



ECIU

European Consortium of Innovative Universities

The role of Universities in the Smart Specialisation Strategy process

THE ECIU PERSPECTIVE

About the ECIU

In 1997, some of Europe's most innovative universities came together to form a new continent-wide network, to share and build on their successes as entrepreneurial institutions. The name European Consortium of Innovative Universities underlines the European dimension of a select group of entrepreneurial universities dedicated to the development of an innovative culture in their institutions, and to a catalytic role for innovation in industry and society at large. This is also reflected in the ECIU Vision: "ECIU – Challenging Conventional Thinking - ECIU is the leading international consortium of research intensive universities, with collective emphasis on innovation, creativity and societal impact, driving the development of a knowledge-based economy." For the upcoming years, the Board agreed on joining forces in two focus areas, in which the consortium has a strong track record: 1. Innovation in Teaching and Learning and 2. Entrepreneurship and the Societal Impact of Research.

In the last 17 years, ECIU has only grown into a consortium with mutual trust and networking and collaboration across academic and administrative areas in all member institutions. ECIU has gained a collective wealth of experience and expertise in innovative education, research, knowledge exchange and administrative structures and practices.

- Aalborg University (Denmark)
- Universitat Autònoma de Barcelona (Spain)
- Universidade de Aveiro (Portugal)
- Dublin City University (Ireland)
- Technische Universität Hamburg-Harburg (Germany)
- Lodz University of Technology (Poland)
- Linköping Universitet (Sweden)
- University of Stavanger (Norway)
- University of Strathclyde (UK)
- Universiteit Twente (Netherlands)

Our associate members are:

- Southern Federal University (Russia)
- Tecnológico de Monterrey (Mexico)

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Survey background and objectives

In February 2015 and in response to an information request by the European Commission, the ECIU ESIR run a two week online survey of its member Universities seeking preliminary feedback on their experiences with the entrepreneurial discovery process in their regions. The purpose of this exercise was to support further joint learning and engagement with the European Commission to understand how the ECIU could be a constructive partner in the implementation of Smart Specialisation strategies across the EU.

Due to time constraints, it is important to understand that the results of the survey are not based on comprehensive and comparable data but rather provide preliminary feedback on how the Universities perceive their role in the smart specialisation strategy process. The results are not calibrated for regional context differences or how the Universities are regulated at national level. This is rather a first step towards understanding better the different approaches. Finally, nine out of ten members and the two associate members responded to the survey, with eight respondents based in regions within the EU and therefore formally required to have an RIS3.

Overall, all participating Universities work together with their region or government to promote Innovation. It is broadly observed that where Universities have explicitly regulated third mission tasks, promote academic entrepreneurship or are recognised for excellence, they have consistently high direct impact on regional policy formulation. Other Universities impact the formation of regional innovation policy through support structures like incubators or relationships of individuals.

The University of Linköping reports the highest degree of engagement as it drives the regional development, growth and innovation agenda. The Universities of Twente, Stavanger, Dublin, Aalborg and Strathclyde reported mutual strategic collaboration with their respective regions both at top management and at staff level, with many engaging further in running jointly with the region intermediate organisations like TTOs, networks and clusters and taking part in joint projects. Aveiro and Lodz reported strategic collaboration at top management level but without much interaction between staff. Nevertheless, they still have joint responsibility with the region around intermediate organisations like TTOs, networks and clusters. The Autonomous University of Cataluña focuses its engagement on strategic collaboration at top management level and runs joint projects with the region. Finally, the University of Rostov reported that the University and the region have joint responsibility in intermediate organisations.

In conclusion, regions are at different stages of identification of policy priorities, design of strategies and implementation of strategies. Further ECIU work on this should deliver experiences from these different stages in a way that is sensitive to differences in regional context and the way the role of Universities is regulated to allow for meaningful comparison of approaches to strategy development. The ECIU also needs to better understand how the third mission of universities is regulated at the national (or regional) level and how this work is organised at the respective universities. As a next step of this exercise, the ECIU could consider establishing “benchlearning”

between the 'best' ECIU universities and other universities in EU in relation to the role of universities in designing and implementing (and later of monitoring) the Smart Specialisation Strategy. Another action could be to encourage ECIU universities in countries participating more than 70% in EU activities to take an active part in the Horizon 2020 activity of 'Spreading of excellence and widening participation'

Summary and conclusion of the ECIU workshop on Smart Specialisation

On 17 April 2015, the ECIU held a two hour workshop on Smart Specialisation including members, the European Commission, ERINN and some representatives of the regions. The workshop was introduced by the ECIU speaker and included presentations by the Commission, the ECIU, ERINN and the regions, followed by discussion.

