Introductory Session – Overview of Bay Area's Innovation Ecosystem

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EDP Innovation Immersion Program

LEADERSHIP BUSINESS CONSULTING


EDP is a leader in innovation!
But technological evolution and market developments
Make it necessary to reinforce the culture of innovation and introduce a strutured capacity to promote implementation
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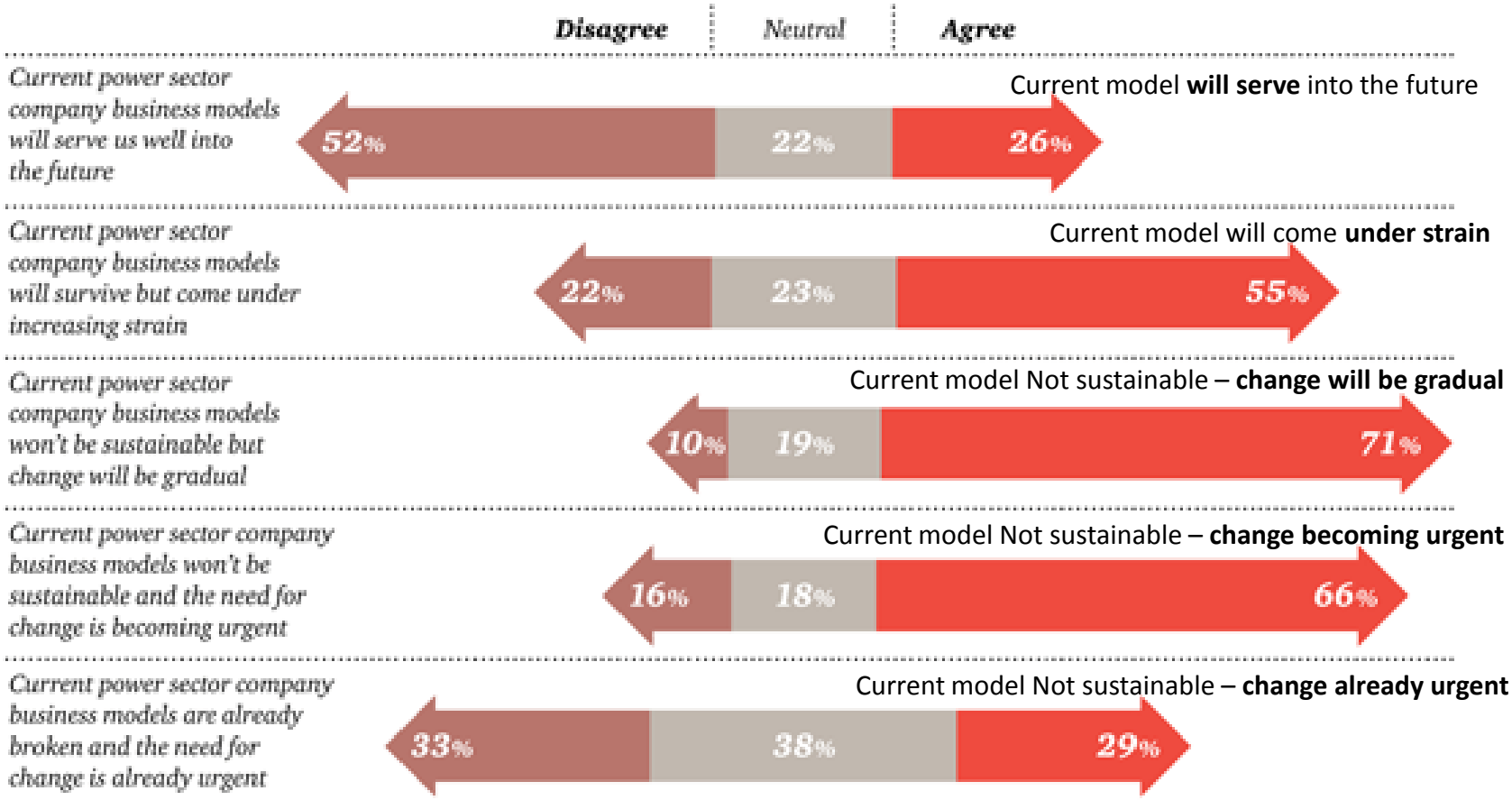
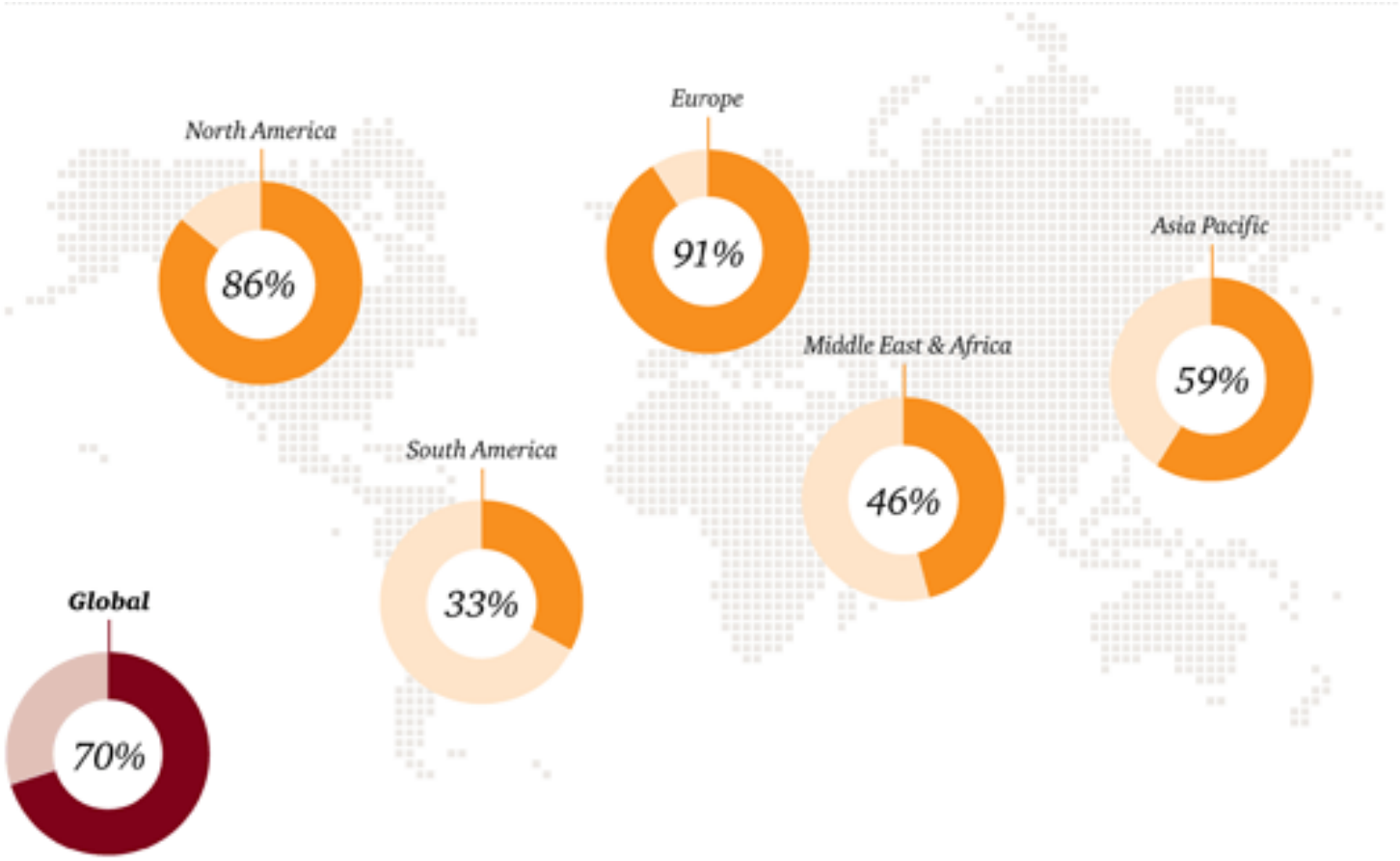
The Future of Current Business Models



