



European
Commission

JRC TECHNICAL REPORTS

A Policymakers Guide to Transnational Learning in Smart Specialisation

S3 Policy Brief Series
No. 05/2014

Åge Mariussen
Inger Midtkandal
Ruslan Rakhmatullin

2014



Report EUR 26542 EN

European Commission

Joint Research Centre
Institute for Prospective Technological Studies

Contact information

Institute for Prospective Technological Studies
Address: Edificio Expo, C/ Inca Garcilaso, s/n 41092 Seville, Spain
E-mail: jrc-ipts-secretariat@ec.europa.eu
Tel.: +34 9544 88318
Fax: +34 9544 88300

<http://ipts.jrc.ec.europa.eu/>
<http://www.jrc.ec.europa.eu/>

This publication is a Technical Report by the Joint Research Centre of the European Commission.

Legal Notice

This publication is a Technical Report by the Joint Research Centre, the European Commission's in-house science service. It aims to provide evidence-based scientific support to the European policy-making process. The scientific output expressed does not imply a policy position of the European Commission. Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use which might be made of this publication.

JRC88429

EUR 26542 EN

ISBN 978-92-79-35758-9 (PDF)

ISSN 1831-9424 (online)

doi:10.2791/69493

Luxembourg: Publications Office of the European Union, 2014

© European Union, 2014

Reproduction is authorised provided the source is acknowledged.

Printed in Spain

A Policymakers Guide to Transnational Learning in Smart Specialisation

Åge Mariussen*, Inger Midtkandal** and Ruslan Rakhmatullin**

*Botnia-Atlantica Institute, University of Vaasa (Finland), Umeå University (Sweden), Nordland Research Institute (Norway)

**European Commission, JRC-IPTS, Seville (Spain)

S3 Policy Brief Series n° 05/2014 – January 2014

S3 Platform, JRC-IPTS

Abstract

Smart Specialisation (S3) is a new framework for research and innovation strategies which together with other instruments, such as Horizon 2020 is designed to pull Europe out of its current economic problems. Successful RIS3 strategies are improving and sometimes changing conditions promoting innovation, competitiveness and growth. In order to do so, RIS3 operates with six steps of planning, outlined in the S3 Guide.

Core issues in this policy brief are

1. What are the ambitions of Smart Specialisation when it comes to transformation of RIS in a way which can deliver the over-all objectives of solving the European economic crisis?
2. How can this be done in practice in the context of the framework of planning defined by the 6 steps outlined in the S3 Guide?

In discovering, promoting and implementing these improvements, transnational learning is a promising and potentially powerful tool. However, attempts to organize transnational learning may easily fail. This brief explains how it can succeed, with reference to the six steps of the S3 Guide.

The brief tentatively discuss a typology of S3 strategies, understood as 5 distinctly different “drivers of change” in RIS (deindustrialization, innovation system inefficiency, entrepreneurial discoveries, new paradigm creation and transnational inter-regional co-specialisation). This typology is intended to illustrate how transnational learning may play different roles in S3 policymaking.

Key words: Smart Specialisation, transnational learning, typology of RIS3, drivers of change, 6 steps of the S3 Guide

^a The views expressed are purely those of the author and may not in any circumstances be regarded as stating an official position of the European Commission.

TRANSNATIONAL LEARNING AS A POWERFUL TOOL IN SMART SPECIALISATION

The point of departure for this policy-brief is opportunities and challenges in promoting transnational learning as a more forceful tool in Smart Specialisation. Core issues are

1. What are the ambitions of Smart Specialisation when it comes to transformation of RIS in a way which can deliver the over-all objectives of solving the European economic crisis?
2. How can this be done in practice in the context of the framework of planning defined by the 6 steps outlined in the S3 Guide?

In this brief, core concepts of the S3 Guide, such as system of innovation, triple helix connectivity and entrepreneurial discoveries are assumed to be known by the reader. The brief tentatively discuss a typology of S3 strategies, understood as 5 distinctly different “drivers of change” in RIS (deindustrialization, innovation system inefficiency, entrepreneurial discoveries, new paradigm creation and transnational inter-regional co-specialisation). This typology is intended to illustrate how transnational learning may play different roles in S3 policymaking.

