skill set required become broader and include UX, UI, business and marketing expertise. This is a challenge for Tel Aviv since our strength is predominantly on the tech side of the equation. As policy makers we are formulating a plan for the coming years that will maintain Tel Aviv's position as a leading hub. The plan is based on the internationalization of the local ecosystem by attracting talents, startups and investment from abroad, thus bringing diversity and a range of know-how to the local community.

Outlook for Tel Aviv: I believe that we will be seeing the development of niche and regional innovation hubs alongside massive global hubs such as Silicon Valley and at some point, London and New York. These niche and regional hubs will specialize in certain know-how or industries. As super hubs develop in the big cities, Tel Aviv's opportunity will be as a small and community orientated hub specializing in deep technology capabilities and innovation.

Avner Warner, Director of Economic Development Tel Aviv

Investor Perspective

"A key lesson from Israel is that innovation is not just something that goes on inside companies; it comes from a wider culture that fosters both innovation and entrepreneurship. Israel is a country of immigrants — there are over 70 nationalities represented in this tiny country. Two out of every three Israelis are newcomers, or the children or grandchildren of newcomers. Immigrants are natural risk takers since they were willing to uproot themselves and start over."

Orit Mossinson, Founder & CEO of VC Holdings

"Within the 6 years after the tech bubble burst in 2000, Israel suffered one of its worst periods of terrorist attacks and fought a second Lebanese war; and yet, its share of the global venture capital market did not drop—it doubled, from 15% to 31%."

Dan Senor and Saul Singer, Author of The Startup Nation

It is true that israeli exits are smaller than Silicon Valley's. Remember, we don't have a local market and many of the large US high tech companies are coming to Israel and acquire young startups. I think this is a very good phenomenon, since trying to grow big from a remote place is much riskier than doing it from Silicon Valley. So this is a good way to mitigate the risk.
Also, I believe the phenomenal success of the hi tech sector in israel, is due to unique symbiosis between small, fast, nimble start ups and established large companies. When startups are acquired they avoid the very risky endeavor of deploying their own 10-20 person sales teams. As a result of these rapid acquisitions, the economy benefits from the infusion of expansion capital, access to markets, strategic interests, management know how and technical back up. The acquired entrepreneurs then go on to immediately build new companies.
Intel invested in 64 startups in israel and employs 8000 people. Ibm purchased 11 companies, Cisco purchased 9, the list goes on and on. So smaller but faster, frequent exits serve this ecosystem very well.

Yossi Vardi, Investor

Entrepreneur Perspective

"I believe that the Israeli survivor nature , together with the guts we get while going to the army at the age of 18, makes Israelis feel like they could conquer the world. This together with Israelis' tech tendency makes it easier for them to start new technology platforms and feel they could make the world a better place. The Israeli nature of thinking "out of the box" is our best advantage over Silicon Valley , but otherwise the Valley is dominating in each and every way."

Orit Mossinson, Founder & CEO of VC Holdings

I think that what you found makes sense, especially with respect to adoption of new technologies and business models, and with respect to focusing on small markets. Israeli tech companies do better if they develop strong technologies that can be sold abroad, rather than strong marketing and business models, since the market in Israel is so small, and they're too far away from building into Europe or the US, unless its a pure technology play.

I think the entrepreneurial spirit is amazing, but people tend to start companies when they're older so that may explain the risk profile you found.

Biggest challenges are the political and economic ecosystem that push the best people to leave the country. I think in the long term, this will weaken the tech sector tremendously.

Na'ama Moran, Founder of Sourcery

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US Hub - Los Angeles

Local profile

Population
17,000,000

Density
3,124 / km² (8,092 / sq mi)

Entrepreneurs' persona

|		SILICON VALLEY
Age	32.55	34.12
Gender (F/M)	12% | 88%	10% | 90%
Education (dropout vs. master + PhD)	1 : 2	1 : 2.5
Serial Entrepreneur	55%	56%
Percentage of non-technical founding teams	21%	16%
Working hours per day	9.64	9.95
Percentage of founders who lived in SV	29%	100%
Motivation (product vs. impact)	1.4 : 1	1 : 1
Customer (B2B vs. B2C)	0.25 : 1	2 : 1
Market (new vs. niche)	3 : 1	4 : 1
Local startup examples	ShoeDazzle, Factual, Omaze, Beachmint, CapLinked	

Los Angeles

Component Index

Los Angeles

Silicon Valley

	Los Angeles	Sillicon Valley
Startup Output Index	4th	1st
Funding Index	6th	1st
Company Performance Index	2nd	1st
Talent Index	3rd	1st
Support Index	13th	1st
Mindset Index	11th	1st
Trendsetter Index	4th	1st
Differentiation from SV Index	11th	1st

Overview

Los Angeles has long been overshadowed by Silicon Valley in terms of high-growth technology startups. The domination of Los Angeles by Hollywood and associated industries has also made it difficult for startups to shine. However the LA startup ecosystem is gaining increasing momentum and now ranks third globally. Although the ecosystem has 70% less startups than Silicon Valley, it has a healthy funnel of startups moving through the startup lifecycle. There is a healthy opportunity for LA to establish itself as an alternative to Silicon Valley.

Findings

LA startups are 12% less likely to monetize directly than SV startups

Compared to Silicon Valley, LA startups are 58% more likely to have consumers as their primary payer and 43% less likely to have SMEs as their primary payer

Startups in LA employ as many people per stage as startups in Silicon Valley.

LA has no funding gaps. It has a healthy mix of capital sources.

LA entrepreneurs are as ambitious as SV entrepreneurs. Both tackle similarly large total addressable markets, and concentrate less on 'new' markets and 'niche' markets.

The average working hours are the same in LA as in SV.

The key challenges of LA startups are similar to SV startups: customer acquisition, building the product, funding, and building the team.

The revenue streams of LA startups are similar to SV: subscription, transaction fees and advertising.

63% of LA entrepreneurs have previous experience in the market their startup is targeting.

LA startups are as data driven as SV startups.

Newer programming languages like Python and Ruby are the preferred coding languages of LA startups.

40% more of the user base of LA startups are paying customers compared to SV.

The average age of entrepreneurs in LA (38.22) is 4.1 years older than in SV.

LA entrepreneurs are more risk averse than SV, being 10% less likely to commit full time to their startup before reaching Product Market Fit.

LA startups are more 16% less likely to raise VC than startups in Silicon Valley and more likely to be self-funded or raise money from friends and family.

LA has more web startups (+4.8%), and less mobile-focused startups (-18%) than SV. LA startups have 27% fewer mentors than startups in SV.

Los Angeles

Investor Perspective

LA has a great potential for growth by differentiating itself from SV. Objectives for investors might include helping startups get more help from mentors and increasing their risk tolerance by funding more younger entrepreneurs.

The LA scene is no less entrepreneurial than any other market, but a sudden proliferation of technology and internet based startups as well angels investors interest in them has reinvigorated entrepreneurship with less stress on traditional risk factors. The Socal market has usually been more transaction and revenue based focused and less prone to taking bets on "disrupting" ideas the way than Silicon Valley defines them. For that reason, it is only normal that many entrepreneurs don't jump in before product/market fit.

Amir Banifatemi, Investor & Founder K5launch

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Entreprener Perspective

Even though LA entrepreneurs are as ambitious as their peers in SV, there is a need for more risk tolerance in the ecosystem by committing full time to their startups before Product Market Fit. Its close proximity to Silicon Valley can be advantageous in that SV investors find it close enough that they don't mind sitting on boards in LA, but with SV so close it makes it all the more important for the ecosystem to build its own identity, most likely around the media, advertising and fashion strengths that LA already possesses.

I would say that Los Angeles is extremely different from Silicon Valley in the mindset of people. SV attracts the top young people in the world who want to do a tech start up. LA is an entertainment mecca that also has a lot of tech start ups because it's a big city on the west coast of the US. It's a nice environment to live, but it has a lot of distractions and is very dispersed. I think it's much harder to do any large scale start up in LA. I also think that LA people do not feel part of a community as much as therefore don't help each other as much. This is related in part to the distractions and the dispersion effect in my opinion. Most

Chris Grey, Founder and CFO of Caplinked

US Hub - New York City

Local profile

Population
8,175,133

Density
10,518/km² (27,243/sq mi)

Entrepreneur persona

|		SILICON VALLEY
Age	32.55	34.12
Gender (F/M)	18% | 82%	10% | 90%
Education (dropout vs. master + PhD)	1 : 4	1:2.5
Serial Entrepreneur	56%	56%
Percentage of non-technical founding teams	22%	16%
Working hours per day	9.69	9.95
Percentage of founders who lived in SV	19%	100%
Motivation (product vs. impact)	1 : 1	1 : 1
Customer (B2B vs. B2C)	1.2 : 1	2 : 1
Market (new vs. niche)	2.6 : 1	4 : 1
Local startup examples	Foursquare, Tumblr, Etsy, Meetup, Bit.ly, Fab, Kayak	

New York City

Component Index

New York City
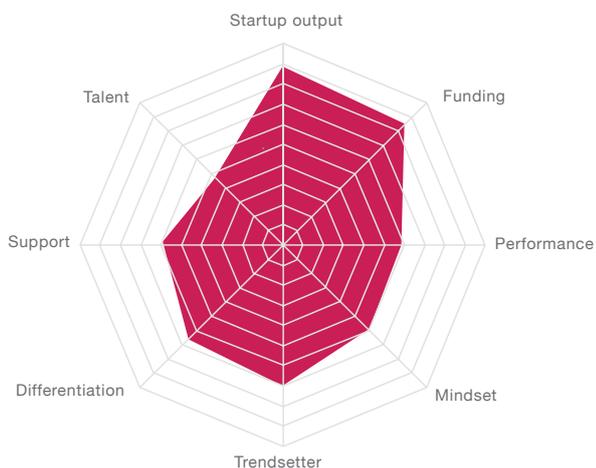
Silicon Valley
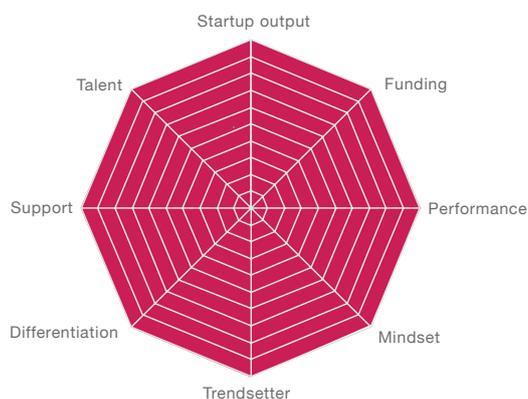
	New York	Silicon Valley
Startup Output Index	3rd	1st
Funding Index	4th	1st
Company Performance Index	8th	1st
Talent Index	12th	1st
Support Index	9th	1st
Mindset Index	8th	1st
Trendsetter Index	7th	1st
Differentiation from SV Index	8th	1st

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Overview

New York has established itself as a serious alternative to SV for startups in the consumer space and those focusing on e-commerce, advertising, media and fashion. However, it has long way to go to truly catch up with SV, with about the half number of startups as SV.

Findings

NYC is the global capital for women tech entrepreneurs, with 18% being female.

NYC companies tend to monetize earlier, with a higher ratio of paying customers. Even though that may mitigate risk, it may also limit the startup's ability to be highly disruptive.

Startups in NYC employ as many people per stage as startups in Silicon Valley.However, in the efficiency (stage 3) NYC startups have twice as many employees as SV.

NYC is the second largest ecosystem for software startups in terms of absolute output.

NYC has been able to clearly distinguish itself from SV with a strong emphasis on consumer startups.

NYC entrepreneurs are as ambitious as SV entrepreneurs, with an equal preference for tackling 'new' markets over 'niche' markets.

The revenue models in NYC are basically the same as SV, with subscription similarly being the most popular. There is a similar rate of indirect monetization in NYC as SV.

NYC has a funding gap, with 70% less funding than SV in the second stage before product market fit, probably due to a lack of super angels.

NYC is slow in adopting new technologies such as Ruby on Rails and Python, relying more on PHP and .Net.

NYC entrepreneurs are 10% less likely than their peers in SV to go full time on their company before reaching Product Market Fit.

There are 34% fewer serial entrepreneurs proportionally compared to Silicon Valley.

The target market size of NYC startups is 58% less likely to be over $10 Billion as compared to SV startups.

NYC startups are 17% less data driven than SV startups.

NYC is more consumer oriented, with 35% more startups focused on consumers as their primary paying customer, and 35% less focused on SMEs as their primary paying customer.

Startups in NYC have 16% fewer mentors per company compared to startups in Silicon Valley.

New York City

Investor Perspective

NYC is a mature ecosystem that will continue to grow. NYC's burgeoning early stage startup scene combined with its lack of early stage capital presents a strong opportunity for investors who are looking for good deals at round sizes of $300K to 1.5M.

"NYC has key assets for the founder with vision beyond the startup realm to leverage: culture (arts & multi-cultural population); commerce (multiple global industries); connectivity (midway between West Coast USA, Europe/Middle East/Africa, and midway between Boston and Washington DC).

It may have been the case thus far that entrepreneurs have been overshadowed by Wall Street, but as the Mayor has indicated, Silicon Alley is strategically and geographically well positioned for more startup capital & resources."

Neil Anderson, Partner at Hubitat

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Entrepreneur Perspective

For anyone tackling the consumer space and building an e-commerce, advertising, media or fashion startup, NYC is a true alternative to SV. If a startup has already reached product/market fit and is getting ready to scale, NYC can be a great spot for both raising money and for getting global exposure.

"I believe NYC is the most diverse ecosystem of all the three leaders SV, NYC and London. It has a quickly growing startup community, access to capital and a talent pool, but at the same time it is also the home of big media, of style, and of finance. Above all, NYC is very supportive of entrepreneurial initiatives and ideas. It wasn't a strategic decision, but all three co-founders ended up in NYC. We have been considering a move to SV, but believe that because our company is at the intersection of sustainability, ecommerce and design, it makes more sense to be in NYC. Plus, we just love it here."

