Welsh Government

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Wales – Manumix
Innovation Policy Mix
WALES – KEY FACTS
Wales - Physical

Devolved administration. Part of the United Kingdom and the island of Great Britain

Borders - England to the east and the Atlantic Ocean and Irish Sea to the west.

Population over 3 million, 5% of the UK total.

Land area of 21000 sq/km 1,200 km of coastline

Devolved Responsibilities e.g. in Economy/Health/Education/Housing
Wales - Physical

Two ‘regions’ East Wales and West Wales and the Valleys

Three major cities Cardiff, Swansea, Newport

8 Universities

Main economic centres in east

Mid Wales predominantly rural.
Upcoming events

3rd June 2017
Cardiff - Destination
UEFA Champions league Finals
Wales: Key Facts

Economy changing from heavy industrial to service led

Total workplace GVA in Wales in 2015 was £55.8 Billion, up 3.0% on 2014. (Total Manufacturing sector c£9.5 Billion)

Workplace GVA per head in Wales in 2015 was 71% of the UK average, the lowest amongst the devolved countries and English regions. East Wales 84%/West 63%
Wales: Key Facts

Manufacturing comparatively more important in Wales than rest of UK

Many large companies have a presence in Wales, e.g. Tata, General Dynamics, GE Healthcare/Aerospace, Ford, Airbus, Toyota, BA

But business R&D low

Small number of Head Quarters

Lack of critical mass
SMART SPECIALISATION
Wales and Smart Specialisation

We have some history:
Wales was one of the 1st regions in Europe to produce a *Regional Technology Plan* in 1996
This was superseded by *Wales for Innovation* in 2003
These strategies prioritised Structural Funds spending up until 2013
Wales and Smart Specialisation: Welsh Government Policy Framework
Overriding principle:

- Innovation is vital across all parts of economy but major investments must be based on evidence of existing strengths and market opportunity.

Five key themes:

- Collaborate inside and outside Wales.
- Promote a culture of innovation.
- Innovation in government.
- Flexible support.
- Prioritisation and critical mass.
Action areas

Wales needs to collaborate and engage more productively with EU and UK bodies

Knowledge exchange and commercialisation of R&D will be given a high priority, favouring a demand led approach

The value of all types of innovation will be recognised, not only those which are technology led
Action areas

Innovation, entrepreneurship and enterprise should feature strongly in the education of young people.

Wales will present itself to the world as an attractive place to locate and grow innovative businesses.

Public sector in Wales an opportunity to support ‘testbed’ of new solutions.

Wales will develop financing products to bridge the gap between research and the deployment of new products and ideas.
Action areas

Wales will support a culture of open innovation

The public sector in Wales will support innovative methods of procurement, such as Small Business research Initiative (SBRI)

Wales will identify opportunities for a small number of major investments designed to have a transformational effect of Wales’ RD&I capabilities
Energy & Environment

Financial & Professional Services

ICT

Advanced Materials & Manufacturing

Construction

Creative Industries

Life Sciences

Tourism

Food & Farming
Wales’ Strengths

• **Advanced engineering and materials**
  - Photonics
  - Compound semi conductors
  - MRO (aerospace)
  - Functional coatings

• **ICT/Digital**
  - High performance computing
  - Broadband infrastructure
  - Cyber Security
Wales’ Strengths

• Life sciences and health
  Patient data records
  Wound healing
  e-health

• Low carbon energy and environment
  Smart living
  Eco innovation
  Marine energy
Advanced Manufacturing strategy

5 key priorities:

Globalisation – increasing trade, export and inward investment opportunities from existing and emerging markets

Innovation and Technology – encouraging and supporting Research and Development in innovative products and processes to increase and embed 'intellectual capital' in Wales

Employment – ‘future proofing’ education, skills, training and leadership to meet the demands of the 21st century manufacturing workplace

Finance for growth – syndicating risk-sharing financial packages through a combination of public and private sector funding mechanisms

Building Capacity - targeting investment in strategic infrastructure and broad-access initiatives that together create a sustainable business environment

“Car maker Aston Martin has bought the land for its new factory in South Wales.

The firm will build its new DBX model at a plant in St Athan, Vale of Glamorgan, from 2020 and will employ 750 highly-skilled workers” (December 16)
INSTRUMENTS
## WG mix and Instruments

<table>
<thead>
<tr>
<th>Categories</th>
<th>Research</th>
<th>Applied Research and Development</th>
<th>Prototype Demonstration</th>
<th>Pre Commercial Deployment</th>
<th>Commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Idea = Feasibility Studies</td>
<td>Scale up = Industrial research</td>
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<tr>
<td><strong>TRL</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
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### Business Research
- **SMART Cymru (Feasibility to Exploitation)**

#### Working with universities
- Smart Expertise & partnerships/ Knowledge Transfer Centres (KTC), Industrial Research (Collaborative R&D/ Knowledge Transfer Partnerships KTP (with Innovate UK)

#### Business Innovation
- Innovation Vouchers – Third Party Experts, Capital Investments
- Innovation Specialists – Advice, Signposting, Design etc.

