

# THE PROACT BENCHMARKING FRAMEWORK:

# A METHOD PROPOSED TO EXPLORE GOOD PRACTICES IN REGIONAL INNOVATION AND RESEARCH POLICY

Written and edited by:	Balázs BORSI (HU), Gábor PAPANEK (HU) and Wouter MENSINK (NL)
Based on contributions by:	Dénes ANTAL (HU)
	Carsten BERGENHOLTZ (DK)
	Thomas BERNDT (AT)
	Henrik DAM (DK)
	Wojciech DZIEMIANOWICZ (PL)
	Adolf FILACEK (CZ)
	Josef HOCHGERNER (AT)
	Bernhard KATZY (NL)
	Martin KEDRO (SK)
	Martina KEDROVA (SK)
	Peter LINDGREN (DK)
	Jiri LOUDIN (CZ)
	Jakub NOSEK (CZ)
	Attila NYIRY (HU)
	Theodoros PAPAIOANNOU (UK)
	Jeff READMAN (UK)
	Howard RUSH (UK)
	Magdalena SEDOVA (CZ)
	Jacek SZLACHTA (PL)
	Kateryna TYDLACKOVA (SK)
	Attila UDVARDI (HU)
	Konrad WALCZYK (PL)
	Janusz ZALESKI (PL)

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## Foreword

One important – if not the most important – goal of a region's innovation and research policy is to create, maintain or update its competitiveness. The benchmarking framework aims to present how the efficiency of designing and implementing such regional policies can be studied. We propose a number of benchmarks with the help of which, one can show whether the different processes and methods of a region's innovation and research policy were reasonably chosen.

The paper builds on the experience of the ProAct consortia supported by the  $6^{th}$  Framework Programme of the European Commission (contract no. 030121). Experts from eight countries – Austria, the Czech Republic, Denmark, Hungary, the Netherlands, Poland, Slovakia and the United Kingdom – joined forces to look for efficient innovation and research policy practices in the European Union.

When the paper was structured, we used the experience of interactive consultations within the ProAct consortium which consisted of regional innovation policy makers and innovation experts. These consultations clarified that regional policy practices in very different regions could be addressed from three different aspects. These practices also form a policy learning cycle:

- the practices of strategy formation;
- the practices of strategy implementation and policy flexibility;
- the practices at programme / project level.

In the benchmarking framework, the three broad aspects are broken down into practices and underlying areas of study which are approached in questions and explanations to these questions. What follows at the end of each such section are suggested benchmarks of good regional innovation and research policy practice. The sections and benchmarks were agreed and consolidated in interactive workshops and group discussions via the the internet, which also used case study experience from the eight ProAct countries. Beside the case study experience shown in grey, there are fourteen boxes throughout the text: these provide additional information on related topics in the given section.

The benchmarking framework was made for regional policy makers first of all, because they play a key role both in designing the development strategy and in governing and supervising its implementation. Nevertheless, we also hope that this report is also useful for everyone participating in envisioning, planning and "programming" a region's future, or implementing a sub-task in regional development or industrial development or those teaching or learning these subjects... and of course anyone interested in the future of his/her region.

We believe that initiating a policy debate on the practices shown below can help regional development in Europe.

Budapest, March 2007

Gábor Papanek project coordinator

## 1. Setting the scene

The so-called Lisbon Strategy of the European Union set the ambitious goal of increasing Europe's competitiveness. The mid-term evaluation of the strategy underlined the importance of increasing these efforts (see the *Kok Report* [2004] and then the *EC* [2005] document). With the present benchmarking framework, the ProAct project would like to contribute to the discussion by showing efficient tools and policy practices in the wider domain of regional innovation and research policy. In this framework "policy" means a set of documents and the government behaviour and practices (activities, actions, interventions, legislation, etc.) intended to influence the regional economy in a longer term.

## 1.1 How do regions become the key to competitiveness?

An innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations (*Oslo Manual* [2005]). This definition is very influential in terms of policy-making in Europe. However, we recommend policy-makers take a more critical view of it.

There are many examples of innovations that have failed upon implementation. The classic example of the battle between VHS and the superior Betamax video cassette (see e.g. *Rogers* [2003]) demonstrates that quality alone does not always lead to innovation. It is the task of a governance network to make sure that innovation is more than introducing new things: innovations should have an impact on society and should actually work. We also note that there are different arguments as to why the best technological standards do not always survive (see for instance the discussion on technological trajetories by *Howells* [2005] or on institutional trajetories by *North* [1993]). Also, the definition of the OECD is not suitable for discussing innovation in services, although European countries are usually service economies (*Gallouj* [2002]).

In many policy areas, such as in public health care, the answer to increasing efficiency is to implement new technologies to facilitate organisational processes. However, the crisis in health care will not be solved by equipping every nurse with a Personal Digital Assistant (PDA) if they have no idea how to use it, or if the software of the hospital is not compatible with it. Policy-makers should collaborate with stakeholders in their region to make sure that innovation moves beyond implementing new artefacts.

Innovation and research policy are traditionally part of industrial and technology policy that aims at accelerating innovation (e.g. the development of new market products and services), economic growth and social development. It is often the most important element of the economic policy mix, which consists of the design and the implementation of modernisation efforts needed to create or keep a certain degree of competitiveness. However, in line with what was argued before, innovation should be integrated in other facets of policy as well, be it health care, education or the environment. We would like to stress to policy-makers in general to adopt an innovative mindset, and see how new technologies and processes could enhance their fields. The ProAct benchmarking framework relies on the practices of different regions:

- South East England is the largest;
- the Northern Hungary and Podkarpackie (Poland) are NUTS-2 regions;<sup>1</sup>
- the Leiden (Netherlands) region, North Denmark, South Moravia (Czech Republic) and the Presov region (Slovakia) are smaller territories;
- and **Vienna** is a city.

## Box 1. The concept of a region and regional innovation system

A region is an intellectual concept and there is no general definition. A region exists only in terms of the criteria by which it is defined, of which four are the most commonly used: (i) it must not have a determinate size; (ii) it is homogeneous in terms of some specific criteria, (iii) it can be distinguished from bordering areas by a particular kind of association of related features, (iv) it possesses some kind of internal cohesion. The boundaries of regions are not fixed See: *Cook-Memedovic* [2003] p.3.

*Cooke* [2001] argues that the theory of regional innovation systems contains five key dimensions: region (e.g. a political and administrative unit); innovation (e.g. commercialisation of new knowledge); network (e.g. trust and co-operation-based linkages among actors); learning (internalisation and externalisation of knowledge, skills and capabilities); and interaction (e.g. formal and informal communication focused on innovation). These dimensions determine whether a region has an innovation system or not and these are also important in regard to the ProAct policy learning cycle, a concept introduced later in this paper.

The fact that regions compete gained attention towards the end of the 20<sup>th</sup> century. In understanding the competitiveness of geographic areas the views of *Porter* [1998] are of particular importance. The main objective of a region is to attain ever-higher levels of welfare, both in terms of economic performance and social issues. The per-capita GDP, the wage level, their growth rate, a high rate of employment and their sustainability are together longer-term indicators of regional competitiveness and economic performance. Despite the vast literature on regional competitiveness, there are authors who claim that at a territorial level, competitiveness becomes a chimera (see for instance *Budd–Hirmist* [2004]).

The competitiveness and economic performance of EU regions greatly differ. The regions in the ProAct project are no exception (see the figure and table below).

Dominant companies and regionally concentrated groups of companies often determine the competitiveness of regions. It is very important in any region whether high or low productivity elements of the value chains (i.e. the companies participating in the given productive activity and those supporting them, as well as the totality of the institutions active in the given branch) are present in the region. If relatively long segments of the value chain are present, or if a substantial concentration of a "valuable" value chain element exists, they form a competing cluster. In-depth studies of competitiveness often use clusters as the units of analysis.

<sup>&</sup>lt;sup>1</sup> They are defined according to the Nomenclature of Territorial Units of Statistics (NUTS) of Eurostat.





Source: Regions: Statistical Yearbook 2005, Eurostat, p.40.

Table 1.1.

	(2002, 11	i Purchasing
Rank	Region	GDP/capita
1	Inner London (UK)	315
2	Brussels (BE)	234
3	Luxemburg (LU)	213
4	Hamburg (DE)	188
5	Ile de France (FR)	176
6	Wien (AT)	174
7	Berkshire et al. (UK)	162
8	Provincia Bolzano (IT)	160
	Zuid-Holland (NL)	128
	Denmark (DK)	123

# GDP per capita in leading and lagging European regions\* (2002, in Purchasing Power Parity, EU25=100)

Rank	Region	GDP/capita
	•••	
	Stredni Morava (CZ)	52
246	Vychodne Slovensko (SK)	39
247	Észak-Alföld (HU)	38
248	Opolskie (PL)	37
249	Észak-Magyarország (HU)	37
250	Swietokrzyskie (PL)	36
251	Podlaskie (PL)	35
252	Warminsko-Mazurskie (PL)	34
253	Podkarpackie (PL)	33
254	Lubelskie (PL)	32

\*NUTS-2 regions. Those related to the wider or smaller ProAct regions are with bold letters. Source: Eurostat: News Release 2005. No. 13.

Today the literature acknowledges the importance of innovation and localized innovation systems in attaining regional competitiveness (for an early reference see (*Hägerstrand* [1967]). After a period in which National Systems of Innovation were considered to be the ideal unit of policy analysis, international organisations like the European Union and the OECD switched to Regional Systems of Innovation. However, administrative regional borders can constrain innovation. If projects cannot be supported because one of the partners is located in a neighbouring region, the regional concept may slow down innovation. In addition, many companies have outsourced substantial parts of their value-chains to Asian countries, and "virtual enterprises" are producing globally leading products, so spatial proximity may no longer be a fundamental need for innovation. In such cases, social proximity seems to be more important. Still, geographical closeness can assist virtual collaboration in a globalised world and participation in regional clusters can help companies to meet their challenges on the global market. In Europe, the Airbus in aviation and GALILEO in satellite-navigation are probably the best examples in this respect.

Some decades ago in traditional views, the strength of geographic areas was mostly expected to be dependent on the resource-base and on the characteristics of the organisations within the region. Further research showed, however, that there were great differences in performance between regions that were very similar in their resource base (see e.g *Saxenian* [1994], but also *Porter* [1998, 2003]), *Porter et al.* [2001]).

If resources are not the only source of competitiveness, what can policy makers do to improve it? Over the past decades, 'how to do things' was raised on agenda both in innovation, social theory and in policy. 'Exchanging good practices' became an often-heard expression. The challenge is to define which practices are good and which ones are bad. If we ask ten public officials how they handle a call for proposal for new innovation projects, would we be able to extract good practice from their replies? Or should we rather look at theory to extract such ideas? In the ProAct-project, we made an attempt to combine these approaches. By involving both policy-makers and researchers, we confronted theory and practice. The result of this is presented below. Obviously, this is not an all-inclusive or final answer on how to make regional research and innovation policy. What we want to stress is the importance of a critical examination of the processes that lead to policies.

## 1.2 The policy makers' choice: strict or loose planning and implementation

As regards the choice on and the implementation of regional innovation and research policy tools, there are different approaches:

- Some argue that they need to be embedded in complex regional development plans: their view is based on the management concepts of Henry *Fayol*. The *European Commission* [1998] also advised to work out complex plans broken down to detailed programmes.
- Others say that formal planning is not necessarily needed There are however many important issues where regional innovation and research policy needs to act: regional strategies and visions, economic projections, foresight, social dialogue about future plans, elaboration of action plans, monitoring and evaluation, revision of existing strategies, provide forums for and foster networking etc.

• There are also different views and practices as regards the "optimum" level of policy intervention and bureaucracy.

## Box 2. Shifts from government to governance

Discussions about governance began in the 1990s (see for example *Rosenau–Czempiel* [1992], *World Bank* [1994], *Rhodes* [1996], *Stoker* [1998]).

