What kind of universities does society need?

Knowledge transfer: Influence of universities

30 November 2018

John Green
formerly Chief Operating Officer, Imperial College London 2004 – 2010
now Emeritus Professor Queens’ College Cambridge
jtg11@cam.ac.uk
Knowledge transfer: Influence of universities

Moderator: Mikhail Strikhanov, Rector of National Research Nuclear University MEPhI (Russia)

Our speakers will share their experience of

• Transferring technologies from universities to companies in China
• Knowledge transfer from universities in Italy to small & medium companies (SMEs)
• Student & faculty mobility
• Experiences in Russia
Transformation of Imperial College 2001 – 2014 (1)

University with long-tradition of innovation & application of research

- Science, technology, medicine & business only
- Was >20th in QS/THE
- High research output; strong international collaboration
- Highly inter-disciplinary; much industry fertilisation
- Traditional university structure
- Tech transfer company (“Innovations”) highly active but until 2000 was preventing success - why?
- Up until 2000 policies of Innovations & university were the same so that
  - only university-generated IP was of interest
  - no clarity over student IP rights
  - unclear rewards for academic inventors
  - no on-campus entrepreneurial community
  - no space for new small-scale start-ups

- 2001-2010 Imperial dramatically changed its approach with huge success and reward. How?
Transformation of Imperial College 2001 – 2014 (2)

- New Rector: ex CEO of GSK (global pharma)
- Major changes in university structure: budgets & responsibilities passed to academic departments; senior team more fluid; empowerment; no control; easy access for all to Rector; Rector had less direct reports; the freer structure encouraged inter-disciplinarity
- Lean and dynamic university structure and administration
- Physical campus infrastructure modernised to reflect new culture of university
- Business School created in 2003 which quickly became globally strong, focussing on entrepreneurship & innovation
- Established Imperial Create Lab (student led activity) embracing regional entrepreneurial community
- Transparent rewards for academics

- From a top-down traditional university it became disruptive, risk-taking, innovative community

What did Imperial do?
Learned from Aalto, Auckland, TSUR Tomsk ..
Fundamentally changed university technology transfer function from a traditional model to a completely new model for raising money.

2005, Imperial sold 30% of Innovations to stock market (value in future IP) raising new free money to invest in start-ups and “play the long game”; new money allowed investment in top people.

2011, sold another 40% (US$230m) and started developing IP of other universities (Oxford, Cambridge etc).

Students started Imperial Entrepreneurs in 2006 focused on networking with banks, investors, business angels.

Imperial invested in a dedicated site (10km away) for translational research and incubators.

Fundamental cultural change.

No top-down entrepreneurial strategy – innovation and entrepreneurship the responsibility of Innovations & Business School.
My three takeaways - 3 bullets

• Learn from other successful models
• Be willing to be disruptive and take risks
• Student led entrepreneurship
Knowledge transfer:
Influence of universities

- **Victor Koksharov**, Rector Ural Federal University
- **Claudio Roveda**, Rector of Link Campus University, Rome (Italy)
- **Weiping Wu**, Professor, Columbia University (United States)
- **Zsolt T. Kosztyán**, Associate Professor and head of Department of Quantitative Methods, University of Pannonia; Senior Research Fellow, MTA-PE Budapest Ranking Research Group (Hungary)
- **Olga Pilpenko**, Rector Orel State University
- **Yaroslav Kuziminov**, Rector Higher School of Economics
Success factors: what should universities in Russia do?

Each university starts from a different baseline position but common to the success of many examples:

- Learned from other successful models
- Willingness to be disruptive and take risks
- University becomes interdisciplinary with cross-cutting themes
- Student led entrepreneurship
- Commitment (not suffocation) by university management (“to support but not direct”— strong leaders support vocally & publicly)
- Not possessive about IP; rewards to inventors (including students)
- Training and courses in entrepreneurship (e.g. through Business School)
- Encouraging environment (e.g. incubator space)
- University & tech transfer activities have clear but separate priorities