An Innovation Strategy for Wales – Logic Model

Welsh Government is developing a new integrated Innovation Strategy for Wales. This decision followed research commissioned by the Innovation Advisory Council for Wales and an extensive round of Stakeholder Engagement on the findings. The strategy will set out the direction and overarching priorities for innovation in Wales across sectors, the various Departments, delivery agents and Ministerial portfolios, and will focus on delivering the Programme for Government.

The Logic Model (currently in draft) will underpin the development of the strategy. It will be used to determine the outcomes we want to achieve from our innovation efforts and activity, informing the evaluation plan and target setting for the strategy, and communicating to our partners our main areas of focus.

Development has been informed by a number of key documents (Scoping the future of Innovation Policy in Wales (gov.wales), AMPLYFI Research - Global, EU and UK Innovation Comparators - March 2021 (gov.wales)), the Innovation Advisory Council for Wales, a working group internal to Welsh Government with representation from across Departments, an external stakeholder group and ongoing targeted stakeholder engagement. This next stage is seeking broader input from all stakeholders in Wales. Questions we seek answers to include:

Are there different activities that stakeholders want?
What measures exist not captured here?
Have we captured all of the desired outcomes?

Feedback to Innovationstrategy@gov.wales

Vision

- **Prosperous** – an ecosystem with players that have the skills and ability to innovate by introducing new products and services to market, adopting new technologies and processes, and engaging in collaborative activity with the public, third and academic sectors as we move towards an increasingly digital and greener economy focussed on sustainability.

- **Resilient** – innovative communities that seek to adapt and diversify to improve and maintain a healthy natural environment. Ecosystem players innovate locally to protect the natural environment.

- **Healthier** –A Health and Social care system that collaborates across Industry, Academia and the third sector to deliver improved healthcare value by developing, sharing, procuring and adopting innovative practice and technology. This approach will prevent illness, support people to manage their own health and well-being and enable people to live independently for as long as they can - through the provision of integrated health and social care services which are delivered closer to home.

- **More Equal** – a transparent innovation ecosystem that ensures inclusivity in its activity, reflecting the diverse nature of the Welsh population. Equality is reflected in the demography of the people undertaking Research, Development and Innovation, as well as the geographical distribution of investment and the development and stimulation of innovation skills and talent.

- **Cohesive Communities** – collaboration amongst players, using the latest innovations and technology, to align activities towards delivering for our communities in Wales.

- **Vibrant (Culture and Welsh Language)** – innovation as an enabler to support delivery of our target of 1 million Welsh speakers by 2050, ensuring our efforts and investments result in products and services that are multi-lingual.

- **Globally Responsible** – decision making processes that take account of the impact of our innovation activities on global wellbeing, as well as a collaborative approach to working in partnerships internationally to share knowledge, skills and undertake projects with a social purpose e.g. acting together to tackle climate change, healthy ageing.

Innovation in Wales

Inputs

- Investment Funding
- UK Funding
- International Engagement
- Staff Resource & Expertise (internal)
- Expertise (external)
- Skills and Learning Opportunities
- Education – Curriculum
- Knowledge Exchange
- Information Provision
- Innovation tools and resources
- Communications
- Events
- Incentives
- Competitions/Awards
- Branding
- Levers – Contracts, Awards
- Digital Infrastructure

Activities

- Flexible, complimentary funding streams (R,D&I)
- Private Finance
- Information & Advice
- Horizon Scanning
- Consultancy/Support
- Proposal Development support
- Consortia Building
- International Partnerships
- Peer to Peer Networks & Clusters
- Investment & Support Portal
- Cross Sector Collaboration
- Commercialisation Support
- Tech adoption and diffusion
- Public sector income streams – sustainability
- Challenge Led Activity
- Student Awards/Activity in Education Settings
- Knowledge Transfer/Exchange
- Supply Chain Development

Audience/Actors

- Innovators/Entrepreneurs
- Private sector - Industry
- Third sector - Social enterprises, charities, NGOs
- UK Government
- International Ecosystems
- Public Sector – e.g. NHS, LAs
- City and Growth Deals
- Welsh Government
- Citizens
- Children and Young People
- Research Institutions
- Education Institutions - Schools, FE, HE
- Private Finance Providers
- Commission for Tertiary Education Research

