1. NON-TECHNICAL SUMMARY

Please provide below a project summary written in non-technical language. The summary may be used by ESRC to publicise your work and should explain the aims and findings of the project. [Max 250 words]

This exploratory project investigated innovation in peripheral, sparsely populated areas, in contrast with the usual view of innovation as the outcome of intense interactions in urban areas with dense populations of businesses and workers. A broad definition of innovation was used, that not only included the commercialisation of research and development, but also the
introduction of new services, business models and ways of working. The study involved:
- Interviews with policy-makers and business support organisations in the UK and other European countries;
- Three discussion papers that were presented at an international practitioner workshop;
- An interdisciplinary seminar with academics from the UK and other countries.

The study’s findings suggest that innovation in peripheral areas:
- is often associated with aspects of peripherality, as firms exploit immobile natural resources, address constraints linked to distance, draw on locally embedded human resources, and create new products/strategies that draw on an image of remoteness;
- depends on ICT/transport and interpersonal networks, as sparse population limits links within the region as well as links to extra-regional actors;
- is often shaped by external demand/supply factors e.g. regulatory frameworks, demand on urban markets, and the service provision strategies of large companies and public authorities;
- can be supported both by targeted innovation policies and by broader investment and regulatory policies.

The project found specific methodological challenges in analysing innovation in peripheral areas, which implies the need for larger and regionally stratified samples in business surveys, as well as more use of sectoral/thematic case studies.

2. PROJECT OVERVIEW

a) Objectives

Please state the aims and objectives of your project as outlined in your proposal to the ESRC. [Max 200 words]

This exploratory project aimed to enhance understanding of innovation in peripheral, sparsely populated areas via:

1. A scoping study into:
   - the kinds of (hidden) innovation seen in key sectors in peripheral areas, where innovation is linked to peripherality, either in terms of locally embedded natural resources (e.g. renewable energies, tourism, food/drink) or in terms of constraints (e.g. e-health services, community enterprise);
   - the types of connection that underpin innovation in these sectors in peripheral areas;
   - how innovation in peripheral areas is shaped by local strengths and by external demand (e.g. changes in urban markets, environmental regulation) and supply-side drivers (e.g. ICT);
   - how the internal logics of innovation policies shape the capacity of policy-makers to support innovation in peripheral areas.

2. The development of research approaches and methods that could be used in a more substantial future research project on innovation in peripheral areas.

3. A workshop involving practitioners from the UK and other European countries, aimed at stimulating exchange and building cooperation.

4. A seminar, involving academics from the UK and other European countries, aimed at facilitating research cooperation, with a view to developing a more substantial research project.
b) Project Changes

Please describe any changes made to the original aims and objectives, and confirm that these were agreed with the ESRC. Please also detail any changes to the grant holder’s institutional affiliation, project staffing or funding. [Max 200 words]

The main changes to the project were agreed with the ESRC:

- The starting date of the project was put back by one month from 1 October 2009 to 1 November 2009;
- The location of the practitioner workshop in May 2010 was moved from the UK Innovation Research Centre (Cambridge/London) to Glasgow.

We also increased the number of practitioner interviews undertaken in the UK (from the 16-20 planned to 26) and undertook face-to-face interviews in other European countries (rather than by email/telephone as originally planned).

In addition, funding was obtained for a linked event under the ESRC Festival of Social Science in March 2010, and the Investigators contributed to additional practitioner-funded knowledge exchange events in Scotland (June 2010) and Finland (August 2010).

None of the changes substantially altered the research project.

c) Methodology

Please describe the methodology that you employed in the project. Please also note any ethical issues that arose during the course of the work, the effects of this and any action taken. [Max. 500 words]

The Investigators developed a research brief and questionnaire, drawing on a review of scholarly and policy literature, which was then used in undertaking:

- Twenty six semi-structured interviews with policy-makers, business support organisations and trade associations in the UK (at UK level, and in Cornwall, Scotland and Wales);
- Nine semi-structured interviews with policy-makers and business support organisations in other European countries with significant peripheral areas (e.g. Austria, Finland, Norway, Sweden).

All the interviews all focused on the research questions:

- What is the shape of innovation in sectors where innovation is linked to aspects of peripherality?
- What types and spatial levels of connectivity facilitate innovation in these sectors?
- How do innovating actors in these sectors build on local strengths, and how do they respond to external demand stimuli and supply-side drivers?
- How do the internal logics of innovation policies at EU, national and sub-national levels affect policy-makers’ capacities to support innovation in peripheral areas?