The Commission clarified that it acknowledges regional variations and in that, it clarified the five success criteria that universities should aim to achieve in their engagement with their regional Smart specialisation process. Universities should:

1. Be aware of the policy framework of RIS3 and its application at various levels;
2. Address regional development in their strategic development plans and include regional stakeholders;
3. Include regional aspects in their own assessment strategy;
4. Develop effective partnerships and appropriate infrastructures/processes to sustain effective communication with them and;
5. Be prepared to play active role in RIS3 and promote regional engagement.

The Commission concluded with six recommendations to institutional actors:

1. Include regional engagement in the core missions and use RIS3 to achieve focus for actions;
2. Seek an active role (lead organisation) in the development and implementation of RIS3;
3. Enhance the absorptive capacity of SMEs by providing training aligned to business growth;
4. Review recruitment and reward systems to encourage quality, impact and regional engagement;
5. Develop institutional strategies for capacity building and retaining and attracting talents;
6. Stimulate institutional reform based on ICT, i.e. Digital Science and Digital Learning models, support the implementation of "virtual mobility" as a means to reverse the 'brain-drain'.

ERINN presented the results of the FP7 project on regional perspectives on smart specialisation practices. Four main challenges were articulated:

1. **Broad based innovation policies:** too strong focus on STI policies, underrepresentation of DUI policies in some regions; consideration of non-technological innovation, service innovation, public sector innovation, social innovation as key future challenge.

2. **Involvement of non-policy stakeholders in smart spec policy processes:** clear evidence for inclusive approaches; need to solve challenges related to vested interests, empowerment, and institutionalisation of collaboration.
3. **Selected priorities for policy intervention:** reflect modernisation of existing economic strengths (path extension) & support for emerging activities (path renewal & creation); but in some regions: too wide priorities (no 'real' prioritisation) & neglect of cross-sectoral activities based on related variety and combinations of knowledge bases.
4. **External connectedness:** creation of links with capacity and capability outside the region is not a widespread phenomenon.

The study revealed that the biggest challenge to be the neglected regional dimension. In relation to the public sector this manifests itself in the lack of coherence between national and regional/local innovation policies, lack of political leadership and lack of a shared voice/vision at the regional level. In relation to the private sector the study found that there is lack of a representative voice with which to engage, motivated by narrow self-interest and short term goals and dominated by SMEs with low demand and absorptive capacity for innovation. The higher education sector is seen as in the region but not of the region, policies and practices discourage engagement, focus on rewards for academic research and teaching. Across sectors, there are no boundary spanners while the focus is on supply side/transactional interventions which leads to an ineffective or non-existent partnership, a lack of a shared understanding about challenges and the exclusion of entrepreneurs from regional planning.

Outcomes and next steps

Overall, the Commission found the ECIU to be in a very good place. The big challenge is how others can follow the same path. Specifically regarding the role of the ECIU in solving this challenge, the Commission responded favourably to a benchlearning exercise but went further to clarify that only Poland and Portugal may be eligible for funding in this context. ECIU members could however take a lead in Teaming and Twinning activities in the context of Horizon 2020 and also through pursuing opportunities as ERA Chairs. An important next step would be to see how ECIU best practice could be spread, transferred to support underdeveloped regions and the Horizon 2020 "Spreading Excellence and widening participation" measures could be the right place.

This quick survey revealed that there are many unknowns in relation to the regional context and how the role of Universities is recognised in the different regions. More comprehensive data is needed to allow for meaningful comparisons and learning. The Smart Specialisation project results point to the need for a strategic plan to improve the regional dimension which going forward shall be increasingly important for innovation. At the next ECIU Board meeting in October, members shall discuss a strategic plan to improve the regional dimension of innovation. In addition, ECIU members will commit to provide more data on their relevant regional contexts and the role of Universities.

