



Global Education Dialogue:

Case study of a developing place-based University-led innovation ecosystem

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Keele University

Keele University
Estate-set university
founded in 1962



Universities and the innovation ecosystem: Some features of the current landscape



- Continuing focus on **innovation-led productivity**
- Focus on universities as **economic anchors** a constant theme
- Focus on **local comparative advantages**: skills, universities and business-base
- Continuing focus on exploiting research excellence
- Strong focus on **small/medium sized enterprises** as key economic sector

Universities and the innovation ecosystem: Some features of the current landscape



Continued...

- Significant **devolved** investment available to drive innovation-led growth
- Unresolved **Tension** between local and national innovation strategies
- Regional Science & Innovation audits to inform future investment
- New **National Innovation Plan** later this year?
- Future tuition fees linked in part to **degree outcomes** (e.g. graduate salaries)

HOW IS KEELE UNIVERSITY LEADING ON THIS?

Government

Securing more investment locally to drive innovation-led growth, targeting £70m (\$100m) of investment by 2023

Culture
Using our Science Park as a key site for international inward investment and use our campus as a technology demonstrator

Market demand

Developing more experiential learning; developing new academic roles; developing local leadership capacities for innovation

Leading the development of a local innovation eco-system

People
Increasing focus on knowledge co-creation not technology transfer; progressive IP policies ; more business-led R&D

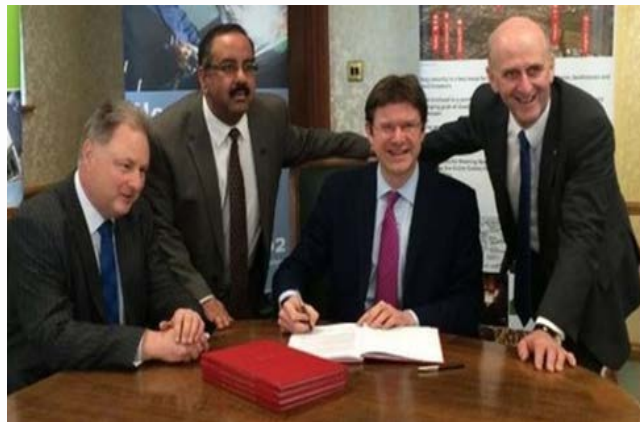
Innovations
Leading sector networks; supporting open innovation models; harnessing global reach for local business

Funding
A university strategic aim; integrating strategy to research and education (not separate); strong partnerships with other HEIs

Infrastructure
Providing a case study for wider adoption; address key local challenges with national visibility

Keele University:

Investment to build role as innovation anchor



- \$100m in new posts and facilities by 2023
- EU, government, charity & business investment
- Significant University co-investment (\$40m)
- Focus on research strengths and infrastructure
- To deliver >\$300m economic impact per year
- >1000 business partnerships by 2023
- 3:1 return on investment
- Major leadership role in economic development
- Foundation for international partnering

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Smart Energy Network Demonstrator

- Largest UK campus
- Residential, commercial and leisure facilities
- Own private utility network (heat/power/waste)
- >\$13m investment in a smart energy network
- \$13m for R&D facility from UK/EU public funds
- >\$4m for Collaborative Doctoral Training Centre
- \$6m+ in private sector energy generation by 2020
- First off-grid UK Science Park and University?

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1st
**for Student
Satisfaction
2014 and 2015**
(National Student Survey)