Rated on a scale of 1–5, where 1 = fully disagree; 2 = partially disagree; 3 = neither agree nor disagree; 4 = partially agree; 5 = fully agree.
Source: 14th PwC Global Power & Utilities Survey

Expected Change in the Market Model until 2030



* Scale of 1-5 where 1 = no change; 5 = very significant change. Scores 4 & 5 reported.
Source: 14th PwC Global Power & Utilities Survey

Main Industry Challenges

Cybersecurity	An estimated 40% of all hacks in the US have electric grids as a target.
Customer Expectations	Customers expect greater personalization from suppliers, and this can be challenging for the energy market.
Demand Response	The adjustment in energy supply to better fit the market is an area where new technologies can produce substantial and profitable changes.
Smart Grids	The installation of smart grids, on top of starting to be legally required, could lead to substantial cost savings.
Energy Storage	With the possibility of big industrial clients becoming more independent in energy production, the business model could start to be increasingly focused on storage.

The utility of the future will be a fully digital system

1. Utilities' **relationships with customers** will be more interactive than ever, requiring deeper insights into **customer behavior and actions**

2. **Business models** will change – Utility without assets?

3. **Decision cycles** will become shortened. Current organisations and people of utilities can respond in the digital era?

Internet of Things
Big Data
Cloud
Mobile revolution
Smart grids
Smarter measuring systems
Greener standards
Changes in regulations

This requires a digital transformation of business, organisation & culture – supply, network, retail

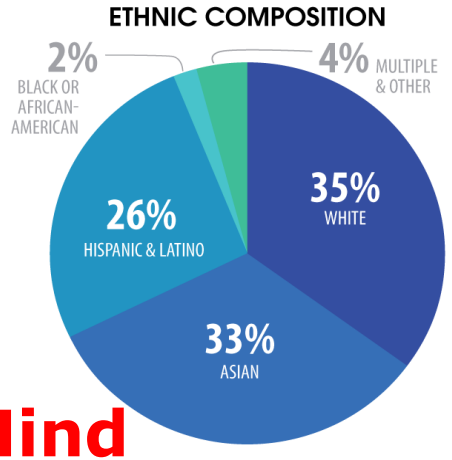
The capacity of EDP to Innovate will be a decisive factor

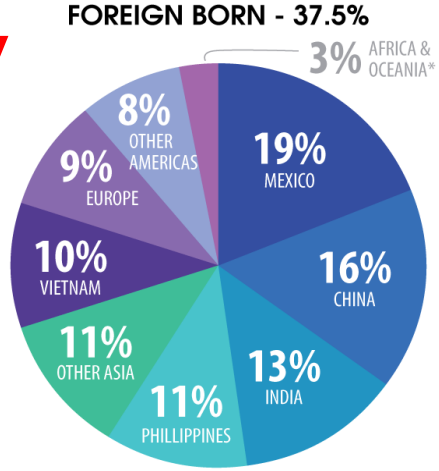
Mobile Customer Engagement **Digital Customer Experience** **Smart Cities** **Decentralised Energy** **Digital Asset Management**

Digital Field Worker **Digital Billing** **Next Grid 3.0, Microgrids** **Smart Homes** **Energy Data Mining** **Energy Analytics**

The Bay Area – What is it?