Annex 1: Regional profiles

Region	Number of Universities in the region	GDP per capita ¹ / relative position	Regional innovation performance (EU)
Östergötland	1	SEK 286,000 (~17% below national average)	Leader
North Jutland	1	€37,700 (national €43,200)	Leader
Lodz	3	3 rd largest city in Poland, highest GDP per capita €12,167 (compared to lowest €6,558)	Modest
East Netherlands	6	Overijssel 6% of Dutch GDP - Gelderland, the biggest province, 10% of Dutch GDP	Follower
Centro region	9	62.5% of EU 28 average, which is below the national average (76%), also the region with lowest unemployment.	Moderate
Dublin and the South East region	10	80% of the national GDP	Leader
Cataluña	10	€26,996 fourth largest in Spain	Moderate
Scotland	21	£24,900 which is higher than UK average	Follower
Stavanger	1	GDP per capita is about 16% above the national average – as the energy capital of Norway, it has the lowest unemployment rates	Follower
State of Nuevo León	97	GDP per capita USD \$18 500 vs. avg. USD \$8 500 USD at national level	

¹ Based on latest publicly available data acquired through desktop search.

Annex 2: Approaches to Smart Specialisation from the perspective of ECIU Universities

Aalborg University



AALBORG UNIVERSITET

Aalborg University is the only University in the region of North Jutland with a formally recognised third mission and highly entrepreneurial. As such, it is directly involved in North Jutland's Smart Specialisation Strategy.

Regarding the nature of collaboration with the region, the feedback was that it is about strategic collaboration both at top management level and at staff level (ongoing meetings) implemented through joint responsibility in intermediate organisations (matchmaking, network, clusters etc.) and through joint project implementation - 50 projects running currently or recently completed.

Focus on:

- Mobility and retention of (international) students (Stay with 3 purposes: To increase the number of study jobs and traineeships);
- Employment (student projects, tour de municipalities, career days, PhD research, incubator programs);
- Education (student projects, events to generate interest in educations, collaborations with UCN and other educational institutions);
- Innovation (research, entrepreneurships, spin-outs, networks, clusters, matchmaking)
- Infrastructure / (urban) planning (Smart City);
- Research (within e.g. maritime, ICT, infrastructure, nature, tourism, experience economy etc.).

University of Aveiro



The University of Aveiro is one of nine Universities in Centro. The university was directly involved in Centro's Smart Specialisation Strategy through academic entrepreneurship and indirectly through collaboration in joint structures. The nature of collaboration with the region was described as strategic at top management level, but not at staff level. It is implemented through joint responsibility in intermediate organisations (i.e. networks, clusters, TTOs, etc), both through cash contributions and in-kind. The focus is on Innovation and Education.

Universitat Autònoma de Barcelona

The Autonomous University of Barcelona is one of ten Universities in Catalunya. Its impact on Catalunya's Smart Specialisation Strategy was reported as indirect, through lobbying at individuals' level.



The nature of collaboration with the region was described as strategic at top management level, but not at staff level and it is implemented through joint projects.

Focus on:

- Infrastructure/ (urban) Planning (Municipality, Regional Government);
- Research (Joint Research projects);
- Innovation (Clusters, Strategic Agreements);
- Employment (Entrepreneurship programmes);
- Education (Postgraduate and lifelong educational programmes).

Dublin City University

Dublin City University is one of ten Universities in the Dublin and South East area. The University was directly involved in developing a Smart Specialisation Strategy from the beginning through academic entrepreneurship.



The nature of collaboration was reported as mutually strategic both at top management level and at staff level and is implemented through joint cooperation between Universities which happens through regional clustering. In addition, the University and the region have joint responsibility in intermediate organisations - TTOs are now coordinated nationally. DCU also owns and runs the DCU Ryan Academy which is funded by philanthropic capital to support entrepreneurship both in the for-profit and not-for-profit sectors. The services provided are available throughout the region and are supported also by state agencies in the drive to increase start-ups as distinct from spin-outs in the region

Focus on:

- Mobility and retention of (international) students - Work concerns making Dublin more attractive for International Students through joint marketing and branding
- Education - Regional clustering of Universities is designed to eliminate duplication and promote specialisation, the 3U partnership between Dublin City University and two other universities offers students the opportunity to avail of complementary modules at degree level
- Employment - Matching of education programmes against skills demands in the marketplace
- Innovation - Universities jointly collaborate on large scale industry-driven research programmes with support from regional government agencies, promote the DCU Innovation Campus as the basis for an emerging cluster of companies with the support of the City and County Councils
- Research - We have joint research projects between several universities and major industrial employers

Linköping University



Linköping University is the only University in Östergötland with a formally recognized third mission. The University is driving (coordinating) the regional development, growth and innovation agenda together with partners in the regional network of East Sweden Business Region (ESBR):

- Linköping University (coordinator)
- East Sweden Regional Council (coordinator)
- The County Administrative Board
- The Chamber of Commerce
- East Sweden Seed Capital
- Business Organisations
- 13 Municipalities
- ALMI/INVEST
- Science Parks
- Incubators
- Clusters

The nature of collaboration with the region is described as strategic and is concretely implemented through the formulation of:

- A Regional Development Program;
- A Regional Innovation Strategy;
- A Smart Specialisation Strategy.

