Friends of Smart Specialisation – Workshop 3

Smart specialisation: focusing on clusters and skills

Co-organisation: Friends of Smart Specialisation (FoSS) and VLAIO¹

Date: 13 June 2019

Overview

The workshop was part of the ‘Smart Specialisation Policy Lab’ series organised by the ‘Friends of Smart Specialisation’, a group of independent innovation policy experts, to start a discussion on mainstreaming the smart specialisation policy approach. This third FoSS workshop hosted by VLAIO (Agency for Innovation and Entrepreneurship, Flanders), in the Herman Teirlinck Building at Tour-et-Taxis/Thurn-en-Taxis, Brussels, explored how smart specialisation strategies can drive the policy mix for industrial change in practice. The focus was on the closer alignment of cluster policies, skills policies and smart specialisation in targeted transformation strategies.

The 40 participants heard presentations from the European Commission (DG Employment, DG Grow and DG Regio), regions, partnerships, and panel discussions involving networks, regional institutions, the Smart Specialisation Platform in Seville and ‘Friends of Smart Specialisation’.

Following a welcome from the hosts,² Jan Laro (FoSS) introduced the workshop emphasising the role of smart specialisation as a new tool for industrial transformation providing a coordination mechanism for enhanced collaboration, complementarities and co-investment. This mechanism is able to combine both the vision and the governance needed for a transformational agenda through ‘smart complementarities’.

First panel discussion: Setting the policy framework for smart specialisation, clusters and employment policy

The first session examined the main components of the policy framework for combining clusters, skills and smart specialisation in targeted transformation efforts. Starting from current cluster policy practice in Flanders, the session explored the European Commission’s thinking on future skills policy, encompassing Centres of Vocational Excellence (DG Employment), the Blueprint for Sectoral Cooperation on Skills (DG GROW) and the strengthening of skills within future smart specialisation strategies post-2020 (DG REGIO).

In Flanders (Belgium) the smart specialisation strategy has developed organically over 30 years which emphasises an ecosystem approach through a triple helix collaboration between the Flemish government (VLAIO) and universities in four ‘strategic research centres’ (VIB, VITO, IMEC and Flanders Make) and also in six ‘spearhead clusters’³ which enhance the active

¹ Vlaams Agentschap Innoveren & Ondernemen
² The Herman Teirlinck Building, the location of the event, is the largest passive building in Belgium, the workplace of 2500 Flemish civil servants, and heated by solar and geothermal energy.
³ Catalisti – sustainable chemistry; SIM – materials innovation; VIL – logistics; Flux 50 – smart energy, Flanders’ Food – agro food; Blue Growth – blue economy.
engagement of industry. The cluster organisations are 50% funded by the government with an earmarked budget of about €100 million a year for R&D&I, over ten years. The role of the spearhead clusters is to be a central contact point and develop collaborative initiatives and manage implementation resources for action plans agreed with government.

The Flanders smart specialisation strategy combines a top down approach in establishing strategic research institutes with a bottom up approach from clusters which then develops priority domains through an Entrepreneurial Discovery Process thus joining forces around regional strengths. Skills agendas are now identified thanks to two special ESF calls for spearhead clusters.

The European Commission representatives reminded the audience that 50% of education and training spending in the EU can be categorised as Vocational Education and Training (VET). The Commission wishes to move VET more centre stage in the innovation process. One way of doing this is to promote Centres of Vocational Excellence (CoVE). CoVEs can be established at the national or regional level but with a given local context in order to embed them in an innovation and skills ecosystem and can be focused on sectors or societal challenges.

A CoVE is characterised by a holistic learner-centred approach in which VET is an integrative part of the skills ecosystem and contributes to regional development and smart specialisation strategies. The CoVE will also be part of the knowledge triangle working closely with other education and training sectors and the scientific community and business. A CoVE should allow learners to acquire vocational and key competences through high-quality training provision underpinned by quality assurance mechanisms but varying the approach according local conditions.

