Key issues and messages regarding S3 Design-Implementation and Governance

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S3 State of Play at England

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What is Smart Specialisation?

National or Regional Research and Innovation Strategies for Smart Specialisation (RIS3 strategies) are **integrated, place-based economic transformation agendas** with the following features:

- They focus policy support and investments on key national/regional priorities, challenges and needs for knowledge-based development.
- They build on each country/region's strengths, competitive advantages and potential for excellence.
- They support technological as well as practice-based innovation and aim to stimulate private sector investment.
- They get stakeholders fully involved and encourage innovation and experimentation. (Entrepreneurial Discovery Process -EDP)
- They are evidence-based and include sound monitoring and evaluation systems.

Definition of Smart Specialisation

'*Smart specialisation strategy means the national or regional innovation strategies which set priorities in order to build competitive advantage by developing and matching research and innovation own strengths to business needs in order to address emerging opportunities and market developments in a coherent manner, while avoiding duplication and fragmentation of efforts; a smart specialisation strategy may take the form of, or be included in, a national or regional research and innovation (R&I) strategic policy framework*;'

From Regulation (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013 ("Common Provisions Regulation" for the European Structural and Investment Funds) O.J. No. L347, 20.12.2013

Why Smart Specialisation?

The regulations governing the European Structural and Investment Funds for the period 2014-2020 provide for a number of Ex Ante Conditionalities (EAC) to be complied with, that is, specified measures to be put in place by certain dates, aimed at ensuring that appropriate institutional and strategic policy arrangements are in place for effective investment.

In relation to research and innovation investment supported by the ESIF, **an ex-ante conditionality is the existence of a national or regional smart specialisation strategy** in line with a National Reform Program, to leverage private research and innovation expenditure, which complies with the features of well-performing national or regional R&I systems.

S3 provides a method to help policy makers identify domains and activities where capabilities formation is supported (innovation ecosystem) and structural changes are initiated.

In a nutshell:
Smart Specialisation is based on 4 Cs

Competitive advantage: match R&I with business and develop links (related variety); adoption of (generic/new) technologies for diversification/modernisation of sectors + explore emerging areas

Policy **Choices** (tough ones): select a limited number priorities on basis of specialisation & integration in international value chains

Critical mass of resources & talent: cooperation between regions by avoiding duplication and fragmentation

Collaborative Leadership: involve stakeholders from academia, businesses, public administrations and civil society ("quadruple helix") & synergies between funding instruments (EU, national, regional)

‘’The “renewal of the regional planning culture” seems to have been a quite important secondary outcome for number of regions in which the EDP has been a novel approach with a view to their administrative traditions, related challenges will likely remain acute. Competence Center Policy and Regions Fraunhofer Institute for Systems and Innovation Research ISI

Nine criteria to assess ex ante projects or domains and select priorities*

- Proximity to market
- Does the activity open a new domain potentially rich in innovation and spill-overs?
- What is the degree of collaboration, the number of partners involved?
- Is public funding needed?
- What is the significance of the activity for the regional economy?
- What is the capacity of the region to keep the successful activity on its territory?
- Can this activity drive the region towards leadership in the selected niche?
- What is the degree of connectedness of the activity vis-à-vis the rest of the regional economy
- Private firms are ready to submit themselves to monitoring and performance audits.

*Dominique Foray, Federal Institute of Technology Lausanne, Switzerland

Entrepreneurial Discovery Process (EDP)

- A core element of any S3 is the requirement of an 'entrepreneurial-driven' allocation of public resources. This means that, compared to past industrial policies, prioritisation should be the result of an entrepreneurial discovery process (EDP) through which entrepreneurial actors, from the public and private sector (i.e. companies, research organisations, universities and public society), would constantly guide the allocation of public resources.
- Nonetheless, the operationalisation of EDP is still a major challenge for many policy makers. EDP requires not only the capacity of entrepreneurs to identify local strengths but also the ability of governments to collect and assess the information received in order to align policy measures to the selected activities.

'S3 is not about central planning and we don't want that of course, this is not what smart specialisation is all about. It is about what each country and region thinks are their traditional strengths and weaknesses so that they can build their future based on that. So it is very much based on SWOT analysis and avoiding doing research in a certain area because it is fashionable. So this is not a central planning effort but a bottom-up approach involving stakeholders.'

Robert-Jan Smits, Director General for Research and Innovation-European Commission.