The brief draws on Learning Transnational Learning, combined with experience from S3 peer review workshops throughout 2013, as well as discussions with and advice from the S3 Platform team.

S3 PROVIDES A COMMON FRAMEWORK

The S3 guide outlines Research and Innovation Strategies for Smart Specialisation to improve the performance of regional and other systems of innovation, as well as suggestions of methods and approaches of “how to do it” in terms of policymaking. The implementation of the guide is supported by a platform in Seville, hosted by DG JRC IPTS. Regional and national S3 programs are expected to be submitted to an evaluation of DG REGIO, as conditionality for support from the European Structural Investment Funds.

S3 PROVIDES A COMMON “LANGUAGE”

The S3 guide provides the basic “dictionary” for knowledge sharing, a “language” for transnational peer reviewing and communication, consisting of definitions of core concepts for analysis and planning. In this way, S3 provides a *framework for dialog* on regional development opportunities and challenges between regional development policymakers inside regions and *between regional planners in different countries*.

...AND OPPORTUNITIES FOR TRANSNATIONAL DIALOGUES

Through peer review workshops knowledge about the region, its regional innovation system (RIS), its “triple helix” (3H), as well as its on-going work on the Smart Specialisation strategies are put on the table, and explained and discussed with peers, experts and critical friends from regions in other countries. Core components in these attempts at transnational learning so far have been “Critical friends” and “peer review”. Peer review sessions follow certain rules, such as shared objectives, mutual respect, openness, shared information and acceptance of different perspectives.

... BUT HOW DO WE MOVE FROM DIALOGUES TO REAL CHANGE?

However, the over-all aim of Smart Specialisation is not to discuss, it is to pull Europe out of its economic problems. In several European regions, this is only possible through considerable improvements of the regional institutional conditions and frameworks promoting growth and competitiveness. Europe cannot succeed without deep changes in improving innovation and competitiveness. So how do we go from dialogue to change?

CHANGE STARTS WITH AN “OUTSIDER” PERSPECTIVE

A short answer is: most regions and regional development institutions or partnerships have a hegemonic self-understanding or “story” of what they are doing. These stories often tend to take their existing strategies and practices as given. Change is only possible through reflection upon these practices from an analytical point of view which is located outside this self-understanding. We have to put the practices and the stories explaining the practices on the table and discuss and analyse them. In order to be able to reflect upon what you are already doing, you have to look upon yourself from the perspective of an outsider. This is what the S3 common framework, common language, and opportunities for transnational dialogues are all about. It is the first step in the direction of a new perspective on your systems of innovation. This new perspective might help you to discover problems and shortcomings which are invisible seen from an insider perspective, or opportunities and new strategies you might need in the future. In other words, the new perspective could lead to real change.

At this point, however, there is reason to be cautious.. Advice from peers from other regions or international experts may just be pushing fashions which may be more or less relevant and useful.

SMART SPECIALISATION IS NOT A FASHION

The concept of transnational learning is used in different ways. It is often understood as diffusion of “best practices”, based on “hegemonic models”, which are supposed to be applied in similar and standardized ways elsewhere. In these cases the “model” is often provided by a transnational consultancy, and it is likely to be implemented in a “cut and paste” manner, based on a generalized description of what the “best practice” is. One example is the diffusion of “new public management” models of organization, where public policies were left to regional development and other types of agencies, which operated on a contract basis. During the 1980s and 1990s different New Public Management agencies emerged in many countries.