Fabian Pfortmueller, Founder of Holstee

US Hub - Boston

Local profile

Population
7,200,000

Density
4,924 / km² (12,752 / sq mi)

Entrepreneurs' persona

		SILICON VALLEY
Age	36.8	34.12
Gender (F/M)	9% | 91%	10% | 90%
Education (dropout vs. master + PhD)	1 : 6	1 : 2.5
Serial Entrepreneur	51%	56%
Percentage of non-technical founding teams	15%	16%
Working hours per day	10.41	9.95
Percentage of founders who lived in SV	16%	100%
Motivation (product vs. impact)	1.6 : 1	1 : 1
Customer (B2B vs. B2C)	2.7 : 1	2 : 1
Market (new vs. niche)	4.5 : 1	4 : 1
Local startup examples	Formlabs, Runkeeper, EchoNest, Vertica	

Boston

Component Index

Boston

Startup output
Talent
Funding
Support
Performance
Differentiation
Mindset
Trendsetter

Silicon Valley

Startup output
Talent
Funding
Support
Performance
Differentiation
Mindset
Trendsetter
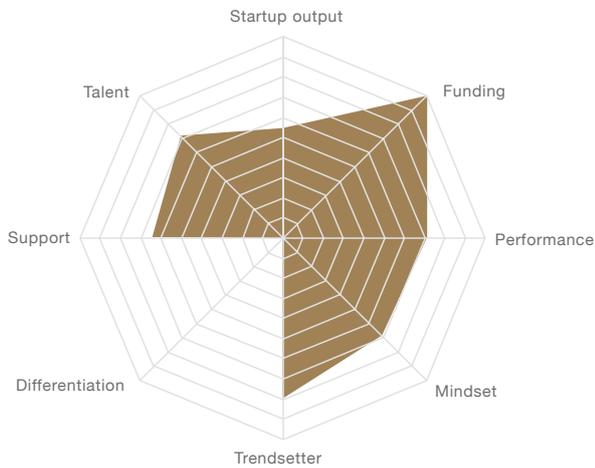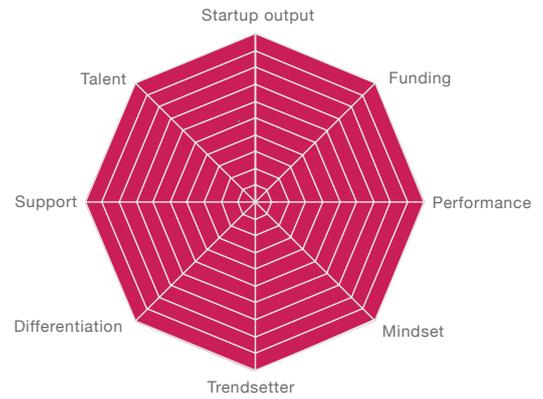
	Boston	**Silicon Valley**
Startup Output Index	10th	1st
Funding Index	1st	1st
Company Performance Index	7th	1st
Talent Index	7th	1st
Support Index	8th	1st
Mindset Index	7th	1st
Trendsetter Index	5th	1st
Differentiation from SV Index	20th	1st

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Overview

Boston has lost its position as frontrunner on the east coast to NYC. Although it has a well-established angel and venture capital scene, Boston creates 79% fewer startups than SV. The Boston startup ecosystem is significantly smaller than SV but it has a healthy funnel of startups throughout the Startup Lifecycle. It can be considered a serious alternative to SV.

Findings

Boston startups are 24% more likely to monetize directly than SV startups.

Boston entrepreneurs are more educated than SV entrepreneurs (50% Master and PhD vs. 42% in SV)

Boston's funding ecosystem as no major funding gaps.

Boston entrepreneurs are almost 3x more likely to have a PhD than entrepreneurs in SV.

Compared to Silicon Valley, Boston entrepreneurs are more likely to be serial entrepreneurs, especially in markets where they have previous experience.

The motivation of entrepreneurs in Boston is significantly different to entrepreneurs in Silicon Valley.

Boston entrepreneurs are half as likely to create a quick flip, 87% less likely to want to get rich, 16% less likely to want to change the world, and 37% more likely to be motivated by building a great product.

Boston startups review metrics more often than SV.

The Boston startup ecosystem has the same healthy mix of startups targeting consumers, enterprise, and SME customers as SV.

Investor Perspective

Boston has depth across the board, from funding ecosystem to engineering talent. It's a very balanced ecosystem. It is particularly strong in areas related to SaaS and all areas related to SaaS marketing, hard innovation, infrastructure, gaming and e-commerce. It's also super strong in biotech of course, where it's impact is much bigger than the size of the town would suggest. The is extremely high density of general ecosystem around the Kendall Square area, which is without a doubt one of the most vibrant hubs in the world.

Fred Destin, Partner at Atlas Ventures

Boston appears undifferentiated only because it is not the leader in consumer internet, therefore not top of mind in the popular press. The diversity of the startup clusters in Boston also makes the storytelling more diffuse and therefore more difficult.

There are many clusters here with multi-hundred million dollar or billion dollar exits or hundreds of millions of revenue both in software (adtech, travel, health IT, database, enterprise, search, commerce, storage, games) and beyond (robotics, materials, life sciences)

Boston will continue to birth big companies that may never have taken root in the Valley, like Demandware, Unica, Endeca, Vertica, Zipcar, A123, eInk, Brightcove, Carbonite, Equallogic, Kiva Systems, iRobot, Kayak, ITA and TripAdvisor, not to mention the life sciences successes.

Reed Sturtevant, Investor, Techstars Boston

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Entrepreneur Perspective

Over the past 15 years I have co-founded startups in the Bay Area, Boston and NYC, which has given me a first-hand look at their ecosystems. Boston's key strength as an ecosystem is its diversity. There is no other place on Earth that comes close. Boston is #1 in biotech, #2 in high tech and top 3 in medical devices, energy technology, materials & environmental science, robotics, etc. This is fueled by the large number of top universities and by the diversified New England economy. Whatever your dreams may be—no matter how crazy they may seem—there are people here who can help you build a product and a business.

My outlook for the Boston ecosystem is very positive. Over the past couple of years, I've seen a level of innovation, growth and excitement that reminds me of the late 90s without the unsustainable cash burns. Boston's biggest opportunity is to leverage its diversity and produce new category-defining companies. I expect many of these to be at the intersection of two or more existing categories. Boston's biggest challenge is increasing the breadth and depth of its talent pool in the face of (1) competition from the Bay Area, NYC and the foreign countries where many of Boston's top students come from and (2), specifically in high tech, the fact that many Boston companies are acquired by Bay Area companies, which puts a glass ceiling on local talent development.

Simeon Simeonov, Founder & CTO at Swoop

London

Local profile

Population
12,700,000

Density
5,206/km² (13,466/sq mi)

Entrepreneur persona

|		SILICON VALLEY
Age	35.98	34.12
Gender (F/M)	9% | 91%	10% | 90%
Education (dropout vs. master + PhD)	1 : 3	1 : 2.5
Serial Entrepreneur	42%	56%
Percentage of non-technical founding teams	15%	16%
Working hours per day	9.78	9.95
Percentage of founders who lived in SV	25%	100%
Motivation (product vs. impact)	1.3 : 1	1 : 1
Customer (B2B vs. B2C)	1.8 : 1	2 : 1
Market (new vs. niche)	3 : 1	4 : 1
Local startup examples	Tweetdeck, Moshi Monsters, Wonga, Autonomy, Moo.com	

London

Component Index

London
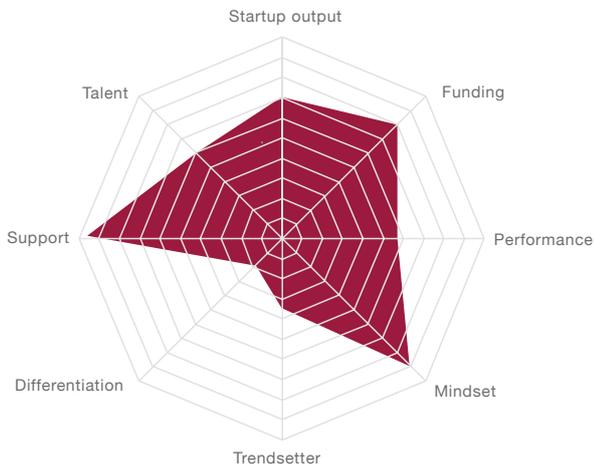
Silicon Valley
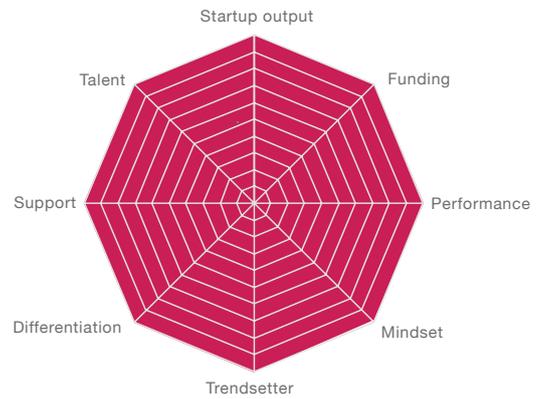
	London	Silicon Valley
Startup Output Index	7th	1st
Funding Index	5th	1st
Company Performance Index	10th	1st
Talent Index	9th	1st
Support Index	2nd	1st
Mindset Index	3rd	1st
Trendsetter Index	14th	1st
Differentiation from SV Index	17th	1st

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Overview

For the last 50 years the technology startup scene has been dominated by Silicon Valley, Boston and Tel Aviv. In recent years London has burst onto the scene and has become the most successful Startup Ecosystem in Europe, producing the largest output of startups in the European Union by far. But its output is still 63% lower than Silicon Valley. London looks to be well positioned for continued growth as the leading Startup Ecosystem in Europe, and first choice for fast growing US startups to establish their European headquarters.

Findings

London has a funding gap, with 81% less capital raised by startups before product market fit than startups in Silicon Valley. This is probably caused by a lack of super angels and micro VCs which are designed to target the deal sizes of 500k to 2.5M

London entrepreneurs are less ambitious and more risk averse than their counterparts in SV. They are 31% more likely to tackle smaller markets than their peers in SV, being 6% less likely to tackle markets ranging in soze $1Billion to $10 Billon, and 32% less likely to tackle markets larger than $10 Billion.

They are more motivated to build a great product than change the world.

They are 9% less likely to work full time before product market fit.

London has been slow in adopting mobile, with 30% fewer startups than SV and NYC in the mobile space.

London entrepreneurs focus 81% more on consulting as a side activity than SV entrepreneurs.

London's technology adoption is slower than SV. London startups rely more heavily on PHP (50%), and less on Java (10%), Ruby (13%), and Python (8%) compared to SV.

London startups have slightly less support from mentors than startups in Silicon Valley. (3.24 vs. 4.04 mentors per startup).

There are 42% fewer serial entrepreneurs in London than in SV.

London entrepreneurs are just as likely to tackle markets they have previous experience with as Silicon Valley entrepreneurs.

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London

Investor Perspective

There is an opportunity for investors to participate in large seed deals designed for super angels and Micro VCs.

"Young people in Europe have traditionally opted for lifetime government or corporate jobs. The European crisis, however, is changing that. Governments are maxed out in debt and corporate payrolls are shrinking. The three hottest startup cities in Europe right now are London, Berlin and Stockholm but there is startup activity all over the map. The challenge is that there is no Sand Hill Road in Europe. We need to have a critical mass of venture firms to build a more robust startup ecosystem."

Martin Varsavsky, CEO of Fon

Entrepreneur Perspective

In Europe, London is the only comparable hub to SV and NYC. It offers a wide range of support networks, the right capital infrastructure and diverse talent. In Europe, London leads, even though Berlin is emerging and being currently hyped.

"Despite various encouraging developments to encourage more angel investment, via the Seed Enterprise Investment Scheme, a lot more needs to be done to improve access to early stage financing. Generally investors are more risk averse, require far more validation and are less generous with valuations compared to those in the Valley."

Rajeeb Dey, CEO/Founder Enternships.com

"Setting up a business in the UK is probably the easiest in the world. A company can be registered online within 5 minutes and VAT registration takes another 10 minutes. Renting traditional offices can be expensive but with the prevalence of shared work spaces and tech incubators, it's not hard to find a reasonably priced office."

Rahul Ahuja, CEO, Taskhub.co.uk

Policy Maker Perspective

Its status of being globally integrated needs to be sustained over time. Policy makers can help by making it easier to bring in talent from abroad though easier immigration policies, tax breaks and incentives for later stage companies to base their operations in London.

"The last ten years has seen a near-total collapse of the innovation cost curve, thanks to the perfect storm of open-source, cloud infrastructure, and "free" global distribution via search, social and app stores. At the same time we have seen the start-up ecosystems in New York, London and Berlin emerge as meaningful competitors to Silicon Valley."

Nic Brisbourne, Partner at DFJ Esprit

"London and Berlin are close to reaching critical mass in the sense of concentration of great startups, investors and big companies to partner with. A lot of companies go to London to create their business because there they have investors close by, big clients and media attention that is read all over the world. The same happens in Berlin. Great teams are starting to emigrate to these cities, which attracts investors from other parts of Europe to move to those cities as well, creating a virtuous cycle."

Pedro Santos, Author European Founders at Work

Canadian Hub - Toronto

Local profile

Population
5,850,000

Density
4,149 / km² (10,750 / sq mi)

Entrepreneurs' persona

|		SILICON VALLEY
Age	35.63	34.12
Gender (F/M)	18% | 82%	10% | 90%
Education (dropout vs. master + PhD)	1 : 1.4	1 : 2.5
Serial Entrepreneur	44%	56%
Percentage of non-technical founding teams	17%	16%
Working hours per day	8.69	9.95
Percentage of founders who lived in SV	31%	100%
Motivation (product vs. impact)	1.1 : 1	1 : 1
Customer (B2B vs. B2C)	3 : 1	2 : 1
Market (new vs. niche)	3.2 : 1	4 : 1
Local startup examples	Wave Accounting, FreshBooks, Achievers, Polar Mobile, Idee	

Toronto

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Toronto
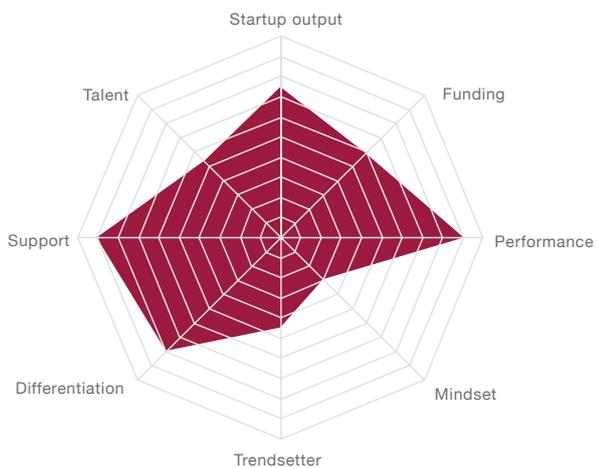
Silicon Valley
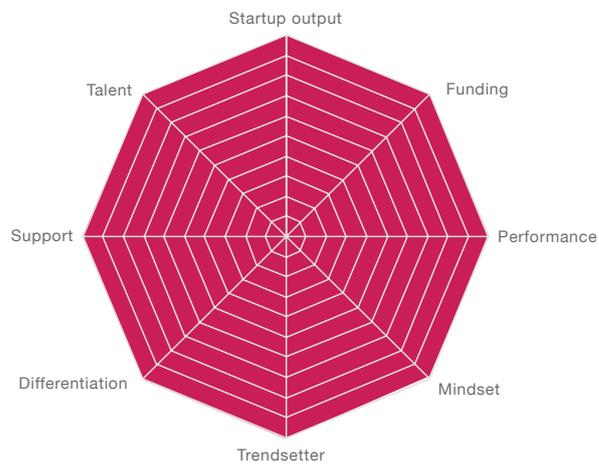
	Toronto	Silicon Valley
Startup Output Index	6th	1st
Funding Index	9th	1st
Company Performance Index	3rd	1st
Talent Index	10th	1st
Support Index	3rd	1st
Mindset Index	15th	1st
Trendsetter Index	12th	1st
Differentiation from SV Index	5th	1st

Overview

Toronto is the largest startup ecosystem in Canada and is one of the largest startup ecosystems globally even though it creates 85% less startups than SV. It has a healthy funnel of startups across the stages of the Startup Lifecycle. Toronto competes for startups with regional competitors such as NYC, Boston and nearby Waterloo.

