

INNOVATION WITHIN CITIES

POLICY APPROACHES TO GROW TECH STARTUP ECOSYSTEMS AND INCREASE
INNOVATION IN CITIES

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AGENDA

- **Global Trends** on Innovation and Entrepreneurship in Cities
- **Key Success Factors** of City Innovation and Entrepreneurship Ecosystems
- **Policies** for Growth and Sustainability of City Innovation and Entrepreneurship Ecosystems

SOURCES AND ACKNOWLEDGEMENT:

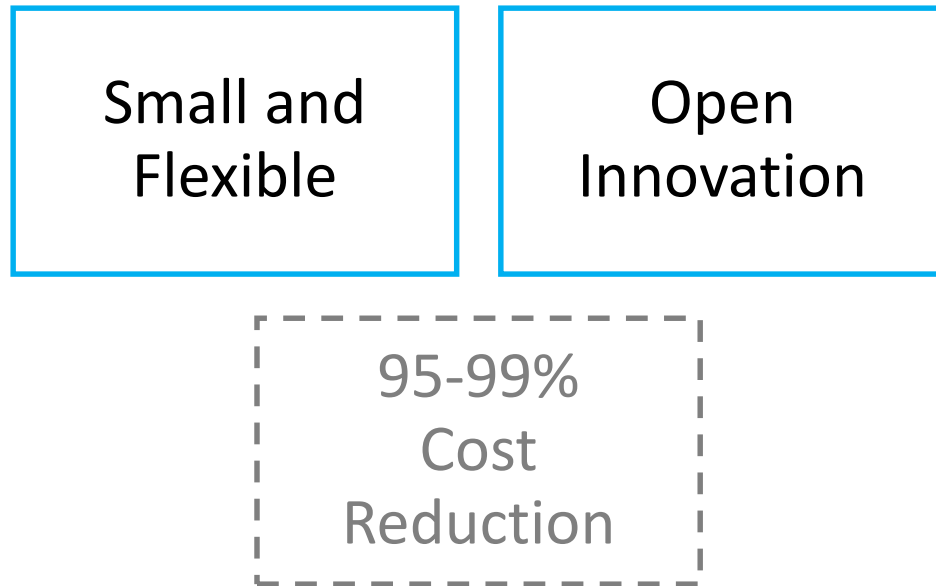
This presentation based on the results from: i) ongoing research, ii) technical World Bank activities, and iii) knowledge sharing from practitioners. The ongoing research is being conducted under the Global Entrepreneurship Research Network (GERN) and, particularly by Endeavor Insights and the World Bank. Technical World Bank activities include technical assistance programs to support local entrepreneurship in Lebanon, Chile, Colombia and other countries. Knowledge sharing has been collected from the World Bank-led Community of Practice of Open Innovation in Cities, which has over 20 members covering a variety of city practitioners from Barcelona, Nairobi, Mexico City, New York, Amsterdam or Seoul, to name a few.

