



**清华经管学院**  
**Tsinghua SEM**

**Global Business School Network  
Annual Meeting**

**1-3 November, Washington, DC**

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

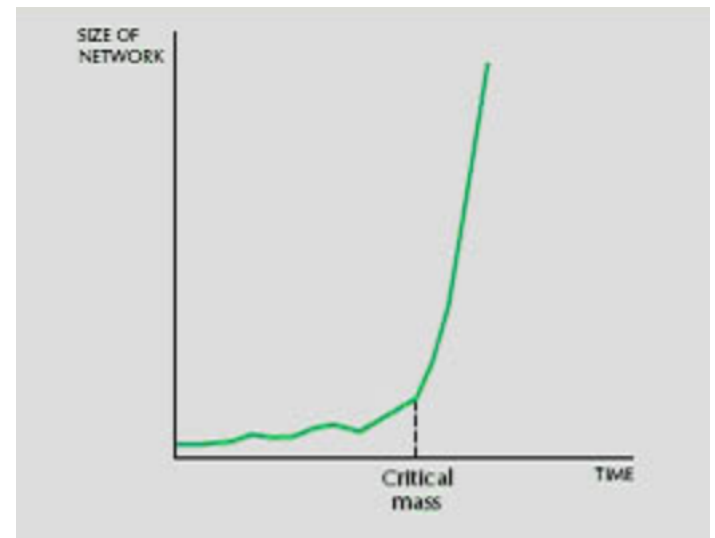
**Professor Steven White**

Associate Academic Director, Tsinghua x-lab

& Associate Professor, Department of Innovation,  
Entrepreneurship & Strategy

School of Economics & Management

Tsinghua University



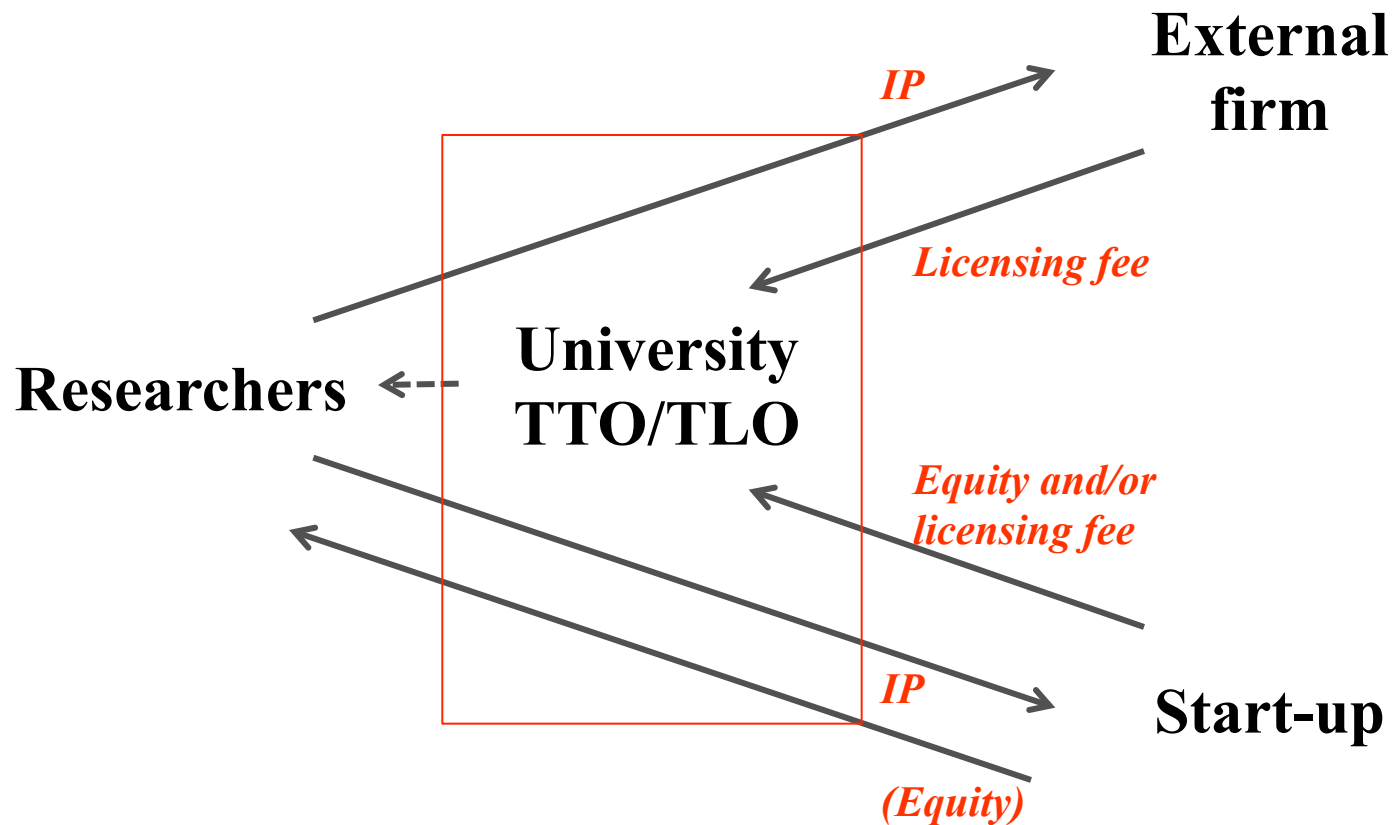
# Entrepreneurship not a traditional strength of universities