Findings

Toronto entrepreneurs are as ambitious as their counterparts in SV. They consider building a great product and trying to change the world as their key motivations in similar proportions. They are similarly committed to work full time before product market fit, and focus similarly on 'new' vs 'niche' markets.

The key challenges of Toronto startups are similar to SV startups: customer acquisition, building the product, funding, and building the team.

Toronto has a similar technology adoption rate to SV.

Toronto startups are as data-driven as SV startups.

Toronto's startup ecosystem has the same healthy mix as SV of startups targeting consumers, enterprise, and SME as customers.

Toronto startups have a similar level of mentor support per startup to SV.

Startups in Toronto receive 71% less funding than SV startups. The capital deficiency exists both before and after product market fit. Toronto startups receive 70% less capital in Stage 2 (Validation) and 65% in Stage 4 (Scale).

The ecosystem most likely lacks a sufficient quantity of all kinds of startup capital sources: angels, super angels, accelerators, micro VCs, VCs etc. As a result Toronto startups rely more on self-funding, or rounds from family/friends.

Toronto startups employ fewer people per stage than startups in SV, which is likely a result of undercapitalization.

Startups in Toronto work 1 hour less per day on average than startups in Silicon Valley

Toronto startups rely 79% more on advertising and 21% more on license fee as revenue streams than their peers in SV. They rely 22% less on subscription, and 49% less on transaction fees as revenue streams.

71% more entrepreneurs do consulting as a side activity in Toronto than in SV.

Toronto startups outsource almost twice as much of their product development as in SV.

Toronto

The increasingly vibrant startup activity of Toronto combined with its lack of capital presents a large opportunity for investors.

"Canada has amazing entrepreneurs like Marcel Lebrun (Radian6), Derek Ball (Tynt), Terry Matthews, David Martin, Ted Livingston (Kik), Bernard Herscovich (BelAir Networks), and Rick Segal (Fixmo). The common element is that they go after big opportunities, inspire confidence, want to build big companies, stay close to customers/competitors, pivot quickly, and are relentless. We need to celebrate this type of entrepreneur and we need more of them!"

Chris Albinson, Managing Direcor and co-founder of Founders Circle Capital

Entrepreneur Perspective

If Toronto does not improve its funding climate, entrepreneurs may relocate to the nearby Startup Ecosystems of NYC and Boston where funding prospects are much better.

"Toronto is broken. Toronto is a young startup ecosystem, largely because it wasn't always possible to run a startup here. This has 2 effects as far as I can tell. The first is that most of the entrepreneurs here in Toronto are very young, the average age is definitely lower than the Startup Genome Project average of 33. And the second is that almost all of us aren't tied to Toronto. We have all been somewhere else, worked somewhere else, and got money somewhere else."

Zak Homuth, Serial Entrepreneur, Toronto

Policy Maker Perspective

Toronto's startup ecosystem is self-sufficient. However, policy makers can help closing the funding gap by attracting late-stage venture funds through tax breaks and incentives, and investor-friendly policies.

"We've got strong education, finance, life sciences, IT, creative industries and research institutions and cross pollination is going to be our key. The same holds true for people. Toronto attracts an incredible array of people from all over the globe. This gives us an edge in the war for talent and in taking products to a global market."

Mark Zimmerman, Advisor, MaRS

Canadian Hub - Vancouver

Local profile

Population
2,425,000

Density
5,249 / km² (13,590 / sq mi)

Entrepreneur persona

|		SILICON VALLEY
Age	36.7	34.12
Gender (F/M)	8% | 92%	10% | 90%
Education (dropout vs. master + PhD)	1 : 0.6	1 : 2.5
Serial Entrepreneur	50%	56%
Percentage of non-technical founding teams	9%	16%
Working hours per day	9.50	9.95
Percentage of founders who lived in SV	26%	100%
Motivation (product vs. impact)	2 : 1	1 : 1
Customer (B2B vs. B2C)	1.6 : 1	2 : 1
Market (new vs. niche)	2 : 1	4 : 1
Local startup examples	Flickr, Summify, Unbounce, PayrollHero, MediaCore	

Vancouver

Component Index

Vancouver
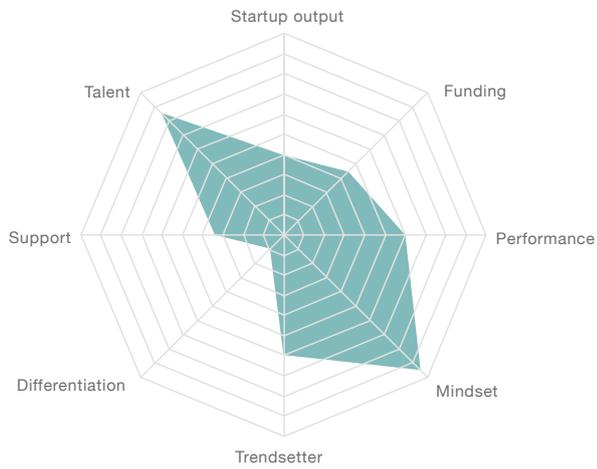
Silicon Valley
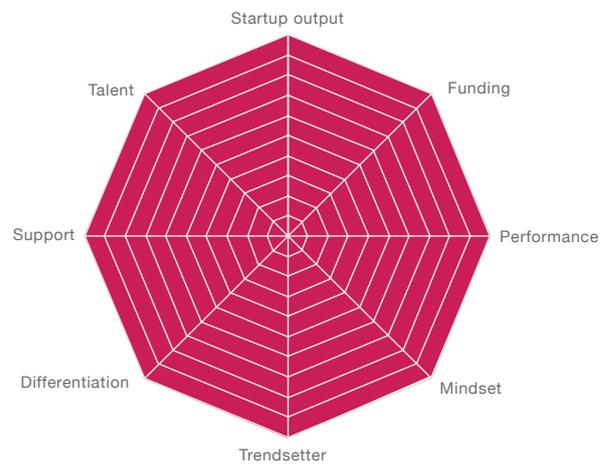
	Vancouver	Silicon Valley
Startup Output Index	13th	1st
Funding Index	12th	1st
Company Performance Index	9th	1st
Talent Index	4th	1st
Support Index	14th	1st
Mindset Index	2nd	1st
Trendsetter Index	9th	1st
Differentiation from SV Index	19th	1st

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Overview

Vancouver is the second largest startup ecosystem in Canada. Globally it ranks number 9 even though it creates 85% fewer startups than SV. Vancouver has a healthy funnel of startups across the Startup Lifecycle. Seattle is a strong regional competitor for talent.

Findings

Vancouver startups are 8% less likely to monetize directly than SV startups.

The funding climate for startups in Vancouver is insufficient, with startups receiving 80% less funding than startups in SV. They receive 72% less in Stage 2 (Validation) and 97% in stage 4 (Scale). The late stage funding market basically doesn't exist for Vancouver startups.

Vancouver startups employ less people per startup than their peers in SV.

Compared to entrepreneurs Silicon Valley, Vancouver entrepreneurs 59% less likely to consider customer acquisition their main challenge.

Vancouver entrepreneurs rely 2.75x more on advertising as a revenue stream than SV entrepreneurs.

Entrepreneurs in Vancouver are less likely to tackle 'new' markets and more likely to tackle 'niche' markets than their peers in SV.

Entrepreneurs in Vancouver are 10% less likely to be serial entrepreneurs compared to entrepreneurs in Silicon Valley.

Startups work the same hours in Vancouver as in SV.

Vancouver has a similar technology adoption rate to SV.

Vancouver startups are as data-driven as SV startups.

The Vancouver startup ecosystem has the same healthy mix of startups targeting consumers, enterprise, and SME customers as the SV startup ecosystem.

Vancouver entrepreneurs focus 76% more on mobile (30% vs. 17% in SV), and 21% less on web startups (58% vs. 73% in SV).

The number of mentors per startup is almost 25% higher in Vancouver than in SV There are similar product development outsourcing levels in Vancouver as in SV.

Vancouver

Investor Perspective

Similarly to Toronto, Vancouver startups are heavily undercapitalized in later stages. This creates an opportunity for later stage funds to find good startups cheaply.

Entrepreneur Perspective

Being the second largest ecosystem in Canada, Vancouver functions as a local talent magnet. But after successfully finding Product Market Fit, entrepreneurs might consider moving to a more capitalized hub.

Startup Genome
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Telefónica
Digital

Paris

Local profile

Population
10,600,000

Density
21,196/km² (54,900/sq mi)

Entrepreneur persona

		SILICON VALLEY
Age	33.21	34.12
Gender (F/M)	7% | 93%	10% | 90%
Education	95% with higher education	1 : 2.5
Serial Entrepreneur	37%	56%
Percentage of non-technical founding teams	25%	16%
Working hours per day	9.88	9.95
Percentage of founders who lived in SV	25%	100%
Motivation (product vs. impact)	2.6 : 1	1 : 1
Customer (B2B vs. B2C)	3 : 1	2 : 1
Market (new vs. niche)	3 : 1	4 : 1
Local startup examples	Stupeflix, Kwaga, Appsfire, Hypios	

Paris

Component Index

Paris
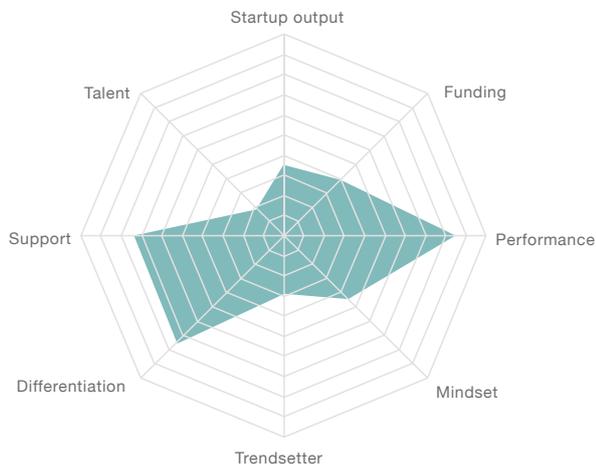
Silicon Valley
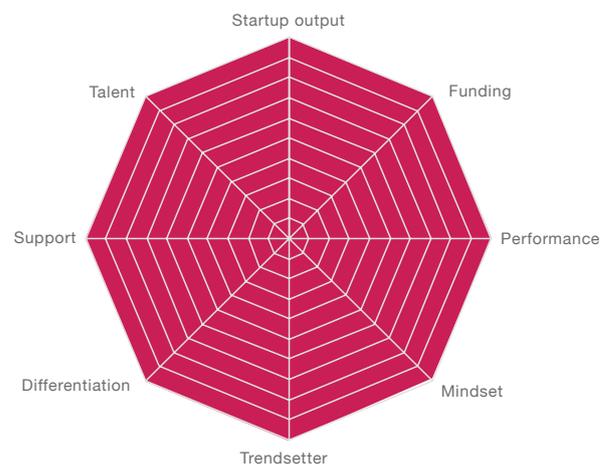
	Paris	Silicon Valley
Startup Output Index	14th	1st
Funding Index	13th	1st
Company Performance Index	4th	1st
Talent Index	17th	1st
Support Index	6th	1st
Mindset Index	12th	1st
Trendsetter Index	15th	1st
Differentiation from SV Index	6th	1st

Overview

Despite being the world's most popular magnet for tourists, Paris is not yet much of a magnet for out of town entrepreneurs. One of the most important factors in creating a thriving entrepreneurial scene and self-sustainable startup ecosystem is the ability to attract talent from abroad. Immigrants have played a critical role in the success of Silicon Valley, even in the face of very tough immigration laws. In fact, in the US one out of six business owners are immigrants. Paris has a long way to go in this area to be able to compete with London and Berlin as the top Startup Ecosystem in Europe. Paris is ranked 9th globally, in large part because of its healthy distribution of startups across the first 4 stages of the Startup Lifecycle.

Findings

Paris startups are as likely to monetize directly as SV startups

Paris entrepreneurs are much more likely to have graduate degrees than entrepreneurs in SV (97% Master & PhD vs. 42% in SV).

Startups in Paris employ as many people per stage as startups in Silicon Valley.

There are no significant differences in the sizes of the markets entrepreneurs in Paris tackle vs. entrepreneurs in SV.

Paris entrepreneurs are as likely to work full time before product market fit as Silicon Valley entrepreneurs.

Paris entrepreneurs work 9.88 hours per day, which is almost the same as Silicon Valley entrepreneurs (9.95).

Paris startups are as data-driven as SV startups.

The Paris startup ecosystem has the same healthy mix of startups targeting consumers, enterprise, and SME customers.

Paris startups outsource as little product development as their peers in SV.

Startups in Paris raise 62% less funding than startups in SV.

There is a significant funding gap after product market fit in Paris. In total, Paris startups raise 95% less capital in stage 3 (Efficiency Stage) and 91% less capital in stage 4 (Scale Stage) than SV startups.

Due to the dearth of super angels and venture capital in Paris, entrepreneurs are almost solely reliant on self-funding, friends and family, and incubators for capital.

Motivation in Paris is significantly different to SV. Entrepreneurs in Paris are 3x more motivated by creating a "clone" of an already successful startup for their local market.

Entrepreneurs in Paris are 37% more likely to be motivated by building a great product than their peers in SV, and 45% less likely to be motivated by changing the world.

For entrepreneurs in Paris team building is 3x more likely to be a key challenge than for entrepreneurs in SV.

Paris entrepreneurs rely much less on advertising, but more on license fee revenue streams than their peers in SV.

Paris

Findings continued

There is lower technology adoption in Paris than in SV: Paris engineers are 72% more likely to use PHP; 63% more likely to use Java; 2.2x more likely to use .Net; 2.5x more likely to use C++, 75% less Ruby, and 2x less likely to use Python.