The concept of governance describes the shift from formal institutions of the state (e.g. government) to a new way of governing through informal networks and non-governmental actors. This shift has occurred both in terms of the organisation of policy-making, as well as in the process through which this occurs. Concerning the process-issue, it has been argued that a linear approach does not work. It simply cannot be argued that one spends year one on strategy formation, year two on implementation and year x on evaluation. These parts of the process are interrelated, and occur in an unstructured manner (see also the concept of the ProAct policy learning cycle later). When the organisation is concerned, it is common to distinguish three "modes of governance": those based on hierarchy, those based on market and those based on network relations. If a political system is organised in a hierarchical manner, this has certain implications for the process and for the actors that will be involved. The same applies to the other governance forms.

Over the past decades, we have witnessed a move away from hierarchical forms of governance. Based on a great deal of factors, some systems developed a more market-oriented approach, whereas others started operating in networks. The UK is traditionally an example of the former, the Netherlands an example of the latter (*Kickert* [1997[). Unfortunately, it goes beyond the scope of this paper to illustrate the drivers behind these changes. For policy-makers, however, it seems to be important to realise the direction in which their regional governance system is developing. Market relations are usually based on contracts, and can thus be managed relatively easily. Network relations are usually based on more abstract notions, such as trust and social closeness, and are probably more difficult to manage. However, it needs to be argued that innovation often takes place in network settings. Hence, it is required of policy-makers to adapt their governance model to this. Trying to manage a network like a market-contract will often not work.

This issue if also of great importance when considering the question of strict or loose planning. The title of this section implies that policy-makers have a choice in this respect. This is certainly true. However, it needs to be argued that their choice should be based on an adaptation to the environment in which they are engaged.

The present benchmarking framework is intended to find good practices whether or not regional innovation and research policy is part of a complex and detailed programme or a looser approach is adopted.

## 1.3 The policy learning cycle

The future is always uncertain and this is especially true in the longer term. As a consequence, reasonable regional innovation and research policy tools can only be implemented in a continuous cyclical process.

The success of concrete policy tools depends on a number of issues, which together form the regional context that is always individual and region-specific. Thus, finding the effective regional innovation and research policy tools requires abstraction, for which the ProAct consortium has defined the so-called "ProAct policy learning cycle". In this cycle, practices of regional innovation and research policy strategic decisions have an impact on the selection of programmes through which the strategy is implemented, but also the experience and practice of implementation is fed back to programme design and strategy formation. The practices in the learning cycle characterise regional innovation and research policy and help the evolution of learning regions.

It also needs to be noted that the policy learning cycle relies much on the theories of governance, specifically on new modes of coordination, whereby it is not based on command-and-control regulatory policy instruments or hierarchy but instead on processes through which non-governmental actors are gradually allowed to co-ordinate amongst themselves, increasing their role in policy-making (*Jordan et al.* [2005]).

Fig. 1.3



It seems that it is very difficult to distinguish tacit and explicit knowledge transfer in the ProAct policy learning cycle, however, the authors believe that the concepts of *Nonaka-Takeuchi* [1995] about the learning organisation are valid for learning policies as well. Until more developed concepts are formulated, the ProAct policy learning cycle seems to be an extension of a sophisticated double-loop learning process. As *Argyris-Schon* [1978] argue, in double-loop learning the concerned individuals, groups or organisations learn by questioning the values, assumptions and policies that led to the actions, and this is exactly what we would like the regional innovation and research policies to do: be able to learn from past action and behaviour by posing appropriate questions and studying practices.

## 1.4 How to learn with the help of this Framework?

In this benchmarking framework there are questions about regional innovation and research policy practices and illustrative examples of related practices.

The questions proposed can be asked by several stakeholders of regional innovation and research policy:

- policy makers themselves can go through these questions to see if in their local context, regional innovation and research policy making is well networked, able to learn, transparent and accountable;
- independent consultants or advisory bodies can examine the proposed areas in detail in order to help the improvement of policies;
- the interested "local citizen" can also find out if enough public information is available in a given region.

As the reader will see, there are different answers possible to the questions and we can define positive and negative ends to the practices in the benchmarking framework. Good practices are at the positive, bad practices are at the negative end. Because of the different local contexts, there is probably no regional policy that is excellent by all measures. On the other hand it is worth thinking about the practices in any region and see how close regional practice is to the positive end of the benchmarks. If possible, comparison of practices in different regions and different countries is also a useful exercise.<sup>2</sup>

## 1.5 Limitations of the ProAct benchmarking

By applying the ProAct benchmarking framework, one can learn diverse in-depth information about a region's approach to innovation and research policies. The questions proposed and the resulting answers help our understanding of the efficiency of various regional policy tools in a systematic way of learning. However, one should also be aware of the limitations of the ProAct exercise:

In the European Union regions were usually defined along administrative and not economic considerations. It is therefore not realistic to talk about unified policies that are valid for European regions. We would stress here that there are other ways of talking about regions. In the USA for instance, regional policy analysis can easily rely on actual economic regions, because they were defined along socio-economic considerations and for which the collection of statistics have also started (see for instance *Porter* [2003], see also: http://bea.gov). In actual economic regions there are centres that offer certain services, such as business consultancy, R&D, logistics, financial, accounting etc. services, and there are peripheries, which rely on these services (see for instance *Christaller* [1966]). Knowledge exchange, production, sales and development cooperation take place within these regions and globally competitive clusters and synergies of different co-operation forms emerge. In Europe it would also be advisable to define homogenous regions – e.g. by studying data on commuting –

<sup>&</sup>lt;sup>2</sup> The forthcoming ProAct Policy Outlook book will contain some of the possible comparisons of regional innovation and research policy practices.

and lay the policy analysis on such regions, but this is not the case. This is clearly a limitation to benchmark regional innovation and research policies and this is also one of the reasons why the abstract concept of the "ProAct policy learning cycle" had to be defined.

- Innovation is an evolutionary process (*Hodgson* [2003]). Although it is reasonable to talk about the likely outcome of regional innovation and research policies, actual impacts and outcomes occur as a result of a series of interactions with the environment, in which these policies are embedded. The way institutions are operating in a local context is also important. Therefore, the ProAct benchmarking is a learning guide and the benchmarking exercise cannot give precise directions and guide for the future.
- The authors of this benchmarking framework believe that regional innovation and . research policy should support and be based on bottom-up initiatives. This view is reflected also in the EU's concept of subsidiarity. Nevertheless, the approach taken by this document is still a somewhat centralised and strategy-based approach, although attempts were clearly made to allow for the desired level of flexibility as regards policy analysis in the area. This controversy is naturally inherent in the document, because regional innovation and research policy cannot be analysed if there is no public will to define such policies. The other side of the coin is that the strategic level seems to have gained importance recently and innovation seems to be a must in the strategic positioning of regions. The benchmarking framework is appropriate to analyse the strategic innovation and research positioning of regions, but it is not suitable to explore the soft factors of regional innovation and research (on the importance of soft factors see Viszt [2006], a literature review for ProAct). Comparison of concrete tools is not possible either - due mainly to the mentioned region-specific nature of innovation policies.
- At first sight, the practices this benchmarking framework wants to look somewhat independent of the actual regional institutional setup. This is again a controversy, because practices are system-dependent. Nevertheless, to do the exercise and learn from the process is still better than not to do anything!
- Last but not least we should also note that implementation of regional research and innovation related strategies is possible only by regions that have some degree of autonomy over the resources available (*Muller-Neuwelaers* [2005], p. 9.). If this is not the case, the potential impact of using this benchmarking framework also remains limited.

## 2. The practices of strategy formation

Strategy is a Greek word and it originally referred to the guiding principles of military leadership. Following the research of *Chandler* [1941], the phrase has a different and somewhat varied meaning in economic practice. In the ProAct context strategy refers to the guiding principles of the actions of an institution or region.

Steps of regional development governed by a strategy may include:

- building or transforming the planning institutions (if necessary);
- defining a long-term vision (also for industries that are important for regional employment);
- compiling a regional strategy (mid-term objectives and the corresponding tools);
- identification of the main programmes or key actions, which help the implementation of the strategy;
- ex-ante evaluation (to see that the implementation of the programmes envisaged enable attainment of the strategic objectives);
- defining the programme implementing institutions;
- actions along the programme lines;
- monitoring and interim evaluation of strategy and programme implementation and corrective actions;
- ex-post evaluation of the strategy.

The strategic management of regional development may assign different weights to the steps above. For instance, there can be successful regions which do not formally complete evaluation (instead, such evaluation forms part of the regional election campaigns, or media provides appropriate analysis of these issues, etc.). Others may not have a centralised view of programme implementing institutions (but accordance results as a consequence of practices, which we would also like to explore in this document).

Innovation and research may also appear differently in the strategy of regions. We hypothesise that successful regions consider innovation (and research) on their policy agenda at a strategic level. However, determining how it is actually done seems more important than the occurrence of the term "innovation" in high level policy documents.

Certainly, before the ProAct benchmarking starts for any given region, the leader of the benchmarking exercise needs to identify the key responsibilities, namely who (which institutions) is in charge of regional development and enhancing the competitiveness of regional firms. After describing the regional set-up of institutions and bodies, we propose the following set of questions to explore in-depth the strategy formation processes in regions:

## 2.1 Finding a vision

## Questions to pose

Is there a process for identifying regional specialisation? If yes, how does it work? E.g. Do you use surveys, expert consultation, subcontracting, negotiation with neighbour regions / other policy makers, SWOT analysis, competitor analysis etc.? Is there a process for identifying new regional opportunities? If yes, how does it work? E.g. Do you use surveys, expert consultation, subcontracting, negotiation with neighbour regions / other policy makers,

SWOT analysis, competitor analysis etc. in finding the region's vision and setting the main strategic objectives? Does the vision aim mostly at one or at several specialisations?

#### What is the rationale behind these questions?

In his work *Porter* [1998] underlines that the capacities of individual regions (in education, labour, R&D, consulting) are sufficient for the robust development of only a handful of industries. As such, regions need to be highly specialized., It is worth thinking long term. about whether or not this specialization has been achieved

The ProAct regions show different specialisation efforts. North Jutland (Denmark) seeks to focus on life sciences, wireless technologies and building materials. The vision was founded as a common effort of the government, the regional authorities and the companies. The city of Leiden (Netherlands) traditionally relies on bio- and life sciences, however, new areas (such as satellite-navigation technologies) have recently gained policy focus in the 25 year vision. Vienna would like to become the scientific and cultural capital of Europe. The Viennese strategy has been being formed for many years, and the local government takes the lead in getting the vision into shape. Education, research, financial services, internet technologies and biotechnologies. Northern Hungary specifies the specialisation directions (mechatronics, chemical industry, tourism), but no strategic commitment can be read from subsequent analysis. Further, different strategic level documents have different visions. The Podkarkapckie (Poland) region aims to lay the foundations for a Regional Innovation Strategy and development of the Aviation Valley (Dolina Lotnicza) cluster. In the Presov Self-Governing region (Slovakia), no clear vision could be identified.

Regional resource endowment might point to innovation or to the possibility of becoming innovative. The resource-based view argues that clusters and regions can compete on the basis of resources. However, research has shown significant performance differences between clusters with a comparable resource base (see e.g. *Saxenian* [1994]). It is worthwhile to begin with making an assessment of regional resources and 'innovation infrastructure' in order to have a starting-point for analysing the competences that might be connected to this infrastructure. In this sense, a two-step identification of regional specialisation should be made: (i) examine resource endowment, (ii) determine whether the resources are connected to good practice. There can be excellent resources without good practice, or the other way around. A task for public policy is to consider economic boundaries of the region (based on the resources available for the region) and to develop these in a common vision.

Different processes can lead to a clear regional vision. It is important to see if this vision was found and, if so, how. The practice that leads to a clear vision also gives an indication of the soundness and acceptance of the vision. Studying the process of finding a regional vision is important in the EU, where administrative regional boundaries exist and their socio-economic prospect is not straightforward at all.

