

Smart Specialisation: Governance and Implementation Challenges

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Smart Specialisation: Governance and Implementation Challenges

- Identify roles → who will decide what to do?
- Who will decide how to do this and how?
- Who will monitor and measure and how?
- How will we engage and mobilise stakeholders and participants and how?
- Incentives → Initiatives → Engagement → Experiments → Entrepreneurship → Innovation
- Institutions and governance of the process are essential

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“Like politics, all innovation is local: each community has its own comparative advantages. Local government must build on their existing capabilities by leveraging local strengths and expertise. The use of public funds to create jobs must be reserved for cases where there are important market failures and the community has a credible chance of building a self-sustaining cluster. Ultimately policy-makers should realize that when it comes to local development, there is no free lunch” (Moretti 2012 p.214).

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- *“Innovation should be understood as the dissemination of something new in a given context, not in absolute terms” (World Bank 2010)*
- *“Innovation can be approached from an ‘organic and evolutionary perspective’ considering the overall innovation climate, rather than simply science and technology policy.” (World Bank 2010)*
- *“Distinguishing between high technology from low technology is not very useful, particularly in low and medium income countries. High technology may not generate jobs and wealth, while low technology developments and the exploitation of indigenous knowledge can lead to significant economic growth and welfare. The use of high technology in all sorts of products, processes and services can be more important than producing it”. (World Bank 2010)*

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- *“Policy initiatives targeted to ‘specific industries, communities or site need a holistic and collective vision and approach with the mobilization of different levels of governance” (World Bank 2010)*
- *“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)*

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- World Bank 2010 – *horizontal and passive* policies - Making business easier through institutional reforms to protect property rights, enforce contracts etc – all so as to facilitate trade, FDI and entrepreneurship in measurable ways – with a special emphasis on start-ups, spinoffs and FDI
- *Active Policies*: Rethinking government financial support instruments to promote risk-taking, the stimulation of private risk capital, such as matching grants, mini-grants, venture capital, innovation parks, incubators, and angel investors. All of these support instruments also require evaluation

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- Market failure arguments cannot guide what to do in specific cases (COST 2007; Hughes 2012) → need for “choosing races and placing bets”
- Many different approaches and tools are currently in use in different types of places
- Are these properly and appropriately tailored to the context?
- Examples:
- McCann, P., and Ortega-Argilés, R., 2013, “Modern Regional Innovation Policy”, *Cambridge Journal of Regions, Economy and Society*, 6.2, 187-216

Type of region	Economic and Industrial challenges	Innovation challenges	Policy challenges	Policy mix	Policy instruments	Regions (examples)
‘World-class performing regions’	Maintain their international competitiveness and growth. Research, technology and innovation is perceived as fundamental for economic development and wealth generation. Leverage of public R&D investment for the private sector.	Strengthening public and private research, Support innovations and technologies (with a focus on specific branches) or increase of high-tech firms. Human capital, human resources such as the attraction of abroad talent. Support knowledge-intensive services, Focus on regional disparities, Support knowledge transfer and knowledge exchange.	Strong dependency upon national policies even in quite autonomous regions. Continuing the intra and inter regional coordination. Regional specificities. The focus is on strengths rather than on promoting innovation as such.	Most programmes focus on cooperation projects and not on the supply of support to a single company. Cluster policies play a crucial role. They are aimed at building on a region’s existing strengths or at developing strategic fields for the future. Strategic anchoring policies which aim at the development of regional connections.	Policy intelligence tools (in order to monitor the efficiency and effectiveness of policy measures as well as regional economic and innovation performance): <ul style="list-style-type: none"> - Evaluations, - Impact assessment studies, - Implementation external advisory committees, - Negotiation and participation processes, policy studies and - Foresight instruments. Triple helix partnerships and enterprise partnerships. Cluster policies aimed at focusing regional intervention. One-stop business support agencies Networks of “impulse centres”, “competence centres”, “centres of expertise” Business incubators or science parks schemes Support innovation in SMEs (innovation vouchers, knowledge transfer partnerships, innovation assistant schemes) Regional research institutions Demand-side oriented instruments (public procurement)	Bavaria (DE) Berlin (DE) Capital region of Denmark (DK) Lower Saxony (DE) South East of England (UK) Stockholm (SE) Styria (DE) Tyrol (AT) Upper Austria (AT)