GLOBAL TRENDS

ON INNOVATION AND ENTREPRENEURSHIP
IN CITIES

INNOVATION IS DE-CENTRALIZING

Firm Innovation is Transforming

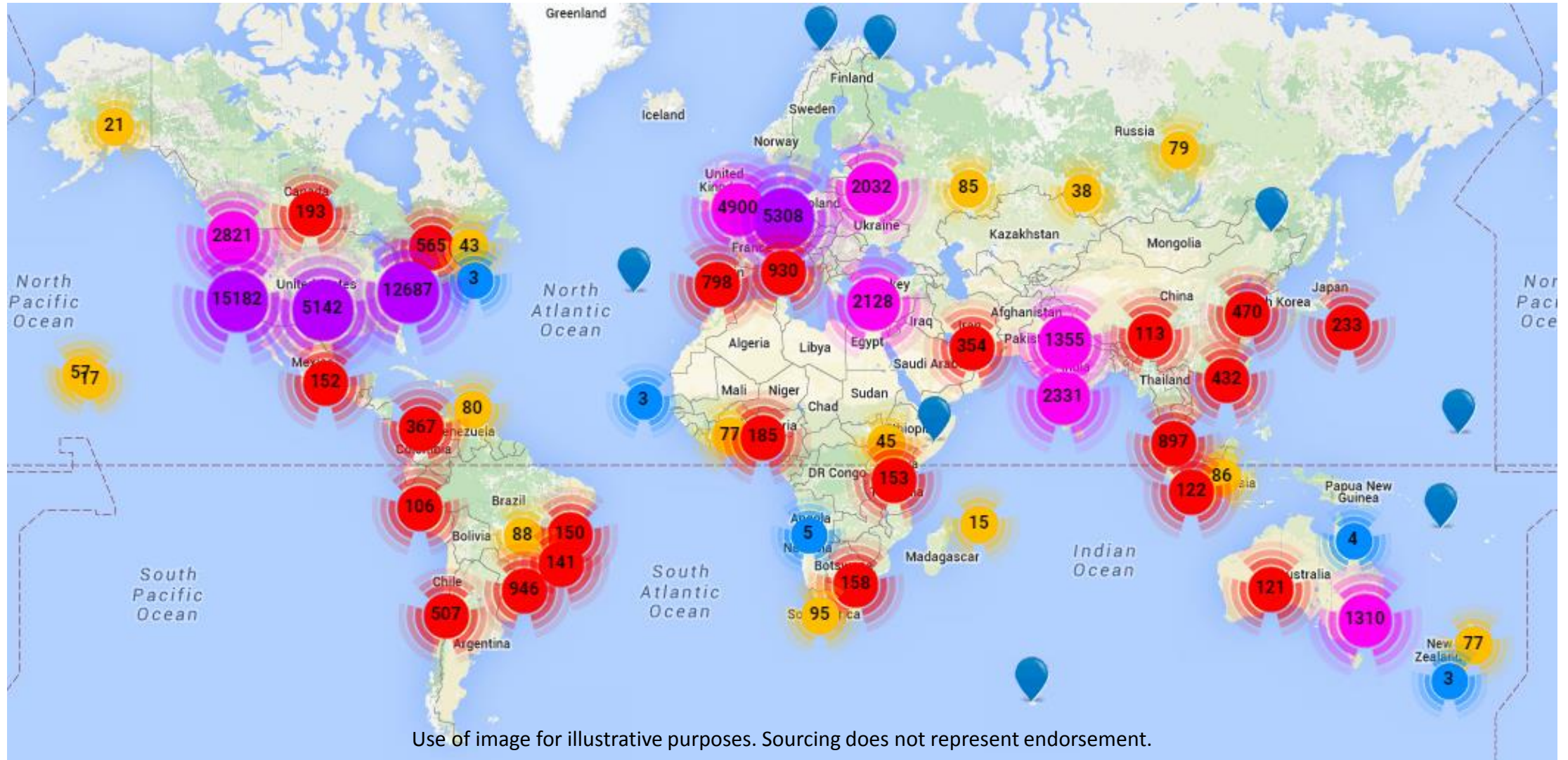


Acceleration of Innovation Disruption

TRADITIONAL INDUSTRY	START UP MODEL
Hotel Chains	Airbnb
Taxis	Uber/Lyft
Radio	Pandora/Spotify
Pictures	Instagram
Office Space	WeWorks
Vocational Education	General Assembly
Access to finance	Kickstarter
Phone calls	Skype/Vonage

ENTREPRENEURSHIP IS GROWING IN CITIES WORLDWIDE

Source: StartUp Blink Map - www.startupblink.com



Use of image for illustrative purposes. Sourcing does not represent endorsement.











NEW SOURCES OF COMPETITIVENESS

Legendary startups

Biggest American "unicorns"

(Date founded)

Unicorn (noun): Any startup worth more than \$1bn

		Company valuation, \$bn*, July 2015	Funds raised, \$bn	Revenue, \$m, 2014†	Employees, '000‡
 UBER (2009)	Taxi hailing	41	6	800	7.5‡
 airbnb (2008)	Accommodation for tourists and millennials	26	2.3	450	3.0
 Snapchat § (2011)	Ephemeral messaging app	16	1.2	nil	0.4
 Palantir (2004)	Big data	15	1.1	600	1.5
 SPACE X § (2002)	It is rocket science	12	1.1	825	3.0
 Pinterest (2009)	Photo sharing	11	1.3	15	0.7
 Dropbox (2007)	Cloud-based file sharing	10	1.1	400	1.5
 wework § (2010)	Office space provision	10	1.0	145	0.4
 theranos (2003)	Diagnostics through blood sampling	9	0.1	45	0.2
 Square (2009)	Mobile-payments system	6	0.6	900	1.3

Sources: CB Insights; Mattermark; PrivCo; *The Economist* *Latest post-money †Estimate ‡Drivers are not employees §Not in Silicon Valley