Paris entrepreneurs focus much less on mobile (7% vs. 17% in SV), and more on non-web software (16% vs. 3% in SV).

Paris entrepreneurs are 50% more likely to tackle niche markets than SV entrepreneurs.

Paris has more Automator companies than SV (34% vs. 18%), and less challenger companies (11% vs. 21%).

Paris startups have 48% less support from mentors per startup than startups in SV.

Entrepreneurs in Paris are 34% less likely to be serial entrepreneurs than entrepreneurs in SV.

Paris entrepreneurs are 50% less likely to have previous experience in the market they are tackling than entrepreneurs in SV.

Investor Perspective

Paris is by far the largest startup ecosystem in France and the second biggest in Europe, after London. It most likely will continue to grow, but in order to so, must solve its nonexistent late stage capital problem.

"Seen from abroad, France is the last country an entrepreneur wants to go."

Marc Simoncini, Jaïna Capital

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Entrepreneur Perspective

Paris shows a lot of potential but it lacks many necessary elements for startups to scale startups into billion dollar companies. The most significant being its lack of capital for entrepreneurs who have found product market fit and are ready to scale. If Paris

"On a political and economic level, Europe needs to be tighter knit to trigger a European web of startup ecosystems. Each of them must develop an unique position within the web. French and German entrepreneurs are starting to even work closer together. Europe needs this more open world."

Nicolas Metzke, Co-Founder & CEO of Melvin & Hamilton Digital

Policy Maker Perspective

Paris can enter the Global Integration stage when more investors set up late-stage funds in Paris. Policy makers can encourage this with appealing tax breaks and tax incentives. Enabling more mentors to help and share their crucial knowledge with local startups is important. Policy makers should also do what they can to move towards a more open culture of sharing and giving. Paris will experience a brain drain if does not improve.

"In the last few years, the European startup ecosystem has evolved from small isolated communities to a much more interconnected and vibrant ecosystem. This interconnectivity between each European country startup community needs to be fostered and accelerated in order to accelerate the rhythm of innovation in European. Also, we need to bring more liquidity to the exit market of startups in order to help improve the overall ecosystem."

Pedro Santos, Author of 'European Founders at Work' and CEO/Founder all-desk

"Europe's culture is deeply inhospitable to entrepreneurs; wanting to grow a startup into a behemoth is quite as countercultural as piercings and performance arts"

The Economist, European Entrepreneurs. Les misérables

Sydney

Local profile

Population
4,725,000

Density
2,058/km² (5,330/sq mi) (2006)

Entrepreneur persona

|		SILICON VALLEY
Age	33.43	34.12
Gender (F/M)	3% | 97%	10% | 90%
Education (dropout vs. master + PhD)	1 : 1.8	1 : 2.5
Serial Entrepreneur	45%	56%
Percentage of non-technical founding teams	20%	16%
Working hours per day	9.17	9.95
Percentage of founders who lived in SV	17%	100%
Motivation (product vs. impact)	2 : 1	1 : 1
Customer (B2B vs. B2C)	5 : 1	2 : 1
Market (new vs. niche)	1.7 : 1	4 : 1
Local startup examples	Atlassian, Spreets, Freelancer.com, Wooboard, Pygg,BigCommerce	

Sydney

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Sydney
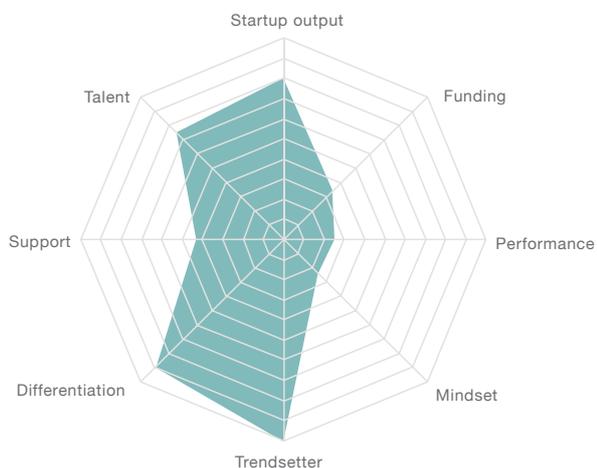
Silicon Valley
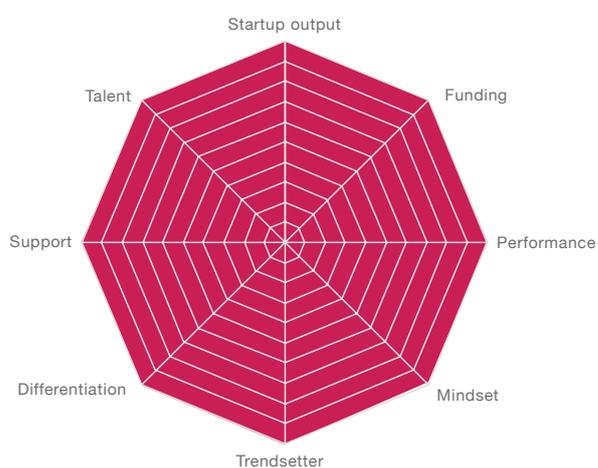
	Sydney	Silicon Valley
Startup Output Index	5ht	1st
Funding Index	14th	1st
Company Performance Index	16th	1st
Talent Index	6th	1st
Support Index	12th	1st
Mindset Index	16th	1st
Trendsetter Index	1st	1st
Differentiation from SV Index	3rd	1st

Startup Genome

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Overview

Sydney is well-known for its beach lifestyle and is virtually surrounded by water. A question often posed is whether Sydney's laid-back atmosphere hinders entrepreneurs from successfully scaling their startups into large businesses. Although Sydney is Australia's largest startup ecosystem, with a healthy funnel of startups distributed throughout the startup lifecycle and healthy diversity of targeted customers and markets, it has not reached a position where it influences markets and societies outside Australia.

Findings

Sydney startups are 9% less likely to monetize directly than SV startups. Sydney entrepreneurs are as highly educated as SV entrepreneurs (37% Master & PhD vs. 42% in SV).

The key challenges for Sydney startups are similar to SV startups. Both consider customer acquisition, building the product, funding, and building the team to be their primary challenges.

Entrepreneurs in Sydney have a similar amount of mentors per startup as entrepreneurs in Silicon Valley.

Sydney entrepreneurs work 9.17 hours per day, almost as many as in SV (9.95).

Sydney startups outsource as much product development as their peers in SV, with less than 6% of product development being outsourced.

Founders in Sydney are as likely to tackle markets they have had previous experience in, as entrepreneurs in Silicon Valley (50%)

Startups in Sydney raise 59% less capital than startups in Silicon Valley.

Funding sources in Sydney are skewed towards self-funding, friends/family and incubators; significantly away from super angels and VCs.

Startups in Sydney have 43% fewer employees per stage compared to SV.

Sydney startups are 53% less likely to focus on consumers and 62% more likely to focus on SMEs.

Entrepreneurs in Sydney are 20% less likely to be a serial entrepreneur than entrepreneurs in SV.

Sydney startups are 57% more likely to tackle small markets compared to startups in Silicon Valley.

Sydney startups are 13% more likely to tackle markets sized $1 Billion to $10 Billion and 61% less likely to tackle markets greater than $10 Billion.

Sydney entrepreneurs are 82% less likely to create a quick flip, 86% less likely to want to get rich, 45% less likely to want to change the world, and are 37% more likely to want to build a great product.

Sydney entrepreneurs are 23% less likely to commit to working full time before finding product market fit than their peers in SV.

Sydney

Investor Perspective

Due to Sydney's early stage funding gap, there is an opportunity for investors to increase seed stage activity there, especially for super angels and venture capitalists. The necessary capital supply will help founders to commit earlier full-time to their startups.

"We have an urgent need for capital in the Efficiency stage. At this stage of the startup lifecycle there is practically no investment happening and companies are failing for the wrong reasons. We are seeing signs of life here but have a long way to go."

Phil Morle, Co-CEO Pollenizer

Entrepreneur Perspective

Sydney startups would benefit from diversifying their focus beyond just targeting SME customers in niche markets.

"Sydney is on its second or third generation of entrepreneurs and is building its own momentum. We are very close to California and many Sydney entrepreneurs now call San Francisco home, providing a strengthening connection point for up-and-coming entrepreneurs. Increasingly, Sydney companies are looking to Asia and seeing themselves as part of an Asia Pacific ecosystem."

Phil Morle, Co-CEO Pollenizer

Policy Maker Perspective

Although Sydney is the largest startup ecosystem in Australia it still has plenty of room for improvement. More accommodating immigration policies, tax breaks and incentives for startups and investors could help.

"Even if the commodities boom lasts decades, Australia is in trouble. In Silicon Valley it took 60 years to create the structural, cultural and financial infrastructure to repeatedly create new billion dollar technology based industries. The problem is, we are wired to think in a linear way. We massively underestimate the long term impact of current technology trends and market shifts caused by technology. "

Adrian Turner, Author of Blue Sky Mining

São Paulo

Population
21,300,000

Density
2,469/km² (6,395/sq mi)

Entrepreneur persona

|		SILICON VALLEY
Age	30.80	34.12
Gender (F/M)	4% | 96%	10% | 90%
Education (dropout vs. master + PhD)	1 : 10	1 : 2.5
Serial Entrepreneur	23%	56%
Percentage of non-technical founding teams	24%	16%
Working hours per day	8.86	9.95
Percentage of founders who lived in SV	26%	100%
Motivation (product vs. impact)	2.4 : 1	1 : 1
Customer (B2B vs. B2C)	1 : 1	2 : 1
Market (new vs. niche)	3 : 1	4 : 1
Local startup examples	Peixe Urbano, Dafiti, Kekanto, NetShoes, Descomplica	

São Paulo

Component Index

São Paulo
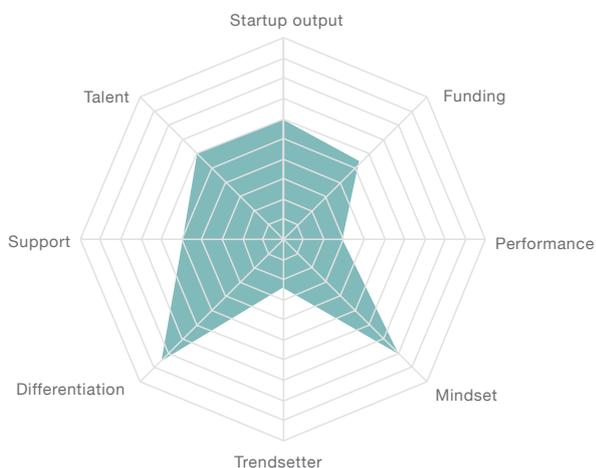
Silicon Valley
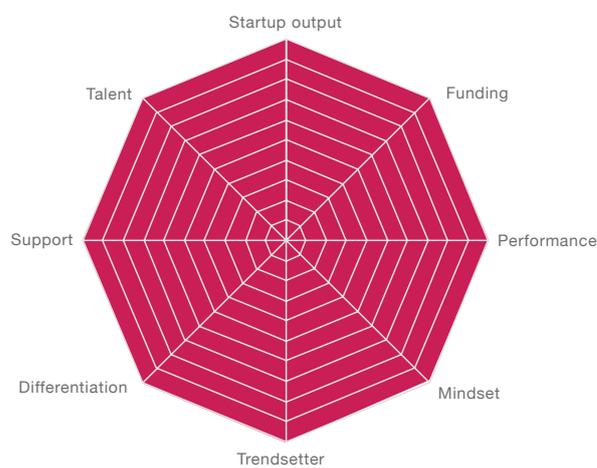
	Sao Paolo	Silicon Valley
Startup Output Index	9th	1st
Funding Index	10th	1st
Company Performance Index	15th	1st
Talent Index	19th	1st
Support Index	11th	1st
Mindset Index	5th	1st
Trendsetter Index	16th	1st
Differentiation from SV Index	4th	1st

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Overview

The Brazilian economy has been growing steadily in recent years. Being part of the of the BRIC economies, Brazil's economic outlook is very promising. The South American entrepreneurial community is now being described as the TechnoLatinas. São Paulo is by far the largest startup ecosystem in Brazil. However compared to SV, it has created 80% less startups. The São Paulo ecosystem has a healthy distribution of startups throughout the startup lifecycle stages. The hub ranks 13 globally.

Findings

Sao Paulo startups are 20% less likely to monetize directly than SV startups.

São Paulo entrepreneurs are similarly educated as SV entrepreneurs (40% Master & PhD vs. 42% in SV)

Startups in Sao Paulo employ as many people per stage as startups in Silicon Valley.

São Paulo startups are as data driven as SV startups.

The key challenges of Sao Paulo startups are similar to SV startups: customer acquisition, building the product, funding, and building the team.

The Sao Paulo startup ecosystem has the same healthy mix of startups targeting consumers, enterprise, and SME customers as SV.

Sao Paulo entrepreneurs tackle 'new' markets over 'niche' markets with equal proportion to SV entrepreneurs.

São Paulo entrepreneurs have an average age of 30.80, 3.32 years younger than their peers in SV.

São Paulo has a significant funding gap. Before and after product/market fit São Paulo startups raise 86% less capital than SV startups.

São Paulo startups use significantly different revenue streams to monetize than SV startups. Compared to SV, São Paulo startups focus 26% less on subscription models, half as much on advertising, and 30% more on transaction fees, and 2.2x more on a license fees.

São Paulo startups have 37% less support from mentors than SV startups. On average, startups in São Paulo have 2.51 mentors and SV startups have 4 mentors.

Entrepreneurs in Sao Paulo are 59% less likely to be serial entrepreneurs compared to entrepreneurs in Silicon Valley.

SV startups are more than 6 times more likely to build mobile products than startups in Sao Paulo (3% vs. 17% in SV).

There is lower technology adoption in São Paulo than in SV: São Paulo startups rely heavily on PHP and .NET, and less on Java and Ruby, compared to their peers in SV (PHP 38%; Java 13%; Ruby 0%; Python 12%, .NET 37%).

São Paulo

Findings continued

São Paulo startups outsource more crucial product development than their peers in SV. Nearly 13% of product development is outsourced (vs. 5.5% in SV).

São Paulo startups tackle 60% more smaller markets than their peers in SV. They are 2% less likely to tackle $1B - $10B, and 52% less likely to tackle $10B+ markets.

São Paulo entrepreneurs are more driven by creating a great product than making impact.

São Paulo entrepreneurs are 13% less likely to commit full time before finding product market fit than their peers in SV.

São Paulo entrepreneurs work 8.86 hours on average per day, 1.08 fewer hours than entrepreneurs in SV.

Investor Perspective

São Paulo is the largest and most powerful startup ecosystem in Brazil. Early stage funds can make a significant contribution to helping many local companies reach product market fit. A fund concentrating on late-stage companies will enable São Paulo startups to scale into local market leaders and potential global challengers.

