The Startup Ecosystem: a Quick Tour

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A silly joke for two serious questions
Spot the Similarities
Spot the Similarities

Sergey Brin (Google)

Biz Stone (Twitter)

Daniel Ek (Spotify)

Drew Houston (Dropbox)

Mark Zuckenberg (Facebook)

Naveen Selvadurai (Foursquare)
Spot the Similarities

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Do they have glasses?
The InnovAction Lab Experience

- 2010 RomaTre: 40 students (geek & business)
- 2011 Roma*, Puglia*, Bologna: ~160 students (geek, business & anything else)
- 2012 Roma*, Trento: ~200 students (geek, business & anything else)
- 2013 Roma*, Trento: ~200 students (geek, business & anything else)
- 2014 Roma*, Milano*, Sardegna: ~300 students (geek, business & anything else)
- 2015 Roma*, Milano*, Sardegna: ~300 students (geek, business & anything else) - WWWC
Do we need startups?
Premise

- "There are no facts, only interpretations" (F. Nietzsche)
Do we need startups?

• Job Creation

Most startups fail, and most that do survive do not grow. But among the surviving startups are high-growth firms that contribute disproportionately to job growth. These high-growth young firms yield the long-lasting contribution of startups to net job creation.

Ryan Decker, John Haltiwanger, Ron Jarmin, Javier Miranda (University of Maryland, College Park) The Role of Entrepreneurship in US Job Creation and Economic Dynamism
Job Creation

High-tech startups are different: unlike small businesses overall, they create net new jobs. The actual numbers are stark: In 2011 [according to Census Bureau data] high-tech companies between one and five years of age created a net 16,700 jobs. Other businesses between one and five years in the private sector overall lost 513,700 jobs.

http://www.bloombergview.com/articles/2013-08-16/the-only-startups-that-matter-to-job-creation
Do we need startups?

- Job Creation
  *Because of a multiplier effect, each new high-tech job in the U.S. creates five additional jobs in the service economy*

Enrico Moretti *The New Geography of Jobs* 2012
(Department of Economics, University of California, Berkeley)
Do we need startups?

Explore Salary & Equity Data

**Filters**

**Role**

- Developer
- Sales
- Marketing
- Full Stack Developer
- Frontend Developer
- Mobile Developer
- Backend Developer
- Designer
- Product Manager
- Data Scientist
- DevOps

[Link to Angel.co/salaries](https://angel.co/salaries)
Do we need startups?

https://angel.co/salaries
Do we need startups?

http://www.indeed.com/salary?q1=devops+startup

Average devops startup salaries for job postings nationwide are 93% higher than average salaries for all job postings nationwide.
Do we need startups?

To summarize:

1. high-growth young firms yield the long-lasting contribution of startups to net job creation
2. this is particularly true for high-tech startups
3. each new high-tech job creates five additional jobs in the service economy
4. startup salaries for geeks are higher than for any other profile
Startups and research

• Startup companies have become a distinctive and foundational aspect of IT Industry

• To achieve their goals startups leverage research results

• and their disruptive business models motivate and inspire new research directions
Premise (reinforced)

• "There are no facts, only interpretations" (F. Nietzsche)

• G: "Do you know everytime I breathe, a man dies?"
  A: "why don't you try mouth wash?"
  (in India: Sardar jokes, in Italy: Gigi e Andrea)
Startups and research

Google search results for "such as Oracle" SIGMOD anytime:

1,470 results (0.05 sec)

Articles
- STRUDEL: a Web site management system
- Towards sensor database systems
- Automatic SQL tuning in oracle 10g

Cited by 220, Related articles, All 14 versions, Cite, Save, More

Custom range...
Startups and research

- "such as facebook" SIGMOD
  any time ➔ 1060 results
  since 2011 ➔ 821 results
  since 2014 ➔ 315 results
  since 2015 ➔ 96 results

- "such as Oracle" SIGMOD
  any time ➔ 1440 results
  since 2011 ➔ 368 results
  since 2014 ➔ 111 results
  since 2015 ➔ 42 results
Overview

Startup Basics

Investors & Accelerators

Universities?
Startup

- Steve Blank: “A startup is a [temporary] organization formed to search for a repeatable and scalable business model.”
Startup ingredients

- Idea
- Method
- Team
- Money
"You can resist an invading army; you cannot resist an idea whose time has come"

Victor Hugo
Big Ideas...