EDP as a collaborative, dynamic process*

- The government does not have innate wisdom.
- Against the usual logic according to which the government knows from the start which domains should be developed and therefore confines the policy to setting up the incentives for private industry to carry out the plan !
- The discovery and collective experimentation process forms an integral part of political action and must be carried out within the framework of strategic interactions between the government and the private sector.
- EDP does not amount to innovation – but it increases its probability
- It is the exploration of a possible evolution path starting from a specific industrial situation
- EDP does not reflect any particular degree of novelty: an ED can be very much incremental while initiating significant structural change
- A strong learning dimension: an EDP is socially valuable in redirecting productive decisions

*Dominique Foray, Federal Institute of Technology Lausanne, Switzerland

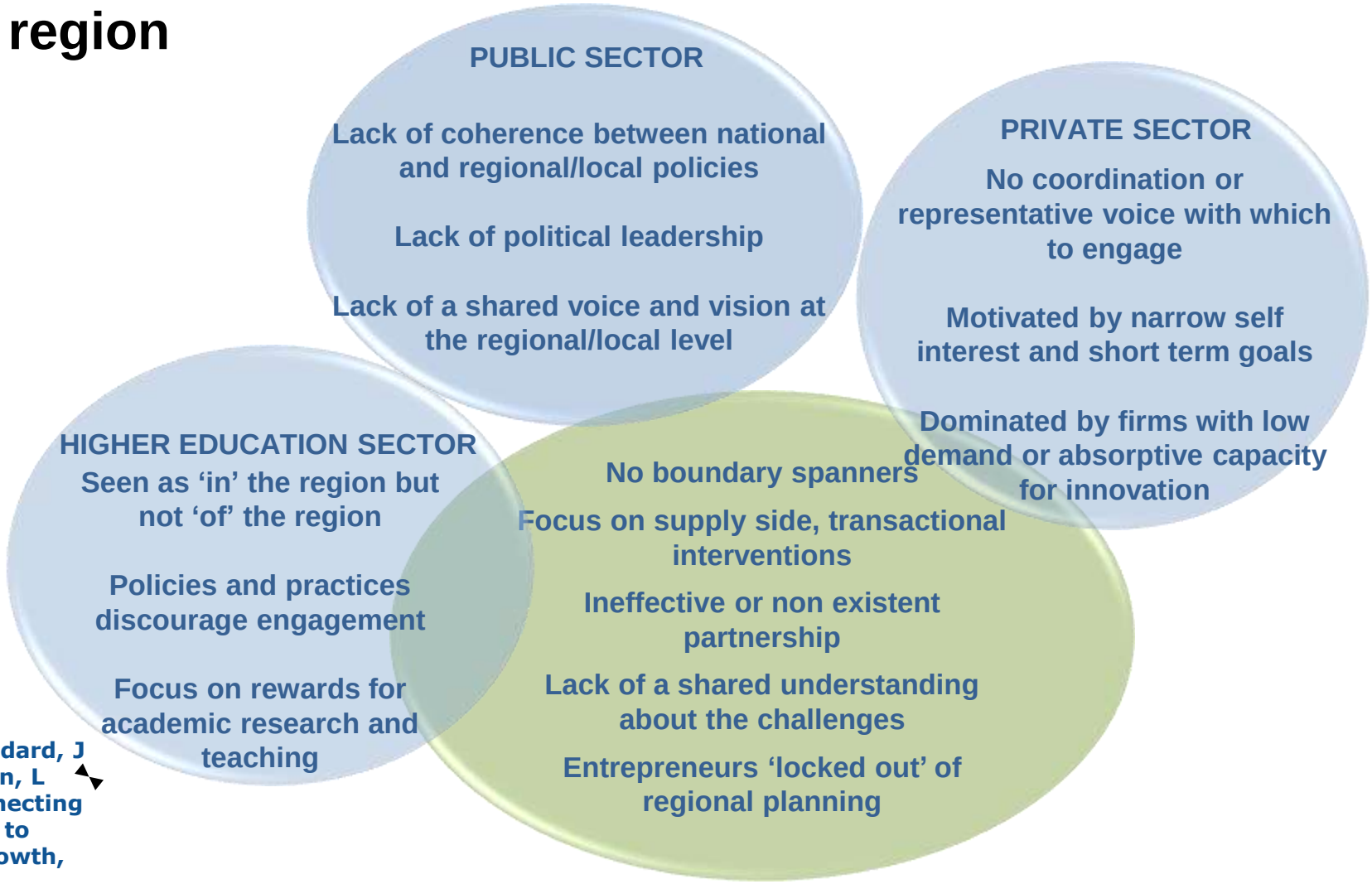
How vertical and narrow S3 should be ? *