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## 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*

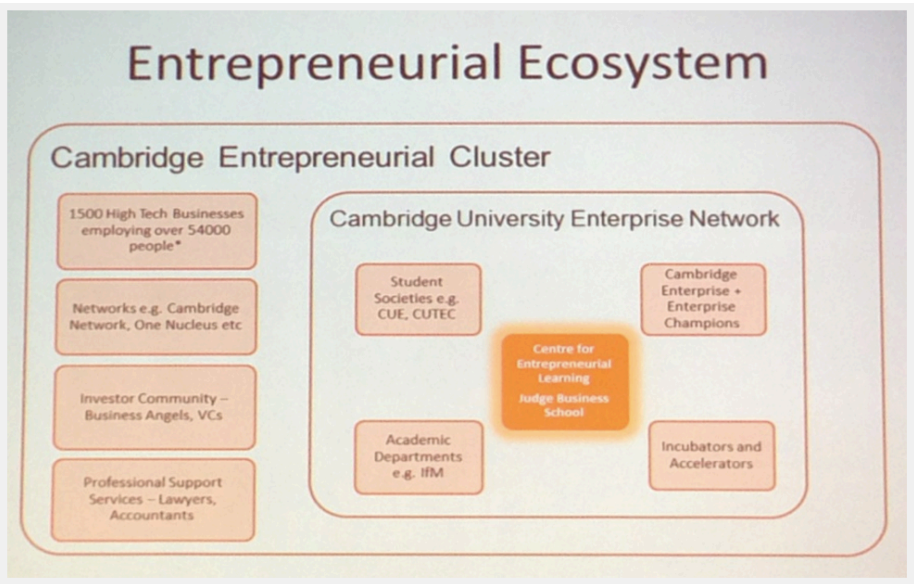


## MIT ENTREPRENEURSHIP ECOSYSTEM

- Entrepreneur Resources**
- 1 Deshpande Center for Technological Innovation
- 2 Gordon Engineering Leadership Center
- 3 Innovation Initiative
- 4 Legatum Center for Development & Entrepreneurship
- 5 Lemelson-MIT Program
- 6 Martin Trust Center
  - co-creating space
  - BU Law Clinic
  - MIT Clean Energy Prize
  - Delta V Accelerator
  - Full-time Entrepreneur In Residence
  - and a lot more entrepreneurship assessments...
- 7 Media Lab
- 8 MIT Sandbox Innovation Fund Program
- 9 MIT.nano
- 10 Tata Center
- 11 Translational Fellows Program
- 12 Technology Licensing Office
- 13 Venture Mentoring Service
- MakerSpaces**
- 14 Area 51
- 15 Beaver Works
- 16 MakerWorks
- 17 MIT Central Machine Shop
- 18 MIT Hobby Shop
- 19 ProtoWorks
- External Resources**
- 1 Cambridge Innovation Center (CIC)
- 2 Entrepreneur Walk of Fame
- 3 LabCentral
- 4 Microsoft NERD Center (New England Research & Development)



POWERED BY THE MARTIN TRUST CENTER FOR MIT ENTREPRENEURSHIP



Source: Brad Feld, Start-up Communities (2012).