State of Mind + Diversity





Main characteristics that make the Bay Area a global leader in innovation

Fast and efficient processes, allowing for rapid advancement of ideas to market entry:

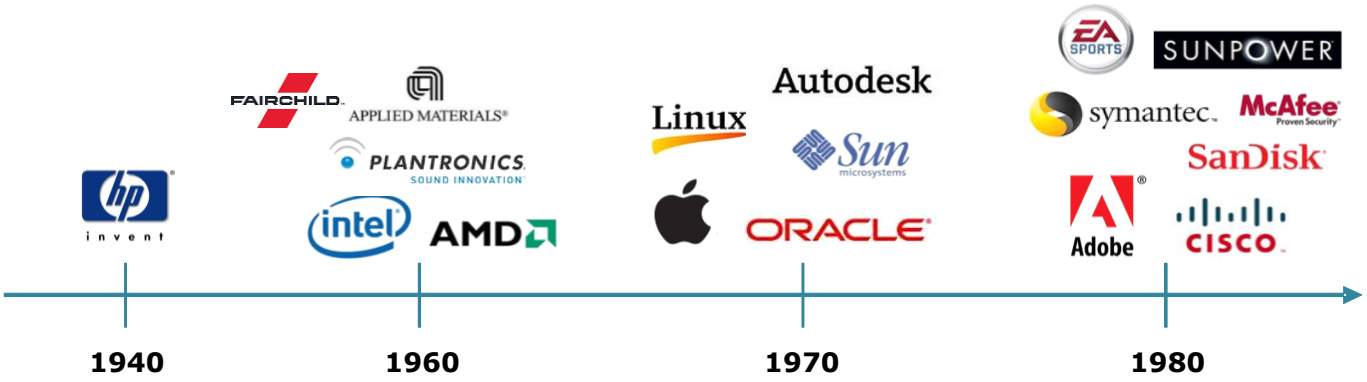
- **Disruptive ideas** are encouraged and promoted
- Ideas are developed **at a global scale** and **risk taking** is part of the process