Outputs

- Demographic Data
- Funding Awards WG, UK, EU
- BERD, HERD, GOVERD
- Third Sector R,D&I Spend
- Research Income Awards
- Matched Investment (PSI)
- New IP Registered
- Companies/Sectors Engaging in Innovation Activity
- Profit Generation
- Energy Generation
- Carbon Reduction
- Public Sector Procurement Spend
- PROMs/PREMs (VBH)
- Public Sector Expenditure – efficiency savings
- Citations
- Presence of Digital Connectivity & Technology
- People involved in skills development/Awards

Outcomes

Prosperous
- Increased new Products/Services to domestic and international markets
- New enterprises/jobs - net employment gain
- Increased spend within Welsh Economy
- Increased spend on R,D&I
- Increased Research Income won
- Increased R,D&I activity in Wales
- Improved engagement with Innovation Skills
- Improved productivity (GVA)

Resilient
- Reduction in Carbon Emissions
- Improved Biodiversity

Cohesive
- Greater Cross-Sector Collaboration
- Improved community connectivity

Healthier
- Increased Adoption of Innovation
- Improved Patient/citizen Outcomes
- Improved Patient/citizen Experience
- Improved Resource Efficiency

More Equal
- Fairer Distribution of Investment
- Diversity in Innovation
- Increased New to Innovation Companies

Vibrant
- Multi-lingual development as standard

Globally Responsible
- Informed Decision Making and Activities
- International Collaboration on Shared Challenges

Cross cutting impacts and influences: COVID-19 and Brexit, UK Innovation Strategy, Strengths, Place

Innovation in Wales

Inputs

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- Levers – Contracts, Awards
- Digital Infrastructure

Inputs

This sets out the required inputs needed to develop the innovation ecosystem in Wales, and to deliver the desired outcomes. These inputs have been identified based on previous provision which has been subject to evaluation and feedback. We have also engaged with stakeholders from across sectors and gathered information on their experiences and what they require. Further detail on these inputs is included below:

- **Investment & Funding** – this includes grants delivered through the Wales based infrastructure, UK and International sources, as well as private finance. Investment in innovation is a key ask from all sectors – public, private, academic and third sectors are often recipients of funding as well as investors themselves.

- **Expertise** – this can be provided from within programme structures (not restricted to Welsh Government) as well as external sources through advisory services and contracted provision. Welsh Government currently has Innovation Specialists and Business Development Managers in place to support businesses through the support landscape. Similar roles also exist to provide support in other sectors e.g. the recently formed Wales Innovation Network is in place to support capability and capacity for academic proposal development.

- **Education, Skills & Knowledge** – The new curriculum for Wales includes opportunities for the development of entrepreneurial skills. This input also recognises the broader need to develop and nurture innovation skills throughout the life course to support people to realise their potential as entrepreneurs and innovators whether they be in industry, public or third sector. In addition to developing individuals, an additional input will be capability building across consortia.

- **Information Provision** - The UK Innovation Strategy commits to develop a portal between IUK and BBB to support businesses to navigate the funding landscape, we would like to see the Welsh offer as an integral part of that portal to provide users with a single place. This very much reflects the view from stakeholders that the landscape is too complex and often businesses do not know where to head for support.

- **Levers** - We currently use the Economic Contract to set out in writing what businesses should do to meet requirements set out by Welsh Government e.g. Fair Work and sustainability as part of funding awards. Our innovation activity includes grants and procurement, these are levers to ensure innovation activity delivers the Wales we want in terms of equality, the circular economy and other policy commitments.

- **Communications and Branding –** In order to ensure we are offering inclusive services it is vital that all communications activity is far reaching and our branding is fit for purpose.

