



Rural-Urban Outlooks: Unlocking Synergies (ROBUST)
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Snapshot: Expressions of Urban – Peri-Urban – Rural Relationships

Aberystwyth Innovation and Enterprise Campus

Mid Wales

1. Brief Description

The Innovation and Enterprise Campus (AIEC) has been established as a mechanism for supporting innovation and collaboration between researchers working in agri-tech, renewables, bioscience, and broader business and investment interests in Wales. The site is identified as a national centre of excellence in analytical science, bio-refining, seed development, and food futures. It currently houses a range of companies with expertise in antibiotic resistance, dairy production, software and telecommunications, and agri-electronics and engineering. As of October 2018, the AIEC has nine full-time corporate tenants, with approximately 15 people based on the site. When the development is fully completed (August 2020), the site will have circa 21 offices and capacity for over 40 workers on-site.

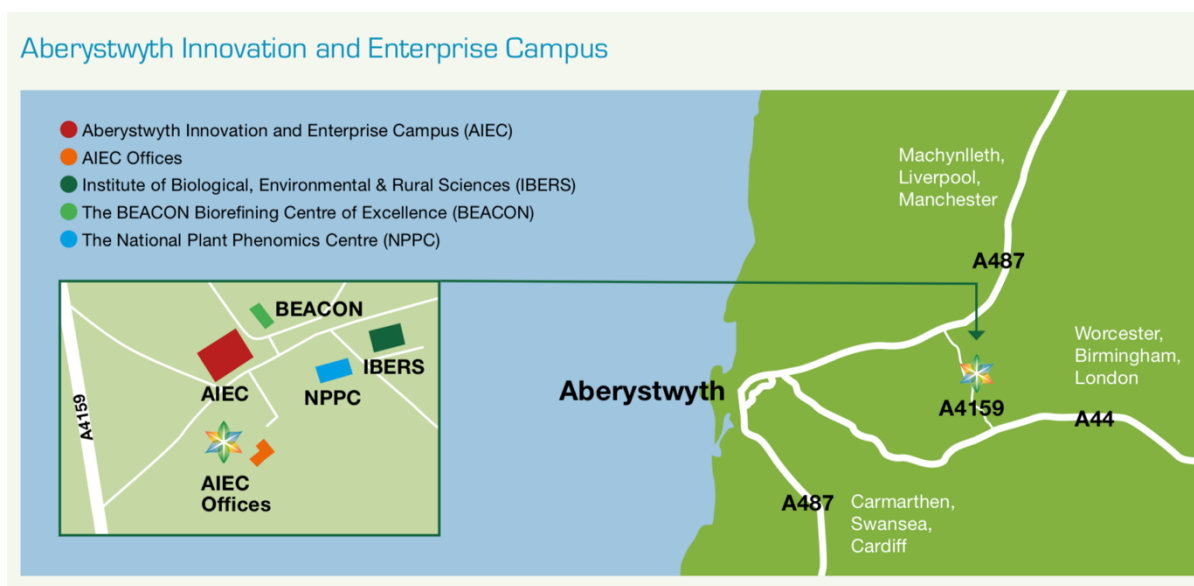


Figure 1: Location of AIEC. Source:
https://www.aberinnovation.com/images/uploads/3853_AberUni_AIEC_Booklet_Jan_2018_EN_V4_Web_FIN.pdf

In order to provide support to these enterprises, prompt further initiatives and develop intellectual capital, AIEC also brokers interactions with a range of relevant regional and national actors. These include the UK Government's Research and Innovation Department (via Innovate UK), the Welsh Government's innovation and funding specialists, and the Development Bank of Wales.

Situated at Aberystwyth University's Gogerddan campus, the AIEC is joint venture involving; the European Regional Development Fund (via the Welsh European Funding Office); the Biotechnology and Biological Sciences Research Council (BBSRC), and; Aberystwyth University. It has also received support from Ceredigion County Council in terms of developing localized road infrastructure, allowing increase access for the site and its workforce. Pulling together public, private and 3rd sector agencies, this AIEC is explicitly designed to prompt growth across a rural, peri-urban and urban locality centred on Aberystwyth.

2. Questions and/or Challenges

Cultivating growth in agri-tech, bio-tech and analytics

Developments in agriculture, bio-tech, renewables and environmental management often require significant capital investment, expertise and collaboration.

- > How are knowledge-gains in the form of University research and innovation translated into fully-realised, functional and marketable products?

Levels of investment of this magnitude (both in terms of cost and expertise) puts a limit on these types of initiative, especially given high levels of competition for public funding. Developments of this type are heavily dependent on transport and ICT links, which poses challenges in many rural localities.

Collaborative endeavours of this type might often require expertise and involvements of actors working in urban localities, but draw upon the green infrastructure held in rural localities. In this context, the AIEC might operate as an emerging 'spoke' extending out of a Mid Wales hub centred in Aberystwyth, but with strong networked links to city-regional poles in Cardiff and London.

