Deliverable 16

Public

EURO-COOP

(Regional Innovation Policy Impact Assessment and Benchmarking Process: Cooperation for Sustainable Regional Innovation)

Contract No. 517541

Work Package 3: **Implementation and analysis of the regional innovation policy impact assessment**

Deliverable 16: **Comprehensive Regional Innovation Policy Impact Assessment scheme**

Authors: Joe Ravetz (CURE, University of Manchester): with Elvira Uyarra & Kieron Flanagan (PREST, University of Manchester),

Emmanuel Brillet & David Alcaud (CIR):

Dorel Tamm & Marek Tiits (IBS)

Date: 31 October 2007

Project funded by the European Commission, 6th Framework Programme for Research, Structuring the European Research Area, Research and Innovation, Regional Innovation Strategies: Including New Tools and Approaches, Strand 2: Innovation Policy Impact Assessment at Regional Level

Table of Contents

PART II - ANNEX

1 OVERVIEW

This deliverable sets out the final scope and method of the 'Regional Innovation Policy Impact Assessment' method (RIPIA).

1.1.1 Context

A 'Regional System of Innovation' ('RSI') has many actors and stakeholders; and a regional innovation policy has many effects, direct or indirect, in the shorter or longer term. Any impact assessment has to be aware of these possibilities. Also, recent evidence suggests the importance of more intangible and fuzzy issues - communications, relationships and mutual learning between stakeholders – for the system of innovation.

Therefore the RIPIA method does not aim at a simple fixed answer to the question of 'impact assessment'. It aims more to provide a route map and working tools for investigation. This will help to explore the regional innovation agenda, the critical paths of causes and effects, the relationships of stakeholders, the qualities of governance, and the 'organization / regional learning' capacity as a foundation for the innovation process.

The RIPIA method is designed to be run by experts in close consultation with regional stakeholders. It is designed as a flexible set of steps with a series of templates and graphic aids. It is compatible with the 'rational management' logical framework approach of objectives, inputs and outputs, where this is relevant. It provides a basis for benchmarking and comparison as far as possible, by identifying common and measurable issues among many other issues which are more fuzzy and intangible.

1.1.2 RIPIA 4 stage process

In the light of the above, the proposed RIPIA method has 4 main stages, each with a series of steps:

- Stage 1 – ***'baseline'*** is concerned with scoping the boundaries and context, identifying the regional profile and innovation agenda, and defining the relevant parts of the 'regional system innovation' (RSI).

- Stage 2 – ***'policy analysis' -*** applies the 'logical framework' or rational management approach, across the relevant policies, programmes and projects.

- Stage 3 – '***extended analysis'*** - extends the logical framework approach with network analysis, path analysis and others, with a variety of methods.

- Stage 4 – ***'feedback' -*** reviews the implications of the assessment, with feedback to actors / sectors and benchmarking for policy development.

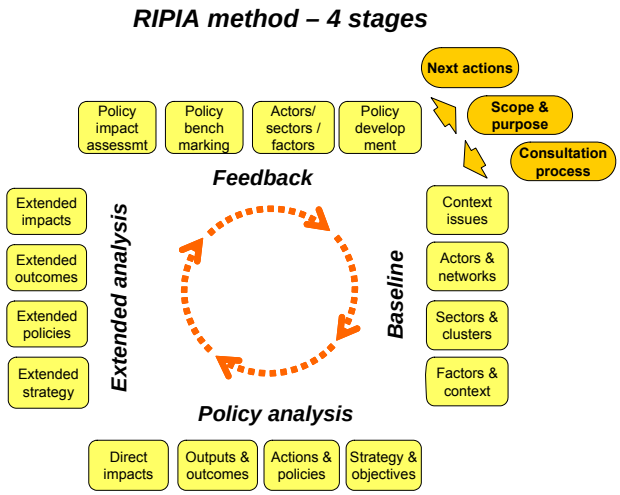


Figure 1

1.1.3 RIPIA 5 theme framework

The method also follows 5 main themes or perspectives on the Regional System of Innovation:

- **Context:** the economic, political, technological profile of the region, with performance measures and benchmarks where possible

- **Actors:** institutions, networks, governance structures, and their relationships and interactions.

- **Sectors**: the particular issues in the structure of the industry, cluster or technology.

- **Factors**: other socio-technical issues such as I.P, legal, financial, infrastructure issues

- **Actions:** the strategy, policy, programme or project to be investigated.

RIPIA method – 5 themes

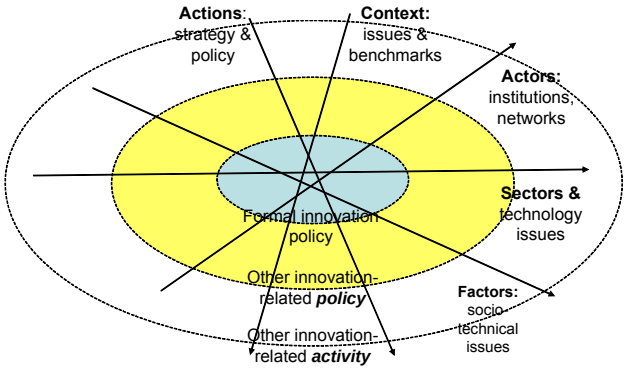


Figure 2

1.1.4 RIPIA core approach - 'Extended Analysis'

At the core of the RIPIA method is the Stage 3 'extended analysis' approach. This builds on the linear model of the 'policy logical framework', to investigate the wider range of causes and effects which are often more complex, fuzzy, intangible and indirect. We call this an 'approach' as it is not a fixed text book method. It is more like a flexible way of thinking - investigation, analysis, benchmarking - which is responsive to the situation. There are 3 main features of this approach (details in Part II):

- Policy causal analysis: this sets out a wide range of possible cause-effect chains, and then prioritizes the most significant effects / impacts, or risks / opportunities.

- Emergent system investigation: this looks for 'emergent' behaviour across a wider system, such as collective learning and cooperation.

- Policy opportunity benchmarking: this compares the cause-effect chains with 'opportunities', from best practices, scenario studies, and policy innovation work. With this the assessment can be framed in positive terms of creativity and opportunity.

RIPIA method – 'extended analysis'

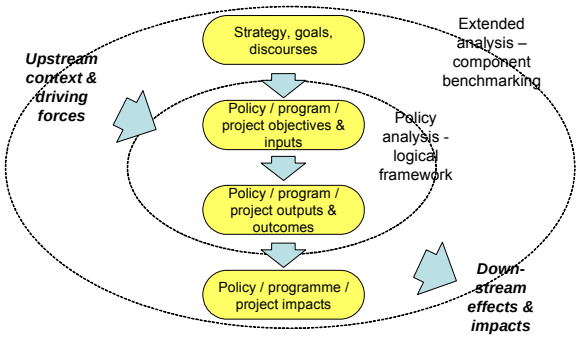


Figure 3.

1.1.5 The RIPIA method inputs and outputs

A range of inputs and outputs will be needed, depending on the regional situation, the type of policies to be assessed, and the resources available. These are described in detail in Part II:

- Policy documents & context review.
- Fieldwork – semi-structured interviews and regional panels.
- Questionnaire survey, where a larger sample is possible.
- Statistical data, where this is available and relevant.
- Systems / causal analysis, using a variety of graphic mapping methods.
- Desk analysis, using the suggested templates.
- Benchmarking and comparison of the impact assessment results.
- Summary report and feedback, using the suggested templates.

1.1.6 Conclusions & recommendations

The RIPIA method is designed as a research and policy tool: and also as a contribution to the emerging knowledge base on innovation and innovation policy.

It has the advantage over conventional scoreboard approaches, that it focuses on the chains of causes and effects: it considers intangible and fuzzy factors: and it follows a participative process.

Use of this tool in a variety of regions will over time build up a library of evidence and analysis: this may be used for a common benchmarking scheme or learning platforms.

Therefore the RIPIA also provides a practical tool for regions to assess and benchmark themselves, and for national / EU bodies to gain better intelligence on their policies.

The EUROCOOP project has developed the RIPIA method, with demonstrations of its applications in each of the partner regions.

The final deliverables of the EUROCOOP project will provide a comparative benchmarking and review between the partner regions: and policy recommendations which follow from this.

The overall recommendation is that regional, national and EU authorities should adopt a structured, comprehensive impact assessment such as the RIPIA method. This will provide a robust and grounded basis for intelligent policy assessment, evaluation, benchmarking and further policy development.

Part I
The method

2 Introduction

This chapter shows the context and applications of the proposed RIPIA method.

