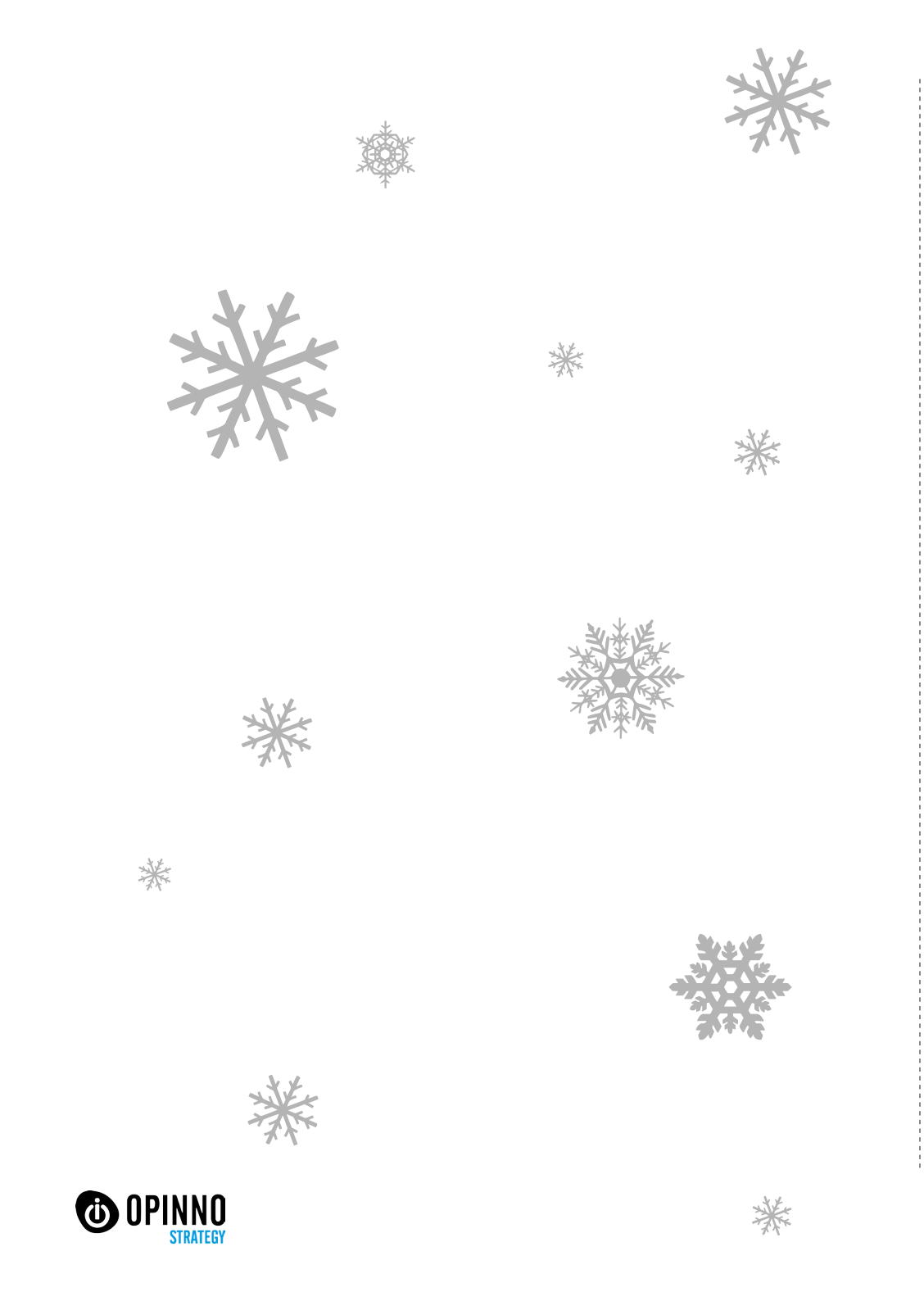

LEADING GLOBAL
ECOSYSTEMS
REPORT 2013
OPINNO
Think | Build | Engage



As the world becomes increasingly inter-connected, wealth and ideas have greater opportunities to travel anywhere, and the boundaries between countries that we are accustomed to have become increasing blurred. The key players in this newly-connected world are those who have harnessed the ability to attract talented people, who encourage them in sharing and trying new ideas, and who attract organizations with all the resources and knowledge required.

This is known to work best on a regional scale, as shown by the most successful and best-known case of such a breeding ground of innovation, Silicon Valley. Only at this level is it possible to touch upon all the aspects of innovation both by contact with entire institutions and by dealing with individual people and companies, all whilst remaining relevant on a national scale.

Here at Opinno we want to identify the most promising regions whilst they remain at their embryonic stages, and then become the enabler of their growth. To do this, we need not only to understand how these regions function, but also to identify the main key factors that make the main innovation ecosystem in the world work at the top innovation level.

Within this context, we at Opinno decided to study a sample of the most innovative ecosystems that have arisen within varying contexts, with our objective being to draw conclusions upon their strengths, how they have come to be innovative, and the best practices they used that could be translated to other regions. For this task, we joined forces with students of ESCP Europe and IED Madrid (Instituto Europeo de Deseño). Ultimately, we are seeking to open new ground in Europe and in Hispanic countries, by becoming the “new Silicon Valley”. We aim to do this by analyzing the local context, adapting the best practices in line with the particular strengths we find, and by allying with strong, established partners, as only they have the capabilities to leverage the investment required for such an enterprise and to secure strong growth.

We would like to give special thanks to all the people that helped us bring this white paper together:

Anna Lobkowicz, ESCP Europe Student
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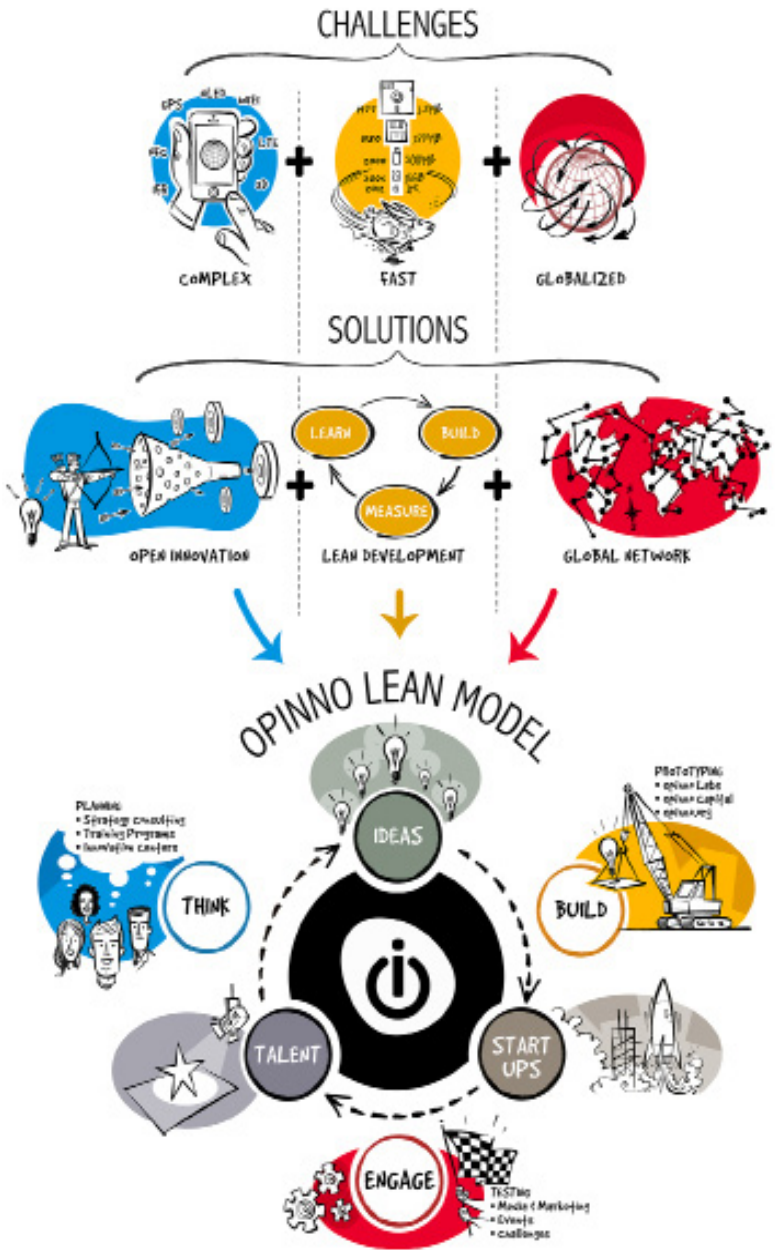
Saumitra Das, ESCP Europe Student
Mercedes Riba Michaus, IED Student

We at Opinno hope that you will find this piece of work illuminating, and that you will enjoy reading it as much as we have enjoyed creating it.

OPINNO
STRATEGY



OPINNO

Opinno is a global network of open innovation which uses lean development methodology to transform organizations through design, prototyping and the validation of new products, services and business models.

Opinno was born as an answer to three quandaries affecting all organizations: the enhanced complexity that products and services require in order to become competitive; the increased influence that technological innovation has upon the market place and globalization, and the direct effect such innovation has upon ideation processes, production and the marketing of products and services.
Opinno has responded to these challenges with three strategies which, when combined, make up our business model:

- Open innovation as an engine of response to rapidly moving markets, enabling the transfer of knowledge, personnel and financial support among innovation ecosystem agents.
- Lean development as a tool to design, implement, and to correct our ideas, giving our model a practical and tangible character.
- Building a global network that brings together the best talent in the world, as well as linking major multinational companies, universities, research centres, entrepreneurs, investors and public administrations.

Opinno is divided into three business lines:

Think: Groups together all the business consulting activities that we offer to large organizations and governments. We work to generate and implement new management models and we serve as a technological intelligence network in order to detect possible partnerships, investment opportunities and emerging competitors. We also provide training for entrepreneurs and executives, and we both create and manage innovation centres orientated towards such fields as entrepreneurship, smart cities and different industrial sectors.

Build: This unit, in collaboration with our clients and partners, is focused upon the implementation of our client's projects. We offer a technological development laboratory (Labs), which is a tool for Venture Capital investment projects (Capital) that supports outside projects as well as our own. We also have a foundation (Opinno.org), which seeks to create social impact through our ideas, network and products.

Engage: Does an important job in spreading innovation and entrepreneurship by means of our digital communication strategies, technology conferences, entrepreneur competitions and market prospecting explorations. This allows us to stay in constant contact with emerging new talent, new technologies and new business models.

Methodology

Our study started with an assessment of the subject matter, studying as widely as possible the ecosystems, the main stakeholders and their key personnel, the relationships between them, and the practices that exemplified how these systems performed. Ten ecosystems were first studied in this way, which were then ranked using both established criteria through existing indexes that measured their specific attributes, as well as our own expert's assessment of them. Finally, through the in-depth study of specific cases, we were able to extract best practices and global conclusions that could be applied to other ecosystems in order to boost their chances of success.

Input (Analysis)

Broad Overview

- Global Innovation Index Report
- Government websites (Chamber of Commerce)
- Innovation Ecosystems Case Studies
- Global Competitiveness Report

Criteria for Innovation/ City facts & figures

- Start-up Ecosystem Report
- Regional Innovation Index Report
- Silicon Valley Index Report

Specific Best Practices

- Case Studies

Output (Our point of view)

Mapping the Ecosystem

A visual description of how the main actors in the ecosystem interact

Current Situation Analysis

A depiction of the most salient aspects that have a positive or negative impact and therefore need to be reinforced or respectively reduced

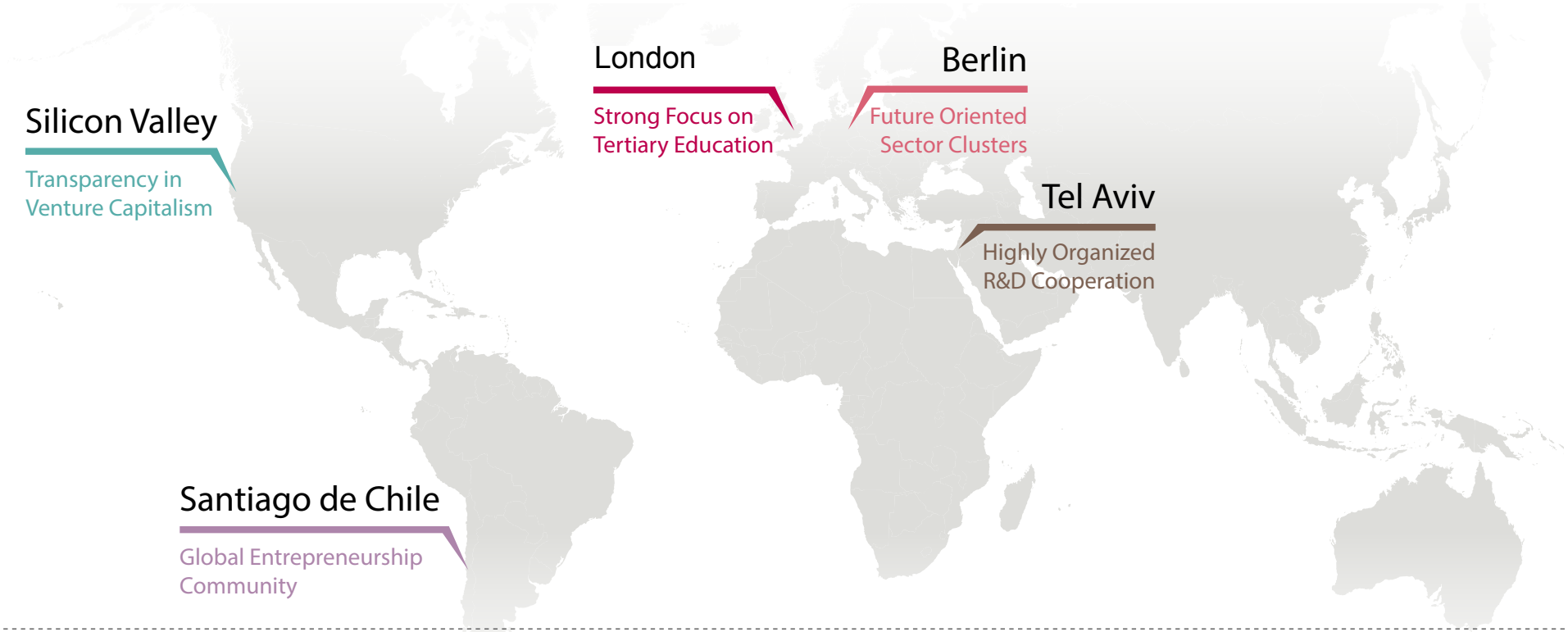
SWOT Analysis

A synthesis of the traditional analysis of Strengths, Weaknesses, Opportunities and Threats to the Ecosystem

Opinno Recommends

Best practices extracted from specific exemplary practices that have had a substantial long term impact on the success of the ecosystem

6 ecosystems



Silicon Valley

With extremely standardized legal documents and a large number of VC (Venture Capital) experts, Silicon Valley offers entrepreneurs a whole host of options that enables them to easily access the resources required to develop a start-up as quickly and as efficiently as possible.

London

With 40 excellent Higher Education Institutes and with 43 percent of its population possessing a tertiary degree, London has an outstanding pool of skilled workers.

Berlin

Berlin serves as an exemplary role model that displays the positive impact that strategic clustering can have upon a city's ecosystem. The city gathers together exceptional R&D centers, international human capital and sizable enterprises. It's the city's way of achieving excellence within their future sectors.

Tel Aviv

The Government encourages highly intertwined activities and co-operation between its R&D centers, universities, MNCs and SMEs, mainly through enabling risks for VCs and organizing sizable multi and bilateral R&D research funds.

Santiago

Santiago is an excellent example of how the public sector can nurture, sustain and foster an entrepreneurial mindset in a short period of time, by creating a visionary type of environment for innovation.

