

Importance of The Regional Ecosystem for the Space Business

SPACE INNOVATION FORUM

200312

ANNE LIDGARD

VINNOVA

Sweden's Innovation Agency




General Features of Innovation
Ecosystems

What about Regional Ecosystems?

How is Space Business special?

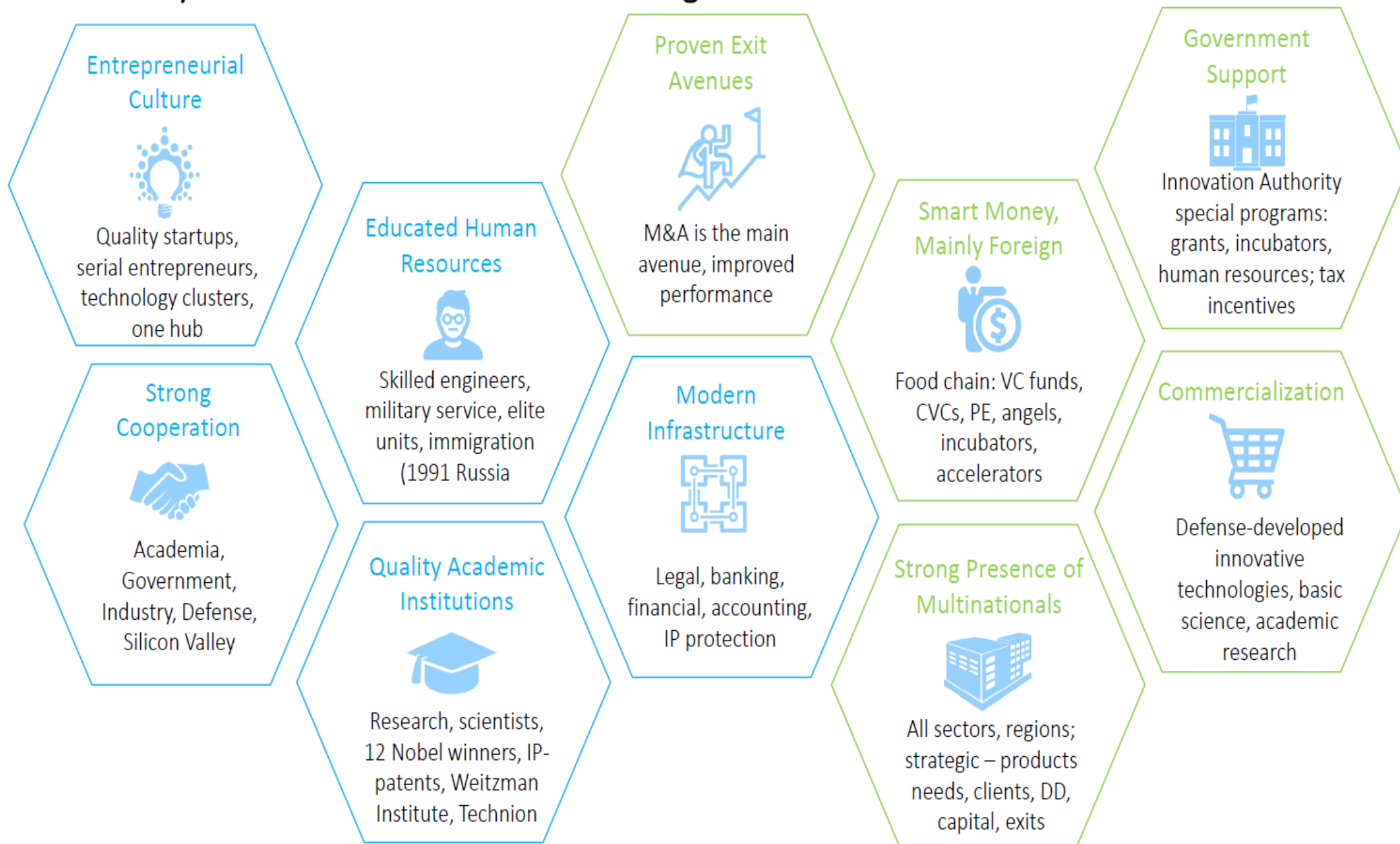


A lush green forest with sunlight filtering through the trees, creating a bright and airy atmosphere. The text is overlaid on a semi-transparent dark blue rectangle.

An innovation ecosystem is the evolving set of actors, activities, and artifacts, and the institutions and relations, including complementary and substitute relations, that are important for the innovative performance of an actor or a population of actors.

