Smart Specialisation Strategy (S3) Consultation: South East Input

> **Key point: Ensuring that the national Smart Specialisation Strategy emphasises the importance of enhancing support for innovation ecosystems and clusters of distinct strength <u>at NUTS 3 level</u> – particularly through Technological Universities - both to help indigenous regional SMEs and to address rising intra-regional disparities.**

General Comments:

- **Rising intra-regional disparities within NUTS 2 regions in Ireland are well noted** in the discussion paper. These are evidenced across a range of socio-economic (incomes, unemployment, % of minimum wage jobs, etc.) and research and innovation capacity metrics (such as HERD, BERD, etc). **Ensuring that the S3 policy places a key emphasis on supporting struggling regions address these intra-regional disparities is of paramount importance**.

- While it is clear that Ireland will have to show specialisations at national level to international investors, it will also be crucial that **national innovation ecosystems and clusters link coherently to and across NUTS 3 entities.**

- **A key specific gap in the consultation paper appears to be around the potential central role for Technological Universities at NUTS 3 level.** A range of policy documents from the NDP to Future Jobs to the National Strategy for Higher Education specifically highlight the importance to regionally based clusters and driving applied research and innovation at regional level.

- The national S3 policy could be a way of driving real change in these TU entities, particularly through funding for industry-facing specialised regional innovation ecosystems. **Related to this is the need for a central role for D/Further & Higher Education in this S3 policy and associated implementation measures.** There would be a concern that without taking a broad view of regional development, a national **S3 policy could compound regional imbalances and Ireland's already centralised network of national research centres** (e.g. 8 of 16 SFI National Research Centres are in Dublin).

- Regional clusters are seen to be crucial to supporting company growth at regional level and supporting S3. <u>OECD</u> and clustering experts like Ifor Ffowcs-Williams have noted that the **best cluster functional regions are often "the commute distance, maybe an hour or so where personal relationships can be built"** – this will be crucial for engaging indigenous SMEs and for bolstering regional innovation ecosystems at the level that makes most sense to those SMEs. For example, it is unlikely that a company in Wexford would look to innovation ecosystem support in Cork (also in the NUTS 2 Southern Region) given the physical distance between the two places.

- **The national S3 policy thus needs to tease out practical elements to support specialisations at NUTS 3 level –** such a**s** sustained central funding for clusters at NUTS 3 level; supporting capital investment and personnel in research centres with clear distinct strengths; etc. **An evaluation of how existing policy instruments such as the RTCF, Human Capital Initiative, Innovation Vouchers and others are supporting distinct regional innovation specialisations could be useful in informing the S3 policy development.**

- The S3 Policy will also need to articulate how the policy will interact with **EU ERDF funding delivery** (which will also have a S3 element) and the **role of Regional Assemblies in enterprise policy**.

Section 1: Comments on Identified and Emerging Regional Strengths

The draft consultation document **identifies the following sectoral strengths for the Southern Region (including the South East):**

Identified sectoral strengths	Emerging Opportunities
- ICT - Advanced Manufacturing - Food/Agri-Tech - Automotive/Aerospace - Pharma/MedTech - Marine/Maritime - Renewable Energy - Financial Services - Design	- Renewable Energy - New opportunities in ICT (Quantum) - Advanced Manufacturing - Connected and Autonomous Vehicles (CAV) Sector

1. Q: Do you agree with the suggested areas of strength for the three Southern regions as set out above? **Are there other areas of strength to be highlighted?**

   - **Sustainable construction** – construction employs c.10% of the South East's workforce and there are clear emerging sustainability trends which can be supported as well as latent research and training capability such as the National NZEB Training Centre.
   - **Transport and logistics –** building on latent potential of the two key South East ports and the strategic location of the South East as the closest geographic location to continental Europe.
   - **Tourism** – while not covered by the Department of Enterprise, there is strong potential to support innovation in tourism products and services in this key employment sector for the South East.
   - **Health, Welfare and Sport** – the South East has a number of emerging centres of excellence in this key sector with significant employment such as the Nutrition Research Centre of Ireland; UPMC Sports Medicine Clinic; and the Community Health, Sport and Wellness Hub.