Application of more vertical and narrower approach leads to deeper specialization based on more fundamental knowledge. This is OK for big economies like the EU or the most advanced countries. They could develop their growth strategies based on S3 in a number of sectors and technologies. However, it would be problematic for small economies like the Baltic or other CEE countries due to limited resources possessed. Their strategies should be focused on identification of the unique characteristics and assets of each country and region, highlighting competitive advantages, concentrating regional stakeholders and resources around an excellence-driven vision of their future

S3 would allow regions to take advantage of scale, scope and spillovers in knowledge production and use. S3 combines knowledge and innovation with specific strengths of the national or regional economy; also it generates unique assets and capabilities based on the region's distinctive industry structures and knowledge bases. The synthesis and integration of fragmented knowledge and capabilities should help to create a vision for opportunities in existing or new sectors.

Robertas Jucevičius and Auksė Galbuogienė / Procedia - Social and Behavioral Sciences 156 (2014) 141 – 145 143

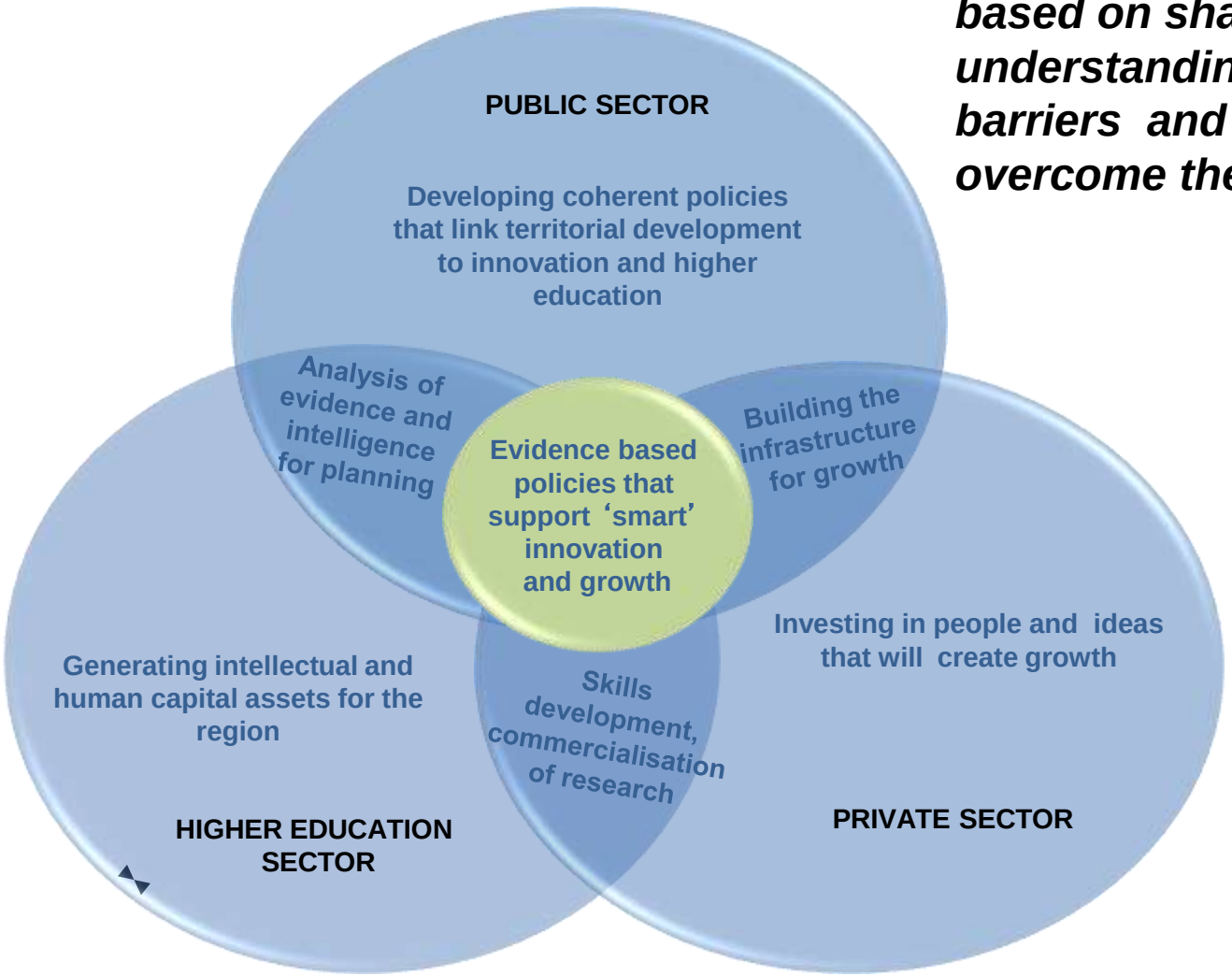
The ‘disconnected’ region



Source: **Goddard, J and Kempton, L (2011) Connecting Universities to Regional Growth, European Commission**

The ‘connected’ region

Strong partnerships based on shared understanding of the barriers and how to overcome them



Source: **Goddard, J and Kempton, L (2011) Connecting Universities to Regional Growth, European Commission**

The case of the Podkarpackie Region* (1)

-Overall the Region has adopted a place-based approach that builds on the strengths of the existing industrial infrastructures around the Polish aviation industry.

-There are certain attempts for emphasis on cross-technologies domains but these need to be further strengthened. The aviation sector is extremely competitive and every established links with Global Value Chains should be maintained and further developed with the view of innovation spill over effects towards the SME subcontractor community operating in the Region. This will depend on how concretely the steering team of the regional operating programmes will facilitate synergies in the near future and that remains to be seen.

-The role of RTOs in the regions could be further shifted towards the valorization of the research results produced within the RTOs and the local Universities. That could part of an answer to the fact that in the Region there are plenty of tools to 'push' but very few 'pull' tools for innovation absorption. Well networked RTOs could provide practical solutions that are much needed on:

•How to access new knowledge created in other regions and how to procure knowledge produced within the Region at national and even global level.

•How to succeed the necessary Knowledge translation into entrepreneurial language in the Region.

* Remarks by Antonios Fysekidis, S3 Peer Review, Rzeszow, 19-20.3.215

The case of the Podkarpackie Region* (2)

The role of Enterprise Europe Network -financed by both CoSME and Horizon 2020 (the latter for the coaching and mentoring services in the SME Instrument) - could be really valuable but only in the case that the local EEN partners participate actively in the Network life including the Sector Groups of the Network that are relevant to the Region's S3.

At the same time (according to the Call of Proposals that established the EEN from the 1st of January 2015) one of the tasks of every local EEN partners should be to ''*Ensure that the services provided in the context of the Framework Partnerships are consistent with and embedded in the wider regional business and innovation support environment. To this end, a degree of cooperation with other regional stakeholders is required*''

As an overall remark, the view that new approaches are needed for the continuous stimulation and the efficient governance of regional innovation eco-systems gains currency. The relative success of the aviation industry in the region should not mislead the regional authorities that they do not need new innovative governance approaches. One example is the rising need to lift existing barriers at political, strategic and operational level that prevent synergies between Horizon 2020 and ESIF, especially in the current programming period where there is an abundance of ESIF funding that has to wisely lead to new capacities and not only infrastructures.

* Remarks by Antonios Fysekidis, S3 Peer Review, Rzeszow, 19-20.3.215

S3 Governance and Implementation Challenges (1) ***

- S3 approaches to regional policy should be about promoting the generation, exploitation, and dissemination of local ideas and knowledge
- Critical development of local linkages and knowledge exchanges built on global knowledge flows → place based
- Maximising both intra- and inter-regional knowledge spillovers in the relevant scale domains (embeddedness + relatedness)
- Place based approach is about building on local knowledge and mobilising it in the wider national and international context
- Multi-level governance for multi-level systems of knowledge
- Not about localism – but about fostering bottom up development and local capabilities in the wider context
- S3 principles provide a quite different logic to much existing thinking
- Explicitly based on the region's history and context
- Technological upgrading of a region's existing and traditional sectors
- Focus on coordination between skills-training and emerging technologies
- Building synergies, scale and a realistic and forward-looking agenda