NEW SOURCES OF EMPLOYMENT

PERCENT GROWTH IN EMPLOYMENT
2003-2013

U.S. TOTAL EMPLOYMENT



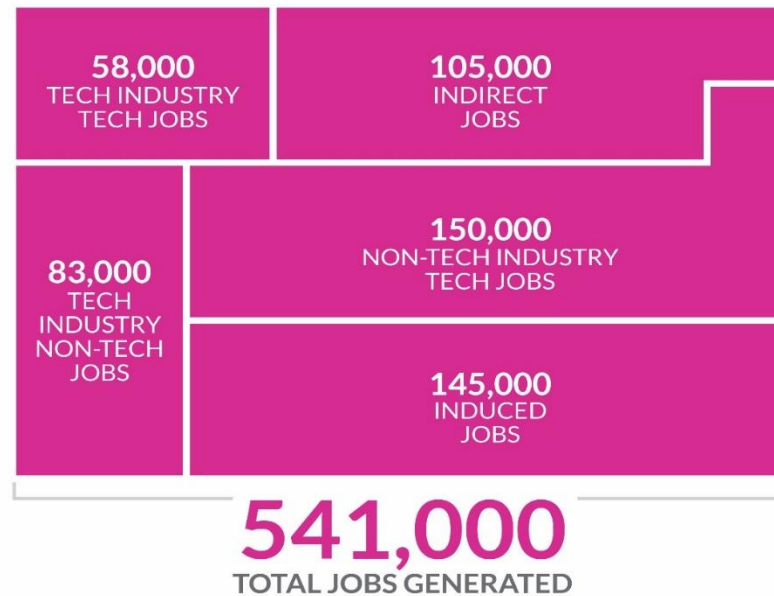
NYC TOTAL EMPLOYMENT



NYC TECH ECOSYSTEM EMPLOYMENT



0 5 10 15 20



Ratio of
Employment
Creation

10 X

Jobs below
Bachelors Degree

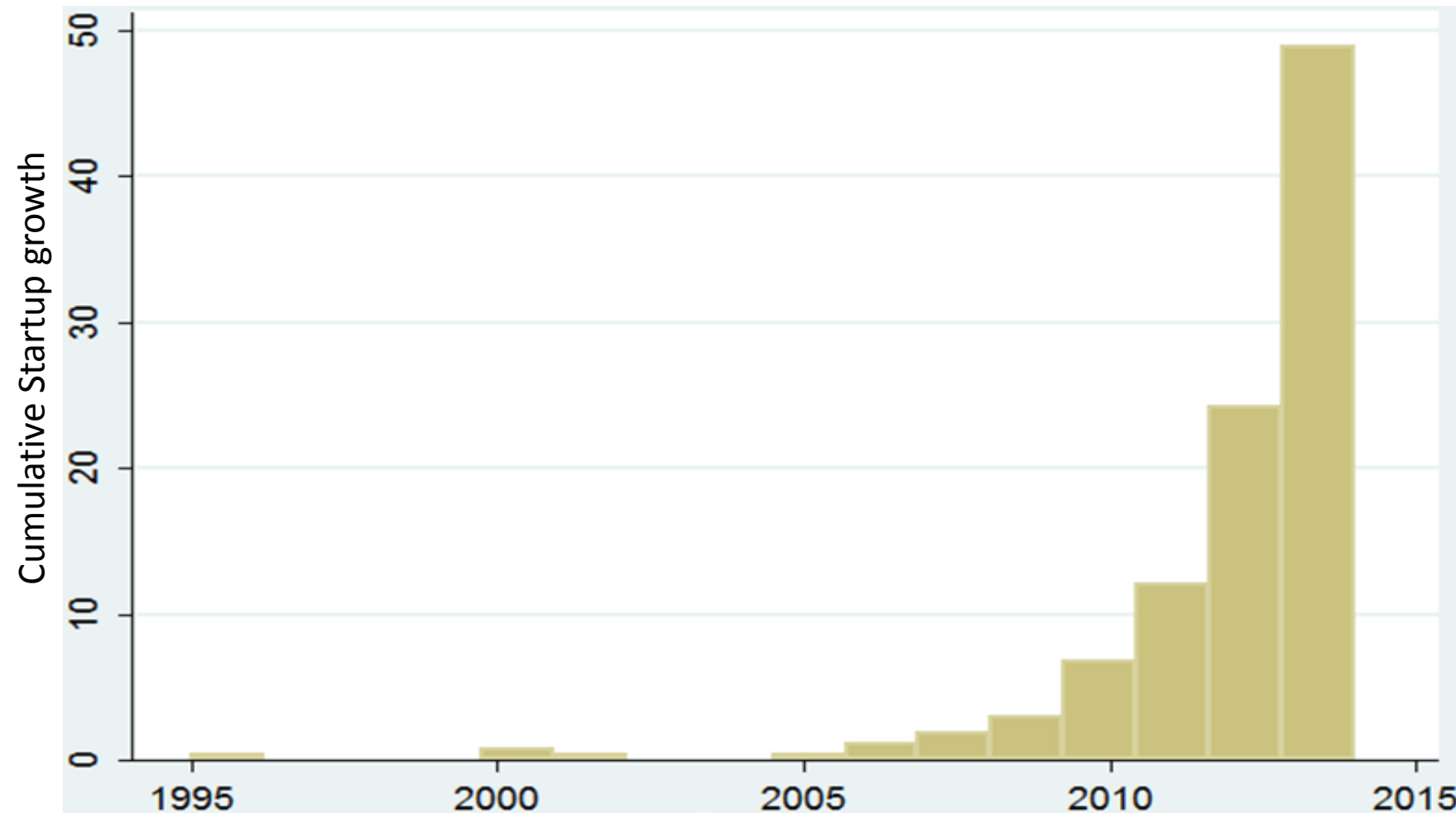
44%

Source: HR&A (2015) The New York City Tech Ecosystem

KEY SUCCESS FACTORS

OF CITY INNOVATION AND ENTREPRENEURSHIP
ECOSYSTEMS

WHY DIFFERENT GROWTH ACROSS CITIES?