Top 10

**university for
employment**

**(Destination of
Leavers from Higher
Education 2015,
Higher Education
Statistics Agency)**



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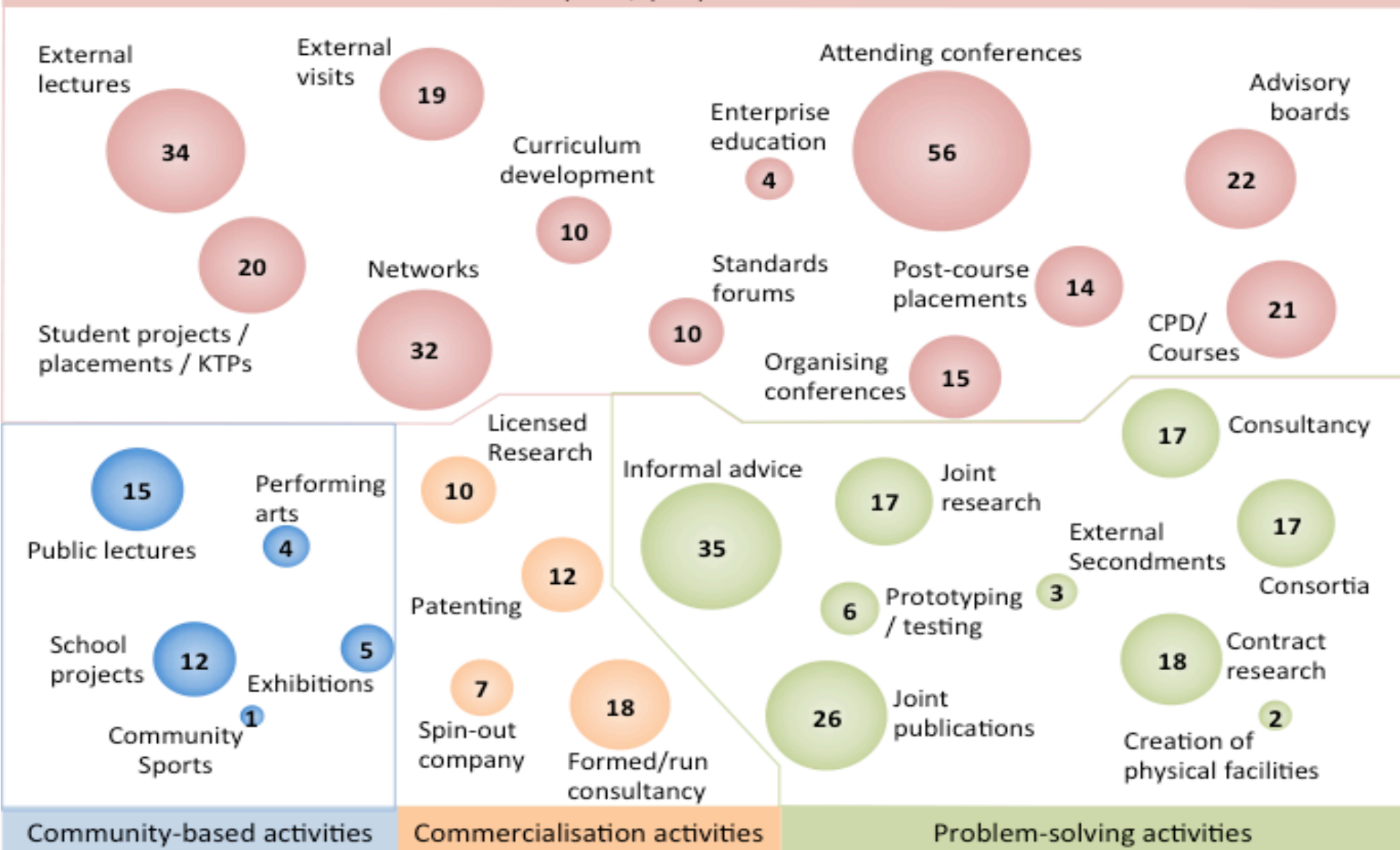
Market demand

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Public space / people-based activities



Number in bubbles is the % of academics engaging at least three times over the past three years in that mechanism, or at least once in the past three years for commercialisation activities.

McMillan Group Report (2016):

UK university technology transfer best practice



- Universities are motivated by impact on society not income
- One size fits all models for technology transfer do not work
- US models are exceptions not necessarily adoptable models
- Universities, technologies and places vary and so must strategies
- Focussing on spin-outs and IP alone misses the bigger role of universities
- Universities pursue most appropriate pathway for the technology and place
- Universities that do more research do more tech transfer
- Senior University leadership is essential

Professor Trevor McMillan – Vice Chancellor of Keele University

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97%

**of our research
was classified as
world leading or
of international
importance**

**(Research Excellence
Framework 2014)**

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AIM 1

To continue building Keele as a broad-based research-led University of about 13000 students recognised internationally for excellence in education, research and enterprise



AIM 3

To deliver international excellence and impact in focused areas of research



AIM 5

To promote environmental sustainability in all that we do



AIM 2

Through the Distinctive Keele Curriculum provide outstanding discipline-based education and a unique portfolio of personal development opportunities in the context of a sector-leading student experience



AIM 4

To contribute positively to the society, economy, culture, health and well-being of the communities we serve



AIM 6

To transform how we work to ensure the University's development is sustainable and delivers world-leading teaching and research





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Leadership, Strategy and Institutional Structures