#### What are the indicative benchmarks of good and bad practices?

- economic boundaries of the region in finding the vision
  - (+) during finding the vision, economic spaces are considered
  - (-) during finding the vision, the difference between administrative and economic boundaries of the region is not considered
- analysis before vision is found
  - (+) wide scale and in-depth scanning before vision is found
  - (-) shallow and narrow analysis takes place, if any

## 2.2 Stakeholder involvement and the consequences of involvement

#### Questions to pose

What are the different phases of stakeholder consultation in drafting the strategy? How long do these phases take approximately? Which social groups, companies, experts, stakeholders from the region are contacted in the design process of the strategy? How their contribution / input / opinion is taken into account? Have the opposing stakeholders of the different strategic objectives been identified, if any? How? If yes, what is the general approach to dealing with them? Does policy look for compromise or does it attempt to make them interested in implementation? What mechanisms are used to consolidate the different inputs, if any? E.g. public discussions, votes, etc. If unsuccessful, what mechanisms are used when inputs cannot be consolidated in one strategy, if any? Are there discussions about alternative strategies? If so, do they proceed in the same manner as the discussions of the "mainstream" strategy? How is it ensured that the strategy is not a wish-list only regarding politicians, public officials and other stakeholders?

#### What is the rationale behind these questions?

Although subsidiarity is a fundamental EU principle, unnecessary centralisation of regional planning and indifference of stakeholders are a problem in many European countries.

At regional level it is important to get as many stakeholders involved in the strategic management as possible keeping in mind, of course that the networks ought to remain manageable. This is due to the region not being a company; the identification of competitors is not straightforward and; making a region competitive is essentially different from making a company or product competitive. As a result, concerted action becomes more of an art than in the case of companies. However, these actions can be managed and facilitated. Involving stakeholders is important for two reasons: (i) policy makers get access to information that they lack themselves, (ii) by involving others, a basic support could be assured. People are more likely to comply with plans to which they have contributed themselves. On the other hand, policy makers have to be aware of the downsides of public involvement as well: (i) it slows down the process, (ii) it can create an image of lots of talk, while doing little. Policy makers have to find the right balance and the right form of consultation with the stakeholders as well as opposing parties.

Involving stakeholders can take place through representatives like branch organisations, professional associations, cluster bodies or even regional development agencies. On the one hand, this can be a positive addition to the process, as it might speed up consultation and as representative bodies might be more experienced with governance issues than individual companies. On the other hand, it implies an additional 'hierarchical' layer between policy-makers and innovators, implying that the impetus for innovations may decrease. Awareness is important also in this respect.

In South-East England the regional strategy is part of the national development strategy. The Department of Trade and Industry drafted the strategy in cooperation with large firms. The interest of SMEs was mediated by the Regional Development Agencies. In North Jutland (Denmark), there was a strong effort to reach a social consensus and the dialogue between the government, the region and SMEs was especially vivid. The new member states started strategy development only a few years ago. In the Presov (Slovakia) region and Northern Hungary there was a social dialogue of the currently valid strategy. In Northern Hungary, however, local initiatives did not get to the national development level and this issue remains questionable also for the coming development period (2007-2013). In South Moravia (Czech Republic) empirical surveys were conducted in preparation of the strategy. The surveys are expected to continue.

#### What are the indicative benchmarks of good and bad practices?

- stakeholder participation in finding the vision
  - (+) major stakeholders are truly involved in finding the vision
  - (-) stakeholders are not asked, when the region's vision is drafted
- decision makers knowledge on the reach of the vision / strategy (+) decision makers have up-to-date knowledge on the reach of the vision / strategy and the key stakeholders' motivations
  - (-) decision makers are not informed about the reach of the strategy
  - facilitating discussion on alternative visions and strategies (+) alternatives are discussed and a shared vision emerges (-) alternatives are not discussed

## 2.3 Coordination of and facilitating finding strategy

#### Questions to pose

Who takes the lead in the different phases of compiling the strategy (who - which body - is responsible)? Have the opposing stakeholders of the different strategic objectives been identified? How? If yes, what is the general approach to dealing with them? Does policy look for compromise or tries to make them interested in implementation? What happens when the first draft of strategic objectives is compiled? Who determines the strategic tools for reaching the strategic objectives? What are the strategic objectives and strategic tools? Who determines the key indicators of attaining strategic objectives? Were the tools and indicators discussed with stakeholders? If yes, was their opinion taken into account?

#### What is the rationale behind these questions?

Objectives and the tools used to achieve the objectives are key elements of any strategy. Nevertheless, recent management practice has shown that it is also important to verify if the tools chosen are actually suitable for achieving the strategic objectives (see for instance Kaplan-Norton [1996]). This is why it is important to look at what happens to the objectives and the corresponding tools. In regional planning quite often there are ambitious goals while the methods of implementation and/or the indicators of progress are missing. A shared strategic vision and a commonly accepted strategy are also not straightforward in many regions which explains why practices that help establish accordance between different views and actions are required.

## Box 3. Coordination Actions

Coordination actions in the EU aim to promote and support the networking and coordination of research and innovation activities. Coordination actions should cover the definition, organization and management of joint or common initiatives. They cover activities such as: the organization of conferences and meetings, the performance of studies, exchange of personnel, the exchange and dissemination of good practices and the setting up of common information systems and expert groups. The ProAct project is also a Coordination Action.

Source: Cordis

## What are the indicative benchmarks of good and bad practices?

- designing responsibilities linked with the strategy
  - (+) responsibilities are clear and the bodies involved act in the same direction
  - (-) responsibilities are mixed up and there are many bodies acting in different directions
- developing priorities and accordance between strategic documents
  - (+) one agreed strategy or clear accordance between strategic documents
    - (-) several strategic documents (if any) without common priorities

## 2.4 The attitude towards innovation and research

#### Questions to pose

Is there a specific strategy for research and/or innovation? If not, is it covered by any other strategic document? If so, which topic prevails: research or innovation? What is the weight that is given to innovation and research, respectively in the strategy, if it concerns a general strategy for regional development? How would you describe the extent of strategy among main regional / local stakeholders? Were there any processes to internalise innovation and research in the strategic documents and among strategic stakeholders (e.g. successful raising awareness actions, wide-scale agreement on the importance of RTDI, etc.)?

#### What is the rationale behind these questions?

As previously mentioned, supporting innovation and the spread of innovative behaviour is probably the most important in keeping or enhancing a region's competitiveness. As the earlier presented Fig. 1.1 and Fig. 2.1 below demonstrate, high-GDP and high-R&D regions overlap. Certainly, despite their common co-existence, innovation and R&D are not the same. This distinction is a reflection upon the so-called European Paradox: in general the results of high-quality scientific research are not used in practice (the Lisbon Strategy and the *Kok Report* [2004] both underline the serious economic consequences of the paradox).

If the importance of innovation is not prevalent in a region's strategy and strategic actions, it refers to a lack of knowledge on the recent agenda of competitiveness. Nevertheless, the interviewers should be very aware of the relation between artefacts and actual processes. If a given region does not have a specific department or strategy for research and/or innovation, it does not necessarily imply that the policy process is better if there is a specific strategy or

department. If public officials do perform their work well, it does give added value. The key is again the process(es), in which innovation receives the necessary attention at the regional level.



Source: Regions: Statistical Yearbook 2005, Eurostat, p.86.

Implementation of an innovation-based strategy and realisation of the strategic objectives can only be expected if the stakeholders know about the strategy and are more or less in agreement with it. The questions above help to see clearly if there was a serious attempt to communicate the strategy to the widest possible audience of stakeholders. The practices of diffusing the strategy among stakeholders as well as the reach of stakeholders may vary greatly from one region to another, but a common point is that successful policy is informed about the stakeholders view on and commitment to the strategy. Social dialogue of the regional innovation strategy – as a key to enhance the region's competitiveness – did take place in all ProAct regions. However, the regions differ greatly as regards to the results of the social dialogue. In South East England or Vienna, for instance, stakeholders could be sure that policy makers take their views seriously. In Northern Hungary stakeholders view social dialogue rather as a task for policy makers without major consequences to future strategic actions, which are dominated by the central government anyway. The social dialogue can also help in getting innovation aims of the regions closer to local municipalities: the gap is large between the two especially in Poland.

#### What are the indicative benchmarks of good and bad practices?

- the role of innovation and research (innovativeness) in the regional strategy
  - (+) innovation and research are in the centre of the strategy
  - (-) innovation and research have only a nominal role in regional strategy, if any
- stakeholders attitude to regional innovation / innovativeness

(+) stakeholders have a common understanding of regional innovation and its importance

(-) stakeholders have only vague if any ideas about the role of innovation in regional well-being and competitiveness

Box 4. Entrepreneurship and per capita GDP levels

A systematic relationship exists between a country's level of economic development and its level and type of entrepreneurial activity. Countries with similar per capita GDP tend to exhibit similar levels of entrepreneurial activity, while significant differences exist across countries with different per capita GDP levels. At low levels of per capita GDP, industrial structure is characterised by the prevalence of many very small enterprises. As per capita income increases, industrialisation and economies of scale allow larger and established firms to satisfy the increasing demand of growing markets and to increase their relative role in the economy. This increase in the role of large firms is usually accompanied by a reduction in the number of new enterprises, since a growing number of people find stable employment in large industrial plants. As further increases in income are experienced, however, the role played by the entrepreneurial sector increases again as more individuals have the resources to go into business for themselves in an economic environment that allows the exploitation of opportunities.... the rate of aggregate entrepreneurial activity also depends on the demographic, cultural and institutional characteristics of each country.

Source: *GEM* [2006] p. 12.

## 2.5 Concept of research and innovation support

## Questions to pose

Is there a concept of how research and/or innovation should be supported in the strategy? E.g. Is there an open innovation, systems approach, linear approach, cluster development approach etc. apparent in the strategy? Is regional specialisation and innovation support linked? How can the attitude towards bottom-up initiatives be described?

Box 5. How to make innovation happen?

The starting-point for the current type of innovation theory can probably be found in the work of Schumpeter. After establishing at first that entrepreneurs are required for innovation, he shifted his trust to large R&D departments from the 1940's. The linear model of innovation was introduced in the United States after the WWII, and was institutionalised through a linked series of institutes for fundamental research, applied research and production. Institutes like Fraunhofer in Germany, VTT in Finland and TNO in the Netherlands are a result of this effort. Making innovation happen occurred by channelling as many ideas through this process as possible, and doing it efficiently. It can be imagined that there was a strong policy-involvement in such a rigid approach to innovation. Subsequently, the economic crisis of the 1970's put innovation on the map as a source of competitiveness. The main effort of this period was to facilitate the process of technology transfer from the earlier-mentioned knowledge institutes to companies and especially SMEs. It was quite common to found specific semi-public agencies for this task. The concept, however, was still based on linear logic: an idea was generated by knowledge institutes and could be processed in other sectors in the next phase.

The next real change occurred when awareness arose that this linear type of innovation had some fundamental shortcomings. In the wake of the battle for global competition, the next attempt was to adopt a systems approach to innovation. The earlier-mentioned concepts like clusters, science and business parks stem from this period. Specifically when the focus was shifted from the national to the regional level the idea of spatial proximity was taken over as the key to success. Competitiveness was sought in a strategic pooling of resources, leading to the so-called resource-based view on innovation. In spite of this, however, many of the previous institutions of the linear innovation model remained. Technology-transfer remained a key term, rather than co-development with partners from different sectors.

New technologies like ICT enableb this type of collaboration in more recent years. Supported by international financing, increasingly large networks are collaborating on innovative projects. At the same time, it became clear that the resource-base of the established innovation systems was not the key to competitiveness after all: there were still great performance differences between seemingly similar clusters. The coming of so-called 'open innovation' processes implied a greater flexibility in the organisation of innovation. On the basis of the almost random success of Silicon Valley, the importance of one overall strategy was downgraded, in favour of allowing multiple innovations to emerge simultaneously. New institutions like incubators, Living Labs, networking events, serial entrepreneurs, business angels and venture capitalists started collaborating in a manner that was no longer defined on traditional financial or contractual terms.

Obviously, innovation policy in a setting like this is very different from how it was done in earlier decades. Many government officials and scholars are still looking for ways to deal with such flexible forms of organisation.

Based on *Katzy* [2005]

#### What is the rationale behind these questions?

There are many different points of view as to how to make research and/or innovation happen. Policy makers probably have their own conception of this issue, even if it is implicit. By attempting to find out more about the background of strategy development processes, we can get a better understanding of the strategy itself. In addition to this, by asking such questions, we can make policy makers aware that their concepts of the topics they are dealing with should be made explicit.