According to Granström and Holgersson

Israel VC Ecosystem – Critical Mass of Success Ingredients



The Swedish Innovation Ecosystem

International Interfaces



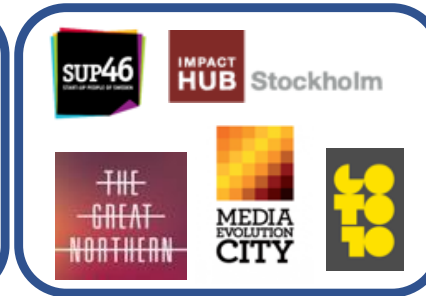
Events, Awards, Competitions



Startup Communities, media & Resources



Co-working Spaces



Miscellaneous



Student Entrepreneurship



Business Incubators & Accelerators



Science Parks & Clusters



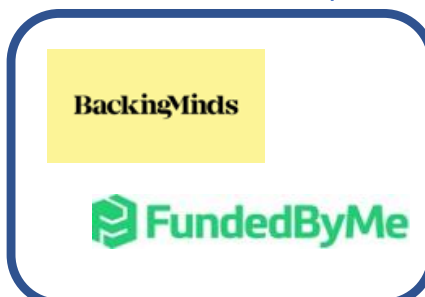
Research Institutes



Global Corporates



Seed & Venture Capital