2.1 Context

It is clear that regional innovation is uncertain and complex, and that it can be difficult to predict its outcomes and impacts. This uncertainty and complexity are found not only in activity levels (quantitative measures), but also at the conceptual level (qualitative measures)... for instance, what is innovation? What is a 'regional system of innovation' (RSI)?[1] and so on.[2]

Experience tells us that these questions cannot always be simplified - for instance, 'innovation' does not strictly keep to regional boundaries, and firms do not always do what policy says they should do. However in order to build any kind of intelligence, we have to draw boundaries around these definitions, while at the same time being aware that often what lies outside the boundary is most significant.

> *For example, a typical Regional Innovation Strategy may bring together a wide range of evidence and stakeholders. Some years later the result may be seen with a scheme for developing a science park. For this we can measure easily the floorspace and the cost, but it is more difficult to measure the 'downstream' impact on business entrepreneurs, or the impact on large firm branch-plants. The 'upstream' side is also complex – a strategy may contain many objectives and policies: each policy may propose programmes and projects, some of which may be achieved: the science park may be built in stages over 20 years of economic change. The 'quality' of its firms, training programmes, IT infrastructure, financial stability etc, is maybe more important than its size.*

How can we begin to 'assess the impact' of such a strategy, policy, programme or project, which may be conducted over a period of 20 years?

---

[1] We refer to a "Regional System of Innovation" (RSI) to avoid confusion with the Regional Innovation Strategy (RIS).

[2] The 'EURO-COOP guidance on terminology' provides standard answers for these questions.

The draft RIPIA method recognizes these challenges. It does not aim to model or forecast the exact impacts of a regional innovation strategy – clearly the 'regional system of innovation' (RSI) is more complex than the most sophisticated economic or management models available. However the RIPIA method does aim to provide a structure and template, to enable a constructive investigation, to suit a particular policy purpose.

This structured template aims to help stakeholders shine the light of their own experience on the questions of cause and effect, and their perceptions of what is relevant and significant. It seeks to provide 'knowledge for action', i.e techniques that are useful in real-world situations. In particular, it provides a method for linking up complementary modes of knowledge:

- From **quantitative** (as measured in indicators, scoreboards and other statistical data), to **qualitative** (intangible factors, processes & experiences)
- From **analytic** (taking the problem to pieces) to **synthetic** (putting together solutions).

2.1.1 Scoping the policy context

The four-stage / five-theme RIPIA method is not 'fixed in stone'. Rather, it is recommended from experience, as a way of investigation and analysis which is likely to be useful. This is then more adaptable to different regions and different types of application:

- **IF** there is a single formal 'regional innovation strategy' (such as a RIS or RITTS), with a clear policy boundary, and a clear definition of the region, then the method and templates can be used more or less directly, as specified here.
- **IF** there are many types of policies and programmes, a large and complex regional economic / political structure, and wider questions on what is the 'regional system of innovation', **then** the method can help as a guide for expert judgement.

The scoping of the RSI and its boundaries is an important step in the whole assessment method. This is also dependent on location, politics and development profile: the same policies may be grouped under one "RIS" umbrella, or be spread around many different departments and funding sources.

There is no single answer to this, except to say that assessments / evaluations may be useful for either case: the important thing is to be clear and transparent as far as possible about the boundaries which are used.

2.1.2 Scope & dimensions of the method

The key assumption behind the RIPIA method is that of diversity and plurality – i.e, that there are multiple ways to understand the 'regional system of innovation': the innovation process itself and the policy process itself. Hence, there are multiple ways to investigate the 'impacts' of innovation policy.

The diagram at Figure 2 above shows several boundaries to the investigation:

- Assessment of RIS, RITTS and similar formal schemes
- Assessment of other innovation-related policy
- Assessment of other innovation-related activities.

It also shows different axes of investigation, on the 'actors / sectors / factors' model: the templates in the Section 4 below ask specific questions on each of these. (The more detailed templates in the Appendix show how these are related to 'Porter's Diamond' (Porter, 1999): this is used as it is possibly the most widely understood framework for innovation policy.).

- **Context:** the economic, political, technological profile of the region, with performance measures and benchmarks where possible
- **Actors:** institutions, networks, governance structures etc
- **Sectors**: the particular issues in the industry or technology
- **Factors**: other socio-technical issues such as I.P, legal, financial, infrastructure issues
- **Actions:** the strategy, policy, programme or project to be investigated

There is also a further theme - **"sponsors**" - concerning the purpose and scope of the assessment / evaluation, the expectations of the sponsors, and the time and human resources available.

2.1.3 Core concept

The central concept of the methodology is the process of linking the rational management approach of the logical framework ('log-frame'), with the investigative and discursive approach of 'system mapping', i.e. a more holistic representation and analysis of the 'regional system of innovation'.

There is no single ideal way to achieve this – there is no 'magic bullet' with all the answers! The templates shown in Section 4 are only an outline and a guide, to be combined as far as possible with path analysis, graphic mapping, scenario workshops and other techniques of evaluation research and elicitation.

The most crucial step in the RIPIA method is that between stages 2 and 3 – between the 'policy analysis' and 'extended analysis'. The conventional log-frame assumes clear lines of cause and effect between objectives, inputs, outputs and outcomes. An 'extended logical framework' looks more widely for possible causes and effects, and also aims to identify the links between high level indicators of 'inputs'. This is also the most creative step, in that it requires the assessor to think beyond normal boundaries of policy statements.

The templates in Section 4 show examples of this kind of thinking. These would contain, for example:

- High level **'input' indicators**, as on the EIS scoreboard: e.g. "S&E graduates per 1000 population".
- Regional innovation **upstream context factors**: e.g. university financial health: trends in career choices:
- Policy log-frame **objectives**: e.g. encourage new students retained at HEIs
- Policy log-frame **inputs**: e.g. provide financial incentives to students
- Policy log-frame **outputs**: e.g. student population % retained through course.
- Policy log-frame **outcomes**: e.g. students graduating
- Other regional innovation **downstream context factors**: e.g. in-migration of professionals: out-migration of graduates: dependency between city & rural areas: ratio of patents to graduates.
- High level **'output' indicators**, as on the EIS scoreboard: e.g. "Employment in high-tech services (% of total workforce)".

The point here is that policy is often not directly or clearly connected to the high level output indicators. It is often very difficult to assess which is upstream or downstream, and which is outcome or contextual. There are many possible ***causal paths***, of which the assessment needs to identify the most significant, in terms of risk or opportunity. Overall, the extended logical framework analysis is

a tool for investigation and discussion, more than an 'objective' description, and it focuses on leading questions such as:

- What do the components tell us about the nature of the problem?
- Are there system effects which are not described by the components?
- How do these effects compare with the scope and objectives of policies / programmes?

It is also interesting that this challenge relates not only to regional innovation policy, but to many branches of public policy, where impact assessment and evaluation is rapidly growing in importance. We hope that the work on the RIPIA method will translate to other areas in due course.

2.2 Methodological issues

2.2.1 A heuristic research model

There are big theoretical and conceptual questions surrounding the 'regional innovation policy impact assessment' (RIPIA) method. This deliverable is not a theoretical paper. However, we can summarize here some of the issues, and their implications for the RIPIA method.

'Regional Systems of Innovation' (RSI) are clearly not so much positivist and closed systems, rather they are heuristic, path dependent and open systems. There is no laboratory for assessing the "impact" using policy on/off control groups, placebos etc. Therefore impact assessment will also be more a heuristic, path dependent and open process.

The regional innovation policy itself is a complex set of aspirations, influences, strategic directions etc. There may be layers of strategy / policy, spread over many years, and spread over many institutions and actors, before we can define funded projects with hard inputs / outputs. Therefore, effective impact assessment will need to be transparent about its scope and boundaries, the degree of uncertainty and the degree of subjectivity.

It is also clear that the main actors in the RSI are private sector actors and individual entrepreneurs, within a multi-level innovation system (regional, national, global…) (Kaiser & Prange, 2004). Therefore the role of regional policy

is a relatively marginal role, with influence and coordination of others in a large, complex and open system. Therefore, impact assessment has to take this system-wide perspective, and focus on this relationship of potential influence on other actors at other levels.

One approach is to look at regional systems of innovation as a supply – demand relationship (as with the OMEN project, www.omen-project.org). The impact assessment can then compare the reality to the ideal case where 'suppliers' of innovation services are in total coordination with 'demanders' of innovation services. This assumes that such relationships and supply – demand roles are clear and transparent to all actors. In reality, this may not be the case, and much of regional policy is focused on strengthening those supply-demand roles which may be 'invisible' or latent. Therefore, impact assessment has to deal with this more reflexive role of policy (e.g. where a key aim of the policy is to increase awareness of the policy).