Another issue to touch upon is the relationship between the region's specialisation and the policy support to innovation. Regional innovation and research policy should support regional specialisation by expanding the local resource (knowledge) base, innovative start-ups, the diffusion of knowledge, strengthening demand for the regions products and services, etc.

Helping innovation and R&D is obviously one of the key objectives in South East England. The policy tools mostly rely on bridging mechanisms (such as consultancy, university-industry linkages), however, individual R&D subsidies (grants) are also used. In North Jutland (Denmark) innovation is understood as the key to competitiveness and every innovative effort can count on regional support to some degree. In Leiden (Netherlands) innovation is inherent in the strategy. Bioscience park, incubation facilities, and a competence centre (and the related ICT developments) are particularly supported. Currently, there is a shift to more open innovation.

If policy recognizes the importance of bottom-up initiatives and if regional innovation and research policy makers regard themselves rather as a networking-facilitating organisation (as opposed to the "owners of big funds"), then some of the evolutionary foundations of innovation have been internalised.

## What are the indicative benchmarks of good and bad practices?

awareness to the need for regional specialisation

(+) policy (and the strategy) focuses on regional specialisation and (related) innovation

- (-) policy does not recognize the need for regional specialisation
- attitude to bottom-up initiatives
  - (+) the importance of bottom-up initiatives is recognized
  - (-) research and innovation support is centrally designed (or in the policy centre of the region)

## 2.6 Balancing between EU / national / regional / local policy

#### Questions to pose

Is there friction between EU / national / regional and local policy in general? Or are they not related at all? And as long as innovation and research policies are concerned? What happens to EU / national aims at the regional / local level? How can the influence of EU / national policy be determined? Are there direct contacts with policy officials at the national and European level to accord the regional strategy with strategies of higher policy levels? To what extent can regional policy-makers overrule interferences from higher policy levels?

#### What is the rationale behind these questions?

The likelihood of implementing a successful regional strategy based on innovation and research is higher if planned strategic policy actions are in accordance with international (EU) and local policy making. Regional policy-making, or innovation for that matter, is to a great extent a matter of opportunism. If higher policy levels offer schemes through which new programmes can be started, it is good practice to be aware of this and use it if possible. In this sense, multi-level governance can offer great opportunities to regions: even if national governments do not offer possibilities, some EU body might. On the other hand, dependence on higher policy-levels can also prove to be detrimental to innovation.

The concept of multi-level governance describes processes of policy control taking place between actors organised at different territorial levels and cross-sectoral policy networks (for further reading see *Bache–Flinders* [2004]).

In reality, balancing between EU / national / regional and local policy is almost impossible, because different policy levels have different flexibilities and the channels between them vary from one country to the other. Nevertheless, regional (local) and national strategies coincide in a natural way in South East England, North Jutland (Denmark) and Leiden (Netherlands). In Vienna, such accordance is considered as a success factor. In South Moravia (Czech Republic) the Regional Innovation Strategy was built on analysing the influences from various (EU and national) policy levels and implementation of the RIS also contains the monitoring of superior strategies EU / national / regional. In Podkarpackie (Poland) and Northern Hungary top-down (central government) influence is strong and the regions are forced to get in line with national policy. Accordance with EU-level policy is on the agenda in new member states as financial resources for research and innovation are dependent on the political struggles in Brussels. However, the EU influence is usually communicated through the central government and there is no particular awareness of the EU (although this should be changing slowly as more and more regions get involved in programmes financed directly from Brussels).

## Box 6. The Open Method of Coordination

The "Open Method of Coordination" (OMC) was introduced by the European Council of Lisbon in March 2000. It was a method designed to help Member States progress jointly in the reforms they needed to undertake in order to reach the Lisbon goals. The method included the following elements: (i) fixing guidelines and timetables for achieving short, medium and long-term goals; (ii) establishing quantitative and qualitative indicators and benchmarks tailored to the needs of Member States and sectors involved as a means of comparing best practices; (iii) translating European guidelines into national and regional policies, by setting specific measures and targets; (iv) periodic monitoring of the progress achieved in order to put in place mutual learning processes between Member States.

Generally, the OMC works in stages. First, the Council of Ministers agrees on (often very broad) policy goals. Member states then transpose guidelines into national and regional policies. Thirdly, specific benchmarks and indicators to measure best practice are agreed upon. Finally, results are monitored and evaluated. However, the OMC differs significantly across the various policy areas to which it has been applied: there may be shorter or longer reporting periods, guidelines may be set at EU or member state level and enforcement mechanisms may be harder or softer.

See: http://ec.europa.eu/invest-in-research/coordination/coordination01\_en.htm and *Borrás–Jacobsson* [2004]

Very often it is necessary to understand "higher level" policy in order to understand the regional one. If the regional innovation and research policy is directly linked to a national programme, it is important to assess whether the regional and national goals are in accordance. Usually, there is some connection to a higher policy level that does not involve the regional authority. For instance, it would be good to know for regional policy-makers whether researchers/innovators in their regions manage to attract funding from other bodies, either on the local, national and European level. This way, a problem of awareness on funding possibilities might turn up, either in general, or related to specific programmes like the 7<sup>th</sup> Framework Programme for instance. Another reason for doing this is that it might point regional officials at strengths that they had been unaware of.

## What are the indicative benchmarks of good and bad practices?

- mutual understanding between different policy levels
  - (+) the policy levels involved tend to speak the same language
  - (-) the EU / national / regional / local policy levels only formally interact, if any
- relying on regional initiatives
  - (+) there are regional initiatives unchanged apparent in higher policy levels
  - (–) regional initiatives (if any) get distorted on higher policy levels
- the relationship between national and regional policy practice
  - (+) national policy practice strongly supports regional development
  - (-) national policy practice cares mostly about central government objectives

## 2.7 Dealing with risks in the strategy

## Questions to pose

Were strategic scenarios created before / during the drafting of the strategy? Is the strategy based on a SWOT analysis? Are there policy practices to update the SWOT analysis that backs the strategy? And the vision? If yes, please describe them briefly. How often are strategic goals and the corresponding indicators revised? What are the consequences of such a revision?

## What is the rationale behind these questions?

Due to the rapid changes in the broader environment, the realisation of strategic objectives (or moving towards the vision) is possible only if there are regular reviews of the important environmental variables and the strategy. Such reviews need to be connected with the objectives and the vision. If there are frictions detected, corrective actions need to be taken and in an extreme case. Redefining the vision might even be needed. If there are scenarios behind or in the strategy, it indicates thinking about these issues a priori.

In management literature the case of US railways is a classical reference. At the beginning of its history, the US railways defined its vision as the development of railway transportation. The related strategies had been successful for decades. Then road transportation started to develop to the detriment of railway transportation. Many say that the vision should have been updated to "transportation" only: this way the company could have suited its activities to the changing environment.

#### What are the indicative benchmarks of good and bad practices?

- flexibility of the strategy
  - (+) strategy deals with uncertainty (e.g. there are scenarios in the strategy)
  - (-) the strategy does not analyse uncertainty and there are no scenarios

In South East England the coordination of the strategy is flexible: if there are major changes "in the environmental variables", the strategy is subject to change. In Leiden (Netherlands), policy makers think about making local strategies flexible. In Northern Hungary and the Presov Self-Governing Region (Slovakia) there are strategies currently running, but deviation between plans and reality are not followed. In South Moravia (Czech Republic) the first Regional Innovation Strategy was adopted in 2002 and by 2008 the region expects to see the third update of the RIS. In North Denmark even a revision of the regional set-up has taken place to better meet global challenges.

## 2.8 Strategy to support the winners or uncompetitive firms

#### Questions to pose

Does the strategy support winners (the regions / business areas promising for the future)? Or rather it tries to equalise between winners and losers? Put differently: does the strategy tend to support actions that increase employment and GDP the most or does it support areas (firms) that face socio-economic difficulties?

#### What is the rationale behind these questions?

The European Union has been exerting substantial effort to level regional disparities, although there are arguments that supporting the winners can be more efficient. Nevertheless, regional information on the topic is relevant and important: the empirical findings can help our understanding of the key message as regards the difference between the two approaches.

If we get rid of the administrative boundaries of regions and think in terms of regional innovation systems, it is also worth considering if the strategy aims at extending the boundaries of successful regional innovation systems to other key regions or peripheries. Involving peripheral regions in innovation systems is difficult because they are under strong external pressures and their poor internal capabilities pose difficulties in successfully absorbing external support (see *Dziemianowicz et al.* [2006]).

#### What are the indicative benchmarks of good and bad practices?

- orientation of the strategy
  - (+) in the strategy, there is a tendency to support winners
  - (-) the strategy focuses primarily on supporting incompetitive firms

Supporting the winners and the successful parties gains ground only slowly in Europe. For instance, Vienna adopted strategic tools that support the successful regional actors. South East England and Presov (Slovakia) do not want to pick winner sectors. The strategic tools in North Jutland (Denmark) generally focus on the relationship between "ICT and SMEs", and within that approach, the most suitable (professional) economic actors are supported. In Leiden (Netherlands), there is a tendency to support those that have been successful for a long time. Only recently have they started supporting new potential. The approach in Northern Hungary is mixed – and in a way half-hearted: the strategy wants to support the best institutions, but catching up lagging areas could not be forgotten either.

## 3. Strategy implementation and policy flexibility

According to *Fayol* [1949], the main functions of management roles are prevoyance, to organise, to command, to coordinate and to control. Ensuring accordance and evaluation of the functions is also a task for strategic management. We are convinced that implementing a successful regional innovation and research strategy requires similar management functions. The ProAct benchmarking framework proposes the following topics and questions to study the practices of the efficient tools for such a strategy.

## 3.1 Innovation and research policy tools

#### Questions to pose

Which regional research and innovation tools or programmes were chosen to be launched? E.g. incubation, strengthening university-industry links, science parks, innovation centres etc. How and why these programmes were chosen? Are there any programmes that cannot be traced back to the prevailing strategy? If so, what is the rationale for these programmes? How would you describe the flexibility of strategic innovation-related programmes? Do they allow for flexible implementation or rather do the programme lines need to be followed strictly?

## What is the rationale behind these questions?

As we have already emphasised, the ProAct consortium believes that regions need to rely on innovation if they want to enhance their competitiveness and welfare. For instance, a recent publication shows, there are quite a few innovation policy tools available and there are also good practices linked with these tools (see the *Paxis Manual* [2006]). The table below gives a summary of not only innovation, but also research policy tools available at the regional level.

#### Table 3.1

	Reactive tools allocating inputs for innovation	Proactive tools focusing on learning to innovate
firm- oriented support	subsidy for hiring <b>technicians</b> in SMEs <b>R&amp;D</b> subsidies and loans, innovation grants risk <b>capital</b> training subsidies incubators with " <b>hard</b> " support <b>research centres</b> traditional " <b>reactive</b> " technology centres <b>transfer units</b> in universities technology transfer schemes	subsidy for hiring <b>innovation managers</b> in SMEs loans for <b>competence</b> development management advice risk capital with sparring partner function incubators with " <b>soft</b> " support business <b>innovation centres</b> , innovation centres " <b>pro-active</b> " technology centres audits, monitoring needs <b>innovation coach</b> innovation management <b>training</b> techno-economic intelligence schemes SMART scheme
system- oriented support	<b>mobility</b> schemes "research-industry" cooperative schemes "HEI industry" subsidy for <b>cooperative</b> R&D projects subsidy to promote use of <b>business services</b> <b>collective user-oriented</b> technology or innovation centres	pro-active brokers, match-makers <b>cluster</b> policies support for firms <b>networking</b> umbrella schemes local <b>strategic plans</b> schemes acting on the <b>culture of innovation</b> fostering <b>strategic capabilities</b> of policy makers (e.g. RIS)

Innovation and research policy tools categorised in the SMEPOL project

Source: Neuwelaers–Wintjes [2000]

Asking the proposed questions helps to examine why particular tools were chosen. Giving a detailed account of the tools provides an insight into the overall conception of research and/or innovation (see before). For instance, the idea of having science parks is based on the belief that physical proximity enhances the innovation process, the idea of technology and knowledge transfer might be based on an outdated linear view of innovation ("knowledge from universities must find their way to business"), etc. Nevertheless, there can be other considerations as well (like "the region shall give new momentum to the tourism sector by supporting experimental research" etc.). By going into "why questions" like these, we get to know more about the background of the specific choices that are being made. After the interview one should be able to judge to what extent the overall conception on the role of innovation, the strategy and the specific programme match.

