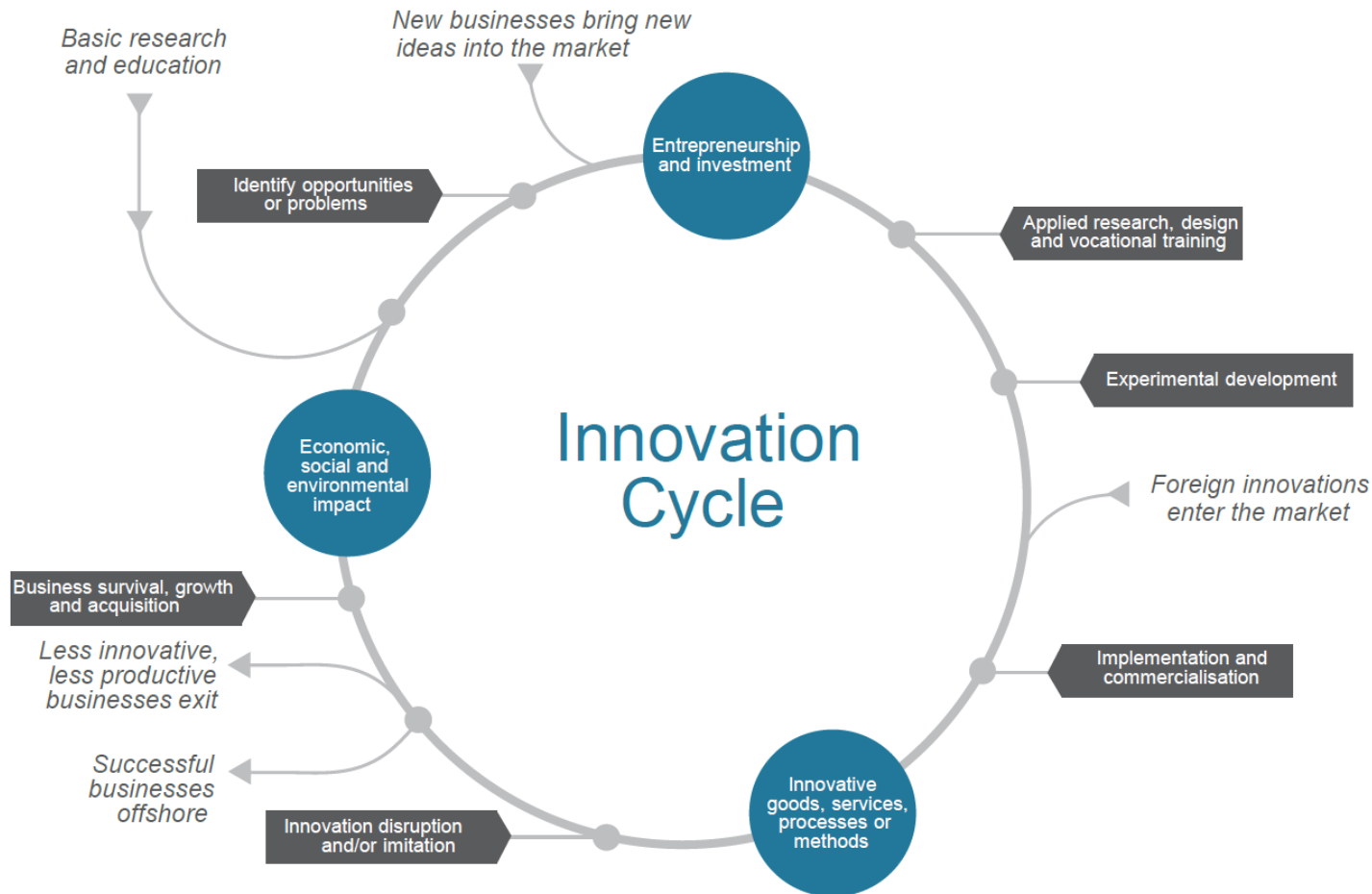


# Innovation Cycle

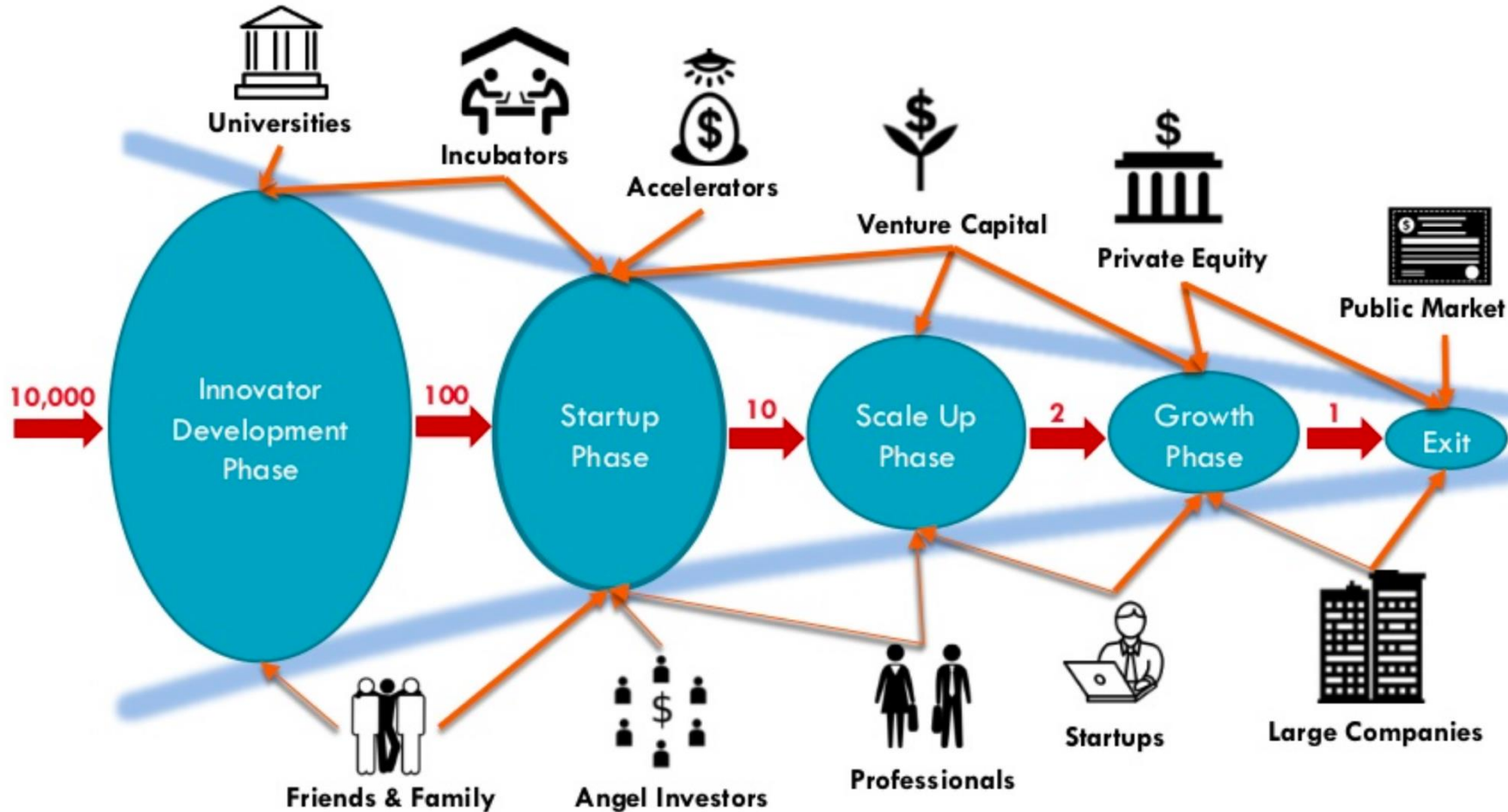


# The innovation system – what is it?

- An innovation system is an open network of organisations that interact with each other and operate within framework conditions that regulate their activities and interactions.
- These three components of the innovation system —
  - innovation activities,
  - networks and
  - framework conditionscollectively function **to produce** and **diffuse** innovations that have, in aggregate, economic, social and/or environmental value.