2. Q: **What, in your opinion, are the key sectors in your region**? What are the skills, assets and capabilities within your region?

   There are a number of distinctive strengths in the South East – the key challenge being that the innovation ecosystem is at relatively small scale and often underresourced in terms of physical infrastructure and personnel.

- **Pharma/ Med Tech:** Multi-national and indigenous company base supported by an ecosystem including PMBRC Technology Gateway (WIT) and Kinetic Labs, high quality lab space for science based companies.

- **Advanced Manufacturing:** Significant employment in this sector, with local industry supported by SEAM, one of the leading Enterprise Ireland Technology Gateway Centres in the country providing innovative materials science & engineering solutions. Advanced manufacturing ecosystem also includes 3DWIT, Ireland's first dedicated training facility for 3D printing and Additive Manufacturing, and the academy of Lean Enterprise Excellence based in WIT.

- **Food/ Agri:** World class brands including Glanbia, Danone, Cooney Furlong and Dawn. Research ecosystem includes the Teagasc Environment Research Centre at Johnstown Castle and the largest Teagasc college in Ireland at Kildalton Agricultural and Horticultural College. The South East is also home to the Precision Agriculture Centre of Excellence and SmartAgriHubs Regional Cluster.

- **Financial Services**: A strong cohort of shared services operations, a sizeable portfolio of international financial services companies and strong activity in the future growth sectors of Fintech/Regtech/Insurtech and the global payments sector. Supports include Ireland South East Financial Services Cluster and The Insurtech Network Centre.

- **ICT**: 6k+ ICT professionals are working within the region and companies including leading international brands IBM, Uber, Nearform and Netwatch. Industry is supported by the Walton Institute for Information and Communication Systems Science and the Crystal Valley Tech Cluster.

- **Design and creative**: The Design & Crafts Council of Ireland (DCCoI) is based in the South East and the Design+ Technology Gateway in IT Carlow offers expertise in design thinking, engineering, ICT and BioScience. Companies include the multi award winning animation studio Cartoon Saloon.

- Renewables: Renewables are a key future sector for the region with a significant wind energy opportunity existing in the Irish Sea and serviced by the two ports in the South East, Rosslare Europort and Waterford as well as energy generation plants such as Great Island and an Interconnector. A large cohort of engineering and construction companies are in existence who can support the transformation to service new green markets.

- **Tourism**: A traditional sector for the region that also has future potential as demand moves to outdoor experiential tourism that can be delivered by the region's network of greenways/blueways, walks, mountain trails and beaches. The sector is supported by a range of Tourism, Hospitality and Culinary third level courses delivered in WIT's dedicated Tourism and Leisure building.

3. Q: Which **sectors could achieve critical mass in Ireland** over the next seven years? Where are the opportunities and what needs to be done to unlock these opportunities?

Section 2: Comments on Digitalisation and Digital Transformation

4. Q: Is **digitalisation impacting your sector or region**? How?

Digitalisation is a major challenge for the South East - CSO data on Digital Skills positions the South East in the lower half of the country in terms of digital skills activities such as installing software, using Word processing software and creating presentations. In the related area of automation, a 2018 Irish Government Economic Evaluation Service (IGEES) Technical Paper assessed the degree to which automation is likely to affect the occupation profile of the workforce in Ireland. The IGEES paper found that the South East and Border regions had the highest regional risk profile to automation in Ireland while Dublin had the lowest risk level/ Furthermore, the region suffers from the highest proportion of minimum wage employees nationally. Such structural labour market problems will like make supporting digital skills an even more pressing challenge in the South East.

5. Q: Could your business or sector benefit from new digital technologies? **What support would you need to adopt these digital technologies?**

6. Q: How can we **improve the alignment of the country's ICT and digitalisation expertise, initiatives and investments**?