The main business of SV is ... to **challenge business models**

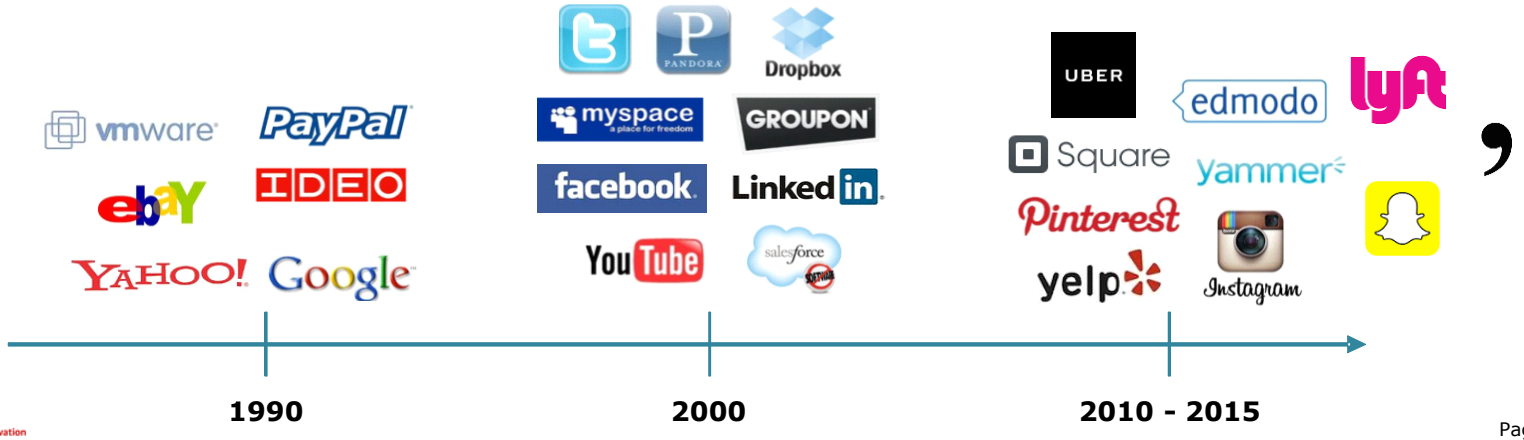
Evolution of Silicon Valley/Bay Area

A few examples of companies based in Silicon Valley

Defense / Radio / Silicon / Semiconductors / Networks



Search / Social Web / Cloud / Driveless Cars / Artificial Intelligence

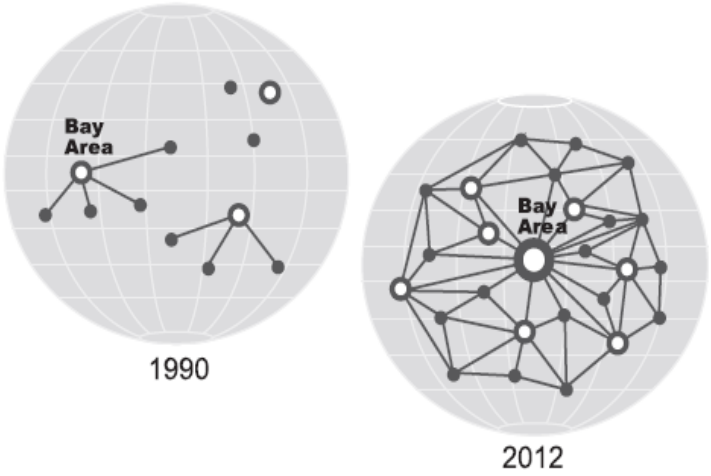


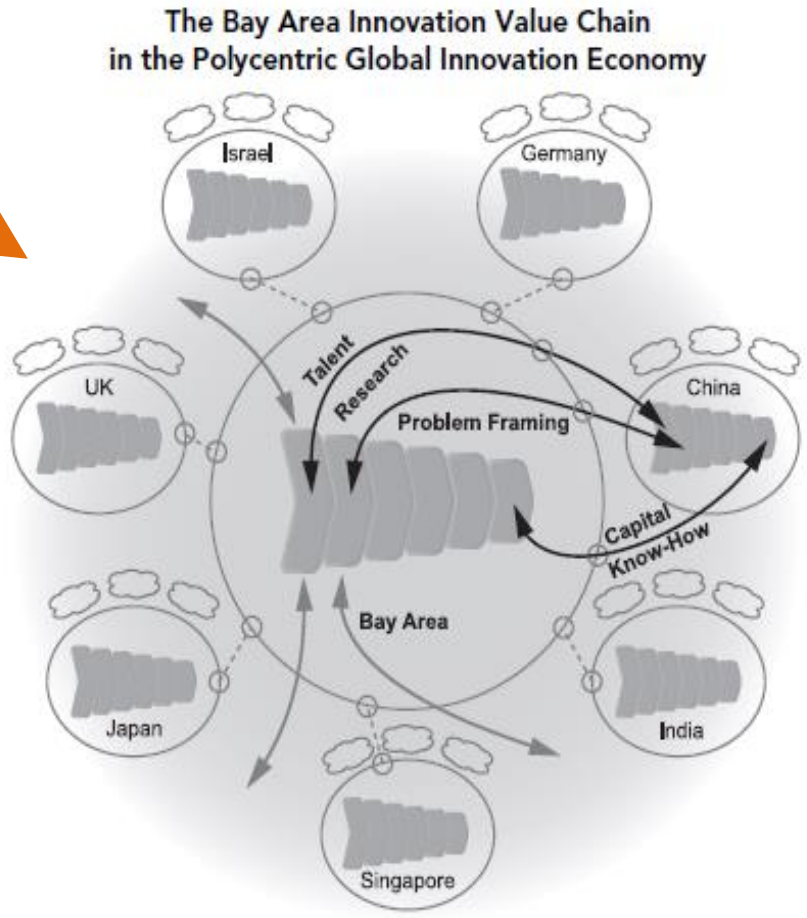
Differentiator #1

Super Hub

Aggregator of global innovation and entrepreneurship networks.

Disperse Global Innovation Centers





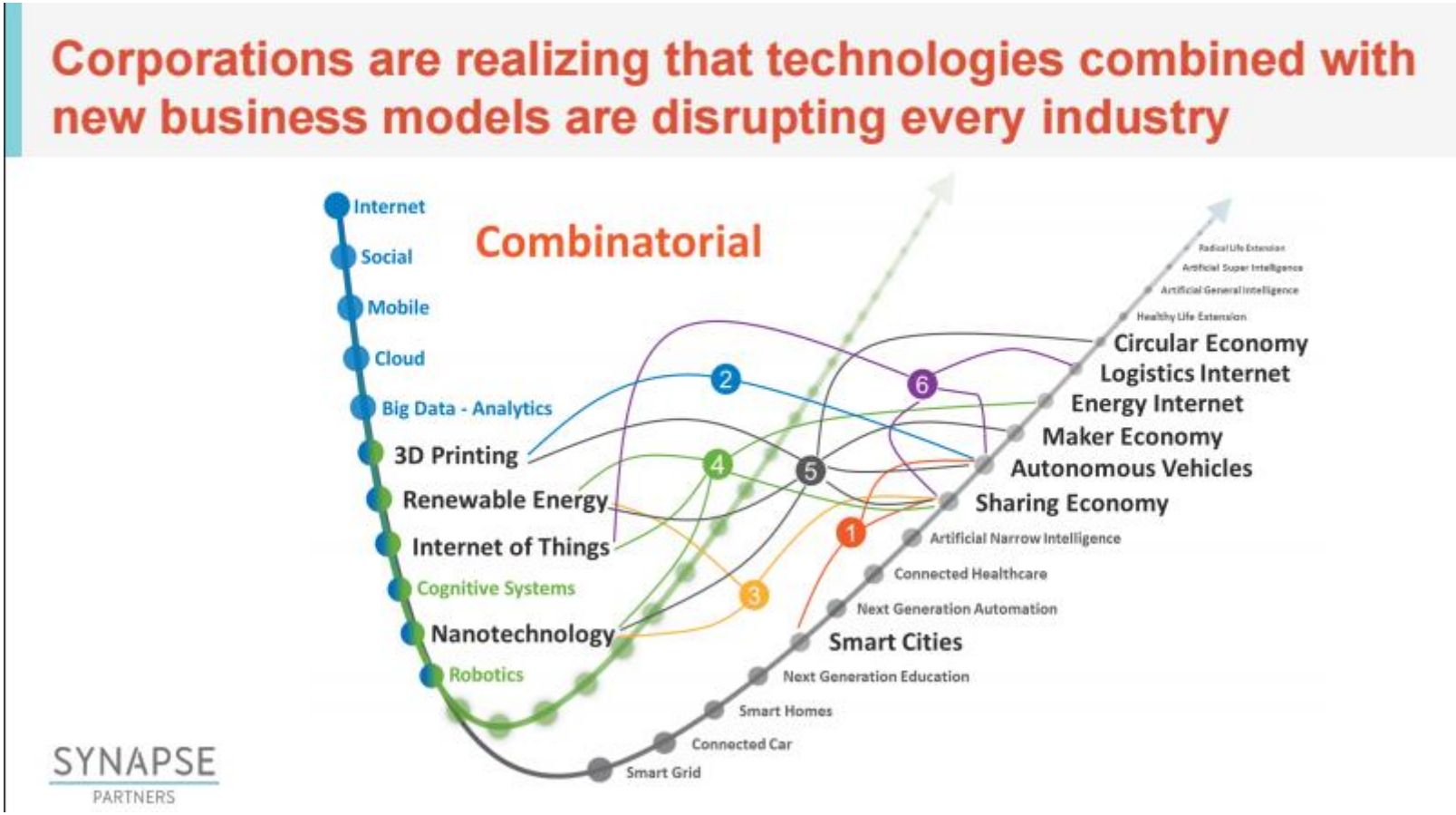
SV positioning:

Global Marketplace **of ideas, talent and capital**

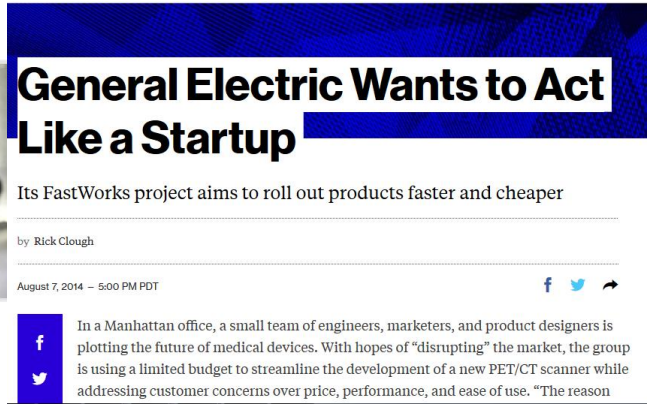
Super Hub **linking other innovation centers**

Differentiator #1 cont'd

Super Hub



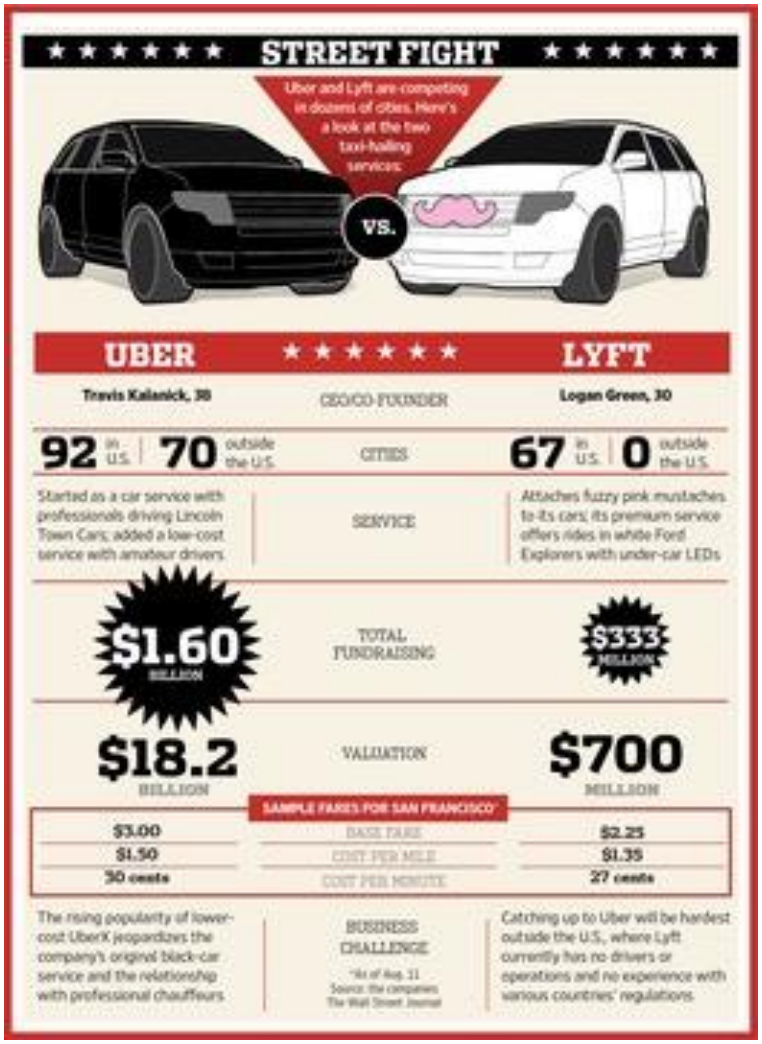
Differentiator #2



STARTS UP RULE

- Maintaining the Startup culture:
  - Acqui-hires;
  - Options over shares;
  - Benefits arms war;
  - Partnerships;
  - Investment funds;
  - Independence;
  - 20% rule.