The interviews were recorded, transcribed and analysed, with the analysis structured around the research questions.

The Investigators drafted three discussion papers on:

- (hidden) innovation in sectors where innovation is linked to aspects of peripherality;
- innovation support policies and interactions in peripheral areas;
- research approaches and methods which could be used in a follow-up study.
A workshop was held in May 2010 with 20 participants from business support organisations, trade associations, the policy community and academia, from the UK (Cornwall, North East England, Scotland and Wales) and other European countries (Austria and Norway). The Investigators presented the discussion papers and 6 other participants also made presentations. The Investigators sent a report summarising the workshop discussions to all participants and also displayed it on the project’s website.

An interdisciplinary seminar was held in June 2010 involving 16 participants and nine presentations by academics from Denmark, Finland, Norway, Sweden and the UK with expertise in business innovation or regional/rural development. The seminar facilitated international networking and provided the basis for future research cooperation.

No ethical issues arose during the work, which was conducted in accordance with University of Strathclyde’s code of ethics.

d) Project Findings

Please summarise the findings of the project, referring where appropriate to outputs recorded on ESRC Society Today. Any future research plans should also be identified. [Max 500 words]

This was an exploratory project, involving a limited number of interviews and two events, so the findings remain indicative.

The study’s findings suggest that:

- Innovation in peripheral areas is often associated with aspects of peripherality, as firms exploit immobile natural resources, address constraints linked to distance, draw on locally embedded human resources, and create new products/strategies that draw on an image of remoteness. Where innovation is not associated with peripherality (e.g. consumer electronics in northern Finland, or specialist oil and gas engineering in western Norway), it has been facilitated by public investment in infrastructure, higher education, R&D and business support.
- ICT/transport and interpersonal networks are extremely important for innovation in peripheral areas, as sparse population limits links within the region as well as links to extra-regional actors. Patterns of connectivity vary across firms and sectors, with some (e.g. renewable energies or Arctic technologies) drawing on strong links with researchers outside the region. Most innovative firms address markets outside the region and their innovation is strongly shaped by demand, especially as firms are generally in price-taking relationships with external customers. ICT is facilitating the creation/attraction of innovative firms in peripheral areas, especially in sectors which do not rely on the transport of goods or face-to-face delivery of services.
- Innovation in peripheral regions is often shaped by external demand/supply factors e.g. regulatory frameworks (e.g. in renewable energies and in the UK regional television sector); demand on urban markets (e.g. for regional foods, wilderness holidays); efforts by large companies and public authorities to cut costs and ensure quality in service provision (e.g. call centre home-working, e-health services, community enterprise).
- The capacity of policy-makers to support innovation in peripheral areas is affected by the extent to which innovation policy is seen mainly in terms of supporting R&D excellence; the availability of funding for innovation support; and the shape of investment and regulatory policies that affect e.g. the quality of transport and ICT networks, the availability of higher and further education, conditions for entrepreneurship.
The project also assessed research methods for analysing innovation in peripheral areas and found two main challenges. First, issues of statistical robustness arise in relation to the regional disaggregation of data collected via national business surveys due to small regional samples. Second, both business innovation and the broader conditions for innovation may differ in peripheral areas. These difficulties could be addressed via larger (regionally stratified) samples in business surveys and sectoral/thematic case studies.

The project’s two events showed strong demand for participation and very good feedback from participants e.g.
- The P.I. was invited to present the project’s results at two practitioner-funded events;
- Seminar participants expressed enthusiasm for developing future research projects or a joint seminar series.

Future research plans are noted in Section 3b).

e) Contributions to wider ESRC initiatives (eg Research Programmes or Networks)

If your project was part of a wider ESRC initiative, please describe your contributions to the initiative’s objectives and activities and note any effect on your project resulting from participation. [Max. 200 words]