The ProAct regions differ greatly as regards the concrete tools chosen for innovation and research support. North Jutland (Denmark) for instance supports entrepreneurship, the ICT capabilities of SMEs, and higher education. Implementation takes place on a project basis. Among others, Vienna also lays emphasis on building competence centres, a joint initiative of science and industry, supported by the Austrian government. Leiden (Netherlands) invests in the bioscience park and incubation facilities and tries to kickstart the Living Lab initiative of local stakeholders. In Podkarpackie (Poland), an innovation database and regional technology foresight are being created. Besides, various tools are planned: incubation, venture capital (also for start-ups), technology transfer, inter-sectoral cooperation, cluster development, innovation-oriented education, etc. In South Moravia (Czech Republic) there is an emphasis on incubation, clusters and entrepreneurship.

## What are the indicative benchmarks of good and bad practices?

 relationship between strategic objectives and the related innovation and research policy tools

(+) strategic objectives and the innovation and research policy tools are in accordance

(-) the relationship between strategic objectives and the innovation and research policy tools is not analysed

reasonable degree of flexibility in the programmes / projects

(+) the programmes / projects can be adapted to environmental changes

(-) programmes / projects cannot be changed, programme lines and contracts are strictly followed

Box 7. Innovation management in firms

Regional firms can learn a lot from different innovation management techniques. These should be known to regional innovation and research policy makers as well. The European Commission's expert group defined 10 groups of innovation management techniques. These are: knowledge management techniques (such as knowledge audit, knowledge mapping, document management system, intellectual property rights management); market intelligence techniques (technology watch, patent analysis, customer relationship management, business intelligence, etc.); cooperative and networking techniques (teambuilding, groupware techs, supply-chain management, etc.); human resources management techniques, interface management techniques (linking different knowledge systems, concurrent engineering, R & D / marketing interface); creativity development techniques (brainstorming, lateral thinking, incentive problem solving etc.); process improvement techniques (workflow management, business process re-engineering, TQM, lean process technology etc.); innovative project management techniques, design management techniques, business creation techniques (virtual incubators, spin-offs, entrepreneurship, business plan, etc.).

#### Questions to pose

What does the governance of implementation look like / how is implementation of the strategy organised? If there are no separate regional implementing organisations, how do strategic objectives and the related resources get from the national (or regional) to the appropriate implementation level? (who will actually implement programmes / actions if there is no separate body?) Conversely: is there a process to support bottom-up activities independent of official (regional) programmes? If yes, how do policy makers ensure that these initiatives are geared towards strategic objectives? Or if these initiatives question the region's strategic objectives, do policy makers care for raising the initiatives on agenda? How can leadership practices during programme implementation be described? (e.g. delegation of responsibilities, motivation of staff, etc.) Does governance change when elections change the political set-up? E.g. change of personnel, organisation, processes, etc.

#### What is the rationale behind these questions?

There are many organisational modes to implement regional innovation and research policy. How implementation is actually organised needs to be clarified in order to find good practices.

In South East England the regional innovation strategy is implemented by a network of institutions, which are assigned jobs along programme lines. There is no one single institution responsible for the strategy, but the South East England Development Agency (SEEDA) has an outstanding role (e.g. cares for the relationship between different policy makers, facilitates peer reviews, monitoring and evaluation, etc.). In North Jutland (Denmark) strategy implementation is done along project lines with the involvement of many institutions. The Growth Forum is a body responsible for the strategy. In Northern Hungary the current strategy is centrally governed and locally implemented. The Regional Innovation Agency and its programmes are financed by the central government. In Presov (Slovakia) the regional innovation strategy is just getting in shape and there are no consolidated mechanisms of governing the implementation yet.

The first is to see whether the policy making and policy implementation are carried out by the same organisation or not. This notion alone will tell us a lot about the policy process itself. Obviously, if there are distinct organisations (or departments) for different tasks, we are dealing with potential differences in knowledge, attitude, etc.

The second issue of governance is the networking mechanisms that ensure cohesion of the programmes and accordance with the strategy and the region's needs during implementation. Nevertheless, implementation should not be understood in a narrow-minded way (by implementation we unquestionably focus on the strategic target and are interested in nothing else). Instead, it should be viewed as the principal mechanism that benefits raising the region's innovation capabilities. Not neglecting bottom-up efforts is a sign of understanding flexibility in a positive way.

Also here, the question of the "mode of governance" is important. In a market-like relation with a limited number of partners, it is relatively easy to facilitate implementation by a clear aim and approach. In larger consortia and networks, the chances that the aims shift throughout the process are larger. In fact, *Rogers* [2003] reports an example from medical innovation, in which it is argued that of the 500 key articles in a particular field, 41% reported research that at the time it had been conducted had no relationship whatsoever to the disease it eventually

helped to treat. Hence, in a network sense, implementation should aim more at the process than at the final outputs.

Box 8. What is not bottom-up?

If regional research and innovation policy follows a bottom-up approach, the first step is to identify local stakeholders and stakeholder groups in detail. A task for policy is to connect these parts and network between them. At the end of the day, the regional stakeholders form a sort of system (part of the regional innovation system), which is working, functioning and breathing. Thus bottom-up does not mean that policy supports and recognizes e.g. friends or members (supporters) of the ruling party, because nobody should be excluded on a political basis.

Third, there are concrete leadership practices. The delegation and division of responsibilities is not easy to facilitate: the person(s) responsible for implementation should have enough information but not an overflow of information from the colleagues. Staff motivation can also be important in the success of a programme's implementation and motivation practices are interesting to compare.

Last, but not least successful strategic programme implementation requires a degree of stability, which may not be the case in many new EU member states, where political elections seem to bring a cyclical influence (and not necessarily good influence) on strategy implementation.

## What are the indicative benchmarks of good and bad practices?

policy attitude to governance

(+) governance and networking that enable flexible and efficient implementation, and support to bottom-up initiatives

(-) governance takes place behind the desks, bottom-up initiatives do not reach regional policy levels

- overview of stakeholder efforts and actions by regional policy
  - (+) stakeholder efforts and actions are traceable and regularly taken up by policy
    - (-) stakeholder efforts and actions are not observed by policy
- political influence on governance

(+) governance is independent of "high politics"

(-) regional policy governance depends on "high politics"

Despite the fast pace of technological development, flexibility of the strategy is not yet on the regional innovation and research policy agenda in Europe. South East England is probably ahead of most European regions: the regional development agency has a strong focus on learning from the experiences of implementation and on adjusting the strategy if necessary. In Leiden (Netherlands) there is some awareness to flexibility, but no policy mechanisms work yet. In North Jutland (Denmark) the strategy is more like a framework and regional innovation and research policy gives content to this framework, whereby the behaviour of regional actors remain flexible.

#### Questions to pose

Have the main stakeholder groups of the different programmes been identified? How? During the implementation of a particular strategic programme, how often do the people in charge of the programme and those affected by the programme meet? What kind of feedback do stakeholders give about such events? Did any change in the programmes occur as a consequence of such events? Is there regular networking with partner regions? And joint initiatives with them? How active is collaboration with the partner regions?

#### What is the rationale behind these questions?

Enabling the emergence of clusters and networks is an important policy task. Such developments go hand in hand with innovation (see *OECD* [2001/a, 2001/b]). Nevertheless, Europe lags behind as regards cluster development (see the figure below).



Source: WEF The Global Information Technology Report 2005-2006 \*How common are clusters in your country? 1=limited and shallow, 7=common and deep

An important prerequisite for cluster development and thus regional specialisation is that stakeholders are networked and such networking is facilitated by regional innovation and research policy. The questions above assist in finding out about regional networking practices as well as the attitude to partner regions.

#### What are the indicative benchmarks of good and bad practices?

- reaching stakeholders
  - (+) no major stakeholder group is left out from the networking practices
  - (-) the stakeholders are virtually never approached by policy
- assistance to the dialogue between stakeholders

(+) regular dialogue between stakeholders is efficiently facilitated / assisted by policy

(-) regional policy does not care about the dialogue between stakeholders

- the role of partner regions in programme implementation
  - (+) active collaboration with partner regions
    - (-) partner regions are not considered
- feedback from stakeholders
  - (+) stakeholders think that their opinion counts
  - (-) stakeholders feel abandoned by policy

## 3.4 The way money goes

#### Questions to pose

How can the financing mechanism of strategy implementation be described? What is the importance of financial resources "from above" (i.e. national and EU levels)? To what extent do higher-level governments earmark money for specific programmes? Is there a substantial own effort as well?

## What is the rationale behind these questions?

Financing means resources for research and innovation, and thus a way to be able to work. Ample financing does not necessarily mean that the work improves or speeds up because of the large amount of money available. The actual financing mechanisms that are connected to policy programmes probably have more importance. It is of particular interest to be able to see where money goes, and whether it was spent well. These questions are also related to further questions of evaluation.

In South East England, financing of the whole strategy implementation is not on the agenda. However, there is strict monitoring to each of the projects financed. In North Jutland (Denmark) programmes are co-financed by national (50%), EU (25%) and regional (25%) sources. In Leiden (Netherlands) the strategy is elaborated with detailed financial planning and PPP (public-private partnerships) are important. In Northern Hungary regional projects are financed by the central government and the Regional Innovation Agency is responsible for the projects (centrally planned and financed strategy with local implementation). In the Presov Self-Governing Region (Slovakia) regional sources are also poor: the EU is the most important financial source and there is some national financing as well. In Podkarpackie (Poland) there are only expectations, currently public financing for innovation is inadequate (the share of private sources in R&D is reasonable).

In relation to previously mentioned examples of public-private partnerships, there is a great relevance to such new forms of collaboration also in terms of financing. Many regional governments are offering funding to private venture capitalists, in the context of universities or science parks, but also for the region as a whole. Good practice in terms of financing also involves the development of a critical position to the question of which organisation is the most suitable to provide or distribute funds.

The ways regional innovation and research policy finances its aims are manifold. Direct project (programme) financing is one option, but giving incentives to financial intermediation is also possible. In the so-called market based systems of financing innovations the funds needed for innovation are raised through the capital market (the US, the UK or Australia). In credit-based systems (such as the Netherlands, Germany or Japan) innovations are financed mainly through the bank sector (see *OECD* [1995]). Direct financial support to small start-up

companies is usually not recommended by experts, however, seed or venture capital firms can be encouraged to invest in the region.

## What are the indicative benchmarks of good and bad practices?

financial governance

(+) financing is fluid (no major obstacles or bottlenecks)

(-) financing is not in accordance with programme / project needs, sometimes there is significant money available, sometimes months can elapse without money

## 3.5 Ex-ante, interim and ex-post evaluations

#### Questions to pose

Are there regular independent ex ante, interim and ex-post evaluations evaluations of the impact of the programmes? And of internal responsibilities? What means are used to evaluate? (e.g. peer review, surveys, case studies, etc.) To what extent evaluation is independent, in other words: who/which organisation performs the evaluation? What are the the consequences of evaluation?

#### What is the rationale behind these questions?

When business strategies are implemented, the management typically does not want to face the failure of the strategy and (sound) evaluation is not carried out. This practice gives grounds to uncertainty and distrust towards the management. Such a situation often comes before more serious problems emerge. In business life the bad practice (or lack) of evaluation has direct and often sad consequences. In regional innovation and research policy the consequences may not be direct but are at least as detrimental as in the case of companies. Moreover, independent evaluation of regional innovation and research policy actions is more difficult, because sometimes qualitative aspects become more important than quantifiable results.

