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Snapshot: Expressions of Urban – Peri-Urban – Rural Relationships
Businesses, labour markets and connectivity
Gloucestershire, UK

1. Brief Description

This snapshot explores the links between businesses, labour markets and connectivity. Two distinct types of connectivity are highlighted and discussed, namely *physical connectivity* and *ICT connectivity*.

Physical connectivity will be enhanced by investments in transport infrastructure, which are being planned to improve the mobility of goods, services and the workforce both within Gloucestershire, and in and out of the county. This includes commuter possibilities and visitor opportunities and is an important aspect of rural-urban flows. *The Economy of Gloucestershire* (GCC 2017) states that 83% of residents in Gloucestershire also work in the county, showing the reliance on county jobs by county residents from both urban and rural areas. The adopted *Local Transport Plan* (LTP) (GCC 2016) further envisages improved rural-urban connectivity. However, primary data collection also indicated poor connectivity between peri-urban areas in some towns (WP1 Focus Group June 2018). ICT connectivity has received major investment in recent years, not least to enhance rural broadband connections so that rural residents and businesses are not disadvantaged in comparison to their urban neighbours.

Gloucestershire is a predominantly rural county in the south west of England. It has a vibrant and diverse economy. Most recent figures (GCC 2017) suggest there are 336,000 jobs in the county, and almost 28,300 enterprises. Business start-ups have a high survival rate. The economic activity rate among the working population (16-64 year olds) is over 83% and the total output in 2015 was close to £16 billion (NB: thousands of millions), which is about 1% of the UK economy. Qualification rates among the population are higher than the national average and key industrial sectors include hi-tech manufacturing, health, public administration and defence, retailing, education and construction.

A key business agency in the county is the Local Enterprise Partnership, GFirst LEP. The LEP is a public-private network, incorporated as a public interest company (an organisational model that combines limited liability with a local asset lock), and which brings together key industry and civil representation with local authority partners. GCC is the 'Accountable Body' within the LEP for a range of UK and EU funding streams, and funds the LEP locally.

The county's *Strategic Economic Plan* (SEP), the delivery of which is the responsibility of the GFirstLEP, sets out proposals to support growth in sectors of high value, including the nuclear generation industry; high-tech engineering linked to aerospace, precision tools and medical instruments; knowledge intensive sectors such as finance and insurance; and the ICT sector. Three key achievements, led through the GFirst LEP structure, are the development of a county Growth Hub (based at the University of Gloucestershire), the redevelopment of a former nuclear power station into the Gloucestershire Renewable Energy, Engineering and Nuclear Skills Development Centre (GREEN), and the agricultural innovation centre farm491, based at the Royal Agricultural University (see also the Rapid Appraisal on Sustainable Food Systems). These three innovation and employment centres, which draw heavily on the county's higher educational institutions, are directly linked to attracting and developing hi-tech and high-skilled employment and investment to the county and providing benefits far beyond it.

Finally, Gloucestershire has an aging population and a flow of young people both in and out of the county to work and train or study. This has been emphasised in the recent Glos2050 conversation taking place across the county as a potential cause for concern.[1]

2. Questions and/or Challenges

> Challenge 1 – Major industrial, transport and housing developments for the county remain substantially linked to urban settlements (GFirstLEP 2014, Section 1.4). This may help attract people to come and live and work in the county. Even so, there is a net loss of young people to cities such as Bristol and London. Meanwhile, rural housing and public transport / mobility infrastructure in Gloucestershire remains expensive, infrequent and restricted due in part to the county's landscape quality. *How can the county attract and retain young people to work in the sectors prioritized by the Economic Strategy?*

> Challenge 2 – Cybersecurity and ICT sector development are strategic priorities for the county and substantial investment has flown into rural broadband (see example of *Fastershire* below). *How will this benefit rural dwellers?* For example: *will the growth in cybersecurity require tightly controlled site-based employment? And will urban development objectives for the county really influence how businesses and workers operate?*

3. Main Insights

3.1. Indications of the application of the new concept of 'New Localities'

This section outlines the new locality concept in three ways: firstly, improvements in physical connectivity are planned in order to facilitate more access into and out of the county (for example to improve export opportunities and to make Gloucestershire and its adjacent cities easier and quicker to reach). Secondly, within the county, a trio of district

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[1] https://glos2050.com/ accessed 17th September 2018

councils is leading economic development, because of the economic importance and growth potential associated with the urban centres of Gloucester and Cheltenham. Thirdly, efforts to improve rural broadband connections have linked Gloucestershire to the neighbouring rural county of Herefordshire.

3.1.1 Transport infrastructure

Gloucestershire has a high degree of employment linked to export intensive enterprises, and yet underperforms in export markets (GFirstLEP 2014: Section 1.6). Proposals are being discussed to improve accessibility within and to the county, principally via the existing motorway network. The M5 motorway runs north-south through the county and is connected to the London-Cardiff M4 motorway a short distance to the south. (Please refer to the rapid appraisal about the Gloucestershire Local Transport Plan (LTP) for further information about transport infrastructure.)