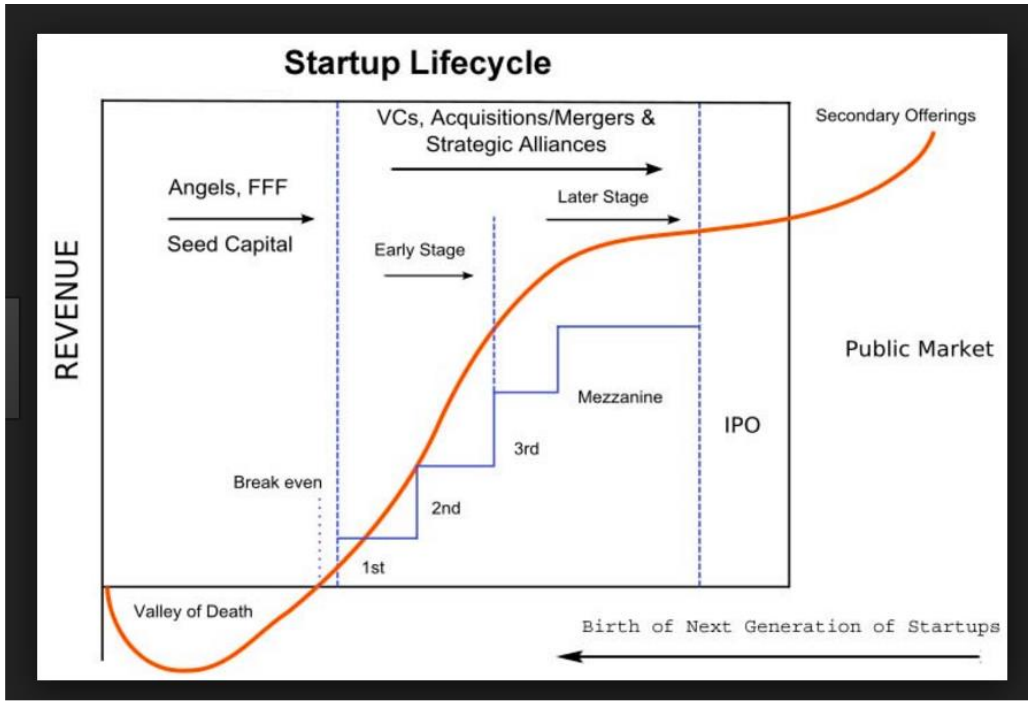
Differentiator #3



Experience in SCALE

- "First-scaler" advantage beats first-mover advantage"
- "Most of the impact and value creation in Silicon Valley actually occurs after the start-up phase ends and the scale-up phase begins"
- Scaling via:
  - Pattern recognition
  - Capital
  - Talent
  - Users
  - Sales Channels

