

LIUC – Università Cattaneo

Laurea Magistrale in Economia Aziendale e Management

Course: Entrepreneurial Ecosystems

San Francisco Bay Area Ecosystem for startup

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Lesson 1

6 marzo 2019

MY BACKGROUND

- 1965-1980 **Computer Science Researcher** (first experience in Silicon Valley at **Olivetti Advanced Technology Center (ATC)**);
- 1972-2010 **ICT Entrepreneur** (with important responsibilities in the national associations of ICT entrepreneurs);
- From 1998 **Lecturer in University** (and “ferryman” of people interested in knowing the “sanctuaries” of the technological innovation).

AGENDA

- 1) The San Francisco Bay Area (SFBA)**
- 2) Startups and SFBA
- 3) SFBA Ecosystem

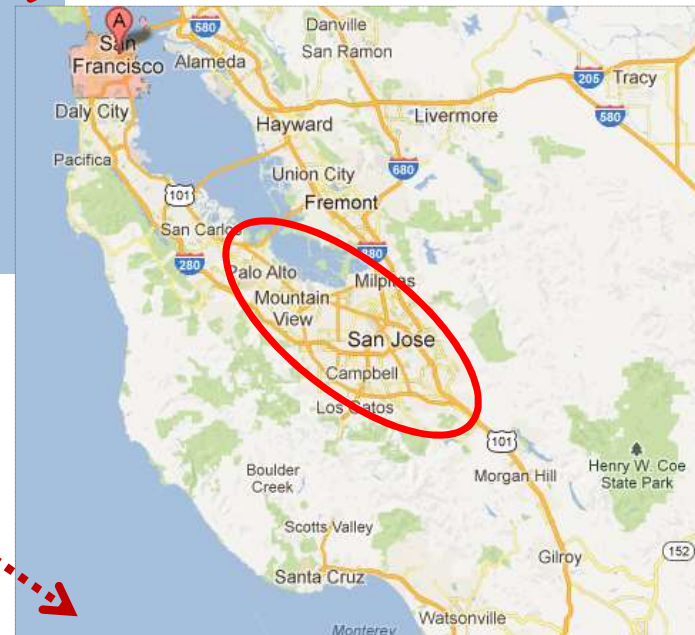
A QUESTION



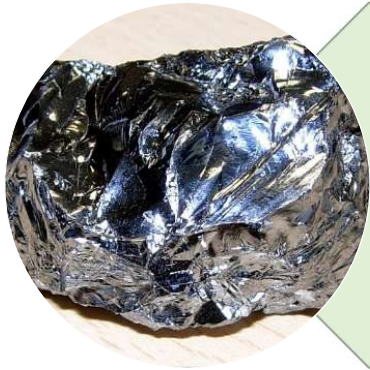
**Why SAN
FRANCISCO BAY
AREA instead of
SILICON VALLEY?**

SILICON VALLEY

A region of Northern California centered in the Santa Clara Valley which is home to a large number of technologically innovative companies including Apple, Google, Facebook and Netflix.



WHY «SILICON VALLEY»



Historically its name is because in this area there where the highest concentration of silicon in the world;



Silicon is used to build the chips of the billion of computers working there.

THE BIRTH OF SILICON VALLEY

1939: William Hewlett and David Packard patent and built an audio oscillator, forming the foundation for the Hewlett-Packard company. It happened in a garage just behind the Dave house. Their company was born with a capital stock of 538 US\$. Now HP revenues is about several hundreds of billion \$.



SILICON VALLEY TECH HISTORY (1/2)

1940

- William Shockley invents silicon transistor at Bell Labs.

1951

- Fred Terman establishes the Stanford Research Park as a partnership between Stanford University and the City of Palo Alto, providing a base of operations for both military and commercial technological innovations for companies such as Fairchild, Lockheed and Xerox.

1956

- William Shockley opens his own firm, Shockley Semiconductor Labs, in Mountain View, California

1957

- Several Shockley employees resign and start a competing firm. Fairchild Semiconductor. These men go to start many other firms, including Intel and Nvidia.

1958-1960

- Independently, Robert Noyce and Jack Kilby discover that all parts of a circuit including the transistor can be created using silicon. Their discoveries led to the integrated circuit, created from silicon, which is used in all microprocessors today.