"I don't think SP has such a stronger ecosystem than other regions in Brazil. Obviously, since it's the economy hub, it has a larger supply of entrepreneurs, MBAs, financial analysts, and investors. On the other hand, Brazil's best startups blossom in Rio, Porto Alegre, Brasilia, Recife, Campinas, Florianopolis and Belo Horizonte as well as in São Paulo. Unfortunately, it's a scattered ecosystem with no unique central ecosystem."

Yuri Gitahy, Founder Aceleradora

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Entrepreneur Perspective

Entrepreneurs in Brazil have a great opportunity to be part of an emerging startup ecosystem in São Paulo. São Paulo is likely to grow by attracting more capital and talent locally. At the center of a huge economy, São Paulo can serve a large home-grown market to test their ideas before global expansion.

"The São Paulo startup ecosystem is finally happening – there's a big market opportunity, good entrepreneurs, new startups with innovative business models, and angels and VCs with money available willing to take a risk. What we need to see in the next couple of years are the startups that are going to succeed and fail, along with exits hat were non-existent in Brazil before."

Iavio Pripas, CEO & Co-Founder Fashion.me

"The entrepreneurial buzz in São Paulo makes it easy for someone to establish a good business network in a couple of weeks. Our major problem here was structural: it is quite complicated to structure an investment based on options or convertible notes based on the Brazilian legal system."

Augusto Camargo, co-founder, aaTag

Policy Maker Perspective

"For decades, Brazilians were not natural born entrepreneurs - only recently, GenY started to think different and entrepreneurship became a motto. At the same time, there is a deep economic change with the rise of the lower income classes that generates a massive consumer market that will evolve over the next 10 or 20 years. So it's not about the ecosystem, it's about the growing number of market opportunities."

Yuri Gitahy, Founder Aceleradora

Moscow

Local profile

Population
16,200,000

Density
4,583 / km² (11,870/sq mi)

Entrepreneur persona

|		SILICON VALLEY
Age	27.90	34.12
Gender (F/M)	7% | 93%	10% | 90%
Education	1 : 2.3	1 : 2.5
Serial Entrepreneur	50%	56%
Percentage of non-technical founding teams	13%	16%
Working hours per day	9.38	9.95
Percentage of founders who lived in SV	10%	100%
Motivation (product vs. impact)	3.6 : 1	1 : 1
Customer (B2B vs. B2C)	1 : 2.5	2 : 1
Market (new vs. niche)	1.25 : 1	4 : 1
Local startup examples	Yandex, Ozon, Mail.ru, Abbyy and Kaspersky, Hipway, Zingaya	

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Moscow

Component Index

Moscow
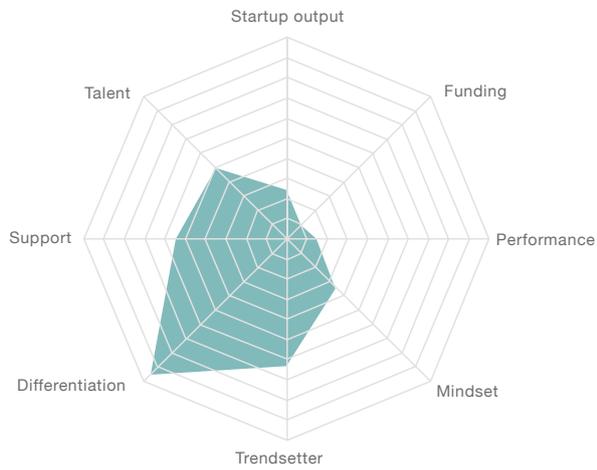
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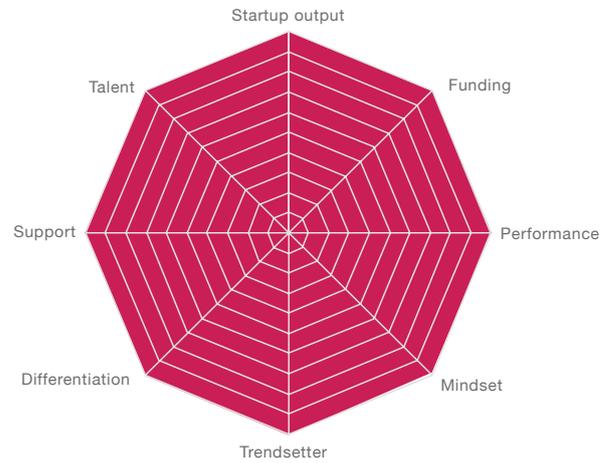
	Moscow	Silicon Valley
Startup Output Index	16th	1st
Funding Index	19th	1st
Company Performance Index	18th	1st
Talent Index	11th	1st
Support Index	10th	1st
Mindset Index	14th	1st
Trendsetter Index	8th	1st
Differentiation from SV Index	2nd	1st

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Russia's internet economy reached a tipping point in 2010, lead by Groupon's acquisition of Russian daily deals site Darberry, and Mail.ru's IPO. According to Vastlane Ventures' Deal Book of Russian Internet, four themes were dominant in 2010: the growth in government funding for accelerators and incubators; dramatically increased amounts of seed capital; a scarcity of later stage financing rounds; and limited exit opportunities. Although copying established Western internet business models and localizing them for the domestic market has driven growth, the Moscow startup ecosystem now needs to step up its efforts to build globally viable companies. Moscow is ranked 14 and has produced 89% less startups than SV. The ecosystem does not have a healthy distribution of startups across all 4 developmental stages or a healthy mix of different types of end customers.

Findings

Moscow startups are 32% more likely to monetize directly than SV startups.

Moscow entrepreneurs do have more Master degrees than SV entrepreneurs (69% Master vs. 37% in SV). On the other, they are also more likely to have no education at all (8% Master vs. 4% in SV), or only have a high school degree (15% vs. 2% in SV)

Moscow startups are as data-driven as SV startups.

There is an overall funding gap in Moscow, with 80% less funding raised by Moscow startups than SV startups.

There is a significant funding gap before and after product/market fit in Moscow. In total, Moscow startups raise 93% less capital in stage 2, 94% less in stage 3, and 76% less capital in stage 4 than SV startups. Funding sources in Moscow are relatively high on family/friends and self-funding, and low on Venture Capital.

Moscow lacks a healthy mix of different revenue models among startups in comparison with SV.

In terms of total addressable market size, and the type of market tackled, Moscow startups are much less ambitious as SV startups.

Moscow startups tackle markets that are twice as small compared to SV startups.

Moscow entrepreneurs tackle are twice as likely to tackle niche markets.

They are 18% less likely to tackle markets with sizes between $1 Billion and $10 Billion, and 74% less likely to tackle markets larger than $10 Billion.

Russian entrepreneurs care more about building a great product than changing the world, and work more than an hour less per day than SV entrepreneurs (8.76 vs. 9.95 in SV).

The key challenges of startups in Moscow differ greatly from startups in SV:

Moscow startups are 3.67x more likely to be concerned with building the product while being half as likely to be concerned about acquiring customers, 70% less likely to be concerned about fundraising and 50% less likely to be concerned about building the team.

Moscow

Findings continued

Technology adoption in Moscow is slow. Software engineers rely mostly on PHP, Python and .Net, with little to no focus on Java and Ruby compared to software engineers in SV.

There are 59% fewer mobile startups in Moscow than in SV.

Moscow entrepreneurs are 2.1x more likely to target consumers, 68% less likely to target enterprises and 41% less likely to target SMEs.

Startups in Moscow have 61% fewer mentors per company compared to startups in Silicon Valley.

Moscow entrepreneurs are 6.22 years younger than SV entrepreneurs.

There are 10% less serial entrepreneurs proportionally in Moscow compared to SV.

Investor Perspective

For investors, Russia is an attractive market. As soon as Russian startups begin to think more globally, it will be even more interesting for investors. Currently there is an opportunity to raise early and late-stage funds to help close the funding gap. This will help the Moscow ecosystem to mature and makes investments more likely to succeed.

"An emerging trend is the investment activities of the local serial internet entrepreneurs. A number of successful Russian and Eastern European internet entrepreneurs are investing in new projects, leveraging their experience in building internet companies, existing internet traffic and cash flow."

TechCrunch, Everything You Need To Know About The Startup Ecosystem In Russia And Eastern Europe

Policy Maker's Perspective

Policy makers are only supporters. They should not lead development. We heard from our interviewees that they prefer to operate under the radar of the national government, because they are simply not sure about potential political actions. The Moscow startup ecosystem has created significant jobs and contributed to the overall nation's economy. For Russia, high-growth technology entrepreneurship can help to reduce its dependency on fossil fuels.

"Most entrepreneurs will probably say lack of money, but I disagree. The major pain, in my opinion, is the fragmentation of the market. You don't launch in Europe, you launch country by country. You don't raise money in Europe; you raise money in London, Berlin, Moscow etc. This fragmentation makes it harder and more expensive to launch products in a big market and also reach the right people for fundraising and business development."

Pedro Santos, Author European Founders at Work

Entrepreneur Perspective

There is a significant gap between the challenges entrepreneurs say they have, and the ones that the data appears to show they have. Although founders in Moscow think that funding isn't a major problem, our data clearly shows that Moscow has a huge funding gap in all stages of the Startup Lifecycle.

"It's all about people and their mindset. Startups need inspiring people to follow, mentors to teach, and money to support ideas. You can build an ecosystem with just a few committed people to help inspire others. A necessary requirement is an entrepreneurial mind set and there is no policy to easily foster that entrepreneurial mind set."

Jane Smorodnikova, CEO of Russian startup community Freshle.com

In Moscow you can get easy access to the capitals, talent and clients. It's all concentrated here inside Sadovoe ring. If you want to get into Russia and CIS market, it's the place you should be. But from the global perspective it's hard to find any advantages of being in Moscow. It's quite expensive, high crime rate, traffic and climate is a nightmare.
This country was isolated from the rest of the world for almost 70 years. And what you see now is the repercussion of it in the people minds. Most of the startups aimed on the local market. Very few companies can think and compete globally.

On Funding: Funding infrastructure is relatively young in Russia. Especially early-stage financing. It was almost non-existent 3 years ago. But situation is improving and to my mind now there are more money on the market than the projects to invest. The other part of the problem it's a restriction related to legislation and taxation in Russia. Their inflexibility and enormous level of bureaucracy led to the situation when most of the investments being made through offshore entities.

On Change: No one is satisfied with current situation. Everyone wants to change it. But Russia is difficult country in all aspects so it cannot be done overnight.

Michael Balakin, Managing Director at sociomantic labs GmbH

Often Russian startups address Russian markets first and only then start expanding internationally. That is especially true for first time entrepreneurs. The few startups that are founded, funded, or seriously mentored by successful serial entrepreneurs with international experience choose to address global markets from day 1. But these examples are not too frequent.

On Funding: First, Moscow is an expensive place to live and do business, so $20K without any infrastructure support will not get a startup too far along.
Second, there's a lot of funding through competitions, grants, etc that startups can apply for or win.
Third, there's some private early stage money that give capital in exchange for too much equity (40%+), but that's not for serious startups.
Forth, for quality projects there's always capital in the range of $100-200K, but a big obstacle is Russian legislation: it's not smart to structure the deal in Russia, and proper deal structure in an offshore or in US takes money. Nobody wants to spend $10-20K on legal fees for a $100K deal.

Outlook: Moscow is developing very fast. We expect several internet IPOs from companies started less than 5-6 years ago, many internet companies with tens of million USD in revenue, and 150+ VC funding deals over 1 mln USD in the next year.

Dmitry Repin, CEO at Digital October

Berlin

Local profile

Population
4,375,000

Density
1,520 / km² (3,939 / sq mi)

Entrepreneur persona

		SILICON VALLEY
Age	31.86	34.12
Gender (F/M)	3% | 97%	10% | 90%
Education	1 : 6	1 : 2.5
Serial Entrepreneur	40%	56%
Percentage of non-technical founding teams	17%	16%
Working hours per day	9.18	9.95
Percentage of founders who lived in SV	7%	100%
Motivation (product vs. impact)	1.6 : 1	1 : 1
Customer (B2B vs. B2C)	1.5 : 1	2 : 1
Market (new vs. niche)	1.8 : 1	4 : 1
Local startup examples	Soundcloud, Gidsy, EyeEm, Amen, Readmill	

Berlin

Component Index

Berlin
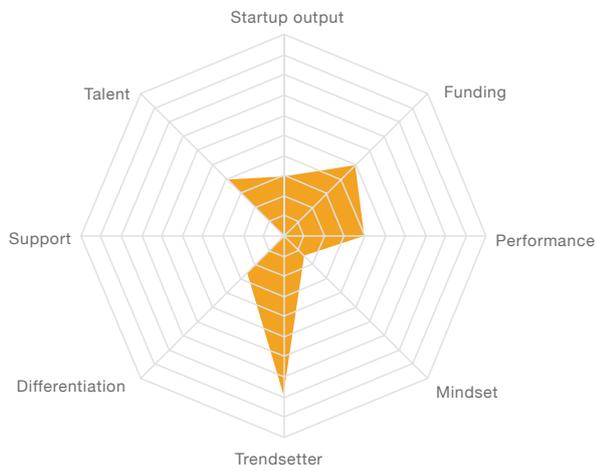
Silicon Valley
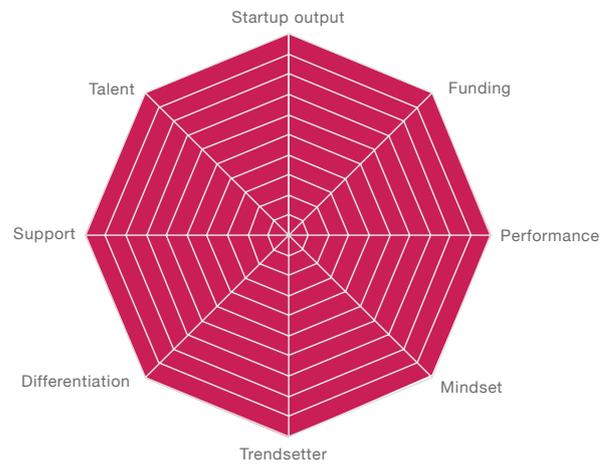
	Berlin	Silicon Valley
Startup Output Index	15th	1st
Funding Index	11th	1st
Company Performance Index	13th	1st
Talent Index	13th	1st
Support Index	20th	1st
Mindset Index	18th	1st
Trendsetter Index	5th	1st
Differentiation from SV Index	16th	1st

Startup Genome
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Overview

Since its reunification in 1990, Berlin has re-established itself as a thriving cultural centre. It is now being hyped as the new startup hotspot in Europe. Whether Swedish Alexander Ljung, or Dutch Edial Dekker, Berlin is a magnet for worldwide entrepreneurs and investors. Berlin feels like a startup itself, constantly changing and driving forward. To become self-sufficient, Berlin needs to take certain steps to better support entrepreneurs to build global startups. Matthew Brimer, co-founder, General Assembly, acknowledged that "Berlin is an up and coming community. If you look at where New York was a couple of years ago, you can see a parallel to where Berlin is now". The question is whether the city can live up to its hype. Berlin is ranked 15 and is creating 88% fewer startups than SV. However, the ecosystem generally shows a healthy distribution of startups across the Startup Lifecycle.