Each CoVE should link together three aspects of skills: teaching (curricula development and validation); partnerships between industry and training bodies (e.g. apprenticeships skills anticipation); and governance (linking in with business networks such as SME United and Business Europe. Centres of Vocational Excellence will be developed through Erasmus+ pilot calls in 2019 and 2020 and further rolled-out in 2021-27 (with synergies in investments in ESIF and Horizon Europe).

From a global perspective, Europe is squeezed between the west and the east (Asia). Europe will not survive on low skills and low productivity and so needs to take the predicted skills shortages to come in the next decade seriously. The Skills Agenda in 2016 identified ten actions – one of which was the Blueprint for Sectoral Cooperation on skills. Nine sectoral alliances have been set up and another six are in the pipeline. The new six will cover the bio-economy, batteries for electro mobility, defence technologies, energy value chain-digitisation, energy-intensive industries and microelectronic manufacturing and design. A call for a fourth wave will be published in October 2019.

The Blueprints are the cornerstone of the European Commission’s sectoral strategy for skill development and they rely on strategic cooperation between key stakeholders and social partners in the pilot sectors. Blueprints are more focused on higher level skills and the digital

4 https://smeunited.eu/ ex-UEAPME
5 https://ec.europa.eu/social/main.jsp?catId=1415&langId=en
agenda. There is now more attention being paid to synergies between cluster policy and skills borne out by the numerous conferences, emphasising the need to fight the growing skills gap with smart industrial specialisation.6

The above presentations illustrated new thinking at EU level regarding skills from two perspectives: the regional perspective where skills play into the development of an effective innovation ecosystem (CoVE) and from the more global competitive EU perspective strengthening skills in key European sectors (Blueprints). This increased interest in skills has also been incorporated into future smart specialisation strategies (2021-2027). Future Cohesion Policy will be based on five policy objectives:

- A smarter Europe (innovative & smart economic transformation)
- A greener, low-carbon Europe (including energy transition, the circular economy, climate adaptation and risk management)
- A more connected Europe (mobility and ICT connectivity)
- A more social Europe (the European Pillar of Social Rights)
- A Europe closer to citizens (sustainable development of urban, rural and coastal areas and local initiatives)

Smart specialisation strategies will be part of a ‘smarter Europe’, not just enhancing innovation but economic transformation, and include enhancing R&I capacities, digitisation, growth and competitiveness of SMEs, and developing skills for S3 industrial transition and entrepreneurship. ERDF funding will support a range of actions including networking, cooperation, exchange of experience and activities involving clusters and training and lifelong learning and educational activities. The specific objective ‘skills’ will be focussed on the specific target areas identified under the objective innovative & smart transformation.

Two European pilot actions are undergoing – the first on industrial transition for middle-income regions7 and the second on boosting interregional cooperation in innovation which supports interregional cooperation in eight sectors.8 The findings from these pilot actions will feed into smart specialisation thinking post-2020. However, smart specialisation will go beyond simply prioritising innovation investments, towards a mechanism of economic transformation that serves broader economic, social and environmental goals and importantly will broaden the scope of smart specialisation strategies beyond research and innovation. There will be more emphasis on strengthening the intangible complements to physical investment. In addition, capacity building for innovation management, reach-out for R&D, and development strategy knowledge are also fundable. There will also be more attention paid to

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6 The Future of Work
https://ec.europa.eu/social/main.jsp?langId=en&catId=101&eventId=1386&furtherEvents=yes
EU Industry Days 2019
Skills for Industry 2030 http://skills4industry.eu/
8 http://s3platform.jrc.ec.europa.eu/documents/20182/305491/ LaurentDeMercsey-DG_REGIO_Bilbao-TSSPevents_2018.11.28.pdf/5f993c31-ce02-40c9-8a4b-0bd800443cba

FoSS Brussels June 13th 2019 Overview latest draft by DC 24/06/19
reinforcing the governance of smart specialisation by identifying accountable bodies and using the EDP as an ongoing process. Finally, innovation diffusion should be accelerated, and cross-sectoral cooperation increased as part of adaptation to technological change using the added-value of being in the EU through interregional innovation investment.