Delivering the SEP is the responsibility of GFirstLEP, and has led to the formation of a Joint Strategic Committee which brings together all six district authorities and GCC. Two specific areas of growth potential in the SEP are export and tourism.

The Gloucestershire Local Transport Plan is a county-wide document which sets out the long-term transport strategy to 2031. It is delivered in partnership with parish and district councils, organisations, businesses, transport operators and individuals. GCC is the local Highway and Transport Authority. Gloucestershire's adopted LTP has been updated to support delivery of the Strategic Economic Plan. The LTP must also support emerging local (ie. district-level) plans.

Opportunities for tourism are closely linked to the county's natural assets, especially the Cotswold Area of Outstanding Natural Beauty (AONB), which covers over half of Gloucestershire. The governance of the AONB is managed through a multi-stakeholder network called the Cotswold Conservation Board, established in 2004 by an Act of Parliament and includes 37 members appointed by local and national government. The objectives of the Board relate closely to the preservation of the natural beauty of the area. There are two additional AONBs with boundaries within Gloucestershire (see also the rapid appraisal on Flood Risk Management).

In this brief overview, transport infrastructure in the county has been substantially linked to a range of connected but distinct governance partnerships that seek to improve connectivity while minimising the impact of the county's designated landscapes. These, in turn, have the effect of concentrating transport development to the central region of the county where the largest towns and existing rail, road and waterways infrastructures are already located and operating. (cf. also section 3.3.3 – *Glos2050*)

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3.1.2 Fastershire – improving rural ICT networks

The Fastershire[2] project is a partnership between GCC and (the adjacent) Herefordshire Council, as part of a UK government's strategy run by *Broadband Delivery UK*. Funding for the project is shared between the central government and both local authorities to offer superfast broadband (30 Mbps +) to businesses and residents in the two counties. The new broadband infrastructure is provided by companies contracted by Fastershire, with the connections being 'rolled out' (extended) across the counties in a number of phases.

The first phase of the rollout saw almost 90% of properties in the two counties provided with access to superfast broadband via 'Fibre to the Cabinet' (FTTC), meaning connections were offered close to the property and the last connection is via existing telephone cables. This technology means that most of the urban and many of the rural areas of the county have such a connection. A weakness in the technology is that the quality and strength of the broadband between the cabinet and the property can diminish, a particular problem with more extensive connections in rural areas. The second phase of the Fastershire project saw a roll out of FTTC to an additional 8% of the population, in rural and urban areas, meaning that 98% of the Gloucestershire population had the ability to access superfast broadband infrastructure. For these initial phases, the contractor was BT (British Telecom) the successor company to the former state-owned monopoly. The next phase of the roll-out to rural areas of Gloucestershire and Herefordshire was 'Fibre to the Premises' (FTTP), meaning that ultrafast connection (up to 1000Mbps) was available to properties via a company called Gigaclear which specialises in rural broadband provision. The final phase connecting the last few remote rural properties is being supported by a mix of technologies and specific EU funding. The result of the Fastershire project is that Gloucestershire has a patchwork of technologies and options for businesses and residents. Some rural areas have access to some of the fastest broadband available anywhere, equivalent to the connection enjoyed by a University to domestic premises. At the same time, some rural properties remain to be connected, and some urban areas have slower connections than adjacent rural areas.

3.2. Insights related to the broad area of 'Smart Development'

3.2.1 Cybersecurity and ICT sector development (see also Smart Development Snapshot)

Within Gloucestershire, the high-profile importance of cyber security to the county has been recognised by government, with £22million of funding being allocated to GFirstLEP, to spend on transport/highway infrastructure to enable the development of a Cyber Business Park on the outskirts of Cheltenham.[3] This investment originates from the UK government's Growth Fund, which is designed to support the local-level economy. The Cyber Park will be a joint public and private sector initiative to support the growth and

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[2] http://www.fastershire.com/about-fastershire/strategy *accessed 9th October 2018*

[3] Case study information: GFirst LEP website https://www.gfirstlep.com/case-studies/cheltenham-cyber-park/

development of new cyber security businesses, technology, research and skills[4]. GFirst LEP has a range of business groups which involve business members from important sectors of the local economy. The most recently established is the Cyber Business Group. This group has several objectives including: to work with the Scheme Promoter of the Cheltenham Cyber Park and to support small and medium enterprises (SMEs) and to foster links between SME suppliers to develop their reach and knowledge in the cyber security sector[5].

The Government's Communications Headquarters (GCHQ) is based in Cheltenham. In 2016 the National Cyber Security Centre (NCSC) [6] was launched, the UK's authority on cyber security and also a part of GCHQ. Gloucestershire is also home to one of the country's leading defence companies, BAE Systems. Neighbouring counties beyond also contain cyber security suppliers and, in this respect, cybersecurity should be seen as a specialist regional cluster. The government, through the Department of Business Energy & Industrial Strategy has recently sponsored a Science and Innovation Audit report, on behalf of the Cyber Resilience Alliance group. This consortium includes GFirst LEP (the Local Enterprise Partnership for Gloucestershire) and three partner LEP areas which adjoin the north and south boundaries of the county.[7]

The University of Gloucestershire has recently expanded its premises and training provision to allow additional students to study cyber security, with University premises now situated at Berkeley (C11 Cyber and Digital Centre). The Berkeley site is in the south of the county, within easy reach of Bristol and offers cyber/digital training, plus access controlled secure workspace for the Gloucestershire cyber community to work, learn and network[8]. A four-year degree apprenticeship in cyber security has also been announced[9].