Public Funding



Late Stage Venture Capital



Business Angel Investors

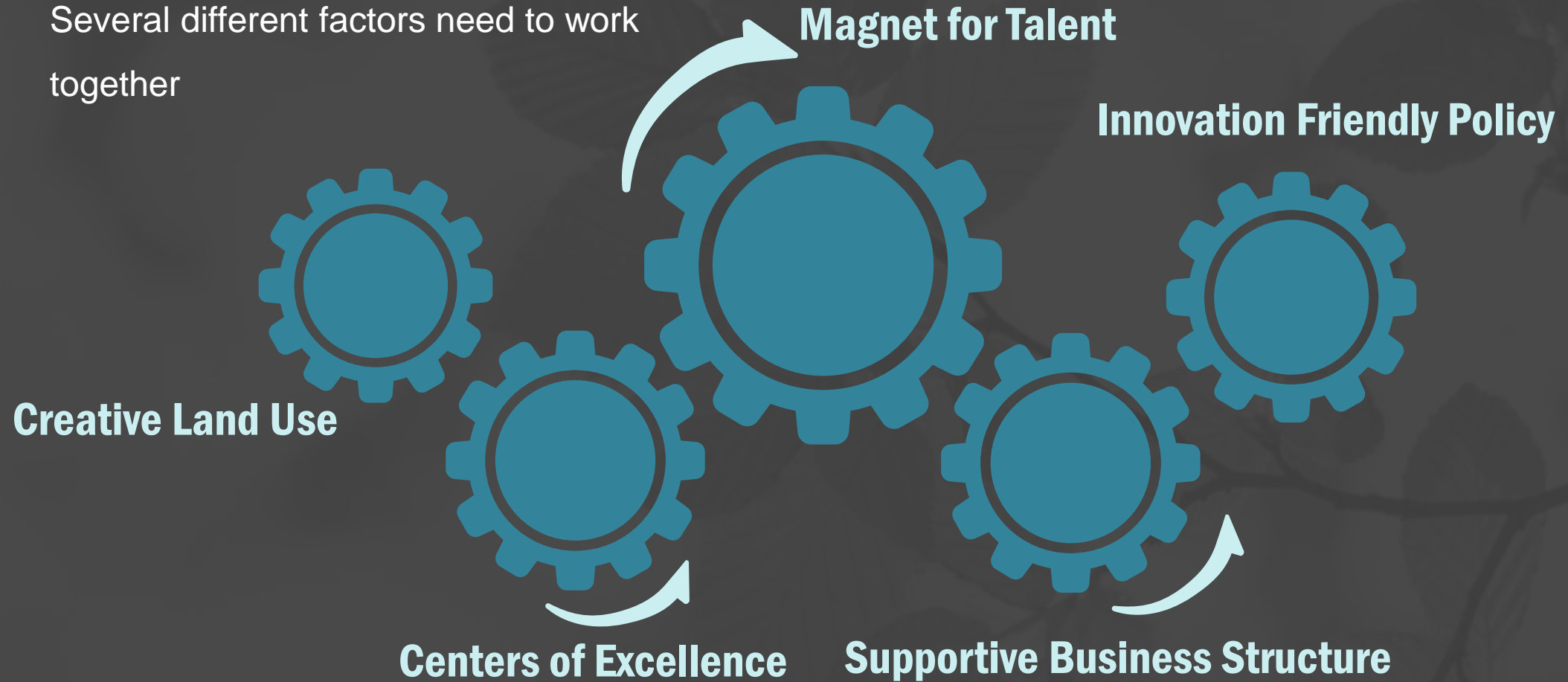


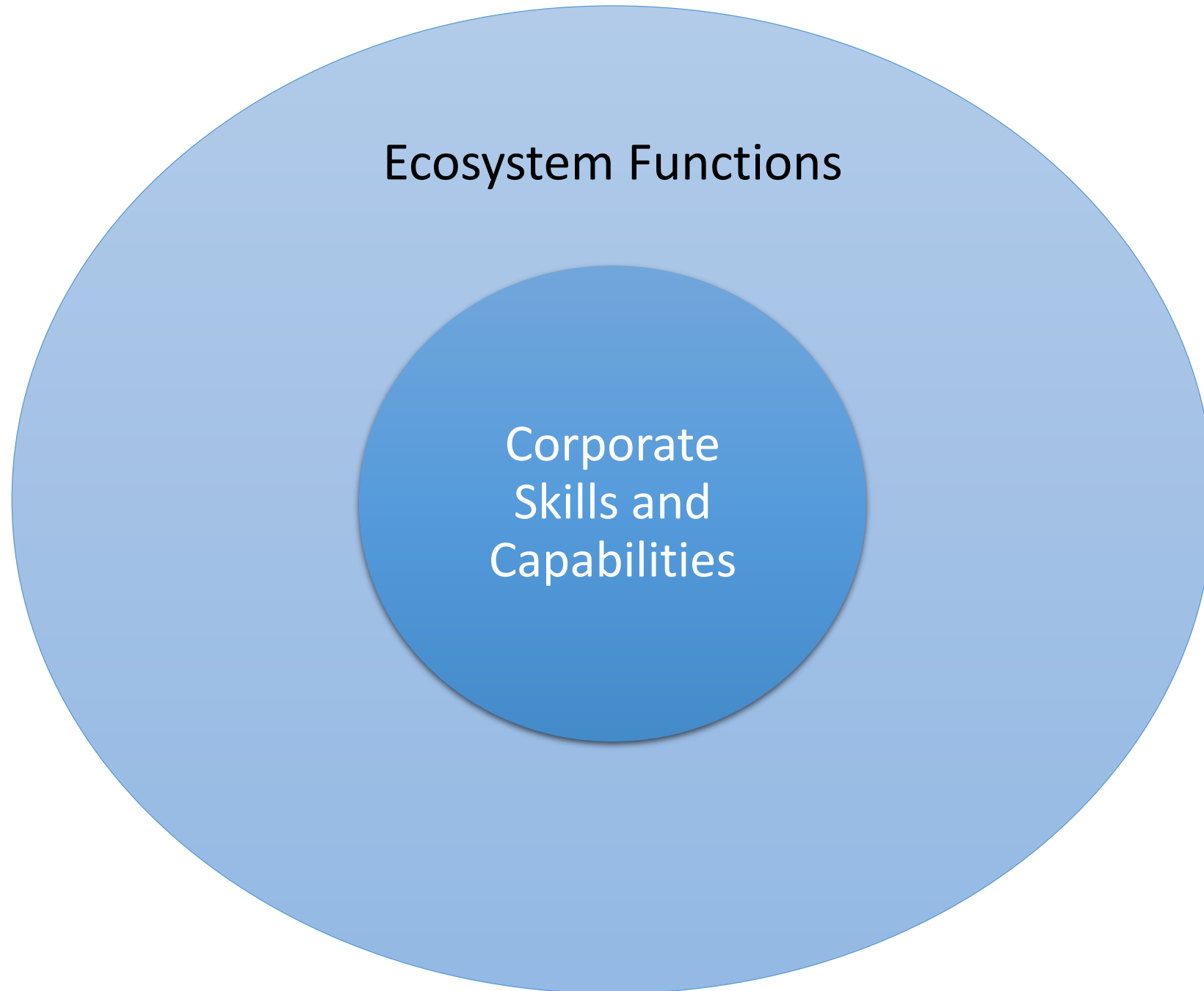
Corporate Ventures



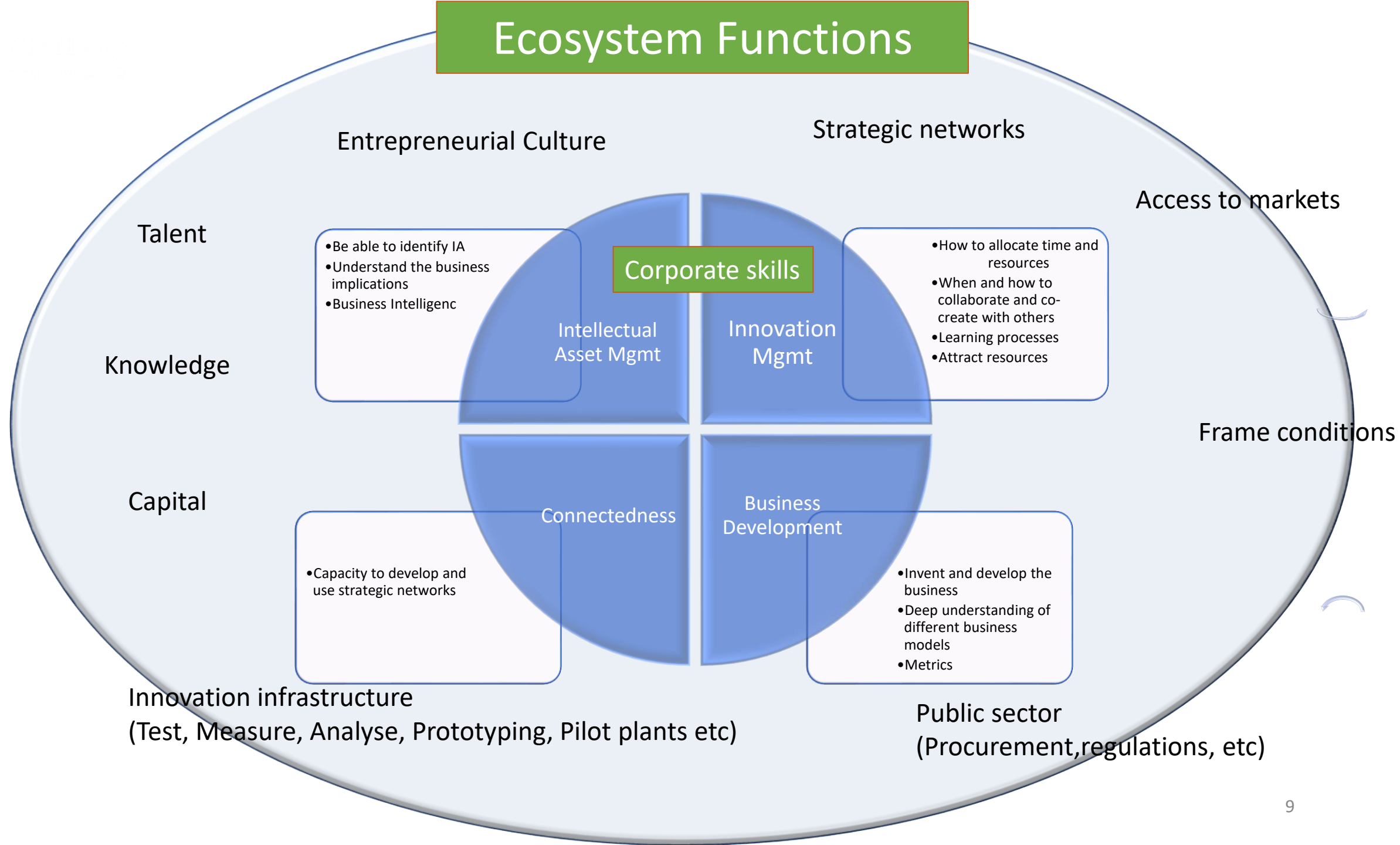
Building Blocks of an Innovation Economy