Source: Endeavor Insights (2015) Mapping of Santiago de Chile Startup Ecosystem (ongoing research)

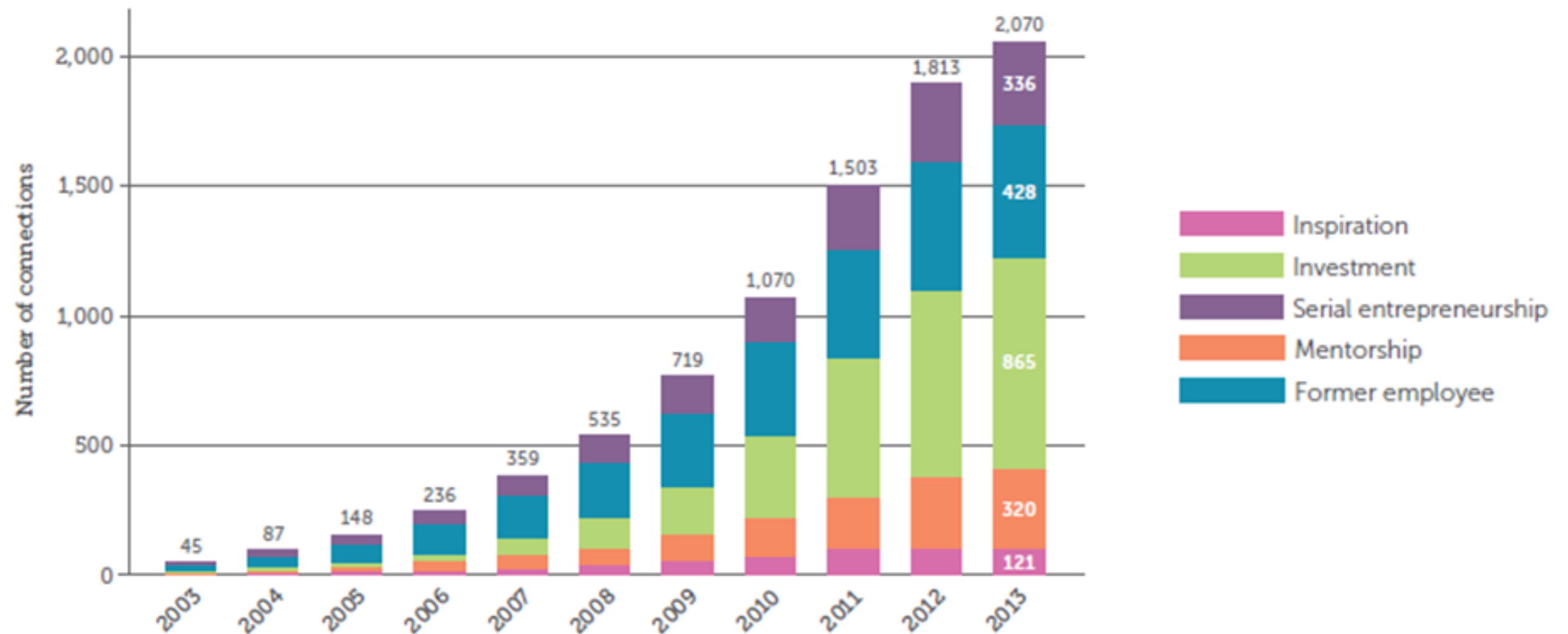
HOW INNOVATION HAPPENS?



Source: (2015) Working Paper, Growth and Sustainability of Tech Innovation Ecosystems [to be published],
adapted from Roberts, Bryce (2014) Collision Hours