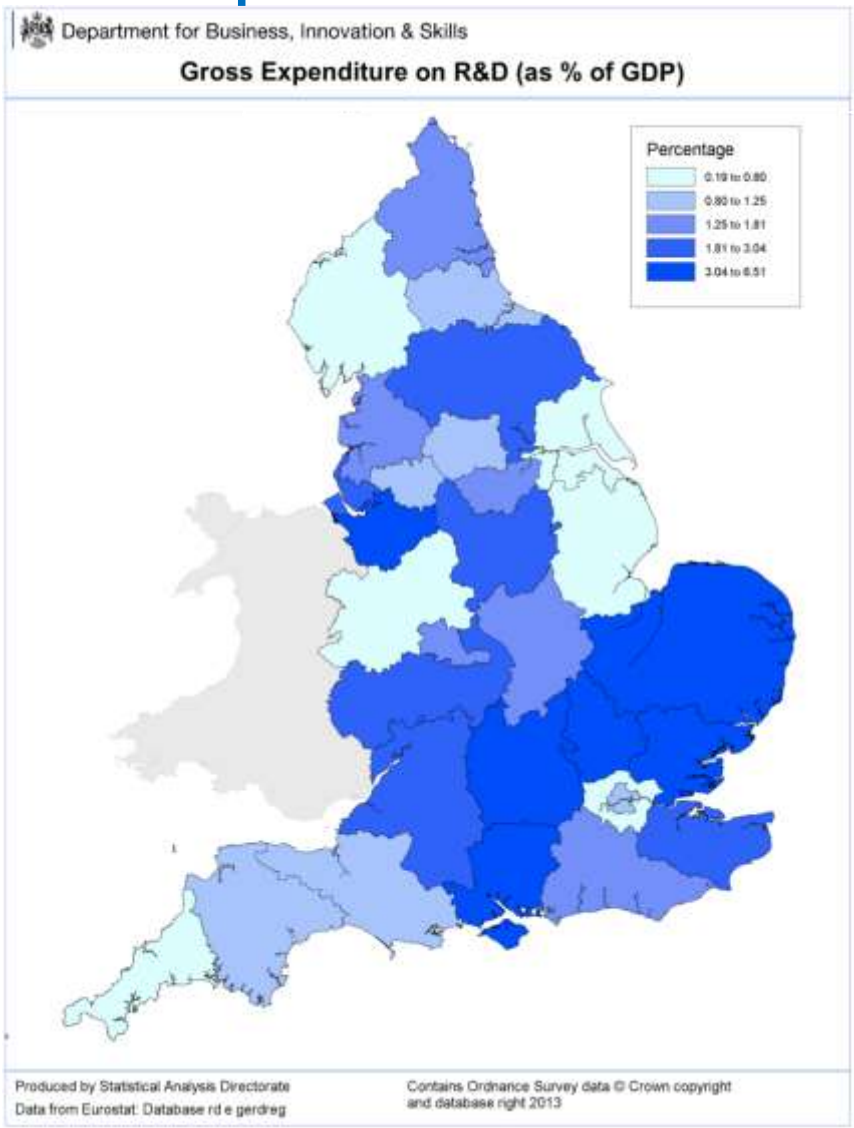
S3 Governance and Implementation Challenges (2) *

- Less developed regions in the EU have governance systems that are also very state-centric.
- Incentives → Initiatives → Engagement → Experiments → Entrepreneurship → Innovation.
- Institutions and governance of the process are essential
- "*Local communities, even the poorest, have unique knowledge and entrepreneurial potential that can be exploited with appropriate support from surrounding actors such as research and education establishments, the business sector, and nongovernmental organizations. Acting in concert, with efficiently local and global networks, is essential*." ..."*But history has shown that in moments of major transformation and crises, the role of governments has always been crucial*" (World Bank 2010)

* McCann, P., and Ortega-Argilés, R., 2015, "Smart Specialization, Regional Growth and Applications to EU Cohesion Policy", 2014, Regional Studies, Forthcoming, DOI: 10.1080/00343404.2013.799769

England:

Policy mix and implementation of the RIS3



S3 Status: Where are we?

- Development of a single RIS3 for England – combining ‘bottom up’ proposals from 39 **Local Enterprise Partnerships** - within wider national strategic policy framework (national innovation & industrial strategies)

- LEP proposals for **Strategic Economic Plans** & **EU SIF Investment Strategies** received by Government

- **Assessment** of innovation elements based heavily on **testing S3 criteria**

- **Recommendations** to made to Growth Programme Board (Ministers, Government Departments, delivery partners, & local actors (LEPs, universities, municipalities, business & rural representatives etc.)