The methodology of evaluating innovation is not easy (see *EPUB* [2002]). Innovation surveys, macro-level and cost-benefit analyses, benchmarking, foresight, etc. can be used. Also, the output and outcome should be distinguished and there are a number of different measures that can be used:

- scientific-technological outputs: publications, patents, prototypes, new products, new technologies, new organisational modes, standards, etc.;
- outcome of science and technology: the impact of new knowledge, new mechanisms to exchange knowledge, developing a cooperative culture, emergence of networks, development of the community, etc.;
- economic outcome: new dynamics to value added, improvement in competitiveness, an influential organisational innovation, employment growth, etc.;
- social impacts: rise in the level of the quality of life, environmental protection, etc.;
- policy impacts: appearance of up-to-date development policies, harmonised innovation policy actions, positive changes in the regulatory framework, innovation-based view of other policies, etc.

Independent evaluation is an important element of policy learning, but at the same time one of the main reasons for attaining a reputation of bureaucracy. This makes evaluation a critical issue, requiring proper consideration. Evaluation reports to the public regarding the accountability of regional innovation and research policy makers between election periods. If independent evaluation is general practice and the results of evaluation are used for future policy design, there is a feedback and awareness towards learning in the regional innovation and research policy processes concerned.

Peer review probably has an outstanding role in evaluating programmes: it can be cost effective and very useful when a bunch of independent experts – with a proven record of expertise in the given field – are collected and they share their views in a common report.

## Box 9. Different concepts of evaluation

There are many different concepts of evaluation. Traditionally, it was part of the linear model of policy-mating, being one of the later phases, after agenda-setting, decision-making and implementation. With the growing awareness that policy processes are not linear, another approach to evaluation had to be found. The follow-up of the linear model was one in which numerous feedback-loops were introduced. These can be considered as ex ante and interim evaluations and they turned out to have raised bureaucracy often to unwanted levels.

Another framework for change with respect to evaluation can be found in the shift to new forms of governance. As we mentioned earlier, a project in a market context is very different from one in a network. The same applies to evaluation which is different if there is an underlying contract with clear objectives and hard criteria. A question that is still very hard to answer, is how projects in a network setting can be evaluated, if the goal of the project is to 'create a breeding-ground for innovation' for instance. The same notions of active participation and trust are important here as well. Another issue with network governance is that it is more difficult to predict ex-ante what the outcome of a process will be. This greatly depends on the composition of the network, considering that the choice for a specific group of actors means that certain actors are necessarily excluded. As for the problem of ex-post evaluation of network settings, satisfaction is mentioned as an important criterion. Even though one of the partners might have practically 'lost' in a network, this might be balanced out by other types of benefits (*Klijn & Koppenjan* [2000]).

We would also mention the "behavioural additionality" concept behind recent practices of evaluation. It basically refers to the change in the conduct or behaviours of individuals and institutions as a result of policy intervention.

The interviewer can also get a good understanding on the type of learning that is meant to be achieved. The evaluation can aim at finding how the programme can be improved or become more efficient (investigate whether the programme contributed to reach the objective in a single-loop learning process). Additionally, it can also seek to explore what might be a better way to reach the objective (and question the whole programme set-up in a double-loop learning process).

In South East England there are ex-post evaluations of the efficiency and impact of certain programmes. In South Moravia (Czech Republic) the measures in the Regional Innovation Strategy can be followed from periodical initiatives linked with the measures. In Northern Hungary there is no evaluation and this is also the case in many other new member states.

#### What are the indicative benchmarks of good and bad practices?

- independence and frequency of evaluations
  - (+) independent and regular evaluations are prevalent
  - (-) evaluations, if they exist, are not independent and not regular
- use and breadth of evaluation techniques
  - (+) effective use of peer reviews and sophisticated evaluation techniques
  - (-) evaluations, if they exist, rely on outdated techniques and there are no peer reviews
- surveys / studies to define the needs and impacts of programmes
  - (+) frequent enough surveys / studies to define the needs and impacts of programmes
  - (-) no surveys / studies to define the needs and impacts of programmes

## 3.6 Learning and feedbacks

## Questions to pose

Do those in charge of implementation have awareness towards learning from practical experience? If yes, please give examples how such an awareness can be described. Does experience with implementation have an impact on future practices? If yes, how? E.g. has the approach to implementation changed on the basis of earlier experience / evaluation? Has the approach to implementation changed on the basis of received feedback from stakeholders? How can flexibility in changing the projects / programmes that are running be described?

## What is the rationale behind these questions?

Monitoring and evaluation is meaningful only if policy (and the public) can learn from the results of monitoring and evaluation. If the results call attention to problems, corrective mechanisms should start. In an extreme case, even the strategy needs to be modified.

As noted earlier, there are many different ways of learning. *Argyris* [1977] for example distinguishes single-loop learning from double-loop learning. The former replies to the type of learning that will enable policy makers to do their work more efficiently. One can imagine that the repetition of a particular programme for many years can help in developing the approach. What, however, if this particular programme is not actually the most suitable for the goal that should be reached? This is what can be called double-loop learning: the type of learning for which policy makers have to question the underlying policies and objectives that define their work. Research has proven that the second type of learning finally leads to better results. When asking whether an "approach has changed" compared to earlier periods, it is important for the interviewer to be sure whether the first or second type of learning is implied.

#### What are the indicative benchmarks of good and bad practices?

attitude of the implementing organisation towards learning

(+) high awareness towards learning (no other influence provides an obstacle to future improvement)

(-) low awareness towards learning (future improvement is less likely, because other issues are important instead of learning)

• the results of evaluation / monitoring

(+) the results of regular (not necessarily formal, but always interactive) evaluation / monitoring have direct consequences

(-) the results of evaluation / monitoring (if exist) do not have direct consequences

Until now we have seen a reasonable degree of flexibility in the programmes and projects only in South East England. In the Central and Eastern European countries bureaucracy is more interested in paperwork: regional authorities are simply not brave enough to change a project (because some parts become outdated). It is also true that public authorities cannot defend themselves on a professional ground if a higher authority asks: why were there such changes?

## 4. Practices at programme level

Programme, and within programmes project management is the most common implementation means of reaching strategic aims. Project management often receives the criticism that project-centric planning is short-termist. Nevertheless, among policy makers implementing strategies and strategic programmes in the framework of project management has gained overwhelming popularity over possible alternative approaches such as trend-oriented goal-setting (for a summary on the theory see *Locke-Latham* [2002]) or directional planning (*McCaskey* [1974]).

In order to grasp this issue properly, we need to return to what was said in the first section regarding "modes of governance". The term project management implies something different if the setting is hierarchic rather than market or network in nature. Considering that most regional bodies are moving either in a market or network direction, we mostly focus on these two here. A project in a market-like setting is probably based on some sort of a contract, in which specific objectives or other types of criteria are mentioned that need to be met. A project in a network-setting can have the same set-up, but is often less clear in terms of outputs. Many regions nowadays have projects to develop an open innovation platform, or a breeding-ground for new projects. Obviously, such vague expectations are less applicable to traditional types of evaluation. We have noticed from experience that such a setting is difficult to deal with for policy-makers: the "hard output" that their executives require cannot be given; the only thing they could say is that communication is developing or that the innovation climate is changing. Only once this has occurred, concrete outputs can be expected. Considering that a great deal of innovative activities work in this manner, a better understanding of how to deal with such uncertainty is required. One way of doing this is to be actively involved in a network to get a sense of the atmosphere. Trust is very important in this respect: if a renowned company or institute is arguing for more patience in terms of concrete outputs, it is probably easier than in the case of a start-up company.

Box 10. What is project management?

Project management is the discipline of organizing and managing resources in such a way that these resources deliver all the work required to complete a project within a defined scope, time, and cost constraints. A project is a temporary and one-time endeavour undertaken to create a unique product or service. This property of being a temporary and a one-time undertaking contrasts with processes or operations which are permanent or semi-permanent ongoing functional work to create the same product or service over and over again. The management of these two systems is often very different and requires varying technical skills and philosophy, hence requiring the development of project management.

The first challenge of project management is ensuring that a project is delivered within the defined constraints. The second, more ambitious, challenge is the optimised allocation and integration of the inputs needed to meet those pre-defined objectives. The project, therefore, is a carefully selected set of activities chosen to use resources (time, money, people, materials, energy, space, provisions, communication, quality, risk, etc.) to meet the pre-defined objectives.

## Source: Wikipedia

The European Union also supports regional innovation primarily in the framework of projects and we are also convinced that lower levels of regional institutions will largely rely on projects in governing their regions towards agreed innovation aims. Thus, the practices at programme level were included in the ProAct benchmarking framework. It is also worth mentioning that the European cohesion policy has already had a positive impact on programme implementation in the New Member States.

## 4.1 Initiation and decision on programme

#### Questions to pose

Who (which organisation) initiated the programme? Upon what considerations? Who made decisions in the programme setup? What were the different stages in setting up the programme / project? How do they check that the programmes are in accordance with the strategy?

## What is the rationale behind these questions?

In an international comparison, initiations and decisions on regional innovation programmes can originate from a number of different organisations. The order of decision making may also show various patterns.

As regards good practice, there is no generally accepted view on this topic. Gathering information, however, can highlight good practices. Assessing the "quality" of stakeholders in the programme initiation process (professional and reasonable, or rather political and clientele-building approaches dominate), the impact of stakeholder involvement in the decision making process, assessing the accordance of the given programme with the prevailing regional strategy etc. are issues to touch upon. Distinction between formal and informal ways of exerting impact on the decision making can also show different practices: if the formal process states a particular committee is in charge of putting decisions into practice, it is good to attempt to find out whether there are informal processes behind this. Often, there is a period of intensive e-mailing between the stakeholders involved that does not turn up automatically.

The question of initiation is also particularly relevant in the context of multi-level governance. Specifically in a comparison of regions from the old and new EU member states, it turns out that there is still a higher degree of centralisation in the latter group. This is understandable, considering that the formal decision to decentralise is only of a recent date. It is important to realise, however, that even though regional policies may seem to be conceived decentrally, they are often connected to national schemes. For the sake of transparency, it is good to highlight this.

In South East England and North Jutland (Denmark) there are various regional authorities that launch calls for proposals. This helps competition and avoids building monopolistic (government) positions. In Leiden (the Netherlands), the regional government uses national policy schemes as a frameworkwork to launch their own innovation policy. In Northern Hungary and the Presov Self Governing Region (Slovakia) the central government "dictates" regional programmes: giving more power to the regions seems to be a long process. Nevertheless, EU funding principles did have some positive impact on the decentralisation of policies in the New Member States.

#### What are the indicative benchmarks of good and bad practices?

relationship between political and professional considerations

(+) there are few political, and many professional considerations

- (-) there are only political considerations, when a programme is initiated
- accordance of programmes with the strategy

(+) programmes are in accordance with the strategy

- (–) programmes have no linkages with the strategy at all
- arranging programme start with stakeholders
  - (+) a period of intensive networking between stakeholders before programme drafts

(-) lack of relations between stakeholders before programme drafts

4.2 Elaboration of calls and concrete actions

#### Questions to pose

Who elaborated the calls? How much time was needed to announce the calls? How much time was needed for proposal submission and contract preparation? Is there real competition for public money?

#### What is the rationale behind these questions?

Prestigious international organisations (the UN, Transparency International) strongly recommend that organisations receiving public money should be chosen in wide-scale competition (in the framework of public procurement). As the figure below shows, this recommendation is reasonable in many European countries.

Fig. 4.1



Source: Transparency International

We recommend that the ProAct benchmarking exercise show how the above is interpreted in terms of regional innovation development. If the time available to draft the calls, submit proposals and conclude contracts is too short, it may indicate an intentional hindrance to decent competition.

On the other hand, after real competition, there is a need to efficiently facilitate the project launch process by preparing the contract rapidly and enabling the project start quickly. The general practice of handling competitive calls in the field of regional research and innovation is fairly easy to analyse.

