University Excellence.
What really matters

Marat Fatkhoulline
Vice President, Elsevier

May'27th 2021
Statements:

1. Top Universities are self driven – they fight cancers within, **not** deliver Ministry/Program kpis;
2. Government/Ministry gives more autonomy to Universities and expects them to be the core of academia-industry cooperation and regional growth;
3. Rankings are the easiest way to measure approach for point 2

3 pillars of behavioural/culture:

1. All Top Universities are Research Intensive **with clear Research strategy**;
2. Successful Universities are bottom-up (Entrepreneurial mode) driven;
3. Evidence-based approach is the key.
Examples of successful transitions of institutions into entrepreneurial mode (based on MIT-SkolTech report) identified ~100 successful universities/regional systems (each with different origins & at differing stages of maturity)

• Aalto University Espoo, Finland
  -> started 2010 - huge progress in short time

• Imperial College London, UK
  -> now identified as a global leader

• National Research Nuclear University MEPHI, Russia
  -> an isolated university making slow but positive progress in a difficult environment

• University of Auckland, New Zealand
  -> brain drain environment, very isolated: 1,200 miles from any markets;
Aalto University

University created out of 3 merged universities (2010) which has made fast progress

- Change in national government approach from: “university budgets used to be just state budgets & Rectors were just civil servants”
- Government committed “for every euro from industry you raise we will commit 2.5 euros” - raised 200M + 500M euros, Centred in economic & political hub: technology manufacturing (telecoms, electronics)
- Grassroots student-led entrepreneurship started as disruptive & anti-establishment creating a vibrant start-up environment (Student Entrepreneur Society is >5,000)
- University leadership proactive in supporting entrepreneurial ecosystem; Rector deeply involved meeting students (“impossible in an established university”)

**Challenges:**
- university leaders maintain traditionally strong, research-led policies: “publish or perish” for academics, but faculty promotions now also recognise entrepreneurship
- national culture of not taking risks
- entrepreneurship & innovation agendas aren’t firmly in university’s core policies or embedded within the academic departments
Auckland University

1. NZ total R&D expenditure is 1.7% of GDP (2.38% OECD average); overdependence on agricultural industries;
2. Auckland University heavily dependent on government funds (approx. 40%);
3. No entrepreneuriaI culture, lack of motivation, quality and balance of start up teams.

Development of entrepreneurship & innovation

1. 1999 new Rector with business background – "think big, think where is the nation going, make NZ more internationally competitive"; took university in new direction;
2. Shifted fundamental culture – destroyed boundaries between industry and academics, built trust

Success based on:

1. Consistent endorsement of entrepreneurship & innovation;
2. Inclusive leadership;
3. Clarity of Tech Transfer Offices purpose (purely to make money).
National Nuclear Power University (MEPHI)

Many challenges (closed culture because of previous focus on nuclear research, poor English language skills, dominant Industrial partner, push for education focus):

• Highly specialised research activities (high energy physics, nuclear physics, cyber security);
• In 2010, MEPHI openly marketed themselves as “transforming to an entrepreneurial university” based on University strengths (Physics & Engineering skills) – visits by key staff to successful global hubs;
• Participation in 5Top100 initiative provided the opportunity to go beyond borders and disciplines;
• 5 Strategic Academic Units to focus Research with high level of autonomy, incl. 6 student design and research bureaus with high-performance research equipment
• project-based learning within undergraduate curriculum formal programme to prepare graduates to be entrepreneurial
National Nuclear Power University (MEPHI)

Many challenges (closed culture because of previous focus on nuclear research, poor English language skills, dominant Industrial partner, push for education focus):

• Highly specialised research activities (high energy physics, nuclear physics, cyber security);
• In 2000, MEPHI openly marketed themselves as “transforming to an entrepreneurial university” based on University strengths (Physics & Engineering skills) – visits by key staff to successful global hubs;
• Participation in 5Top100 initiative provided the opportunity to go beyond borders and disciplines;
• 5 Strategic Academic Units to focus Research with high level of autonomy, incl. 6 student design and research bureaus with high-performance research equipment
• project-based learning within undergraduate curriculum formal programme to prepare graduates to be entrepreneurial
Key elements common to all for success:

1. Disruptive approach:
   - externally or internally imposed;

2. Strong university leadership:
   - which promotes the entrepreneurship agenda such that it is clearly heard and understood by staff, students, region;

3. Responsibility for entrepreneurship:
   - distributed ownership, embedded throughout university departments, interdisciplinary emphasis, including academic & support staff, & students throughout their careers with multiple routes entry;

4. Student led activity:
   - students, empowered with mentors and direct connection to senior management;

5. External community:
   - robust relationships with outside players visibly influential in the university endeavour.
Success factors: what was learned?

Each university starts from a different baseline position but common to the success of these examples (see report for much greater detail):

1. Learned from other successful models;
2. Willingness to be disruptive and take risks;
3. University becomes interdisciplinary with cross-cutting themes;
4. Student/early career researcher led entrepreneurship;
5. Commitment (not suffocation) by university management (“to support but not direct”— strong leaders support vocally & publicly);
6. Incentives the right behaviour/rewards to inventors (including students);
7. Training and courses in entrepreneurship (e.g. through Business School).
Statements:

1. Top Universities are self driven – they fight cancers within, not deliver Ministry/Program kpis;
2. Government/Ministry gives more autonomy to Universities and expects them to be the core of academia-industry cooperation and regional growth;
3. Rankings are the easiest way to measure approach for point 2

3 pillars of behavioural/culture:

1. All Top Universities are Research Intensive with clear Research strategy;
2. Successful Universities are bottom-up (Entrepreneurial mode) driven;
3. Evidence-based approach is the key.
University success – it’s all about the culture

1. **Evidence base** of the current position and objective (where and when) University wants to be – owned by whole University members;

2. **Research strategy** – what to do (or not to do), who (ownership from bottom-up) and milestones. And then deliver, deliver, deliver;

3. **Entrepreneurial** mode (bottom up) – some findings:
   - Make a difference every day principle;
   - Take ownership for yourself (Academic, Laboratory, Faculty, University, Ministry);
   - Play professionally – do not compromise.
Can we help you do what Imperial did?

Marat Fatkhullin
m.fatkhullin@elsevier.com

MIT – Skolkovo report 2015