Find a **Solution** For many **Users** With a **Problem**

Success  = (A lot of value) X (a lot of people) X (a lot of times)
...and big mistakes

Personally I am very fond of strawberries and cream, but I have found that for some strange reason, fish prefer worms. So when I went fishing, I didn’t think about what I wanted. I thought about what they wanted.

Dale Carnegie

Fall in love with the problem you’re solving - not the solution
Now the bad news

The world is plenty of good ideas (not to mention the silly ones)
Team

The difference between in-theory and in-practice... Is much **larger** in practice than in theory
Idea and Team

Ideas are worth nothing unless executed. They are just a multiplier. Execution is worth millions

Derek Sivers
# Idea and Team

<table>
<thead>
<tr>
<th>Idea Level</th>
<th>Value</th>
<th>Execution Level</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWFUL IDEA</td>
<td>-1</td>
<td>NO EXECUTION</td>
<td>$1</td>
</tr>
<tr>
<td>WEAK IDEA</td>
<td>1</td>
<td>WEAK EXECUTION</td>
<td>$1000</td>
</tr>
<tr>
<td>SO-SO IDEA</td>
<td>5</td>
<td>SO-SO EXECUTION</td>
<td>$10,000</td>
</tr>
<tr>
<td>GOOD IDEA</td>
<td>10</td>
<td>GOOD EXECUTION</td>
<td>$100,000</td>
</tr>
<tr>
<td>GREAT IDEA</td>
<td>15</td>
<td>GREAT EXECUTION</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>BRILLIANT IDEA</td>
<td>20</td>
<td>BRILLIANT EXECUTION</td>
<td>$10,000,000</td>
</tr>
</tbody>
</table>

To make a business, you need to multiply the two.

The most brilliant idea, with no execution, is worth $20. The most brilliant idea takes great execution to be worth $20,000,000.
How to recognize a great team?
Useful Questions

• How committed are they to this venture? What are their motivations?
• Who is going to take a salary? How much?
• Where are the founders from? What have they accomplished in the past?
• What is their reputation? Whom do they know?
• How will they respond to adversity?
Method

How can we do it?
Method: lean startup

• "Lean Startup" is an approach for launching businesses and products, that relies on validated learning, scientific experimentation, and iterative product releases to shorten product development cycles, measure progress, and gain valuable customer feedback.

In this way, companies, especially startups, can design their products or services to meet the demands of their customer base without requiring large amounts of initial funding or expensive product launches.

source: wikipedia
Method: lean startup
Money

Raising money is simple but not easy
(Founders and founders)
Investor types by startup stage (ICT)

startup stage

Idea

Alpha

Public Beta

Traction

4Fs

Public Funds

Accelerators

Business Angels

Venture Capital

thanks to Augusto Coppola
Public funds

- Investor goal:
  - Creating wealth for the territory

- Pros:
  - Easy money (but usually small deals)
  - Incentive to start doing

- Cons:
  - Bureaucratic
  - Might have territorial constraints
  - Potential plan distortion
Private investors

- Corporate Ventures
  - Alfa
  - Beta
  - Public Beta
  - Traction

- Accelerators
- Business Angels
- Venture Capital
Accelerators

• They aim to increase the odds of building a successful business

• cohort-based program (3-5 months) including mentoring, training, networking
• seed investment (20-30K)
• physical space
• culminates in a public pitch event or demo-day

• In charge of 5-10% equity
Accelerators

- Investor goal:
  - Making big money by stats

- Pros:
  - Understand startups and investors
  - Rapidly add value

- Cons:
  - Small deals
  - Rapidly loose interest
Corporate Ventures

- **Investor goal:**
  - Scouting R&D, creating synergies, financials

- **Pros:**
  - Quite easy money
  - They speak your language

- **Cons:**
  - Bureaucratic (less than public)
  - Not completely reliable
  - Potential plan distortion
Business angels