Successes in S3 Development

- Engagement & debate about Smart Specialisation across all 39 LEPs, embedded within wider local Strategic Economic Plans
- Closer collaboration between Government Departments, delivery partners and local actors
- Renewed debates about how local areas can benefit from, & contribute to, national policies & programmes
- Stronger collaborative leadership for innovation at local level; incl. especially businesses & universities
- Stronger evidence base at national & local levels, including ‘heat maps’ & detailed quantitative data at LEP level
- Building consensus on focusing on commercialisation & on a limited number of priorities
- An informed & pragmatic approach to **building synergies** with H2020 etc
- Some larger LEPs voluntarily opted for local S3 strategies e.g. Manchester (peer reviewed), Liverpool, North East, Tees Valley, Cornwall & LEPs collectively in West Midlands

Proposed Strategic Governance of S3

SMART SPECIALISATION PLATFORM

Smart Specialisation Leadership Group

Growth Dashboard

Annual Innovation Report

Higher Education Business Survey

Formal Evaluations

Smart Specialisation Advisory Hub

What Works Centre for Local Growth

H2020 Contact Points

Local Innovation Leadership Boards

National S3 Priorities

IS strategic partnerships – the 11 sectors

Life Science Strategy (Dec 2011) and one year on update (Dec 2012)
Aim: To make the UK the global hub for life sciences

Nuclear (March 2013)
Aim: Grow the global market share; set out role that nuclear plays in UK energy mix

Information Economy (June 2013) Aim: to seize the opportunities from new ICT technology

Aerospace (March 2013)
Aim: Maintain existing UK market share; secure UK employment

Oil and Gas (March 2013)
Aim: Increase inward investment in energy supply chain

Construction (July 21013) Aim: make the UK the global leader in sustainable construction

Professional Business Services (July 2013) Aim: make the UK the global hub of expertise

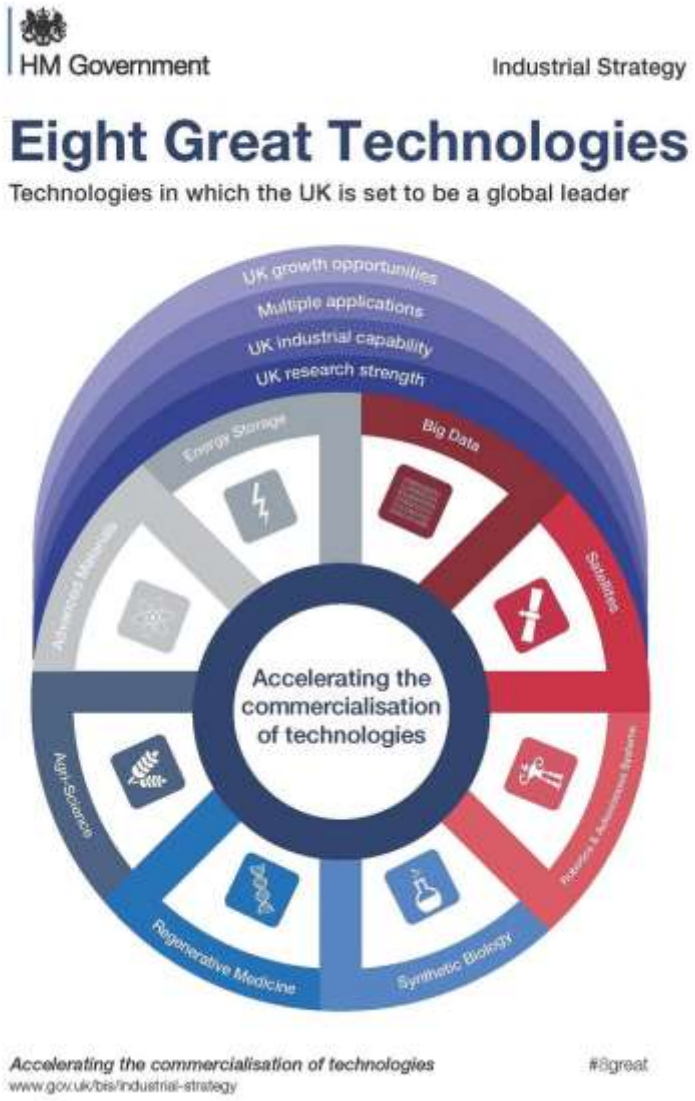
Automotive (July 2013) Aim: Investment in R&D; grow and develop UK supply chain