Several different factors need to work together

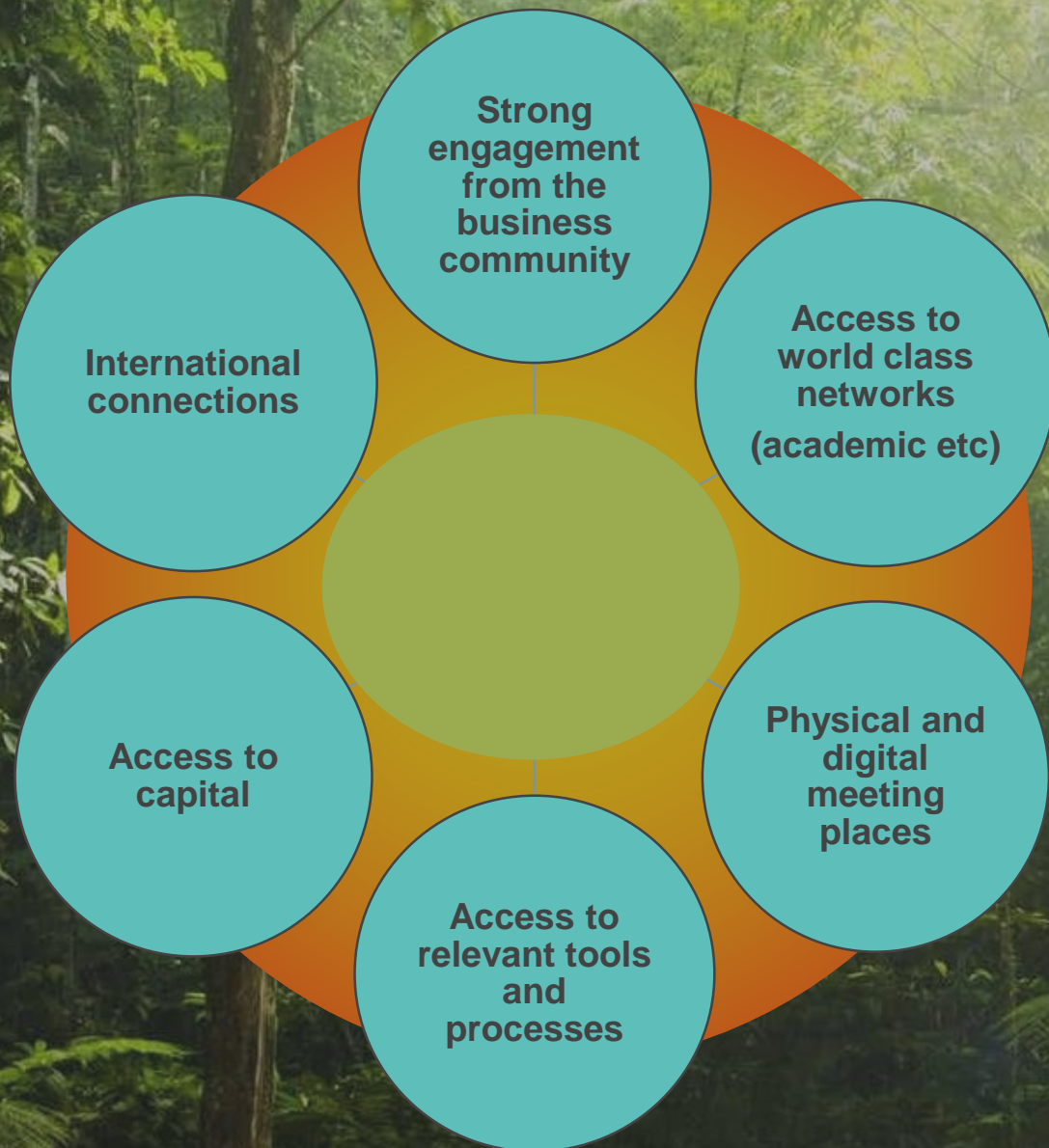




Ecosystem Functions



Ecosystem for Entrepreneurship and Innovation



- Access to (complementary) talent
- Inspiring role models
- Experimentation paving the way for new areas and new methods
- Deal makers that make it happen!
- An open and collaborative culture that drives the demand for innovations
- And that is naturally forward-leaning

It's all about people!

A wide-angle photograph taken from a hillside looking down at a sprawling city at night. The city is illuminated by numerous lights, with prominent light trails from highways and clusters of lights in various urban areas. The foreground consists of rolling, grassy hills with some sparse vegetation. In the background, more hills and mountains are visible under a twilight sky with soft, wispy clouds. The text "So what about 'regional ecosystems?'" is overlaid in a light blue, sans-serif font on the left side of the image.

So what about "regional ecosystems?"

Bay Area has...

- ▣ The nation's largest concentration of national labs, corporate and independent research labs, and leading research universities – such as Stanford, Berkeley, UCSF, UC Santa Clara.
- ▣ The highest concentration of innovation-related jobs in the U.S
- ▣ The largest number of top-ten ranked graduate programs in business, law, medicine and engineering in the nation
- ▣ The highest Internet penetration of any U.S. region

More Metrics

- ▣ Silicon Valley founders start **twice as many** companies as those from New York City.
- ▣ Silicon Valley's job growth rate (2.1%) is higher than the US average (1.6%).
- ▣ Since 2013, Alphabet, Apple, and Facebook have grown revenues 10x faster than the rest of the Fortune 500
- ▣ Almost two-thirds of its workforce is engaged in knowledge-related positions
- ▣ The Bay Area generates 15% of all U.S. patents—more than 3x New York! (2018)
- ▣ The share of US VC investments was 45% in 2018
- ▣ More than 50% of Silicon Valley companies have key founders born outside the US.