Second panel discussion: Implementing smart specialisation for industrial transformation, featuring the case of additive manufacturing (AM)

The second panel covered a deeper analysis of how cluster and skills policies for industrial transformation benefit from targeting through smart specialisation, featuring the case of additive manufacturing. The different regional examples (Noord-Brabant, Wallonia) and programmes (Blueprint for Sector Cooperation on Skills, Urban Agenda of Jobs and Skills) show an increasing awareness of the need to integrate the human capital agenda more closely in the transformation strategies, in particular to secure growth in new high-tech areas as AM. Smart specialisation is recognised as a targeting strategy.

In Noord-Brabant the Smart Specialisation Strategy (RIS3) was a starting point to define development strengths for high-tech and now functions as part of a challenge approach for attracting and training the right people. The Brainport Industry Campus offers already training for SMEs on state-of-the-art machinery, shared infrastructures. The Human Capital (HC) agenda becomes part of an integrated approach for the high-tech field (including AM): learn, connect, and demonstrate. Noord-Brabant leads the 3D-Printing Partnership in the Vanguard Initiative: to save money and time through collaboration, with a focus on shared facilities for demonstration (3DP PAN EU). Recently a joint Interreg proposal was launched on skills development to cover shortage of people for AM (SAMAS).

The need for a skilled workforce is the reason why the additive manufacturing sector is implementing the Blueprint for sectoral cooperation on skills. The European Commission’s DG Employment has launched these Blueprint projects as tools for gathering skills intelligence (anticipating future needs), developing sectoral skills strategies (as part of a wider sectoral growth strategy) and reviewing/developing sectoral occupational profiles and qualifications as well as concrete training solutions (review/development of vocational curricula). The Blueprint is implemented by Sector Skills Alliances under the Erasmus+ programme. It is a sectoral action plan proposed in the Skills Agenda for Europe 2016. Nine projects in nine sectors (including AM) have already been selected. The projects should work with particular attention for synergies with other actions, such as the thematic smart specialisation partnerships. An objective is to involve interregional networks that specialise in AM in the Blueprint Skills Alliances in AM (managed by the European Welding Federation).

The Urban Agenda, started in 2016, has been at the origin of 14 partnerships (coalitions of cities developing action plans together with EU bodies), including one on Jobs and Skills. The Action Plan comprises actions on regulation, training for digital competences, role of city ecosystems and also one the coming ‘RIS3 2.0’, in which human capital and smart cities should take a prominent place. Cities are missing in present RIS3, while infrastructures for implementation (such as field labs) are in cities. Governance should be enlarged. Education and larger society should be part of the entrepreneurial discovery process of transition
strategies. City networks can play a role. It is expected that these elements will be part of the Future Urban Agenda.

The Walloon case of cluster policies for industrial transformation (Pôles de Compétitivité) is as in Flanders the core of its RIS3. It started also earlier (in 2005) and it recognised the importance of training from the very beginning, by including training in the policy mix of the programme (with a budget of 18 million out of approx. 100 million). But the Pôles are not yet driving the skills agenda. The challenge is to develop a collaborative approach for skills of the future. In the case of AM, specific training is organised for engineers and designers in excellence centres, with a focus on developing application expertise in sectors as aerospace or medicine. As a result of participation in the Vanguard Initiative partnership on 3D printing Wallonia participates in Liliam (Lifelong Learning on AM), a project under the EIT KIC Raw Materials\(^9\) which aims to develop a standard (training certificate). A pro-active dialogue on the jobs of the future is key.