Findings

Berlin startups are 11% more likely to monetize directly than SV startups.

Berlin entrepreneurs are less educated than SV entrepreneurs (59% Master & PhD vs. 42% in SV)

Startups in Berlin employ as many people per stage as startups in Silicon Valley.

Berlin entrepreneurs are as ambitious as SV entrepreneurs in terms of their motivation, working hours, and full time commitment before product/market fit.

Berlin has high technology adoption, startups heavily rely on Ruby, and not at all on Java and .NET.

Berlin entrepreneurs are almost 2 years younger on average than SV entrepreneurs.

The key challenges of Berlin startups are similar to SV startups.

There is an overall funding gap in Berlin, with 80% less funding raised by Berlin startups than SV startups.

There is a specific significant funding gap before and after product market fit in Berlin. In total, Berlin startups raise 87% less capital before product market fit and 79% less after product market fit than SV startups.

Funding sources in Berlin are relatively high on banks and low on accelerators, and VCs.

In terms of total addressable market size, and the type of market, Berlin startups are much less ambitious than SV startups.

Berlin startups are 54% more likely to tackle smaller markets than their peers in SV. They are 10% less likely to tackle $1Billion to $10 Billion markets, and 51% less likely to tackle markets greater than $10 Billion. Berlin entrepreneurs tackle are almost twice as likely to target niche markets compared to SV entrepreneurs.

Berlin startups rely 75% more on advertising as a primary revenue stream than their peers in SV (14% vs. 8% in SV).

Berlin

Findings continued

Berlin startups are 28% less data driven than SV startups.

Berlin startups are 2.57x more likely to do consulting on the side than SV startups.

Startups in Berlin have 45% fewer mentors per company compared to startups in Silicon Valley.

Berlin startups outsource almost double the amount of product development compared than their peers in SV.

There are 28% fewer serial entrepreneurs, proportionally, in Berlin than in SV.

Investor Perspective

Berlin offers great opportunities for investors interested in early stage startups. Overall, Berlin significantly lacks funding from VC and super angels. For VCs there are both early stage and late sage funding opportunities.

"Silicon Valley is not something that was created overnight; it was probably 50 years in the making. So with each generation, the ecosystem just gets stronger. I would assume therefore that it might take another 40 years for Berlin or other places in Germany to have a vibrant tech community. It's not something that just happens from one day to the next."

Paul Singh, Partner 500Startups

"I'm bullish on the startup sector all over the world but Europe is closer to NYC than most of the rest of the world, both in terms of how long it takes to get there and also in terms of culture, language, and a host of other things that matter in the relationship between entrepreneur and investor. Berlin and NYC are like sister startup cities. They remind me of each other in many ways with Berlin a few years behind NYC in terms of its overall development."

Brad Feld, Managing Director Foundry Group

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Entrepreneurs Perspective

Early successful entrepreneurs (turned business angels) now pump their back capital into a burgeoning scene. New Berlin entrepreneurs share their know how and experiences among each other, but lack significant support from advisors and mentors. In terms of living cost and lifestyle, Berlin might be the best place to start a company right now. However, for scaling it, Berlin startups might consider relocating as the ecosystem is not mature enough in terms of capital, support infrastructure, and mind set.

"Berlin stood out a long way for us when we were looking for a place to establish SoundCloud, not least for the fact that it offers such a vibrant intersection of artistic creativity and technological knowledge. The city operates very much on a mantra of 'going your own way'; a counterculture mind set that embodies the startup spirit of looking at the world differently and trying to do something better. We are always hearing about fresh ideas and interesting opportunities cropping up across the city, and the network of fellow startups we're proud to be a part of makes our working lives that bit more interesting every day."

Alexander Ljung, Founder & CEO, SoundCloud

Policy Maker's Perspective

"Berlin is an up and coming community. If you look at where New York was a couple of years ago, I think you see a parallel to where Berlin is now."

Matthew Brimer, co-founder, General Assembly

"Berlin acts almost like a start-up in the new economy. It did not have much to lose when it started to attract talent a few years ago. The fact that it had an economic vacuum, low price level and an interesting geographic location were turned into assets compared to other European capitals. Berlin's start-ups very cleverly use the current hype to position Berlin as the number 1 city in Europe."

Nicolas Metzke, Co-Founder & CEO of Melvin & Hamilton Digital

Canadian Hub - Waterloo

Local profile

Population
124,600

Density
1,520 / km² (3,939 / sq mi)

Entrepreneurs' persona

|		SILICON VALLEY
Age	33.43	34.12
Gender (F/M)	9% | 91%	10% | 90%
Education (dropout vs. master + PhD)	1 : 2.3	1 : 2.5
Serial Entrepreneur	32%	56%
Percentage of non-technical founding teams	13%	16%
Working hours per day	9.80	9.95
Percentage of founders who lived in SV	35%	100%
Motivation (product vs. impact)	1.8 : 1	1 : 1
Customer (B2B vs. B2C)	2.3 : 1	2 : 1
Market (new vs. niche)	1.5 : 1	4 : 1
Local startup examples	TribeHR, Top Hat Monocle	

Waterloo

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Waterloo

Startup output
Funding
Performance
Mindset
Trendsetter
Differentiation
Support
Talent

Silicon Valley

Startup output
Funding
Performance
Mindset
Trendsetter
Differentiation
Support
Talent
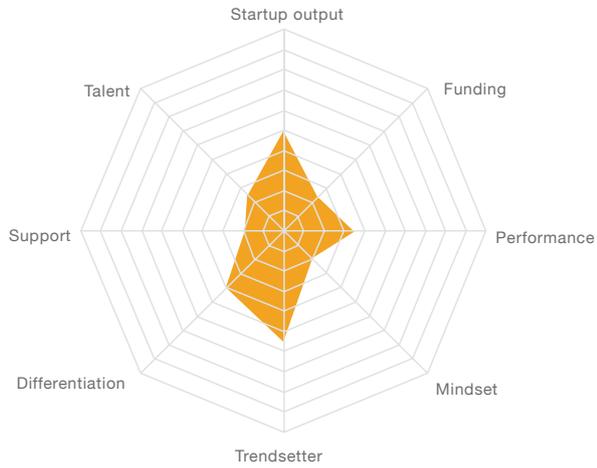
	Waterloo	Silicon Valley
Startup Output Index	11th	1st
Funding Index	16th	1st
Company Performance Index	14th	1st
Talent Index	16th	1st
Support Index	17th	1st
Mindset Index	17th	1st
Trendsetter Index	10th	1st
Differentiation from SV Index	13th	1st

Overview

Waterloo has developed an emerging startup ecosystem with strong ties to Toronto. It is Canada's third largest startup ecosystem, ranking 16th globally. It has produced 88% fewer startups than SV. In the near future, it will be interesting to see whether Waterloo is able to hold on to its talent base or whether it will be sucked into Toronto.

Findings

Waterloo startups are 18% more likely to monetize directly than SV startups. Waterloo entrepreneurs are less educated than SV entrepreneurs (32% Master & PhD vs. 42% in SV)

In terms of total addressable market and motivation, Waterloo entrepreneurs are similarly ambitious as SV entrepreneurs.

The average working hours in Waterloo are similar to SV.

The key challenges of Waterloo startups are similar to SV startups. Both focus on customer acquisition, building the product, funding, and building the team.

Waterloo has a similar technology adoption rate as SV. Waterloo startups are as data-driven as SV startups.

Waterloo entrepreneurs focus much more on mobile (28% vs. 17% in SV), and much less on web (50% vs. 73%). However, they also do more consulting as a side activity (17% vs. 7% in SV).

Waterloo has a funding gap (96% less in the second stage) for early stage startups before product market fit, probably due to a lack of super angels and micro VCs.

There are high numbers of accelerators and much lower numbers of super angels and VCs than SV.

Startups in Waterloo employ slightly fewer numbers of people on average compared to startups in SV (8.0 vs. 9.79 in SV).

Waterloo entrepreneurs are 15% less likely to go full time on their company before reaching product/market fit compared to entrepreneurs in SV.

Waterloo startups outsource twice as much of their product development as SV startups (12% vs. 6% in SV).

There are 43% fewer serial entrepreneurs, proportionally in Waterloo as compared to SV.

In terms of tackling an already known market, Waterloo's entrepreneurs are less experienced on average. Only 39% have experience tackling the same market before (vs. 64% in SV).

Waterloo

Entrepreneur Perspective

In many respects, Waterloo seems to a have healthy distribution of certain attributes (market types, primary payers, such as 30% consumers , 44% enterprise, 26% SMEs). However, Waterloo has a massive funding gap in the second developmental stage, validation, meaning an inability to reach product/market fit. Even nearby Toronto does not really provide the necessary capital basis for successfully scaling startups into large companies, so Canadian startups may struggle to grow quickly if they stay in Canada.

Policy Maker Perspective

Waterloo's strength is its close proximity and density of universities, helping talent flow into Waterloo's startup ecosystem. Waterloo needs to make sure its graduated talent stays in town contributes to the startup ecosystem as founders or as employees. It will be crucial for Waterloo not to allow a brain drain. It is not guaranteed that Waterloo will continue to grow and become self-sufficient as Toronto might get stronger and steal away Waterloo's best talent.

Singapore

Local profile

Population
6,600,000

Density
7,315 / km² (18,493/sq mi)

Entrepreneurs' persona

|		SILICON VALLEY
Age	33.35	34.12
Gender (F/M)	5% | 95%	10% | 90%
Education (dropout vs. master + PhD)	1 : 6	1 : 2.5
Serial Entrepreneur	32%	56%
Percentage of non-technical founding teams	26%	16%
Working hours per day	11.00	9.95
Percentage of founders who lived in SV	33%	100%
Motivation (product vs. impact)	1 : 1	1 : 1
Customer (B2B vs. B2C)	2 : 1	2 : 1
Market (new vs. niche)	1.4 : 1	4 : 1
Local startup examples	Mig33, Viki, Zopim, Bubble Motion, Buzz City, Tencube	

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Singapore

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Singapore
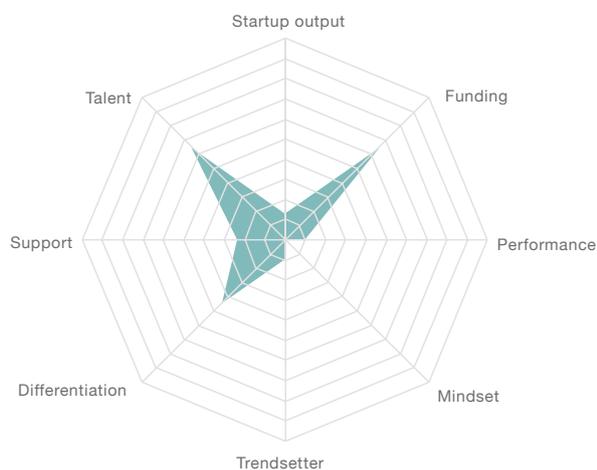
Silicon Valley
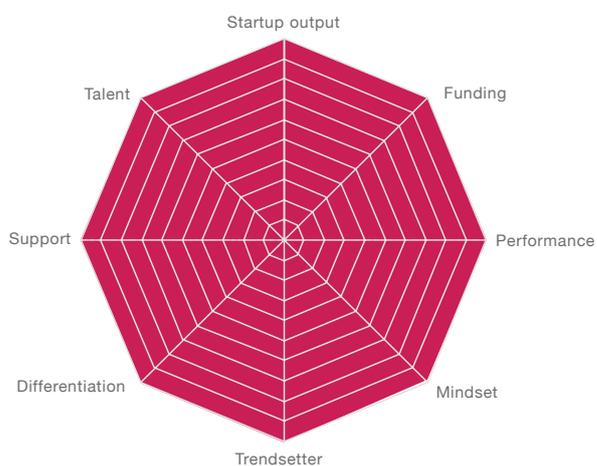
	Singapore	Silicon Valley
Startup Output Index	18th	1st
Funding Index	8th	1st
Company Performance Index	19th	1st
Talent Index	8th	1st
Support Index	16th	1st
Mindset Index	20th	1st
Trendsetter Index	19th	1st
Differentiation from SV Index	12th	1st

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Overview

Singapore has the potential to become the central startup ecosystem of Asia, knitting together the huge markets of China, India, Indonesia, and Malaysia. "Being a Singapore startup forces us to think global from day one," says Alvin Yap, Founder of The Mobile Gamer. This embodies the very nature of the Singaporean startup ecosystem. Its unique geographical position at the heart of Asia provides a fertile environment for entrepreneurs to start, grow and scale their businesses not only in Asia, but globally. Singapore is ranked 17th globally.

Findings

Singaporean startups are 15% more likely to monetize directly than SV startups.

Singaporean entrepreneurs are as highly educated as SV ones (52% Master & PhD vs. 42% in SV).

The Singapore startup ecosystem has the same healthy mix of startups targeting consumers, enterprise, and SME customers as SV.

The key challenges of Singaporean startups are similar to SV startups.

Startups in Singapore are 88% undercapitalized compared to SV startups before product market fit.

Funding sources in Singapore rely more on incubators and self-funding, less on accelerators, super angels, and VCs.

Startups in Singapore have less employees per stage (6.57) compared to SV.

Startups in Singapore have 35% fewer mentors per company compared to startups in Silicon Valley..

There are 46% fewer serial entrepreneurs proportionally in Singapore than in SV.

Singaporean startups rely more on advertising and license fee revenue models than SV startups.

There is lower technology adoption in Singapore than in SV. Singaporean startups heavily rely on PHP, Java, and .NET, with no use of Ruby compared to their peers in SV.

Singaporean startups are 50% less data driven than startups in SV.

Singaporean entrepreneurs focus 51% less on web, 48% more on mobile, 2.4x more on consulting, and 7.1x more on non-web software.

Founders are slightly less likely to tackle markets they have had previous experience with than their counterpart in SV (52% vs. 63% in SV).

Singaporean startups tackle are 2.1x more likely to tackle smaller markets than their peers in SV. They are 30% less likely to tackle markets markets sized $1 Billion to $10 Billion, and 70% less likely to tackle markets greater than $10 Billion.

Singaporean entrepreneurs are 12% less likely to commit full time before finding product market fit than their peers in SV.