### Supply chain Innovation
- Open Innovation

### Public Sector innovation
- Small Business Research Initiative SBRI (with Innovate UK)

### Outside Wales
- Horizon 2020 (TRL 1-6)
- Innovate UK SMART (TRL 3-7), competitions, Launchpads etc., Nesta programmes.
SMART (2015 – 2021)

SMART Innovation
• Pan Wales team of Innovation and IP Specialists plus framework of private sector partners providing expertise on product design and manufacturing improvement for eligible businesses.
• Dedicated Research Development Managers working with Welsh Research Institutions

SMART Cymru
• Innovation grant funding for eligible businesses accessed via Innovation Specialists.

SMART Expertise
• Support for Welsh Research Institutions to facilitate specialist technology transfer via industry led collaborative projects, accessed via the Research Development Managers
Eligibility:

- Support is mainly focused on:
  - established SMEs with 10 or more employees.
  - Smaller businesses accepted on Accelerated Growth Programme.
  - Businesses with a desire and capability to grow.
  - Larger businesses with a significant positive impact to Wales.
SMART Innovation:

- Technical & professional support at all stages of the innovation process starting with an **Innovation Diagnostic**

- Technical Advice and Mentoring through in New Product Development / New Product Introduction process

- IP advice & Exploitation of IP – IP Audits and awareness training
SMART Innovation:

- Facilitate collaboration with other businesses, networks and research organisations across Wales and UK

- Access to Welsh Government funding for the acquisition and implementation of transformational technologies that will launch new products and/or processes.

- Signposting to other Welsh Government, UK and EU innovation funding and support
Design/Manufacturing

- Manufacturing & Design health check (max 3 day, 100% funding) classified as de minimis for both SME and large companies

- Framework of private sector providers that can be tailored to the requirements of the business

- Accessed through team of Innovation Specialists
Intellectual Property

Make the most of business ideas by protecting them:

• Intellectual Property awareness:
  • Patents
  • Trademarks
  • Copyright
  • Know how / Trade secrets
  • Registered Designs

• Access to UK Intellectual Property Office IP Audits
SMART Cymru

Innovation Vouchers

- Procure technical consultancy / expertise (third party services; design, prototyping, **IP searches and registration**).

- Capital element if it represents a significant technology step for applicant (not minor incremental changes or improvements). Output from these projects should have a **transformational** change on the applicant business.
<table>
<thead>
<tr>
<th></th>
<th>Technical &amp; Commercial Feasibility</th>
<th>Industrial Research</th>
<th>Experimental Development</th>
<th>Exploitation</th>
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</thead>
<tbody>
<tr>
<td><strong>Small Limits (10–49)</strong></td>
<td>70% £15,000</td>
<td>70% £100,000</td>
<td>45% £200,000</td>
<td>50% £25,000</td>
</tr>
<tr>
<td><strong>Duration (mths)</strong></td>
<td>1 - 6</td>
<td>3 - 12</td>
<td>6 - 24</td>
<td>Up to 6</td>
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<tr>
<td><strong>Medium (50 – 249)</strong></td>
<td>60% £15,000</td>
<td>60% £100,000</td>
<td>35% £200,000</td>
<td>50% £25,000</td>
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<tr>
<td><strong>Large (250+)</strong></td>
<td>N/A</td>
<td>50% £100,000</td>
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</table>
…..‘The public sector in Wales should be encouraged to support innovative methods of procurement.

….. The Welsh Government will work to identify opportunities within Wales and collaborate with Innovate UK to facilitate SBRI competitions in Wales.

….. Value Wales will raise Welsh public sector awareness of the scope to use innovative procurement to improve outcomes.’
Innovative measures that will improve the energy

Fenceless fencing solutions

Invasive Non Native Spr

Metal Mines Remediation Challenge

Reducing Motorcyclists' Casualties In Wales

Next Generation Predictive Policing
15 SBRI Public Sector challenges to date

Lessening financial support. Move from a ‘Catalyst’ to an ‘Accelerator’

100% > 80% > 60% > 30%

- £5.2m contracts awarded
- 57 contracts awarded at stage 1
- 22 contracts awarded at stage 2 to date
- 42% Welsh businesses receiving funding
- 5 Welsh businesses successful in other SBRI competitions
- 4 Public bodies running more than 1 challenge
- 2 Non Welsh businesses now potential inward investors
- 20%-30% Gap funding secured for 3 projects project from Central Government departments
Thank you for listening

Diolch am wrando

Questions welcome