The result of this kind of learning is often the creation of what professors studying diffusion refer to as “fads and fashions” where several countries and regions go in a similar direction. Fashions start with solutions (such as new public management forms of organization) which look for problems. Following a successful fashion may be easy, because “everybody else does the same”. Because everybody does the same, the fashion creates a legitimacy of its own. “Everybody” cannot be wrong. However, after a while, based on some negative experiences or following a change of government, a successful fashion is likely to create a reaction. For instance, the introduction of regional development agencies in UK, as a part of a broader “devolution” policy to meet globalization through regionalization, promoted by the Social Democrats, was later scrapped by the current Tory government, and replaced with a new model of local governance, based on other ideas of societal evolution. What follows from fashions is an unstable system of policymaking which moves between different solutions.

Smart Specialisation is not about “following a fashion” or applying the same standardized model or “best practice” which may be applied to different problems.

SMART SPECIALISATION STARTS INSIDE YOUR OWN REGION, BASED ON YOUR UNIQUE RESOURCES

Smart Specialisation starts with the analysis of the regions own preconditions for development, its “critical mass”, specialisation and challenges.

Most regions are already likely to have several studies as a basis of their on-going regional planning. What is more, in several cases, it is likely that these studies confirm the ways in which the regional institutions already operate. Whereas existing planning documents are likely to contain useful data, analysis and information, they are not usually regarded as sources of the discovery of new strategies. Quite the opposite, documents outlining existing plans and practices are likely to be consistent with existing plans and practices. Smart Specialisation is about *experimental change*, where the analysis should move us from what we know today into the discovery of new possibilities. This is where we need to take a new look at what is happening inside the region, applying an outsider perspective.

In that way we can discover *a driver of change*.

LOOKING INSIDE YOURSELF WITH AN OUTSIDE PERSPECTIVE, YOU ARE LIKELY TO DISCOVER YOUR DRIVER OF CHANGE

The dynamic element which may move planning out of a lock-in situation can be a driver of change. This driver can be a frustration with the current situation, a weakness, and/ or it can be the discovery of an opportunity of development. Frustrations and the discovery of opportunities are closely related. If you have lost the ability to experience a frustration with your own performance, you are unlikely to look for new opportunities. In the analysis, the driver of change is likely to be summarized as a SWOT, which outlines strengths, weaknesses, opportunities and threats.

This frustration, importantly, may be created through comparisons with others. It may also be present already, as a tension between current realities and opportunities you have not been able to reach. Comparisons with other can help you to see your own region in a new perspective, and to discover your own shortcomings and hidden possibilities. Comparisons with others may also help you to confirm that the emergent strategies you are already working on are relevant, and should be reinforced, taking the advice from others into consideration.

Among industrial actors, this is called “learning through monitoring”. Industrial actors apply benchmarking and monitoring of what their competitors and suppliers are doing, and how well or bad they perform compared to their competitors as a basic tool of corporate governance. It is an efficient way to understand their position in global competition, and identify areas which needs improvements.

Regions are not companies. They are not actors in markets. However, regions and countries who are successful in providing triple helix frameworks for globally competitive industries, and have well-functioning systems of innovation, may sustain high levels of employment, decent standards of living and welfare, in short, preconditions for happiness. In so far as regions follow unique S3 strategies, they are not competing with each other. In this respect, within the context of Smart

Specialisation, regions may learn from each other and share experiences of how their regional economy may become more globally competitive.

The motivation to do this varies. Regions may in varying degrees feel the forces of global economic competition. Then again, why should regional policymakers care? Regional policies and the ways regions work seen in relation to the global market are kept in place through several institutional arrangements. Similarly, in trying to relate to science policy and regional development, S3 project may meet science policy actors and institutions happy to stay inside their policy paradigm, follow the science policy indicators, and just skip any thought of adapting universities to regional development needs. These and other obstacles to triple helix connectivity might be frustrating, but at the same time, if you are able to create new university – industry relations, or repair other flaws in your system of innovation, obstacles are also opportunities. In order to realise these opportunities, you need an analysis of your problems which identifies your needs.

