Knowledge Triangle or Education, Research & Innovation Nexus

Yuko Harayama
Executive Member
Council for Science, Technology and Innovation (CSTI)

Higher Education Institutions

HEI

Innovation

Research

Education

Mutually reinforcing?
Tension?
Reconcilable?

Humboldtian model

15/09/2016
HEIs boosting innovation?

• Training, empowering and connecting people
  – Different layers of professionals
    • Including “game changer”
• Through research activities
  – Collaborative works (enabling tech), tech-transfer, start-ups
• Taking advantage of high performance infrastructure
  – Space for collaboration and source of inspiration
• Diffusing the value of “innovation”
  – e.g. Stanford’s idea about the “community of engineers”, and d.school
• Experimenting new breed of innovation
  – e.g. Social innovation, Inclusive innovation,…

Other stakeholders’ expectations

• Industry
  – Alternative to “in-house” approach
  – Seeking for what’s next
  – Access to skilled human resources
  – Empowering its own human capital
  – Multiplier effect of R&D investment
  – …
• Government
  – University as a driver of innovation (ultimately economic growth)
  – Better functioning innovation eco-system
  – Better equipped human capital
  – …
Implication for HEIs?

• HEIs able to respond to ever-increasing demands and expectations?
  – Core value of HEIs to be revisited
• “HEIs diverted from its fundamental mission of education and basic research”
  – Myth or Reality?
• Space for HEIs to act proactively?
  – Given exiting institutional framework, including state’s funding mechanism, governance structure, and shared values among faculties and staff

In the Japanese context

• Before 1998
  – Loosely coupled relationship between University and Industry
    • With its coherence and limits
• After 1998 ➔ Government’s initiatives
  – Technology Licensing Office
  – Japanese Bayh-Dole Act
  – Joint Research Lab
  – Internship, MOT programs
  – Incubators, Science and Industrial Parks,…
  – Deregulation to facilitate the mobility of people
  – Promotion of “University start-ups”
  – Promotion of “Open innovation”
  – …

Mostly in terms of University-Industry linkages

Are Students winner or loser?

HEIs Reform!

15/09/2016
The 5th Science & Technology Basic Plan

1. Introduction: changing context and our goal
2. Preparing the next: Future industry and society
   – Society 5.0
3. Addressing socio-economic & global challenges
4. Investing in “fundamentals”: People and Excellence
5. Better functioning STI systems (➡ p.9)
6. STI and society
7. Leading effective STI Policy implementation
   – University reform
   – National R&D institutions reform

http://www8.cao.go.jp/cstp/english/basic/5thbasicplan.pdf

5. Better functioning STI systems

- Exploiting power of open innovation
  – Putting cross-sector, cross-institutional, cross-discipline collaboration into practice
  – Facilitating mobility of people and creating “spaces” for collaboration
- Innovation ecosystem driven by start-ups
  – Entrepreneurship and University start-ups
  – Revisiting “ecosystem” for new business creation
  – Mobilizing demand-side policies
- Strategic IP management
- Adapting regulatory environment
  – To the forthcoming new products and services
  – New approach for IP management to deal with ICT revolution
- New framework for empowering regional innovation system
  – Particular focus on “Global Niche Top companies (GNT)"
- Global strategy for innovation
  – Contributing to the global agendas (e.g. SDG)
  – Promoting inclusive innovation
HEIs may consider...

- Stepping from “exogenous reform” to “endogenous reform”
- Mainstreaming student-centered approach  
  – e.g. University of California San Diego
- Use of alumni network
- Working with stakeholder to formulate a shared narrative
- ...
- Responsibility as a social institution