Silicon Valley

TRANSPARENCY IN VENTURE CAPITAL

Silicon Valley

Region: North America

Population: 7.5 m

GDP: US$ 535 billion (Bay Area)

GDP/cap: US$ 74,815 (Bay Area)

Patents: 224,505 (USA)

Public R&D Expenditure: 10 %

Data: 2012

Strongest Drivers

Silicon Valley is the leading technological hub in the world, and is located in San Francisco Bay, in the United States. Its beginnings can be first traced back to 1950s when Hewlett Packard's growth in Palo Alto became the main driver of the region's development. This community of entrepreneurs started developing solutions for large companies and corporations, who then started investing in these solutions, thus creating the perfect vehicle for encouraging the creation of new enterprises. The rest is history. Venture Capitalists began investing in entrepreneurs before the larger corporations could acquire them. Accelerator programs started supporting entrepreneurs before VCs invested in them. Angel Investors and Incubators swiftly followed.

Global Innovation Index 2012

The United States

Innovation Input Subindex

9º

Institutions	Human & Research Capital	Infrastructure	Market Sophistication	Business Sophistication
17º	22º	1º	2º	9º

Innovation Output Subindex

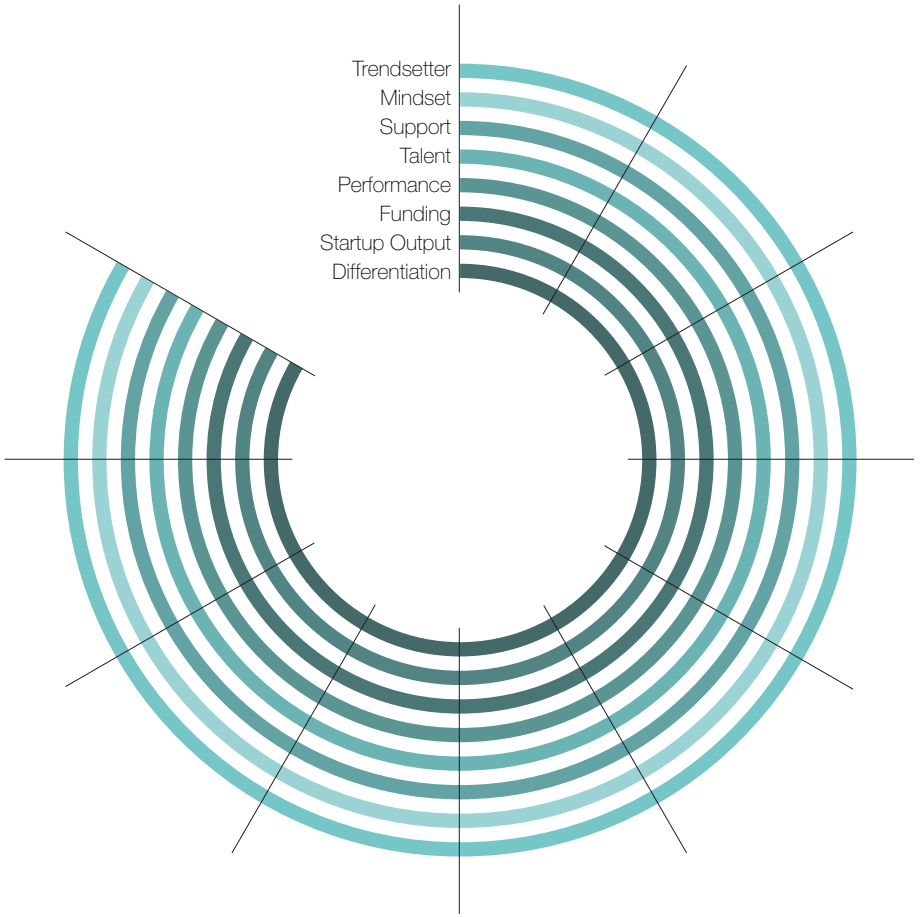
16º

Knowledge & Technology Output	Creative Output
11º	33º

compared to: 141 countries

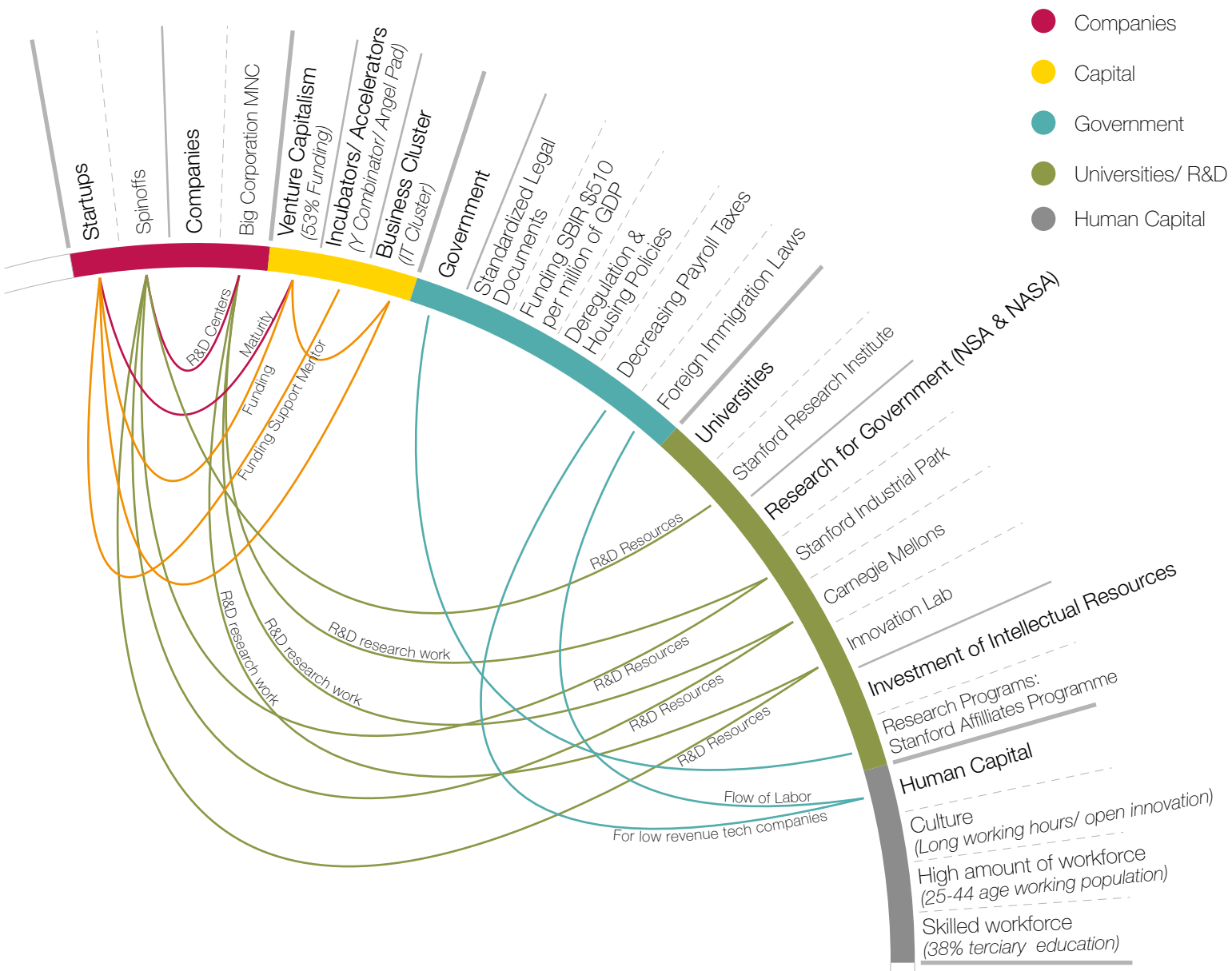
Startup Ecosystem Report 2012

Silicon Valley



compared to: 20 cities

The Ecosystem



Venture Capitalism

VCs and Angel Investors together make up around 53 percent of all funding that's provided to start-ups. VCs perform the multiple role of broker, management consultant and recruiter. They sometimes even act as lawyers.

Incubators/ Accelerators

There are many Incubators/Accelerators in Silicon Valley (of which 90 percent are private) which have helped in building start-ups like Ycombinator and TechStars, as well as countless others.

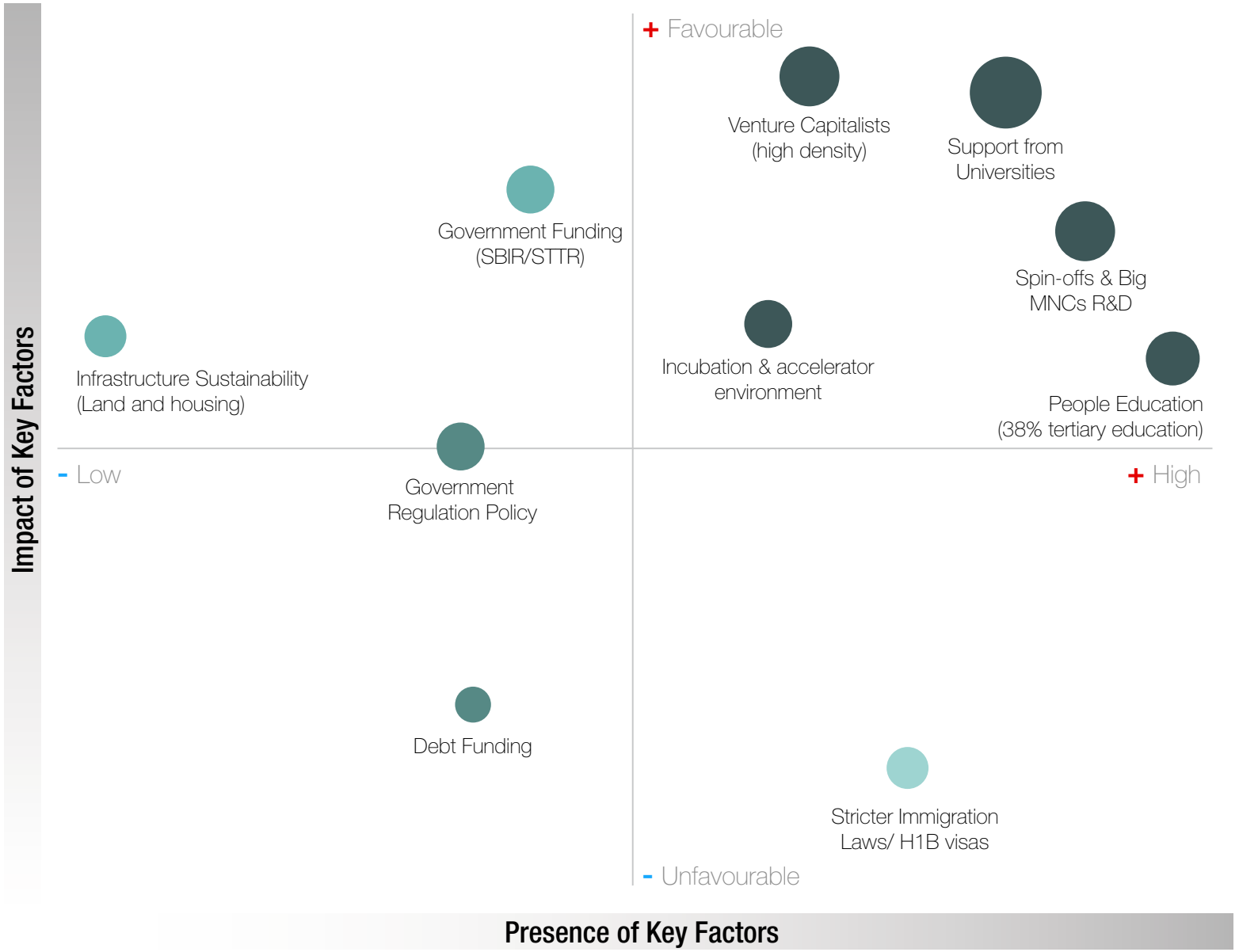
Universities

Silicon Valley has established itself upon the multidisciplinary and cross pollination of ideas that both support failure and create serial entrepreneurs who are ready to start the next big thing. Having educational leaders around to support them and to offer the space to build this community has been crucial in supporting the ecosystem.

Startups

The number of people between the ages of 24 and 44 in Silicon Valley is around a quarter of a million, approximately 38 percent of whom possess a high level of education. It has been shown that these people are content to work longer daily hours and show more commitment to working full time than in any other start-up ecosystem. Furthermore, they continually display an entrepreneurial spirit and a drive to change the world with newer and better products.

Current Situation



- To Maintain
- Increase Presence
- To Mitigate the Risk
- To Reduce the Risk

The main strength of Silicon Valley has been the level of autonomy allowed by the US government, and the drive shown by the private sector and entrepreneurs to continuously develop both the ecosystem and the community.

The main weakness is the price of accommodation and property, as with more and more people coming to Silicon Valley housing has become very expensive (average monthly rent is now $1,750), to the point at which many businesses are relocating outside the region.

The biggest threat to Silicon Valley is the US's strict immigration policy. Fifty-two percent of start-ups are from foreign nationals. Some start-ups have decided to move to major hubs in other countries. Other entrepreneurs, true to their creative mindset, are coming up with solutions such as creating a floating city in international waters outside the bay, where entrepreneurs can commute to and from the Valley.

Strengths

Government Support

Government is decreasing the payroll tax to support high head-count low revenue technological companies.

State government continues its strong support of research universities.

- The opening of Stanford Industrial Park has been, to date, its greatest achievement.
- The Carnegie Mellon Innovations Laboratory – aerospace research with NASA.

Funding

Venture Capitalists not only provide the necessary financial resources to start-ups and spin-offs, but also they often perform the multiple role of broker, management consultant, and recruiter.

Venture Capital has the highest concentration of VC to GDP ratio in the entire country. Nearly 53 percent of funding comes from VCs or Investment Angels.

Funded start-ups are more likely to have a successful exit – through an IPO or by becoming absorbed into a bigger company.

People Culture

The 25-to-44 age group is the largest in Silicon Valley.

In recent years, the percentage of adults with Bachelor's degrees or higher has increased significantly.

Nineteen percent of the working population are more likely to motivate themselves by their vision of changing the world, rather than just the thought of building a product.

An open culture where people from all walks of life and different companies sit down together to share ideas.

Weaknesses

Foreign Immigration Laws

Reports show that as many as 52 percent of Silicon Valley's start-ups were founded by foreign nationals, and that non-natives contribute almost 25 percent of WIPO PCT applications filed.

Government and interested groups support the analysis and study for a solution that provides international entrepreneurs a way to legally work in the country, and so create jobs and wealth.

Infrastructure

One of the most expensive US cities to live in.

- Five percent of new residential development in 2011 was classified as affordable.
- Average monthly rent rose to $1,750 in Silicon Valley (Eight percent increase).

Since there is only a small amount of land available, more and more companies are setting up their headquarters away from the city, thus creating transportation problems for their employees and also creating an urban sprawl which may not be sustainable within the terms of the innovative ecosystem of Silicon Valley.

Overall job growth is constrained by limited housing production, as many individual jurisdictions do not view housing growth as being within their interests.

Highway congestion results when jobs are scattered throughout the region, often far from comfortable transportation routes.

Opportunities

Development around transit areas

Focus employment growth near transits in existing down-town and employment areas to reduce commuting time and so increase productivity.

Housing for general population

Build sufficient housing in the right places for the growing workforce.

Adjusting taxes

Reduction of fiscal inequities among jurisdictions by sharing taxes among them, thus reducing the competition for commercial and industrial development and making investment decisions depend upon the broader regional economy, rather than specific local actions.

Mentoring cities to develop innovative ecosystems

Mentor other cities and economies to develop innovative ecosystems.

Culture

Silicon Valley has given birth to more billion dollar companies than any other ecosystem, mainly due to its plentiful supply of risk-capital world-class talents, the inclusion of the headquarters of many leading public companies, its vibrant support ecosystem, and an "open-minded, trust, pay it forward, change the world" attitude.

Entrepreneurs are 22 percent less likely to think of building a new product as a major challenge.

An entrepreneur's ambition in Silicon Valley is more highly-motivated when compared to entrepreneur's ambition on average across all other ecosystems.

Entrepreneurs are 19 percent more likely to motivate themselves by the vision of changing the world rather than just creating a salable product.

Supporting the development of new "collaborative consumption" start-ups. This can have an impact on the creation of new systems that break the status quo.