Using transnational learning to change your own region takes a coordinated effort, which involves several phases of analysis and planning. It is an analytical task to find out what lessons needs to be learnt, and it is a task of S3 policymaking to identify how they can be implemented, and to do it. A point of departure is to look for other regions which may provide relevant input and guidance. Preferably, this should be regions which in important and relevant ways are comparable to your own region, in terms of spatial structure, institutional setup, sector specialisation or along other dimensions where you might need assistance.

...THEN HOW CAN TRANSNATIONAL LEARNING BE EXPLOITED IN S3 POLICYMAKING?

The short answer is that it needs to be integrated into all parts of the S3 planning cycle. We know from the guide that the cycle of S3 planning goes through 6 steps:

The experimental S3 planning and policy-making cycle

The experimental S3 planning and policy-making cycle			
Smart specialisation planning and policymaking	Objectives	Transnational learning opportunity	What can go wrong?
Step 1 Analysis of the national/ regional context and potential for innovation	Identify and understand the unique characteristics of the region and its preconditions for development.	Learning from others in the analysis (an outsider perspective)	We are perfect
Step 2 Set up of a sound and inclusive governance structure	Balancing inclusion and participation with a view of the entire region.	Involving the S3 regional governing partnership or institutions in evaluation and exploitation of transnational learning	Transnational learning isolated in a project which is not implemented
Step 3 Production of a shared vision about the future of the country/ region	A model of how the S3 strategy is expected to work and what it should achieve of the program.	Inspiration from other regions or good practices, co-specialization or development of a unique strategy with a view on others	Copying other blindly – without considering your unique strategic position

Step 4 Hard choices. Selection of a limited number of priorities	Making hard priorities is about making cost-efficient use of scarce resources.	Learning from others how to prioritize, evaluating good practices and selecting the best options for future development	Dominant regional actors takes all the money for usual purposes
Step 5 Establishment of suitable policy mixes	Policy mixes are determined by the model of how the program is expected to work in the first place, decided upon in step 3, as well as the selection of priorities and coordination mechanisms through involvements of networks of actors which can contribute to the achievement of the vision.	How are they creating good practices in other regions? Who are the actors? Take these experiences and actors on-board!	The scope of actors is too narrow. Some may be missing.
Step 6 Integration of monitoring and evaluation policies	Process, output and impact indicators. Indicators are the main drivers of implementation of the program. Process indicators should be based on the model of implementation (see step 3, 4 and 5).	Comparing your indicators with other regions, understanding reasons behind differences, closing the gap to the leaders	Indicators and monitoring based on irrelevant criteria

WHAT CAN GO WRONG?

Failed attempts to do transnational learning are often derived from a series of missteps. The regional partnership may see the situation as perfect (step 1), contacts with others are delegated to peripheral projects, and not monitored by the S3 leaders (step 2), the shared vision is created without taking the wider situation of the region into consideration (step 3), priorities are based on dominating actors already present in the S3 partnership, and not on the analysis of the regional potential (step 4), and actors who should have been involved are excluded (step 5), and indicators and monitoring get stuck in technicalities (step 6).

.... AND HOW CAN YOU SUCCEED?

Similarly, efficient use of transnational learning should as explained above include learning through monitoring in the analysis (step 1), involving the S3 regional leaders in transnational learning (step 2), specifying a vision on a reflection upon the global position of your region (step 3), listen to the advice from others in priority-making (step 4), take on board the actors you need, irrespective of how your partnership looked from the start (step 5), and compare your indicators with those of the other regions you found to be relevant (step 6).

In practice, these solutions are likely to depend on the more specific challenges and opportunities identified in your SWOT. What is relevant in terms of transnational learning depends on your SWOT analysis where you have discovered your drivers of change. For the purpose of this discussion, we will focus on five types. :

I. Globally competing industries located in my region are moving away. Several European regions have experienced that global industrial actors invest in factories in the region, but then they move away, because the framework conditions, such as the triple helix of universities and public policies does not support the industry and its suppliers sufficiently, or for other reasons.

II. The systems of innovation of my region are inefficient or non-existent. It may be a problem or a deficiency in your own system of innovation you have not seen before which becomes visible through the comparison with other regions. You may have done considerable investments in R&D, but outputs may be lagging. Or you may simply lack a proper regional system of innovation supporting important sectors.