Type of region	Economic and Industrial challenges	Innovation challenges	Policy challenges	Policy mix	Policy instruments	Regions (examples)
Regions with a strong focus on industrial employment	<p>Having to support the creation and growth of innovative companies on a broad basis</p> <p>Need to develop specific and unique strengths not necessarily in line with the traditional ones</p> <p>Strengthening the role of clusters</p> <p>Restructure the economy to compete successfully on new niche markets.</p> <p>High level unemployment in many of the regions.</p> <p>Human capital development is becoming a central obstacle as the education system is often not able to supply the required level of highly educated personnel that is accentuated by the demographic trends and ageing.</p>	<p>They are very diverse and associated to their socio-economic context.</p> <p>Structurally low private and public R&D investments.</p> <p>Sustaining and developing research and innovation base.</p> <p>Need for greater investment in research and innovation and for region-specific support measures.</p> <p>Strengthening connections between the research and innovation system actors. Disjuncture between science and industry and low cooperation and synergies between science and industry, among firms, and between regional RDI actors and international networks.</p> <p>Greater diversification of industry because of pronounced low-tech specialization.</p>	<p>Put in place simple systems of coordination or to develop the necessary capacity to ensure successful design and delivery of innovation support.</p> <p>Adequate funding from national governments is a specific issue concerning the innovation policy governance.</p> <p>To move beyond the old economic model of attracting FDI based on cost competitiveness and grant incentives.</p>	<p>Policy mix tends to be more broadly focused on stimulating the creation and growth of innovative firms and supporting the research and technologies.</p> <p>Promoting cooperation and collaboration between public bodies and enterprises – creation of knowledge intensive clusters.</p> <p>Less importance is assigned to measures regarding human resources, markets and innovation culture.</p>	<p>Knowledge intensive clusters to build up a critical mass.</p> <p>Knowledge transfer mechanisms.</p> <p>Innovation support instruments: Support to innovation in services (Smart city innovation playground)</p> <p>Support to sectoral innovation in manufacturing (<i>help bridge science and business</i>)</p> <p>R&D cooperation</p> <p>Direct support to Business R&D (grants and loans)</p> <p>Horizontal measures in support of financing</p> <p>Support to commercialisation of R&D.</p> <p>SWOT analyses to elaborate the regional innovation strategy.</p>	<p>Border, Midland and Western Region of Ireland (IE)</p> <p>Brittany (FR)</p> <p>Eastern Finland (FI)</p> <p>Flanders (DE)</p> <p>Lombardy (IT)</p> <p>Navarra (ES)</p> <p>Catalonia (ES)</p> <p>Northern Central Sweden (SE)</p> <p>Opole</p> <p>Voivodeship (PL)</p> <p>Picardy (FR)</p> <p>Silesia (PL)</p> <p>Southwest (CZ)</p> <p>Central Greece (EL)</p> <p>The West Midlands (UK)</p> <p>Valencia (ES)</p>

