

# Paper to the Enterprise and Business Committee Innovation Advisory Council for Wales

## Introduction

1. The purpose of this paper is to set out written evidence on the progress of the Innovation Advisory Council for Wales and to highlight the importance of the innovation agenda in Wales.

## Role of the Council

2. The Innovation Advisory Council for Wales (IACW) was launched in October 2014 and consists of representatives from public services, higher education and business to reflect the wider range of views on innovation.

3. The Council was set up to advise the Welsh Government on a broad range of innovation matters to help grow and sustain Wales' economy and improve the wealth and wellbeing of the people of Wales. It provides advice and updates the Welsh Government on emerging trends and developments, and aims to identify areas of existing strength and future opportunity using the Smart Specialisation approach identified by the European Commission.

4. IACW provides advice on innovation strategy, policy and priorities to allow the Welsh Government to make effective use of available means of support in formulating and implementing policies to support the full range of its objectives.

5. The Council has held 4 meetings to date with a further meeting planned at the end of November. In addition to the 4 official meetings, members are involved in work streams; provide advice to WEFO on potential EU funded projects; and have met the Minister for Economy, Science and Technology on several occasions to provide an update on the progress of the Council.

6. IACW aim to improve Wales' innovation profile on a world wide basis.

## Plans for the future

7. At the inaugural meeting, IACW decided on the following priorities that could enhance innovation in Wales:

- International Collaboration – to ensure Welsh organisations collaborate effectively to improve Wales' share of UK and European grant funding; and promoting Wales as a distinctive and connected innovation nation and a valued partner for collaborative projects;
- Measures and brand – understanding the true state of innovation in Wales by developing better – and real time – measures of innovation and its impact;
- Centres – aiming to increase RD&I in Wales through developing and supporting applied research centres; and helping Innovate UK to implement the Hauser Review

by identifying business and research strengths in Wales for consideration as potential future applied research centres;

- Public sector – working with the Public Services Innovation Lab, Y Lab, to identify opportunities to be more innovative in the delivery of public services, and providing greater scope for business to generate innovative solutions.

8. The Minister for Economy, Science and Technology attended the May Council meeting. Several recommendations were made to the Minister, including investigating the creation of a National Innovation Body (NIB) for Wales. It is argued that NIBs have had a positive impact in other EU regions. The Minister proposed an initial scoping study be undertaken.

9. IACW commissioned Nesta and Cardiff University to undertake some research looking at options for the scope, services and governance arrangements of a National Innovation Body for Wales. The report analysed worldwide NIBs to understand the role, responsibility and governance regime that may be suitable for Wales. The paper was supported by the Council and was presented to the Minister in October.

10. The Minister welcomed the paper and requested further research be commissioned to outline the role, responsibility and resource required for a Wales NIB. This report will be completed and presented to the Minister in the new year. In parallel to the report being prepared, IACW will be carrying out stakeholder engagement to solicit views and support from key individuals from both business and cross government on the concept of a NIB in Wales.

11. IACW Chairs are in the process of producing an annual report highlighting the progress made by the IACW over the last year. The report will focus on highlights, progress update and actions already achieved.

## Achievements of the Council

12. As identified above, 4 innovation themes were identified that could enhance innovation in Wales. Key projects that Wales could collectively focus on from an innovation perspective have been narrowed down. Business cases are currently being developed for each theme.

13. The centres group identified 3 areas of research expertise and business strength in Wales and submitted a brief proposal to Innovate UK on the areas for future Catapults. The areas identified include Medical Technologies, Advanced Structural Materials and Compound Semiconductors. The proposals were well received by Innovate UK. Medical technologies and Advanced Structural Materials were added to the long list of future Catapult areas. Compound Semiconductors was added to the short list of future Catapults and is undergoing active consideration. Consultation has been taking place in the form of consultation events, where Wales has been well represented.

14. IACW has requested an increase in the sample size of Welsh companies in the UK Innovation Survey. The deadline for the upcoming survey has passed, but the increase in the number of companies surveyed in Wales will be included in the following survey.