Agri-tech (July 2013) Aim: increase inward investment and exports

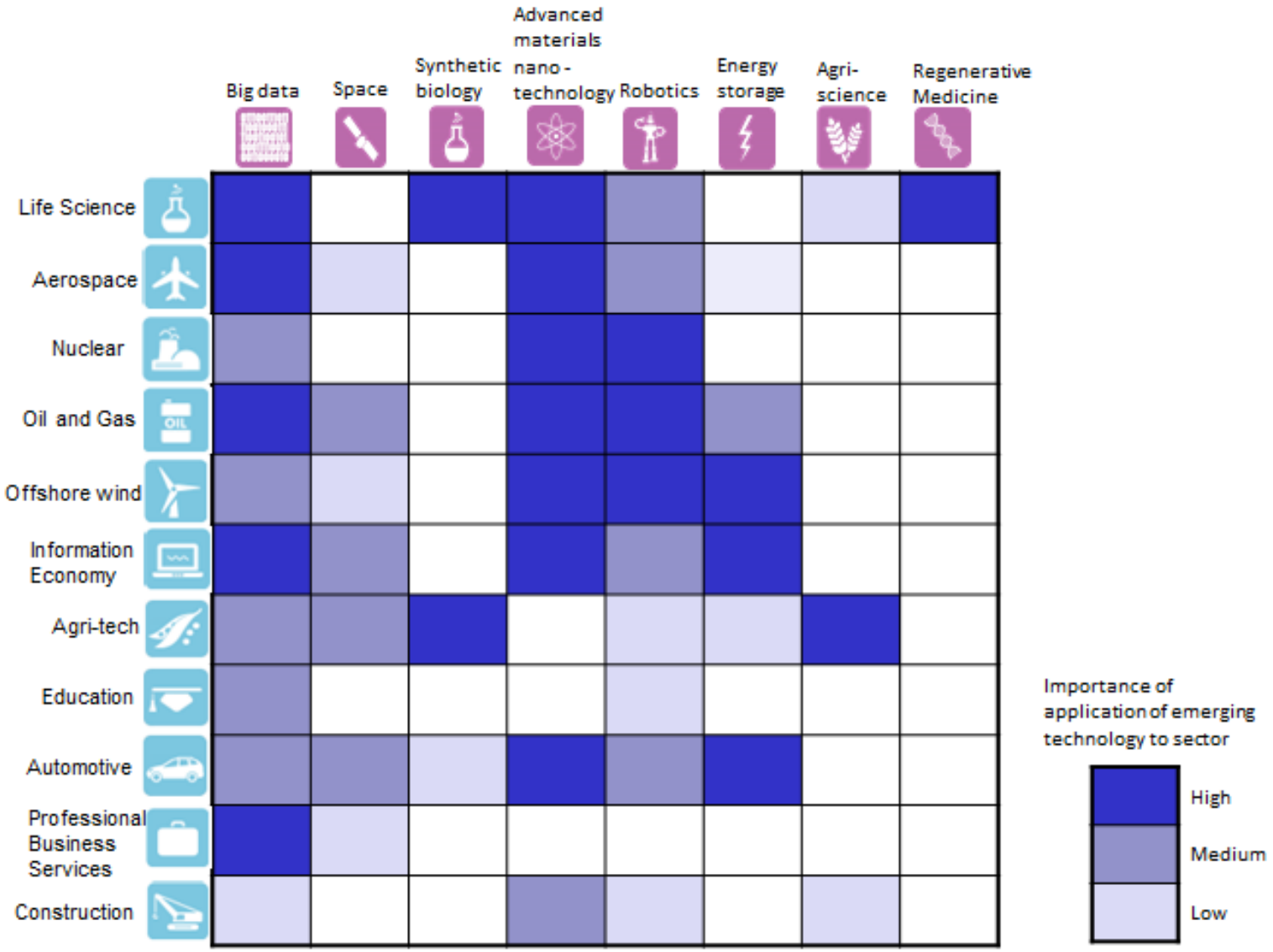
Education (July 2013) Aim: Increase the UK's education exports

Offshore wind (August 2013) **Aim:** Build competitive and innovative UK supply chain

