Open Innovation: Industry and Universities
A Case Study of the UC Berkley Innovation Collider

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How do you engage with Universities?

Ikhsaq Sidhu
Sutardja Center for Entrepreneurship & Technology (S/CET)

- **Est. 2005**: Undergraduate: Entrepreneurship & Technology,
  - Today over 1200 students/yr, over 100 projects, 10 startups, and 4000 Alumni

- **2007**: Developed Venture Lab -> SkyDeck Accelerator in 2012

- **2009**: 40+ Global Partners: Global Venture Lab (GVL) Partner Institutions and 5 on-campus Global Innovation Partners in 2015

- **2010**: Created Engineering Leadership as new area including Executive/Professional: ELPP

- **2013**: Codified Berkeley Method of Entrepreneurship

- **2014**: Management of Technology Innovation (MTI). Research commercialization and industry engagement for Ph.D track

- **2015**: Named and Endowed: Sutardja Center
The Center is well-known for creating the “Berkeley Method of Entrepreneurship”

Co-developed by Ikhlaq Sidhu and Ken Singer

Some misconceptions about learning Technology Entrepreneurship

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Entrepreneurship Misconception #1:

- Idea
- People
- B Plan and Validation
- Raise Funds
- Build Product
- Sell and Scale

Reality:
- Not Linear
- Complex and People Oriented
- Many unwritten rules
- Not enough data to make a plan

Entrepreneurship Misconception #2:

It cannot be taught prescriptively like other subjects.
And, we can not simply “Test for Retention”

Two Cities in USA

- Chicago
- San Diego

What is the role of entrepreneurial culture?

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Silicon Valley is Big, Competitive, and Fast

- Thousands of experienced, serial entrepreneurs
- 27-30,000 startups less than 2 years old
- 60% of CEOs not American-born
- People change jobs 14 times by age 37, on avg.
- Decisions are made at lightning speed
- Follow up in hours, not days or weeks

Components of Any Industry Cluster or Ecosystem

- Entrepreneurs
- Venture Capital/Private Equity
- Support System
- Industry Base or Cluster
- People with Skills
- Government Policy
- Universities

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Components of Any Industry Cluster or Ecosystem

Hidden Essential Ingredient

Entrepreneurs  Venture Capital / Private Equity  Support System
Industry Base or Cluster  People with Skills  Government Policy
Universities

Innovation Culture & Mindset

Entrepreneurs  Venture Capital / Private Equity  Support System
Industry Base or Cluster  People with Skills  Government Policy
Universities

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How Did Silicon Valley and Its Culture Evolve?

1940s-50s Defense electronics leads to rise of Semiconductor industry, and first big IPO, HP

A Culture of Divergence and Leaving
(Shockley)-> Fairchild -> Intel -> KPCB -. Google -> …

Trend Continues today:
Big Data, Cloud, Mobile, Social
And now, children of entrepreneurs

Universities and Industry Misconception

Universities: Stanford, Berkeley

New Ventures

Smartest People

Technology

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Universities and Industry

This is misconception

Universities and Industry

Talent

Execution

Smartest People

World Brain Drain

Universities: Stanford, Berkeley

New Ventures

Create

Grow

Skilled Employees

Large Firms

New Ventures
Universities and Industry

**Talent**
- Universities:
- Smartest People
- World Brain Drain

**Execution**
- Grow
- Skilled Employees
- Large Firms
- New Ventures
- Create

**Government Role is to:**
1) allow competition and protect disruptors
2) keep business friction low (including taxes)
3) educate talent with basic research

What Can a University Contribute
What Can a University Contribute

- Teach skills and culture for innovation
- Some research can become companies
- Sustain or augment the R&D of existing firms
- Generate independent studies

How do we use Open Innovation?
1. We bring leaders, innovators, executives and Silicon Valley know-how into the classroom