15. IACW has commissioned the Innovation Dashboard Wales (Arloesiadur) project. This project aims to capture real time mapping and changes which will provide policy makers with a better understanding of developments in the Welsh innovation system, using novel mapping methodology to identify Wales' existing and emergent areas of smart specialisation and evaluating appropriate policy interventions. The Dashboard project is a global first which is likely to generate lots of interest among other nations and regions looking to systematically grow their innovation capacity. Council members played a key part in forming this project.

16. A working group has been created between IACW members and WEFO to provide advice to WEFO on the strategic fit of potential European projects. The advice received so far from the working group has already helped tailor proposed projects to increase impact.

### Importance of innovation to the creation of jobs and economic growth

17. The BIS Innovation Report 2014: Innovation, Research and Growth suggests "Innovation is the engine of economic growth and improved living standards. Innovation is vital for prosperity. Using knowledge effectively enhances productivity and welfare and creates new UK market opportunities. Innovation has been, and will continue to be, a key driver of UK growth and economic prosperity, accounting for up to 70 per cent of economic growth in the long term. It enhances health and welfare and helps us to address key challenges facing society such as ensuring clean and sustainable energy and food security, and responding to demographic change."

18. The EU's Europe 2020 Flagship Initiative Innovation Union states, "As public deficits are reined in to repair public finances and as our labour force begins to shrink, what will be the basis for Europe's future competitiveness? How will we create new growth and jobs? The only answer is innovation, which is at the core of the Europe 2020 Strategy agreed by Member States at the June 2010 European Council, underpinning the smart, sustainable and inclusive growth the Strategy is aiming for. The "Innovation Union" is one of the seven flagships announced in the Europe 2020 Strategy. It aims to improve conditions and access to finance for research and innovation, to ensure that innovative ideas can be turned into products and services that create growth and jobs."

### Emerging trends and latest developments in innovation in Wales

19. There are a number of areas in which Wales is developing its innovation strengths. These include:

- Precision Medicine sector – The Precision Medicine Catapult announced in October that Cardiff will be one of the six locations identified to host a regional centre of excellence network. The centre will act as a hub for regional precision medicine activities within the UK-wide network;
- Compound semiconductor – Funding has been secured to develop the Compound Semiconductor Research Foundation to support research, development and innovation within the area which is the first of its kind in the UK and has the potential to become a leading cluster in Europe;

- SPECIFIC Innovation and Knowledge Centre (IKC) – SPECIFIC aims to address the challenge of low carbon electricity and heat by enabling buildings to generate, store and release their own energy, in one system, using only the energy from the sun;
- IBERS is an internationally recognised research and teaching centre providing a unique base for research in response to global challenges such as food security, bioenergy and sustainability, and the impacts of climate change;
- The Aberystwyth Innovation and Enterprise Campus at IBERS received £35.5M funding from WEFO and the BBSRC. The infrastructure, facilities, advanced technology expertise will also help businesses translate innovations and investments in basic plant science, food supply chain, nutrition and environmental research into new products, processes and services;
- Public Services Innovation
  - SBRI – funds the development of innovative solutions to challenges faced by the public sector, leading to better public services and improved efficiency and effectiveness;
  - Y Lab – Cardiff University, Nesta and Welsh Government established Y Lab to devise and test new solutions to major public services challenges in Wales. Academics in Cardiff University and innovation experts in Nesta will be working to model different approaches to society’s challenges in action, helping to make sure that the public sector responds in the best possible way to deliver effective and efficient outcomes;
- Health innovation
  - Life Science Hub and Fund - brings together academic, business, clinical and professional services and funding organisations;
  - GE Healthcare Innovation Village - designed to help life science start-ups and spin outs;
  - Health Technology Challenge - The Challenge aims to develop cross sector collaborative research projects focusing on medical technologies that translate innovative research in material sciences and engineering towards bio-medical applications.
- The Welsh Government pioneered the Open Innovation pilot project to encourage innovation collaboration between large and small businesses and other potential partners, for the benefit of the Welsh economy.