## What are the indicative benchmarks of good and bad practices?

- enforcing the principle of competition
  - (+) users of government money chosen in real competition (without any barriers)
  - (-) distribution of public money is not transparent
- timing

(+) good timing between drafting the calls, proposal submission deadlines, contract and project start

(-) unjustifiable timing between drafting the calls, proposal submission deadlines, contract and project start

Box 11. Fighting corruption

Transparency International's Minimum Standards for Public Contracting provide a framework for preventing or reducing corruption. The Standards recommends; that public procurement authorities should implement a code of conduct for strict anti-corruption policy; allow a company to tender only if it has implemented a similar code of conduct; maintain a blacklist of companies for which there is sufficient evidence of their involvement in corrupt activities; ensure that public contracts above a low threshold are subject to open competitive bidding; provide all bidders with easy access to information on the tender; allow bidders sufficient time for bid preparation; ensure that contract change orders that alter the price or description of work are monitored at a high level; ensure that control and auditing bodies are independent, and responsibility for demand assessment, preparation, selection, contracting, and supervision of a project is assigned to separate bodies; use committees at decision- making and create well trained and adequately remunerated staff; promote the participation of civil society organisations as independent monitors.

See: *TI* [2005]

## 4.3 Responsibilities and management

## Questions to pose

Who is in charge and who supervises these programmes? Government officials? A public/private agency? Was a new agency created? Who is in charge of managing the projects / programmes? What is the general practice of project management? Are the administration duties of programmes extensive? Are the related administration costs high or low (reasonable)?

#### What is the rationale behind these questions?

International practice shows a variety of options to govern regional innovation and research programmes. Many solutions are possible. The existence of artefacts says a lot about the process or about practices. For instance, the existence of public-private bodies may suggest that policy makers recognize their limitations in terms of the field they are dealing with.

It is important that not only the EU-funded programmes be well managed, but also the programmes / projects funded from national / regional etc. sources as well.

Obviously, there are many different ways in which the public-private dichotomy can be explained. The decision to privatise certain activities can be considered as such, but also to have a formal public-private partnership or to allow a private organisation to maintain public funds. Private influence is not a panacea for innovation policy, however. Good practice, in this sense, exists when a proper motivation exists for acting in a particular manner. Again the critical assessment of the position to be taken, and the discussion of the different sides is important.

When the general practice of project management is described, it is worth describing the process and the related regulations: e.g. if there is an enforced policy on time management or quality issues. Such regional (local) measures should contribute to efficient programme management, whereby the costs of running successful programmes are low. It is also worth thinking about the human resources side of programme management: it is possible that the programme was successful because of some dedicated individuals (key people), who took substantial workload in running the given programme. If it was so, it might also turn to be important why these key people were enthusiastic (e.g. there might have been sophisticated incentive mechanisms, traditions etc.).

## What are the indicative benchmarks of good and bad practices?

- administration duties
  - (+) reasonable (low) administration duties
  - (-) significant and unjustifiable administration duties (reflected also in high costs against total programme budget)
- project time management
  - (+) effective regulation on project time management
  - (-) no enforced policy on time management
- human resource policy in programme management
  - (+) dedicated individuals with passion assist in realising the programme / project
  - (-) lack of dedicated individuals who assist in realising the programme / project

Box 12. The emergence of PPP schemes

Pressure to change the standard model of Public Procurement arose initially from concerns about the level of public debt which grew rapidly during the macroeconomic dislocation of the 1970s and 1980s. Governments sought to encourage private investment in infrastructure, initially on the basis of accounting fallacies arising from the fact that public accounts did not distinguish between current and capital expenditure.

Although the idea that private provision of infrastructure represented a way of providing infrastructure at no cost to the public has now been generally abandoned, interest in alternatives to the standard model of public procurement persisted. In particular, it has been argued that models involving an enhanced role for the private sector, with a single private sector organisation taking responsibility for most aspects of service provisions for a given project, could yield an improved allocation of risk, while maintaining public accountability for essential aspects of service provision.

Source: Wikipedia

4.4 Documentation

#### Questions to pose

How is information management organised? Which means of communication are used for documentation? Upon request, would it be possible to present all the documents related to the programme so that every important step of programme implementation becomes clear for the reader?

## What is the rationale behind these questions?

Transparency is an important aspect of efficient project implementation. Taking responsibility and being accountable for policy actions implies a level of reliable documentation of the course of events, but of course the regional innovation and research policy support should not be overly bureaucratic. Clear and decent documentation is important when it comes to evaluation, audit or other means of assessing policy performance (even elections can be mentioned).

The increase of technology is an important factor in this respect. Many transactions or communications in general are performed via e-mail, or even on blogs. This implies that the flow of information is almost beyond control. It may occur that some contracts are filed on paper in an old-fashioned archive, whereas some agreements remain in the inboxes of the involved individuals. The question of what good practice is, remains the judgement of the person in charge of the analysis (nevertheless, good practice is the practice that results in good performance). On the one hand, flexibility in information management, by using IT like electronic signatures, or blogs can facilitate efficiency, and can take away a feeling of bureaucracy. On the other hand, this will inevitably push out the borders of the organisation which might lead to less overview.

#### What are the indicative benchmarks of good and bad practices?

- archives of documents
  - (+) documentation / documents are easy to find after 5 years as well

(-) no system of documentation, finding documents (e.g. up to 5 years) is complicated and a big effort

electronic information management

(+) emails and other electronic documents are well managed and form a basis for programme / project information management

(-) emails and other electronic documents are not managed

Box 13. Quality Assurance

Quality Assurance is the activity of providing evidence needed to establish confidence among all concerned that the quality-related activities are being performed effectively. All those planned or systematic actions necessary to provide adequate confidence that a product or service will satisfy given requirements for quality. Quality Assurance is a part of and a consistent partner with quality management. Thus providing fact-based external confidence to customers and other stakeholders that products meet needs, expectations, and other requirements. QA (quality assurance) assures the existence and effectiveness of procedures that attempt to make sure - in advance - that the expected levels of quality will be reached.

Source: Wikipedia

## 4.5 Monitoring

#### Questions to pose

Is monitoring an everyday practice? If yes, what happens to the results of monitoring? Do they get onto a higher policy level? How can data collection be better? What happens if unfavourable trends, which monitoring shows, emerge?

#### What is the rationale behind these questions?

Monitoring the progress of implementation is an important source of management information, indispensable for the governance of regional strategic programmes. In this framework, the term monitoring means "an eye to ensure that processes are on the good track". If the processes are off-track, the monitoring mechanisms shall ensure signalling as early as possible.

Monitoring should be a continuous practice and its results should reach the top management of regional innovation and research policy programmes. The *Paxis Manual* [2006] also states that monitoring is a good practice in many of the regional innovation and research programmes. Despite its importance, monitoring is often not used in regional development.

The implementation of the strategy is not monitored in South East England, however, monitoring is organised for each project and it is being done by a number of organisations. In South Moravia (Czech Republic) a monitoring system, which can be developed, has been in use for a few years. In Northern Hungary, Presov (Slovakia) and Podkarpackie (Poland) there is no monitoring of any kind (in Poland, often the lack of data poses specific problems of control).

In a network setting, the best practice of monitoring is to keep in touch with the process without disturbing it (but having an influence on it when needed). As the difficulties of evaluation of network-projects has been mentioned a few times, such informal monitoring can help to have a better view on the overall outcome of the project at the end.

## What are the indicative benchmarks of good and bad practices?

- frequency and interactivity of monitoring
  - (+) regular (not necessarily formal, but always interactive) monitoring practice
  - (-) no monitoring linked with innovation and research programmes
- availability of monitoring results
  - (+) correct monitoring results exist
  - (–) no monitoring
- treatment of monitoring results
  - (+) immediate modification of the programme if monitoring shows divergence from objectives and feedback to strategic objectives if needed
    - (-) no modificaton in case of divergence from objectives

In South East England, the system of programme monitoring functions well. There are milestones and performance indicators and independent assessment on the progress of the programmes. In North Jutland (Denmark) monitoring is also an everyday practice. In Vienna the policy makers regularly receive reports on the progress of projects. In Leiden (Netherlands), monitoring mostly occurs informally through being connected to the process and by passively sitting in on meetings of the project organisation. In Northern Hungary and Podkarpackie (Poland) there is no monitoring linked with innovation and research programmes. In the Presov Self Governing Region (Slovakia) monitoring is done in an informal way: in this case institutionalisation is the future, otherwise the practice will be overly dependent on the personal character of policy makers. Serving the public obviously requires well-functioning institutions and policy mechanisms of monitoring and evaluation.

4.6 Audit

#### Questions to pose

How would you describe the practice of programme audits?

#### What is the rationale behind these questions?

Audit is one of the practices that cannot be done without reliable documentation. Just as evaluation and to some extent monitoring, audit is also an important constituent of the accountability of regional innovation and research projects. One of the (easily verifiable) preconditions of a successful audit practice is that it is done by an organisation that is independent of the institutions and people in charge of the projects.

## Box 14. Audit

An audit is an evaluation of an organization, system, process, project or product. In accounting, an audit is an independent assessment of the fairness by which a company's financial statements are presented by its management. It is performed by competent, independent and objective person or persons, known as auditors or accountants, who then issue a report on the results of the audit.

Audits are performed to ascertain the validity and reliability of financial information and also provide an assessment of a company or a business' system of internal control. Such systems must adhere to generally accepted standards set by governing bodies that regulate businesses. An audit is based on random sampling and is not an assurance that financial statements are free from errors. It simply provides assurance for third parties or external users that such statements present 'fairly' a company's financial condition and results of operations.

Source: wikipedia

## What are the indicative benchmarks of good and bad practices?

- the practice of auditing programmes / projects
   (+) there are regular audits with consequences
  - (–) there are no audits at all

In South East England, Deloitte conducts audit for each of the programmes. In North Jutland (Denmark) there are also regular audits. In Northern Hungary and Podkarpackie (Poland) audit is not part of the processes to close programmes.

*4.7 Sharing project / programme experience internally and externally* 

## Questions to pose

Are the results of evaluation / monitoring / audit discussed within the implementing organisation? And externally? Are the results of evaluation / monitoring / audit disclosed to the wider public? Are the programme results disseminated? If yes, how? Is intersectoral and international mobility of personnel for the exchange of practices supported? How?

## What is the rationale behind these questions?

Without feedback, there is no learning and this is especially true in the ProAct policy learning cycle. Feedback of the results of evaluation, monitoring and audit is the most influential way to establish motivation of the programme planners and those implementing it. External discussion of the results of evaluation, monitoring and audit not only contributes to the transparency of regional innovation and research project implementation but it is also a dissemination tool. Additionally, it also helps to spread the practice of networking. Such external discussions on evaluation and dissemination of the project results is possible abroad as well and we may also assume that the good practice policy experience can be shared with industry and higher education as well.

One of the difficulties in this respect is related to the organisation of the public body that is in charge of policy making or implementation. The most obvious example is the gap between the political and the executive layer. If public officials get a considerable amount of influence in the process, this is often referred to as the 'third power'. In a principal-agent type of situation (in which information is asymmetric) politicians depend upon the knowledge of the officials in their departments for information. This does imply, however, that public officials are usually more involved in the practical side of the programmes. In terms of evaluation, specifically if this refers to network evaluations, it might be difficult to communicate the less concrete outputs. Good practice in this respect is to be innovative in communicating programme results.

In South East England the authority initiating the programme receives the results of monitoring and evaluation and the results are disseminated to the widest possible public. A similar practice can be found in North Jutland (Denmark). A challenge for Leiden (Netherlands) is to translate 'abstract' outcomes into practical information, both for politicians and for the public. In the Presov Self Governing Region (Slovakia) the evaluation and monitoring results reach only a few distinguished professionals and policy makers. In Northern Hungary the practice does not exist at all.

If the practice exists, at some point the analyst has to assess whether evaluations and monitoring efforts are actually used for learning purposes. Even if an evaluation was carried out perfectly, it will not be effective unless it is integrated in a feedback process.

## What are the indicative benchmarks of good and bad practices?

• disclosure of the results from evaluation, monitoring and audit

(+) disclosure of the results is in everyday (formal and informal) practice and they reach the interested public

(-) evaluation and monitoring results (if exist) reach only a few distinguished people

mobility of programme / project personnel for learning

(+) intersectoral and international mobility of personnel for learning is in practice and supported

(-) no possibility for intersectoral and international mobility of personnel for learning

## 4.8 Other practices

## Questions to pose

Are there other practices at the programme level that are considered to be good? E.g. personal professional networking when a worker at the agency hears about an EU project and communicates the opportunity training within the agency, etc.