Another approach comes from the direction of 'socio-technical systems' and 'actor-network theory' (Latour etc). The RSI may be identified as a multi-level socio-technical system composed of individual actors, organization actors, infrastructures, flows of information, flows of finance, etc. The logic of such a system will be beyond the reach of any single theoretical model or framework, such as an economic model or institutional model. A causal path analysis of the RSI will always be partial, incomplete, and subjective: the direction of cause and effect will be open to discussion.

The implication for the proposed method comes back to the philosophy of the Open Method of Coordination (OMC). In other words, that policy may be more effective and efficient where it is self-organized, on the principle of subsidiarity, in a mutual learning context. Therefore the role of impact assessment in policy analysis and comparison may shift from a narrow technical 'bench-marking' to a more heuristic and process based ***'bench-learning'*** (Room, 2005). The impact assessment does not attempt the impossible task of finding the 'true' impact, but it does aim to identify issues which are useful for policy learning and policy development.

2.2.2 Economic perspectives on innovation

The economic literature on technical change provides significant tools to appraise the causes and effects of resources devoted to the production and dissemination of new knowledge. However, the complexity of this matter requires multi-dimensional analytical approaches with different insights offered and different aspects highlighted by conventional neo-classical, new growth theory and evolutionary frameworks:

- Mainstream economics highlights resources and incentives for firms while taking technological possibilities and capabilities of firms as a given;
- New growth theory contributes to a better understanding of the conditions for economic convergence between countries;
- Evolutionary theory highlights the importance of institutions and of path-dependence in the selection of technologies.

For the **neo-classical framework** the basic principles of S&T policy are to achieve the following:

- to reduce uncertainty;
- to provide investment where science is a public or non-rival good;
- and to allow for the internalization of externalities.

The policy rationale is grounded in rectifying market failures including imperfect information, non-rivalry and non-excludability, indivisibilities, and problems of appropriability through knowledge, market and network externalities.

Within the **evolutionary-structuralist framework**, the basic principles of S&T policy are to develop and orient the cognitive capacity of actors and provide the conditions for use of this capacity. Policy rationale is grounded in learning failures, including exploration /exploitation failures, selection failures, innovation system failures, and knowledge-processing failures.

2.2.3 Evaluation and 'additionality'

The question of 'additionality' is a foundation for the philosophy of public policy and social intervention (Lengrand Associates *et al,* 2006). It is therefore a critical factor for impact assessment and evaluation. Additionality is framed in terms of what difference (i.e. impact) is made by intervention, and whether the net effect 'justifies' the cost or opportunity cost of intervention.

Four types of additionality can be identified. The first two are mainly based on a neo-classical and management school perspective: the latter two are based on a more structuralist-evolutionary and human resource perspective:

- **Output additionality:** the counterfactual of whether the same outputs would have been obtained without policy action;

- **Input additionality:** whether the public action adds to, or substitutes for the agents inputs (usually financial);
- **Behavioural additionality:** the differences to the agent's behaviour following the policy action, or its persistence beyond the action; and
- **Cognitive capacity additionality:** whether the policy action changes the different dimensions of the cognitive capacity of the agent.

The last two themes are the subject of great debate and experimentation. "Behavioural additionality has generally been ignored by econometric studies of the effects of R&D support which focus on input additionality, where estimates are made of additional R&D expenditure or output additionality, whereby firm performance is compared between recipients and non-recipients of public support. These are both interesting questions, but in neither case is causality examined, nor is there an explicit or implicit model of how the firm uses public support. Such a model is integral to the concept of behavioural additionality. Behavioral additionality is directly related to an in depth insight into the dynamic capabilities which make a company different from its competitors." (Georghiou and Claryss, 2005, p.9)

This last point is the key to the philosophy of the RIPIA method. To identify these 'dynamic capabilities', a method is needed which can be flexible and open enough to respond to such intangible and qualitative impacts.

2.2.4 Implications for the RIPIA method

In the light of the above the proposed RIPIA method has the following features:

- Generally, the RIPIA method is a process-based and staged approach, arranged as a cycle of investigation and consultation. This puts the 'process' into the centre of the picture.
- Stage 1 is concerned with scoping boundaries, identifying the regional profile and agenda for the RSI, and defining the relevant parts of the RSI.
- Stage 2 aims to apply as far as possible a standard management approach – the log-frame approach – across the relevant policies, programmes and projects.
- Stage 3 is the core of the method. It aims at a combination of network analysis, path analysis and other relevant approaches, with a variety of methods. This does not try to assume a single theoretical model of the RSI or the regional economy. It takes a 'grounded' approach and focuses on the perceptions of key stakeholders, in order to identify the

most significant factors and paths, in a complex multi-level and open system.

- Stage 4 aims to apply the results and the implications of the assessment, with feedback to policy learning and policy development.

2.3 Further issues on 'policy analysis & extended analysis'

(CIR text)

2.3.1 Objectives

The main objectives of stages 2 & 3 are to gather all data necessary to have a quantitative and qualitative overview of the dynamics of regional innovation policy (as well as of its impacts on the regional innovation system and economy), and to promote critical thinking and feedback for policy improvements amongst regional policy-makers and stakeholders.

Expected results are to identify the 'real-world' context and conditions in which regional innovation policy is being made, and to overcome the limitations of the "log-frame approach" by extending it in various ways: EURO-COOP is creating an "extended logical framework" which shows a wider set of upstream, downstream and contextual factors. This entails:

- Measuring not only 'stocks' but also 'flows': there has been too much emphasis on static indicators in the past; what we need is dynamic indicators on flows (both 'diachronic' and 'synchronic' ones):

- *diachronic flows*: the dynamics of change / how has the innovation policy changed over time;

- *synchronic flows*: interactions, networks and processes within the system of actors.

- Focusing on the intangible factors of institutions and interactions, which lie behind the scoreboard indicators;

- Focusing on a wider set of external impacts which are not included in the policy / programme log-frames;

- Focusing on the extended causes and effects which surround the inputs and outputs shown in a policy / programme log-frame.

2.3.2 Linear – non-linear models

The conceptual framework of traditional performance indicators (scoreboard type) refers to a neoclassical model, meaning an input-output approach: innovation is a linear process, the performance of which can be measured and evaluated through a purely quantitative and intrinsic approach. These quantitative data are certainly important to know, and they are, at the present time, the only ones available to perform local diagnoses or inter-regional comparisons/benchmarking exercises; but they do not allow to go far enough in the analysis of the "why" and the "how" of innovation, and provide limited support to regional innovation policy.

In methodological terms, this emphasizes the necessity to shift from a purely linear, quantitative / statistical and techno-economic approach to a more qualitative / dynamic and socio-political approach (measurement of interfaces, network phenomena and externalities). The objective is to measure the quality of interactions within the system on the one hand, the propensity / inclination to promote consensus-building and strategic culture on the other hand: is there a common vision among stakeholders or are there divergences? Performance indicators provide only a linear measure / vision of what is happening (they make it possible neither more nor less to appreciate to what extent a given region is able to transform production inputs into innovation outputs), but not the motivation behind it. The use of qualitative survey methods (interviews, surveys/questionnaires, focus groups, workshops, etc.) makes it possible to map changes in regional government's/firm's culture and to determine whether there exists a propensity for consensus-building that may not yet appear in statistics, by reporting both on individual visions and the quality of relationships within the system of actors.

Moreover, technological indicators, whether they are quantitative or qualitative, do not completely cover certain indirect or unexpected effects of innovation-support policies (externalities) – whether these effects are 'positive' or 'negative': for instance, impacts on employment, quality of life (social acceptance and social appropriation of technology), ecosystems, etc.

The frame of reference of the RIPIA method, in contrast, considers the innovation process not only in its linear but also in its 'reticular'[3] dimension

[3] ***Reticular*: pertaining to or resembling a net, network, or reticulum.**

(including quality and intensity of inter-relationships between policy-makers and/or innovation performers, as well as "cross-policy aspects"). Innovation-support policy impacts on the whole social, political and economic environment at the crossroads of technology policy and regional development policy (in the broad sense), and should therefore be the object of a more qualitative, cross-sectoral and extrinsic assessment. RIPIA approach is to address both the issue of the quality of relationships within the system of actors (synergic or not) and cross-policy/cross-sectional issues (in a "sustainable innovation" perspective).