Type of region	Economic and Industrial challenges	Innovation challenges	Policy challenges	Policy mix	Policy instruments	Regions (examples)
Regions with a strong focus on the service sector and public R&D – ‘Science and service regions’	Enhance business R&D, better exploit and commercialise existing public research, Improve private and public linkages, in particular public R&D and industry Special attention to innovation in services is needed	Prevalence of micro-firms and a very limited number of medium and large enterprises. Lacking of RTDI culture in the business sector. Insufficient awareness of researchers regarding exploitation of research results. Lack of government research institutions (in some regions), reduce number of spin-offs and knowledge based cluster developments Reduce relations between FDIs and local SME suppliers. Development of specialisation poles.	Coordination between national and regional policies is an issue in this type of regions. Sometimes there is a need for an improvement of the governance processes and structures within the region. Develop regional specific strategies and the main opportunity is in developing strategic networks or platforms by mobilizing and organizing the regional stakeholders (in particular the knowledge intensive firms).	The dominant focus is supporting research and technologies. Direct business innovation support is the second most important priority. Taking into consideration global technological trends with a view to increase the local competitiveness.	<ul style="list-style-type: none"> - Setting multi annual research programmes and Innovation strategies on ICT - Innovation councils, networks, task-forces, innovation steering/advisory groups, forums, communication plans, new executive bodies, etc. - Task sharing, engaging regional champions - Client-oriented policy-making - “Output indicators” for the Operational Programme - One to one advice workshops (how to start a business, etc.) 	<p>South West of Bulgaria, Sofia (BG) Prague (CZ) Central Macedonia (EL) Attica/Athens (EL) Nord-Pas-de-Calais (FR) Alsace (FR) Trentino (IT) Lazio/Rome (IT) Apulia (IT) Central Hungary/Budapest (HU) Groningen (NL) Gelderland (NL) Mazovia/Warsaw (PL) Algarve (PT) Lisbon (PT) Bratislava (SK) London (UK) Wales (UK)</p>

Good practices in the context of innovation and smart specialisation policy measures and instruments

Table 1 Good practices

Policy objective	Region	Applied instrument or policy measure	Description
Networking and regional development	Capital region of Denmark (DK)	Growth Forum for the Capital Region	<p>Platform for regional development. It brings together municipalities, companies, organisations and research institutions in a strong partnership with the goal of identifying and improving the framework conditions for innovation and business development in the region.</p> <p>Drafts long-term development plan for the regions (actions, policy priorities and new policy projects).</p> <p>Decides on which projects should be supported with funding from the ERDF and the ESF.</p> <p>It is the most important regional body with a view to innovation policy and business development.</p> <p>Examples of projects:</p> <ul style="list-style-type: none"> - The CIBIT Accelerator: focuses on international, fast and action-oriented business development course for Danish start-up and SMEs that provide insights into customers, competitors and markets. - The Healthcare Innovation Centre: focuses on providing quality and efficiency in the healthcare service by coordinating innovation across the 14 hospitals in the region. - The Copenhagen Cleantech Cluster: provides access to cleantech sector networks, cooperation between members, investment opportunities, workshops, seminars, R&D projects, test & demonstration, partners and business opportunities.
Anticipating economic change	Northern Central Sweden (SE) – Regions of Dalarna, Gävleborg and Värmland	SLIM Project – System Management for Innovative Platforms and Cluster Organisations”	<p>Cluster framework policy example. The SLIM project promotes cluster development, by linking clusters, universities and regional authorities to stimulate innovation in the companies involved. The companies were encouraged to intensify and widen their networking in order to develop new products and services and increase employment. Research on the performance of the companies and communication of the results was an innovative element in the project. It has increased the collaboration and transfer of knowledge between cluster organisations as well as between counties within Northern Central Sweden.</p>

<p>Cooperation between industries, regional networking</p>	<p>Stockholm (SE)</p>	<p>Strengthening Stockholm's ICT cluster. KISTA Science City</p>	<p>World leading cluster in ICT. Stimulating the cooperation between information and communication technologies (ICT) companies. Involves 60 companies and 9 business networks.</p> <ul style="list-style-type: none"> - executive networks (dialogue, problem solving, knowledge development through regular meetings, coaching and support), - expertise networks in different thematic fields, in order to develop and exchange interdisciplinary knowledge, - cross-industry networks between ICT industry and audiovisual industry, o initiate business development and growth in the multi media sector. <p>A mid-term evaluation indicates the involvement of 40 CEOs and around 60 experts.</p>
<p>Encourage growth potential in new economic sectors</p>	<p>Wales (UK)</p>	<p>Growth in environmental marine science</p>	<p>The project aims to support marine and aquatic science businesses in Wales, to assist them in gaining global business by encourage them to work together and encourage Welsh graduates to start up enterprises in this sector. It aims as well at stimulating business growth and supply chain activity.</p>
<p>Regional networking – knowledge transfer initiatives</p>	<p>East of England (UK)</p>	<p>Knowledge partnerships. Knowledge Partners – East of England (KEEP)</p>	<p>It is a collaborative project, led by University of Luton between 7 Higher Education Institutions in the Eastern region of England.</p> <p>It supports three way partnerships between a regional firm, a regional university and a recent graduate.</p> <p>It aims to help businesses to use expertise and skills of the university, high-skilled graduates that can help in the implementation and planning of new projects.</p> <p>This programme complements the national Knowledge Transfer Programme (KTP) that is run by the UK Technology Strategy Board and may set up projects lasting up to two years.</p>