University Research and Innovation strategy are aligned, contributing to a knowledge-based social development. High growth, emerging and start-up companies thrive in regional science parks and business incubators, supported by entrepreneurship programs, centres for newly started companies and professional advisors. Managed in a business region platform system governed by ESBR and guided by the regional innovation and smart specialisation strategies.

Focus on:

- Education (bildung), research, growth and innovation:
- Educational science; Urban planning; Health sector; CleanTech; Branding and promotion; Welfare systems; Democracy; Innovation ecosystem; Talent attraction; Mobility; Migration; Entrepreneurship; Energy systems etc.
 - Four main areas: Business development, Innovation, Investment promotion and Talent attraction;
- Support processes: Place management and marketing, strategic project management. Supported by a broad regional innovation policy mix:
 - Physical environments: Science Parks and Visualisation centres, Cluster initiatives, Arenas (i.e. printed electronics), living labs, concept realisation facilities etc.;
 - Venture capital provision: coordinated soft funding ESBR, business angel network, regional investment fund (East Sweden Growth Capital);
 - Open innovation platforms: Demola, Open Innovation Accelerator, Project arenas (visualization etc.);

- Support to large scale thematic innovation initiatives: New tools for health, Nova MedTech, Printed Electronics arena;
- Innovation Office at Linköping University and applied research institutes
- Incubator facilities;
- Entrepreneurship promotion programmes;
- Business development schemes;
- Ad hoc small project funding.

Lodz University of Technology

The Lodz University of Technology is one of three Universities in Lodzkie. The University indirectly influences the region's Smart Specialisation Strategy through cooperating in a cluster and contribution is done both in-kind and cash.



The nature of collaboration is strategic at top management level, but not at staff level and it focuses on strategy, local programmes and local initiatives creation.

Focus on:

- Innovation - Together with the regional authorities run various projects promoting entrepreneurial attitudes (eg. Local program "Youth in Łódź"), and the creation of local incubators;
- Employment - partner of "Młodzi w Łodzi", a scholarship programme led by the City of Lodz and funded by employers to direct graduates towards developing those skills that are needed most. This also includes training and additional language courses and career fairs to increase graduates' chances in the labour market as well as an internship portal (www.praktyki.lodz.pl) through which young people can gain experience in the best companies in Lodz. The portal includes an internships holiday program "Practice in Lodz". "Young in Łódź - I have an idea for a business" is an initiative designed to recognize and support young entrepreneurs. In addition to those activities the Lodz University of Technology is an active participant in meetings with investors in Lodz, which enable cooperation with companies in the future, giving real jobs for graduates. Lodz University of Technology also works under the "Łódzkie promuje start up'y" program within which promotes business development through support for start-ups and information training and consulting services. The University also participates in the Poviats Employment Board, which approves strategies for dealing with unemployment. We as well use the data of Poviats Employment Offices to compare it with our Electronic System of Researching Professional Careers and in consequence to prepare our students most properly to entering the labour market.);
- Infrastructure/ (urban) planning - Many joint initiatives, the latest related to a Sports Centre;
- Research – joint cooperation in regional research programmes.

University of Stavanger



The University of Stavanger is the only one in the region and it directly impacts regional innovation policy both through formal third mission and involvement in the Smart Specialisation Strategy currently in development. Norway is not an EU member and therefore not formally required to have a smart Specialisation Strategy. The example of the Nord Nordland region though who went ahead and developed a smart specialization Strategy was considered successful and a useful exercise to undertake in the context of a big change for the region which is currently dominated by oil & gas.

The nature of collaboration is strategic both at top management and at staff level. It is implemented through joint responsibility in intermediate organisations (i.e. networks, clusters, TTOs, etc) and joint projects. Focus is on infrastructure/ (urban) planning through the joint implementation of the Triangulum Smart City project

University of Strathclyde



The University of Strathclyde is one of twenty one Universities in Scotland. The university directly influences Smart Specialisation through academic entrepreneurship and collaboration on projects.

