



Entrepreneurial University Summit, Zhejiang University, China

The Entrepreneurial University Vision

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Entrepreneurial University Wave

- University plays leading role in Knowledge-based Society: shift from secondary to primary institutional sphere
- Taking the role of the other e.g., university forming firms; government as venture capitalist; industry raising training to higher levels
- University's competitive advantage—Students: flow through of human capital
- University's comparative advantage Novelty as source of innovation, translated into industries, firms
- Second Academic Revolution: entrepreneurship, incubation and firm-formation as third academic mission



MIT: Three Key Moments

- **Restructuring of Professorial Role:**
Controversy over consulting
Compromise One /fifth rule
- **Organizing Relations with Government:**
Invention of Sponsored Research Office
- **Creation of Regional Role:**
Participation in New England Council
Invention of the Venture Capital Firm



Stanford: Five Steps

- Encouraging Start-ups: Before Hewlett Packard
- Steeples of Excellence Academic Strategy
- Marketing Model of Technology Transfer
- ME310 Project-based Learning/ D School
- StartX Accelerator: Formalizing Start-Up Mentoring

Ivory Tower Vs Entrepreneurial University

1 Isolated from the society

Open and serve to the external society

2 Teaching on campus

Teaching on/off campus

3 Knowledge production for own sake

Polyvalent knowledge produced

4 Meandering stream of basic research

Multiple sources of input into research direction

5 Useful knowledge as accident

Useful knowledge sought

6 No organizational technology transfer capability and no firm formation TTO

Incubator integrated into innovation strategy to foster start-ups

7 Discipline-based Departments primary units

Departments and Inter-disciplinary Centres equal status

8 Single internal stakeholder

Multiple Stakeholders –internal and external

9 University administration only from academia
University administration from multiple sources,
including industry and government

10 Funding as matter of right
Funding as matter of exchange, something to be
earned

11 Operation for self sustainability
Make significant contribution to regional
development as well

12 Only academic mind-set
With entrepreneurial ethos

What is an Entrepreneurial University?

- * non-linear: can be built on a teaching as well as a research university base
- * combinatorial: entrepreneurship, training and research integrated (firm and academic lab in one, e.g. 4G firm at PUCRS, Brazil)
- * collaboration: broadens teaching and research missions, e.g. joint research centers; professors of practice



Professors of Practice (PoPs)

- From **1/5th Rule** to **Half-Time Mod**
- **Newcastle University Experiment:**
Turns PoP model “on its head” from teaching to research
- **Forward linear:** faculty entrepreneurs moving 1/2 time to Industry
- **Reverse linear:** Industry entrepreneurs (PhDs) moving 1/2 time to University

Novum Trivium

- Model for reform of undergraduate education
- Update classical Trivium of grammar, rhetoric and dialectics
- Structure:
 - A Traditional Discipline
 - Innovation and Entrepreneurship
 - Another Language and Culture



Proposal for PhD Reform

- From Contemporary PhD of 3 Published articles
- To Entrepreneurial PhD of 2 published articles and a new third element
- Translational research leading to a practical result

2008 Stanford OTL Study

- Unrealized Potential
- Focus on Serial Entrepreneurs
- Excluded middle of inventors with good ideas but lacking entrepreneurial experience
- Ecosystem Fallacy:
“Stanford is incubator; We are in Silicon Valley”
- Paradox of Success: If its not broken don’ t fix it

Vs

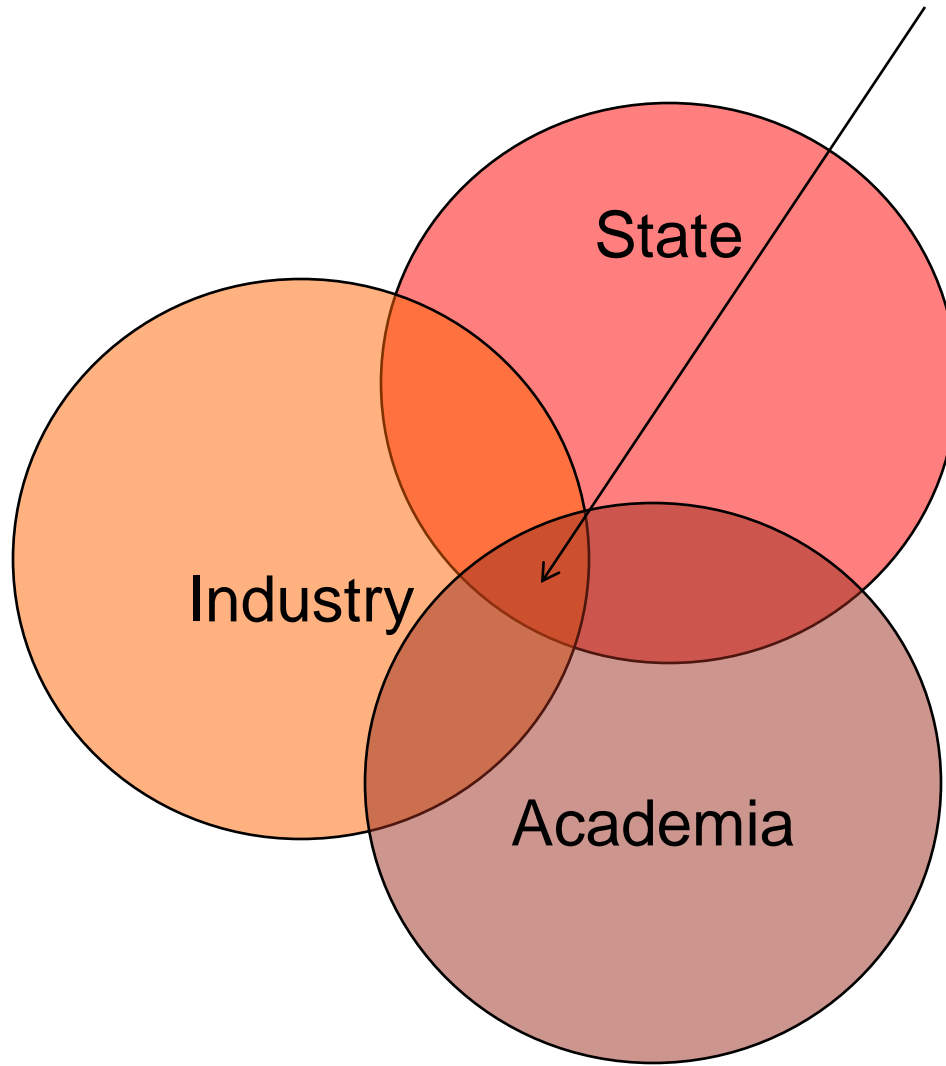
If its doing well; make it better



StartX Accelerator

- **Stanford Student Government Initiated**
- **Application by groups (proto-firms)**
- **Mentoring by alumni volunteers**
- **12 week session**
- **6% of Stanford students have applied**
- **Research Groups as Source of Projects**
- **Stanford invests in graduate firms**

Triple Helix Innovation Model



**Innovation at the
Intersection of
Institutional
Spheres**

- Questions?