Financial instruments to support innovation in SMEs	Bavaria (DE)	Innovation vouchers	<p>It is addressed to SMEs that wish to engage in R&D but do not have the necessary in-house financial or human capital resources to do so. SMEs can apply for a complementary funding in a rather non-bureaucratic manner to finance R&D projects with external partners.</p> <p>It is characterized by a non-bureaucratic procedure.</p> <p>The financial support covers 50% of the planned R&D investment or up to €7,500.</p> <ul style="list-style-type: none"> - Technical assistance, technology transfer services, development of innovative products, processes and services and bring them to the market or to the design or the production stage. - Research activities prior to the development of an innovative product, innovative service or process innovation, including market research activities such as technology and market research, studies (flexibility, production technology, market access). <p>More than 600 enterprises in 2 years have benefited from this project.</p>
	West Midlands (UK)	Innovation voucher scheme – INDEX	<p>Its main objective is to increase the interaction between the 13 universities in the West Midlands and SMEs in the region in order to boost their innovation capability.</p> <p>The scheme offers SMEs the chance to apply for a voucher that can be used to purchase an academic’s expertise, which must help deliver a knowledge solution to an innovation project brought by the SME (Parker-Rhodes, 2012)</p>
Venture capital	Opolskie (PL)	Ensuring access to finance entrepreneurship	<p>Investment on innovation in enterprises measure.</p> <p>The main objective of this measure is to improve the competitiveness of enterprises by providing support for investments. The target group of this instrument is the SMEs sector.</p> <p>It is directed towards the development of innovation potential of enterprises from certain sectors which had been identified in the region diagnosis of as the most innovative branches.</p> <p>It creates synergies with other instruments to support innovation</p> <p>It exacerbates the extent of science-industry cooperation (Walendowski, 2012)</p>

Financial support to businesses	Lombardy (IT)	Lombardy Seed Fund	It facilitates the creation and growth of innovative enterprises in the region by providing favourable loans to support internal business-development projects. The potential beneficiaries of SEED are micro enterprises and SMEs. The measure has been launched in 2008, with a €10M of public investment from the region. The beneficiaries are: entrepreneurs, spin-offs part owned by a university and less than 2 years old, any other enterprise, so long as it is 6 months old or less. (Ciffolilli, 2012).
Support to R&D in SMEs	Bratislava (SK)	Support for Purchases of Innovative Technologies and Creation of Quality Management Systems (SPIT & CQMS)	It was designed to support a large number of manufacturing SME's in up-grading and catching-up by promoting the purchase of innovative technologies (costs of machinery, tools and equipment) and improving management. Each firm could participate only once, since it is not meant as an structural subsidy. CQMs grants are relatively small, but, easy to access, flexible, simple administrative procedures and popular among users. Organisational innovations are becoming at least as important for increasing competitiveness levels as technological ones.
	Nord-Pas-de-Calais (FR)	The 2000 SME Plan	The objective of the plan is to increase the number of R&D projects and support 2000 SMEs from 2010 to 2012. The region has developed an SME support mechanism that identifies high-potential SMEs, helps them to design and implement strategic development plans, offer assistance by means of a team of trained and certified advisors and answers all business development needs through a single mechanism (Eparvier and Mallet, 2011).
Support to business in ICT	Trentino (IT)	TreC-Trentino	A demand-side innovation policy. ICT enabled innovation in services for end-users and local communities.
Technology-based economic development	Oklahoma (USA)	i2E Technology Commercialisation Services	Collaborating jointly with the Oklahoma Center for the Advancement of Science and Technology (OCAST), i2E provides technology-based entrepreneurs comprehensive commercialization services, proof-of-concept funding, and seed/start-up funding. The services offered including events, training and educational programmes have created an active network to support existing companies, the creation of employmen and build the next generation of entrepreneurs.