Stanford University

Founded in 1885 (1891)

7,062 undergraduates

9,368 graduates

2,219 faculty

6 BUSD turnover

8,180 contiguous acres

Huge Impact

Since the 1930s, Stanford alumni and faculty have created:

- 39,900 companies
 - 5.4 million jobs
 - \$2.7 trillion annually in revenues
- ~ the world's 10th economy

And >30,000 non profits (Kiva etc)

Bill Miller and Chuck Eesley, 2012





Active Strategies to Promote Collaboration

1951 Creation of Stanford Research Park

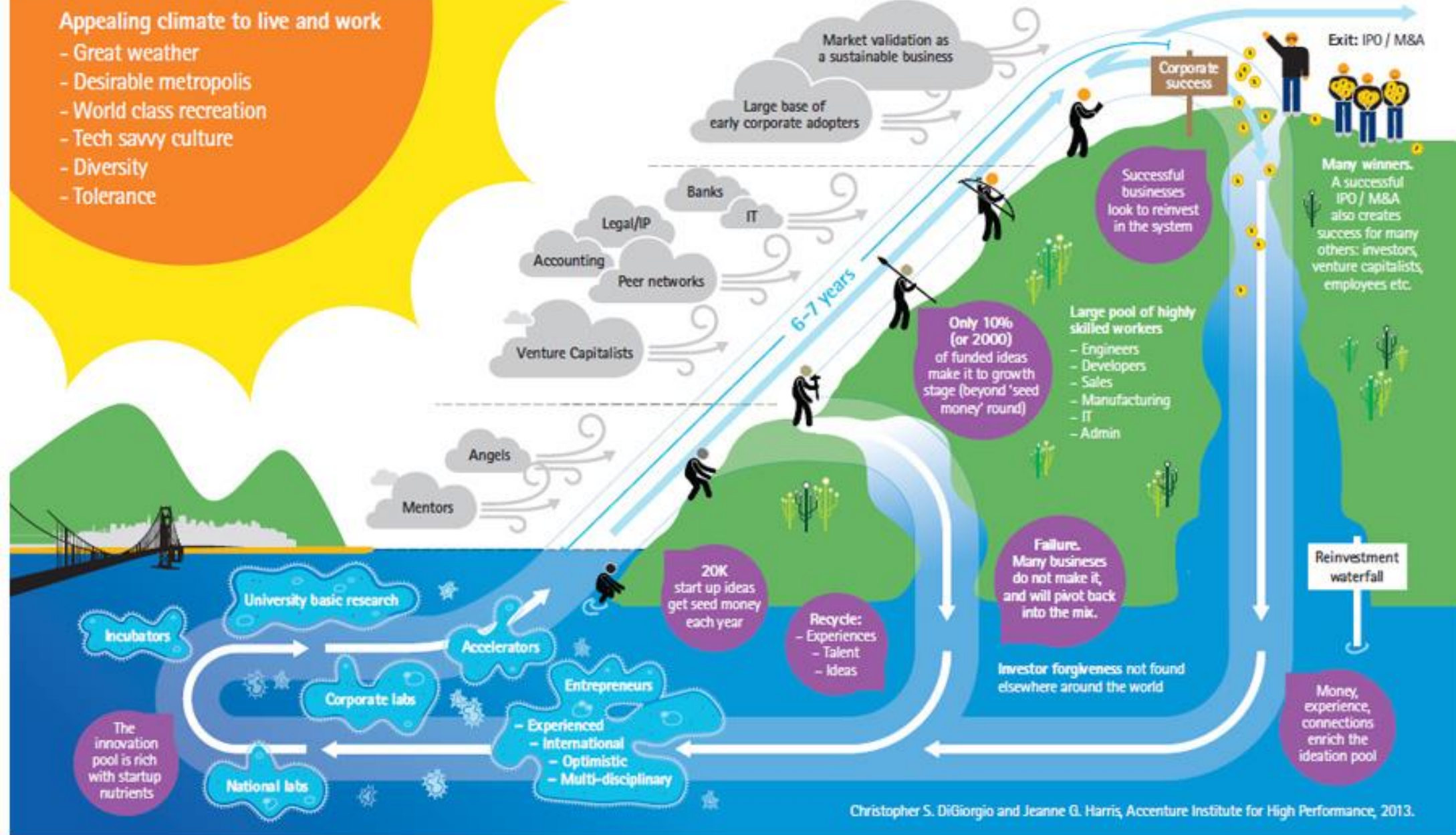
- 700 acres
- 150 tenants: Varian, HP, VMware, IBM, Tesla, Nest,

Multi-disciplinary centers w/ industry affiliate programs (50 + programs), e.g.