SILICON VALLEY HISTORY (2/2)

1961

- Former Fairchild backer Arthur Rock establishes Davis & Rock, which is considered the first venture capital firm, giving rise to a new type of investment industry.

1969

- The Arpanet computer network is established with four nodes, including one at Stanford University. Arpanet is the foundation for the internet.

1971-1972

- Journalist Don Hoefler publishes a three-part report on the rise of technological development in the region in *Electronic News*, titled "Silicon Valley, U.S.A."

1970's

- Atari, Apple and Oracle founded

1980's

- Cisco, Sun Microsystems and Adobe founded

1990's

- Google, Yahoo and PayPal founded

2000's

- Facebook, Twitter, Uber, Netflix and AirBnB founded

SILICON VALLEY IS ALMOST 100 YEARS OLD

We see the fourth generation of entrepreneurs who have chosen this strip of land to build their company.

Entrepreneurial history: 4 periods:

- Inventions
- High tech big companies
- Startups and big manufacturing firms incorporating high tech (smart machines) and «social world»
- Medium size manufacturing firms incorporating high tech and sharing economy companies

THE INVARIANT IN THE SILICON VALLEY HISTORY

Here the technology development grows with an exponential trend.

Leading members of the technology community go so far as to claim that we are inside a innovation technology process twice exponential (Ray Kurzweil).



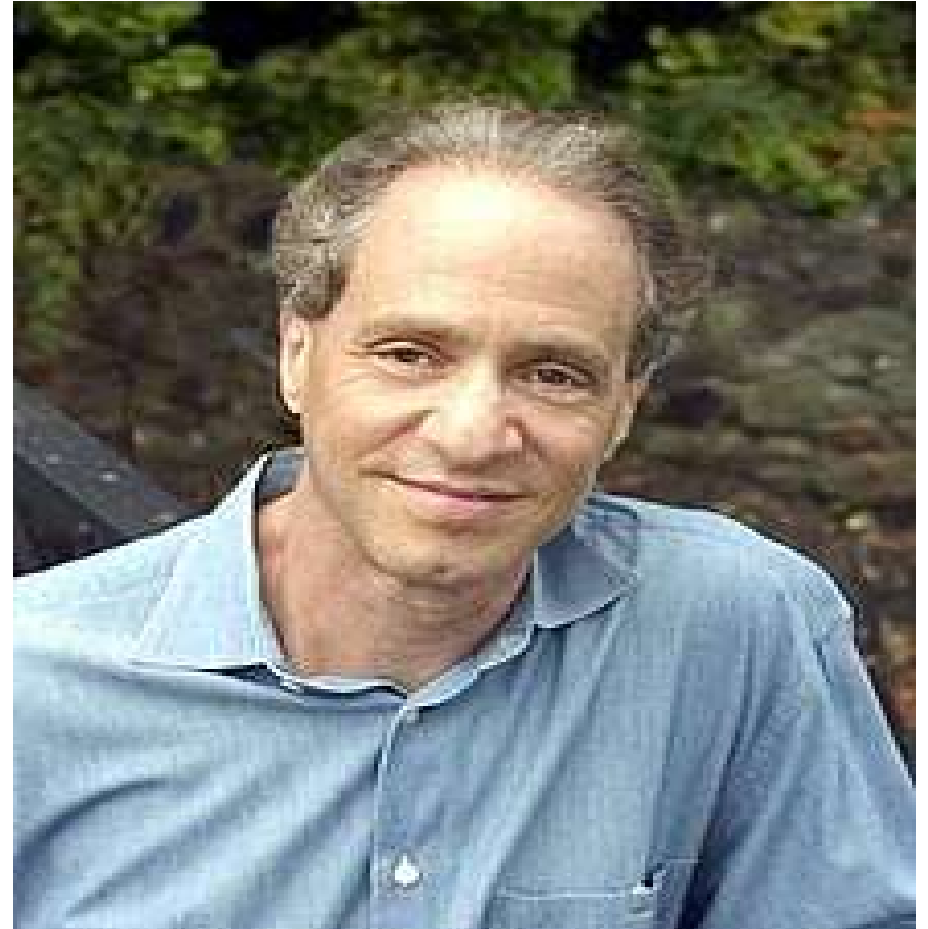
RAY KURZWEIL

Inventor and futurist, involved in fields such as optical character recognition (OCR), text-to-speech synthesis, speech recognition technology, and electronic keyboard instruments.