Innovation in Wales

Activities

- Flexible, complimentary funding streams (R,D&I)
- Private Finance
- Information & Advice
- Horizon Scanning
- Consultancy/Support
- Proposal Development support
- Consortia Building
- International Partnerships
- Peer to Peer Networks & Clusters
- Investment & Support Portal
- Cross Sector Collaboration
- Commercialisation Support
- Tech adoption and diffusion
- Public sector income streams – sustainability
- Challenge Led Activity
- Student Awards/Activity in Education Settings
- Knowledge Transfer/Exchange
- Supply Chain Development

Activities

The activities listed build upon an Innovation Support mapping exercise carried out as part of our involvement in the EU programme, Cohe3sion, and reflect much of what we currently deliver through our infrastructure across the public sector, academia and our private sector delivery partners. Changes, and in some cases wholesale redesign of activities, will be made based on learning and stakeholder feedback.

- **Funding Streams** - feedback from all sectors was clear on the need for flexibility in funding delivery to support all stages of R,D&I. We will explore delivery mechanisms further as part of strategy implementation but industry feedback focussed on the need for finance and investment to be available to avoid the "Valley of Death", public sector was keen to see funding for implementation of innovation.

- **Information and Advice** – these were seen as key to support innovators from all sectors to navigate the complex funding landscape. Where possible we should be seeking to simplify, however much of this remains outside of our control.

- **Network and Consortia Building** – Stakeholders spoke of the value of peer networks and how this has enabled the development of consortia around shared interests and challenges. A great example of this is in the area of Compound Semi-Conductors which has benefitted hugely from the formation of the cluster.

- **International Partnerships** – Opportunities continue to arise for Wales involvement in partnerships with regions and countries from across the EU, and wider world. These opportunities often come with funding requirements, and opportunities for the development of funding proposals. We will consider opportunities based on the priorities set out in our Programme for Government.

- **Public Sector Income Streams** – Part of the feedback from the NHS is the need to develop income streams out of innovation activity in order to generate a sustainable source of funding to support adoption and further activity.

- **Challenge Led Activity** – Wales has previously led the way in the use of challenges as a procurement mechanism. Our activities have grown and we have seen several public sector bodies use challenges as a mechanism to partner with industry through short sharp events such as Hacks and the longer term projects through the Small Business Research Initiative. We are engaging on UK Government Procurement Reform to inform our use of this approach in the future.

- **Student Awards** – Through our stakeholder engagement we have heard about the value of several programmes to grow and nurture innovation skills in school children. There is also a successful Innovation Awards programme for GSCE and A Level students. We will seek to build a support system around this to continue to nurture those skills as students move through the education system and/or into employment.

Innovation in Wales

Audience/Actors

- Innovators/Entrepreneurs
- Private sector - Industry
- Third sector - Social enterprises, charities, NGOs
- UK Government
- International Ecosystems
- Public Sector – e.g. NHS, LAs
- City and Growth Deals
- Welsh Government
- Citizens
- Children and Young People
- Research Institutions
- Education Institutions - Schools, FE, HE
- Private Finance Providers
- Commission for Tertiary Education Research

Audience/Actors

The diverse and broad range of groups demonstrates how far reaching R,D&I activity is. Engagement on the strategy is reflective of this and recognises the multiple roles many groups play as both innovators and as users of innovation, and as funders of and investors in innovation activity.

Our commitments to Equality, Diversity and Inclusion are reflected in our engagement on strategy development, and will be reflected in our implementation of the strategy.

Innovation in Wales

Outputs

- Demographic Data
- Funding Awards WG, UK, EU
- BERD, HERD, GOVERD
- Third Sector R,D&I Spend
- Research Income Awards
- Matched Investment (PSI)
- New IP Registered
- Companies/Sectors Engaging in Innovation Activity
- Profit Generation
- Renewable Energy Generation
- Carbon Reduction
- Public Sector Procurement Spend
- PROMs/PREMs (VBH)
- Public Sector Expenditure – efficiency savings
- Citations
- Presence of Digital Connectivity & Technology
- Number of People involved in skills development/Awards

Outputs – What are we going to measure?

This sets out what we will measure in order to determine whether we have met our objectives, this section will form part of our evaluation plan for the strategy. Sources of data include:

- **Demographic data** – this will be collected as part of all programme delivery activity, and will be analysed to inform how we adapt activity to ensure the greatest reach.