Differentiator #4



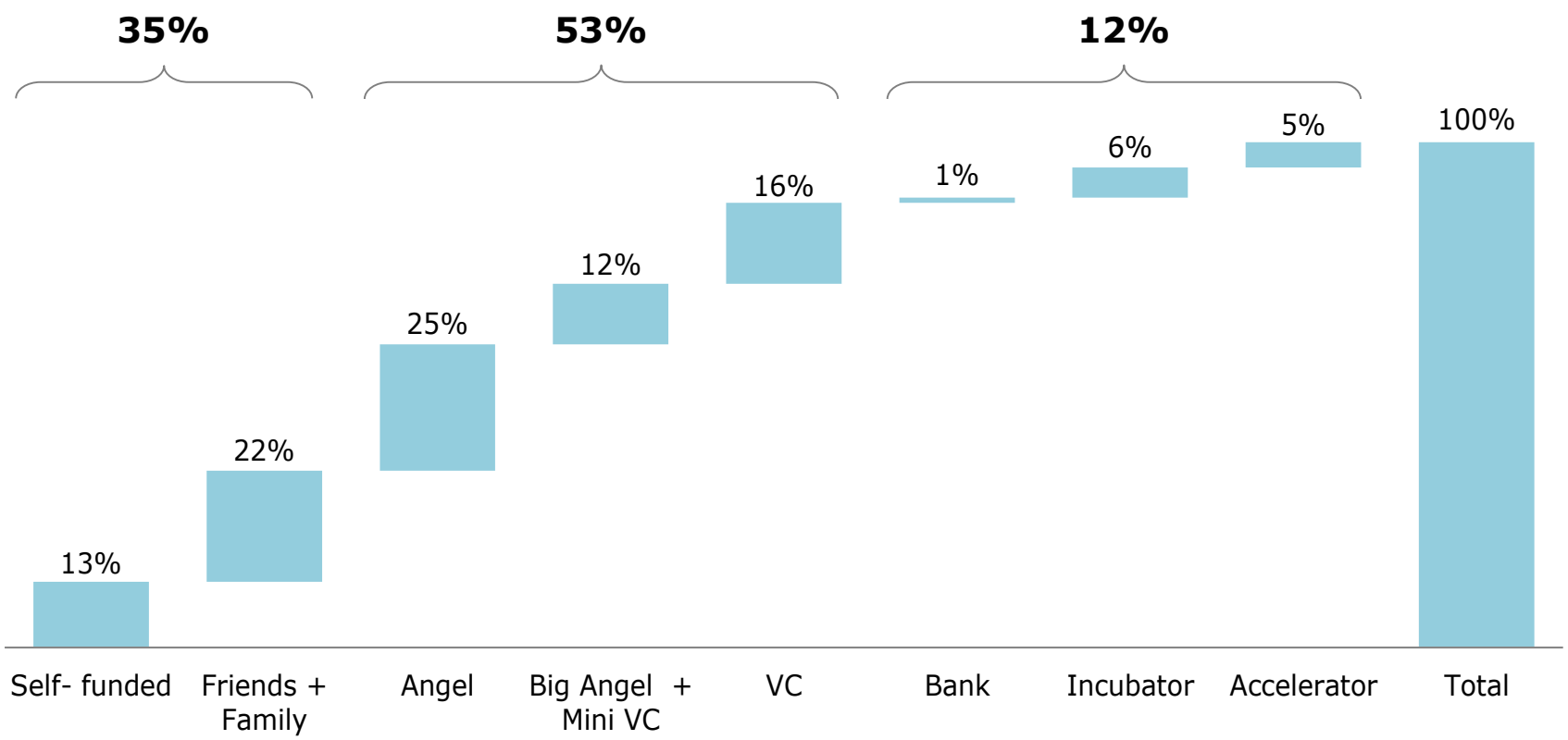
Pace

- The Pace is set by startups that have very particular constraints and mandates:
  - Constrained Time: 1 year to prove there is a billion+ dollar market worth investing $100M into
  - Constrained Money: $1-$3M to prove that they have the ability to build a billion dollar business in the next 3 years
  - Startups have the funding and staffing they need for the exercise, but need to accomplish a very difficult challenge

Differentiator #5

$mart Money

Typical Financing Mix in Silicon Valley



Source: Startup Ecosystem Report, Startup Genome

Differentiator #6

The size of the SV ecosystem is almost 5x that of NY and London in terms of investment value.

SV has the highest absolute venture capital investment value growth.

SV has the most experience with Startups. 48% of all Start-up teams have already worked at other Start-ups.

SV is the ecosystem with the most density in the Top20. It has 3 times more Start-ups per capita than Seattle or Bangalore

Size, $, Intuition

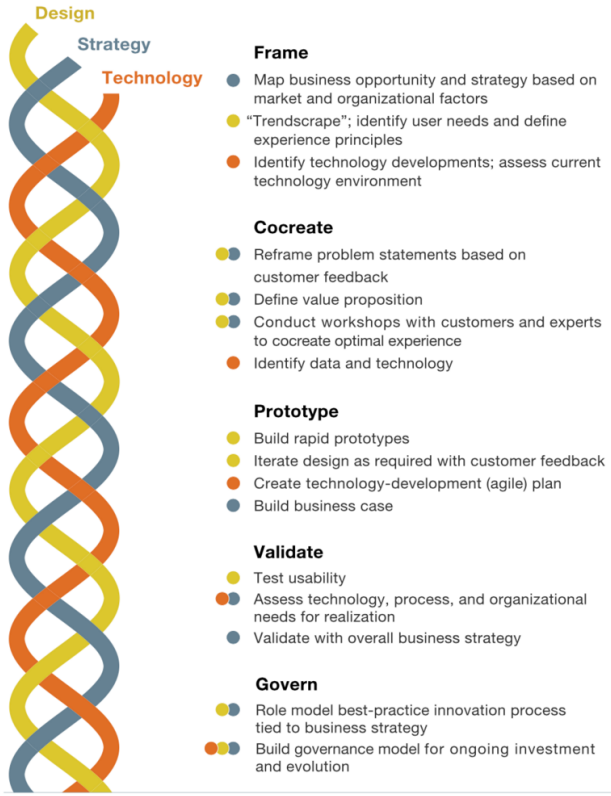
	Ranking		Performance	Funding	Market Reach	Talent	Startup Exp.	Growth Index
Silicon Valley	1	-	1	1	4	1	1	2.1
New York City	2	▲ 3	2	2	1	9	4	1.8
Los Angeles	3	-	4	4	2	10	5	1.8
Boston	4	▲ 2	3	3	7	12	7	2.7
Tel Aviv	5	▼ 3	6	5	13	3	6	2.9
London	6	▲ 1	5	10	3	7	13	3.3
Chicago	7	▲ 3	8	12	5	11	14	2.8
Seattle	8	▼ 4	12	11	12	4	3	2.1
Berlin	9	▲ 6	7	8	19	8	8	10
Singapore	10	▲ 7	11	9	9	20	9	1.9
Paris	11	-	13	13	6	16	15	1.3
Sao Paulo	12	▲ 1	9	7	11	19	19	3.5
Moscow	13	▲ 1	17	15	8	2	20	1.0
Austin	14	NEW	16	14	18	5	2	1.9
Bangalore	15	▲ 4	10	6	20	17	12	4.9
Sydney	16	▼ 4	20	16	17	6	10	1.1
Toronto	17	▼ 9	14	18	14	15	18	1.3
Vancouver	18	▼ 9	18	19	15	14	11	1.2
Amsterdam	19	NEW	15	20	10	18	16	3.0
Montreal	20	NEW	19	17	16	13	17	1.5

Source: Startup Genome, Startup Ecosystem Report 2015

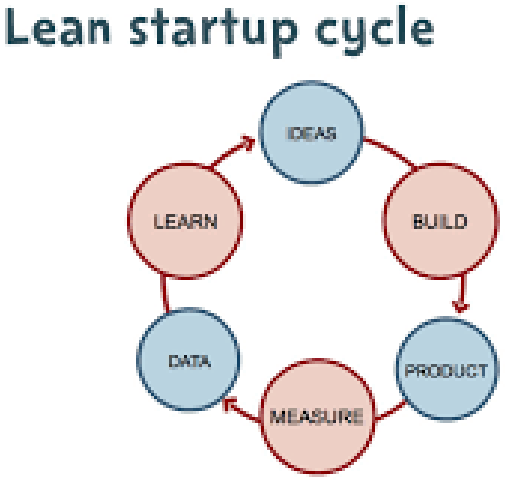
Differentiator #7

Speed, Design Thinking and Prototyping

In a 'braided' design model, three functions work together in lockstep.