Section 3: Comments on Green Transformation for Enterprise

7. Q: What **opportunities can you see as arising from Green Transformation** for your sector or region?

- Offshore renewable energy – particularly through key pieces of infrastructure in the South East such as Rosslare Europort and Waterford Port

- Sustainable Construction – building on initiatives such a the National NZEB Training Centre, the UN Centre for High Performance Buildings and local companies such as Modubuild and Smartply Medite

- Solar supply chain: the South East has some of the strongest solar potential in the country and advanced planning permissions reflect this.

- Green ICT: building on research being carried out in the Walton Institute in area such as smart grids.

8. Q: What **challenges exist for enterprises trying to reduce emissions** or introduce sustainable practices?

9. Q: How **could government or enterprise agencies assist you in meeting those challenges**?

Section 4: Comments on Innovation Diffusion

10. Q: What are the barriers for innovation diffusion in Ireland? **How can these barriers be broken down? Are their regional differences in these barriers?**

11. **Q: What channels for diffusion are used by your business or sector?**

12. **Q: How can we enhance collaboration between industry and the higher education sector?**

Develop and properly fund sector specific clusters at NUTS 3 regional level.

Section 5: Comments on International collaboration on RD&I

13. Q: What areas of **research or industry sectors does Ireland have an international competitive advantage** in? How can we build on that advantage?

14. Q: In what areas or **sectors should we be concentrating our international research collaboration** activity? What supports do these areas or sectors need to be competitive on a world stage?

15. Q. How **can Ireland's regions use Ireland's international links and memberships** to support their strengths and emerging areas of future opportunity?

Section 6: Comments on actions to improve the national or regional enterprise research and innovation system

16. Q: Which RD&I initiatives have been successful for your sector/region? **Which programmes should continue? Which RD&I programmes for enterprise are not working?**

Enterprise Ireland funded 'Technological Gateways' with IOTs/TUs have achieved much. However, most lack the critical mass and resourcing to have significant impact on sectors. Many are dependent upon a small number of experts and a large number of PhD candidates as employees, rather than having their own staff members. The physical

buildings they operate from are often not modern. Some of the less successful gateways should be discontinued and new ones established where needed. There should be greater access to SFI funding for these Gateways also.

17. Q: How do we generate a **stronger, unified ecosystem approach to RD&I across the country** to strengthen the visibility of our RD&I supports?

NUTS 2 level systems have less relevance to companies, due to issues around proximity. It is crucial that support is given to supporting innovation ecosystems at NUTS 3 level and for these NUTS 3 initiatives to have clear and coherent linkages to national initiatives.

For example: A cluster or network at NUTS 3 level in say, Financial Services, can be of real support to local companies but can also plug into national networks such as Irish Funds.

The national S3 policy is an opportunity to articulate how regional ecosystems and clusters can link to these national entities in a way which supports regional development and allows Ireland to show genuine scale.

18. Q: How do **we target RD&I spend in a way which maximises impact** for the economy and which addresses the market failure evident in low RD&I in the indigenous SME sector?

More financial support for innovation ecosystem development in Technological Universities and NUTS 3 clusters which will be crucial to interfacing with SME sector across all of Ireland's regions. In certain areas – for example regional clusters - this can be done at relatively low cost and with support of local authorities where necessary.

Headline Indicators for South East

Society	Education	Vulnerability	Opportunity
10% of National Population	2nd Lowest % with Degrees	Top 3 COVID & Brexit Exposure	Quality of Life
Highest Unemployment (+2% above national average)	3rd Lowest R&D in Higher Education	Highest % of minimum wage jobs (13%)	Value for Businesses/ Families
Incomes remain below 2008 levels	63% of 3rd level students leave SE	Most vulnerable region to Automation	TUSE & Clusters

Overview of South East Innovation Ecosystem

	Outline estimate Employment in South East (2019)	Company Examples	South East Ecosystem	Link to TU priority Research Strength