Singapore

Investor Perspective

"Singapore has some of the key infrastructure and policies in place for a startup ecosystem. The money is there for early stage, and global funding can find good companies for later stage investment. What is still lacking? Cultural elements: lower risk-aversion, tolerance of failure, better role models and self-promotion skills, and stronger access to key markets. Singapore can be a base, but access to the US market or the key Asian markets of China, Japan and soon India, possibly Indonesia, is needed to scale."

Benjamin Joffe, CEO/Founder +8* | Plus Eight Star

Entrepreneur Perspective

Building a team is considered a big challenge, whereas funding is considered less so. However there are huge gaps in the financing rounds. As a result, Singaporean founders might misjudge their perceived vs. actual challenges. The actual challenge for entrepreneurs is definitely funding before product/market fit. However, Singapore offers a great infrastructure and has everything to get to the next level.

"When we do look outside of Australia, our attention typically goes east to Silicon Valley. Our visits to Singapore exposed us to an impressive group of founders, investors and ecosystem builders and opened our eyes to the amazing growth opportunities in the greater south-east Asia region. Start-ups in Singapore are solving different problems for different users. It's an exciting process, and something that we are eager to become part of."

Phil Morle, Co-CEO Pollenizer Global

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Policy Maker's Perspective

Singaporean startups employ 43% fewer people per stage as SV startups. There could be a number of reasons for this. They could be much more efficient, more undercapitalized, aware of the dangers premature scaling or the Singaporean startup ecosystem could lack the talent to fill open positions. Policy makers need to celebrate earlier entrepreneurial successes. They

"There is lots of private and public involvement in the entrepreneurship ecosystem. Though this is a double edged sword as the government has been instrumental in helping attract talent and funding into Singapore but the question is when can it pull out, or perhaps the better question might be "if"."

Gwen Regina T, Co-Founder and Editor-in-Chief SGE

Startup Genome

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Digital

Melbourne

Population
4,250,000

Density
1567/km² (4,058/sq mi)

Entrepreneurs' persona

|		SILICON VALLEY
Age	33.06	34.12
Gender (F/M)	6% | 94%	10% | 90%
Education (dropout vs. master + PhD)	1 : 1.3	1 : 2.5
Serial Entrepreneur	33%	56%
Percentage of non-technical founding teams	24%	16%
Working hours per day	9.80	9.95
Percentage of founders who lived in SV	24%	100%
Motivation (product vs. impact)	4 : 1	1 : 1
Customer (B2B vs. B2C)	2 : 1	2 : 1
Market (new vs. niche)	0.9 : 1	4 : 1
Local startup examples	Sitepoint, 99designs, Redbubble, Retailmenot, Scoopon	

Melbourne

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Melbourne
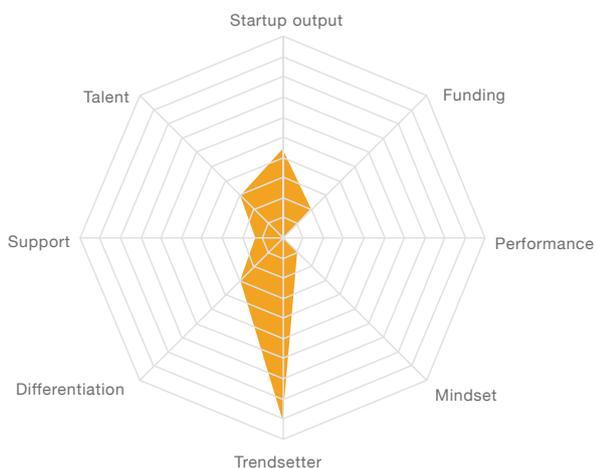
Silicon Valley
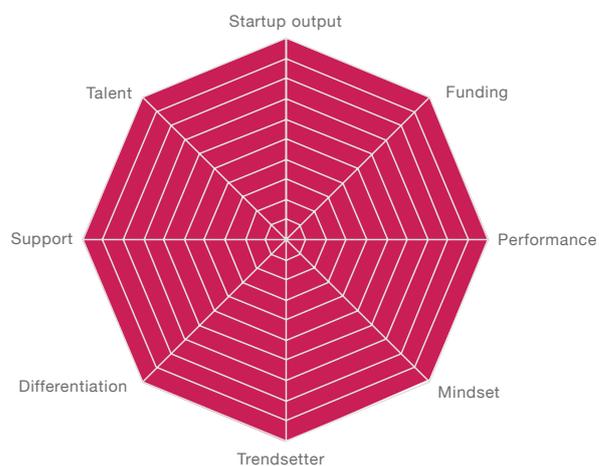
	Melbourne	Silicon Valley
Startup Output Index	12th	1st
Funding Index	17th	1st
Company Performance Index	20th	1st
Talent Index	15th	1st
Support Index	18th	1st
Mindset Index	19th	1st
Trendsetter Index	3rd	1st
Differentiation from SV Index	15th	1st

Startup Genome

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Overview

Melbourne is the second largest startup ecosystem in Australia and is currently being hyped. It globally ranks 18th even though it has created 89% fewer startups than SV. Sydney is a regional competitors for attracting talent. Melbourne needs to grow and establish a unique independent identity or else it will become Sydney's little brother and simply provide talent for the nation's largest ecosystem.

Findings

Melbourne startups are 23% less likely to monetize directly than SV startups.

Melbourne entrepreneurs are less educated as SV entrepreneurs (22% Master & PhD vs. 42% in SV)

Melbourne startups are 42% more data-driven than SV startups.

Melbourne entrepreneurs work 9.8 hours per day, almost as many as SV (9.95).

There are similar level of support from mentors for startups in Melbourne as in SV.

Founders in Melbourne are as likely to tackle markets they have had previous experience in, as entrepreneurs in Silicon Valley.

Funding for startups in Melbourne is insufficient before and after product market fit. Melbourne startups receive 86% less funding than SV startups.

Melbourne has a funding gap (97% less in the second stage) for early stage startups before product market fit.

Melbourne also has a funding gap. After product/market fit, Melbourne startups receive 2.25x less funding when scaling compared to their peers in SV.

Startups in Melbourne employ 71% fewer people per stage (7.02) compared to SV.

There are 40% fewer serial entrepreneurs, proportionally, in Melbourne compared to SV.

Melbourne entrepreneurs are 23% less likely to commit full time before finding product market fit than their peers in SV.

Melbourne entrepreneurs are much more likely to be motivated by building a product than by changing the world.

They tackle twice as small on average as startups in SV. They are 15% less likely to tackle markets sized 1 to 10 Billion 79% less likely to tackle markets greater than $10 Billion.

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Bangalore

Local profile

Population
9,350,000

Density
11,000/km² (29,000/sq mi)

Entrepreneurs' persona

		SILICON VALLEY
Age	37.00	34.12
Gender (F/M)	6% | 94%	10% | 90%
Education	1 : 4.5	1 : 2.5
Serial Entrepreneur	24%	56%
Percentage of non-technical founding teams	15%	16%
Working hours per day	10.86	9.95
Percentage of founders who lived in SV	8%	100%
Motivation (product vs. impact)	2 : 1	1 : 1
Customer (B2B vs. B2C)	1.4 : 1	2 : 1
Market (new vs. niche)	2.4 : 1	4 : 1
Local startup examples	Flipkart, Tally, Zoho , Make my Trip, hungama	

Bangalore

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Bangalore
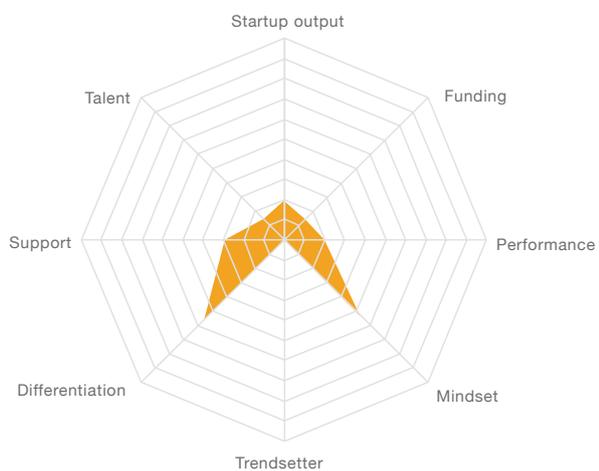
Silicon Valley
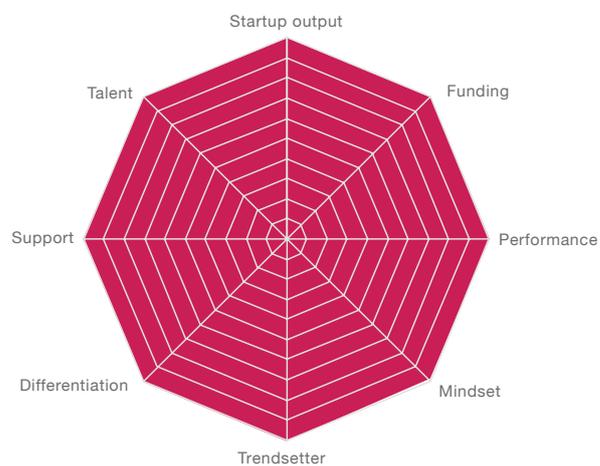
	Bangalore	Silicon Valley
Startup Output Index	17th	1st
Funding Index	18th	1st
Company Performance Index	17th	1st
Talent Index	18th	1st
Support Index	15th	1st
Mindset Index	10th	1st
Trendsetter Index	20th	1st
Differentiation from SV Index	10th	1st

Startup Genome

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Overview

India could well be one of the toughest countries in the world for a startup to flourish. Although it is one of the world's fastest growing economies, India ranks 140th in the world in nominal GDP per capita. However, being one of the biggest markets on earth provides a foundation for a prospering startup scene. Another important factor is the richness of India's talent base. Well-educated and highly skilled, Indian web entrepreneurs have the ability to transform both their economy and society. Bangalore needs to take certain steps to enable entrepreneurs to build global startups and attract talent and capital from abroad.

Findings

Bangalore startups are 24% more likely to monetize directly than SV startups. Bangalore entrepreneurs are as highly educated as SV

Startups in Bangalore employ as many people per stage as startups in Silicon Valley.

There is similar motivation in Bangalore to SV: 56% of entrepreneurs in Bangalore are motivated by building a great product, and 30% are motivated by trying to change the world. Interestingly, entrepreneurs in Bangalore do not seek to create or clone already proven business models.

Bangalore entrepreneurs commit as heavily as SV entrepreneurs to work full time before product/market fit. Bangalore entrepreneurs work almost 1 hour more per day compared to SV (10.86 vs. 9.95 in SV).

The key challenges of Bangalore startups are similar to SV startups. Both focus on customer acquisition, building the product, funding, and building the team.

There is an overall funding gap, with 74% less funding raised in Bangalore compared to SV. There is a significant funding difference before and after product/market fit in Bangalore.

Bangalore startups are 67% more likely to tackle smaller markets than their peers in SV. They are 10% less likely to tackle markets sized $1 to $10 Billion, and 51% less likely to tackle markets greater than $10 Billion.

There is a significant difference in terms of revenue streams between Bangalore and SV. Subscription models are 59% less likely to be used, advertising 37% less likely to be used, transaction fee models 44% more likely to be used and license fee models 3.4x more likely to be used compared to startups in SV.

Bangalore has a low rate of technology adoption: Bangalore engineers heavily rely on PHP, and Java, and much less on Ruby and Python compared to their peers in SV.

Bangalore

Findings continued

Bangalore is as data-driven as SV.

Bangalore startups outsource as little crucial product development

Founders in Bangalore are as likely to tackle markets they have had previous experience in, as entrepreneurs in Silicon Valley

Bangalore startups focus less on mobile (8% vs. 17% in SV), more on consulting (20% vs. 7% in SV) and more on non-web software (16% vs. 3% in SV).

Bangalore entrepreneurs are 50% more likely to tackle niche markets compared to SV entrepreneurs.

Startups in Bangalore have 39% fewer mentors per company compared to startups in Silicon Valley.

There are 58% fewer serial entrepreneurs, proportionally in Bangalore compared to SV.

Bangalore entrepreneurs are almost 3 years older on average than SV entrepreneurs.

Investor Perspective

There is a huge opportunity for angels to get more involved with startups at an early stage. It seems that Bangalore has an already established VC market.

"Even with all the challenges that exist, India has nowhere to go but up. The question isn't if but when it will happen. We've made a handful of investments in Indian startups over the past year and we're planning to aggressively ramp that up."

Paul Singh, Partner 500Startups

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Entrepreneurs Perspective

Being an entrepreneur offers great opportunities to create value and contribute to society. We encourage more talented Indian engineers to consider Entrepreneurship as a viable career path.

"India has come a long way since 1991, the year it opened its economy to foreign investment. Today, it has several first-generation entrepreneurs such as Infosys' Narayana Murthy and Bharti Airtel's Sunil Mittal, who have shown how multinationals can be built from the ground up. Despite all the positives, however, India is nowhere close to emerging as Asia's Silicon Valley."

Swati Prasad, New Delhi-based freelance journalist

Policy Maker's Perspective

Bangalore lacks incubators. Policy makers can help to establish either government funded or supported incubators to bring together entrepreneurs at the ideation stage. These alumni networks help entrepreneurs avoid the most common startup mistakes. Furthermore, policy makers can help by celebrating entrepreneurship. We have heard from our interview partners that entrepreneurship generally is not the first career path choice. Startups in Bangalore have proven that they create jobs and contribute to the overall nation's economy, providing the impetus for policy makers to step in to help development.

"While opportunities are there, India lacks the right startup ecosystem. It is noted that except for some top business schools in the country, most educational institutions do not help students to become entrepreneurs."