III. Our region has a hidden, and not yet exploited potential of development. Most regions are likely to have emergent possibilities, a possible growth strategy where the region already has a potential, which is not exploited. This potential may exist as a “weak project”. The resources of this project may already be there, they just need to be organized in a new way. The project may be supported by entrepreneurs already present in the region, who, for some reason, have not succeeded, because they are blocked by some obstacle. Or the project may become visible as an unexploited potential which you discover when comparing yourself to other regions, where this potential has been developed.

IV. We can create a new value chain or paradigm of production. Some European regions are at the forefront. They discuss new paradigms of production, or, somewhat less ambitiously, new value chains.

V. We may do new things together with other regions. In this case, you have discovered an opportunity for development through co-evolution with other regions. We may be positioned in different parts of the same value chain. By coordinated efforts, we may push for stronger European clusters.

Given these drivers, the integration of transnational learning into this planning process may go like this:

DRIVER OF CHANGE					
PLANNING CYCLE WITH TRANSNATIONAL LEARNING	Globalization is destroying our industrial base	Our innovation system is inefficient	Entrepreneurial discovery of own latent potentials	We should create a new paradigm of production	Sharing visions with other regions
Analysis. Comparison with others, discovery of good practices.	What is wrong with my framework conditions? GAP-analysis	Comparison of output and input indicators show that my innovation system is inefficient	Regions with INITIALLY similar critical mass and resources have developed in different directions, some more successful than you	Who are global leaders and what are they doing? What is my role?	We can support each other through value chains or other forms of co-evolution

Governance. Identification, analysis and central level support to promising good practices	Comparative GAP analysis with other regions authorized by the S3 leaders	Do you have independent systems of governance which are able to address the inefficiencies you discover?	Identification of unexploited opportunities through comparison with other regions Discover own “weak projects with large potentials” Authorization to follow this lead.	Central level support	Decisions on strategic cooperation
Shared vision.		Is the vision really based on a shared understanding of the problem or inefficiency?	Roadmaps for weak projects A strategy for the valley of death	Technology foresight – taking global competition into consideration	Joint development
Making priorities (=hard choices) Decide to do something new	Build a RIS based on redirection and adaptation of the resources you already have and networking with others.	Identify both short term cost-efficient mechanisms of coordination between existing institutions as well as long term strategies	Selection of realistic opportunities,	“Fail fast” – evaluate “wild ideas” and assess bottlenecks.	Decide how central coordination and co-evolution with other regions are
Policy mixes. Who can implement the strategy?	Identify building blocks you already have, and what you need in addition	The good practice analysis will identify institutions and actors who can implement the good practice.	Support to entrepreneurs driving the projects	How does the future value chains and systems of innovation look like?	Set up adequate regional and transnational networks of cooperation between related sectors
Monitoring and evaluation How do you make this work?	Continue GAP analysis through comparison with others.	Monitor change through innovation system indicators	Design of evaluation criteria based on the roadmap	A roadmap passing through the valley of death	Joint evaluation and continues comparison

GLOBALIZATION IS DESTROYING OUR INDUSTRIAL BASE

If your core industries are moving away, you have to consider the regional framework conditions which industrial actors' emphasis as decisive, seen in relation to more successful regions. This can be done through a GAP analysis. By GAP analysis we refer to differences between expectations and experiences in the triple helix of your region. A preliminary finding from S3 policymaking in some Nordic regions confirms that globally competing industrial actors are extremely sensitive to their triple helix. They have high expectations, and they are critical in terms of what they get. These informants are extremely valuable in identifying shortcomings in the connectivity of your triple helix, which are likely to lead to loss of competitiveness and investments.

You could do a comparative GAP analysis with other regions and identify your shortcomings, including the actors and sectors you need to solve the problem (step 5), and set up a monitoring system where you close your GAPs and are able to regenerate lost industries, reposition your region in the global value chains, and attract new investments (step 6).