## Strengths and weaknesses of Wales as a place to innovate and undertake R&D

### 20. Strengths

- Wales has pockets of world class expertise in academia in areas with commercial potential;
- Wales has a number of key multi national ‘anchor’ companies and clusters of smaller companies in niche areas;
- Wales is part of the UK Research Base which is considered to be world class in e.g. science and engineering graduates;
- Recent data indicates a well developed and effective knowledge transfer system between HE and business. Welsh universities performed extremely well in the REF results on the impact of research measure;

- Funding is available to support innovation including dedicated structural fund projects and funding for support to companies and academia;
- Growing group of incubators especially in South Wales – ICE, TechHubs, Indycube and others in development;
- New Accelerated Growth Programme offers individual support to high growth businesses, funded by structural funds.

#### 21. Weaknesses:

- Lack of PLCs, company HQs and R&D intensive businesses which impacts on the draw down of Innovate UK and H2020 funding;
- Few venture capital/private equity players in Wales;
- No Higher Education Innovation Fund in Wales;
- Weak external perception of Wales as a base for knowledge based companies;
- Limited specialised facilities in some areas e.g. Wetlabs;
- Low economic activity, low GVA per head, low wages and lack of employment opportunities;
- Lower business expenditure in R&D than OECD average reflecting the above company demographics.

### Effectiveness of Welsh Government support for innovation and R&D and The impact of EU funding initiatives on innovation activity in Wales

22. Welsh Government offers dedicated programmes of support for RD&I. Support in England is only available from Innovate UK, whereas in Wales, organisations have the chance of accessing the support from both the Welsh Government and Innovate UK.

23. Combined totals for the 3 European funded RD&I programmes from 2007-2013 indicate:

- £32m investment induced
- £23m profit benefit
- 2,184 enterprises assisted and 115 enterprises financially assisted
- 733 products/processes registered and 1,020 products/processes launched
- 561 collaborative R&D
- 443 jobs created

24. There are signs that the poor performance in business R&D in Wales is improving.

25. There has been an increase in Innovate UK spend in Wales. Total grant offers made in Wales last year was £7.9m. In the first 6 months of this year, total grant offers have already exceeded £13m, with further announcements expected in the Autumn.

26. Wales recorded the largest reported increase (37%) in BERD expenditure as detailed in the latest 2013 results (following strong 2012 results).

27. According to the UK Innovation Survey 2013, 46% of firms in Wales are innovation active. Wales is the leading UK nation.

## Impact of the Council on Welsh Government innovation policy

28. The Council has provided independent advice and challenge to the Welsh Government's innovation policy. The Council has instigated a number of new work areas, such as measurement of innovation, the setting up of applied R&D centres, promoting public sector innovation and produced a series of recommendations for the Minister.

## The use of the 'smart specialisation' approach in Wales

29. A sub-group of the Council has provided assistance to WEFO by assessing all potential ERDF funded innovation projects for a fit with Wales' 'smart specialisation' priorities. The Council has also been asked to provide advice on a Welsh approach to the 'Entrepreneurial Discovery Process' intended to identify emerging areas of specialisation.

## Progress to date of 'Innovation Wales'

30. At the first meeting of IACW a delivery plan for Innovation Wales was presented to the Council. Substantial progress has been made against the 14 'Action Areas' and the Council will be presented with an updated delivery report at the next meeting.

31. However, three particular areas of progress in the last year have been:

- Action Area 1: Collaborating with external funding bodies.  
This year has already been a record year for winning funding from Innovate UK, and work to attract Catapult activity to Wales and to support the SPECIFIC IKC in Baglan has brought success.
- Action Area 11: to develop a culture of open innovation.  
The Welsh Government initiated a support programme with a number of Anchor Companies, such as General Dynamics, GE Healthcare and Airbus to develop innovation within their supply chains. The approach has been well received by the businesses and has been replicated by Scotland.
- Action Area 12: Encourage the public sector to support innovative methods of procurement.  
The SBRI Catalyst Fund has supported projects with a range of public sector bodies such as Health Boards, NRW, South Wales Police, Cardiff Council to help them find innovative solutions to their problems (e.g. increasing contact time for nurses with their patients). The Welsh Government team has provided evidence to the Cabinet Office in Whitehall on the success of the SBRI approach in Wales, and are also sharing best practice with colleagues in the other Devolved Administrations.

32. IACW will continue to work with the Public Services Lab to trial new ways of bringing business innovation into public services in Wales.