2.4 Development of the method

The RIPIA method was developed through various stages of the EUROCOOP project, at the same time that evidence was gathered from case study regions. This involved some quite complex moves, where innovation policies were assessed at the same time that the prototype method was assessed. As the innovation policies were often complex and fuzzy, and the prototype method took over 12 months to fully develop, it was a significant achievement to put these all together. In particular the following stages were taken:

- 'Regional Profiles' of the case studies were produced in the first 9 months of the project. This corresponds to the RIPIA Stage 1 – Baseline information, particularly Step 1 – regional context.
- 'Regional Evaluation Demonstration' of the case studies were produced in months 9-18. This focused more on the RIPIA Stage 1 actors / factors issues, and on Stage 2 – Policy Analysis.
- The 'RIPIA demonstration' and the 'regional synthesis reports' on impact assessment studies from month 18-24, was the main output of WP3. These studies were corresponding mainly to the RIPIA Stage 3 – Extended analysis. They included a specific fieldwork strand with both surveys and semi-structured interviews. At this point the prototype RIPIA method was clear, and the fieldwork guidelines were in prototype form, but there was still much testing to do in the field.
- The reporting and final benchmarking / analysis of the regional case studies has helped to finalize the RIPIA method Stage 4, and the reporting templates.

2.4.1 Conclusions of the 'Regional Synthesis Reports'

We summarize here the section C2.1 of the D13 report on the 'implications for the RIPIA method'.

The 'RIPIA demonstration' phase was expected to bring information on two fronts:

- the relevance of the method (added value of the RIPIA in providing information on the dynamics of regional innovation policy / promoting critical thinking on regional innovation systems),

- its feasibility / practicability (e.g., resistance encountered in implementing it).

How comprehensive should RIPIA be?

With regard to the analysis of regional dynamics, certain regional partners find it too complicated to address the whole range of issues relating to the RIPIA's extended framework (particularly cross-policy and/or cross-sectoral issues). They ask both for more precise definitions of the very notion of innovation and to restrict the field of investigation. However, this somewhat contradicts the initial purpose of the project, which was to draw a realistic, non-standardized picture of innovation policy in the regions under examination (including in a non-techno-economic perspective)[4].

On the contrary, some other partners wish the field we are looking at to be expanded. That is to say that the actions of institutions not normally covered by a narrow picture of innovation should be taken into account when assessing the regional innovation landscape (cross-policy aspects / cross-linkages to other policies): changes to the education system, the welfare system, the way of living together, etc. and their potential to innovate as well (social science topics regarding unemployment, social security, xenophobia, etc). This is certainly in line with the initial purpose of the project (*extended framework*) but makes the field work more costly and the analysis more complicated: the field/scope of analysis cannot realistically be indefinitely expanded. An intermediate solution might consist in exploring cross-linkages between regional innovation strategy and regional sustainable development strategy (if any).

[4] Basically, EURO-COOP aims to demonstrate whether and to what extent the understanding of innovation policy in a given region is tailored to its specific needs and assets (in a "sustainable innovation" perspective). This entails assessing how innovation support policy impacts on the whole economic, political, social or ecological environment (including indirect or unexpected effects), at the crossroads of technology policy and regional development policy (in the broad sense). This relates, for example, to the impact

RIPIA needs to be applied by trained social scientists

In any case, it seems clear that the focus on both dynamic (*multi-level coordination*) and cross-policy aspects (*extended impact assessment*) entails the need for transdisciplinary approaches, i.e. the need to involve not only economists but also sociologists or political scientists (or any kind of social scientists) in future innovation policy studies using the RIPIA method.

Allow enough time for field work

In more practical terms, the field work as applied was said to be very time consuming and it was suggested to take more time for the collection of interviews and questionnaires, effectively extending field work from 4 to 6 months.

Is the case-study approach suitable?

Moreover, some partners suggested applying the RIPIA method not on the regional innovation system as a whole, but on one specific sub-sector: for those partners, it may be more convenient to find one example (case study) in a very large, multi-level, multi-agency system, in order to understand it better.

However, this seems to contradict the aim of the RIPIA method, which is precisely to tackle complexity and primarily address multi-governance issues (including consensus-building) and cross-sectoral aspects. In this regard, it seems difficult to look at the innovation system on the basis of only one specific sub-sector and to draw conclusions for the system as a whole. Certainly, it should be possible to focus more attentively on a specific area / sub-sector, but this should only serve as an example, meaning a *priority* area not an *exclusive* one.

Graphic tools would be welcome

It was also suggested that a range of graphic methods might be very useful for exploring, identifying and representing the 'regional system', and could be included in the RIPIA toolkit (with relevant information on how to apply these methods): including set diagrams, matrix diagrams, and network / soft system diagrams.

---

of regional innovation policies on employment, quality of life, democracy (social acceptance and social appropriation of technology), ecosystems, etc.

3 RIPIA method – summary

This chapter is a general summary of the draft RIPIA method.

3.1.1 RIPIA 4 stage process

The RIPIA method has 4 main stages, each with a series of steps (Figure 6):

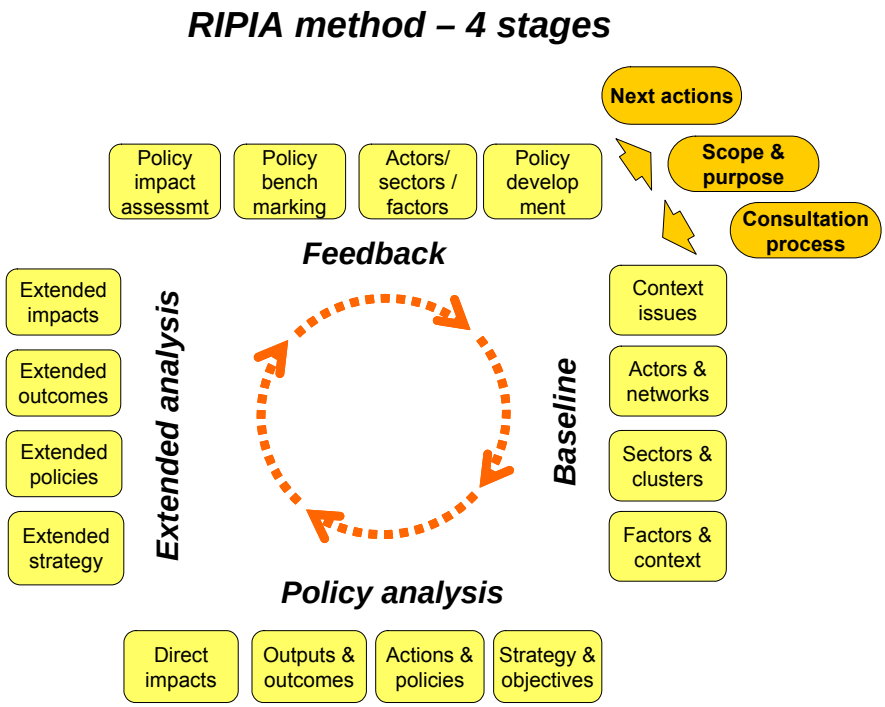


Figure 6

- Stage 1 – ***'baseline'*** is concerned with scoping the boundaries and context, identifying the regional profile and innovation agenda, and defining the relevant parts of the 'regional system innovation' (RSI).

- Stage 2 – ***'policy analysis' -*** applies the 'logical framework' or rational management approach, across the relevant policies, programmes and projects.

- Stage 3 – '***extended analysis'*** - extends the logical framework approach with network analysis, path analysis and others, with a variety of methods.

- Stage 4 – ***'feedback' -*** reviews the implications of the assessment, with feedback to actors / sectors and benchmarking for policy development.

Each of these stages involves both technical and communicative work. The diagram shows a 'starting point', where the method would normally start and end, with an option to repeat the cycle. However there may be situations where starting at other points would be useful, or where the method is used as part of a continuous monitoring programme.

3.1.2 RIPIA 5 theme framework

The RIPIA method works with 5 main themes or perspectives on the RSI:

- **Context:** the economic, political, and technological profile of the region and the RSI, with performance measures and benchmarks where possible

- **Actors:** institutions, networks, governance structures, and their relationships and interactions.

- **Sectors**: the particular issues in the structure of the industry, cluster or technology.

- **Factors**: other socio-technical issues such as I.P, legal, financial, infrastructure issues

- **Actions:** the strategy, policy, programme or project to be investigated.

These categories are not tightly fixed and will overlap in practice. However it is useful as far as possible to identify and report in this way.