You should also consider other alternatives, such as

1. Consider if your position in the value chain is wrong. Maybe they can be replaced with others functions where your region is more competitive
2. Make a critical analysis of the spatial embedding of knowledge in your region. Investors may leave because your educational institutions and R&D framework are insufficient. If you have a strong regionally embedded knowledge base, you should be able to regenerate lost industries

A GAP analysis is also likely to identify shortcomings in sectors outside your present S3 partnership, such as

- Education (lack of adaptation to globally competing existing industries)
- Infrastructure
- Labour market education

You should also consider to what extent the existing fragmentation of your triple helix is caused by the educational system, which may be educating young people away from your globally competing industries. Core issues is to identify regions which well- developed triple helix connectivity, and use they to identify what kind of changes you need to make, and what kind of policy-mix you need to do it.

OUR INNOVATION SYSTEM IS INEFFICIENT

In regional innovation system analysis, core elements in comparisons usually are

- Input indicators, such as public and private investments in R&D
- Process indicators, such as triple helix connectivity
- Output indicators, such as innovations or patents
- Competitiveness indicators, such as Revealed Competitive Advantage and others

A usual discovery in these kinds of comparative analysis is that some regions are more efficient in transforming input, in terms of investments in R&D into outputs, in terms of new products, processes and competitiveness. A problem which is likely to be made in some regions is that their systems of innovation are not as efficient as the systems of innovation in other regions.

These findings are very important, because they can guide the direction of the search for new opportunities. The opportunity is the solution to the problem you just discovered.

What created your inferior performance, compared to the other region?

The crucial governance problem in the initial phase of this process is the analysis of the root cause. At this point you might discover that there are various structural explanations to the difference. For instance, different sectors innovate in different ways. This structural factor could explain that what appears to be bad performance is not bad performance. These factors should be taken into consideration.

Let us assume that a difference still remains.

In carrying out this analysis, you might need to look again at your own region, with a new set of questions which were not answered in your initial analysis. For instance, why is not this university generating more spin-offs? In seeking the explanations to this question, you should look at spin-offs from other universities. Is there something wrong with the organization of the science park? What is different with respect to venture capital funding? Or perhaps there is a lack of connectivity between the universities and industrial actors who has a potential to commercialize university-based innovations? What about the absorptive capacity of your industries? Problems often have root causes, chains of causation which explains the differences and the cause of your problem. Because this analysis has a potential to change your region, it has to be assessed and approved by the S3 leaders.

At this point, the vision is clear: an improved system of innovation. We also know what caused it. The question is how to fix the problem, and who can do it? In this analysis it is crucial to involve actors and sectors with a capacity to solve the problem. This involvement in search for the solution is the way to make the vision, the solution, shared.

Several of the answers you are likely to get in this search will be structural explanations which cannot be solved. A common problem is that the university institutions have strengths in terms of research which is not matched by regional industries. Or maybe there are no industries which are technologically related to the strengths of the University. With no industrial actors willing and able to industrialize university-based innovations, patents from your university are likely to be sold and industrialized in other regions.

There might be ways around these structural problems, providing you discover and use appropriate policies. In this discovery process, there is a lot to learn from the history of other more successful regions you identified in the first place. Why are their industry better connected to regional universities?

In many cases what appears to be a structural problem today is the result of policy decisions made some years ago. For instance, in comparing connectivity between universities and industries between Nordic countries, we have found that an explanation to the excellent contacts between industries and universities in Finland is due to certain reforms in the Finnish school system which created open doors from craft based education to poly-technical university-level education. This is a good practice. The hypothesis is that it can be transferred to other regions in other countries through a reform of your existing educational institutions, or through setting up of new. This is a long-term strategy, and it should be implemented as such.

A complimentary cost efficient approach is networking programs. Other good practices is the frequent contacts between some Norwegian universities and tourism is that the universities tries to support innovation in tourism through innovation programs, in synergy with programs encouraging

tourist entrepreneurs to cooperate in promoting destinations. These are short term strategies, but remember that it takes time to develop good networks between researchers and practitioners.