<https://www.industry.gov.au/publications/australian-innovation-system-monitor> (Oct'24)

# The innovation ecosystem – An example representation



The process of developing, testing and scaling innovation for sustainable impact cannot be undertaken by any one actor working in isolation

<https://www.idiainnovation.org/ecosystem-actors> (May'25)

Source: <https://www.slideshare.net/MaherHakim/building-innovation-ecosystem> (May'25)

# Why is Silicon Valley a successful innovation ecosystem?



1. **Strong research-driven universities (with endowments)**
2. **Globally experienced repeat entrepreneurs**
3. Sophisticated risk capital
4. **Social capital**
5. Knowledge sharing
6. Tolerance for risk-taking
7. **Creative destruction**
8. **Constructive failure**
9. Positive aggregate returns
10. Supportive government policy

# 1. Strong research-driven universities (with endowments)

- Endowment: Approx US\$36.5 billion (Aug. 2023)
- Fundraising: Approx > US\$1 billion per year



<http://stanford.edu>

Stanford University



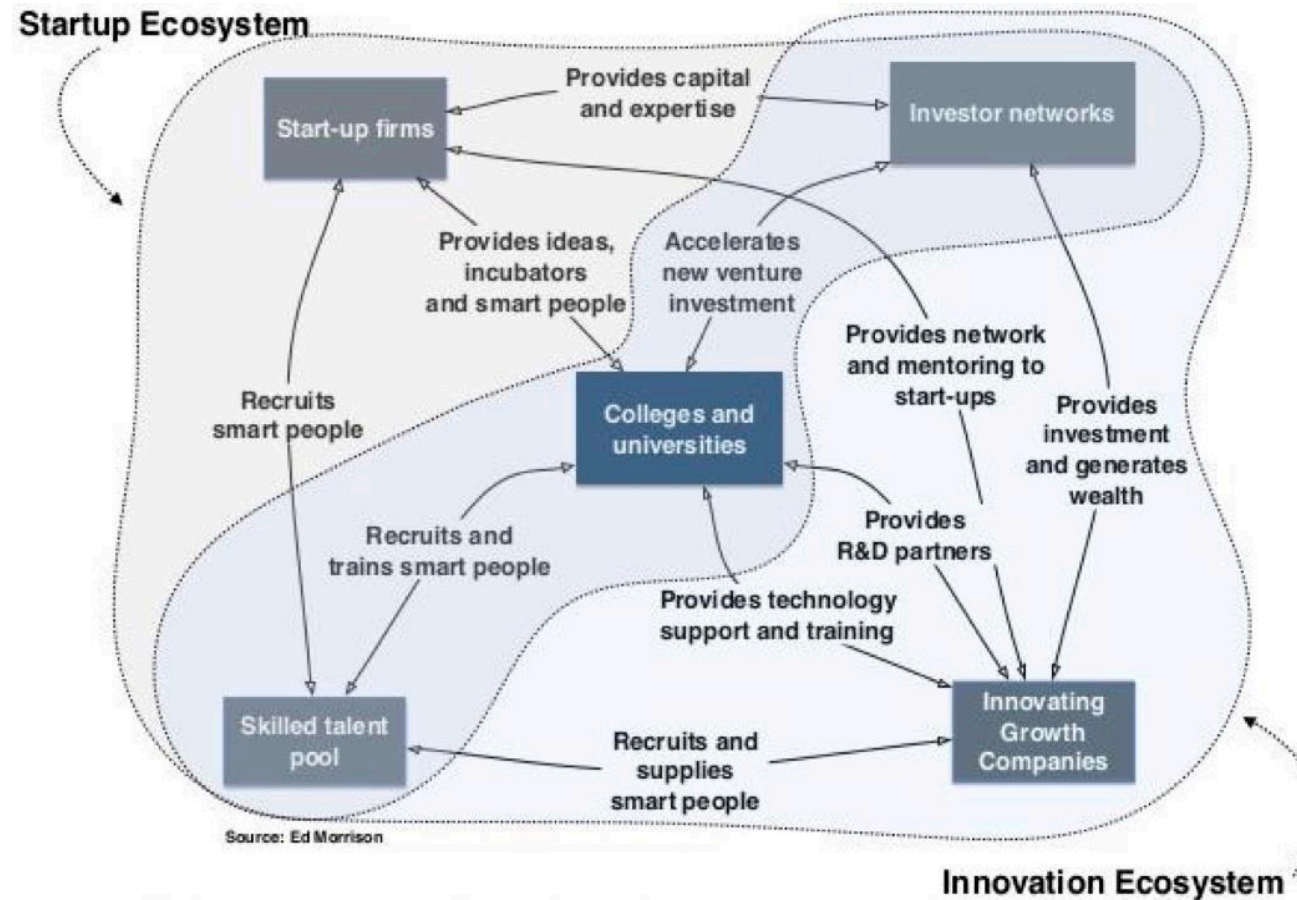
<http://berkeley.edu>

University of California Berkeley

<https://facts.stanford.edu/administration/finances/> (May'25)



