WITTY REVIEW – GUILDHE RESPONSE

CONTEXT, PRIORITIES AND CHALLENGES

The Coalition Government is rightly focused on reviving and rebalancing the economy, both geographically and sectorally. This strengthens the case for broad-based interventions, focused industrial strategies and support for key institutions. The Government's 2011 *Research and Innovation Strategy for Growth* reinforces this, emphasising the need for 'a more open and integrated innovation ecosystem' that leverages 'new knowledge wherever it comes from'.

But since 2010 the higher education sector has experienced major changes to important sources of research, innovation infrastructure and funding – including the replacement of RDAs with LEPs, and the concentration of Higher Education Innovation Funding (HEIF). Both changes have created challenges to capacity, including the depletion of institutional resources for engaging in local economies, disparities across regions, and the complete removal of strategic funding from some HEIs working in key growth sectors embedded in the knowledge economy.

The Review could benefit from extending its current hypotheses to reflect this situation. There is a need to:

- **identify key activities and capabilities**, taking into account the diversity of the HE sector with respect to scale, specialisms, orientations and networks;
- **consider a range of alternative delivery models** that maximise activity and sustain capacity for business and industry engagement (much of which was previously funded through RDAs and HEIF) and graduate entrepreneurship.

This requires changes in how HEIs act as well as in the policy framework that incentivises and catalyses such activity. At the same time of course, these shifts must take place against a backdrop of reduced public spending and slow economic growth, especially in particular areas of the country. The twin challenges of catalysing more economic activity and doing so on the most cost effective basis are clear. This was reflected both in the thinkpiece on '*Culture Change*' which was circulated as part of the Wilson Review on business-HEI collaboration, with its focus on wider cultural change that 'embraces the provision of high level skills and the promotion of enterprise and entrepreneurship', and in Prof Ian Diamond's report, with its focus on achieving efficiencies in the HE sector by simplifying internal processes and data management, and how these play into improving and sustaining strategic partnerships and shared services.

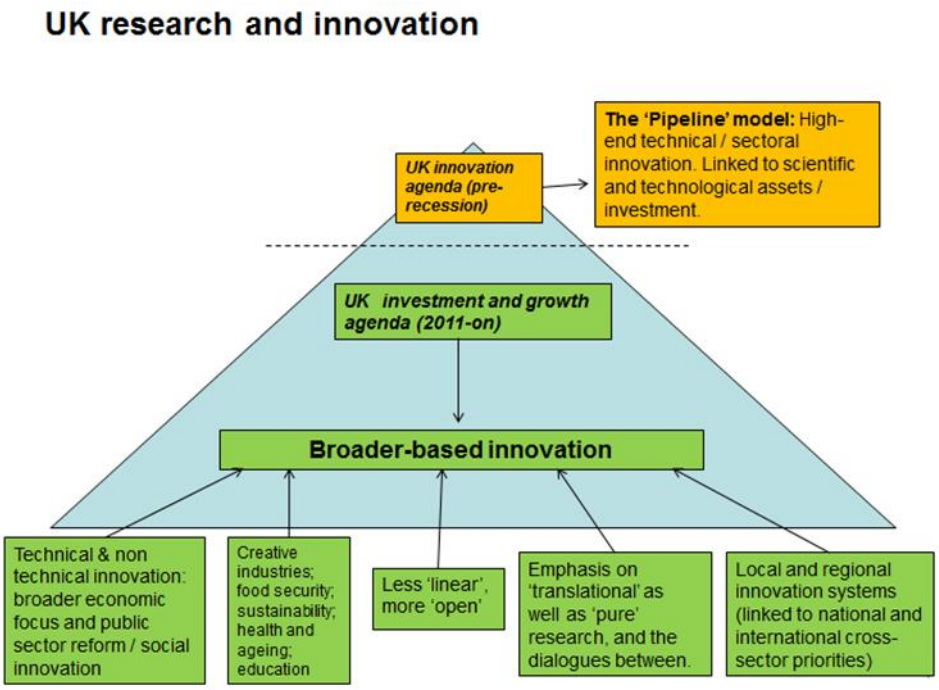
SCIENCE & RESEARCH – DEMAND MATTERS, AS WELL AS SUPPLY

The UK starts from a very strong and globally-competitive position in Science and Research. However, for economic development – at local or national level – there is a need to **move beyond simple linear or**

pipeline models of organisation which focus largely on the supply side, to a broader based system that encourages growth. It is also important to move beyond a focus largely on technical or scientific innovation to one that **encourages value-added activity across a broader base of sectors and geographical locations**.