# Tsinghua has done well in research and education

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

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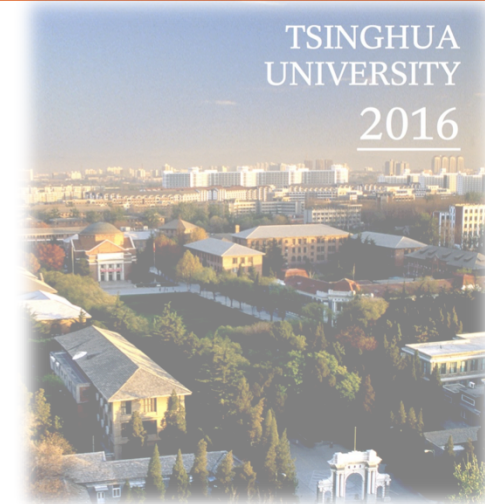
**#9 Graduate Employability**, QS Graduate Employability Rankings 2016

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

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**#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.**

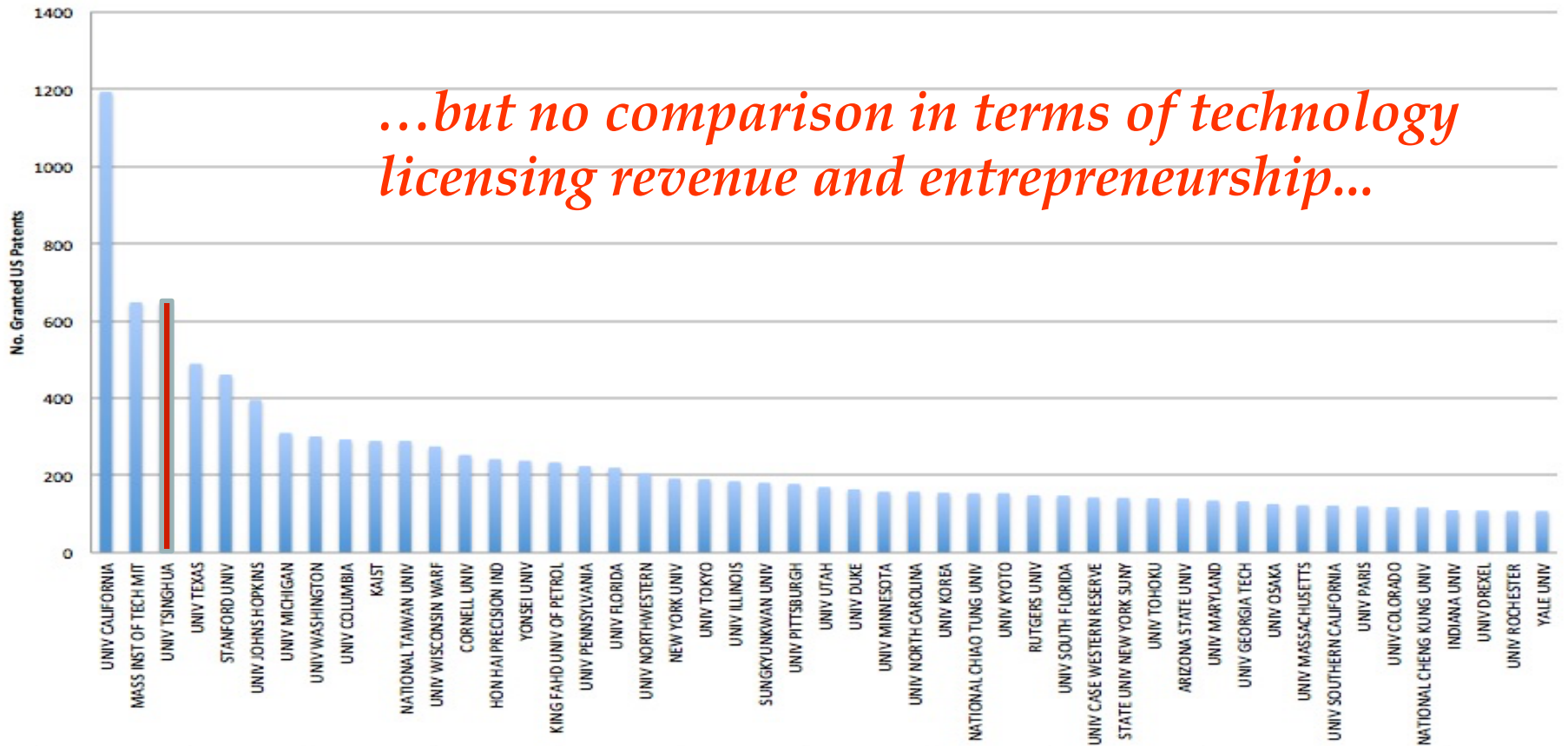
**#1 in research funding in China.**

# Tsinghua-originated patents granted in the USA

*~same as MIT*

*3<sup>rd</sup> among all universities globally*

Top University Patentees of 2015



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