ECOSYSTEM AS A COMMUNITY

Cumulative Connections NYC Tech Startups



Source: Endeavor Insights, 2014

Cairo Tech Sector Network Map

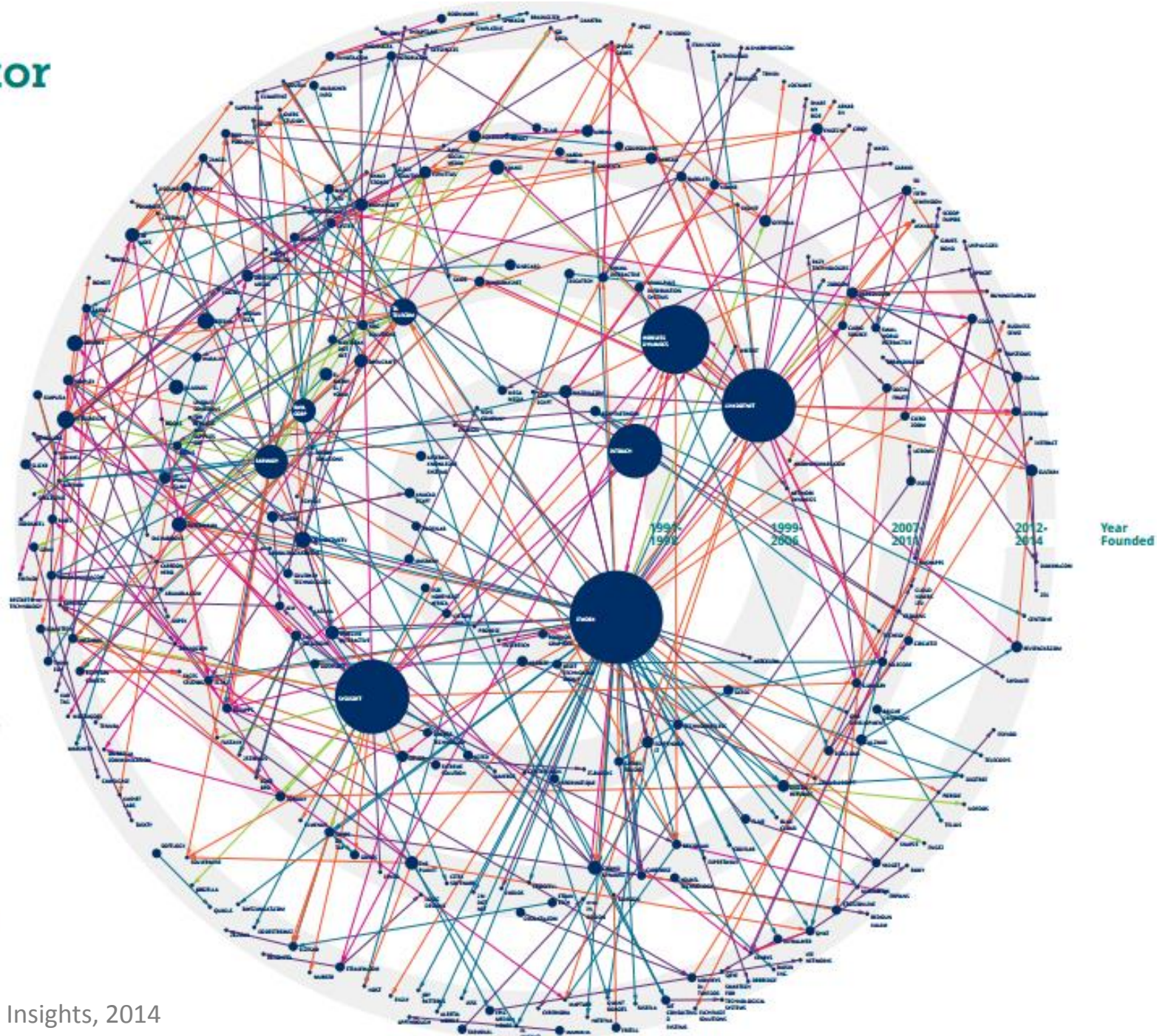
(c. 2014)

Legend:



Size of circle reflects the influence of the entrepreneurs at each company based on their number of outgoing connections.

- MENTORSHIP
- INVESTMENT
- FOUNDER
- FORMER EMPLOYEES
- INSPIRATION



Source: Endeavor Insights, 2014

NETWORKING ASSETS AND SOCIAL DIMENSION

COMMUNITY BUILDING EVENTS	SKILLS TRAINING	COLLABORATION SPACES	NETWORK OF MENTORS
<ul style="list-style-type: none">• Meetups• Conferences, events• Challenges and competitions	<ul style="list-style-type: none">• Bootcamps• Entrepreneurial and technical Rapid skills training• Workshops	<ul style="list-style-type: none">• Community building spaces (e.g., Co-working Spaces, Maker Spaces, Accelerators, Incubators, etc.)	<ul style="list-style-type: none">• Accelerators, Incubators• Angel Investors, VCs• Other network of mentors, alumni, etc.

Source: World Bank (2015) Working Paper, Growth and Sustainability of Tech Innovation Ecosystems [to be published]