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Research, technological development and innovation	Hainaut (BE)	Aerospace Cenaero Recherches	Cenaero is an applied research centre located in the Aeropole of Charleroi (Belgium) providing sophisticated services and technological solutions to industries in the aeronautical and related sectors. Its main mission is to support aeronautical companies in their innovation efforts by providing them with expertise in numerical simulation and modeling methods. The original strategy aimed to make the centre specialized in niche markets boasting highly innovative and sophisticated applications and involving different scientific fields and industrial know-how. The centre also promotes doctoral students to train junior personnel and stimulate the constant upgrading of senior scientists. The centre is an example of perfect cooperation between universities and industries.

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<p>Research, technological development and innovation</p>	<p>Hainaut (BE)</p>	<p>Aerospace Cenaero Recherches</p>	<p>Cenaero is an applied research centre located in the Aeropole of Charleroi (Belgium) providing sophisticated services and technological solutions to industries in the aeronautical and related sectors.</p> <p>Its main mission is to support aeronautical companies in their innovation efforts by providing them with expertise in numerical simulation and modeling methods.</p> <p>The original strategy aimed to make the centre specialized in niche markets boasting highly innovative and sophisticated applications and involving different scientific fields and industrial know-how.</p> <p>The centre also promotes doctoral students to train junior personnel and stimulate the constant upgrading of senior scientists. The centre is an example of perfect cooperation between universities and industries.</p>

Social inclusion: promoting entrepreneurship in immigrant population	East Mid Sweden (SE)	Micro-finance institute	This project focuses on improving access to finance for migrant women who often face difficulties in trying to secure capital to start-up or develop their own businesses. The project has already supported 80 new female entrepreneurs and contributed to the start-up of 15 micro-enterprises, creating 20 jobs.
Support to entrepreneurship and firm growth	Barcelona (ES)	Barcelona Activa	It is an entrepreneurship centre established by the local government of Barcelona. It serves as a reference point for entrepreneurs, as well as a hub that boosts entrepreneurship through its activities and resources. The project uses an innovative model that provides online and on-site services, allowing entrepreneurs to create their own itinerary from their business ideas to the creation of their companies. Training activities, conferences and workshops for specific topics or technical areas (“knowledge pills”) or for specific sectors (“knowledge weeks”), special summer training as well as activities for the self-employed. The centre provides a bridge of resource between business creation and business growth offering also one-to-one coaching, free access to pre-incubation spaces and an online express service for incorporation.
	Madrid (ES)	Madrid Emprende’s Business Incubators Network, Madrid City Council Economic Development Agency	It is a network that integrates 7 interrelated incubator centers (new and refurbished buildings), offering more than 60 positions to pre-incubate new business projects at the gestation phase and 150 offices to host new companies during their first two years of life. The enterprises can access to business services support such as technical network offering advice, training, administrative services, databases of business opportunities among others.
Investing in entrepreneurial culture	Amsterdam (NL)	CASE centre for Amsterdam Schools for Entrepreneurship	CASE seeks to create new types of education with a strong focus on entrepreneurial skills. The project develops multidisciplinary entrepreneurship education for all faculties and phases of study. The project allows students to establish new companies as a component in their training thereby gaining firsthand entrepreneurial experience.