RIPIA method – 5 themes

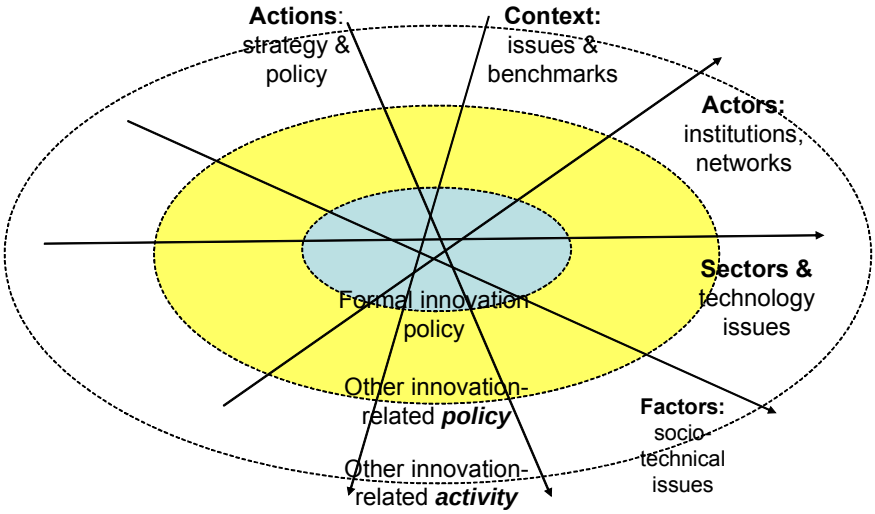


Figure 7

3.1.3 RIPIA core approach - 'Extended Analysis'

At the core of the RIPIA method is the Stage 3 'extended analysis' approach ***(figure 8)***. This builds on the linear model of the logical framework, to investigate the wider range of causes and effects which are generally more complex, fuzzy, intangible, indirect, upstream and downstream. We call this an 'approach' as it is not a fixed text book method. It is more like a flexible way of thinking - investigation, analysis, benchmarking - which is responsive to the situation. There are 3 main features of this approach (details in Part II):

- Policy causal analysis: this sets out a wide range of possible cause-effect chains, and then prioritizes the most significant risks or opportunities.
- Emergent system investigation: this looks for 'emergent' behaviour across a wider system, such as collective learning and cooperation.

- Policy opportunity benchmarking: this compares the cause-effect chains with 'opportunities', from best practices, scenario studies, and policy innovation work. With this the assessment can be framed in positive terms of creativity and opportunity.

With these in mind we focus on the 'policy impact', i.e the results of interventions from the public sector, (although in practice this often involves a complex set of statements and decisions). We can summarize an often long pipeline in four basic stages:

- Strategy and objectives: a generalized intention or discourse which may be more or less formal.
- Policies, programmes and projects:
- Inputs and outputs: the direct resources and results of the policy / programme / project
- Outcomes and impacts: this is the final focus of the method, and as far as possible compares the effects of policy-on / policy-off.

RIPIA method – 'extended analysis'

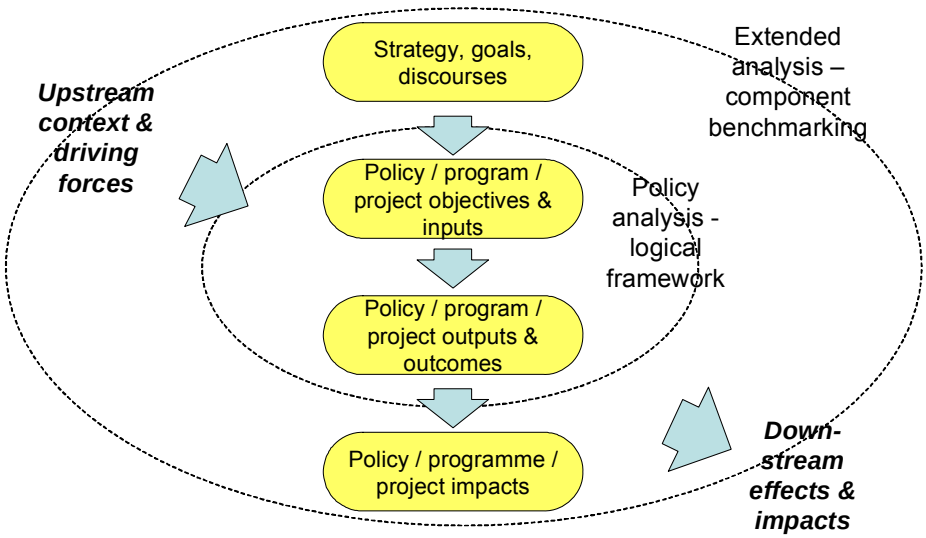


Figure 8.

3.1.4 RIPIA method inputs and outputs

A range of 'instruments' i.e. inputs / materials and outputs / results will be needed. These depend on the regional situation, the type of policies to be assessed, the expectations of the sponsors, and the resources available. These are described in detail in Part II:

- Policy documents & context review: this is the starting point for the baseline situation.
- Fieldwork – semi-structured interviews and regional workshops / panels.
- Questionnaire survey, where a larger sample is possible and relevant to the type of policy.
- Statistical data, where this is available, using the scoreboard indicators where these are available at the regional level.
- Systems / causal analysis, using a variety of graphic mapping methods. There is a suggested 'step-wise' approach which uses a graphic template for each of the 4 stages.
- Desk analysis, using the templates and reporting framework. This puts the evidence together for a creative synthesis.
- Benchmarking and reporting of the impact assessment results.

3.1.5 Added value of the RIPIA method

The RIPIA Method is based as far as possible on standard management reporting and policy assessment procedures, i.e. the 'logical framework' *('log-frame').* Therefore it should be compatible with much of the existing programme / project appraisal and monitoring systems (if we assume that these are properly organized and managed, which is often not the case).

The added value of the RIPIA Method is to recognize the limits of the log-frame approach, and extend it in various ways:

- Focus on the **intangible factors** of institutions and interactions, which lie behind the scoreboard indicators.

- Focus on a wider set of **external impacts** which are not included in the policy / programme log-frames.
- Focus on the **extended causes and effects** which surround the inputs and outputs which are shown in a policy / programme log-frame.
- Extend the 'scoreboard' type indicators sets towards practical indicators and benchmarks of policy / programme **performance**.

3.2 Summary of 4-stage step-wise process

The 4-stage process can be summarized in terms of 4 steps in each stage, i..e a total cycle of about '16 steps', as below.

The 'stepwise' cycle aims at simplicity and clarity – which may or may not suit the reality which is often complex and fuzzy. However as a first base structure it should be useful to then build on and adapt to the situation. Although it is presented as 16 steps, there are many possible overlaps and loops, and the exact number may be quite flexible.

The 'stepwise' cycle is also used as the basis for the suggested graphic mapping method (details in Part II). This is generally the best way to analyse complex systems and cognitive structures. It will be more effective where used by experts with some experience of graphic systems analysis.

- ***Stage 1: baseline***.
- Regional context baseline
- Actors baseline
- Sector baseline
- Factors baseline

Stage 2: policy analysis
- Strategy, discourse, objectives
- Policy / programmes objectives & inputs
- Policy / programmes outputs & outcomes,
- Policy / programme effects / impacts:

Stage 3: extended analysis
- Extended strategy and objectives
- Extended Policy / programmes
- Extended inputs / outputs,
- Extended effects / impacts:

Stage 4: Feedback
- Policy impact assessment
- Policy benchmarking & comparison
- Feedback to actors / sectors / factors
- Feedback to policy development

3.3 Frequently asked questions (FAQs)

These are some first notes on 'frequently asked questions'. They may be expanded or put into on-line format at the end of the project.

3.3.1 What is the RIPIA method and 'toolkit'?

- The RIPIA **method** contains a series of steps and information requirements, which will help regional innovation analysts carry out more effective impact assessments.
- The RIPIA **toolkit** is a package of guidance, templates and resources to support each of these step, based on this methodology.

3.3.2 What are the objectives of the RIPIA?

The context above sets out the challenges. In the light of that, the main aim of the EURO-COOP project is:

"to develop a research and innovation policy impact assessment system at the regional level in order to improve the measurement of the various impacts of regional research and innovation policies."

The objectives of this assessment system i.e. the 'Regional Innovation Policy Impact Assessment' (RIPIA) method, include:

- to provide a method and toolkit for the impact assessment of a regional innovation strategy, from the 'bottom-up' urban-regional perspective.
- to provide practical guidance for assessment in situations of uncertainty & complexity.
- To promote critical thinking and feedback for policy improvements, amongst regional policy makers and stakeholders.

3.3.3 How to use the toolkit?

The method of use involves four key stages in a logical order:

- Baseline / SWOT analysis
- Policy analysis
- Extended analysis
- Policy feedback

For each of these stages, there are information requirements, and communications with stakeholders.

3.3.4 Why is it needed?

Regional innovation policy is required to be targeted, cost-effective, measurable and accountable: but by its nature it is often the opposite:

- Most existing assessment methods are based on 'scoreboards' or project pipelines. These say little about the dynamics of change in the region, and/or the effects of policy intervention, and/or the 'soft' factors of networks and interactions.
- There are technical methods such as econometric modelling, which are limited to available data, and not focused on the 'soft' factors.