Threats

Other upcoming innovative ecosystems

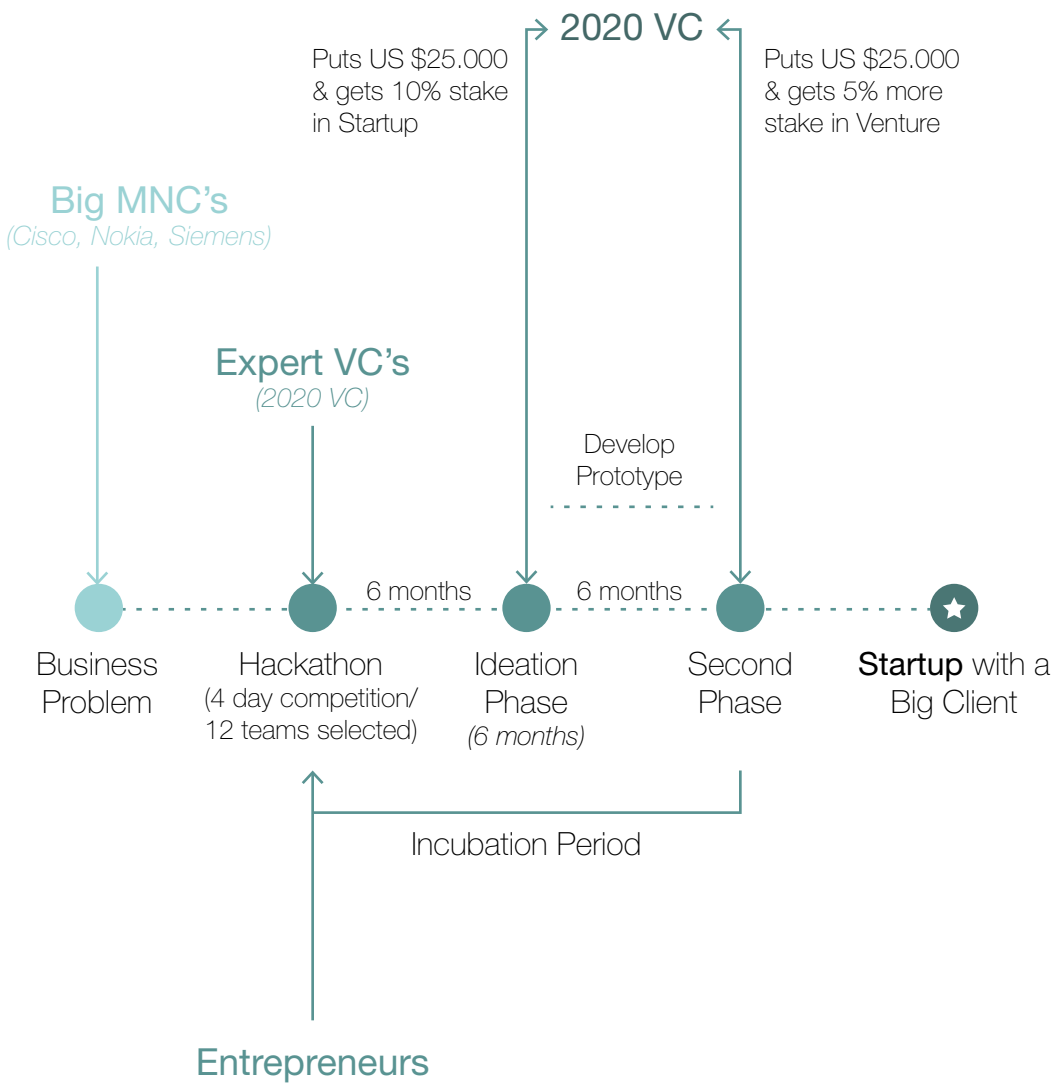
Many research papers suggest that there exists a general belief that the next Silicon Valley will shift location to somewhere else as the world becomes further inter-connected.

New, upcoming innovative ecosystems – 44 percent believe it's likely that the "technology innovation center of the world," now in Silicon Valley, will shift to another country within the next four years - KPMG survey of 668 technology business executives at $1 billion-plus companies in 2012.

Start-up Chile

Start-up Chile is already taking advantage of the main weakness of Silicon Valley - the strict foreign immigration policy - and making use of it to promote its own city. Hence, entrepreneurs are starting to looking towards other cities to consider opening their businesses.

Best Practices



MNCs Competitions

Taking as an example a scenario for 2020vc - large MNCs (Cisco, Intel, Nokia) will give 2020vc their business problems in the hope of a solution.

Experts from 2020vc will spend four days or so screening applicants, who are typically entrepreneurs with no company of their own, and then assess them in a hackathon (competition).

After that they will narrow the numbers down to a dozen or so teams for the entrepreneur-in-residence program.

On average, 2020vc will first inject $25,000 in the "ideation" phase, for which it will receive a ten percent stake in the start-up, and then another $25,000 in the second phase for which the team will have to have a preliminary prototype ready. In addition 2020vc will receive an additional five percent stake in the second phase.

Subsequently these teams become a start-up of their own with major MNCs as their clients.

Funding System

State Government

- Through institutes SBIR & STTR.
- 89$ million granted to small companies.

Venture Capitalists

- 10$ billion dollar investment (2012).
- Highest density of VCs (53%).
- Invest in clean technology.

Education

- Focus to increase the graduation rate from the previous academic year and a decrease in the drop-out rate (38 percent graduates or above in Silicon Valley area).
- Develop institutes in collaboration with government as well as industry.

  Stanford:

  - Stanford Industrial Park.
  - The Stanford Center for Professional Development.

  CMU:

  - The Carnegie Mellon Innovations Laboratory.
  - CyLab Mobility Research Center.

London

STRONG FOCUS IN
TERTIARY EDUCATION

London

Region: Europe

Population: 8.3 m

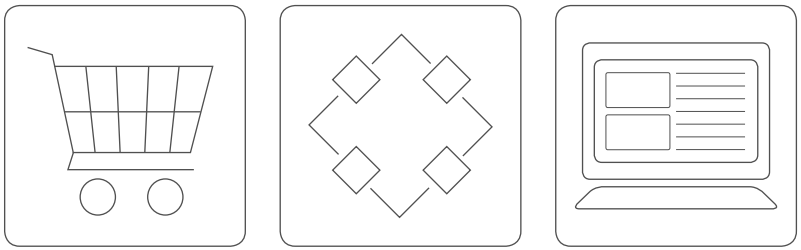
GPD: US$ 761 billion

GDP/cap: US$ 38,514

Patents: 7,173

Public R&D Expenditure: 1.76 %

Data: 2012



Strongest Drivers

The UK's capital now houses thousands of entrepreneurs and technology start-ups, standing true to London's creative and daring history. The "Tech City" was endorsed by UK Prime Minister David Cameron in 2010, with a plan to accelerate its growth as far as the site of the 2012 Olympic village. Facing the difficulties of affordable housing and spaces, there are plenty of Incubators and Accelerators to support this growth. The collaboration of government agencies and universities plays an important role, bringing intellectual resources and grants to entrepreneurs.

Global Innovation Index 2012

The United Kingdom

Innovation Input Subindex

5º

Institutions	Human & Research Capital	Infrastructure	Market Sophistication	Business Sophistication
9º	21º	6º	3º	15º

Innovation Output Subindex

5º

Knowledge & Technology Output	Creative Output
8º	14º

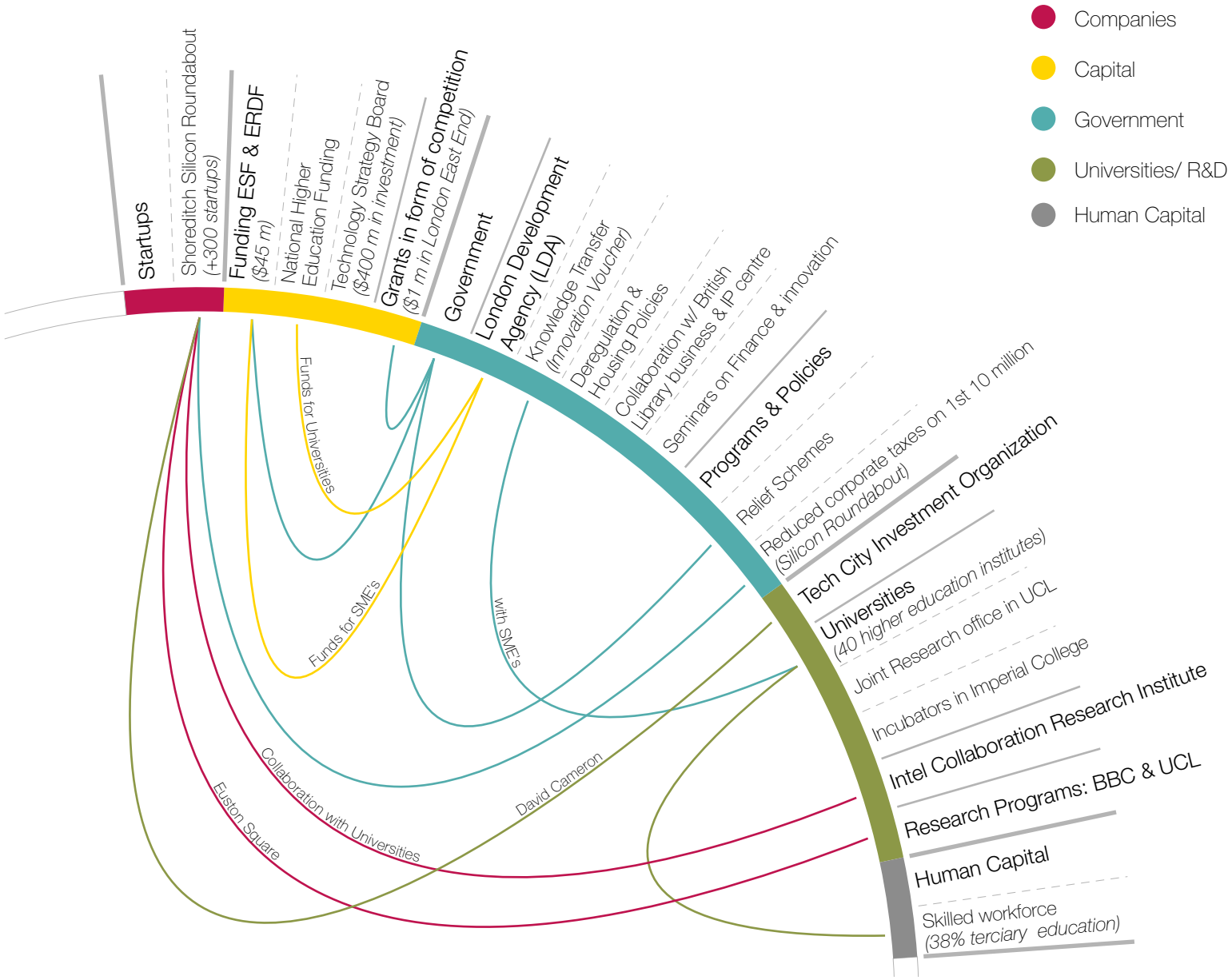
compared to: 141 countries

Startup Ecosystem Report 2012

London

compared to: 20 cities

The Ecosystem



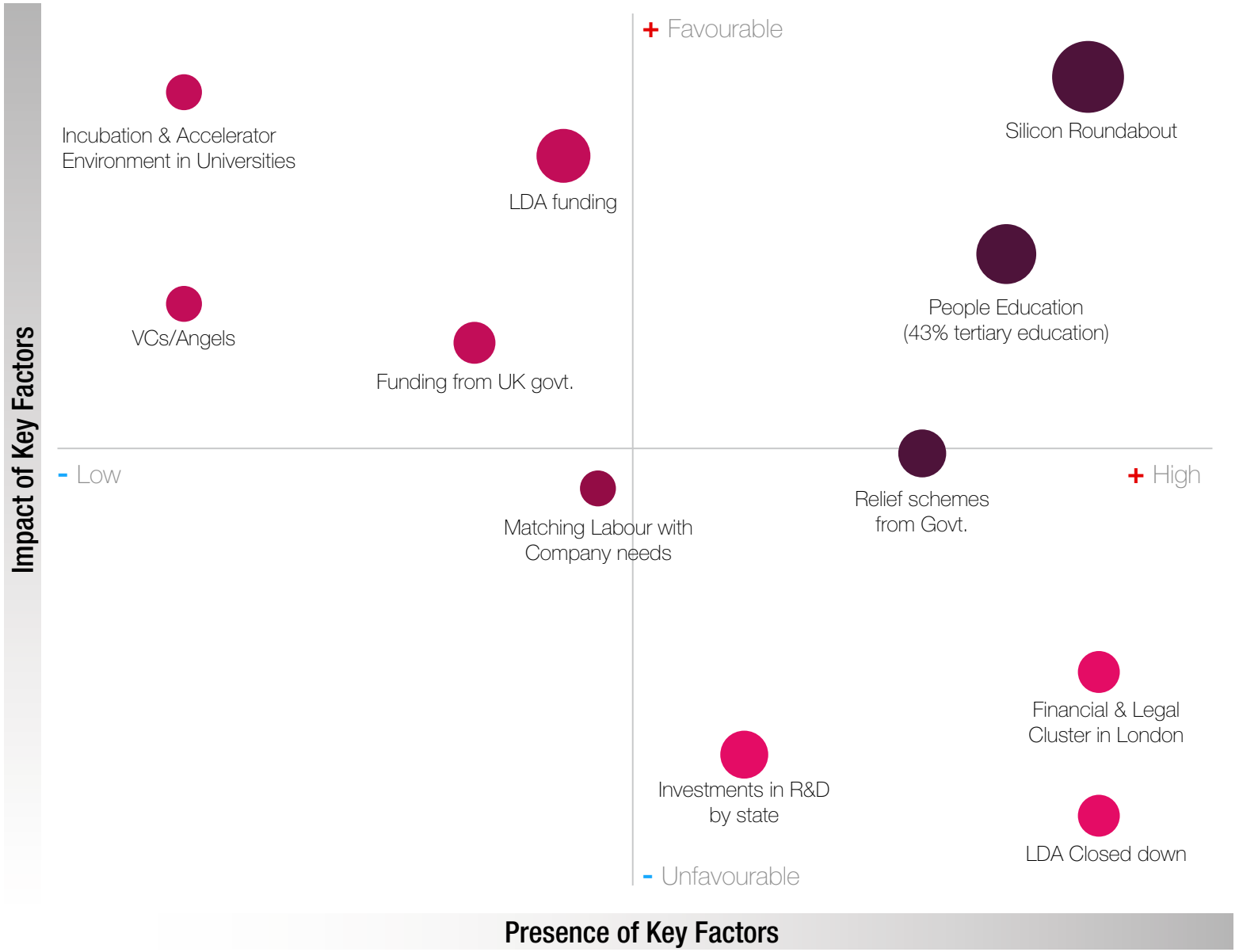
Government

London's "Silicon Roundabout" has become the focal point of London's tech-hub over the past five years, welcoming over 300 start-up companies such as Lastfm, SoundCloud, and many others. The UK government has taken a keen interest in the development of this hub and has started a Tech City investment Organization (TCIO) for its promotion and development, as well as proposing special visas for international entrepreneurs or support from the London Stock Exchange for facilitating exit strategies for start-ups.

Universities

Universities such as the Imperial College, the University College of London, the Macmillan Group and Central Saint Martins College of Arts and Design have relocated to areas close by. They offer a consistent source of cost-effective labor to entrepreneurs.

Current Situation



- To Maintain
- To Increase Presence
- To Mitigate the Risk
- To Reduce the Risk

London's strengths commence with the initiatives in entrepreneurship that are taking place at Shoreditch-Silicon Valley. Various innovation schemes have been carried out each year, first by the London Development Agency (LDA) and now by the Greater London Authority (GLA), with a huge base of educational institutions providing support in the form of intellectual resources.

The main weaknesses in London are the lack of private Incubators/ Accelerators and Venture Capitalists who are willing to invest in anything other than the financial services. The all-purpose start-up Incubators/ Accelerators which already exist are the mostly from outside the UK.

The main threat to London is its focus on knowledge-intensive services (53 percent), due to the strong financial aspect and the legal clusters which leeches away the workforce from the high-tech companies, as well as the dilution of the LDA's efficiency by its assimilation by the GLA, which has much less focus on innovation.

Strengths

University Support

Has a higher than average level of education and skills – a high proportion of London's population possess tertiary education.

Is home to more than 40 higher education institutions.