# University Operate Within Ecosystems



<http://www.slideshare.net/edpro/strengthening-purdues-innovation-ecosystem>

## 2. Globally experienced REPEAT entrepreneurs

Eg Elon Musk



Twitter



SPACEX



TESLA



THE  
BORING  
COMPANY



### 3. Sophisticated Risk Capital



ANDREESSEN  
HOROWITZ  
Sophisticated venture capital



Sophisticated angel investors  
Eg Ron Conway

Sophisticated corporate investors

"With us and many other angel groups, Y Combinator startups get moved to the top of the list automatically." – Ron Conway

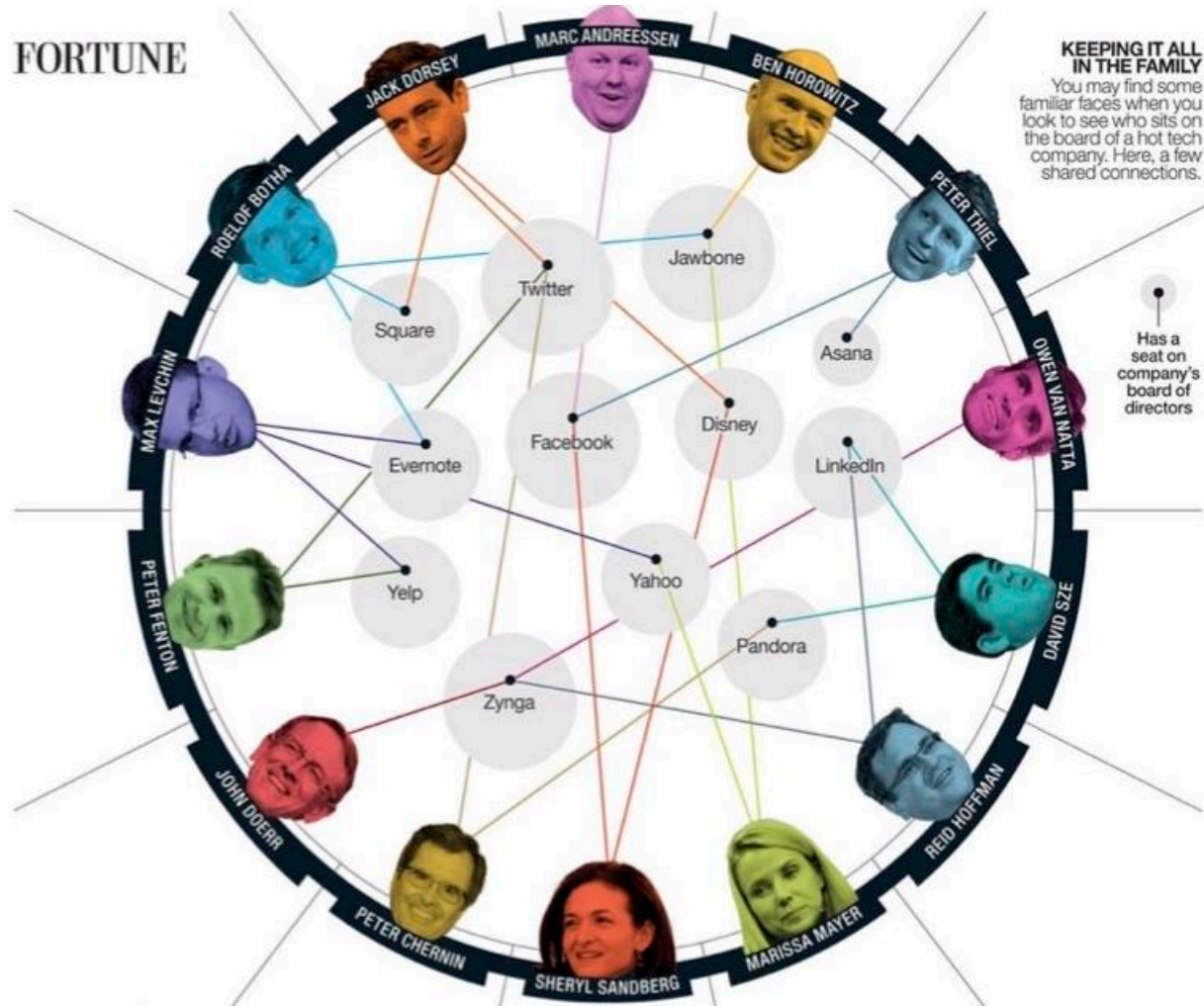


Sophisticated stock exchange

1/3 of all venture capital investment in USA is invested in Silicon Valley  
(SV has < 1% of US population)



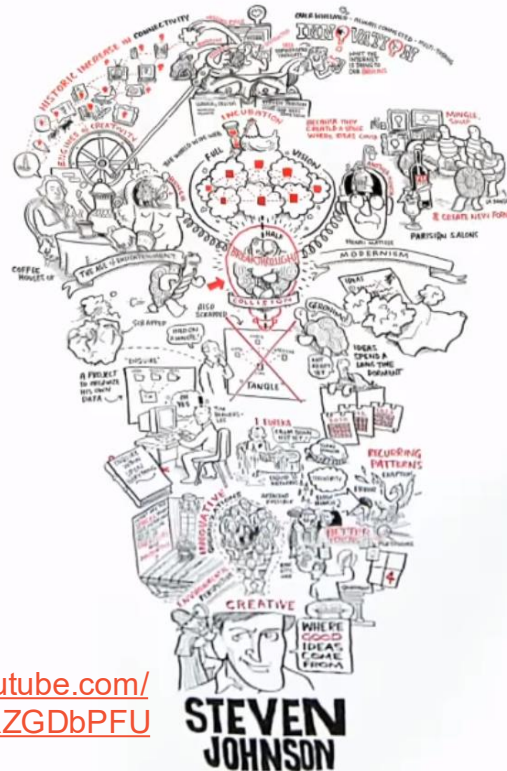
## 4. Social capital



“Some call it an ecosystem; others call it incestuous. In Silicon Valley every prominent player is just an adviser, an investor, a co-founder, an acquirer, or a director away from another. It’s an industry worth trillions that operates like a small town.”

## 5. Knowledge Sharing

- Meetings and Forums
- Expertise in every corner
- Giving back to the community
- Liquid Network



<https://www.youtube.com/watch?v=NugRZGDbPFU>



## 6. Tolerance for Risk Taking

- Entrepreneurs take risks by taking on ambitious missions
- Employees take risks by working for unproven startups
- Banks take risks by lending to unproven startups
- Attorneys take risks by doing pro-bono work
- Property owners take risks by offering accommodation to unproven startups



## 7. Creative destruction – Creating new Businesses while destroying old ones

### S&P 500 Churn Over the Past Decade

Sample companies that have entered and exited the index since 2002

#### Entered the index:



#### Exited the index:



<http://www.aei.org/wp-content/uploads/2014/01/Churn.jpg>  
S&P 500 index is a stock market index of companies listed on Nasdaq and NYSE



## 8. Constructive Failures



EO Personal Communicator (originally by Go Corp)

Failed in market but staff went on to form:



## 9. Positive Aggregate Returns

- Many failures, so need large successes
- For example,
  - In 1997, Benchmark invested \$6.7M in eBay. In 1999, this was worth \$5b
  - Peter Thiel, Facebook's first big investor, has sold off most of his stake, turning his initial \$500,000 investment in 2004 into more than \$1 billion in cash in 2012

<https://money.cnn.com/2012/08/20/technology/facebook-peter-thiel/index.html> (May'25)