- There are process-based methods such as Regional Foresight, which combine evaluation with visioning / networking, but less focused on policy impact assessment.
- Overall, there is a need for a method which is flexible enough for impact assessment in different regions and sectors: but which also has a common structure to enable comparison and benchmarking. It should also be sensitive to soft intangible factors, and focused on useful feedback to policy: it should be able to coordinate different policy levels and stages, from national to local strategy to project delivery.

3.3.5 Who is it for?

The RIPIA method is designed to be used by ***assessment experts***, in collaboration with regional innovation practitioners, i.e. policy officers, leading stakeholders and others who are actively involved in developing regional innovation policy and assessing its impacts.

It will also be useful for 'top-down' assessment and evaluation of regional policy at national / EU level in several ways:

- it will encourage comparison and policy learning between regions
- it will identify the 'real-world' context and conditions in which regional innovation policy is being made;
- it will provide feedback on the most significant indicators and benchmarks.

3.3.6 When is it to be used?

- It has been designed to be used after a policy / programme is implemented (ex-post)
- It may also be used before a policy is implemented (ex-ante assessment)
- It is likely to be more effective and realistic if it is used at periods within an extended strategic programme (mid–term review).

3.3.7 What to do with the results?

- Policy impact assessment will be used firstly for monitoring, programme management, allocation decisions & new policy development.

- The results of the RIPIA method will also contribute to 'policy learning', i.e. building consensus between stakeholders, building vision and capacity etc.
- This can happen at local, regional, national or EU level.

3.3.8 Which policy stages and levels?

- It is designed for use at the regional scale, but could also be useful at the national or local scale.
- It is designed firstly for the level of 'programmes' (i.e. coordinated sets of projects), but can also be useful at the policy level and the project level.
- It can be applied to 'strategy' as far as the strategy can be made tangible.

3.4 Assessment report – summary template

At Stage 4 (feedback) there will be a reporting process. Each assessment report will be specific to its region and its purpose.

However it will be helpful to use the following 'summary template' which is based on the main themes (actors / sectors / factors / policies). Using a common format will also help with any benchmarking or comparability between regions. A worked example of this assessment report (from the NW England case study) is shown in the Annex in Part II.

	MAIN ISSUES to report	*CASE STUDY direct issues*	*CASE STUDY comments & underlying issues*	*BENCHMARKS (indicator & other)*
A) CONTEXT				
	sponsor / client – objectives, scope			
	topic or theme area			
	scale issues - region /city / network			
	time issue – strategy / programme, short / long			
	regional typology			
	political issues			
	discourse / agendas / problems			
	other			
B) ACTORS – institutions, stakeholders, networks				
	national / international authorities			
	city-regional authorities			
	education & training			
	finance			
	SMEs			
	large firms			
	professions			
	technology, R&D bodies			
	agencies & intermediaries			
	other			
c) FACTORS – structural / socio-technical issues				
	Intellectual property			
	professional standards			

	regulation & legislation			
	legal & contractual			
	financial & risk profile			
	education skills & training			
	other			
D) SECTORS – issues with the industry, technology or profession				
	spatial & network issues			
	sector & industrial structure			
	contracting & management			
	skills, training, career incentives			
	intermediaries / gate-keepers			
	technology & diffusion issues			
	other			
e) ACTIONS – policies, programmes, projects				
	type of policy / programme			
	objectives			
	inputs			
	outputs			
	outcomes			
	final impact assessment			
	other issues			

4 RIPIA method templates

This section shows a complete set of templates for the RIPIA method, with some general guidance notes.

The RIPIA method is shown here at 2 levels, (further details on each of the steps is in Part II):

- **Summary template**: 1-page table with an outline of the 'minimum requirements'
- **Main template**: an overall guide to the scope and method, in 4 main stages.

4.1 Summary template for 4 stages

The template below provides a 1-page overall 'route map' of the 4 stages.

	WHO? stakeholders	*HOW? methods*	*WHAT? contents*	*WHY? questions*
1. BASELINE				
This is a 'regional profile' / SWOT analysis of the baseline situation. *[this stage includes the existing EURO-COOP Regional Profile & Regional Evaluation Demonstration]*	Contacts include: National & regional government / agency Other public sector / non profit agencies Universities / research institutes Banking & financial institutions Firms & private sector intermediaries Research / technology agencies	set up regional steering committee / forum / network semi-structured interviews with stakeholders Typical desk inputs: policy / research / evaluation reports, statistical data, indicators / graphic analysis.	Establish the scope of the assessment Topics include: context of the region & worldview : - actors & institutions, - sectoral / cluster issues - factors & other infrastructure issues	General questions: what are the key regional conditions? who are the main actors and how do they interact? what are issues specific to the sector / cluster? what are the most significant contingent factors:?
2. POLICY ANALYSIS				
This takes the baseline information to the next stage, with analysis of the direct features in the context, the policies / programmes and their direct impacts.	RIS policy-makers key stakeholders as above	semi-structured interviews with key stakeholders and / or surveys / policy forum / panel / workshop event or series.	a) direct & visible factors in the context & actors: b) 'log-frame' analysis of policies / programmes: direct inputs / outputs of policy / programmes direct impacts of policies/programmes	what lies behind the context indicators & policy agendas? what is the objectives and scope of the key policies / programmes? what are the visible & direct impacts & external effects?
3. EXTENDED ANALYSIS				
This is aiming to push the rational log-frame approach beyond the boundaries of the typical programme / project, to identify a wider set of critical factors, and the extended impacts of policy on the regional innovation system.	RIS policy makers representatives of other regions. external experts	Draft reports circulated for discussion to: external review & benchmarking discussion by other regions and / or review by expert researchers / consultants.	a) further analysis of underlying factors in the context / actors: b) 'extended logical framework' analysis: indirect & underlying factors influencing policies/ programmes indirect, extended & external impacts of policies/programmes	what are the underlying dynamics behind the regional context indicators & policy objectives? what are the indirect & underlying factors which influence the policies/programmes what are the indirect & external impacts of policies/programmes
4. FEEDBACK				
This stage compares the 'impacts' against policy 'opportunities / best practices', and so provides feedback to policy development.	RIS policy-makers wider range of stakeholders & policy-makers.	interpret the results in non-technical language disseminate the results & implications for policy to a wider circle, via forums, workshops etc	summary of the direct / indirect impact of key policies / programmes implications for policy development implications for info-system development	for each key policy / programme, what is the impact assessment, in short / long term? for each policy / programme, what are the implications of the results?

4.2 Main template

4.2.1 Using the main template

The following sections 3.3 – 3.6 show the 4 stages of the 'main template' in the form of a series of tables. This contains:

- 'Actions' – outputs and communications
- 'Contents' – main items of technical information
- 'Questions' – leading lines of investigation, to be applied to each policy / programme / key project.

For each of these 4 stages, there are more fully detailed templates and guidance notes: these are shown in Section 4.

In each of the full templates there are blank spaces which are available for inserting multiple data. These can_be increased as needed: e.g. to cover a range of indicators, actors, or policies / programmes.

The templates should be filled only as far as this is useful to the assessment. Do not attempt to fill every box in the matrix!! For many issues, other approaches may be more useful, such as flip-chart graphics, or a narrative, or systems analysis software, or other methods of elicitation and analysis.

The **main template** here is shown in 4 separate stages. In practice the stages may overlap or feedback. For instance, a typical stakeholder interview or focus group is likely to cover 2-3 stages.

The **full template** is geared up to a desk study by experts, but it can also help to structure workshop discussions and interviews.

The best method of gathering information will be different in each region, but is likely to include both technical methods and communications methods.

4.2.2 General note: parallel typologies

There is a strong case for focusing the policy analysis at 2 or possibly 3 levels:

- at strategy / policy level (the strategy part of RIS/RITTS or similar initiatives)

- at programme level.
- possibly at the level of major projects.

There is also a strong case for doing impact analysis which focuses on alternative 'worldview' or general approaches to RSI and regional development typologies. Again for each there are a number of possible levels:

- Scientific focus – regional / national / global
- Engineering focus – local / regional / national
- Creative focus – local / regional.