- > How can initiatives like this prompt endogenous growth through supporting new enterprises, and retain these enterprises in-situ and in-locality as they expand?
- > How can initiatives of this type encourage economic actors to relocate away from major urban centres, and how does bricks-and-mortar facilities transform into centres for cross-sector innovation, development and ongoing investment? What role do communications and social media play in this regard?

3. Main Insights

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

The development of the AIEC, and the themes that emerge in those documents discussing this institution, clearly resonate with a 'New Localities' approach in practice and theory. In terms of absolute space, the initiative is connected to the longstanding role of the Institute of Biology, Environmental and Rural Sciences at Aberystwyth University (IBERS) in undertaking research undertaken within a distinct physical setting. In this way there is also a strong degree of imagined coherence – i.e. rural research and development being undertaken within a predominately rural regional context, but with a coherence that extends to Aberystwyth. Aberystwyth is classified as an Urban Service Centre by Ceredigion County Council, deemed to fulfill a national and regional role in anchoring growth in Mid Wales.

It is also evident that the AIEC, via Aberystwyth, the University and IBERS, constitutes a space of engagement. In this way, this initiative involves a range of actors across multiple sectors and settings, and with different functions and scalar remits. In terms of funding these include the EU (via the ERDF) the BBSRC research funding body, with its UK-wide remit, and Aberystwyth University. The AIEC is also a product of interaction with regional and national institutions, including the local authority and the Welsh Government via WEFO.

By way of contrast, and in terms of governance, this is more overtly territorialized. The Project Development Board is comprised of personnel based in Aberystwyth University, as is the Company Board, which attends to the day-to-day running of the organization. Nevertheless, Board Members are situated within a range of networks which express their role and professional backgrounds, as well as legal requirements. These include reporting to funding agencies and audit processes. Furthermore, as the campus develops and expands there are plans to expand the company board to include representatives from the private sector.

The work undertaken in the AIEC is very clearly and purposely set in international networks of research expertise. This is in terms of the people who work at the site, and also the business activities of those 'tenant' companies based in the AIEC. These include developing products for international customers, and through their position in an increasingly transnational knowledge economy. This is evident in the workshops the centre offers to clients which include, for example, sessions on finding funding and protecting intellectual capital via patents.

With its emphasis on exploiting core and emerging market trends around food, biotech and analytic science; connecting this work to the needs of society as a whole (inclusive of urban populations in Wales and beyond), and; investing in innovative solutions for global problems based on longstanding expertise within a specific rural locality; the example of the AIEC closely aligns with Mayer et al's (2016) model of rural entrepreneurialism and

development. As such the project puts a strong emphasis on rural assets and products as a basis for responding to emergent problems in food production and sustainability, and enrolls knowledge and expertise from an adjacent urban centre, as well as more distant cities in the form of links to Cardiff, London and Brussels.

The status of the AIEC as being at once inculcated within firm territorial dimensions as well as a much broader relational spaces of engagement is invoked in the marketing strategy employed by the AIEC. Highlighting the role of the surrounding environment in contributing to a productive work/life balance, the position of the AIEC between the 'beauty of Cambrian Mountains and the Irish Sea' features on the corporate website, as does its proximity to a 'bustling cosmopolitan hub' (the town of Aberystwyth) and 'Aberystwyth University's academic expertise'. Similarly, the 'idyllic setting' is contrasted to the 'smog and congestion' of the city, as is the centre's connections to a bioscience R & D in Britain via the BBSRC. In this way, both the social and political landscape in Mid Wales is constructed in a way which is at once idyllic and 'hi-tech', with the quality of the local environment being emphasized alongside a 'community of innovators'.

The extent to which this will be achieved in terms of numbers of tenants is yet to be established given that the construction of the site is ongoing. It is the case, however, that a number of companies have established satellite offices at the facility, including companies from elsewhere in Mid Wales and, in one case, as far away as Cambridge. In this regard, the AIEC site was classified as a space to 'concentrate' on R&D away from the a more developed, urbanized 'busy' landscape.

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

As set out in section 3.1., AIEC employs a place-based narrative at the same time as a multi-scalar, networked conception of space, whereby cooperation and collaboration with other actors and agencies transcends a rural-urban interface, as well as regional and national boundaries. This corresponds with accounts of smart growth as detailed by Brown and Shucksmith (2017) whereby the AIEC is conferred with a legitimacy to act within a given locality, and with a specific remit. In this case the remit is innovation, investment and job creation in agri-business and agri-tech, with a specific focus on plant genetics and breeding, animal science and the food supply chain more broadly. This corresponds with an embedded expertise based around IBERS, which has a history of agricultural sciences research dating back to the 1870s across a number of sites in Mid Wales. On the Gogerddan site, where the AIEC is based, this legacy of expertise includes the National Plant Phenomics Centre, which opened in 2012 and features the most advanced research greenhouse facilities in the UK.