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**>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

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- **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

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## 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

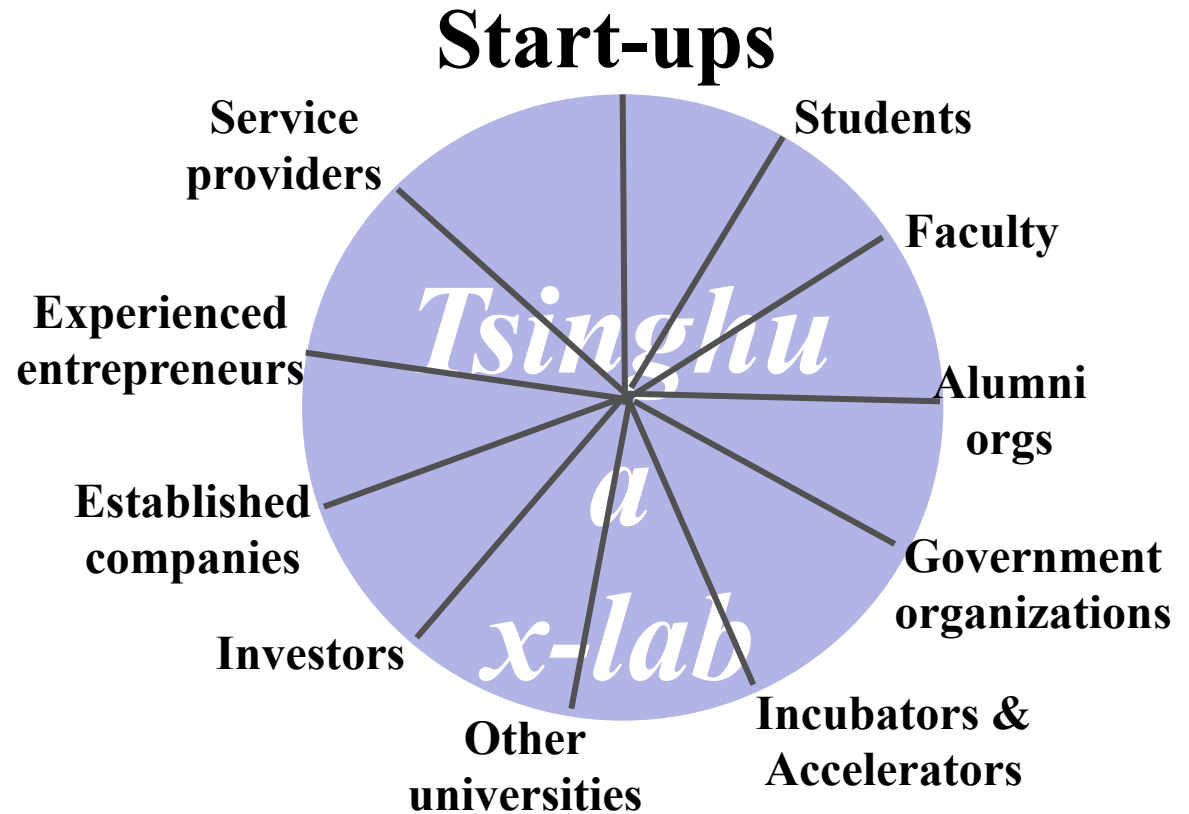
## MATRIX

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

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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.

High-level outline in State Council Guideline released March 2015.

#### *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.*