The project was not part of a specific ESRC initiative but it was funded by the UK Innovation Research Centre (UK~IRC) which was co-funded by BIS, NESTA and TSB. The Investigators contributed to the work of the UK~IRC in the following ways:
- Gave a presentation on the project at the kick-off event for the first round of distributed projects in October 2009;
- Agreed the project’s communications plan with the Director of the Knowledge Exchange Hub at the UK~IRC;
- Included information on the project’s workshop and seminar on the UK~IRC website;
- Publicised the project workshop via the UK~IRC practitioner networks;
- Invited academics from the UK~IRC to attend the project seminar.
3. EARLY AND ANTICIPATED IMPACTS

a) Summary of Impacts to date
Please summarise any impacts of the project to date, referring where appropriate to associated outputs recorded on ESRC Society Today. This should include both scientific impacts (relevant to the academic community) and economic and societal impacts (relevant to broader society). The impact can be relevant to any organisation, community or individual. [Max. 400 words]

<table>
<thead>
<tr>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion papers</td>
</tr>
<tr>
<td>• S. Davies (2010) Innovative sectors in peripheral rural areas, European Policies Research Centre, Glasgow.</td>
</tr>
<tr>
<td>• S. Davies (2010) The context for innovation in peripheral rural regions, European Policies Research Centre, Glasgow.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project events</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Interdisciplinary seminar, ‘Research on innovation in remote areas’, Glasgow, 15 June 2010.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Book chapter</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Conference paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>• S. Davies (2010) Innovation in small and medium-sized centres and rural areas: what potential for stronger linkages with the centres? Seminar on urban-rural networks on innovation, Lappeenranta University of Technology, Finland, August 2010</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Linked project</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ESRC Festival of Social Science, March 2010, debate at a high school on the Isle of Lewis on the theme ‘Are people in rural areas innovative?’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional knowledge exchange events</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Workshop in Inverness in June 2010, organised jointly with Highlands and Islands Enterprise and the University of the Highlands and Islands Millennium Institute;</td>
</tr>
<tr>
<td>• Keynote presentation at Finland’s National Innovation Forum, organised by the Finnish Ministry of Economics and Labour, August 2010;</td>
</tr>
<tr>
<td>• News items on University websites e.g. Business School online video newsletter</td>
</tr>
</tbody>
</table>

Scientific impact
The seminar in June 2010 provided the basis for developing a new research network and additional research capacity on the theme of innovation in peripheral areas, as it brought together academics from different disciplines (i.e. economic geography, operations management and policy studies) and from different European countries (Denmark, Finland, Norway, Sweden and the UK) who do not have track records of working together.

Economic and societal impact
The workshop in May 2010 and other knowledge exchange events contributed to the creation of
new networks among people with an interest in innovation and economic development in peripheral, sparsely populated regions. These involved new links between academics and practitioners, and among the practitioners, bringing together individuals and organisations from different parts of the UK and from different European countries.

b) Anticipated/Potential Future Impacts
Please outline any anticipated or potential impacts (scientific or economic and societal) that you believe your project might have in future. [Max. 200 words]

The Investigators are considering options for continuing the work further e.g. via:
- a bid for follow-up research funding on a related theme (e.g. to the Economic and Social Research Council or the EU Framework Programme);
- further conference papers and journal articles, drawing on the outcomes of the project;
- the development of a research network or seminar series involving participants of the June 2010 seminar.

You will be asked to complete an ESRC Impact Report 12 months after the end date of your award. The Impact Report will ask for details of any impacts that have arisen since the completion of the End of Award Report.
4. DECLARATIONS

Please ensure that sections A, B and C below are completed and signed by the appropriate individuals. The End of Award Report will not be accepted unless all sections are signed.

Please note hard copies are NOT required; electronic signatures are accepted and should be used.

A: To be completed by Grant Holder

*Please read the following statements. Tick ONE statement under ii) and iii), then sign with an electronic signature at the end of the section.*

### i) The Project

| This Report is an accurate overview of the project, its findings and impacts. All co-investigators named in the proposal to ESRC or appointed subsequently have seen and approved the Report. | X |

### ii) Submissions to *ESRC Society Today*

| Output and impact information has been submitted to *ESRC Society Today*. Details of any future outputs and impacts will be submitted as soon as they become available. | X |

**OR**

| This grant has not yet produced any outputs or impacts. Details of any future outputs and impacts will be submitted to *ESRC Society Today* as soon as they become available. | |

**OR**

| This grant is not listed on *ESRC Society Today*. | |

### iii) Submission of Datasets

| Datasets arising from this grant have been offered for deposit with the Economic and Social Data Service. | X |

**OR**

| Datasets that were anticipated in the grant proposal have not been produced and the Economic and Social Data Service has been notified. | |

**OR**

| No datasets were proposed or produced from this grant. | |