National Technology Priorities



National S3 Priorities



Assessment of LEP Proposals

- Evidence of a **planned and staged approach,** especially as set out in the RIS3 guide
- Evidence of a local ‘search’ process, supported by ‘heat maps’ & detailed quantitative data
- Production of a local **SWOT** analysis
- A focus on a limited number of priorities - **appropriate to each locality**
- Identifying contributions to, & benefits from, the Industrial Strategy
- Local ‘niche’ specialisms where these can be evidenced

Local Priorities: LEPs & S3 (extract)

Local Enterprise Partnership Linkages to Industrial Sector Strategies	Life Sciences	Aerospace	Nuclear	Oil & Gas	Automotive	Offshore Wind	Information Economy	Construction	Prof. Bus. Services	Agri-tech	Education	8 Great Technologies / KET	Locally specific
Black Country		■			■			■					
Buckinghamshire Thames Valley	■						■		■	■			■
Cheshire & Warrington			■		■				■	■			■
Coast to Capital	■				■		■					■	
Cornwall & Isles of Scilly	■	■				■	■			■			
Coventry & Warwickshire	■				■		■						
Cumbria			■							■			
D2N2	■	■			■			■					
Dorset													■
Enterprise M3	■	■					■		■				
Gloucestershire						■				■			
Greater Birmingham and Solihull	■	■			■		■					■	■

The Policy Mix for Innovation

	National / Horizontal	Nationally Managed / Delivered Locally	Locally Managed/ Locally Delivered
Policies	Innovation & Research Strategy for Growth Industrial Strategy Science & Innovation Strategy (pending)		Strategic Economic Plans ESIF Strategies LEP Innovation Strategies & Boards
Programmes	• Public Sector Research Establishments • Large Scale Research Facilities • Catapult Centres • R & D Tax Credits • R & D Tax Credits (SME) • Patent Box • UK Innovation Investment Fund (UKIIF)	• UK Research Partnership Investment Fund • University Enterprise Zones • Higher Education Innovation Fund • HEFCE Catalyst Fund • Collaborative R & D • Innovation Vouchers • Knowledge Technology Partnerships • Launchpads • SMART • Knowledge Technology Networks • Small Business Research Initiative (SBRI)	• Science Parks • Innovation incubators • Proof of Concept Funds (FEI) • Proof of Technology Funds (FEI) • Collaborative R & D • Contract research • Innovation Networks • Public Procurement • Knowledge Technology Partnerships • Innovation Vouchers • Social Innovation • Higher Level Skills for Innovation (ESF)

Work in Progress / To be completed

- Developing an **on-line platform** to join up University research & expertise with business needs.

- Kick start an **Advisory Hub on Smart Specialisation** to support LEPs & other local partners

- **Monitoring & evaluation strategies** to be agreed by the Growth Programme Board when fully established

- Exploring feasibility of aligning some national ‘competitive’ funding programmes with proposals in LEP Strategic Economic Plans

- Identifying & driving forward opportunities to work collaboratively, building stronger value chains across England and internationally

- **Result indicators** that reflect **Smart Specialisation** – rather than standard innovation metrics

Key Questions for discussion (1) *

-How does the governance and monitoring system of your RIS support the process of continuous policy learning and adaptation?

-Is the strategy based on inter-departmental/inter-ministerial/inter-agency coordination and cooperation covering relevant policies?

-Does the strategy considers research/science policies and economic development policies (but also other relevant policies such as education, employment and rural development policies?

-How he strategy assesses and takes into account the existing level of policy coordination within the region?

-The strategy fosters the *internationalisation of SMEs* and stimulates *regional clusters/initiatives* to make connections within international/global value chains?

* Selected and adapted from the S3 peer review questionnaire, provided by S3 Platform

Key Questions for discussion (2) *

-How does S3 support *the identification of innovation opportunities* at the interface *between* different disciplines, industries and clusters?

-How does the strategy supports *entrepreneurship and the innovation capabilities of SMEs* (i.e. by facilitating the diffusion and adoption of technologies, including Key Enabling Technologies) ?

-How does the strategy facilitates *the improvement of demand-side* conditions and, in particular, public procurement as a driver for innovation?

-How does the presented strategy outline *measures to stimulate private R&D&I investments* (i.e. through public-private partnerships)?

-How the thematic priorities chosen in the strategy do reflect the description and analysis of the regional economic structure, competences and skills?

-Does the presented strategy offers a vision for the region? Is this vision clearly described, credible and realistic?