He has written books on health, artificial intelligence (AI), transhumanism, the technological singularity, and futurism.

Kurzweil gives public talks to share his optimistic outlook on life extension technologies and the future of nanotechnology, robotics, and biotechnology.

Has been employed by Google since 2012, where he is a "director of engineering".



RICEST VIP IN SV



5. Mark Zuckerberg
(FB)
71 B\$



10. Larry Ellison
(Oracle)
58 B\$



12. Larry Page
(Google)
49 B\$



13. Sergey Brin
(Google)
48 B\$

MORE RICHEST VIP



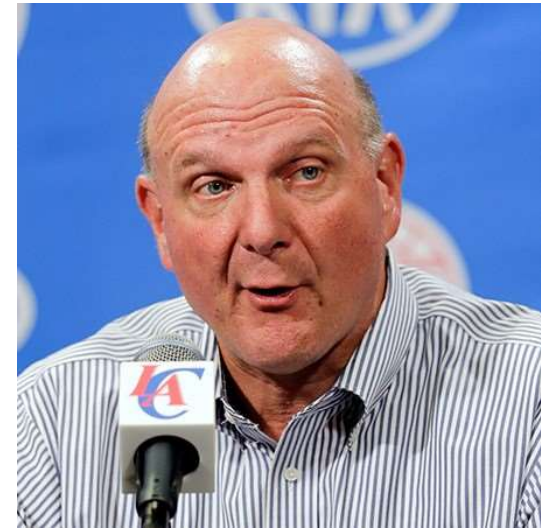
1. Jeff Bezos
(Amazon)
112 B\$



2. Bill Gates
(Microsoft)
90 B\$



3. Warren Buffett
(Berkshire)
84 B\$



22. Steve Balmer
(Microsoft)
38 B\$

FEDERICO FAGGIN

Physicist, inventor and entrepreneur, widely known for designing the first commercial microprocessor.

In 2010 he received the 2009 National Medal of Technology and Innovation, the highest honor the United States confers for achievements related to technological progress.

At UC Santa Cruz he promoted and financed the study of "fundamental questions at the interface of physics and related fields including mathematics, complex systems, biophysics, and cognitive science, with the unifying theme of information in physics."



SILICON VALLEY STRENGTHS (1/3)

Dozens of high level Universities and Colleges at the highest level:

- Stanford University
- UC (University of California) Berkeley
- UC Santa Cruz
- Santa Clara University
- San Jose State University
- Foothill College
- De Anza College
-

And now Singularity University: *«Our mission is to educate, inspire and empower leaders to apply exponential technologies to address humanity's grand challenges.»*

SILICON VALLEY STRENGTHS (2/3)

- Biggest research lab:
 - IBM
 - Lockheed
 - Tesla
 - SLAC
 - Xerox Park
 - NASA
 -
- Partnership and strong cooperation between Universities and firms.
- A professor teaching at Stanford is rewarded if he is an entrepreneur too

SILICON VALLEY STRENGTHS (3/3)

- Research programmes funded by federal government, by California State and by counties.
- Help by banking system (Bank of America, the biggest bank in US, is based in San Francisco).
- 50% of the Venture Capitals of US are based in the Valley.
- The environment (excellent temperature all year long, barren lands, sea, hills)
- Very efficient services provided by immigrants (Mexico, Asia)
- Cross-fertilization: normally people change company very often and this practise «fertilize» the ecosystem.
- *If an hardware, a software, a communication tool, a competence, a funding is available somewhere in the world, you can find it also in Silicon Valley, in other words within 50 kilometers.*

MELTING POT

All these strengths attract more and more people in the Valley. A wealth of intelligences and skills who decides to remain there.

This amazing merger of very qualified persons coming from different ethnic groups and from all over the world is called «melting pot».



SAN FRANCISCO HISTORY MILESTONES

- First Half '700 – San Francisco is one of the 21 missions established by Franciscan priests: with them Spanish King Carlo 3° “marked” California and reassert that it was their area of influence,
- 1848 – the Gold Rush,
- 1906 –San Francisco big heartquake (and fire),
- From 1940 the Silicon Valley

All these events, full of spirit of adventure, sacrifice and inventiveness, allowed them to overcome great difficulties and to build a culture.

