Catalyzing an entrepreneurship ecosystem: The network effects of Tsinghua University's x-lab

Professor Steven White
Associate Academic Director, Tsinghua x-lab
& Associate Professor, Department of Innovation, Entrepreneurship & Strategy
School of Economics & Management
Tsinghua University
Entrepreneurship not a traditional strength of universities

Bottlenecks

• Lack of people with necessary skills and mindset.

• Lack of resources within the university, silos, and lack of connections to external sources...

• Lack awareness/understanding of market (vs. technological) opportunities or customer needs...
Early model to profit from knowledge: Licensing

But TTO/TLO incentives lead them to:

• prioritize ready-to-commercialize technology that can be legally protected (i.e., patents),
• do not nurture researchers’/students’ entrepreneurial skills.
Recent approach: Creating an entrepreneurship ecosystem

Source: Brad Feld, Start-up Communities (2012).
Tsinghua has done well in research and education

#1 Global University for Engineering, U.S. News & World Report, Global University Rankings 2016

#9 Graduate Employability, QS Graduate Employability Rankings 2016

#25 World University, QS World University Rankings 2015/16

#47 World University, Times Higher Education, World University Rankings 2015-2016

42,000 students (2/3 grad students)

Largest undergraduate source of STEM PhD graduates in the USA.

#1 in research funding in China.
Tsinghua-originated patents granted in the USA

~same as MIT

3rd among all universities globally

...but no comparison in terms of technology licensing revenue and entrepreneurship...
Quote from 2012…

We don’t bother going to Tsinghua anymore. There is nothing that we can invest in.

J. Yan, Partner
VC focusing on early-stage investments

Founded April 2013
Since the x-lab’s April 2013 founding

- >24,000 Participants in x-lab events
- 1,122 Teams nurtured
- 459 Companies incorporated
- 152 Teams received investment
- >US$280 million Total investment received
Mix of elements found in other universities

- **Pedagogy** to complement traditional approaches: i.e.,
  *Learning (innovation and entrepreneurship)-by-doing*

- **Pre-Incubator** – “zero-to-one” (but also runs an accelerator)

- **Non-profit** – take no equity, free for teams

- **Inclusive** – Tsinghua students, alumni, faculty and staff
  (>1 “family member” on core team)

- **Rolling applications** (5~8 new teams/week)
Unique: Center managers foster linkages and activities

**Vertical Sector Centers**
- Internet and IT
- Fin Tech
- Intelligent Manufacturing
- Healthcare
- Energy and Environment
- Future Education
- Future Life – urban solutions
- Culture, Content and Media
- Social Innovation

**MATRIX**
Connecting teams to external resources and focused learning activities

**Horizontal Functional Centers**
- Intellectual Property
- Design Innovation
- Financing
- Branding and Marketing
- New Tech Commercialization
- Coaching Center
Emerging Tsinghua x-lab model: *Platform + Ecosystem catalyst*

University-based platform *nurturing skills, mindsets and start-ups*  
+++ *facilitating interaction* among ecosystem actors  
➔ Haidian/Beijing as a new global *entrepreneurial center of gravity*
Macro: In line with (but predates) Chinese government’s call

大众创业, 万众创新 (or 大众创新创业)

Mass Innovation and Entrepreneurship
First articulated by Li Keqiang at Davos 2014.

Goals for 2020

– “Mass makerspaces” shall be built to meet the demands of startup entrepreneurs and to offer professional services.

– A number of angel investors and venture capital institutions shall be cultivated to deliver accessible financial support.

– Plenty of small and micro-businesses should be incubated in emerging industries to spur economic growth.