Conceptually, we must move from a pure supply side model of investment and activity to a **supply and demand model** to encourage greater levels of growth, the development of increasingly innovative SMEs and micro-business with access to research and expertise fostered by Higher Education providers, and to allow existing industrial strengths to flourish.

Achieving this means **identifying the key models and institutions that sustain interactions and benefits in localities**, and looking at **ways in which existing resources might be joined up** to the benefit of diverse sectors and locations. The UK HE sector is diverse, and so is the UK innovation chain that depends on its ability to enrich national and local research and innovation cultures and to provide graduates at all levels with the skills required by existing and new businesses.



The diagram above demonstrates how policy is shifting from seeing innovation as an 'elite', largely technology or technically-driven process aimed at particular sectors and activities, to a much broader understanding wherein many more sectors, geographical locations and activities are important.

This requires high level skills and partnerships with HEIs which deliver the specific support and knowledge that businesses need – and, importantly **at the local level, it needs to ensure that SMEs and micro-businesses can secure sufficient interaction and scale**. This is also crucial to the UK's ability to grow new ideas, as well as new business, on a local level.

SUB-NATIONAL INNOVATION ECOSYSTEMS – LEPS ARE NOT THE ONLY WAY TO DRIVE GROWTH

LEPs provide important potential for supporting growth in key areas. However, this Review should **be wary of focusing too exclusively on LEPs'** involvement in driving local growth. Whilst some are strong

and growing in capability and influence, others are not yet so developed and in some places they are either weak or non-existent. They tend to be variable in geography, knowlege and capacity and not necessarily drawn across coherent economic regions or sub-regions. Relationships with key stakeholders and current and potential high-value growth sectors cannot be guaranteed and may simply be too diverse to be appropriate or effective.

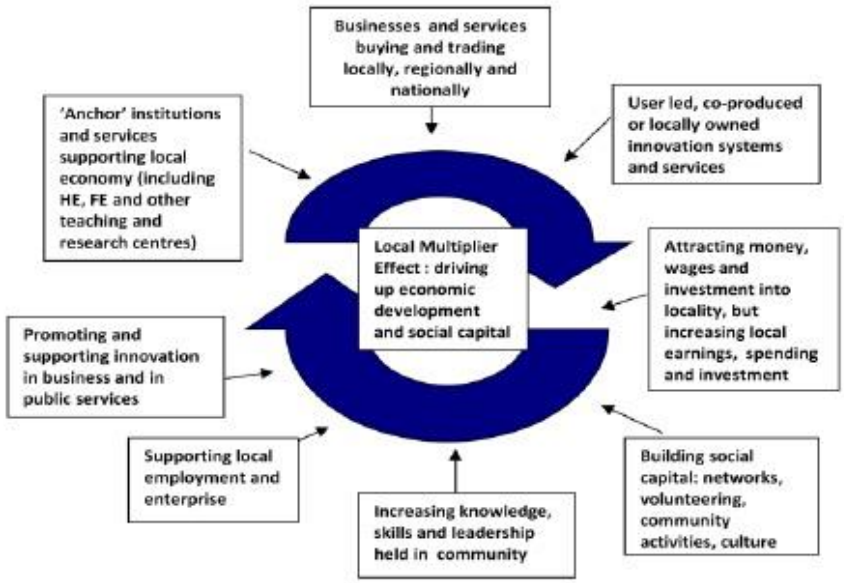
Universities and other higher education institutions should play a key role where LEPs are well established but **should also be supported where they are not**. In both cases they are important institutions that can provide capacity, knowledge, networks and leadership as well as performing a vital institutional 'anchor' role. The Government has already stressed that:

- 'universities…are often at the centre of dynamic local economies and innovation and research systems, acting as the hubs of networks that link businesses with the research base and with the wider innovation ecosystem';
- the Government desires to encourage national growth and economic rebalancing by 'creating a more open and integrated innovation ecosystem'.

HEIs' role in driving up innovation should be seen as **more than simply an 'elite', high-volume, largely technology- or technically-driven process aimed at particular sectors and activities**.