- **Funding awards and Spend** – this will be measured through our own data sets and those of delivery bodies such as City and Region Deals. This will include R,D&I activity from across all sectors, and can be further broken down by place. We have an existing data sharing agreement with Innovate UK which provides access to funding awards and "blue zone" projects – these are projects which pass the threshold for funding but for which there is no budget available. We will also use official data sources such as BERD, HERD and GERD to benchmark our expenditure across sectors, against the other UK Nations.

- **Companies Engaging in Innovation –** We will use the UKIS Survey data to measure companies engaging in innovation, and those new to innovation activity by sector. This is the dataset informing our national Indicator for the Wellbeing of Wales (Wellbeing of Wales: national indicators | GOV.WALES and UK innovation survey 2019: Headline findings (publishing.service.gov.uk)).

- **New IP Registered** – Previous data collection has focussed on Patents as an indicator as determined by ERDF funding requirements. Feedback from a number of programmes has demonstrated that IP needs to measured much more broadly.

- **PROMs/PREMs –** We will follow the same approach taken by Value Based Healthcare and measure value using patient outcome, patient experience and cost efficiency.

- **Carbon Reduction –** as part of our commitment to Net Zero and Climate Change we will work collaboratively with stakeholder, such as WRAP Cymru, to develop standard measures for baselining and measuring the impact of our interventions on Carbon Reduction. This will include private and public sector activity – development and adoption of innovation.

- **Renewable Energy Generation –** As part of our investments we will measure the levels of energy generated, this will be a longer term measure. Other measures such as new products/services, IP protection will also be relevant to renewable energy activity.

- **Innovation Skills –** Skills data will be collected as part of several industry focussed programmes such as Media.Cymru, school based activities and Knowledge Transfer and Exchange through student based programmes.

Outcomes
Prosperous
- Increased new Products/Services to domestic and international markets
- New enterprises/jobs - net employment gain
- Increased procurement from Welsh Economy
- Increased spend on R,D&I
- Increased R,D&I Income Won
- Increased R,D&I activity in Wales
- Improved engagement with Innovation Skills
- Improved productivity (GVA)

Resilient
- Reduction in Carbon Emissions
- Improved Biodiversity

Cohesive
- Greater Cross-Sector Collaboration
- Improved Community Connectivity

Healthier
- Increased Adoption of Innovation
- Improved Patient/citizen Outcomes
- Improved Patient/citizen Experience
- Improved Resource Efficiency (NHS)

More Equal
- Fairer Distribution of Investment
- Diversity in Innovation
- Increased New to Innovation Companies

Vibrant
- Multi-lingual development as standard

Globally Responsible
- Informed Decision Making and Activities
- International Collaboration on Shared Challenges

Outcomes

We recognise the challenge with measuring some outcomes on a national scale however we will build delivery of the outcomes we want into our decision making processes. This is relevant particularly for our commitment to the Welsh Language, to be Globally Responsible and to improve biodiversity as set out in the Environment (Wales) Act 2016 e.g. we will ensure our publicly funded investments are predicated on environmental protection and sustainability.

We have not set targets at this stage, this will be further developed as part of the evaluation plan.

- **Increased R,D&I Income Won** – Linked to the new UK Innovation Strategy and emphasis on Place this outcome recognises our need to improve our competitiveness at UK and International funding opportunities. This outcome requires improved capability, capacity and collaboration across all sectors.

- **Improved Community Connectivity –** This outcome includes not only the presence of infrastructure but also it's use by communities.

- **Increased Adoption of Innovation** – This outcome sits within the Healthier chapter and reflects the role of Health Technology Wales to horizon scan, assess and measure uptake of new technologies and procedures within the welsh healthcare system (Home - Health Technology Wales).

- **Patient Outcome, Experience and Resource Efficiency –** these will become standard measures for the outcomes of healthcare innovation activities. This aligns to Value Based Healthcare and the principles of Prudent Healthcare (Home - Value in Health (nhs.wales)).

- **Fairer Distribution of investment –** linked to the Levelling Up commitments by UK Government, we are committed to seeing a fair distribution of funding and activity across the regions of Wales.

- **Diversity in Innovation –** linked to better data collection, we will monitor and adjust programmes to ensure that we are inclusive in our approach to supporting and funding innovation across all sectors.