Smart Specialisation: Governance and Implementation Challenges

- Europe 2020 *smart, sustainable and inclusive* growth
- OECD ‘global’ standard – *stronger, cleaner and fairer* growth
- US government place-based growth strategy – *sustainable* communities, *innovation* clusters, *revitalizing* neighborhoods
- Different challenges, opportunities and trade-offs for different regions
- Need to identify policy priorities for regions → and the principles on which the priorities are based

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- 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
- Policy makers must decide the priority on the basis of the best public information (Stiglitz-Sen-Fitoussi 2009) → *smart specialisation*

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- A systems approach to innovation – ‘knowledge ecology’
- Existing assets, institutions, frameworks are all relevant to technological evolution
- *Entrepreneurial search processes* → to identify the distribution of likely opportunities
- *Relevant domains* → to enhance the likely magnitude of opportunities
- *Connectedness* → to maximise the potential for learning about these opportunities

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- Smart specialisation 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

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- In a *regional* context entrepreneurial search processes; relevant domains; and connectedness translate to:
 - Embeddedness
 - Related variety
 - Connectivity
- *Relatedness*: It is not about sectoral specialisation but *diversification* → *specialised technological diversification*
- Embeddedness + Relatedness = Relevant Size Domain

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- A smart specialisation approach 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)
- 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

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- Newness, renewal, transformation, novelty and niches
- All actors involved – competences and capabilities – building new linkages, exchanges, participation, cooperation and spillovers
- Develop a local vision on the basis of what works locally
- Governance experimentalism + innovation
- Iterative approach – feedback, monitoring, evaluation and learning
- ‘Self discovery’ (Hausman and Rodrik 2004)

Smart Specialisation: Governance and Implementation Challenges

- Dominique Foray's metaphor – 'excited goblins', 'sleeping giant' and 'hungry dwarfs'
- Examples of high-tech firms, traditional agriculture, engineering or tourism, long tail of small firms
- Different types of interventions, different intended results/outcomes from the interventions, and different pace and tempo
- Need to decide the level/degree of policy prioritisation based on structure, potential, bottlenecks and missing links

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- Prioritisation and concentration
- Good matching, good fit, and potential
- Analysis of missing links and bottlenecks
- Explicitly takes account of the region's strengths, history, skills profile
- Focuses on issues of coordination and governance → cross-border (administration/jurisdiction/
- Data baselines
- Risks and responsibilities

Smart Specialisation: Governance and Implementation Challenges

- Results-Oriented policy-design logic
- Inputs → Outputs → Results/Outcomes
- The result/outcome can be a short- and/or a long-term one
- It is a question of intention – this drives the thematic and policy prioritisation and the specific policy design
- Impact refers to the contribution of policy actions to achieving the intended result/outcome

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- *Outputs* are measurable policy actions whose intended task is to produce results/outcomes
- *Results/outcomes* are the specific dimension of the wellbeing and progress of people (in their capacity of consumers, workers, entrepreneurs, savers, family or community members, etc.) that motivates policy action, - i.e. that is expected to be modified by the interventions designed and implemented by a policy
- *Results/outcomes* are NOT a change for the supported entities only: they are a change for a territory (region), a sector, a target group of people

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- Distinguish results/outcomes from outputs
- Measurement of progress towards results/outcome targets
- Identify how and when different data are to be collected, collated and reported
- Data can be at the project level and at the programme level – all projects should be able to generate results/outcome data
- Evaluation needed to assess contribution of project/programme results/outcomes to change at regional/sectoral level

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- Monitoring, feedback and evaluation are critical for *policy learning*
- Evaluation – with its range of quantitative and qualitative techniques – is what helps us to identify the impact of a policy – not the indicators
- Evaluation involves considering all of the available evidence regarding the policy process, systems and intended objectives – and also unintended implications

Smart Specialisation: Governance and Implementation Challenges

- Smart specialisation emphasises strategic and specialised diversification based around core competences and capabilities
 - a excellent tool for place-based policy
 - promotes clear *self*-awareness of the key bottlenecks and missing links
 - powerful lens through which to ensure thematic prioritisation and concentration
 - monitoring, evaluating, steering
 - engagement and institutional learning