Intel invests in UK institutes to create a Global Center for Research in Sustainable Connected Cities.

Silicon Roundabout

Three years ago, this area housed only a dozen digital start-ups - now there are over 300. Last.fm is based there, as are SoundCloud and TweetDeck.

Techhub – to nurture start-ups.

Government Support

Grants in the form of competitions.

Relief schemes for SMEs and large corporations.

Tax schemes for start-ups, the London Stock Exchange's facilitation, and the availability and encouragement of highly trained professionals from traditional sources.

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Weaknesses

Lack of Capital

London has a funding gap, with 81 percent less capital raised by startups before product market fit than startups in Silicon Valley.

People Culture

They are 9% less likely to work full time. London has been slow in adopting mobile platforms.

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

London's technology adoption is slower than SV.

Low Investment in R&D

Much of London's R&D investments are made in higher education institutes.

London has the lowest level of business investment in R&D in the UK.

FInancial And Legal Cluster

London has a strong financial and legal cluster.

London's population is less likely to be employed in medium-high and high technology companies and more likely to be employed in knowledge-intensive services than in the rest of UK and EU27.

Too much focus on knowledge-intensive services and too little emphasis on medium and high-tech companies.

Opportunities

Matching Business with Available Labour

Under-utilization of the pool of potential workers is not just economically wasteful – it will increase London's inequality gap yet further.

UK Government Plans

The UK Government is seeking to address the economic development vacuum that may be caused by the abolition of the nine English RDAs, by creating a three-year Regional Growth Fund that will invest around €0.5billion a year (around 15% of the RDA budget), through open competitions and the investment in the best local projects that cover any topic or any location.

Development of Shoreditch

It is the vision of UK Government to introduce the concept of Tech City – a theoretical space stretching across East London, from Old Street's Silicon Roundabout to the Olympic Park.

They will provide support for the Roundabout's existing start-ups, as well as encouraging larger technology companies to move to the well-equipped Olympic facilities, vacant after the 2012 Games.

UK government may also consider tax breaks, as well as deregulation. Employees

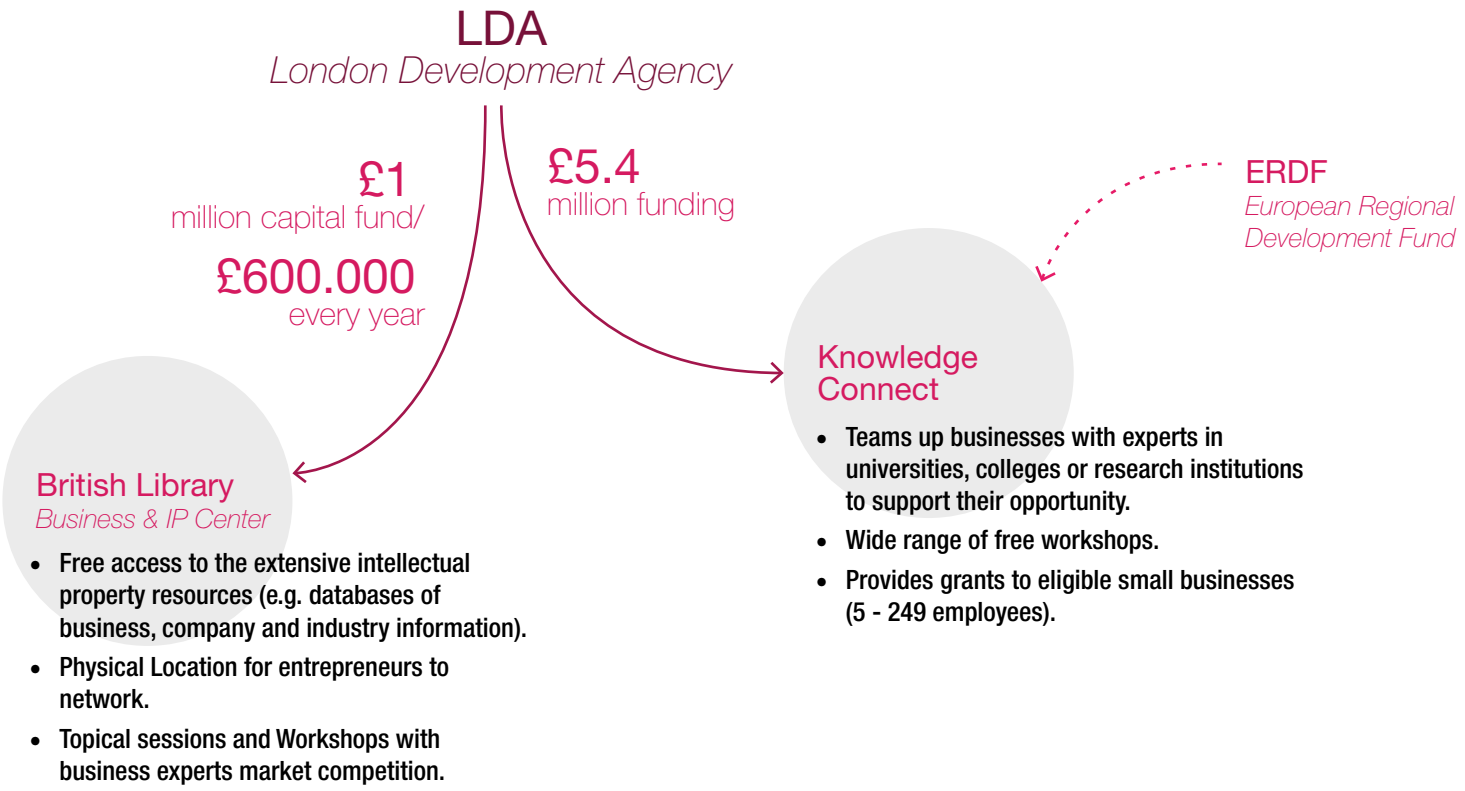
still have to pay 28 percent, which is equivalent to what the banking sector pays. This could be reduced to encourage entrepreneurship.

Threats

The European crisis

Even though London is currently one of the hottest start-up cities in Europe, along with Berlin and Stockholm, there is increasing start-up activity all over the globe that it has to contend with.

Best Practices



Knowledge Vouchers

£3.000
MINI VOUCHER

- Testing proof of concept.
- Strategic or Technical Development.
- Market Investigation.

£10.000
MAXI VOUCHER

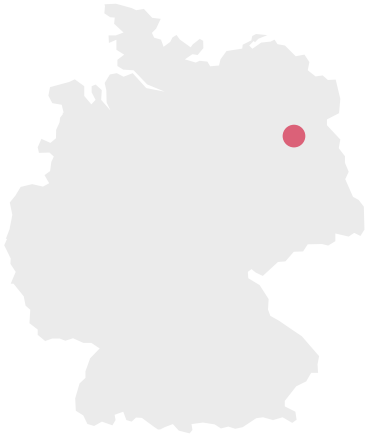
- R&D of new products, services and markets.
- Prototyping.
- Software development, testing and validation.

Clusters for the future

Knowledge Vouchers is a collaboration between the British Library and Knowledge Connect, both of whom were funded by LDA, additionally the ERDF in the case of Knowledge Connect. They give out two types of vouchers. The first are £3,000 mini-vouchers for testing concept designs, strategic and technical development, and market research and investigation. The second are £10,000 maxi-vouchers for performing R&D for new products and services, the creation of preliminary prototypes, plus software development, testing and validation.

Berlin

FUTURE ORIENTED
SECTOR CLUSTERS



Strongest Drivers

Berlin

Region: Europe

Population: 4.5 m

GDP: US$ 133 billion

GDP/cap: US$ 37,935

Patents: 6,624.7

Public R&D Expenditure: 2.78%

Data: 2012

Berlin is a city that is constantly evolving. The fast development of its urban structures, the international mix of its population and the economical development of its cultural network are all making Berlin an extremely attractive city for entrepreneurs to live in and to build their ideas within.

The support that the government provides creates an outstanding landscape that promotes science, education and research. Government becomes the foundation of the innovative ecosystem of this city, and the clusters created around modern sectors drive the increasing competitiveness of the region in the international market.

With a reasonably sizable and affluent population, Berlin has positioned itself as one of the most attractive environments for entrepreneurs, with specific focus on the young European online start-up scene.

Global Innovation Index 2012

Germany

Innovation Input Subindex

23°

Institutions	Human & Research Capital	Infrastructure	Market Sophistication	Business Sophistication
26°	16°	16°	24°	24°

Innovation Output Subindex

7°

Knowledge & Technology Output	Creative Output
10°	12°

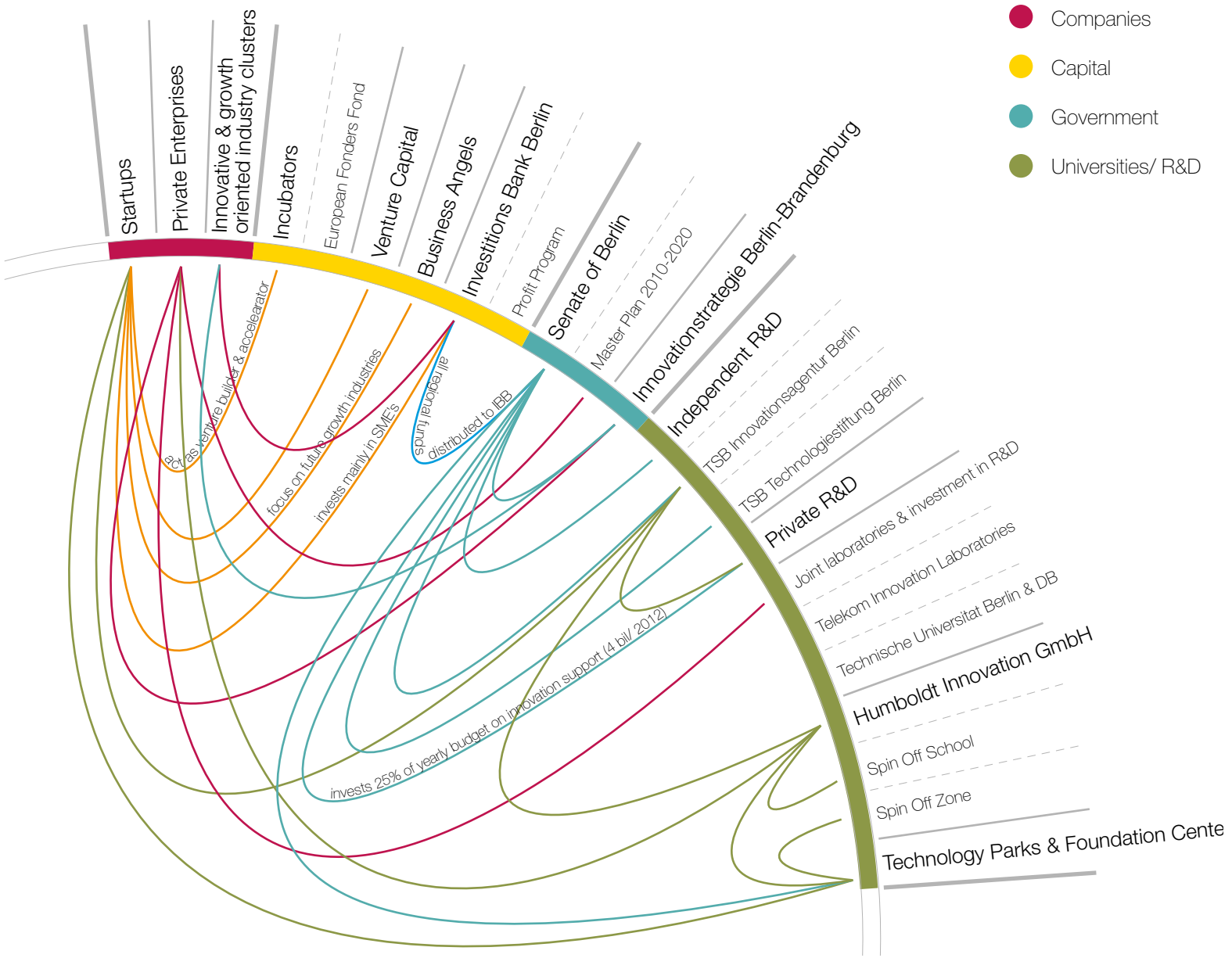
compared to: 141 countries

Startup Ecosystem Report 2012

Berlin

compared to: 20 cities

The Ecosystem



Berlin's ecosystem is characterized by a strong knowledge base, but is also one that also struggles to link with industry and private funding.

Senate of Berlin

The Senate is the heart of the engine that decides future innovation strategies, and one that has focused on the development of technology parks and an R&D landscape. It is ensuring financing through the Investment Bank Berlin (IBB), as well as attempting to attract foreign investments.

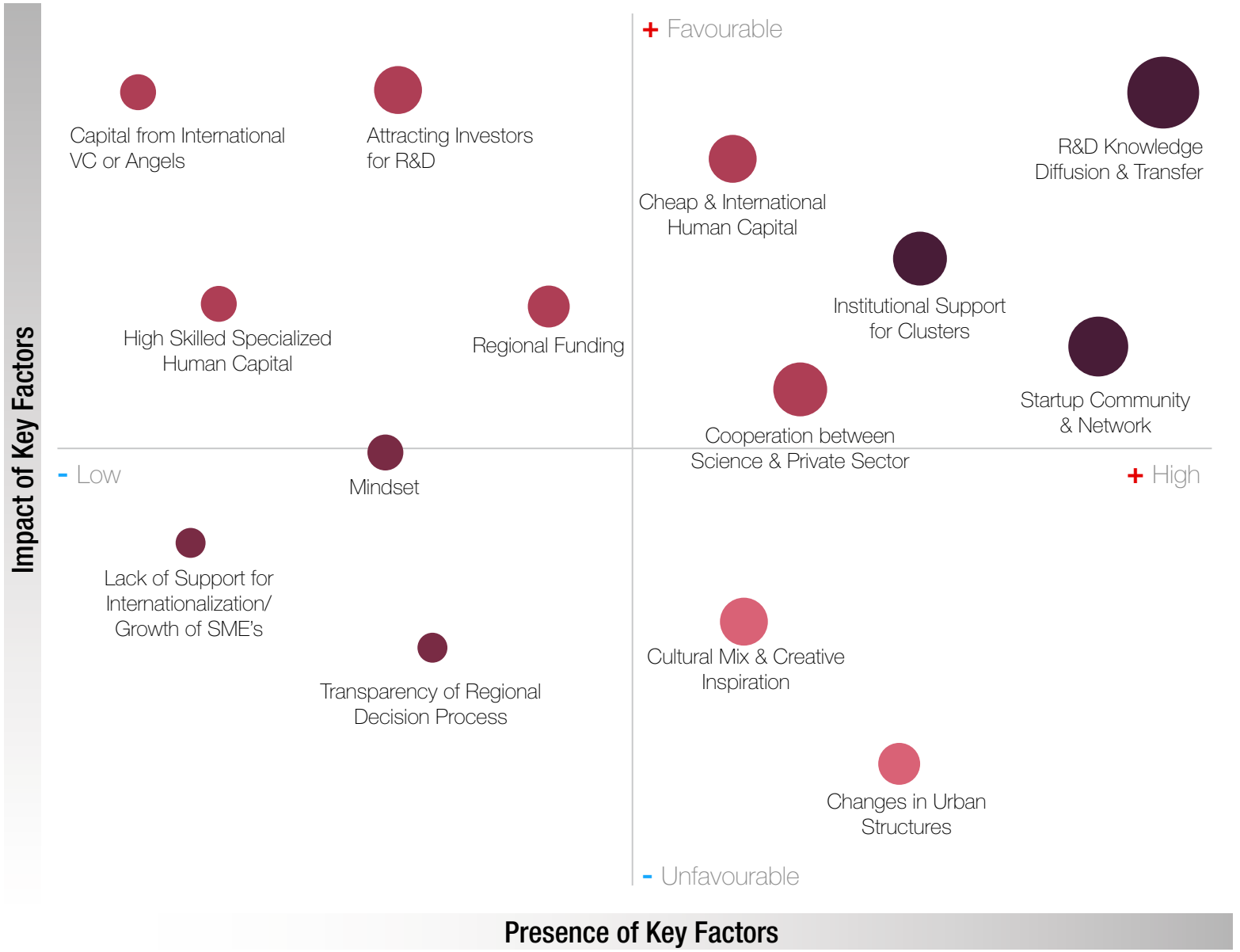
Startup Community

Fueled by a strong working morale and well trained people, the community is very active and interlinked. Nevertheless, the Incubator and Venture Capitalist power is concentrated in the hands of a few, very influential people and their organizations. This makes quick, agile reactions possible, but in certain cases may result in less transparency than is desirable in their activities.