## 10. Supportive government policy

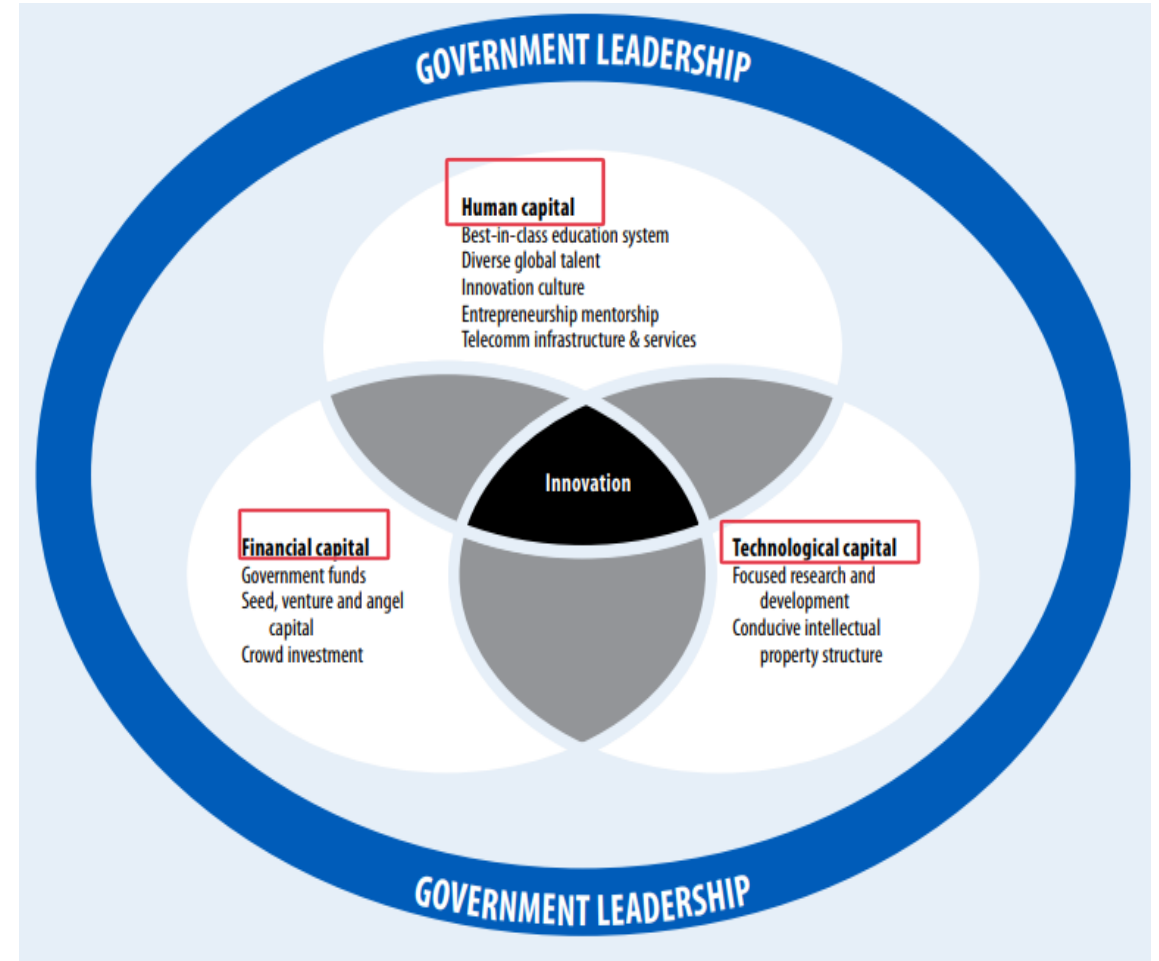
For example:

- Stock options are not treated as taxable income until exercised
- Flexible labour laws
- Tax incentives to encourage new ventures
- Large Govt/defence R&D funding

# UAE “Innovation Eco-System”



- The three pillars of the innovation ecosystem are human capital, financial capital, and technological capital.
- The UAE is actively working to promote innovation through policies and targeted initiatives aimed at developing the human element of the ecosystem while also addressing the key enablers of the human factor: the requirements of financial and technological capital.





# Summary

- Healthy ecosystems are important for innovation
- Successful areas (e.g. Silicon Valley) are successful because of the ecosystem, not just the people and companies
- We can learn from successful innovation ecosystems (and the Australian government is putting in place changes to improve the Australian ones)
- There are lots of people who are able and willing to help in the ecosystem, so always feel free to ask for help

## Support for specific Tech sector

Five key strategy areas to promote further growth and innovation in the industry. The strategy aims to:

- support industry in commercialising research and development
- grow exports and attract investment into the NSW medical technology sector
- support skills development
- improve connectivity and collaboration within the NSW medical technology industry
- improve the business environment.



[Medical technology - Industry sectors \(nsw.gov.au\)](https://nsw.gov.au) (May'25)