Swati Prasad, New Delhi-based freelance journalist

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Santiago

Local profile

Population
6,250,000

Density
1,520 / km² (3,939 / sq mi)

Entrepreneurs' persona

		SILICON VALLEY
Age	28.42	34.12
Gender (F/M)	20% | 80%	10% | 90%
Education	1 : 1.3	1 : 2.5
Serial Entrepreneur	25%	56%
Percentage of non-technical founding teams	8%	16%
Working hours per day	8.76	9.95
Percentage of founders who lived in SV	11%	100%
Motivation (product vs. impact)	1.3 : 1	1 : 1
Customer (B2B vs. B2C)	1.2 : 1	2 : 1
Market (new vs. niche)	1.4 : 1	4 : 1
Local startup examples	AgentPiggy, QuantConnect, Glazeon, Kuotos	

Santiago

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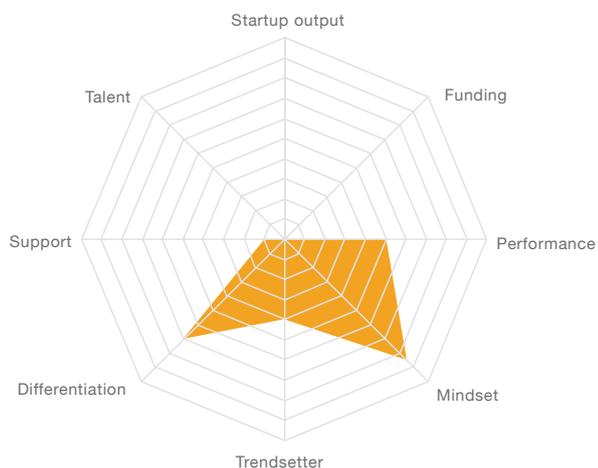
Silicon Valley
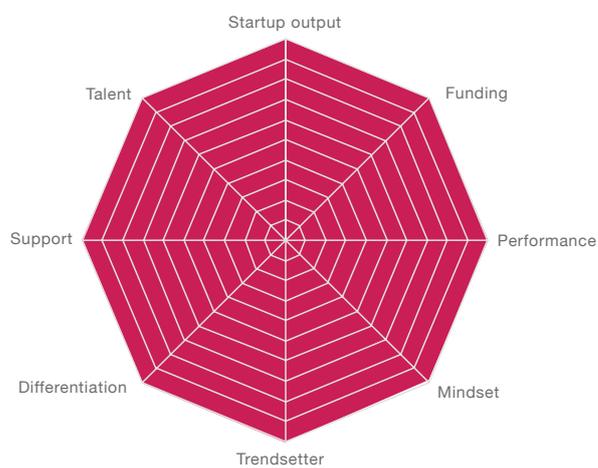
	Santiago	**Silicon Valley**
Startup Output Index	20th	1st
Funding Index	20th	1st
Company Performance Index	11th	1st
Talent Index	20th	1st
Support Index	19th	1st
Mindset Index	4th	1st
Trendsetter Index	13th	1st
Differentiation from SV Index	7th	1st

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Overview

Santiago is an example of how policy makers can help to kick start a startup ecosystem. It demonstrates to other hubs and their political decision makers that it is possible to nurture, sustain and foster an entrepreneurial mind set. To become self- sufficient, Santiago needs to build startups by attracting talent and capital from abroad. Santiago is ranked 20th and has produced 92% fewer startups than SV. The ecosystem generally does not have a healthy distribution of startups across the Startup Lifecycle, with few late stage startups.

Findings

Santiago startups are 31% more likely to monetize directly than SV startups.

Santiago entrepreneurs are less educated than SV entrepreneurs (26% Master & PhD vs. 42% in SV).

Startups in Santiago employ as many people per stage as startups in Silicon Valley.

Overall, Santiago startups are similarly ambitious as Silicon Valley startups.

Santiago startups are 53% more likely to tackle smaller markets than their peers in SV. They are 55% less likely to tackle markets sized 1 to 10 Billion 1% more likely to tackle markets larger than $10 Billion.

Santiago entrepreneurs are 7.3% more likely to commit full time than their peers in SV.

The key challenges of Santiago startups are similar to SV startups. Both focus on customer acquisition, building the product, funding, and building the team.

There is an overall funding gap in Santiago. 96% less funding is raised by Santiago startups than SV startups.

There is a significant funding difference before and after product/market fit in Santiago. In total, Santiago startups raise 97% less capital in stage 2, 94% less in stage 3, and 90% less in stage 4 than SV startups.

Santiago relies highly on accelerators and incubators, and much less on angels, and super angels, with no capital from VCs at all.

Santiago founders work almost an 1 hour less per day compared to SV founders (8.76 vs. 9.95 in SV).

Santiago entrepreneurs prefer transaction fees (38% vs. 17% in SV) over subscription based models (23% vs. 48% in SV).

Santiago entrepreneurs are less data-driven than their peers in SV. Santiago entrepreneurs are 2.1x% more likely to tackle niche markets than SV entrepreneurs.

Santiago

Findings continued

The Santiago startup ecosystem has the same healthy mix of startups targeting consumers, enterprise, and SME customers as SV.

Santiago startups outsource slightly less of their product development than their peers in SV. Santiago entrepreneurs are 6.22 years younger than SV entrepreneurs.

Santiago has 55% fewer serial entrepreneurs, proportional than SV.

Santiago entrepreneurs are much less likely to tackle markets they've had previous experience with (market experience: 40% vs. 63% in SV%.)

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Case study

Santiago has benefitted hugely from government initiatives like Startup Chile to attract and foster startups. Other successful governmental initiatives can be found in Israel or Iceland. Through governmental support and activity Israel, for instance, was able to create and foster a unique startup ecosystem, well described in the book 'The Start-Up Nation' as an adversity-driven culture that cherishes a unique combination of innovative and entrepreneurial density. Against the backdrop of the increasing importance of startups to the Chilean economy, the Chilean Government created Start-Up Chile, a program to attract world class early stage entrepreneurs to start their businesses in Chile.

"For a long time, Chile has been considered a country ideal for investment and business. Compared to other LatAm countries, its politics, economy, and institutions are stable and respectable. All these characteristics - and many others - can shape an innovation hub, and this is what Start-Up Chile aims to do: we want to help Chile become an innovation hub in Latin America. Start-Up Chile was created with the belief that entrepreneurship is a tool to overcome poverty. Chile wants to become a developed country and this government believes entrepreneurship has a key role to play. This is why the Chilean government has created many programs to foster entrepreneurship in the country."

Horacio Melo T., Executive Director, Start-Up Chile

Started in 2010, Startup Chile has attracted 482 startups from 36 countries that receive $40k of unconditional financial support to cover living costs in Santiago. 294 meetups and 646 workshops with more than 9,000 people attending have been organized, 278 activities held outside Santiago, and more than $12m raised. In return, the Chilean government has invested $20m in Start-Up Chile to date. Its goal is to attract 1000 globally-minded, early stage entrepreneurs by 2014. "We are pretty much halfway through with almost 500 startups attracted to Chile" said Horacio Melo.

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Acknowledgment and Sources

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Partner

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Sydney	Phil Morle, Mahesh Sharma, Cassius Dhelon
Sao Paulo	Flavio Pripas, Yuri Gitahy, Leonardo Grijó, Guilherme Lito, Andreas Thoma, Diego Remus, Thiago Feijão, Startup-Base -Bernardo Kircove, Startups.ig.com.br, Endeavor Brazil - Pablo Ribeiro
Bangalore	Shubha A T; Sanjay Anandaram, Dr. Gang LU, Chandan Raj, Hari Pudipeddi
Berlin	Alex Farcet, Lars Hinrichs, Alex Ljung; Benjamin Rohe; Prof. Dr. Sven Ripsas; Jess Erickson,, Marcel Hollerbach, Media partner: SiliconAllee
Paris	Benjamin Joffe, Nicolas Metzke, Liam Boogar
Singapore	Gwendolyn Regina T; Benjamin Joffe
Moscow	Jane Smorodnikova; Anton Malkov

From various locations not covered in our startup ecosystem analysis (partly interviewees):

Asia	Natali Ardianto, Rama Mamuaya (both Indonesia), Hironori Maeda, Yusuke Takahashi, Masaru Ikeda (all Japan, James Jung, Vallabh Rao (South Korea), Volker Heistermann (Taiwan)
Latin/South America	Cesar Salazar, Santiago Lopez, Adalberto Flores, Carlos Matos, (Mexico), Matias Rivera, Horacio Melo, Marcelo Díaz Bowen (all Chile), Germán Prieto (Argentina)
Europe	Emil Abirascid, Francesca Tomatis (Italy), Konstantina Zoehrer (Greece), Gustav Borgefolk (Sweden), Inês Silva (Portugal), Thomas Funke; Bernhard Thalhammer (Austria), Dominik Wensauer, Simon Kaiser (Switzerland), Tijs Markusse, Don Rietzen (The Netherlands), Glenda Napier, Bjarke Møller (Denmark)
Africa	Gamal ElDin Sadik (Egypt)

Research approach

We combined qualitative and quantitative research methods by:

Conducting 50+ interviews and case studies with entrepreneurs, investors and policy makers from various locations globally (structured and unstructured interview guidelines).

Using a web-based survey: StartupCompass.

Using external secondary data: Crunchbase (visualized: SeedTable; BuzzSparks; SeedTableBlog), Angellist, Global Entrepreneurship Monitor (GEM), Numbeo - cost of living, TechAccelerators; Seed-DB.

By evaluating the information sources along 5 factors - purpose, scope, authority, audience, format - we were able to judge the sample quality.

The aggregated level is sufficient for our analysis and adds another layer to our data sample. We ensured the timeliness of the data as it was collected in September 2012.

Through the process of triangulation we used different types of evidence to provide different measures of the same phenomenon and increase the construct validity.

Methodology

1. This is a correlational study.

2. The sample in the startup genome dataset is not uniformly random. As a result, there might be biases in it towards specific results. To make amends for this:
   a) The distribution of the data demographics and summary statistics over time (taking different snapshots of it) within geographical regions has not changed substantially.
   b) The sheer amount of data collected at this point makes coverage high enough to assume the sample covers a significant part of the population.
   c) Comparison to other datasets (Crunchbase, AngelList) yielded very similar summary statistics.
   d) The dataset is heavily skewed towards early stage startups, although it does include many later stage companies turning over millions of dollars a year in revenue.

3. This is a first attempt at such complex analysis. Many variables are endogenous, and as a result, some estimates may be biased although we have done robustness checks as far as possible.

4. Linear and Probit regressions were the main weapons of choice, with cross tabulations as necessary. Significance was tested at 90% confidence for most reports using LR tests and t-tests where applicable.

Aggregation of cities into a startup ecosystem

We used two underlying concepts for aggregating startup ecosystems:

1. Entrepreneurial density (defined by an area's number of entrepreneurs plus people working for startups or high growth companies over the overall adult population)

2. Entrepreneurial proximity (qualitative measure describing a dense area within a city, or quantitative measure circumscribing cities into a hub; 30 miles radius as proxy (30 to 90 minutes drive).

Underlying Assumptions

Startup Ecosystems (SE) evolve through discrete stages of development. Each stage can be measured with specific milestones and thresholds.

Earlier entrepreneurial successes enable further venture creation (spin-off, talent creation & attraction), and act as role models for talents establishing an entrepreneurial mindset and culture in any hub.

Earlier successful entrepreneurs also ensure a solid basis for developing a venture capital and business angel market. They finance and mentor startups by investing and sharing their experiences and network.

There are different types of SEs. Each type evolves through the developmental stages differently.

It appears that there is a link between an art & musician scene and an entrepreneurial ecosystem (such as New York, San Francisco, Berlin, St. Petersburg). Obviously, there is a link between a nation's capital and a SE as well as between a financial industry (New York, London, Hong Kong, Singapore) and a SE.

Technological innovation does not happen in a vacuum. Innovation happens when technology and society interact.

Although the Silicon Valley's entrepreneurial overall culture can't be replicated somewhere else in the short-run, there are adoptable driving forces to foster entrepreneurship at any location.

Research outlook | caveats

1. To date, we are not able to measure a startup Component Index theory, although we have internally outlined a theoretical concept through which stages such a system might develop. We even assume a different evolutionary path based on the type of a startup ecosystem (university driven: Silicon Valley, Boston; creative art and cultural-driven: San Francisco, London, Berlin)

2. In future, by definition, Startup Genome's database will be enriched by dynamic data points (as opposed to its more static nature right now) showing how the same startup is moving through the startup lifecycle stages over time (assuming it uses our StartupCompass through this process). This enables us to draw even deeper conclusions about a single startup and the respective ecosystem it is located.

3. Startup migration will be a future topic describing the 'born global startup' approach and where and when a startup needs to be located somewhere specifically.

Sample size:
We do have different sample sizes depending on the question at stake. For example:

For the question "Are actual stages distributed differently in each ecosystem?" (to measure ecosystem throughput) the sample size is 3,335.

Considering the question "Do startups raise more money on average in different ecosystems?" the sample used includes firms who raised funding, and has a size of 621

Sources

Siliconia: List of places where the SV idea was tried to replicate

The Tragedy Of Calling Things Silicon Blah from Brad Feld

BEEP: Babson Entrepreneurship Ecosystem Project

How to create an Entrepreneurial Economy (Daniel Isenberg): Interview & Paper

Articles: Forbes & The Economist

Entrepreneurship Ecosystem at MIT

Ecosystem 101. The Six Necessary Categories To Build The Next Silicon Valley. Benjamin Joffe.

Building an Entrepreneurial Ecosystem: Lessons from Omaha

Introducing the Entrepreneurship Ecosystem: Four Defining Characteristics

Paul Graham: Why startup hubs work? Why to move to a startup hub?

Brad Feld's book on Startup Communities: Building an Entrepreneurial Ecosystem in Your City

Fred Wilson: A VC: Startup Ecosystems take time

A VC: Startup Ecosystems take time

Global Entrepreneurship Monitor (GEM)

Kauffman Foundation (Kauffman.org)

BEEP (Babson Entrepreneurship Ecosystem Project)

MIT Entrepreneurial Impact: The Role of MIT

OECD - Measuring Innovation: A new Perspective

The Startup Nation (Dan Senor & Saul Singer)

Startup Communities (Brad Feld)

Startup Genome
cracking the code of innovation

Telefónica
Digital

Local startup databases

Germany, Berlin: Silicon Allee & Gruenderszene.de

Brazil: http://bizstart.com.br/

Italy: http://en.startupbusiness.it/

Israel: http://mappedinisrael.com/#

Switzerland: http://startupmonitor.ch/

...

Local startup maps

Global (Crunchbase) - http://startup-map.datalysed.com/

European Startup Map - http://www.thestartuparena.com/european-startup-map/

SF - http://map.innovatesf.com/

NYC - http://mappedinny.com/

LA - http://www.represent.la/

Boston - http://www.bostonfounded.com/

Chicago - http://www.builtinchicago.org/companies/map-chicago-startups

Seattle - http://startupseattle.com/map/ (& Seattle Startup Map)

Hawaii - http://www.alohastartups.com/map///

Toronto - http://www.torontotechstartup.com/ (& an infographic)

Vancouver - http://www.vancouvertechstartup.com/

Waterloo - http://www.waterlootechstartup.com/

Montreal - http://www.montrealtechstartup.com/

London - technology startup map

Israel - http://www.mappedinisrael.com

Berlin - http://berlinstartupmap.com/ (German startup map & startup-map.com)

Vienna - http://www.startvie.at/

Netherlands - http://dutchstartupmap.com/

Madrid - http://www.startupgenome.com/city/madrid-comunidad-de-madrid-es

Brazilian startup map - http://wikimapps.com/a/startupi

Singapore - http://walkaboutsg.com/map/

Sydney - Startup Map