**Third panel discussion: comments and recommendations**

A final panel discussion gathered a mix of young and older professionals in the field of regional innovation. New policies and measures were outlined for integrating the skills agenda in broader frameworks and overcoming an almost chronic deficit on skills, that was never adequately addressed in view of other pressing priorities. But awareness of the need for targeted efforts is increasing when industrial transition is accelerating and places matter. In this effort, cities and city regions seem to take a new leading role.

The audience heard about the experience of a metropolitan region (Brussels Capital Region) on designing and embedding skills policies in their wider development efforts, given higher than usual unemployment rates. The smart specialisation journey is not over, because the Brussels S3 does not incorporate fully the skills agenda despite a high, albeit falling, unemployment rate. Skills policies were guided by the ongoing digitisation of the economy and the necessary moves for adapting, upgrading and developing new skills for new economic endeavours (such as circular economy, personalised medicine ...) but they need critical mass. Non-technological innovation will be promoted with the corresponding skills efforts. A particular attention was already being paid to better integrate innovation in the non-profit (third) sector (integrate citizens in innovation).

Other interventions commented the role of development agencies and clusters. The skills agenda was not a first priority for European Regional Development Agencies in the past. Equally, experience shows that the attention for planning authorities was almost always disproportionately set on design but much less on delivery. But there is an opportunity to undertake a ‘reverse engineering’ process for regional development to learn from successful implementations. Technology Transfer Offices have to address, together with the questions of Venture Capital availability, the fast-developing skills agenda.

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\(^9\) European Institute for Innovation and Technology, Knowledge and Innovation Community
On the other hand, the cluster level is a good entry point to present a right policy mix to SMEs. And link education to industry. Therefore, support packages need to link targeted investment to upgrading of skills. Training has to be integrated in the entrepreneurial discovery process.

More policy integration of Vocational Educational Training and Smart Specialisation has recently been put on the agenda of the S3 Platform with several reports, highlighting the experience of the Basque Country in integrating VET in its RIS3, a Finnish methodology for skills gap identification along the TRL scale, a pilot training module for 3D printing funded by the ERDF.

### General conclusions from the workshop

- This workshop, focusing on clusters and skills contributed significantly to the ongoing policy discussions in the context of the Smart Specialisation Policy Lab, and stressed the need for mainstreaming smart specialisation across all transformation policies.

- The rapid industrial transition of the economy towards new types of activities, linked to new societal needs, new technologies, new business models, reveals more and more a growing mismatch between the present and future skill needs. Education and training policies are more than ever closely connected with innovation policy, in specific place-based context. Pilot actions at regional and European level lead the way.

- While industry should be in the driving seat regarding skills, VET policies are characterised by slow response times and a fragmentation of offer. Industry needs to evaluate better its needs, stay vigilant and address the unexpected. A closer interaction with regional authorities and knowledge institutions was deemed necessary. This increased collaboration between different parts of the education system, schools, VET and research universities, enterprise and civil society is key to ensuring that regional networks reinforce themselves; knowledge institutions delivering on VET are neutral regional brokers strengthening these ties as well as through joint projects and sharing facilities. Moreover, the EDP needs to bring in much more the applied science and professional higher education dimension as this is not happening at the moment.

- The formation of regional innovation clusters comprising education and research institutions can help generate critical mass and nurture social ties with other parts of the public sector, as well as with business and the local community for maximising the use of available resources. Leadership capacity is required across all partners with the ability to create a shared vision for the future. Skills development should also be a strong focus of interregional partnerships for innovation and in this connection, the new ETC component 5 is expected to be instrumental.