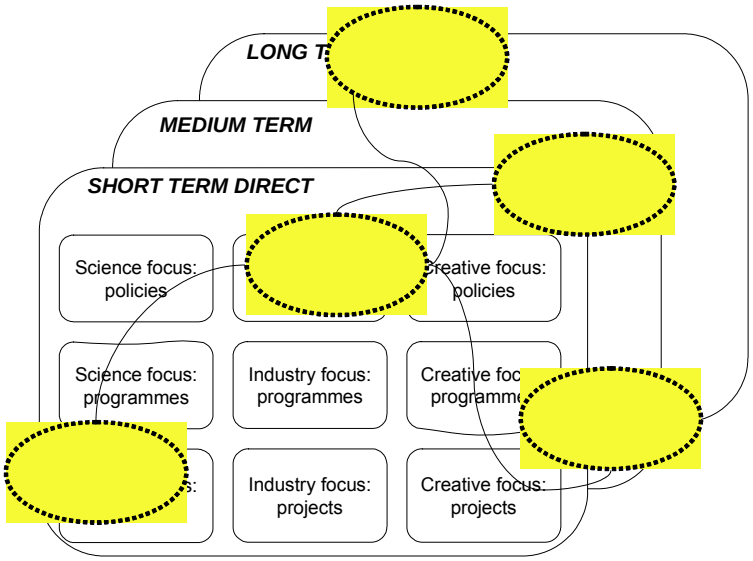
Type of knowledge base / Regional System of Innovation type	**Analytic / scientific**	**Synthetic / engineering**	**Symbolic / creative**
Embedded (grassroots RSI)		innovation districts (e.g. Emilia Romagna)	advertising village (e.g. Soho, London)
Networked (network RSI)	regional clusters & regional university (e.g. wireless in Aalborg)	regional clusters & technical university (e.g. Baden Wurttemberg)	'design city' (e.g. Barcelona)
Regionalised national (dirigiste RSI)	science parks / global technopolis (biotech, ICT)	industrial (national) clusters (e.g. Norway maritime industry).	

Source: D.Charles, presentation at EUROCOOP Manchester Workshop, available on www.iccr-international/eurocoop/

Each of these can work in an embedded grass-roots way, a regional network, or a subset of a national / international network.

Each of these typologies has a different kind of logic, theoretical base, RSI components, policy agenda, and relevant stakeholders. Therefore each will generate a different kind of impact assessment system.

Figure 5: 3 types of regional agenda



In practice many regions and RSI may contain more than one approach and one level. The RIPIA method should take account of these and where needed, carry out a parallel assessment for each main RSI type. The diagram above shows a schematic view, where the circles show how a typical region may have a number of areas of interest, i.e. combinations of science / industry / creative agendas, at different policy stages and different horizons.

We need to be able to identify / map these as far as possible. Each area of interest can then be expanded with the log-frame and extended log-frame approach described previously, and in detail in the next section.

4.2.3 General note: regional / national / international levels

It is clear that the 'regional' level of a system of innovation is in many cases a policy construction. One of the problems of lagging regions is that innovation may be in process all around, with little or no focus or added value to the regional economy. The 'region' may be less relevant to the crucial factors of finance, scientific research, large firm structure, advanced technology, supply chains, entrepreneurship etc. Meanwhile the 'region' may be more relevant to the more spatialized factors of infrastructure, labour markets and the demand side.

The implication is that to understand the RSI, and hence to assess the impact of policies within the specific RSI typology, we have to understand the national or

international context. Hence we could talk about a 'European System of Innovation' ("ESI"), of which the selected region is one possible node on a geographic dimension.

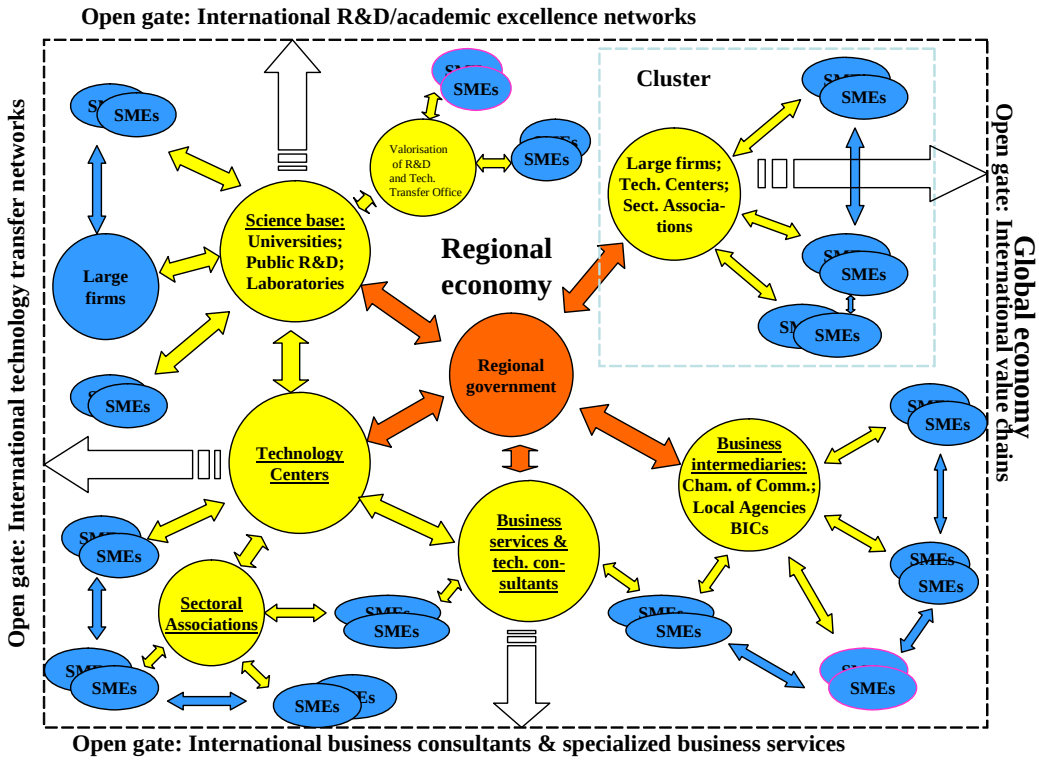
The diagram below shows the RSI in the context of a series of 'open gates', which summarizes the type of interactions between internal and external forces.

This wider perspective then comes back to the RIPIA method. The Stage 3 extended log-frame approach enables the method to identify the ESI or international context for the crucial factors where these are relevant. Finance and FDI, scientific research, large firm structure, advanced technology, supply chains, entrepreneurship and so on, may each have their own logic at the national, EU or global level, and this will enable the policy impacts within the 'regional' RSI to be seen in context.

Figure 6:

Regional system of innovation in context

Source: D.Charles, presentation to EUROCOOP 1st workshop



4.3 Main template: Stage 1 – BASELINE

	Methods & contacts	*Material*	*Research questions*
1. BASELINE			
This is a 'regional profile' / SWOT analysis of the baseline situation. {this stage is based on the EURO-COOP Regional Evaluation Demonstration}	set up regional steering committee / forum / network establish the scope of the assessment desk study interviews with stakeholders	Regional context: actors & institutions processes & interactions policies & programmes	General research questions: what are the key regional conditions? who are the main actors? how do they interact? what are the main policies & programmes?
a1) General information	desk study & consultation	define the strategy / policy / programme to be assessed identify the scope of the region & the actors	
a2) Assessment scope & purpose	identify the role and scope of this assessment		is the assessment ex-post, ex-ante or other? is it mainly for monitoring / review / resource allocation / research ? is it only for impact assessment, or part of a wider evaluation?
a3) Context baseline	assemble the statistical evidence, as far as possible.	review of existing EIS, trend chart etc: fill in data gaps from national data to regional data, where possible identify important factors which are not in the EIS indicators	what are the gaps in the data? what important factors are not covered?
a4) Regional 'Agenda' baseline	analyse statistical data & discuss with stakeholders.	identify the main type of innovation agenda(s) identify the main type of innovation policy response	what kind of regional economy are we addressing? what kind of policy response is active or needed?

b) Actors baseline – institutions, networks, etc	assemble evidence through documents and discussion	identify the main actors / stakeholders identify their roles in the regional system identify their relationships	which actors are most significant, and what are their main functions? what are the incentives and /or barriers to their contribution to the 'regional innovation system'? how strong is the cooperation and interaction between the main actors?
c) Sectors baseline	assemble evidence on the issues for the particular 'sector / cluster' to be investigated.	spatial & network issues sector & industrial structure contracting & management skills, training, career incentives intermediaries / gate-keepers technology & diffusion issues, etc	
d) Factors baseline	assemble evidence on contingent 'factors':	Intellectual property professional standards regulation & legislation legal & contractual financial & risk profile education skills & training	

4.4 Main template: Stage 2 – policy analysis

	Methods & contacts	*Material*	*Research questions*
2. POLICY ANALYSIS			
This takes the baseline information to the next stage, with analysis of the direct features in the context, the policies / programmes and their direct impacts on the regional innovation system	semi-structured interviews with key stakeholders: and / or policy forum / panel / workshop event or series.	a) first stage analysis of the visible factors in the context / actors / interactions b) 'log-frame' analysis of policies / programmes direct inputs / outputs of policies / programmes direct impacts of policies / programmes	General questions: what lies behind the regional context indicators & policy agendas? what are the objectives and scope of the key policies / programmes? what are the visible & direct impacts & external effects?
a) Strategy analysis	assemble relevant documents: semi-structured interviews with key stakeholders: and / or policy forum / panel / workshop event or series.	identify relevant strategies, directives, discourses identify the objectives, inputs, outputs and expected outcomes	what are the most relevant relevant strategies, directives, discourses
a) Policy analysis	assemble relevant documents: semi-structured interviews with key stakeholders: and / or policy forum / panel / workshop event or series.	identify relevant policies, plans, programmes, projects to be assessed arrange these in a hierarchy / pipeline, as far as possible identify the objectives, inputs, outputs and expected outcomes	what are the most relevant policies, programmes and major projects? which of these are higher or lower in the policy hierarchy / pipeline? for each main policy / programme, what are the objectives, inputs, outputs and expected outcomes.
b) Pipeline analysis	desk study / survey material	identify new / existing 'log-frames' for each programme, i.e. objectives, inputs, outputs, outcomes	for each programme, what are the goals / objectives? what are the inputs / resources? what are the outputs / outcomes? what are the main risks and opportunities?

d) Direct impact analysis	desk study / survey material	identify the direct impacts within the programme log-frame	what are the main external influences on the policy / programme? what are the main external impacts from the policy / programme?