Universities/ R&D

Berlin has a unique landscape of universities, R&D centers and independent research institutes that seek to co-operate with the business sector through spin-off GmbHs and laboratories.

Current Situation



- To Maintain
- To Increase Presence
- To Mitigate the Risks
- To reduce the Risks

Berlin has excellent science and R&D capabilities, based on a workforce that is both highly qualified and 20 percent cheaper than other European metropolitan areas.

There is, however, a strong private and overall investment gap (80 percent less private funding with respect to Silicon Valley), making R&D and new companies heavily reliant upon the government for funding. The government brings specific support through financial regulations favoring investors in the Sector Clusters.

Despite English language proficiency among the population, the ecosystem's greatest barrier to competitiveness may be that SMEs and Startups focus mainly on local markets, and lack support for internationalization.

Strengths

Workforce

Berlin is Germany's biggest and most well-trained labor market.*

It also has a multi-national workforce with low labor costs.**

Funding Policy

The Government provides strong support for all funding stages, and international funding in key industries such as health-care, energy, transport, Logistics, ICT and photonics.

Smart City

Due, in part, to a well functioning and constantly improving infrastructure, Berlin has one of the world's highest standard of living levels. ***

Attractive for SMEs

Berlin is the governmental and economic center of Germany, as well as being strategically centered in Europe, providing access to both Eastern and Western Europe.

Ideal market size for start-ups (3.5 million) with strong SME tradition.

*Highest researcher and academic per capita ratio in Germany

**20 percent less than other European metropolitan areas

***16/121 Mercer Ranking of living standard

Weaknesses

Culture

Berliners are less individualist than the general population, but they continue to be risk averse. This means the population is less prone to taking the necessary risks typically involved in entrepreneurship.

Accelerators

There is not a great deal of variety nor number of Accelerators, which skews the power balance unnecessarily towards existing ones. Such is the case of Rocket, which has led to shortage of programmers.

Opportunities

Financial Crisis

The financial crisis worked as a spark that pushed people towards becoming less risk averse, and reduced the cultural fear towards failure.

Logistics

The government investment in infrastructure has led to cheaper and faster ways to import and export from Berlin.

International

Initiatives to promote cross-border investment have arisen from both sides: the Minister of Economics took 100 entrepreneurs to Silicon Valley in order to seek support. In return, Bill Gates and his peers have invested over $35million in German start-ups through Research Gate.

Threats

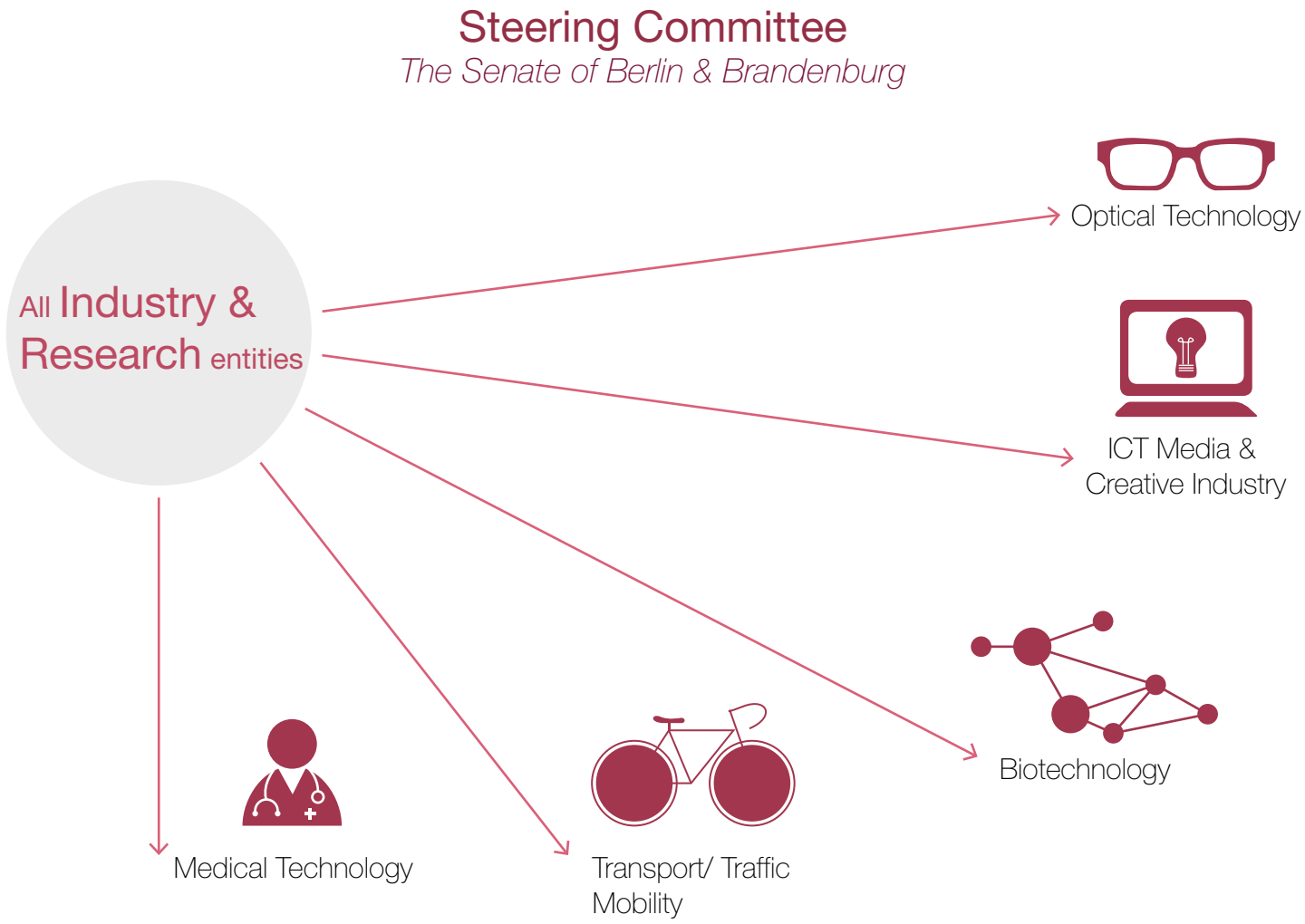
Financial Crisis

The financial crisis has also led to public budget cuts both at a national and European level. In an ecosystem that still relies upon the government for funding, this has reduced available funds for entrepreneurs and technology centers, thus reducing incentives for foreign companies to invest in local businesses.

City Trends

Due to the city's growing attractiveness, living costs such as rental fees are booming, and at the same time available space is being reduced, which acts both as a detractor of potential talent and as discouragement to entrepreneurship in the shape of rising labor costs.

Best Practices

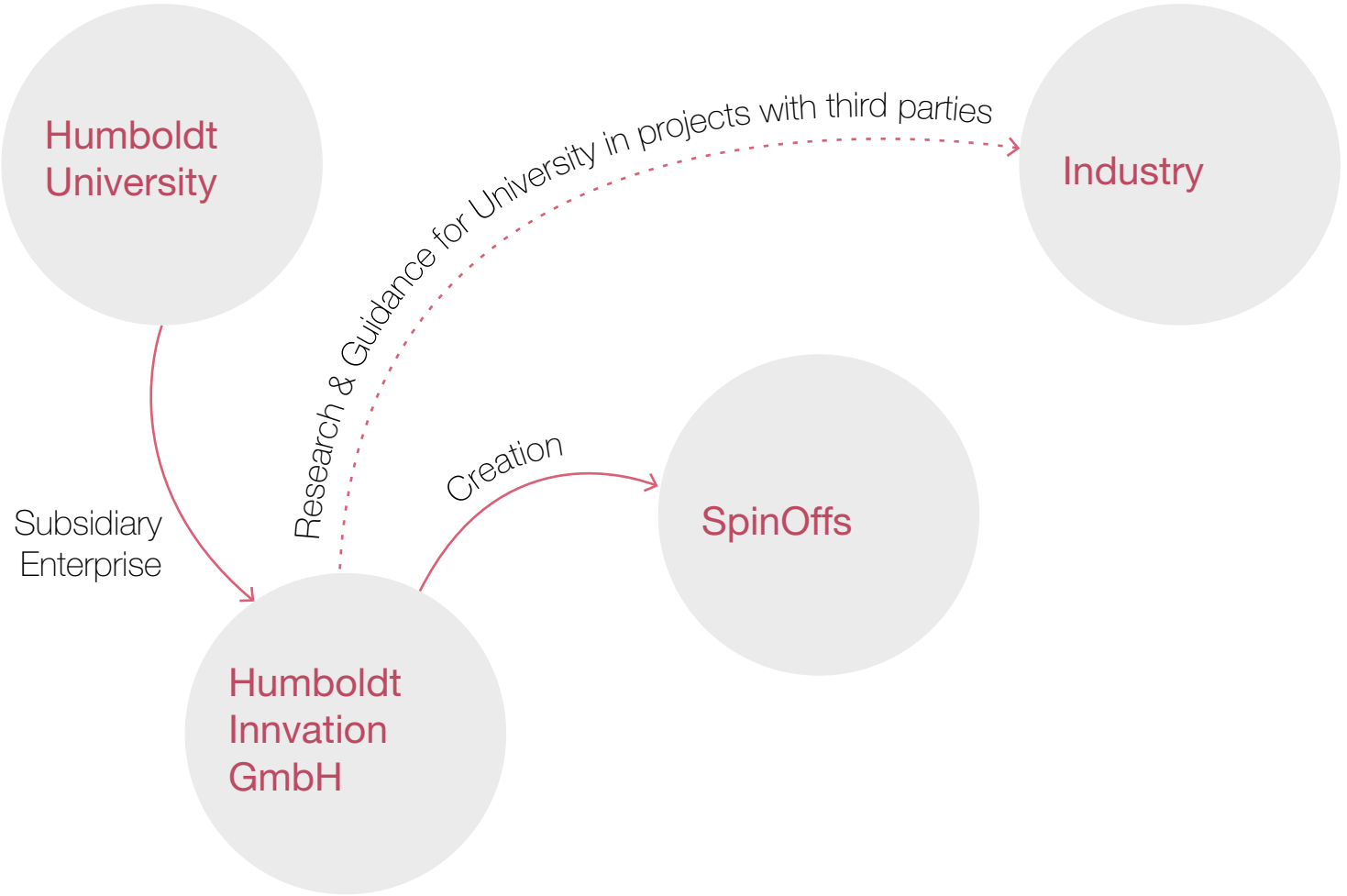


InnoBB: Future Oriented Clusters

InnoBB is an strategy initiated by Berlin and Brandenburg to make their region more competitive with clusters of future focused sectors on the international market. Some of them belonged already to Berlin's specialities, e.g. Pharmaceutical Sector, while others like ICT, came into focus due to the development of a start-up community in the city. The aim is to to grow a unique profile of future growth branches and to bundle the knowledge of all stakeholders in an effective and sustainable way.

Clusters allow an efficient usage of resources, a fast evolvement of professional networks and support interlinked projects.

Best Practices



Humboldt Innovation GmbH

The Humboldt Innovation GmbH is a spin-off and total subsidiary enterprise of the Humboldt University, and acts as a comprehensive interface between the university and industry, for example between science and business. It positions itself between business and academia and performs research projects & start- up development with third parties. Since 2005 it has overseen the implementation of 34 successful spin-offs and over 500 research projects.

Santiago

GLOBAL ENTREPRENEURSHIP
COMMUNITY

Santiago

Region: South America

Population: 6.6 m

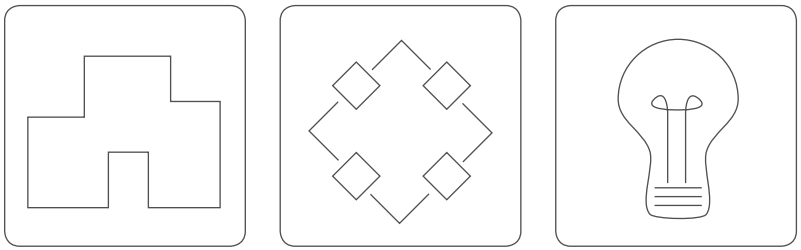
GDP: US$ 101.7 billion

GDP/cap: US$ 15,208

Patents: 1106

Public R&D Expenditure: 0,4%

Data: 2012



Strongest Drivers

Santiago has developed a fast-growing innovative ecosystem within the last decade. With a population twice the size of Silicon Valley, Santiago is considered the agricultural, mining, financial and transportation hub of Chile.

Over the last five years the Chilean Government has made strong and successful efforts to position Santiago as the upcoming Internet Technology Hub of Latin America.

This challenge is not insignificant, considering that Chile isn't even yet classified as an innovation-driven economy by the OECD. Nevertheless, the country ranks 39th in the Global Innovation Index Report and the city of Santiago was noted as an example of a extremely efficient start-up ecosystem among 20 similar cities by the start-up Ecosystem Report of 2012. The city has benefited hugely from government initiatives, such as "Start-Up Chile", that are designed to attract and foster new start-ups.

In addition, innovation and applied Research & Development are key strategic elements to aid Chile in becoming a fully developed country by 2020.

Global Innovation Index 2012

Chile

Innovation Input Subindex

43°

Institutions	Human & Research Capital	Infrastructure	Market Sophistication	Business Sophistication
29°	75°	44°	50°	57°

Innovation Output Subindex

34°

Knowledge & Technology Output	Creative Output
85°	44°

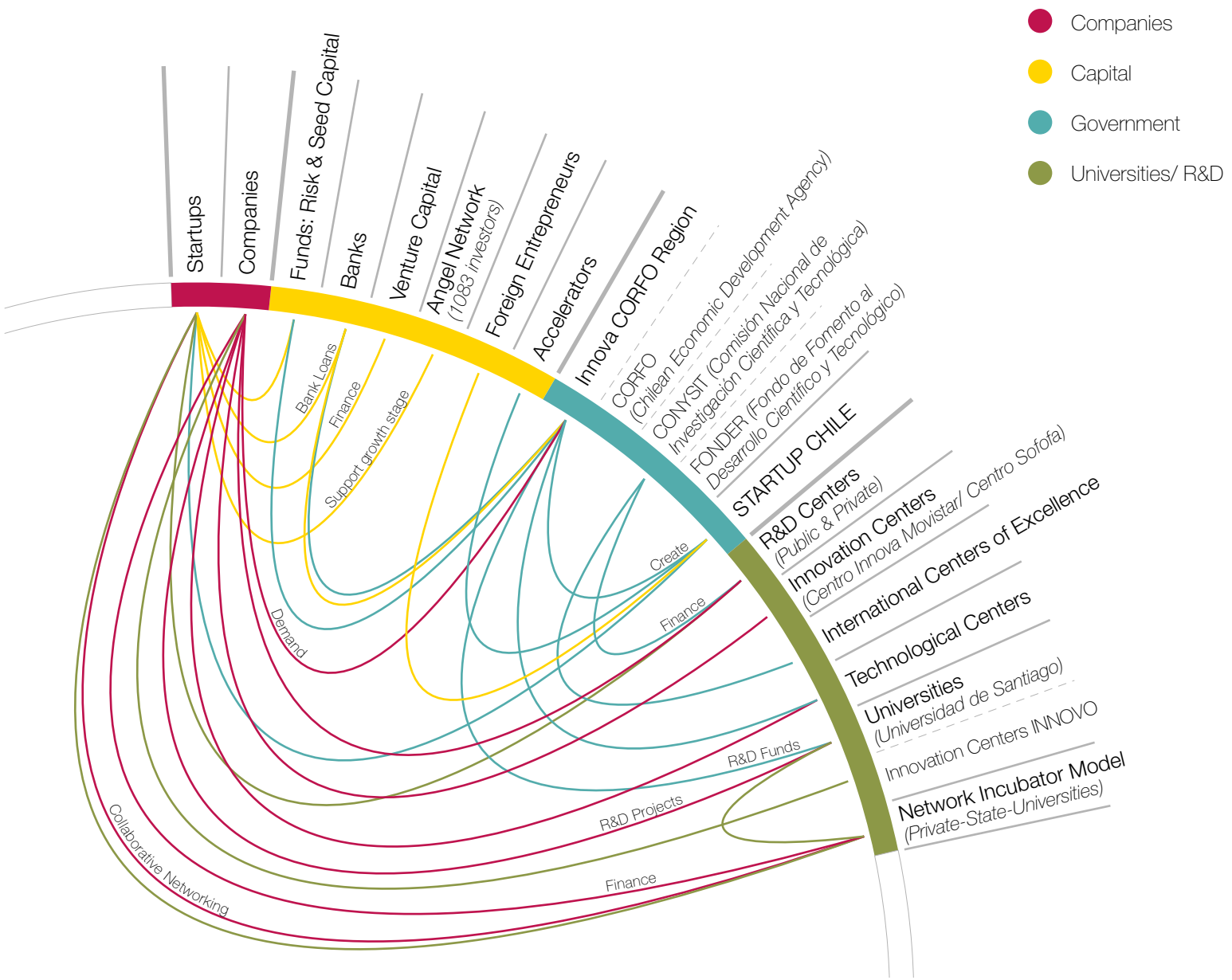
compared to: 141 countries

Startup Ecosystem Report 2012

Santiago

compared to: 20 cities

The Ecosystem



Public Institutions

Public institutional support is the major milestone of the innovative ecosystem in Santiago.