FROM MY EXPERIENCE IN OLIVETTI ATC

- In Cuppertino and everywhere in the Valley people were used to work day and night (sometimes they slept inside the firms) and after sunset there were nobody around.
- But there were great enthusiasm in the work. The companies were absolutaly flat and everyone was called by his first name. All the work station were equal (from the CEO to the last hired). The building were low and in the green. Parking was not a problem.
- There was no time even to go from Palo Alto to San Francisco.

SUN MICROSYSTEM

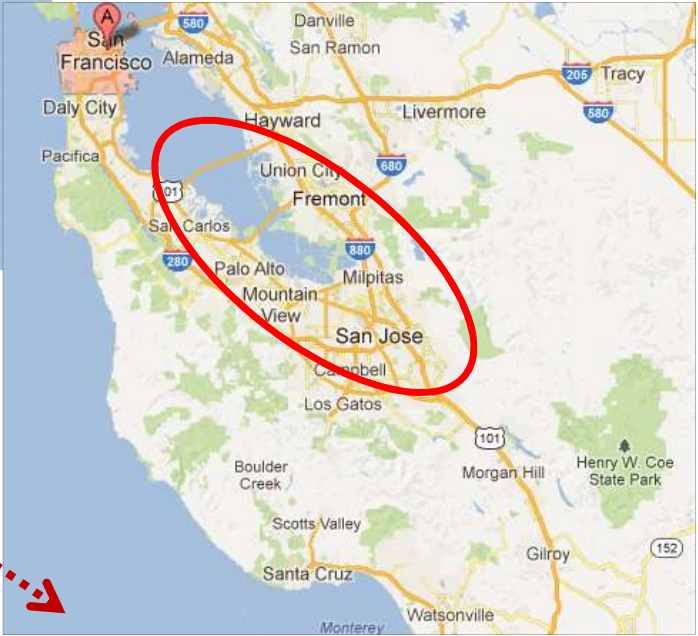
- One of the 4 major IT companies in the '80ies and '90ies and acquired by Oracle in 2010;
- Famous for server and workstation based on CPU SPARC, SunOS and Solaris, NFS file system, Java language, OpenOffice suite, Unix System V;
- Our meeting;
- Scott McNealy;
- Sun ↔ Facebook



BAY AREA



Silicon Valley was too small and the prices were grown up too much



Diapositiva 24

a1

admin; 22/01/2019

STARTUP CULTURE (1/2)

Our basic principle on firm management is:

DON'T GET AHEAD OF YOURSELF

(non fare il passo più lungo della gamba)

In Bay Area is:

SINK OR SWIM!

(o la va o la spacca)

STARTUP CULTURE (2/2)

We think that:

**IT'S BETTER A LITTLE FIRM BUT ALL MINE THAN A PORTION
(ALSO SIGNIFICANT) OF A BIG ONE**

In Bay Area they think the **very opposite, exactly the contrary!**

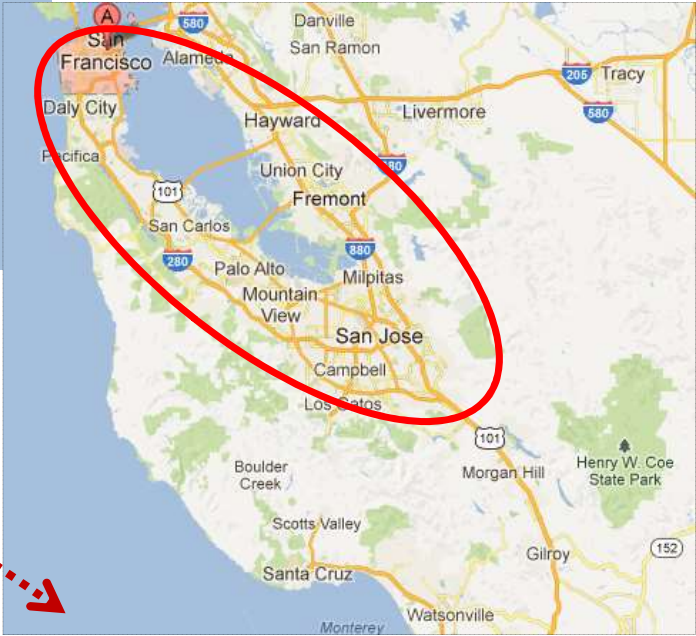
OTHER CULTURE CHANGES (1/2)

- Silicon Graphics ↔ Google & LinkedIn
- “Stop with the Valley!”
- All the disruptive and sharing economy companies are in San Francisco
- The opportunism of the municipality of San Francisco
- But also in San Francisco the spirit of pioneers relives.