To provide some context for the ICT sector in Gloucestershire, we have used the Organisation for Economic Co-operation and Development (OECD) definition of the ICT sector which defines it as *'a combination of manufacturing and service industries that capture, transmit and display data and information electronically'[10]*. Using this definition there are around 2,385 Gloucestershire businesses in the ICT sector which accounts for around 7.1% of total businesses. Of ICT businesses in the county 74% are in areas classed as Urban city and Town, 9% are in areas classed as rural and town fringe, and 17% are in areas classed as Rural Village and Dispersed (Source: UK Business Counts (2017), ONS[11]).

[4] https://www.cheltenham.gov.uk/news/article/1863/22_million_secured_for_cyber_hub_through_partnership_work accessed 17th September 2018.

[5] Cyber Business Group   https://www.gfirstlep.com/about-us/business-groups/

[6] https://www.ncsc.gov.uk/ accessed 17th September 2018

[7] Cyber Resilience Alliance audit
https://www.herefordshire.gov.uk/news/article/534/cyber_security_science_and_innovation_audit accessed 17th September 2018

[8] University of Gloucestershire, Berkeley Green https://c11-berkeley.glos.ac.uk/ accessed 17th September 2018

[9] http://www.glos.ac.uk/business-and-partnerships/Pages/higher-apprenticeship-cyber-security.aspx accessed 17th September 2018

[10] http://www.oecd.org/sti/ieconomy/2771153.pdf accessed 17th September 2018

[11] https://www.ons.gov.uk/businessindustryandtrade/business/activitysizeandlocation/datasets/ukbusinessactivitysizeandlocation accessed 17th September 2018.

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3.3 Other insights that could be relevant for further work

3.3.1 Strategic Economic Plan

The delivery of the 2014 Strategic Economic Plan (SEP) is led by the Local Enterprise Partnership GFirstLEP, and the SEP sets out investment priorities for the county including transport infrastructure. One major proposal the 'Growth Zone' focusses on the expansion of employment land adjacent to the M5 junctions 9 and 10. This location will provide excellent connectivity throughout Gloucestershire and via the M5 to the rest of the UK. Road improvement schemes are also planned to support the successful delivery and sustained growth of the GREEN initiative at Berkeley (see 3.2. above).

3.3.2 Growth Hubs

A new network of growth hubs across the county has been implemented at particular locations including each of the 31 county council libraries acting as a Tier 3 Growth Hub providing information, advice, guidance and a signposting service. Using these facilities helps residents and businesses located outside the major settlements to access information and support locally.

3.3.3 Gloucestershire 2050 Vision (Glos 2050 - https://glos2050.com/)

Glos 2050 is a public consultation initiative which outlines future opportunities in the county and encourages young people to become involved in forward thinking. Currently, the initiative has highlighted six ideas for long-term infrastructure processes. These are closely linked to connectivity and rural-urban links and include: expanding Gloucestershire's local airport to an international airport; building a new road bridge to Wales over the Severn; co-joining Cheltenham and Gloucester into a so-called 'super-city', and enhancing the county's natural and water habitats into regional ecological and leisure parks; and developing the Cheltenham cyberpark.

4. Data Sources and Indicators

In the context of ROBUST, Gloucestershire's business and labour concerns are closely linked to governing changing urban and social relations, and about managing regional-scale growth in specialist industry and skills. GCC is an influential strategic partner with significant leverage in local and regional networks, notably the GFirstLEP and in policy-making. The development of a future local Industrial Strategy, which will involve GCC as a major partner, is a key consideration in thinking ahead to the Living Lab.

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Table 1 Data / Indicators for Example 1

Name of indicator / data	Source (citation, website link, organization)
Number of young people living and working in Gloucestershire	Mid-year estimates, Office for National Statistics
Number of students in Gloucestershire, including apprentices	Department for Education
Number of businesses supported through the Growth Hubs	GFirstLEP
Number of rural properties (homes and businesses) with fast broadband connection	Fastershire project

5. Critical Appraisal of Data Use

One of the challenges in WP3 will be how to access data which relates to cybersecurity sector development. This proposed area of growth is highly sensitive and covers financial, civil and military security. It will be important to work closely with the GFirstLEP and their sector groups to be able to identify most appropriate data sources and 'gatekeepers'.

6. References

Gloucestershire County Council (2016) *Local Transport Plan 2015-2031*. Gloucester, GCC.

Gloucestershire County Council (2017) *The Economy of Gloucestershire*. Strategic Needs Analysis Team. Gloucester, GCC.

GFirst Local Enterprise Partnership (2014) *Strategic Economic Plan for Gloucestershire*. Gloucester, GFirstLEP.

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