



Unlocking Rural Innovation in the North East of England: The Role of Innovation Connectors

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Outline

- ❑ **Rationale**
- ❑ **Main aim & objectives**
- ❑ **Method & Data**
- ❑ **Key findings**
- ❑ **Conclusions**



Why this research?

Innovation: a key driver for economic growth

“innovation will be increasingly needed to drive growth and employment and improve living standards” (OECD Innovation Strategy, 2010: 9)

“... Europe's future economic growth and jobs will increasingly have to come from innovation in products, services and business models. This is why innovation has been placed at the heart of the Europe 2020 strategy for growth and jobs”
(http://ec.europa.eu/research/innovation-union/index_en.cfm)

“We want to create an Innovation Nation because Britain can only prosper in a globalised economy if we unlock the talents of all of our people” (John Denham, Secretary of State for Innovation, Universities & Skills, 2008)



Why this research?

“innovation policy revolves largely around creating innovation hubs and technology clusters in and around cities and urban economies” (NESTA, 2007:5)

Hence, successful innovation requires:

- ✓ **concentration of scientific & technological expertise**
- ✓ **proximity to knowledge resources, particularly universities**

Why this research?

- **Rural areas:**
 - ✓ overlooked, not necessarily excluded, by urban-focused policy making
 - ✓ 'playgrounds' or 'dormitories' for city dwellers rather than areas capable of generating innovative economic activity

- **Limited empirical evidence on the innovative potential of rural businesses & the likely benefits of engaging with regional knowledge institutions**

- **In the North East of England, seven 'innovation connectors' (ICs) have been highlighted as having the greatest potential for using innovation to stimulate regional economic development**



Main aim

What is the role of rural areas and actors in generating innovation & participating in a regional innovation system?