ENTREPRENEURIAL DISCOVERIES

Most regions have entrepreneurial discoveries waiting to happen. They might be existing, weak projects or unexploited opportunities which are there, but which has been marginalized by other, more successful industrial opportunities. You may discover them when you look at others, who have developed them already. You may see them when you compare yourself to other regions.

You may also discover them because they already have supporters inside your own region. Entrepreneurial discoveries may already be present as “emergent” projects, strategies which have not yet fully been exploited, which are well known, and just wait to happen. Or you may discover them as flaws in innovation systems, for instance through lack of triple helix connectivity.

These initial discoveries raise a lot of follow-up questions, such as

1. Why has nobody in our region done this (or succeeded in doing this) before? It may have been tried before, and proven unsuccessful. In that case, before you have another go at it, take a good look at these experiences.
2. Why have others succeeded, and not we? Again, there may be good reasons why others have succeeded and you have failed, which can be explained by hard structural factors. Or, there might be inefficiencies and flaws in your own system of innovation which has prevented you from going in this direction.
3. What does it take to succeed? You need help from other regions to identify their success factors, and how you can build on their experiences.
4. The valley of death – fail fast. Entrepreneurial discoveries may be big projects which required huge investments over long periods of time before they become profitable. You should make a realistic assessment of the “valley of death” in terms of money and time, and what it takes to get to the other side. At this point, it is a good idea to involve core decision making institutions in making the “hard choices, of either investing in this opportunity or putting it on hold.

WE WILL CREATE A NEW PARADIGM

A special case of entrepreneurial discoveries consists of new paradigm creation.

Some European regions are at the forefront of technological development, ready to create new, revolutionary paradigms of production, within artificial intelligence, advanced biotechnology, green energy technology, material technology or other promising and sophisticated fields. A characteristic feature of new paradigm creation is that it consists, not just of new products and technologies, but also involves the creation of new value chains and/ or new systems of innovation. Typically, the basic technologies of the new paradigm may already exist in small scales, in different research laboratories, but the step from these laboratory conditions to real world industrialization has not yet taken place. This situation creates a particularly challenging dilemma when it comes to the balance between transnational cooperation and knowledge sharing on one hand, and competition and knowledge privatization of the other.

On one hand, new paradigm creation requires new infrastructures, value chains, technological standards and support industries which necessarily require collective efforts and cooperation between industrial entrepreneurs, scientists and regions in different parts of the world.

On the other hand, new paradigm creation is driven by massive venture capital investments in long term R&D which necessitates a high level of knowledge privatization. Any strategy which aims at putting the region in a “first mover” position needs to have a reflected position on this dilemma.

Given this point of departure, a strategy of new paradigm creation for obvious reasons have to rely on cooperation with or monitoring of competitors in other parts of the world. From the point of departure of regional planners, this includes:

1. Benchmarking of the triple helix compared to global competitors
2. Technology foresights, including
3. An assessment of the valley of death, and the ways in which it is likely to be overcome
4. A strategy for building value chains, supporting industries and supporting institutions (a cluster)
5. Strengths of visions and networks

CO-EVOLUTION AND CO-SPECIALISATION WITH OTHER REGIONS

In more mature industries, certain European regions have discovered the new opportunities created by co-specialisation. Typically, the development of co-specialised networks of European or global regions takes as a point of departure sector specific or cluster specific networks, and moves into the discovery of the potentials of deepening co-specialisation. For instance, regions might specialize on different positions in the value chains.

In some cases, this strategy may also be applied in the development of new technological paradigms, for instance in the case of Carbon Capture and Storage technologies (CCS) between French and Norwegian partners. Co-specialisation may be seen as a strategy where the dilemma between knowledge sharing and privatization has been solved, and the focus is on exploiting existing opportunities through open systems of innovation.

The forms of transnational learning required in these strategies are sophisticated, and include shared technology foresights and the development of global or European clusters or systems of innovation.