Public authorities are making continual strong efforts to create a favorable entrepreneurial environment by attracting talent and capital from abroad, and encouraging international companies and institutions to locate their R&D operations in Santiago.

Such efforts also provide strong financial support when starting new financing programs, as well as restructuring the previous ones. Public institutions have taken over the role as facilitator between entrepreneurs and the private industry, which are less involved in the ecosystem in comparison to universities and governments.

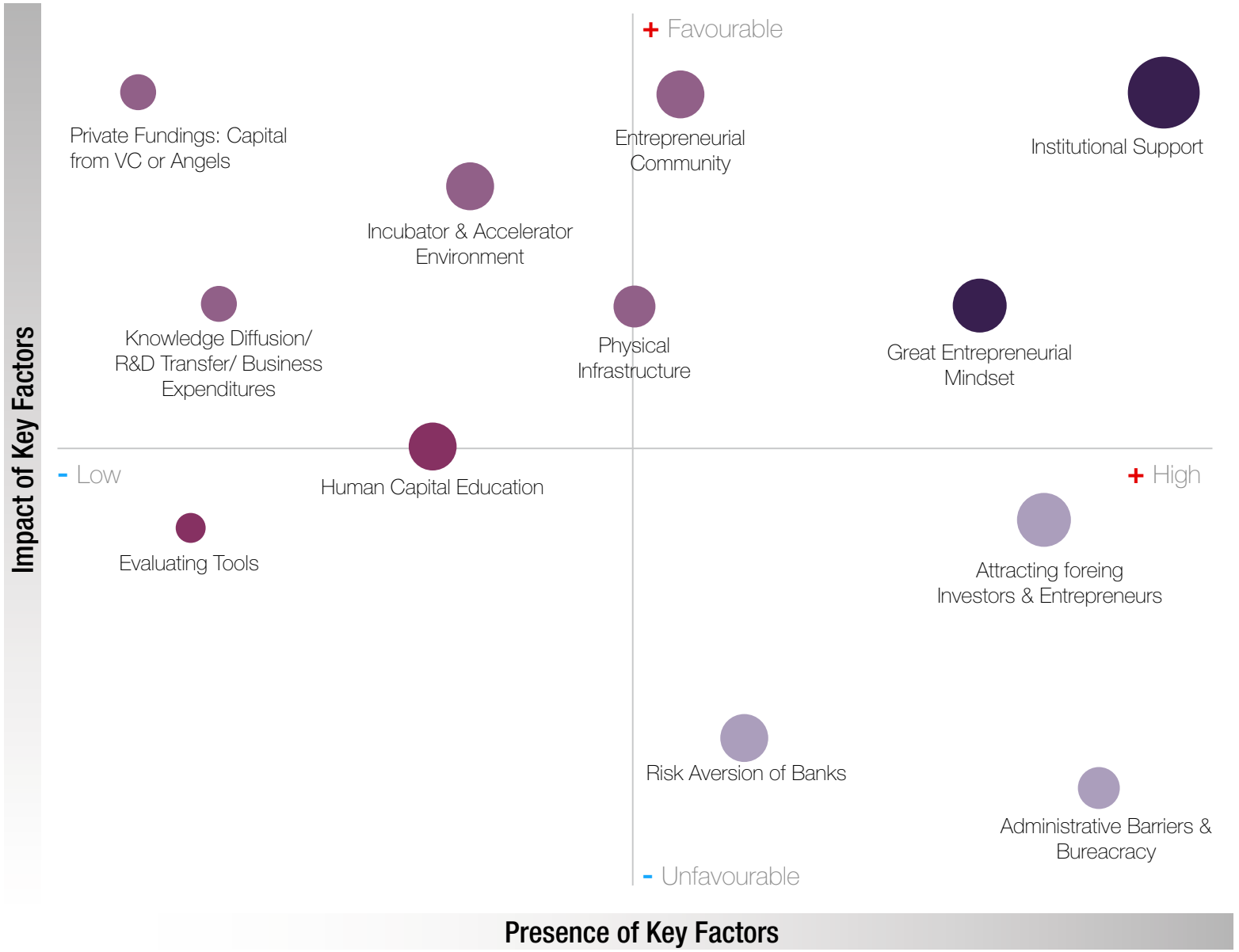
Universities

The activities of Santiago's universities have a huge impact upon the innovation efforts in the city. They act as a sponsor, including both tangible and intangible support.

Network Incubator Model

The incubation network is well developed and co-financed by public institutions, universities and private investors. This helps ensure accelerated growth and creates a high impact upon entrepreneurship, with an emphasis on technological innovation and entrepreneurial capability.

Current Situation



- To Maintain
- To Increase Presence
- To Mitigate the Risk
- To Reduce the Risk

Industries and private financing structures are less involved than compared to the government and universities.
Corfo tries to fill the gaps in the financing cycle, taking an active role by designing and offering seed and risk capital lines. Angel Investors tend to support the growth stage and income-generating projects which are not excessively risky, but it remains that 96 percent less funding is raised by Santiago's start-ups when compared to Silicon Valley.
There is a low level of knowledge diffusion and R&D transfer between companies and universities. Close to 40 percent of total R&D expenditure is carried out by universities, and is mainly located in Santiago: at the two largest universities, namely the University of Chile and the Catholic University. Universities are just beginning to include R&D projects from companies.
The ecosystem is changing at an accelerated rate and has experienced an important growth during the last five years, due to the strong efforts of the authorities to attract foreign investors and to make the ecosystem less bureaucratic and more transparent.

Strengths

Incubation Environment

There is a growing business of the incubation industry that is extremely strong in networking and has a high impact on entrepreneurship.

On the other hand, whilst it has simple administrative procedures, it also tends to emphasize high value services such as consulting, training and networking.

Additionally, there are informal meetings with industry experts to bring on professionals in order to mentor their clients.

Linking informational role (government funding line).

Universities Network

Universities are starting to show interest towards the incorporation of company projects based in I+D results.

The majority of Incubators are located on university campuses in order to gain access to university expertise and resources.

The major Incubators in Chile are either funded to some degree by or work closely with universities.

Public authorities

Public authorities design new financing programs, restructure old ones, or act as a facilitator between entrepreneurs and the private industry.

They demonstrate to other hubs and political decision-makers that it is possible to nurture, sustain and foster an entrepreneurial mindset in order to become self-sufficient. Santiago needs to build start-ups by attracting talent and capital from abroad.

Encourage international companies and institutions to locate their R&D operations in Santiago.

Weaknesses

Private actors involvement

Lack of industry involvement in comparison to universities and government.

Lack of capital from Venture Capitalists or Angels. The people investing seed money do not typically come from the private sphere. The Chilean Economic Development Agency is involved in providing most of the important capital.

Banks are reluctant to loan money to early-stage entrepreneurs as such investments are considered risky.

Entrepreneurs are used to facing a critical phase in the development of a new business during the initial stages.

Administrative Legitimation

There are important administrative and bureaucracy obstacles for entrepreneurs, especially in terms of access to banking services.

New companies only receive 9.4 percent of public support programs.

In addition the Incubator level does not yet have a clear system for evaluating the performance of Incubators.

Regulation Cost

Bankruptcy legislation (the last change in tax policy did not include incentives for companies that hire university R&D centers of technological institutes).

It can take months for entrepreneurs to extricate themselves from a doomed venture. By the time they do, their assets have more than likely shriveled. In the United States, lenders recover about 80 percent of the value of their investment from a failed venture, compared to around 30 percent in Chile.

Knowledge Diffusion

Human capital and research:

- Fifty percent less Masters & PhD compared with Silicon Valley.
- Public expenditure on education per pupil (78th in global ranking).
- Teacher per pupil ratio at the secondary level (101st global ranking).

International co-operation:

- The patented co-operation treaties with foreign investors are not sufficiently developed.
- Low R&D transfer.

Opportunities

Culture

The Santiago start-ups ecosystem has the same healthy variety of start-ups that target consumers, enterprises and SME customers as Silicon Valley.

Innovation

Chilean companies are highly innovative:

- 93.5 percent firms that introduced product innovations.
- 94.3 percent firms planning to innovate more in 2014.

Work

Startups in Santiago employ as many people per stage as start-ups in Silicon Valley.

Economics

Chile has plenty of infrastructures, high industrialization and economies of scale.

Political

Economy and institutions are stable and respectable.

Their political iniciatives can help to kick start a startup ecosystem (attracting talent and capital from abroad).

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

Social

The key challenges of Santiago start-ups are similar to those experienced by Silicon Valley start-ups. Both focus on customer acquisition, building products, funding and building successful teams.

Threats

Education

Santiago entrepreneurs are less educated than Silicon Valley entrepreneurs.

Culture

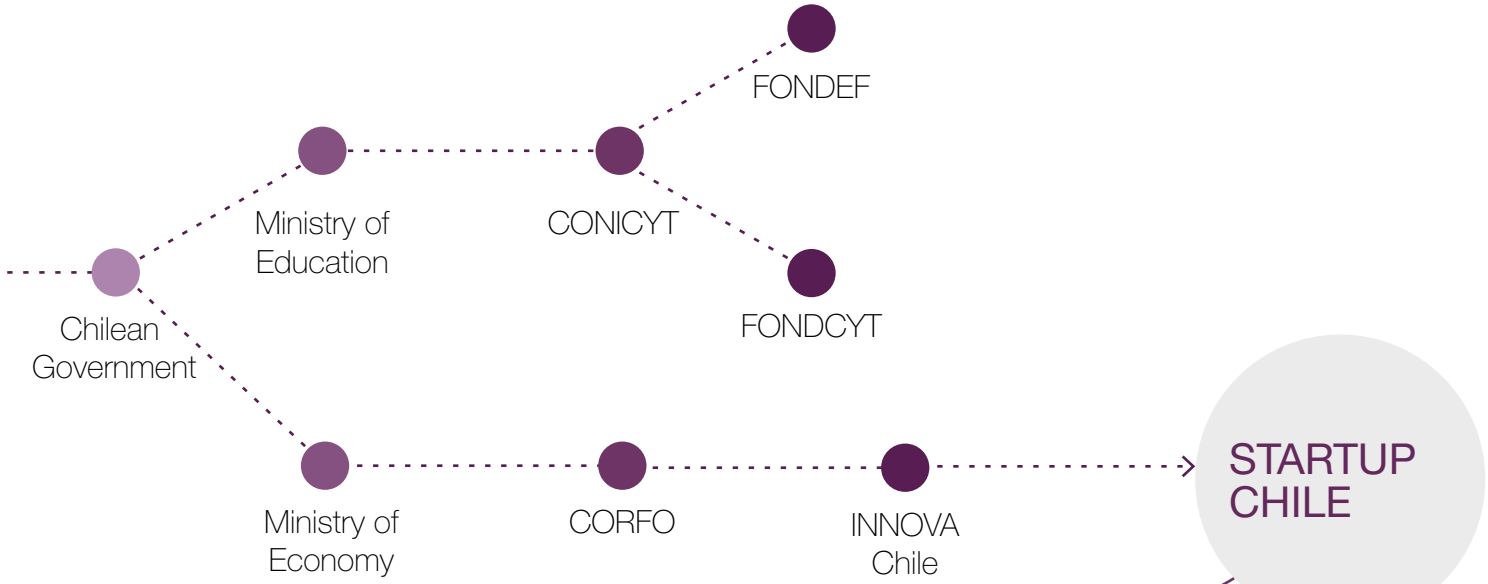
The ecosystem generally does not have a healthy distribution of start-ups across the “start-ups life-cycle”, with only a small number of late stage start-ups.

Santiago entrepreneurs are much less likely to tackle markets in which they’ve had previous experience.

Political initiatives can help to kick start a start-up ecosystem (attracting talent and capital from abroad).

Santiago start-ups are 31 percent more likely to monetize directly than Silicon Valley start-ups.

Best Practices



Favorable environment for entrepreneurs

US$40.000
Funding Give Away

1 Year
Working Permit

Easy access to offices

Develops organic growth

Supports entrepreneur initiatives

Attracts & retains talent

Innovative workspaces

Development of innovation ecosystem

Attraction of foreign Investors

Enable
Partnerships

Creation of
Innovation Hubs

Startup Community

The "Start-Up Chile" program is cited as a key driver of Santiago's ecosystem for entrepreneurship and innovation.

Its objectives are:

- To foster the interaction and transfer of knowledge between Chilean and global entrepreneurs.
- To strengthen the brand awareness of Chile as an innovative ecosystem.
- To enhance local entrepreneurship development by retaining projects with high growth potential.

START-UPCHILE

Tel Aviv

HIGHLY ORGANIZED
R&D COOPERATION

Tel Aviv

Region: Asia

Population: 414,000

GDP: US$ 132 billion

GDP/cap: US$ 37,767

Patents: 2665

Public R&D Expenditure: 4.3%

Data: 2012

Strongest Drivers

Tel Aviv is the second most populous city in Israel with a population of 414,000. It is known for its vibrant and creative environment. Tel Aviv attracts young, well-educated employees and successful businesses which, together with governmental initiatives, have turned Tel Aviv into a start-up and innovation ecosystem with potential world-leading capabilities.
Tel Aviv is the city with the most start-up per capita in the world, and has the best quality of scientific research.
In addition, Israel is the country which invests the highest percentage of their GPD into R&D, and attracts the most venture per person in the world.