OTHER CULTURE CHANGES (2/2)

- More and more employees-friendly firms (bar everywhere, free meal also for dinner, gym, swimming pool, movie theatre, areas for children, walls plastic coated where people can write immediately every new idea, encouragement of new ideas, «inday» experience: company gives employees a day to focus on themselves, the company, and the world. No work but a theme to examine in greater depth in the workplace, ecc.)
- Stock options “a gogò”
- Coworking space everywhere (also in the coffee-shops)
- More easy and powerful networking

SAN FRANCISCO BAY AREA



***Now
Stop with the Valley!***

SAN FRANCISCO

- the 13th-most populous city in the United States, and the fourth-most populous in California, with 884,363 residents as of 2017
- the second-most densely populated large US city
- part of the fifth-most populous primary statistical area in the United States, the San Jose–San Francisco–Oakland, Area (9.7 million residents).

Demographic profile	2010
Total Population	805,235 – 100%
Hispanic or Latino	121,774 – 15.1%
White	390,387 – 48.5%
African American	48,870 – 6.1%
Asian	267,915 – 33.3%
American Indian and Alaska Native	4,024 – 0.5%
Native Hawaiian and Pacific Islander	3,359 – 0.4%
Other	53,021 – 6.6%
Two or more races	37,659 – 4.7%

A GOOD QUESTION

- Still make sense Silicon Valley in a world interconnected by web?
- Experience says yes. The new winning companies recognize highly value in interpersonal relations inside a physical powerful entrepreneur ecosystem;
- After all, every startup professional investor requires as first condition that the startup is established within one hour drive from his office. Remember that about 50% of venture capitals are right in Silicon Valley.

A FINAL REMARK

- If, somewhere in the world, all the Bay Area facilities could be carried out, it would remain unique;
- Anyway it should be impossible to build that culture grown during the 100 years history of the Valley;
- In Silicon Valley:
 - Startups are an industry,
 - Entrepreneurship is a profession,
 - Entrepreneur must be crazy,
 - Almost every 3 years you must change your job (and this is good for the employee, for the company left and for the company that employ you),
 - Taking risks is normal and cool,
 - Failure is called experience and is a value (also in your CV),
 - etc.



Guangdong-Hong Kong-Macao Bay Area



GHMBA

- The biggest concentration of innovation in China;
- Artificial Intelligence funded with 70 B\$;
- «management» of 1 million of industrial robots;
- In competition with SFBA with the same level of technology but having a 1.4 billion internal market behind and the related huge industrial ecosystem (hungry of innovation);
- The pivot of the «Chinese dream» of Xi Jinping: become the powerful country in the world.

HONG KONG- ZHUHAI- MACAU BRIDGE



HONG KONG- ZHUHAI- MACAU BRIDGE



HONG KONG- ZHUHAI- MACAU BRIDGE



HONG KONG- ZHUHAI- MACAU BRIDGE

55 km (7 km tunnel)

8 years of work

Open on September 2018; it's the icon of the «Chinese dream» of Xi Jinping

Cost: 20 B\$

30 minutes to go from HK to Macao, instead of 3 hours

Can withstand 8 on Richter scale

Links semi-democrat town to mainland China

ONE BELT _ ONE ROAD

- Or **Silk Road Economic Belt**
- a development strategy adopted by the Chinese government involving infrastructure development and investments in countries in Europe, Asia and Africa (65 countries, 4.5 billion people)
- The Chinese government calls the initiative "a bid to enhance regional connectivity and embrace a brighter future".
- Some observers see it as a push for Chinese dominance in global affairs with a China-centered trading network.
- Investment: 1000/1800 Billion US\$

PART 1 REFERENCES (1/2)

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- <https://www.youtube.com/watch?v=FJ1QtII2QN0>