## What is the rationale behind these questions?

Having explored the pre-defined practices above, interviewees may like to tell and expand their own stories. If it appears throughout the interview that there is an urge to say more about or to go into another topic, it would be good to make a note of this for the end of the interview.

#### What are the indicative benchmarks of good and bad practices?

interactions between project officers and contractors

(+) proactive interactions between project officers and contractors (not only emails, but personal meetings and frequent telephone conversations)

(-) the relationship between project officers and contractors is formal and mostly in email only

competence and capability building

(+) efficient training and learning exist within the agency

(-) elementary or not existing training and learning within the agency

## Recommendations

This framework is the mid-term product of the ProAct consortium. The recommendations below are also somewhat "mid-term" (more mature views on what to recommend to policy – apart from the presented practices – will be included in the forthcoming ProAct Policy Outlook book).

Our one-year experience shows that the efficient tools and practices of regional innovation and research policy are very diverse as a result of the different patterns of regional development of European regions. Nevertheless, it seems that day-to-day, regional innovation and research policy makers get involved in at least one element of the ProAct policy learning cycle and it implies that the practices presented are usable.

European regions were defined by administrative and not economic criteria. Therefore, the number one policy task is to be aware of the neighbouring regions' dynamics, understand where actual regional borders are and what change can be expected as a result of policy intervention. The Vienna case study is a nice example, because the city's strategy does not only rely on developing the innovation capabilities, but it is done with a view to the potential impact on the surrounding (usually cross-border) regions.

Regional development is a complicated evolutionary process. Having seen the empirical examples, the ProAct consortium is convinced that facilitating social debates and networks is another important regional innovation and research policy task. Exploring realistic development paths is possible only if the different stakeholders understand one another and can join forces for concerted actions whereby policy contributes to neutralising and consolidating the opposing stakeholders' views. In Denmark there was a vivid social debate on innovation and its importance. The result is that people in North-Jutland are ready to think in terms of innovation and be flexible: unquestionably a key to present and future success.

The ProAct case studies show that the strategic dimension of regional innovation and research policy making is gaining importance. Successful policies encompass the most important elements of a regional innovation and research strategy (vision, objectives and tools, implementation, monitoring policy development, networking, evaluation etc.). Nevertheless, it is not necessary to carry out these tasks in one institution. It is enough if there are professionals responsible for these important elements.

Both our literature review and the case studies show that the existence of soft factors is outstandingly important when regional innovation and research policy wants to act effectively. These are: embeddedness of local actors in their environment (this can also be unfavourable, see for instance the literature on path dependency), entrepreneurship, creative liveability (attractive urban agglomerations), tolerance and diversity, innovative milieu, social or civic capital, magnet infrastructure, culture, history, traditions, lifestyle workshops (fashion, the way people live). Soft factors are important contextual variables and make the selection of appropriate regional innovation and research policy tools difficult. This is why the ProAct policy learning cycle concept was defined as a practice-oriented framework to assist learning and networking.

The ProAct consortium has laid emphasis on learning and networking, and understanding the mechanisms of direct (or "hard") regional innovation and research policy tools can be advised

especially for the catching-up regions. In creating incubation facilities, science parks and industrial zones, supporting clusters and spin-off activities the catching-up regions can learn from the developed ones, even with the help of this framework. A very interesting experience of the project is that policy makers in developed regions do not necessarily think about their practices as a way to success, because it is so natural in their context (e.g. the culture of evaluation). In this respect it is also true that compared to Western European regions, the Central and Eastern European regions are more government-centric than governance centric as regards regional innovation policies.

We are convinced that ProAct consortium has already learnt a lot from designing this framework. Nevertheless, in the second half of the project we will further refine the benchmarks and present the new findings in a separate volume.

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## List of the case studies

The city of Vienna in a dynamic regional environment (*Josef Hochgerner, Klaus Schuch, Edeltraud Stiftinger*)

Regional Innovation System: South Moravia (Adolf Filáček, Jiří Loudín, Katerina Tydlackova, Magdalena Sedova)

Regional Development and Regional Research and Innovation Policy in Denmark (*Peter Lindgren, Henrik Dam, Carsten Bergenholtz*)

The practice of strategy formation in North-Hungary (*Attila Nyiry, Antal Dénes*)

From Science Park to Living Lab, Research and Innovation Policy in Leiden (*Wouter Mensink*)

Regional Development and Regional Research and Innovation Policy in Poland (*Wojciech Dziemianowicz, Jacek Szlachta, Janusz Zaleski*)

Regional development and innovation policy in Slovakia with focus on Presov Self-Governing Region (*Branislav Kolenka, Viliam Duras*)

Benchmarking Regional Innovation Policy in South-East England (Howard Rush, Jeff Readman)

# Annex: the ProAct benchmarking framework in brief

# 1 STRATEGY FORMATION

Finding a vision	
economic boundaries of the region in finding the vision	
during finding the vision, the difference between administrative and economic boundaries of the region is not considered	(-)
during finding the vision, economic spaces are considered	(+)
analysis before vision is found	
shallow and narrow analysis takes place, if any	(-)
wide scale and in-depth scanning before vision is found	(+)
Stakeholder involvement and raising awareness	
stakeholder participation in finding the vision	
stakeholders are not asked, when the region's vision is drafted	(-)
major stakeholders are truly involved in finding the vision	(+)
decision makers knowledge on the reach of the vision / strategy	
decision makers are not informed about the reach of the strategy	(-)
decsion makers have up-to-date knowledge on the reach of the vision / strategy and the key stakeholders' motivations	(+)
facilitating discussion on alternative visions and strategies	
alternatives are not discussed	(-)
alternatives are discussed and shared vision emerges	(+)
Coordination of and facilitating finding the strategy	
designing responsibilities linked with the strategy	
responsibilities are mixed up and there are many bodies acting in different directions	(-)
responsibilities are clear and the bodies involved act in the same direction	(+)
developing priorities and accordance between strategic documents	
several strategic documents (if any) without common priorities	(-)
one agreed strategy or clear accordance between strategic documents	(+)
The attitude towards innovation and research	
the role of innovation and research in the regional strategy	
innovation and research have only a nominal role in regional strategy, if any	(-)
innovation and research are in the centre of the strategy	(+)
stakeholders attitude to regional innovation	
stakeholders have only vague ideas about the role of innovation in regional well-being and competitiveness, if any	(-)
stakeholders have a common understanding of regional innovation and its importance	(+)
Conception of research and innovation support	
awareness to the need for regional specialisation	
policy does not recognize the need for regional specialisation	(-)
policy (and the strategy) focuses on regional specialisation and (related) innovation	(+)
attitude to bottom-up initiatives	
research and innovation support is centrally designed (or in the policy centre of the region)	(-)
the importance of bottom-up initiatives is recognized	(+)
Balancing between EU / national / regional / local policy	
mutual understanding between different policy levels	
the EU / national / regional / local policy levels only formally interact, if any	(-)
the policy levels involved tend to speak the same language	(+)
	()
regional initiatives (if any) get distorted on nigher policy levels	(-) (+)
the relationship between national and regional nelicy practice	(+)
	()
national policy practice cares mostly about central government objectives	(-)
Doaling with risks in the strategy	(.)
flovibility of the strategy	
the strategy does not apply a upgost inty and there are no second a	()
the strategy does not analyse uncertainty and there are no scenarios	(-) (-)
suategy deals with uncertainty (e.g. there are scenarios in the strategy)	(+)
orientation of the strategy	
the strategy for the strategy	
the strategy rocuses primarily on supporting incompetitive firms	(-)
in the strategy, there is a tendency to support winners	(*)

## 2 STRATEGY IMPLEMENTATION AND POLICY FLEXIBILITY

Innovation and research policy tools	
relationship of strategic objectives and the related innovation and research policy tools	
the relationship between strategic objectives and the innovation and research policy tools is not analysed	(-)
strategic objectives and the innovation and research policy tools are in accordance	(+)
reasonable degree of flexibility in the programmes / projects	
programmes / projects cannot be changed, programme lines and contracts are strictly followed	(-)
the programmes / projects can be adapted to environmental changes	(+)
The governance of implementation	
policy attitude to governance	
governance takes place behind the desks, bottom-up initiatives do not reach regional policy levels	(-)
governance and networking that enable flexible and efficient implementation, and support to bottom-up initiatives	(+)
overview of stakeholder efforts and actions by regional policy	
stakeholder efforts and actions are not observed by policy	(-)
stakeholder efforts and actions are traceable and regularly taken up by policy	(+)
political influence on governance	
regional policy governance depends on "high politics"	(-)
governance is independent of "nigh politics"	(+)
Networking practices of the programme implementing organisation	
reaching stakeholders	$\sim$
the stakeholders are virtually never approached by policy	(-) (+)
assistance to the dialogue between stakeholders	(+)
regional policy does not care about the dialogue between stakeholders	(-)
regional policy does not care about the dialogue between statemoliders	(-)
the role of partner regions in programme implementation	(.)
partner regions are not considered	(-)
active collaboration with partner regions	(+)
feedback from stakeholders	
stakeholders feel abandoned by policy	(-)
stakeholders think that their opinion counts	(+)
The way money goes	
financial governance	
financing is not in accordance with programme / project needs, sometimes there is a huge money available, sometimes months	(-)
financing is fluid (no major obstacles or bottlenecks)	(+)
Ex-ante, interim and ex-post evaluations	
independence and frequency of evaluations	
evaluations, if exist, are not independent and not regular	(-)
independent and regular evaluations are prevalent	(+)
use and breadth of evaluation techniques	
evaluations, if exist, rely on outdated techniques and there are no peer reviews	(-)
effective use of peer reviews and sophisticated evaluation techniques	(+)
surveys / studies to define the needs and impacts of programmes	
no surveys / studies to define the needs and impacts of programmes	(-)
trequent enough surveys / studies to define the needs and impacts of programmes	(+)
Learning and recubacks	
autude of the implementing organisation towards learning	
iow awareness towards learning (nuture improvement is less likely, because not learning but other issues are important)	(-) (+)
the results of evaluation / monitoring	(7)
the results of evaluation / monitoring (if exist) do not have direct consequences	(-)
the results of regular (not necessarily formal, but always interactive) evaluation / monitoring have direct consequences	(+)

## **3 PRACTICES AT PROGRAMME LEVEL**

Initiation and decision on programme	
relationship between political and professional considerations	
there are only political considerations, when a programme is initiated	(-)
there are few political, and many professional considerations	(+)
accordance of programmes with the strategy	
programmes have no linkages with the strategy at all	(-)
programmes are in accordance with the strategy	(+)
arranging programme start with stakeholders	()
lack of relations between stakeholders before programme drafts	(-) (+)
a period or intensive networking between stakenoiders before programme drafts	(+)
distribution of sublic means in part transport	()
usingulari of public money is not transparent	(-)
timing	(•)
unjustifiable timing between drafting the calls, proposal submission deadlines, contract and project start	(-)
and timing between drafting the calls, proposal submission deadlines, contract and project start	(+)
good ining between a liating in care, proposition and initiation of a line project date.	()
administration duties	
significant and unjustifiable administration duties (reflected also in high costs against total programme hudget)	(-)
reasonable (low) administration duties	(+)
project time management	( )
no enforced policy on time management	(-)
effective regulation on project time management	(+)
human resource policy in programme management	. ,
lack of dedicated individuals who assist in realising the programme / project	(-)
dedicated individuals with passion assist in realising the programme / project	(+)
Documentation	
archives of documents	
no system of documentation, finding documents (e.g. back to 5 years) is complicated and a big effort	(-)
documentation / documents are easy to find after 5 years as well	(+)
electronic information management	
emails and other electronic documents are not managed	(-)
emails and other electronic documents are not managed emails and other electronic documents are well managed and form a basis for programme / project information management	(-) (+)
emails and other electronic documents are not managed emails and other electronic documents are well managed and form a basis for programme / project information management Monitoring	(-) (+)
emails and other electronic documents are not managed emails and other electronic documents are well managed and form a basis for programme / project information management Monitoring frequency and interactivity of monitoring	(-) (+)
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