The nature of collaboration is strategic both at top management and at staff level.

Focus on:

- Research - Collaborative research projects to the likes of EPSRC);
- Innovation - Collaborative projects within innovation centres and catapults.

University of Twente

UNIVERSITY OF TWENTE.

The University of Twente is one of six Universities in the East Netherlands region. The University impacts regional innovation policy formulation both directly and indirectly through promoting excellence and academic entrepreneurship.

The nature of collaboration with the region is strategic both at top management and at staff level and it is implemented through joint responsibility in intermediate organisations (i.e. networks, clusters, TTOs, each university in its own (sub) region). The University of Twente has implemented the golden triangle approach in the joint foundation 'Kennispark Twente.

Focus on:

- Joint promotion activities to brand the region as innovative hotspot with focus on High Tech Systems & Materials (Twente), Health (Nijmegen/Arnhem), AgroFood (Wageningen) and Energy & Green Tech.



The University is one of seven Universities in the Southern Federal District of the Russian Federation. The University indirectly impacts regional innovation policy through joint responsibility in intermediate organisations.

This responsibility is implemented through joint planning and efforts aimed to rebuild innovative collaborations in the region in a more productive way (through clusters and networks in which the university plays an important role).

SFedU plays key role in coordination of higher education institutes of South federal district; providing the sustainable economic development of region; development of competitive regional innovative system at both national and global level. SFedU is the basis of regional innovation infrastructure: 221 scientific laboratories, 109 scientific and educational centres, international innovative centre «Smart Materials», 8 research institutes, 14 multiple-access high-tech centres, 2 engineering centres, 2 technoparks, 3 business incubators, more than 70 small innovative enterprises. University scientific and innovative potential of SFedU is carried out in 90 research areas within 35 areas of knowledge, 5 enlarged areas of scientific research, which correspond to priority areas of science and technology (information and communications technology and electronics, space and aviation technologies, new materials and chemical technologies of living systems, ecology and environmental management, energy-saving technologies. In cooperation with other universities, focus on collaboration with regional enterprises in aviation, aerospace, marine, electronic, nuclear, agriculture, agricultural engineering, biotechnology, medicine and medical equipment.

Focus on:

- Research - The Southern federal university is one of the key contributors in the main regional innovative cluster, collaborating with main industrial companies to develop regional system of research and development
- Infrastructure/ (urban) Planning - Number of common projects in this topic: improvement and development regional sport facilities (swimming pool construction); improvement of the city planning (campus reconstruction)
- Education - University is aimed to provide most important and innovative players of regional industry with highly-qualified and well-trained staff
- Employment - Being the largest university in the region SFedU is not only an important employer but also the main provider of the high-qualified personal for different industries. Career Centre is key in linking not only the graduates to employers but also the whole University community. By tracking personal career paths of the graduates SFedu is capable to provide regional authorities with detailed statistics on the different structural features of the employment
- Innovation - Development of the University/regional industry clusters and networks to organize innovation ecosystem providing routes for technology transfers. University in cooperation with other universities and regional enterprises focus on aviation, aerospace, marine, electronic, nuclear and other industries, agriculture, agricultural engineering, biotechnology, medicine and medical equipment).

Tecnológico de Monterrey is among the top four Universities of a total of ninety seven in the State of Nuevo León.

The nature of collaboration with the State Government is strategic both at top management and at staff level. The State Government Regional Action Program calls encourages universities to:

- Develop Human Resources for Research and Innovation
- Engage in Collaborative research with Industry through their participation in the Research and Technology Innovation Park (PIIT)
- Use Federal Allocated Research Funds for Projects on the 10 Strategic Clusters defined by the State Government

On an Institutional Framework basis, the State Government also encourages the universities to participate and be members of the:

- General Council on Science, Technology and Innovation Education
- Institute for Innovation & Tech Transfer
- Citizen and Academic Committees
- Industrial Cluster Associations

The State Government has established a Regional Action Program on Science Technology and Innovation focused on 10 Strategic Innovation Clusters based on a triple helix model. Focus on:

- IT & Software;
- Automotive and Autoparts;
- Energy;
- Biotechnology;
- Medical Services;
- Agro-businesses;
- Nanotechnology;
- Aeronautics;
- Multimedia and Creative Industries;
- Sustainable Housing Development.