SUMMARY

The previous discussion may be summarized like this:

Driver of change	S3 focus	Characteristics of trans national learning
Deindustrialization	Regional embedding of knowledge GAP analysis	Specific indicators Transfer of institutional solutions
Innovation system efficiency	GAP analysis Innovation system indicators	Specific indicators Transfer of institutional solutions
Entrepreneurial discoveries	Monitoring of others Fail-fast Valley of death	Transfer of development (innovation system) models and strategies
New paradigm creation	First mover v. s. collective action? GAP-RIS comparisons and monitoring Technology foresights, scenarios	Controversial: either competitive learning through monitoring or deep and many-sided
Transnational co-specialisation	Technology foresights Scenarios Shared strategy	Deep, many-sided

The different drivers are likely to be related to different types of S3 focus. Correspondingly, this raises different types of agenda for transnational learning. In some cases, such as transnational co-specialisation, transnational learning may be seen as many-sided and deep.

REFERENCES

Mariussen Åge and Virkkala Seija (2013) *Learning Transnational Learning*, Routledge Studies in Human Geography

Midtkandal Inger and Rakhmatullin Ruslan (2014), "The S3 Platform Peer Review Methodology", JRC Technical report, S3 Working Paper Series 02/2014

Europe Direct is a service to help you find answers to your questions about the European Union
Freephone number (*): 00 800 6 7 8 9 10 11

(*). Certain mobile telephone operators do not allow access to 00 800 numbers or these calls may be billed.

A great deal of additional information on the European Union is available on the Internet.
It can be accessed through the Europa server <http://europa.eu/>.

How to obtain EU publications

Our priced publications are available from EU Bookshop (<http://bookshop.europa.eu/>),
where you can place an order with the sales agent of your choice.

The Publications Office has a worldwide network of sales agents.
You can obtain their contact details by sending a fax to (352) 29 29-42758.

European Commission
EUR 26542 – Joint Research Centre – Institute for Prospective Technological Studies

Title: A Policymakers Guide to Transnational Learning in Smart Specialisation

Authors: Åge Mariussen, Inger Midtkandal, Ruslan Rakhmatullin

Luxembourg: Publications Office of the European Union

2014 – 14 pp. – 21.0 x 29.7 cm

EUR – Scientific and Technical Research series – ISSN 1831-9424 (online)

ISBN 978-92-79-35758-9 (PDF)

doi:10.2791/69493

Abstract

Smart Specialisation (S3) is a new framework for research and innovation strategies which together with other instruments, such as Horizon 2020 is designed to pull Europe out of its current economic problems. Successful RIS3 strategies are improving and sometimes changing conditions promoting innovation, competitiveness and growth. In order to do so, RIS3 operates with six steps of planning, outlined in the S3 Guide.

Core issues in this policy brief are

1. What are the ambitions of Smart Specialisation when it comes to transformation of RIS in a way which can deliver the over-all objectives of solving the European economic crisis?
2. How can this be done in practice in the context of the framework of planning defined by the 6 steps outlined in the S3 Guide?

In discovering, promoting and implementing these improvements, transnational learning is a promising and potentially powerful tool. However, attempts to organize transnational learning may easily fail. This brief explains how it can succeed, with reference to the six steps of the S3 Guide.

The brief tentatively discuss a typology of S3 strategies, understood as 5 distinctly different “drivers of change” in RIS (deindustrialization, innovation system inefficiency, entrepreneurial discoveries, new paradigm creation and transnational inter-regional co-specialisation). This typology is intended to illustrate how transnational learning may play different roles in S3 policymaking.



JRC Mission

As the Commission's in-house science service, the Joint Research Centre's mission is to provide EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle.

Working in close cooperation with policy Directorates-General, the JRC addresses key societal challenges while stimulating innovation through developing new methods, tools and standards, and sharing its know-how with the Member States, the scientific community and international partners.

*Serving society
Stimulating innovation
Supporting legislation*