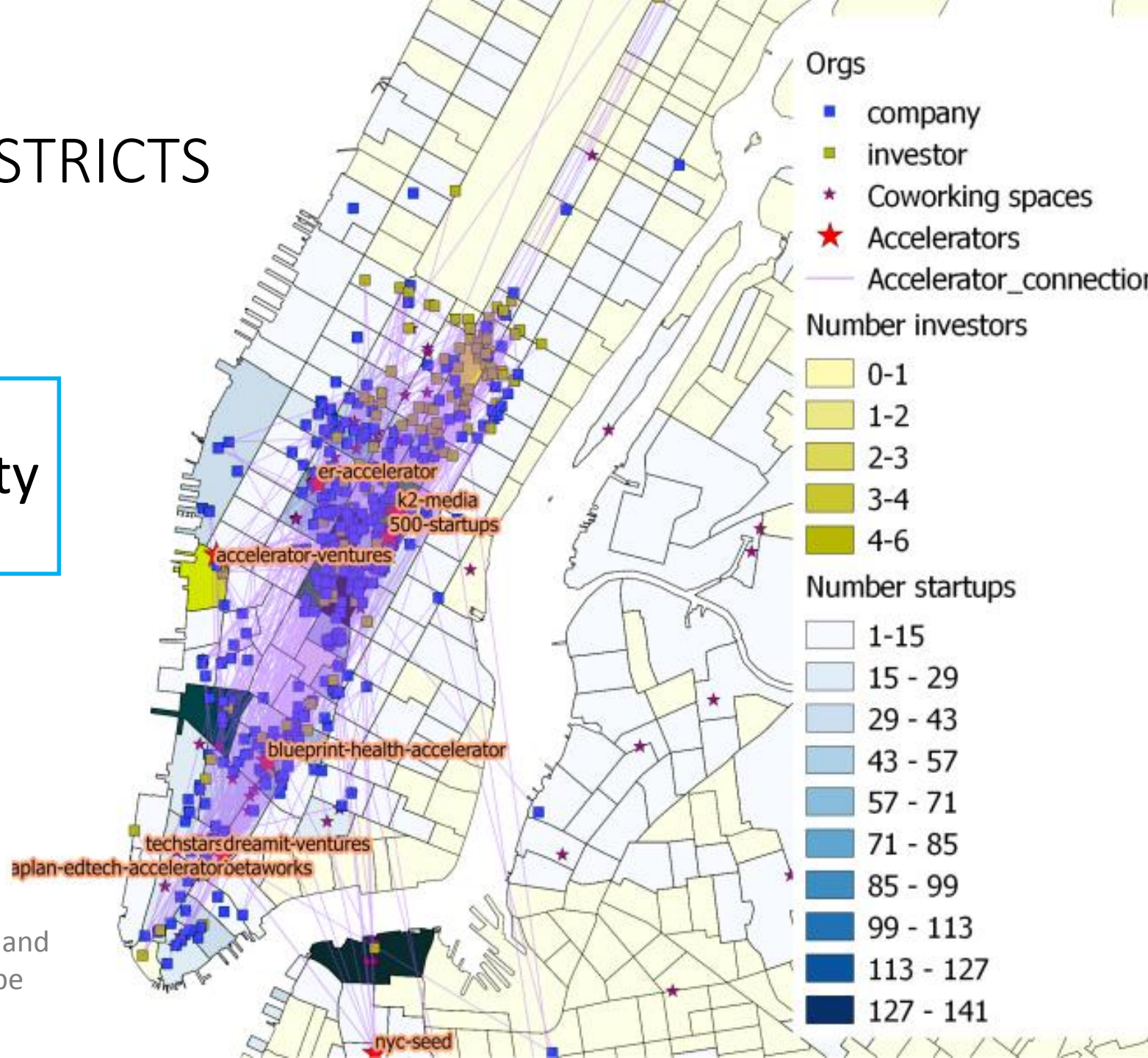
ECOSYSTEMS VS. DISTRICTS

Social Dimension

Geography
Limitations

Community

Fluidity

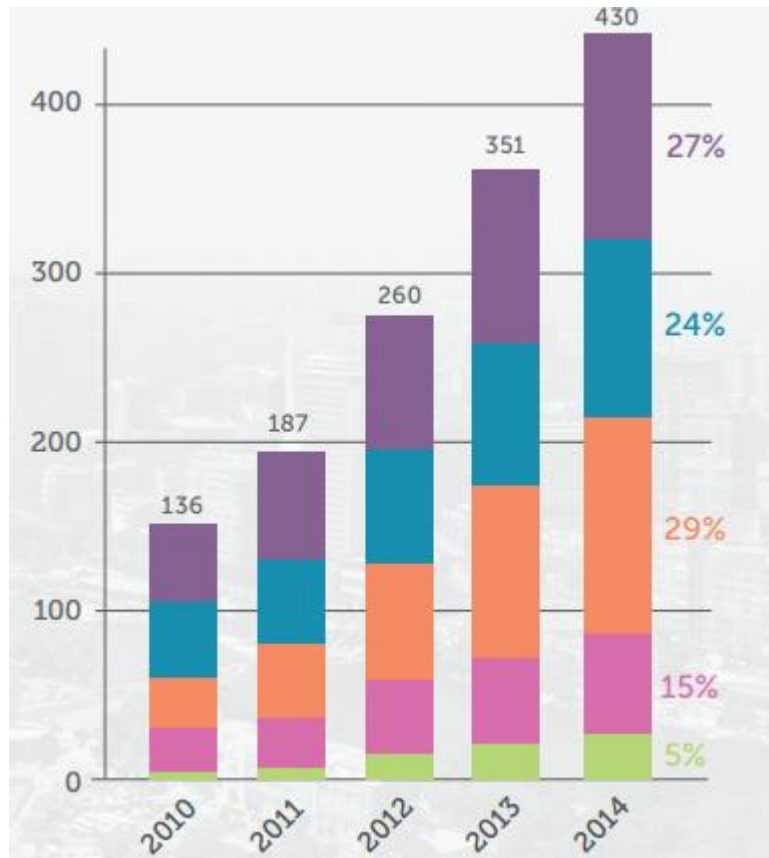


Source: World Bank (2015) Working Paper, Growth and Sustainability of Tech Innovation Ecosystems [to be published]