- BioX
- CARS – Center for Automotive Research at Stanford



Silicon Valley's greatest innovation – how companies evolve from ideas to successful enterprises

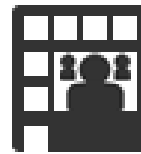




trusted filtering process



stanford



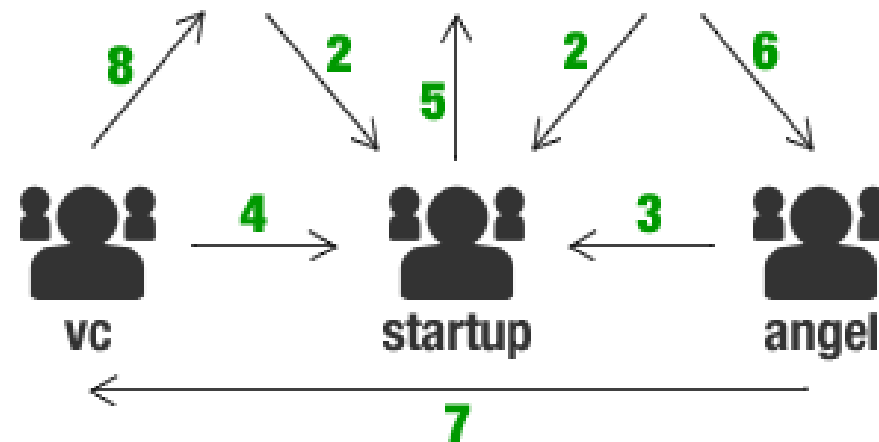
google



facebook



company





So what about "regional ecosystems"
(when they are not Silicon Valley)?

Many positives...even when smaller

- Convenience of geographic proximity
- Potential high level of trust -> lower transaction costs.
- Opportunity for serendipity
- Inspiration for others in the community

However...you also need



- Strong networking skills
- Emphasis on business intelligence to stay on top
- Excellent infrastructure
 - Both physical and digital communication
- A magnet for (international) attraction of talent and business
- And remember: never underestimate the importance of local/regional suppliers of tech or services.

Special Needs for Space Business?

- Highly complex systems require a large degree of collaboration
 - Opportunities mediated by Swedish Space Agency and ESA are important contributions to the ecosystem. Also EU and other international collaborations.
- Exceptional conditions require cutting edge tech and knowledge
 - Universities play an important role: LTU – of course, and also all the others that are engaged in space research and related technologies.
- As space has become part of earth's infrastructure – increased collaboration also with other business areas.
- Regulatory frameworks that encourage (safe) experimentation
- Often long lead times – requires large and endurant funding

Both Pull and Push



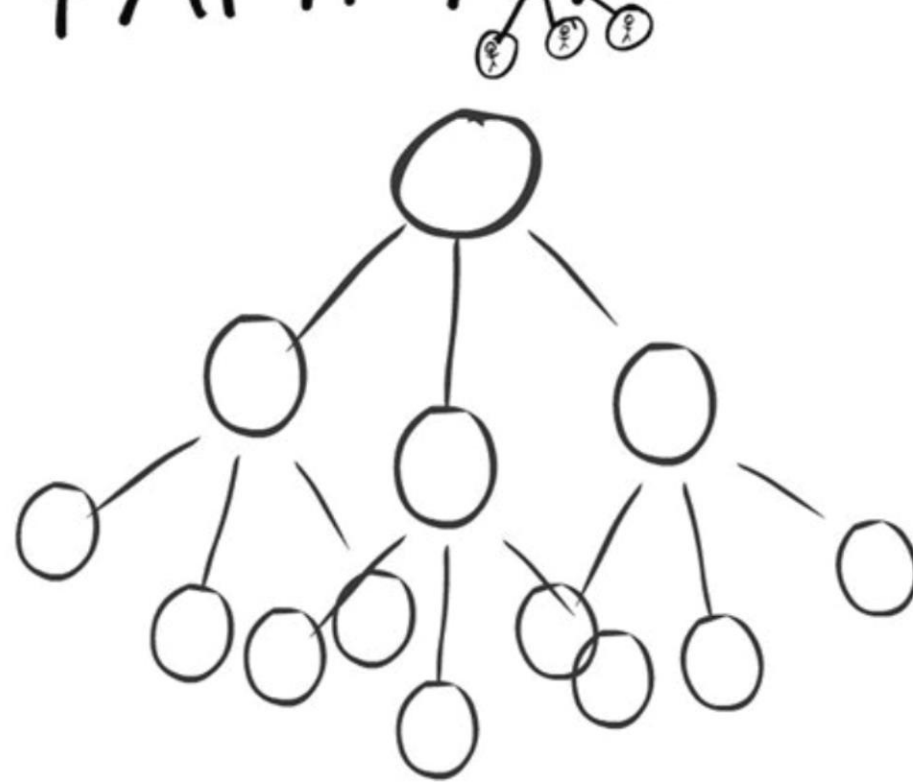


Silicon Valley is a mindset, not a location.