Leadership and
governance

Organisational systems

Strategy

Institutional
culture

Incentives and rewards

Building internal capability within the HEI

KE staff

Academics

Internal / external courses

Best practice networks

Recruitment

Internal courses

Workshops / seminars

Mentoring

Informal networks

Facilitating the research exploitation process

Access points for external orgs

Business development

Technology transfer

Consultancy support

Contracts / legal support

Patenting / IP advice

Corporate Relations

Press / communications

Investment funds

Marketing

External fundraising for research

Skills and human capital development

CPD / short courses

Lifelong learning

Careers services

Work placements / project
experience

Joint curriculum development

Entrepreneurship and enterprise education

Social enterprise

Enterprise and
entrepreneurship training

Knowledge networks / diffusion

Provision of public space

Alumni networks

KE professional networks

Staff exchanges

Academic – external
organisation networks

Exploiting the physical assets of the HEI

Science parks

Incubators

Facilities / equipment

Supporting the community / public engagement

Outreach

Volunteering

Social cohesion / community
regeneration

Widening participation

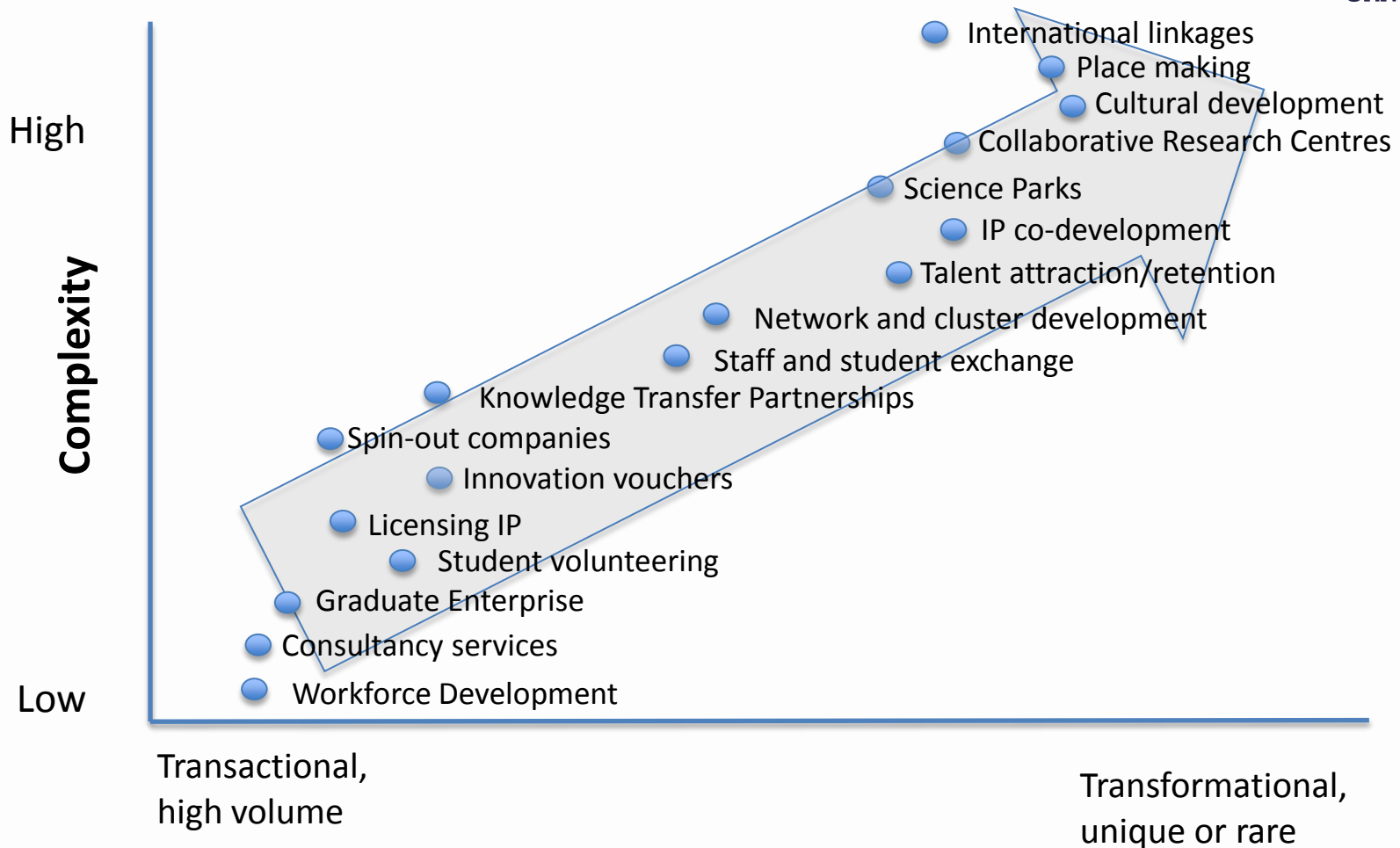
Awareness raising / knowledge
diffusion

Involving public in research

Academic knowledge

*Economic and
societal benefits*

Our role in the innovation ecosystem: From the transactional to the transformational



Adapted from: EU - Connecting Universities to Regional Growth (2011)

The Keele Deal:

Our leadership of an innovation ecosystem



- **Priority 1:** A single point for business to access innovation support
- **Priority 2:** Leadership development for innovation
- **Priority 3:** Smart Specialisation 1 – low carbon innovation
- **Priority 4:** Smart Specialisation 2 – healthcare innovation
- **Priority 5:** Harnessing global reach and visibility for local economic impact
- **Priority 6:** A strategic site for international inward investment
- **Priority 7:** Higher level educational provision and widening participation
- **Priority 8:** A spatial masterplan for the University campus and local area

Proposed Ministerial visit in 2016 will provide opportunity to publish our deal and open our 6th Innovation Centre on the Science & Innovation Park



Keele
University