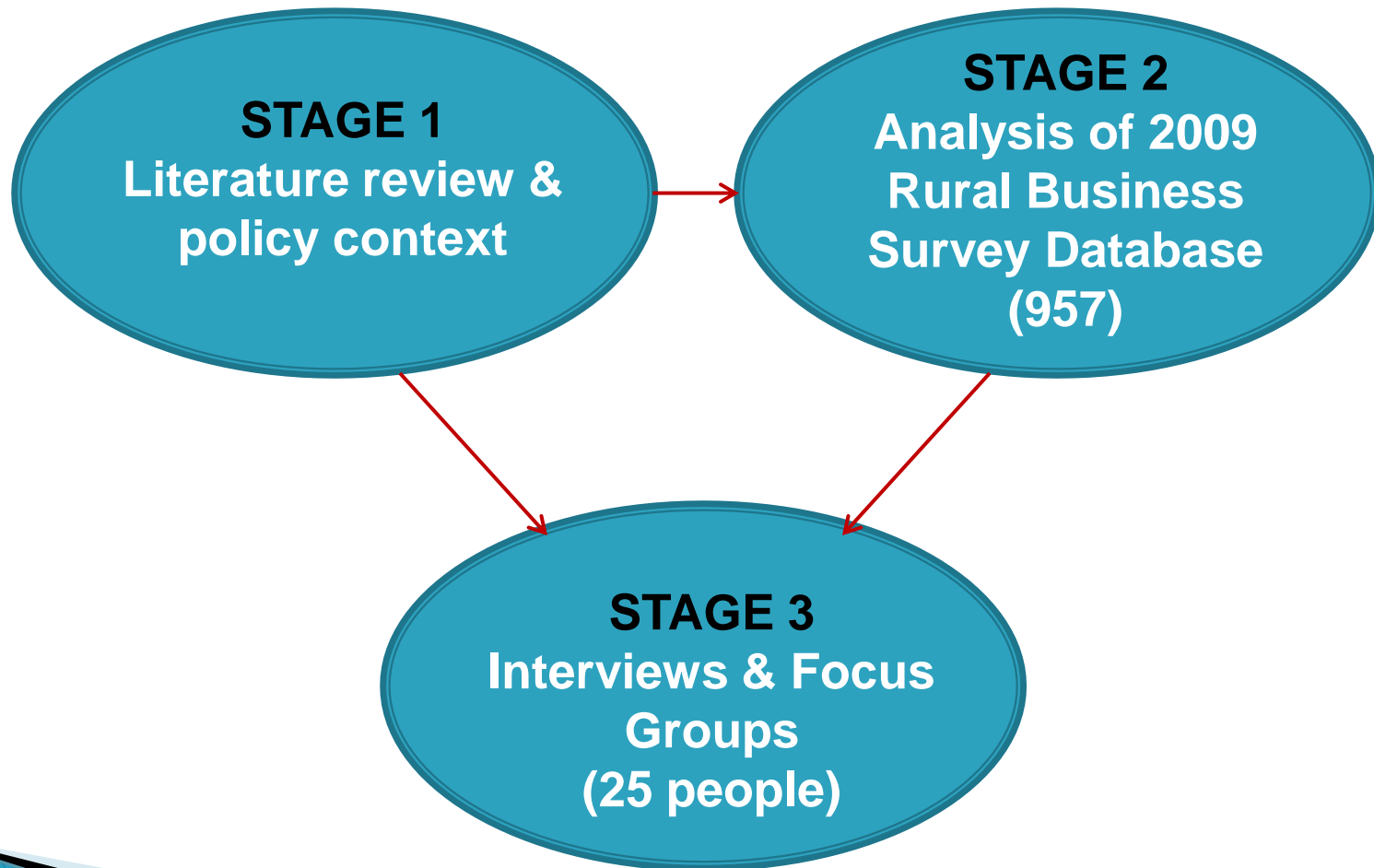
Main objectives

- ❑ **To investigate the extent to which key innovation actors from the North East of England are engaged with rural businesses**
 - **How do selected 'innovation connectors' & Newcastle University work with rural businesses?**
 - **Is their involvement in the innovation system truly regional ?**

- ❑ **To develop some recommendations about how rural businesses might engage better with key actors in the regional innovation system & contribute to wider regional prosperity**



Method & data





North East Innovation Connectors

- ❑ **Partnerships between government, universities & private sector**
- ❑ **Business clusters with a clear geographical & sectoral focus**
- ❑ **Major aims:**
 - **to stimulate economic regeneration, competitiveness & knowledge transfer across the region through innovation**
 - **to enable the development of world class facilities & new approaches to integrating businesses and universities and engaging with the community through education**





Science Cities

- ❑ Six UK cities designated as Science Cities (SCs) in 2005
- ❑ Partnerships between RDAs, local authorities, universities & private sector to foster innovation & regional development
- ❑ To draw scientific and research excellence outside the 'golden triangle'
- ❑ Central role of the universities in innovation
- ❑ Each SC adopted its own model of development based on existing partnerships and skills bases





Newcastle Science City (NSC)

- ❑ **Partnership: RDA (One North East), Newcastle City Council & Newcastle University**
- ❑ **To create an innovation strategy to stimulate regional economic growth**
- ❑ **Newcastle Science Company Ltd (2009)**
- ❑ **23 employees (2010) covering five strands of activities**
 - ✓ **Science Business Creation**
 - ✓ **Science Infrastructure**
 - ✓ **Science Networks**
 - ✓ **Education and Community**
 - ✓ **The Innovation Machine**





NSC Aims

- i) to position Newcastle at a global level as a city of science excellence in ageing & health, sustainability and stem cell research**
- ii) to create prosperity for the city & wider region by supporting the creation of new businesses and jobs & assisting the existing businesses to innovate and grow**
- iii) to ensure that the local communities, particularly young people, play their part in the development of science**



The New and Renewable Energy Centre (Narec)

- ❑ Established by the early 2000s by One North East
- ❑ ‘Centre of Excellence’ for delivering world-class innovative technology for new & renewable energy
- ❑ IC with two roles:
 - ✓ support for companies within the region looking to invest in energy technologies
 - ✓ a supplier of R&D for the private sector at the regional & national level