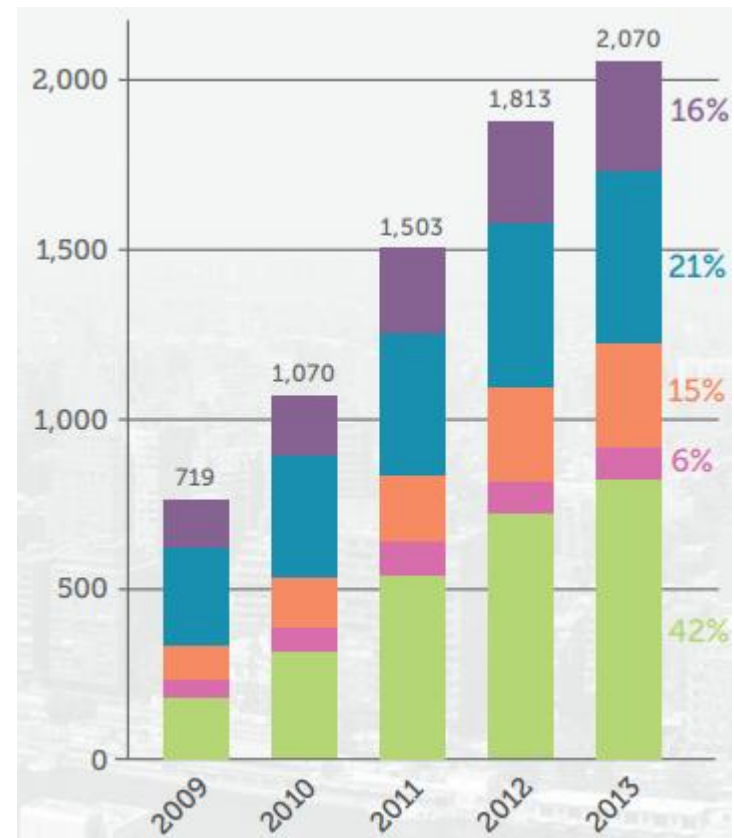
ECOSYSTEMS SUPPORTING INFRASTRUCTURE

Cumulative Connections

Cairo



New York



Source: Endeavor Insights, 2014

POLICIES

FOR GROWTH AND SUSTAINABILITY OF CITY INNOVATION
AND ENTREPRENEURSHIP ECOSYSTEMS

BUILDING THE ECOSYSTEM

POLICIES

- Developing the Community of Entrepreneurs
- Developing and Attracting Specialized Talent
- Changing Perceptions
- Attracting Seed Investment and Acquisitions

ACTIONS

- Networking Spaces & Mentorship
- Competitions and Meetups
- “Applied Science”
- Tech Skills and Training
- Promotion and Significance
- Seed Fund and Multinationals

Examples taken from New York Case: World Bank (2015) The Growth of Tech Startup Ecosystem in New York [to be published]

SUSTAINING THE ECOSYSTEM

POLICIES

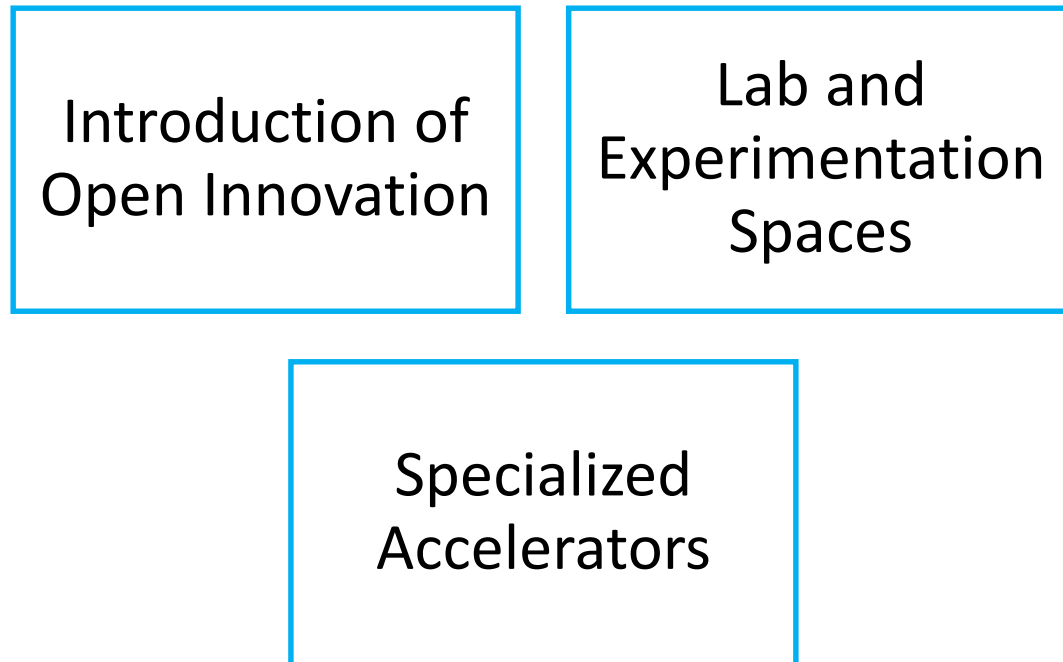
- Coordination and Support
- Skills Pipeline
- Space and Finance Pipeline
- Attracting Multinationals and Networks

ACTIONS

- “Innovation Hub”
- Network of Intermediaries
- University-Industry
- Rapid Skills Training
- “Tech for Kids”*
- Supply Chain
- Product Development
- Network of Ecosystems

EXPANDING INNOVATION TO COMPETITIVENESS

“Infecting” the Local Industry



NYC Specialized Accelerators

Industry	#	Est. # Startups Per Year
FinTech	3	24*
Health	3	24*
Education	2	22
Real Estate	1	8
Fashion	1	10*

*Estimates based on average graduations.