Common Language



Agile design, strategy and technology

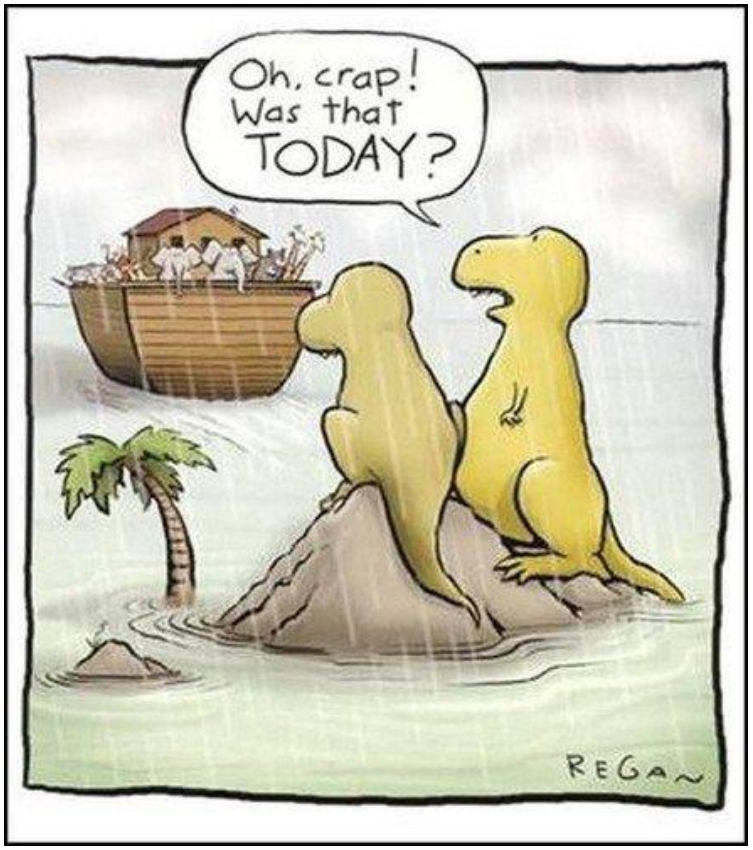
Failure is part of design

Success gets investment

Planning and execution run simultaneously

Time is ever shorter

The average longevity of companies in the S&P 500 fell from 61 years in 1958 to 15 years in 2015. At this rate, 75% of the current company in the S&P will be displaced by 2027.



S&P 500 Churn Over the Past Decade

Sample companies that have entered and exited the index since 2002

Entered the index:

FAMILY DOLLAR, Celgene, SMUCKER'S, priceline.com, ESTĒE LAUDER, eBay, Google, medco, JUNIPER NETWORKS, RALPH LAUREN, EXPRESS SCRIPTS, LEGG MASON GLOBAL ASSET MANAGEMENT, E*TRADE, amazon.com, COVIDIEN, NVIDIA, WHOLE FOODS MARKET, salesforce.com, Abercrombie & Fitch, DaVita, NETFLIX, comcast, IRON MOUNTAIN

Exited the index:

SOLECTRON, RadioShack, BEAR STEARNS, Global Crossing Think Ahead, CIRCUIT CITY, MAY, CLEARCHANNEL, PHARMACIA, QUAKER, Wendy's, TEXACO, Kodak, Scientific Atlanta, PeopleSoft, MAYTAG, The New York Times, Sears, COMPAQ, palm

Preparing for the Program

EDP Innovation Immersion Program

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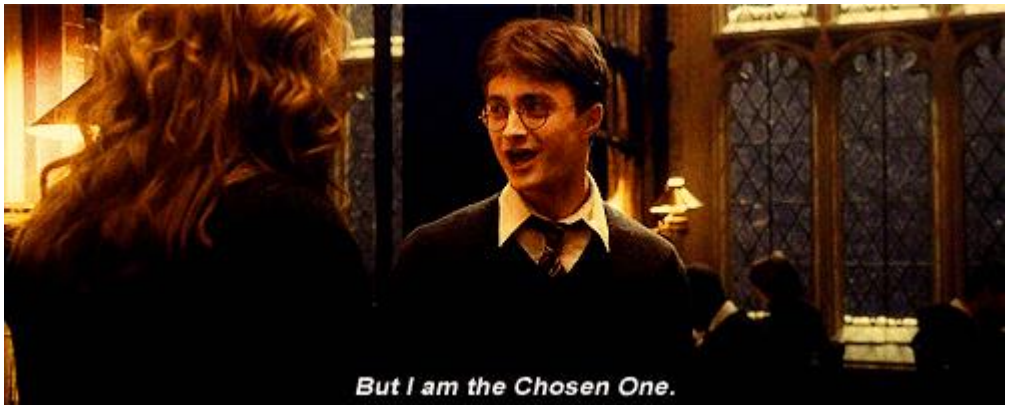

You are the chosen one –

so how can you make it count?

"If you want to change the world be yourself the change"

Mahatma Ghandi

Find time to record your thoughts:

At the end of each day track:

- Key discoveries/rediscoveries
- Personal commitments
- Problem solving/ideation

Discovery – questions we'll be asking you throughout the program:

1. What is the most challenging aspect of your business area today? Why?

2. If you had the opportunity (and unlimited resources) how would you address these challenges?

3. What innovations will change your business in the short or long term?

4. What are your 3 main objectives for this program?