Engineering and manufacturing	*4%, (8,000)* *(EI/IDA only)*	*Kent Stainless; Thermoair; CDS Metalwork; Keenan Alltech: Smartply; Honeywell; Burnside; Kel-tech*	**One of key employment sectors but still relatively small scale ecosystem** *SEAM Applied Materials;* *3D Additive Manufacturing;* *Engcore Applied Engineering;* *Engineering the South East Cluster;* *Eco-innovation centre*; RIKON and LEAN 4.0 Lab	Applied Materials
Food and Drink	*4%,(9,000)* *(EI/IDA only)*	*Glanbia; ABP Group; Dawn; ICM; Bulmers; Red Mills; Flahavans; O'Haras; Waterford Distillery; Danone*	**Small scale ecosystem but a key sector of capability in South East** *Nutrition Research Centre Ireland*; *Vistamilk for Dairy;* *Demeter Farming IoT;* *PACE Precision Agri*	Eco-innovation and agri-technology Health, Welfare, Sport and Nutrition
Medical Technologies	*2% , (5,500)* *(EI/IDA only)*	*Abbott: Boston Scientific: CR Bard: Nypro: Lake Region: Bausch and Lomb; Waters*	**Emerging ecosystem with strong latent potential and highly innovative companies** *SEAM Applied Materials; Work being done on emerging SE Life Sciences Cluster*	Pharmaceutical and molecular biotechnology
Pharma/ bio pharma	*2%, (5,000)* *(EI/IDA only)*	*Eurofins; Sanofi; GSK; MSD; TEVA; Eirgen; Clonmel Healthcare; Alby Pharma*	**Emerging ecosystem with strong latent potential and highly innovative companies** *PMBRC Pharma and Molecular Biotech;* *Kinetic Labs*; *Work being done on emerging SE Life Sciences Cluster*	
ICT	3% (5,000)	Nearform; Redhat; Scurri; Innovate; VR Education; Datapac; SE2; Netwatch	***Established and largest innovation support system in region*** - Walton Institute *Technology Gateway;* *Crystal Valley Tech cluster*	Software Engineering, Telecommunication networks
Financial Services	4% (7,500)	Funds – BNY Mellon; Carne Group; DMS Governance; Opus; Payments – Statestreet; Taxback group Insurance – Zurich, Wright; Fintech - Sedicii	**Emerging ecosystem with strong latent potential** *Ireland South East Financial Services Cluster*; *Insurtech*	Business, finance and enterprise development
Business Services	5% (10,000)	Business Processing Outsourcing such as Eistech Infosys, Emerald Contact Centre as well as smaller consultancies across a range of sectors.		
Construction	7%, (13,000)	Clancy Construction; Mythen Construction; Anthony Neville & Sons; Semiton; Duggan Lynch	**Small scale ecosystem but crucial employment area** NZEB training centre; BIM Group in WIT; Engcore IT Carlow; CIF in SE; UN Centre of Excellence in High Performance Buildings being established in Wexford.	

Arts, Entertainment and Design	5% (10,000)	Cartoon Saloon; VR Immersive Education; Red Lemonade Creative: Waterford Crystal	***Small scale but with potential*** Designcore; C4D; DCCI centres of excellence for ceramics and Jewellry and Goldsmithing	
Tourism	8% (15,000)	Hotels, restaurants and other accommodation services throughout the region	**Small scale ecosystem but crucial employment area** Culinary school WIT; Hotels Federation SE	
Transport and Logistics		Some of Ireland's largest logistics companies - leveraging Rosslare's strategic location – Nolan Transport, Roche Freight, Baku		
Health		Large hospitals but emerging opportunities in nutrition, physical, sports medicine, etc.		Health, Welfare, Sport and Nutrition
Total Employment in SE (including other sectors like retail, healthcare, education, transport)	**190,000** **(Based on CSO, Labour Force Survey Q1 – Q4 2019)**			