Source: World Bank (2015) The Growth of Tech Startup Ecosystem in New York [to be published]

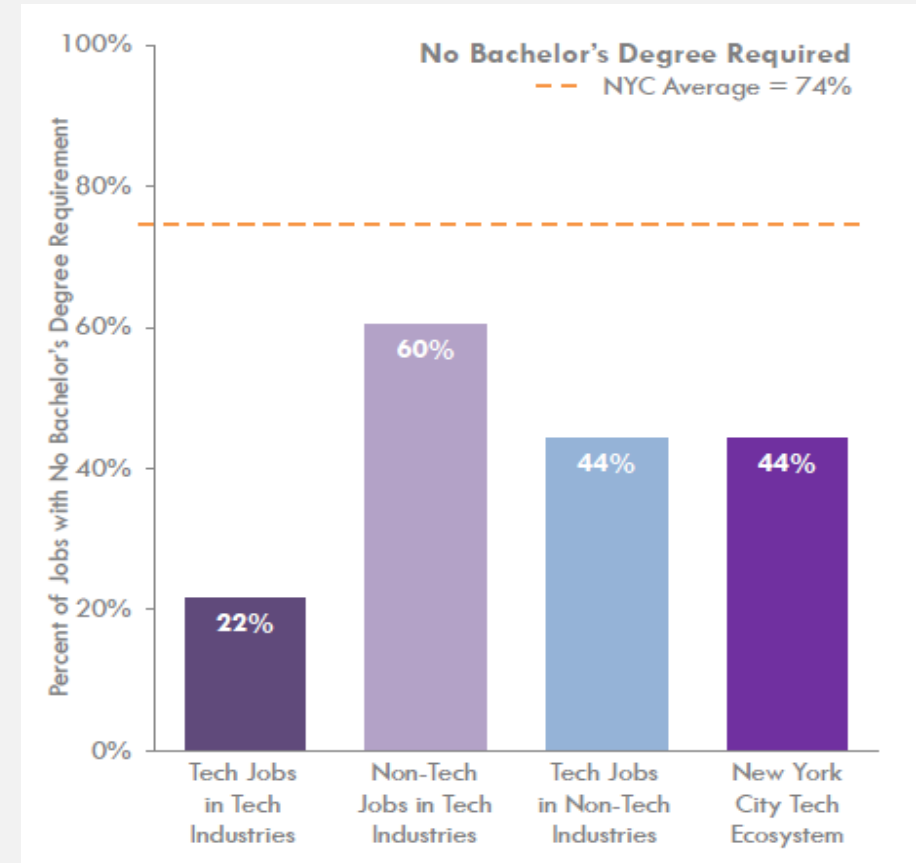
EXPANDING JOB CREATION

Beyond “Tech” and
“White Collar” Skills

University-
Industry
Platforms

Rapid Skills
Training

NYC Ecosystem's Employment Creation



GENERATING URBAN INNOVATION

Open Innovation in City Gov.

Competition
Challenges

Urban Labs
Accelerators

Gov Labs

Barcelona: Challenge and Urban Lab

- | | |
|---------------------------------------|--------------------------------|
| • Procuring Local Problems | • Real Testing Urban Solutions |
| • Partnering Local Startups | • Linked to Local Challenges |
| • Incentivizing Innovative Approaches | • One-Stop Shop Local Gov. |
| • Implementation | • Promotion |

Source: Interview Barcelona City Gov. Team

INNOVATION WITHIN CITIES

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The World Bank core team working on the research and technical activities used in this presentations is led by Victor Mulas and includes the following:

CECILIA PARADI-GUILDFORD, HALLIE APPLEBAUM, KATHY QIAN, NGA NGUYEN, SAMHIR VASDEV, MIKEL GASTELU-ITURRI AND SCOTT HENRY

AVAILABLE RESOURCES:

RESEARCH ADVANCEMENTS WORLD BANK ICT INNOVATION TEAM

Blogs: <https://agenda.weforum.org/people/victor-mulas/>

EXAMPLE OF ECOSYSTEM DEVELOPMENT PROGRAM:

Lebanon Mobile Internet Ecosystem Program (MIEP): <http://www.mie-p.org/>

EXAMPLE OF PROGRAM FOR GOVERNMENT AS A PLATFORM FOR ENTREPRENEURSHIP:

Chile Smart City Gran Concepcion: <http://bit.ly/1FYfirQ>

RESEARCH FROM ENDEAVOR INSIGHT MAPPING ECOSYSTEMS:

New York Map: <http://nyctechmap.com/>

Cairo Map: <http://www.cairotechmap.com/>