Narec

- ❑ **Is a key national player in the UK Low Carbon Industrial Strategy**

- ❑ **Focuses on:**
 - ✓ **engineering & industry consultancy**
 - ✓ **providing business support services and world-class testing & demonstration facilities for the renewable & electrical power sector**

- ❑ **Has four major sectors:**
 - ✓ **offshore and onshore wind energy**
 - ✓ **marine renewables**
 - ✓ **electrical networks**
 - ✓ **wave and tidal distributed energy**

- ❑ **Put forward an Expression of Interest to become the Technology Innovation Centre for Offshore Renewable Energy for the North East (outcome to be known later this year)**



The North East Technology Park (NETPark)

- ❑ Established to attract businesses through inward investment & sustain indigenous companies in the region
- ❑ A science park model - “world class location for science and technology companies”
- ❑ Area of strength: electronics
- ❑ Business support, infrastructure, high-tech, R&D facilities, fund finding & networking
- ❑ NETPark NET – a virtual version
- ❑ Strong links with the five universities in the region





Key Findings: Literature Review & Policy Context

- ❑ Limited geographical extent of knowledge spill-overs from urban-based actors and institutions in the innovation system (e.g. Atterton 2005, Roper et al 2006)
- ❑ UK innovation policy is 'spatially blind' (NESTA 2007)
- ❑ Rural businesses do engage in innovation and may be more innovative than their urban counterparts (e.g. Keeble et al 1992, Keeble & Taylor 1995, Hoffman et al 1998, North & Smallbone 2000)
- ❑ Innovation is not a linear process – more about shared learning
- ❑ Traditional approaches to defining innovation have tended to exclude much of the innovation that occurs in rural areas (e.g. Henderson 2007, Defra 2010)
- ❑ Considerable potential for rural areas to be important sources of innovation in future (CRC, 2008)



Key Findings: 2009 Rural Business Survey Analysis

- ❑ **Sample size: 957 of which 88% were microbusinesses & sole traders**
- ❑ **46% had innovated in the last 5 years & 15% had worked with an external organisation in introducing innovation**
- ❑ **Innovation in the form of: new products, methods of working, equipment, IT systems, changing the way of working with clients or targeting new markets**
- ❑ **'newcomers' more innovative (48%) than locals (41%)**
- ❑ **3% businesses were identified as operating in the NSC themes (ageing & health, sustainability and stems cells & regenerative medicine)**
- ❑ **5% had had a connection with a University**



Key Findings: Interviews & Focus Groups



Innovation Connectors: do they connect?

*“We believe we have a core offer of innovation support services that are unique to Newcastle Science City and we offer more peripheral services that are not unique to us, but part of a package. **That is why we work with the innovation connectors.** Also they offer things unique to them. For the past year we have been actively looking for partnerships with the innovation connectors through formal partnerships, a memorandum of understanding.”*
(NSC1)

*“We know of it on the periphery. **There is no real tie up between us and Science City.**”* (Narec3)

*“You have mentioned Science City a few times and I’m still struggling with the concept of Science City. **What does it do?**”* (Narec8)



Innovation Connectors & Rural Businesses: do they connect?

*“Whether it is urban or rural it should not matter. It is where they can do their business. It is like talking about a car, whether it is a blue or green car, but a car. **This urban-rural thing is not a feature for us**”*
(Narec9).

*“**I struggle with your definition of rural!** ... participants have come [to the First Friday event] from a variety of different locations”.*
(NSC3)



Innovation Connectors & Rural Businesses: do they connect?

*“**Every event we do it’s inclusive** ... When we did the older people event we did not just want people from the city, so if problems were faced there they are found in more than one place. It is inclusive”. (NSC1)*

*“**I don’t know what your definition of rural is**, because we work with businesses in Hexham, which is rural? The company itself is considered as an SME. They are a prime example of a company involved in oil and gas ... But now are looking towards renewables ... we can give them a helping hand of how to get into the sector”. (Narec6)*



Innovation Connectors & Rural Businesses: do they connect?