Charlie Giancarlo, former Chief Product Officer, Cisco
Michael Marks, CEO, former CEO, Flextronics
Jerry Fiddler, Founder, CEO Windriver within Intel
Charles Huang, Co-Founder Guitar Hero Franchise
Sabeer Bhatia, CEO and Founder, Hotmail
Steve Blank, Epiphany, MIPS, Berkeley, Stanford
Steve Strandberg, Head Technology Practice, Merrill Lynch
Shomit Ghose, Venture Partner, Court Ventures
Marc Andreessen, Founder, Netscape
Larry Baer, COO, San Francisco Giants
Jim Davidson, Managing Director, Silverlake Partners
Donna Dubinsky, Former CEO, Palm
In Sik Rhee, co-founder and CEO, Opsware
Richard Gorman, SVP, Siebel Systems
Rick Hill, CEO, Novellus Systems
Brodie Keast, EVP, TiVo
Jeff Miller, CEO, Documentum
Eva Miranda, SVP, Sony Corporation
Geoffrey Moore, MDV, Author, “Crossing the Chasm”
Peter Thiel, co-founder and CEO, PayPal
Stephanie DiMarco, co-founder and CEO, Advent Software
Pehong Cheng, CEO, Broadvision

Berkeley:
• Host platform with Berkeley as a brand
• Provide students who can be talent
• Offer Academic Cases to comment against
• Run the academic operations

Industry Faculty
• Pay it forward culture
• Often Alumni or our programs, college, or university
• Sometimes recruit
• Transfer culture and content
• Value from the stage/platform – global visibility

Our ability to scale education is multiplied by this open example
2. Challenge Lab

Externally Set

Thailand Neonatal Incubator

Big Data Challenge

Source

Societal

Industry or Market

Self Originated

Projects in Clean Energy, Education, Poverty Alleviation, Transportation …

Mobile Applications Course

Berkeley:
- Students with Skills
- Visibility and influence with next generation

Industry Faculty
- A better understanding of the problem and the process to make progress

Our ability to scale education is multiplied by this open example
Project: Create a proposal to match supply and demand for either Amazon’s last mile delivery fleet or Amazon’s line haul network.

Best proposal earns: Paid trip to Seattle to present your solution to Amazon leadership and participate in final round interviews at Amazon.

They are hiring: corporate and field operations positions in Seattle and across country

Kick Off: 6:00 PM, Th April 23

Berkeley:
- Students with Skills
- Visibility and influence with next generation

Industry Partners
- Interest to recruit world class talent

Best proposal earns: Paid trip to Seattle to present your solution to Amazon leadership and participate in final round interviews at Amazon.

They are hiring: corporate and field operations positions in Seattle and across country

Kick Off: 6:00 PM, Th April 23
Elements of an Open Industry Collaboration

- **Time** from actual thought leader(s) in the company.
- Communicate **industry insight** in the form of **challenges** (in class or asynchronous).
- Participate in **advising and instruction**.
- Campus visibility and student recruiting through **genuine engagement**
- Amplified by **communication** platform of Berkeley Engineering.

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**Berkeley Method:**

**Innovation and Entrepreneurship Pathway**

- **Innovation Education**
  - Undergrad
  - Graduate
  - Firm
  - Global
  - Mindset training
  - UC Labs & Project Courses
  - Innovation Collider

- **Innovation Launch**
  - Innovative Large Firm
  - Innovative Small Firm
  - SkyDeck
  - Foundry
  - SV Accelerators & Investors

Ikhlaq Sidhu
Sutardja Center at UC Berkeley
Innovation Collider
Example Project Areas

Supply Chain Logistics
New Venture Formation
Machine Learning
Data and Healthcare
Games and Data Analytics
Applied Research in Transportation

A Goal:
Translation between Academics & Industry

Academics: Create Knowledge
Students & Skills
Tools and Research Sensing
Industry: Market Experimentation, Technology, and Execution
Driven by Firm Strategy
Translation Project
Uses Inspired Knowledge Creation

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Innovation Collider: More Firms

Citrix
Ericsson
Fairchild Semiconductor
Google
HP
Salesforce
Samsung
SanDisk
Synopsys
VMware
Yahoo!

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Sutardja Center: Spectrum of Opportunities

Recruit World Class Talent
Berkeley Outpost
Network of Leaders
Innovation & Training
Strategic Challenges