— Reid Hoffman —

AZ QUOTES

PAY IT FORWARD



S U C C E S S
F A I L U R E

It's not the big that eats the small...





Disruption on the first day always
looks like a toy...

— *Steve Blank* —

AZ QUOTES

NORDIC INNOVATION HOUSE

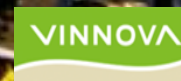
Helping Nordic Start-ups succeed in Silicon Valley

www.nordicinnovationhouse.com

@innorhouse



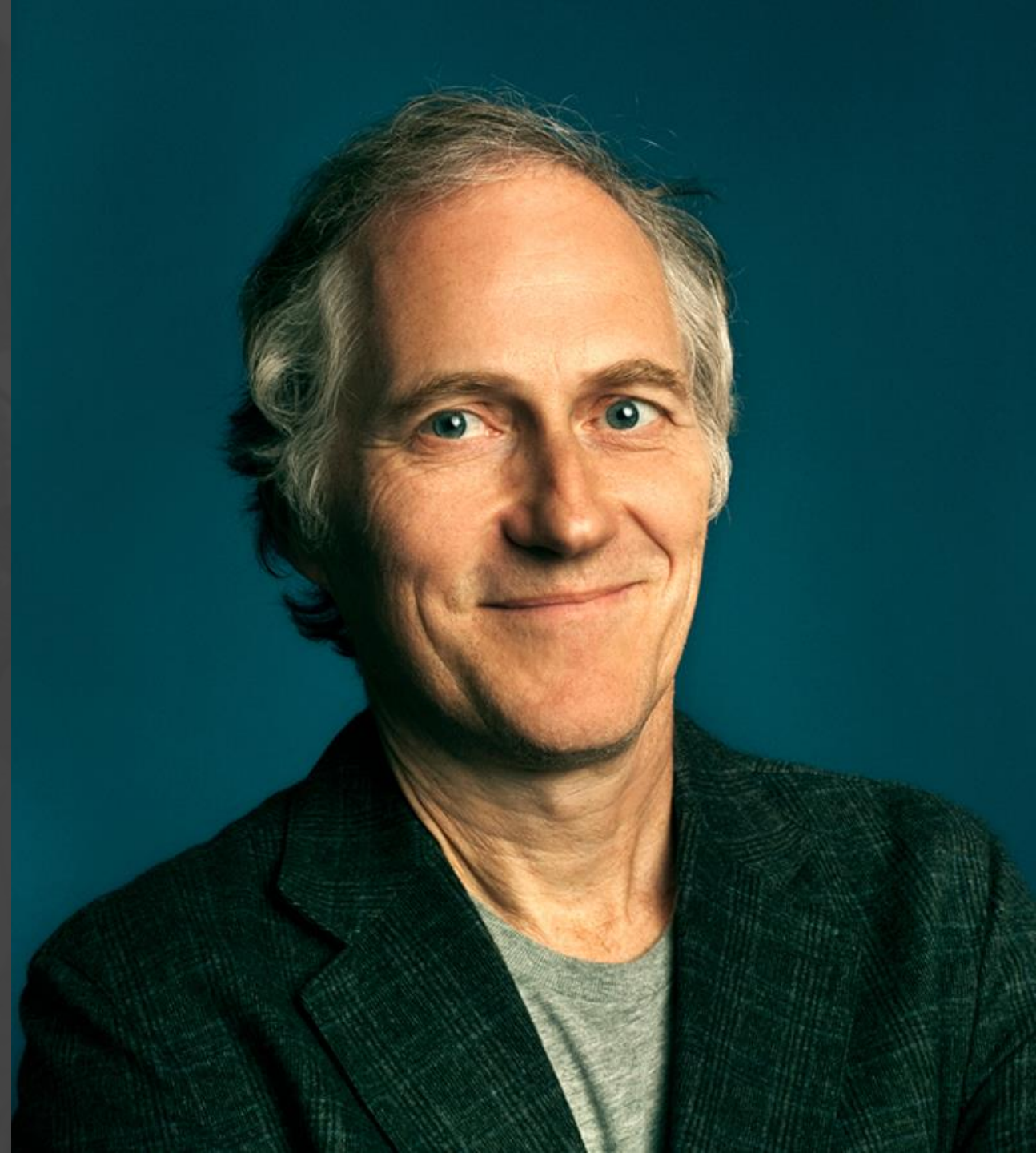
INNOVATION CENTRE DENMARK



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**For an ecosystem
to thrive you need
to contribute as
much value as
you take out**

TIM O'REILLY



Thank you!



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