Naldi et al. (2015) note that the principle manner in which EU frameworks define and address smart growth is in a knowledge context, via policies for innovation, education and research. By contrast the concept of smart growth as applied in the USA is predominantly focused on planning policies; specifically with the intent of counteracting urban sprawl (ibid, p. 229). Both angles are apparent in the rationale provided for the AIEC but, as we

might expect, the imperatives of the knowledge economy dominates the discourse surrounding the AIEC. This is apparent in the potential strengths of the initiative as identified by the Welsh European Funding Office (WEFO), and which prompted funding on their part. These strengths include the ability to respond quickly and effectively to market and client demand, and pursue new commercial opportunities; a capacity to engender further public and private investment; to increase and upskill the local workforce, and; to enable Aberystwyth University to work effectively with a growing number of Small and Medium Enterprises (SMEs), and; the commercialization of R&D (Design and Access Statement, 2016). Set in contrast to science parks which focus on renting space to industry as a basis for forming R&D clusters, the AIEC looks to harness development between university research and the private sector through joint research in a shared space.

More broadly, and using the measure of Technology Readiness Levels (TRLs), the AIEC has been supported on its basis to span the gap between the role of universities in undertaking research which does not traditionally develop beyond the proof of concept stage (TRL 3), and the role of investment and development firms who historically take the lead in bringing products into service (TRL's 6-10). The AIEC positions itself across TRL 4 (bench-scale research), 5 (pilot scale) and 6 (large scale testing) - stages which are identified as common stall points in product development.

In terms of planning policy and development, the literature on the AIEC largely focuses on the immediate locality and the construction of bespoke office, laboratory and meeting space on campus. However, the potential for this development to spark wider development is inferred in the Local Authority's Development Plan. Specifically, they identify the role of IBERS as a major employer and a driver for economic growth, alongside the Universities in Aberystwyth and Lampeter, Coleg Ceredigion, Ceredigion County Council and facilities operated by the regional Health Board.

Focusing on IBERS, the Gogerddan campus and the AIEC, there is a community foyer and exhibition space to facilitate public engagement and interaction between researchers. There is also an outdoor space for this purpose. The campus is also situated close to the village of Penrhyncoch. Penrhyncoch is classified as one of 15 Rural Service Centres (RSCs) in Ceredigion - identified on the basis of its relative size, and the range and quality facilities concentrated in this locality – and has been earmarked for growth within the Local Development Plan (Ceredigion County Council, 2017).

The expansion of the Gogerddan Campus and the AIEC therefore corresponds with broader regional planning narrative, adding to that 'critical mass' within a specified growth zone and benefitting from public sector investment in local services and transport infrastructure. This includes the construction of a new train station in the nearby village of Bow Street, and plans to create a footpath and cyclepath to the AIEC campus. Highway access to the campus has been improved significantly in anticipation of the development, partly as a result of a public consultation and concerns about increased traffic on a narrow stretch of road. Consequently, improvements were recently completed to widen the road from the main A4159 crossroads, as well as make visibility improvements to the C1010 junction.

4. Data Sources and Indicators

Table 1 Data / Indicators for Example 1

Data / Indicator	Source
Design & Access Statement, Aberystwyth Innovation & Enterprise Campus	IBI Group, http://www.ceredigion.gov.uk/cpdl/Dev_Management/20161209%20_AIEC_DesignAndAccessStatement_RevC.compressed_Part1.pdf
Rural – Urban Linkages and Sustainable Rural Development	Mayer, H., Habersetzer, A. and Meili, R. (2016) Rural-urban linkages and sustainable regional development: the role of entrepreneurs in linking peripheries and centers, Sustainability, 8: #745.
Ceredigion LDP 2007-2022	https://www.ceredigion.gov.uk/oldicm/index.cfm?articleid=22184
Campws Arloesi a Menter Aberystwyth/ Aberystwyth Innovation and Enterprise Campus	https://www.aberinnovation.com/en/

5. Critical Appraisal of Data Use

The data within this report is largely derived from formal and publically available documents released by the AEIC, alongside formal planning and development discourse issued by the Local Authority. As such, it has limited capacity to highlight those debates, exchanges and compromises between those agencies and institutions involved in the AEIC, and the different perspectives on harnessing development and rural-urban relations.

6. References

European Commission (2010) Europe 2020: A Strategy for smart, sustainable and inclusive growth. <http://eur-lex.europa.eu/LexUriServ.do?uri=COM:2020:FIN:EN:PDF>

Naldi, L., Nulsson, P., Westlund, H. & Wixe, S. (2015) What is Smart Rural Development? In Y. von Freidrichs, H. Westlund and K. Kobayashi (Ed.) Social Capital and Development Trends in Rural Area Volume 10, Jamtland, Sewedn; Jönköping International Business School 229-249.

Mayer, H., Habersetzer, A. and Meili, R. (2016) Rural-urban linkages and sustainable regional development: the role of entrepreneurs in linking peripheries and centers, Sustainability, 8: 745 – 758.

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