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10 Report (2018) on "Drawing funding and financing scenarios for effective implementation of Smart specialisation strategies"

Forthcoming JRC report (2019) on "Skills and VET: The role of Vocational Education and Training in Smart Specialisation Strategies"

Forthcoming Report (2020) on "Design of a training module for skills development in S3 interregional partnerships"

11 [https://eur-lex.europa.eu/resource.html?uri=cellar:a1aefb38-6376-11e8-ab9c-01aa75ed71a1.0001.02/DOC_1&format=PDF](https://eur-lex.europa.eu/resource.html?uri=cellar:a1aefb38-6376-11e8-ab9c-01aa75ed71a1.0001.02/DOC_1&format=PDF) see page 22
• While discussing skills upgrading, everybody should be able to assess the vast challenges bought about by fast technological change. New combinatorial, game-changing technologies risk disrupting existing value chains that otherwise are productive and beneficial. Saarland (Germany) was recently reported in the international economic press as an example of a high-tech region risking its top position in car manufacturing by game-changing electric vehicle standards. The urgency of innovation-skills policy mixes is higher than ever.

• There is undoubtedly a strong systemic link between Vocational Education and Training (VET) and successful implementation of Smart Specialisation Strategies. VET has a strong capacity to deliver and play a major role here: helping to retain and attract talent, reinforcing absorptive capacity in the societies and economies in which S3 is developed, and helping to build sustainable and more equitable communities. Furthermore, there is a need also to develop appropriately the skill base of those supposed to implement S3 on the ground.

• Smart Specialisation could guide future economic transformation through a broad stakeholder partnership guided by adequate foresight (including the anticipation of skills needs) and crucial investment decisions. Systemic innovation and holistic strategic approaches were stressed compared to piece-meal silo approaches that risk repeating themselves, putting the EU’s economy in jeopardy. Existing clusters must show leadership for guiding further investment and skills. Boundary spanning agents on the ground should help on this transformation.

• The most advanced regions and cities are leading the way in developing the role of VET in the policy mix for transformation and bringing together the institutional actors. Policy developments in different DGs are preparing with pilots the European framework to combine smart specialisation, clusters for smart specialisation investments, and CoVE. The challenge is to develop transparency and coherence between these still fragmented efforts in a shared European transformation agenda.
Agenda

Moderator: Richard Tuffs (FoSS, former Director of ERRIN)

9.00 Welcome coffee and registration

9.30 Welcome from the hosts and introduction to the workshop

9.45 Part 1 – Setting the policy framework for smart specialisation, clusters and employment policy

- Mark Andries, (Admin-Gen. VLAIO – Agency for Innovation and Entrepreneurship, Flanders), Spearhead clusters and smart specialisation
- Jan Varchola, (DG Employment, Social Affairs and Inclusion), Centres of Vocational Excellence and smart specialisation
- André Richier, (DG GROW) (Clusters, Social Economy and Entrepreneurship), Skills for Industry Strategy 2030
- Marek Przeor (DG REGIO), 'Support for clusters and skills in ERDF, through smart specialisation'

10.45 Part 2 – Panel discussion and questions (introduced by Jan Larosse, FoSS)

11.00 Coffee break

11.20 Part 3 – Implementing smart specialisation for industrial transformation. Panel discussion featuring the case of additive manufacturing

- Coen De Graaf, (Project leader Vanguard Initiative, Cluster Economy and Internationalization in Noord-Brabant), Coordinating human capital policy with smart specialisation in the Netherlands
- Felix Rohn, (DG EMPL), Blueprint for sectoral cooperation on skills – Additive Manufacturing
- Hans Verdonk, (Rotterdam), The Urban Agenda for Jobs and Skills – Smart Specialisation and Human Capital
- Vincent Lepage, (Director Economic Policy, Wallonia): Clusters, innovation and training in Wallonia: the case of Additive Manufacturing

12.00 Part 4 – Final panel discussion and questions

- Ariane Wautelet, (Team leader, Policy & Monitoring, Innoviris)
- Christian Saublens (ex-CEO EURADA)
- Dimitri Corpakis, (former HoU widening participation in DG RTD and FoSS)
- Farha Brahmi, (Network Manager, Vanguard Initiative)
- Mathieu Doussineau, (JRC Seville - Growth and Innovation)

12:45 End, conclusions and next steps