Global Innovation Index 2012

Israel

Innovation Input Subindex

19°

Institutions	Human & Research Capital	Infrastructure	Market Sophistication	Business Sophistication
47°	4°	21°	9°	19°

Innovation Output Subindex

9°

Knowledge & Technology Output	Creative Output
10°	27°

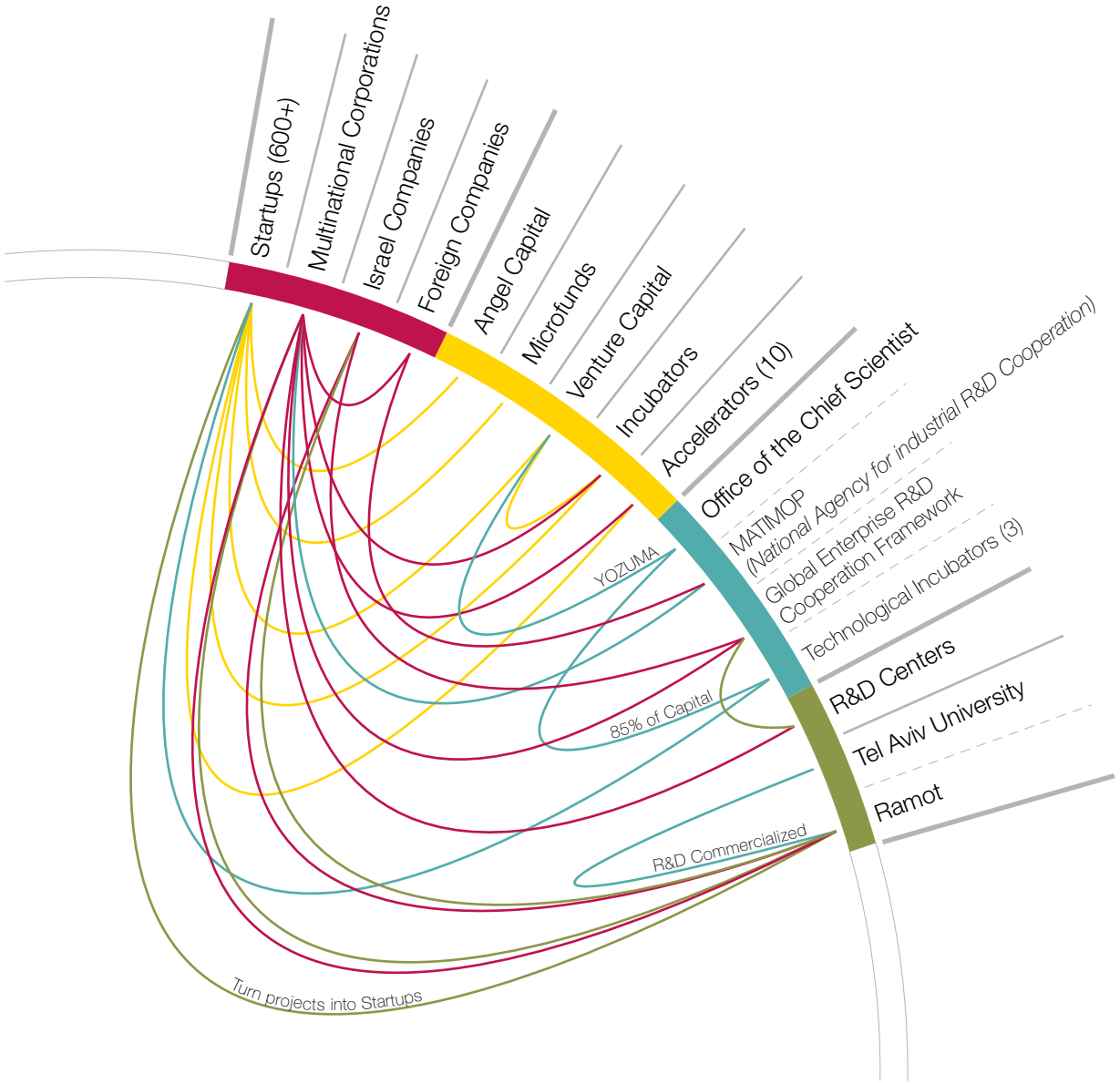
compared to: 141 countries

Startup Ecosystem Report 2012

Tel Aviv

compared to: 20 cities

The Ecosystem



- Companies
- Government
- Capital
- Universities/ R&D

The four Key players in Tel Aviv's ecosystem:

MNC's

MNCs are important in every ecosystem, as they provide not only funding, but also knowledge, R&D, and international recognition.

Investors

A fairly unique aspect of Tel Aviv is concerned with funding. The city has investors for every step of the way, from pre-seed, late seed and early growth. This increases the success rate of start-ups, as they seldom face the issue of the lack of funding opportunities.

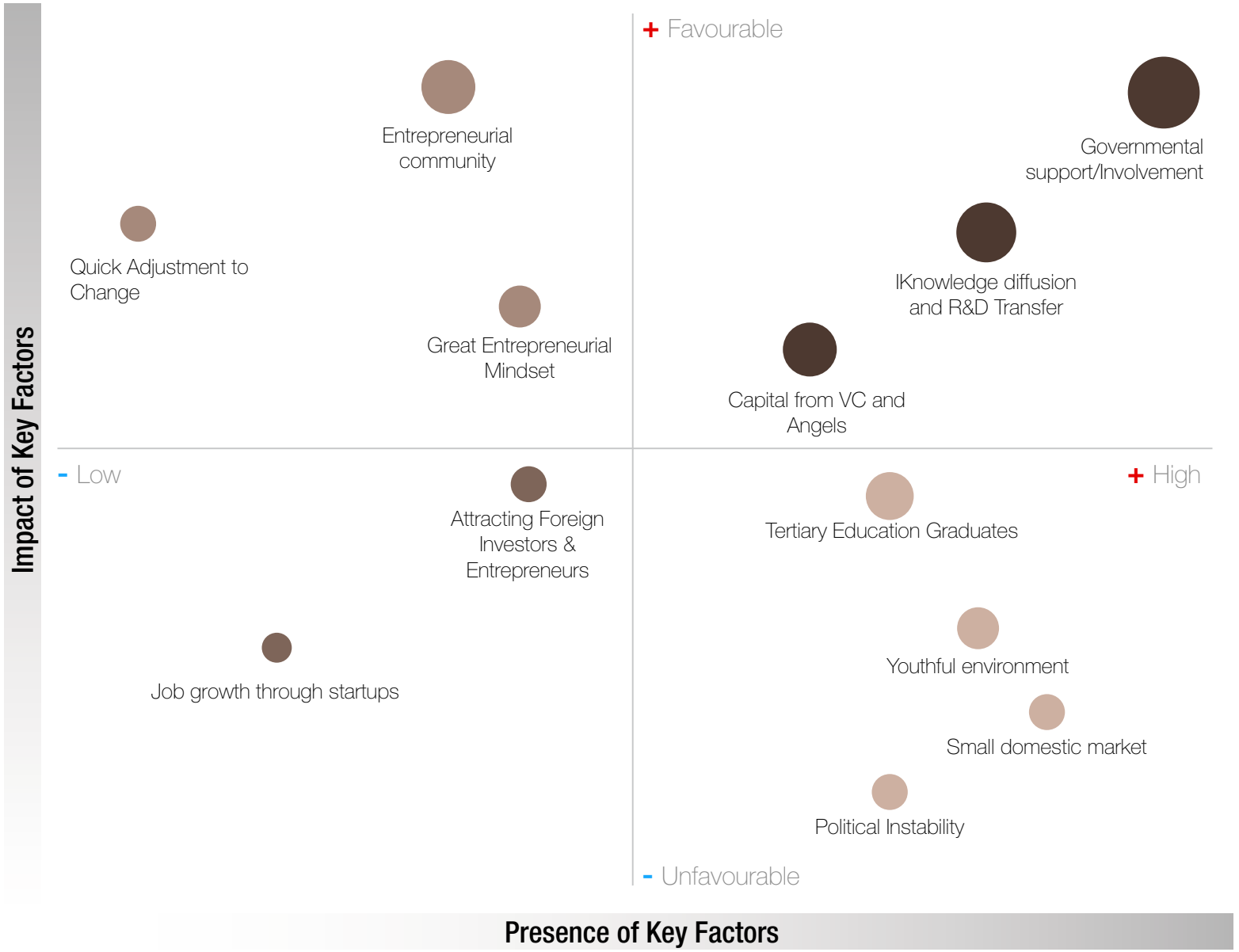
Office of the Chief Scientist

The Office of the Chief Scientist is the Ministry of Industry, Trade and Labor of Israel. It created the Venture Capital market through the Yozma fund, making use of the immigration of scientists and engineers from the former Soviet Union by creating technological start-ups and research. It also created MATIMOP, which is in charge of organizing international R&D.

Ramot at Tel Aviv University

Ramot is the commercial arm of the Tel Aviv University. It works as a mediator between industry and the university. On one hand it helps university projects to find industrial collaborators or for them to create start-ups, and on the other it informs companies about projects currently being researched, to encourage collaboration on common subjects.

Current Situation



- To maintain
- To Increase Presence
- To Mitigate the Risk
- To Reduce the Risk

The three main threats to the innovative ecosystem of Tel Aviv are the conservative culture hindering the quick adjustment to new trends, reserved management styles and political instability.

Furthermore, the constant threat of terrorism in the city places investors ill at ease.

One of the main problems the ecosystem faces is the size of the local market. Israel has a comparatively small population. This leads to the migration of many start-ups from Tel Aviv once they are successful, in order to access a larger market.

The strengths of the Tel Aviv ecosystem are governmental support, funding and knowledge diffusion, the latter of which is especially extensive in Tel Aviv. This occurs not only through MATIMOP and Ramot, but also through the global enterprise co-operation framework, which is in charge of co-ordinating research undertaken in R&D centers, MNCs and local SMEs.

Strengths

Fonds

Tel Aviv has:

- Bilateral-Funds with Canada,USA, Korea and Singapore.
- Multilateral Funds with Europe.
- Venture Capitalists.

Every Stage of investment covered by: accelerators and angel investors, Angel capital, Micro Funds and Venture capital.

Mentoring

Incubators and Accelerators created by the private sector, the universities, multinational companies and the government.

Even though most technology Incubators are privatized, the government pays 15 percent of the required capital for a project whilst the incubator owner pays the remaining 85 percent.

R&D

2240 Foreign centers in Israel.

Joint R&D with US, Latin America, Europe and AsiaPacific.

The Global Enterprise R&D Cooperation Framework.

Programs to encourage the Establishment of R&D Ccenters in Israel for the servicebenefit of international projeccts for MNCs.

University Ramot at Tel Aviv University.

City Branding

Non-stop city (young population, attractive businesses, nightlife, rising real-estate demand,individualism, liberalism, hedonism , freedom…)

Global city: Tech Mile, creation of municipal high-tech hubs, conferences and events.

Weaknesses

Foreign Dependency

Israel has a very small market where a high percentage of knowledge and goods come from the external sources, therefore products must be of sufficient interest to the foreign market for a start-up to become successful.

Lost Potential

Many Israeli start-ups are sold to the US market and become absorbed into global firms, never really expanding in Israel.

The information and communication technology sector accounts for around 20 percent of total industrial output and only 9 percent of business sector employment.

The returns in terms of long-term job creation and income growth have not been maintained, despite continued investment in high-tech industries.

Culture

The conservative culture and slow pace of adaptation towards new technologies, management processes and business models could hinder Tel Aviv from becoming the number one innovative ecosystem.

Similar to Silicon Valley

The ecosystem of Tel Aviv makes direct comparison for foreign investments and projects to the ecosystem of Silicon Valley.

Bilateral-Funds with Canada, USA, Korea and Singapore.

Multilateral Funds with Europe. Venture Capitalists.

Every Stage of investment covered by:

Accelerators and Angel Investors, Angel Capital, Micro Funds and Venture Capital.

Opportunities

Economic

Israel has the highest density of tech start-ups in the world.

Sixty-three Israeli companies are listed on the tech-orientated NASDAQ, which is more than Europe, Japan, Korea, India and China combined.

Attract foreign investment (UE, USA), and entrepreneurs.

Social/Culture

Tel Aviv has the second highest output index of start-ups with a healthy funnel of new enterprises across the developmental life-cycle, a highly developed funding ecosystem, a strong entrepreneurial culture, a vibrant support ecosystem and a plentiful supply of talent.

Israel is a country of immigrants. Youthful environment.

Political

Almost every major tech company across the world today has some kind of subsidiary in Israel, including Intel, Microsoft, Google and Cisco. Consequently, 39 percent of Israeli high-tech employees work in the R&D departments of multinational companies.

Threats

Political

Israel is very unstable country, politically and is in constant threat of terrorism and bombings.

Tel Aviv startups are less ambitious:

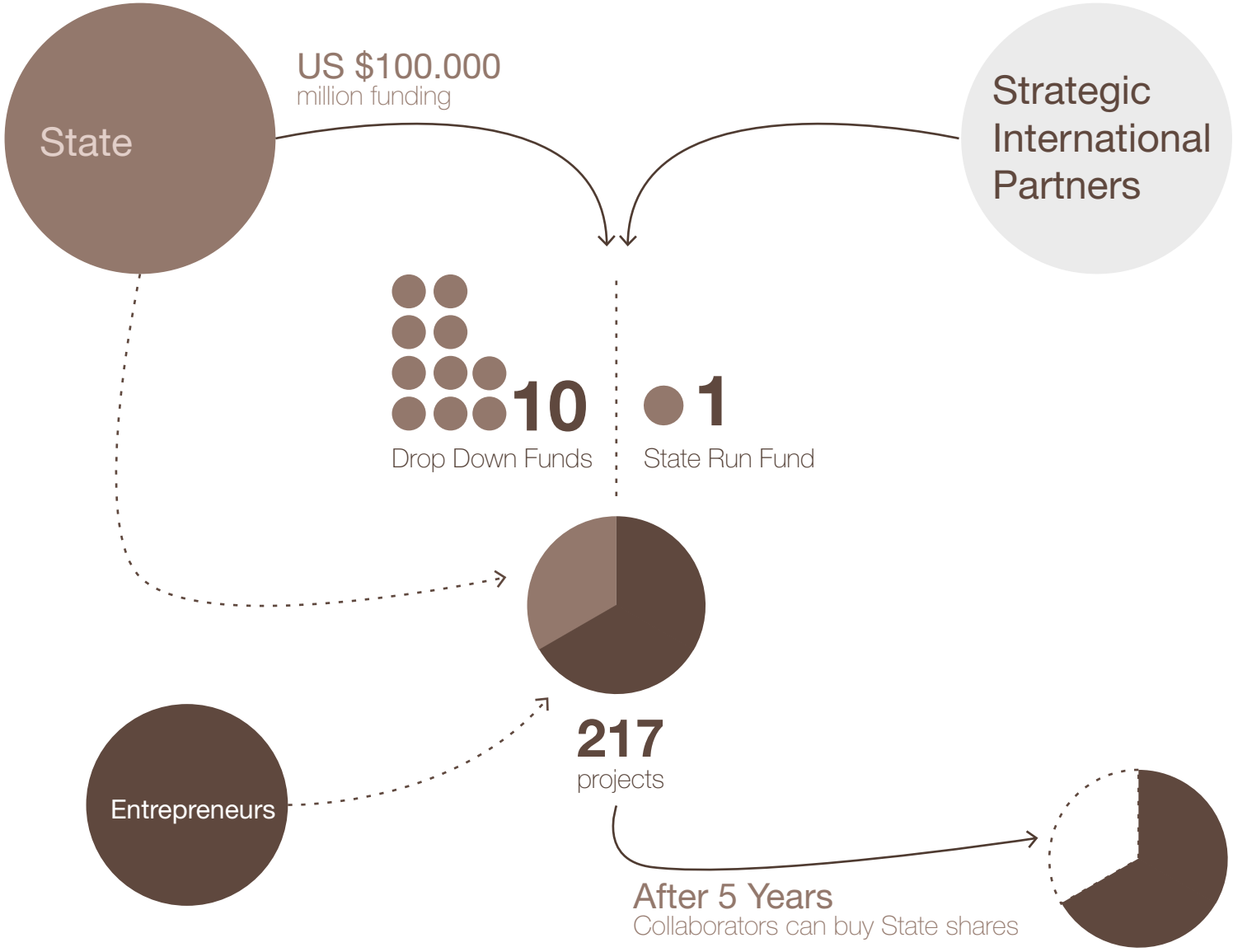
- Israel startups are 46 percent more likely to tackle smaller markets.
- The average company performance (in growth & revenue) is lower than of other ecosystems.
- Employees are 9 percent less committed to work full time before product market fit.

Commercial

Tel Aviv has a slow adoption speed of new technologies (such as programming languages), business models (new types of monetization) and management processes (data driven decision making).

They care more about “building a great product” than “changing the world”.

Best Practices



YOZMA

Yozma is a program designed by the Israeli government with the aim of creating a real market for Venture Capital in the country. The state set up a US$100 million fund. Together with strategic international partners, Yozma then set ten drop-down funds and one state-run fund. The government had a minority role in the funds, and no interference rights in the investment choices.