At the local level **even small or specialist institutions will create a local multiplier effect**: circulating and growing income, human capital, entrepreneurship and locking these into local capacity and economic growth. This focus on '**local multiplier effects'** within localities and within diverse ecosystems is shown in the diagram below:

Local Multiplier Effect: *'Locking in' knowledge, finance, income, resilience, enterprise…*



There is a need to **identify best practice and potential alternative funding and delivery models for such a sustainable, strategic role**. The return on activity will not always be immediate and in many ways its optimal return will be longer term. It is important to **take a long-term approach to effective partnerships**, rather than focusing narrowly on spending and performance management. This means:

- **looking at leveraging funding** from R&D tax credits, innovation vouchers, interactions with the Small Business Research Initiative, the Technology and Strategy Board (TSB), the Design Council, etc.;
- **enterprise support**, achieving scale for micro-business and SMEs;
- **innovative, creative business partnerships and practices** informed by specialist HE-led research and innovation.

ROLE OF ANCHOR/CATALYST INSTITUTIONS IN IDENTIFYING AND DELIVERING LOCAL/REGIONAL NEEDS

Whilst other methods of HE funding (QR, Research Councils, etc.) are not allocated with the direct aim of stimulating the innovation clusters of localities and regions, **funding (including HEIF) directed specifically at KE activity**, administered in partnership with the TSB, the Design Council, Catapult centres, LEPs, and European and international funding bodies (to name a few possibilities), appears to possess the most potential to make the most of 'diverse innovative assets' for sustainable growth. A broader model of partnership is important for **'anchoring' or catalysing local economic clusters** with the potential to stimulate growth and bring high-level jobs to diverse – as opposed to increasingly concentrated – localities.

Here, smaller, specialist and locally-facing Higher Education providers play an important role; they also represent an under-utilised national resource. All institutions attempt to maximise partnerships and the transferable value of knowledge resources, but **smaller, specialist HEIs with local and regional orientations sitting alongside international networks play an essential role as catalysts to local or regional growth**. They achieve this through:

- graduate talent, entrepreneurship and start-ups;
- a local focus within partnerships involving larger universities;
- expertise around the needs of SMEs and micro-business with respect to issues of scale, sustainability and resource;
- translational research (benefiting the complex UK research and innovation supply chain);
- working with public and private partners in specialist sectors (e.g. food security, the creative industries, health and social innovation);
- co-creating innovative curricula and promoting graduate entrepreneurship and employability in key sectors at the sub-national level with local employers;
- expertise and consultancy (including working with microbusinesses and SMEs);
- collaborating with diverse bodies of users at the local level;
- networks and identifying best practice for the future;
- provision of facilities for local business and community use.

This catalyst role has been emphasised by BIS in their *BIS Economics Paper No 15*, in support of the Government's Innovation and Research Strategy. It speaks particularly to the strengths of smaller, specialist and locally-facing institutions, and how they work to support growth in regions where access to research and innovation knowledge is limited, and/or in sectors where their expertise is particularly required:

- *'Universities create capabilities in teams and individuals, both in terms of particular areas of expertise as well as wider abilities to identify and address problems; that is, they are a major channel of investment in high-level skills'*;

- *'Universities maintain knowledge bases via teaching, via data storage and transmission, and via the maintenance of libraries and databases'*;
- *'Universities develop new forms of problem-solving and search heuristics that enable firms to address new problems in new ways; that is to say, they not only solve problems, they develop new ways to address them'*;
- *'Universities engage in reactive problem-solving via a wide range of formal and informal collaborations with firms. This is often done via informal contacts rather than formal collaboration agreements, and therefore does not normally show up on the usual indicators for university-industry interaction.'*

Examples from GuildHE members' institutions include:

- **Royal Agricultural University**'s work with local government and business in Gloucestershire to support rural enterprise in the region, including a collaborative project with South West Food and Drink Ltd looking at ways of producing an integrated strategy for the **development of sustainable food supply chains**, and addressing issues of waste reduction, quality and efficiency; and the innovative 'First Milk Academy', begun in 2007, which focused on providing a learning and development facility to assist members to improve their business performance.
- **Harper Adams University: precision farming research centre**. Supported through the HEFCE Catalyst Fund, this centre in Shropshire, creating over 150 jobs, sits alongside the university's commercial and research driven dairy unit with its emphasis on sustainable and environmentally-aware food production practice. Both are supported by the University's commitment to collaboration with agri-business partners; the innovative 'Open Fields' repository provides another example of an accessible, open-source, cross-disciplinary library containing translated, practical research-based information on food, farming, environment, energy and rural business.
- **University for the Creative Arts**: the Centre for Sustainable Design in Surrey delivers the first dedicated support in the region for **eco-innovation (resource-efficient low carbon innovation) in small businesses**. The Centre delivers research and KE on standards and methods for eco-innovation, as well as supporting the development of sustainable solutions and support for companies' strategic development in this field.
- **St Mary's University College Twickenham's health enterprise activity**, including the Centre for Bioethics and Emerging Technologies, the Endurance Performance Centre, and the Centre for Workplace Health, the latter which works with partners including the British Heart Foundation, Carphone Warehouse, Sainsbury's, Bovis Lend Lease, Age Concern, St Dominics Sixth Form College and Thompson Reuters. This high profile and successful Centre, which recently secured additional funding from public and private sources, provides a good example both as a sustainable project and KT good practice, generating income and surpluses and with significant outreach benefits by improving the effectiveness and efficiency of workforces.
- **Norwich University for the Arts**'s work in conjunction with large and small media companies in Norwich and North Norfolk. This KE activity supports **innovative communication solution and improvements** to the design of interfaces, and allows local businesses access to training and resources held by the College, and also allows students at all levels to gain hands-on experience at the coal face of communication research and development.
- **Bishop Grosseteste University**'s role in founding the Sky Business Centre in Lincoln, where the **capacity to incubate and support start-ups was previously limited**. In other regions or localities in the UK this business incubation hub – built with joint investment from University College reserves, HEIF, ERDF and the County Council – might not have a great deal of impact; in Lincoln it has the potential to make a real difference to local resources and growth potential, and to lock both knowledge and investment into the local economy (see the 'local multiplier effect' above).

- **Networks locally and regionally within particular disciplines**: examples include Plymouth College of Art's "Artsmatrix" (http://artsmatrix.plymouthart.ac.uk/); Harper Adams University College's Women in Rural Enterprise (WiRE) network (http://www.wireuk.org/) and University for the Creative Art's eco-i-net (www.cfsd.org.uk/eco-i-net).

WORKING TOGETHER – THE NEED FOR NEW AND DIVERSE COLLABORATIVE MODELS

No one model for collaboration will work across the diverse range of sectors, technologies and regions with which this Review is concerned. To leverage the greatest impact from collaborations between universities, LEPs and business, any overarching strategy must recognise this and allow adaptation to local circumstances. **Identifying the best collaborative arrangements is most effectively achieved at the local level**. Models which currently work for smaller locally-focused and specialist HEIs include:

- **collaborative networks** bringing several HEIs together to work with external partners, with self-organisation by the HEIs involved – e.g. the Consortium for Research Excellence, Support & Training (CREST);
- **'hub and spoke' models of co-working** with neighbouring HEIs and other stakeholders within a region. As well as LEPs, this can include local Further Education colleges, NHS and third sector organisations. This type of collaboration can also greatly enhance local participation in post-compulsory education and training, progression to higher levels of skills-acquisition, and the delivery of specialist skills to local people.

Alongside this localised approach, **Government could play a supportive role in facilitating the sharing of examples across regions**, to allow for their adaptation in other places as appropriate.
Any new system or systems for providing more detailed and robust illustrations of interactions and collaborations with industry and the Third Sector will need to take into account the particular vocabulary and conceptual framework of partnerships in key sectors, as well as the resources available across existing and potential partnerships. The goal is a light-touch system that avoids being onerous to HEIs and stakeholders, relying on data mined from existing networks and systems wherever possible.

SKILLS AND EMPLOYABILITY

Also central to ensuring long-term innovation is **allowing local business access to HE resources with the aim of increasing the employee skills and employability of graduates**, and employers working in specialist, high-growth areas. Case studies in this area include:

- **University for the Creative Arts**'s partnership with architects Grieg and Stevenson, incorporating research and teaching on the Interior Architecture and Design course with the aim of **enhancing digital archiving and communication models**, which resulted in a 23% increase in profits for the partner SME.
- The **University of Worcester** is working with local organisations, including voluntary and community organisations (VCSOs), to **facilitate student engagement with school-age learners, young adults and employers**, in fields related to the university's academic specialisms. This work includes: learning through sport (initiative touching over 10,000 children and young adults including young offenders and disabled people); theatre in schools (touching 5,000 pupils so far); "earning while learning" (650 students employed last year including sports coaching in after-school clubs); and delivering extra support for local VCSOs.
- The **Arts University Bournemouth**'s project, funded through HEFCE's Catalyst Fund, to extend the University's existing strong collaboration with Framestore and the wider visual effects industry. The UK has led global growth in visual effects, and the project aims to help maintain this lead against strong international competition through the development of skilled and experienced people. The 'Building the Bridge' project will include **mentoring of higher education (HE) students** by the visual effects industry, **professional development of visual effects employees** and **academic-industry staff exchanges**, together with a central employability hub.
- The 'Ideas Factory' at **Norwich University of the Arts** delivers KE and consultancy projects in art, design and media. One example is its graphic design work with Archant, one of the UK's leading regional media businesses, to re-design the classified advertising section for Norfolk's biggest-selling daily newspaper and another publication. Students, with academic support, worked with Archant on this live brief as **part of an innovative HE course**, and were hired by the company for a **paid intensive internship** which drew on academic support from the university, thus sustaining the HEI-business relationship and **retaining successful students in the region**.
- **Support for student enterprise** in Cirencester through **Royal Agricultural University Entrepreneurs**, including collaboration with a local ale company, to further develop the range and retail of the existing alcoholic drink range 'Muddy Wellies', which is marketed and sold by the university's students and staff. This included working as part of **UnLtd**'s social enterprise network. All profits from drinks sales are reinvested in the student enterprise fund.
- **Liverpool Institute of the Performing Arts**' partnership with the National Centre for Guidance in Education (NCGE), which includes translational research on the ways in which performance graduates can contribute to, for example, **workforce training and mental health support programmes**.

CONCLUSION

The UK HE sector is diverse, and so is the UK innovation chain that depends on its ability to enrich national and local research and innovation cultures and to provide graduates at all levels with the skills necessary to consolidate and grow the UK economy**. Ensuring that SMEs and micro-businesses have access to the specific support and knowledge they need, and are able to secure sufficient scale through partnerships with HEIs**, is and is likely to become ever more important to the UK's innovation chain and the nation's ability to grow new ideas and new business. **Locating the best models** to sustain

interactions and benefits to localities, and **looking at ways in which existing resources might be joined up** to the benefit of diverse stakeholders – for example, identifying ways to build collaborations between institutions and with new partners such as the Local Enterprise Partnerships (LEPs) – is important not only for small, specialist and regional HEIs, but to the HE sector more generally, as all institutions attempt to maximise partnerships and the transferable value of knowledge and resources.

Small, specialist and locally facing HEIs can increase and sustain their contribution to regional economic growth. HEIs working with public and private partners in **specialist sectors**, including food security, the creative industries, health and social innovation, have a unique potential, enabled in part by new technologies, to collaborate with diverse bodies of users: students and graduates, business and providers of public services. They are also engaged in **innovating curricula and promoting graduate entrepreneurship and employability in key sectors**, and thus play a key role in subnational economic development. GuildHE Member institutions possess a strong track record of **generating translational research**, with benefits to the complex UK research and innovation supply chain. This is particularly the case with respect **to collaboration between HE and SMEs/micro-businesses**; the similarities between small, specialist and regional HEIs and this vital portion of business-innovation sector make them natural partners for research and skills collaborations.

It is **not just about world class** science and research. Of course this is and must remain a major strength and asset to the UK. However, it is limiting to prioritise this as the only, or indeed the most important part of stimulating either local or national growth. Stimulating and/ or supporting local economic growth will often depend on other factors - on interaction, information and communication for example. **Sometimes only small shifts in access to knowledge, capacity, skills or technology can make a significant difference in a location or sector**. This is important in the understanding of local as well as national comparative economic advantage.

Equally it is important to **move beyond a 'laissez faire' model** of science and research and of human capital – where institutions and policymakers are uninterested in the utilisation or deployment of research or skills. This is what we mean by a **new 'supply and demand' model and a more sophisticated understanding of how innovation happens and how innovation eco-systems can be created and maintained**.

This is much more difficult than it sounds, as a 'disinterested' supply side model of institutional autonomy set within a neo-liberal economic framework with high and stable levels of funding has been a relatively easy place to be for universities. Politically, the need for growth has revived interest in demand side policies and economic thinking – on skills utilisation, sectoral industrial policy and on applied research. This is an important shift and a welcome one, but it creates challenges at the institutional and policy level. The Witty Review allows us an opportunity to do so.