Individuals who invest their own money
Business angel networks

BAs who invest their own money as a syndicate
Venture Capital Funds

Managers in charge of investing other people’s money
Roi based compensation

How does a VC work? (simplified view)

Example (by Augusto Coppola):
Fund: 10M
Number of investments: 10 deals, 1M each
Fund duration: 7 years

Real world stats:
4 complete failures  in: 4M  out: 0M  tot: 0M
3 no return  in: 3M  out: 3M  tot: 3M
2 small x3 return  in: 2M  out: 6M  tot: 9M
1 good x20 exit  in: 1M  out: 20M  tot: 29M

Fund return after 7 years: x2.9 = approx 16.4%

• Lesson learned: VCs seek for x10 (at least!)
Dealflow
(real case)

1472
Investment proposals received in 3 years (avg. 1.34 per day)

12
Deals closed (0.82%)

VCs filter out whatever is not in target and/or time consuming
Are they infallible?

http://www.bvp.com/portfolio/antiportfolio

Jeremy Levine spent a weekend at a corporate retreat in the summer of 2004 dodging persistent Harvard undergraduates in a tennis match. Finally, cornered in a lunch line, Jeremy delivered some sage advice: "Kid, haven't you heard of Friends? More on it. It's over!"

Cowan's college friend rented her garage to Sergey and Larry for their first year. In 1999 and 2000 she tried to introduce Cowan to "these two really smart Stanford students writing a search engine". Students? A new search engine? In the most important moment ever for Bessser's anti-portfolio, Cowan asked her, "How can I get out of this house without going anywhere near your garage?"

BVP's Pete Bancroft never quite settled on terms with Bob Nocey, who instead took venture financing from a guy named Arthur Rock.

Along with every venture capitalist on Sand Hill Road, Neil Brownstein turned down Intuit founder Scott Cook. Scott managed to scrape together only $225,000 from friends, including HBS classmate and Sierra Ventures founder Peter Wendell, who personally invested $25,000 to get Scott off his back.

After extensive due diligence Jeremy Levine identified a fatal business model flaw: airlines wouldn't pay high fees for placement on the platform. Fortunately for Kayak, hotels did. As did Priceline when it acquired the company for $1.8 billion.

Ben Rosen, one of the founders of Swain Rosen, offered Felda Hardymon the chance to invest in both Lotus and Compaq Computer on the same day. Says Hardymon: "Lotus wasn't proven yet, and I was worried about the situation there. As for Compaq, I told him there was no real future in transportable computers since IBM could do it."

PayPal

David Cowan passed on the Series A round. Rookie team, regulatory nightmare, and, 4 years later, a $1.5 billion acquisition by eBay.

StrataCom (acquired by Cisco)

Felda Hardymon: "Sierra's Pete Wendell asked if I'd like to look at Stratacom, which was doing a fast packet switch. I gave him a blank stare."

In 2006 Byron Deeter met the team and test-drove a roadster. He put a deposit on the car, but passed on the negative margin company telling his partner "It's a win-win. I get a great car and some other VC pays for it!" The company passed $30B in market cap in 2014. Byron is still on the waiting list for a Model X.
Roles for University

Focus: it is not what we are doing, it is what we are not doing
Roles for university

- Big Ideas: problem solving
- Great team: teamwork
- Method: validation with real users
- Money: presentation skills
Roles for university

• Issues:
  • Universities, particularly those outside the US, were slow to respond to the ‘startup revolution’
  • Low support to students with entrepreneurial attitude

• Opportunities
  • Accelerators consider universities valuable partners, because they have a very important and valuable advantage: first access to the brightest, young tech talent
  • Universities as ‘feeder schools’ for accelerators
End of the story
The InnovAction Lab Experience

- >1200 students (~20% geeks)
- >50 startups
- startups have raised >10M euros
- one of the best 5 entrepreneurial programs (according to the JP Morgan Chase Foundation)
- WWW Conference 2015
Now they have glasses!

Big Data 2013 (thanks to Riccardo Torlone)
One More Story
A true one

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