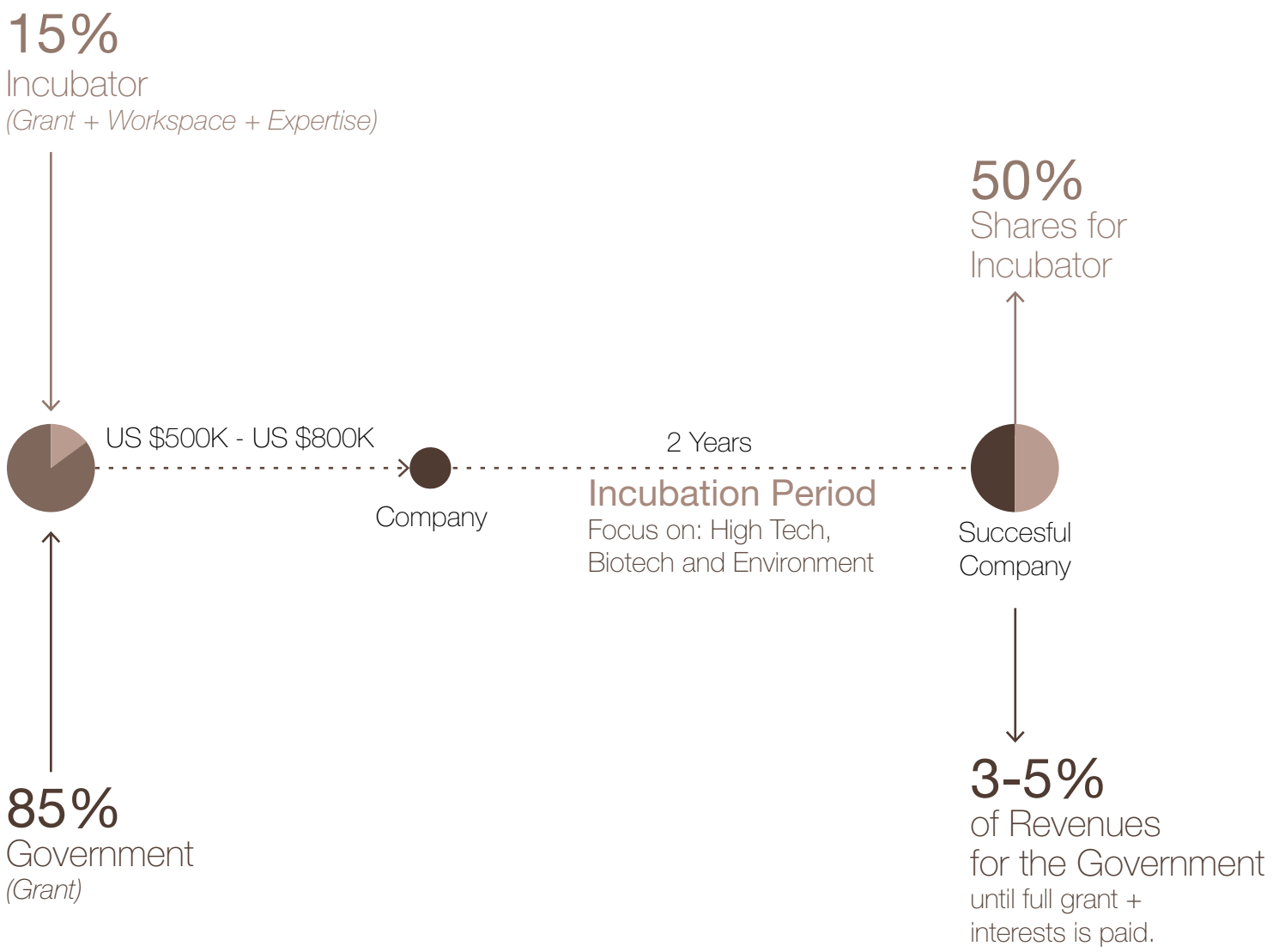
Additionally, the collaborators had the option to buy the state's shares within five years for a very favorable price.

The funds focused on early-state high-tech companies. In total, they invested in 217 projects and companies and eight of these companies made use of the buy-out option.

Ramot at Tel Aviv University

Ramot fosters, initiates, leads and manages the transfer of new technologies from university laboratories to the marketplace, by performing all the activities relating to the protection and commercialization of inventions and discoveries that are made by faculty, students and other researchers. Ramot provides a dynamic interface, connecting industry to leading-edge science and innovation, offering new business opportunities within a broad range of emerging markets.

Best Practices



Technological Incubator Program

The Technological Incubator Program was an initiative by the government to smartly use the knowledge available through the immigration of scientists and engineers from the former Soviet Union. They are a private legal entity intended to invest in high risk projects that would normally find recruiting private investors difficult.

The companies stay in the Incubator for approximately two years, and receive between US$ 500,000 and US$ 800,000 depending on the project. Eighty-five percent of this money is given by the Israeli government and 15 percent by the Incubator itself. In return the Incubator receives up to half of the shares, whilst the government receives between three and five percent in royalties from revenue generated, until the full grant plus interest is paid back, but only if the company is successful.

The Global Enterprise R&D Cooperation

The program encourages MNCs to conduct joint R&D Projects with Israeli partners whilst focusing on the activity in the national preference zones and/or traditional industries.

Final thoughts

Innovative ecosystems can grow and become thriving environments by means of many different methodologies or support measures. Factors such as the strength of the scientific landscape, governmental strategies and support, and the transparency of the overall access for start-ups into the system are crucial when it comes to influencing the overall development of an innovative ecosystem.

Once a system is well established and secure in the entrepreneurial setting of a region or city, it must gain autonomy. The less the government is involved in the long term, the more sustainable an ecosystem becomes.

One of our missions at Opinno is to help governments implement world-class innovation ecosystems in Latin America and the rest of the world, in order to accelerate innovation cycles and to create disruptive innovations, in addition to profitable products and services.

At Opinno we think that one of the main key factors is the implementation of Lean methodologies within these ecosystems, which fosters the acceptance of failure and raises the effectiveness of new businesses to deliver products and services that solve real world problems and needs.

Another key factor for us is the adoption of an Open Innovation framework – a framework to create a high value network that establishes a natural partnership amongst governments, organizations, entrepreneurs and other entities, including large institutions such as MIT, Harvard, Stanford, and where, in a transparent manner, everyone adds the right value and, at the same time, benefits from each other.

At Opinno we believe that any ecosystem that wants to create real long-term value in terms of innovation should:

Define its identity via a clear focus upon the development of strategic lines, seeking the differentiation from other ecosystems (by type of innovation, by sector ...) and keeping in mind that innovation is not just a group of PhDs thinking together, but requires a mix of both hard and soft skills that range from pure science to creativity at its best.

Think on the long term with the right engagement for the plan. There is little sustainability in short-term actions without continuity, and only a well elaborated mid-term and long-term action plan, in conjunction with the right engagement, will deliver the opportunity to build a fully independent ecosystem that is not directly attached to government policies or the general economic situation.

Accelerate the innovation and entrepreneurial process by removing unnecessary bureaucracy, creating incentives for innovation through fiscal tools and lightening the process of talent immigration and tax-schemes for new companies.

Facilitate the integration of the different innovation agents in the country (universities, MNCs, research centers, technology centers, public administration...) through a legislation system in favor of the agents.

Have faith in the talent and the inclusion of innovation and technological thinking in the educational system.

ANNEXES

I. Global Innovation Index 2012
Research Indicators

INSEAD and the World Intellectual Property Organization (WIPO, a specialized agency of the United Nations) & Knowledge Partners: Alcatel-Lucent, Booz & Company and the Confederation of Indian Industry & Advisory Board of eleven experts & Statistical audit by the Joint Research Centre of the European Commission.

Qualitative and quantitative research methods:
The 2011 edition of the EOS included 126 questions; 13,395 surveys were retained for tabulation, completed by business executives from 142 economies between January and June 2011.

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

84 indicators included in the Global Innovation Index (GII). A total of 59 variables are hard data; 16 are composite indicators from international agencies, distin- guished with an asterisk (*), includ- ing five indices based on percent ranks for which an 'r' was added; and 6 are survey questions from the World Economic Forum's Executive Opinion Survey (EOS), singled out with a dagger (†). The EOS has been conducted for over 30 years.

Global Coverage & Broad Scope

- 141 country/ economy profiles (App I)
- Performances by region and by income group
- 84 indicators; 62 hard data, 16 indices, 6 survey questions (App II Data Tables)

Transparent Methodology

- Year-on-year comparability of results (Annex 2)
- Statistical audit (Annex 3, Confidence, interval for rankings)
- Sources and definitions (App 3) and theoretical notes (App IV)

Effort to capture innovation in emerging markets

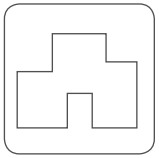
- Scaling of indicators (comparability, stages in development)
- Knowledge diffusion/ absorption
- Relative strengths/ weaknesses (cutoffs based on percentage of countries with scores above/ below)

Framework adjusted for relevance and timeliness

- 35% of data from 2011, 35% from 2010, 21% from 2009
- New data from ISO, STO, GMAT, ZookNIC, Google
- New sub-pillars: Ecological sustaintability and Online creativity

I. Global Innovation Index 2012
Research Indicators

Innovation Input Subindex

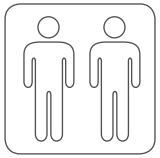


Institutions

Political Environment:
+ Political Stability
+ Government effectiveness
+ Press freedom

Regulatory Environment:
+ Regulatory Quality
+ Rule of Law
+ Cost of Redundancy dismissal

Business Environment:
+ Ease of starting a business
+ Paying taxes
+ Resolving insolvency

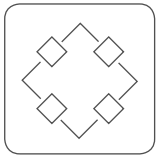


Human & Research Capital

Education:
+ expenditure on education
+ School Life Expectancy
+ Assessment in Math & Science

Tertiary Education:
+ Tertiary Enrolment
+ Graduates in Science
+ Engineering tertiary inbound and outbound

R&D:
+ No. of researchers
+ Gross expenditure on R&D(GERD)
+ Quality of scientific research institutions



Infrastructure

Information & Communication Technologies:
+ ICT access/ use
+ Govt. online service
+ Online e-participation

General Infrastructure:
+ Electricity output/ consumption
+ Gross capital formation
+ Trade- transport infrastructure

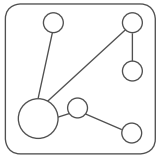
Ecological Sustaintability:
+ Ease of starting a GDP per unit energy use
+Environmental performance
+ ISO 14001 certificates

Market Sophistication

Credit:
+ Ease of getting credit
+ Domestic credit to private sector

Investment:
+ Ease of protecting investors
+ Market capitalization
+ Venture capital deals
+ Total value of stocks traded

Trade & Competition:
+ Applied tariff rate
+ Import/export of goods and services
+ Intensity of local competition



Business Sophistication

Knowledge Workers:
+ Knowledge-intensive services employment
+ Business GERD performance/financing
+ GMAT mean score

Innovation Linkages:
+ University-Industry research collaboration
+ State of cluster development
+ GERD financed by abroad
+ JVs

Knowledge absortion:
+ Royalty and licenses fee payments
+ High-tech imports
+ Computer communication service imports
+ FDI inflows

Innovation Output Subindex

Knowledge & Technology Output

Knowledge Creation:
+ National office patent applications
+ Patent-cooperation treaty applications
+ Science/ technical journals

Knowledge Impact:
+ Growth rate of GDP per person
+ New business density
+ Total computer software spending
+ ISO9001 quality cert

Knowledge Diffusion:
+ Royalty and license fees receipts
+ High-tech exports, FDI outflows
+ IT services exports

Creative Output

Creative intangibles:
+ National office/
+ Madrid agreement trademark registrations
+ ICT and business/ organization model creation

Creative goods & services:
+ National feature films produced
+ Daily newspaper circulation
+ Creative goods/ services exports

Online Creativity:
+ General/country-code top-level domains
+ Wikipedia monthly edits
+ Youtube-videos

I. Global Innovation Index 2012

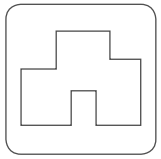
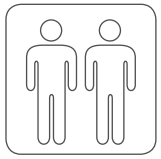
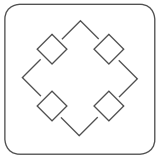
Research Indicators

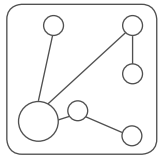
10º United States **15º** Germany **39º** Chile

5º United Kingdom **17º** Israel

/ compared to **141** countries

Innovation Input Sub-Index



	Input	Institutions	Human Capital & Research	Infrastructure	Market Sophistication	Business Sophistication
United States	9º	17º	22º	1º	2º	9º
United Kingdom	5º	9º	21º	6º	3º	15º
Germany	23º	26º	16º	16º	24º	24º
Israel	19º	47º	4º	21º	9º	19º
Chile	43º	29º	75º	44º	50º	57º

Innovation Output Sub-Index


	Output	Knowledge & Technology	Creative Output
United States	16º	11º	33º
United Kingdom	5º	8º	14º
Germany	7º	10º	12º
Israel	9º	10º	27º
Chile	34º	85º	44º

II. Startup Ecosystem Report 2012
Research Indicators

By Startup Genome & Telefonica Digital

Qualitative and quantitative research methods:

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

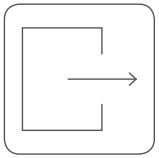
A web-based survey: StartupCompass.

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

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.

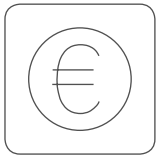
The ranking is made for 20 startup ecosystem: Silicon Valley, Tel Aviv, Los angeles, Seattle, New York city, Boston, London, Toront, Vancouver, Chicago, Paris, Sydney, Sao Paulo, Moscow, Belrin, Waterloo, Singapore, Melbourne, Bangalore, Santiago.

II. Startup Ecosystem Report 2012
Research Indicators



Startup Output

Represents the total activity of entreprenership in the region, controlling for population size and the maturity of startups in the region.



Funding

Measures how active and how comprehensive the risk capital is in a startup economy.

Performance

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.

Talent

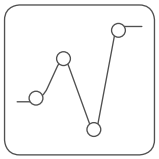
Measures how talented the founders in a given startup ecosystem are, taking into account age, education, startup experience, industry domain expertise, ability to mitigate risk and previos startup success rate.

Support

Measures the quality of the startup ecosystem support network, including the prevalence of mentorship, service providers and types of funding sources.

Mindset

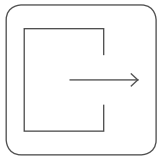
Measures how well the population of founders in a given ecosystem thinks like a great entrepreneur, where a great entrepreneur is visionary, resilient, has a high appetite for risk, a strong work ethic and an ability to overcome the typical challenges startups face.



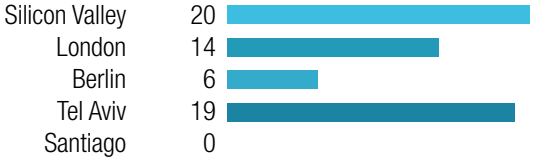
Trendsetter

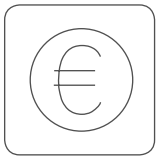
Measures how quickly a startup ecosystem adopts new technologies, management processes, and business models. Where startup ecosystems that stay on the cutting edge are expected to perform better over time.

II. Startup Ecosystem Report 2012
Research Indicators



Startup Output



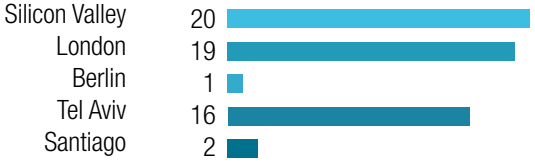


Funding

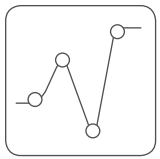
Performance

Talent

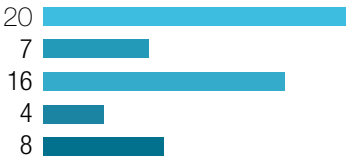
Support



Mindset



Trendsetter



compared to
20
cities

III. Silicon Valley Index 2012
Research Indicators

Joint Venture Silicon Valley and Silicon Valley Community Foundation – with help from Californian departments for Education, Finance etc U.S. Census Bureau, US patent and trade office etc.

Qualitative and quantitative research methods:
The survey elicits both a backward-looking as well as a forward-looking indicator, thereby capturing the sentiment of the past six months' trend and its counterpart six months into the future. The survey is conducted every month and over time is meant to develop an early warning system of upswings and downswings in the Silicon Valley economy.

Using external secondary data:
US census bureau (all demographics), Population estimates 2012, California departments for each sector, Joint Venture Silicon Valley network data, 2010 American community survey, IPOhome.com, US Small Business Administration.

5 indicators focusing on People, Economy, Society, Place and Governance which are then further divided into sub-indiactors.