*“ I’ve seen loads of things on farms that have been very cunning ways of doing things, but the farmer sees it as a means to an end not innovation. I think **there is a lot of innovation out** there but it is not developed, but used just to get things going and they don’t think how else could it be used.” (Narec7)*

*“... **in rural locations they do innovation** and have the advantage of a lot of land and may be the aesthetic considerations As I said before **we don’t make that link or definition of what type of innovation it was**. But we do get innovators who use our facilities who do have a rural background.” (Narec2)*



Rural Businesses: what do they think?

- ❑ **Awareness of ICs, including Newcastle Science City, is low in rural areas**
- ❑ **Relationships with some ICs were** *“long and stressful ... not good at helping SMEs, but rather tended to trample over them.”* (RB2)
- ❑ **Newcastle Science City “First Friday” event useful & effective ... but required to travel long distance to attend these meetings in the centre of Newcastle**

“Informal networking amongst rural business owners leads to a groundswell of wealth creation.” (RB3)

- ❑ **NSC needed to be more pro-active in advertising their services to rural businesses, through the local/regional media**



Rural Businesses: what do they think?

Links with universities:

“from previous experience, the working style and timings [the operating environment] of businesses and universities were not compatible” (RB1)

- ❑ **Universities: good at spinning out business ideas ... it would be easier if individuals/businesses were physically present on site/closer to the University**
- ❑ **What are they and what are they there for?**
- ❑ **Difficult to change the behaviour of academics due to the pressure to publish**



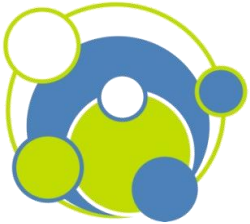
Rural Businesses: what do they think?

- ❑ **Business support (including access to finance) from the government but also peer support within the business community**
- ❑ **The creation of a peer group of forward thinking rural business owners to lead others**
- ❑ **Working collaboratively, including through existing networks such as the National Entrepreneurs Forums where examples of good practice can be shared**
- ❑ **Greater rural involvement in all kinds of regional institutions and programme designs**
- ❑ **Stop chasing the grant funding & encourage long-term strategic investment in companies that will benefit them and the region in the longer-term**



Rural Businesses: what do they think?

- ❑ **The feeling: all regional innovation actors will struggle to be genuinely rural unless they proactively target rural businesses**
- ❑ **But do Innovation Connectors & Universities see enough value in rural areas?**



Conclusions

- ❑ **There is engagement with rural businesses but no urban-rural distinction**
- ❑ **Innovation take places in rural areas but not recognised/accepted as innovation *per se***
- ❑ **Need for a broader approach to be taken to defining innovation (by all actors) beyond patents, R&D & high-technology (change in metrics?)**
- ❑ **Need for a genuine understanding of rural businesses characteristics (e.g. small-scale, incremental innovation, distance from markets & research centres, lack of critical mass) & the challenges they face**
- ❑ **Their characteristics make them interesting to look at & learn from as they have to adapt to the current economic climate**



Conclusions

- ❑ **Use of ICT to reduce distance barriers**
- ❑ **'Role models' used as examples to encourage other rural businesses to engage more pro-actively in regional institutions & programme designs**
- ❑ **Raise awareness of the role of Newcastle Science City & other Innovation Connectors**
- ❑ **Improved information gathering about the businesses that are engaging with the Innovation Connectors**



Conclusions

- ❑ **Wider role of universities in regional/rural development (e.g. sharing their expertise & facilities with rural businesses)**
- ❑ **Businesses should make the most of the fact that two Innovation Connectors are in rural locations and two of the Newcastle Science City themes (ageing and health and sustainability) are relevant to rural areas**
- ❑ **Newcastle Science City should explore the potential for information-sharing events or 'roadshows' in rural parts of the region by tapping into existing business networks & forums**



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