4.5 Main template: Stage 3 – extended analysis

	Methods & contacts	***Material***	***Research questions***
3. EXTENDED ANALYSIS			
This is aiming to push the rational log-frame approach beyond the boundaries of the typical programme / project, to identify a wider set of critical factors, and the extended impacts of policy on the regional innovation system.	Draft reports circulated for discussion to: external review & benchmarking discussion by similar regions and / or review by expert researchers / consultants.	a) second stage analysis of the underlying factors in the context / actors / interactions b) 'extended logical framework' analysis of policies / programmes: indirect & underlying factors which influence the policies / programmes indirect, extended & external impacts of policies / programmes	General questions: what are the underlying dynamics behind the regional context indicators & policy objectives? what are the indirect & underlying factors which influence the policies / programmes? what are the indirect & external impacts of policies / programmes?
a) Causal path analysis	intensive desk study and discussion	map the wider cause-effects from the policies / programmes, in the context of the high level objectives identify the most significant and sensitive of these causal paths, where possible	for each policy / programme, what are the main upstream factors, above the immediate objectives? for each policy / programme, what are the main downstream effects, beyond the immediate output?

b) Actor-network analysis	intensive desk study and discussion	identify the main barriers / risks from the institutional factors. identify the main resources / opportunities for the institutional factors.	for each type of stakeholder, what are the incentives, strategic objectives and barriers to action? for each type of stakeholder, what are the main relationships and interactions with others?
c) Process & pipeline analysis	intensive desk study and discussion	identify the main barriers / risks from the process factors & project pipeline issues identify the main resources / opportunities from the process factors & project pipeline issues	what processes in the policy / programme (e.g. how does it work over time) are key influences on its performance? what factors in the project pipeline are key influences on its performance?
d) Extended impact assessment	intensive desk study and discussion	identify the main 'extended impacts' of the policy / programme.	what are the more intangible and indirect results and impacts from the policy / programme what factors in the policy pipeline are key influences on its performance?

4.6 Main template: Stage 4 – feedback

	Methods & contacts	***Material***	***Questions***
4. FEEDBACK			
This stage compares the 'impacts' against policy 'opportunities / best practices', and so provides feedback to policy development.	interpret the results in non-technical language: discuss / disseminate the results & their implications for policy with within? a wider circle, through forums, workshops etc	Summary of the direct / indirect impact of key policies / programmes implications for policy development implications for information system development	General questions: for each key policy / programme, what is the overall result of the impact assessment, in the short / long term? for each policy / programme, what are the implications of the results?

a) Impact assessment feedback	desk study and comparative review	identify for each policy / programme: - overall short term impacts - overall long term impacts - uncertainty, confidence levels, assumptions	for each policy / programme, what are the short term impacts? what are the longer term impacts? what kind of assumptions does this involve?
b) Benchmarking of impacts & performance	desk study and comparative review	identify for each policy / programme: - comparison with similar policies comparison with similar clusters / regions	for each policy / programme, how do the results compare with similar policies? for each policy / programme, how do the results compare with similar regions?
c) other feedback: information systems, assessment methods, other actor / sector issues	non-technical materials & public dissemination	feedback to further development of indicators & monitoring systems	how could the existing indicators system be improved? how could existing data collection and management be improved? how could actor / sector / factor issues contribute to success?
d) Feedback to policy development	non-technical materials & public dissemination…	applications for each type of policy / programme; - critical success factors & barriers - best available practice & opportunities - failure stories, barriers / problems - further improvements	for each policy / programme, how do the results compare with best practices & possible opportunities? how could this and similar assessments be improved in the future?

Part II
Annex

5 RIPIA method – detailed templates

This section presents the full templates for the prototype RIPIA method, with greater detail including notes, examples, diagrams etc.

5.1 Stage 1 – detailed template

This is a 'regional profile' / SWOT analysis of the baseline situation at three levels:

- in the regional economy,
- in the 'regional system of innovation',
- in regional innovation policy.

The baseline / profile should cover all relevant parts of the 'Regional System of Innovation' (RSI). As above, it should be applied with skill and judgement to the regional situation, not just used as a simple matrix with each box to be filled.

Figure xxx shows a conventional view on the RSI: however it should be clear that there are other types of actors, and many other possible interactions and influences, in addition to those shown.

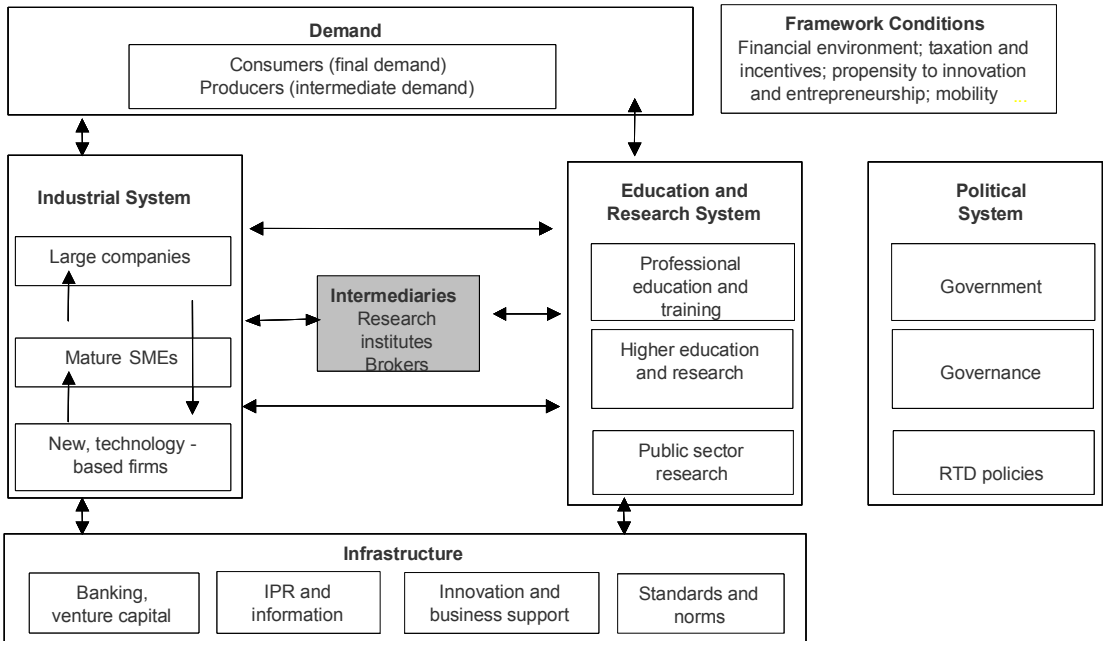


Figure xxx: Regional System of Innovation – conventional view

	KEY QUESTIONS		NOTES & EXAMPLES
STAGE 1 - a) General information			
1	What is the title of the Regional Innovation Strategy, or package of policy / programme to be assessed?		NOTE: The title Regional Innovation Strategy (RIS) is used here with a flexible definition: • the EU funded Regional Innovation Strategy (RIS) focuses on high level evidence and strategy, and so is not suitable for impact assessment, in itself. • following from a RIS there may be a range of relevant policies / programmes / major projects, which can be assessed. These may be packaged together as a 'Strategy' or RIS. We also use the term 'regional system of innovation' (RSI) to describe the whole set of relevant actors, interactions and policies.
2	What is the time frame of the Regional Innovation Strategy or policy / programme to be assessed (e.g. from 1999 to 2003)?		
3	What is the territory and boundary of the policy to be assessed?		NUTS 2, 3, 4 units: other units e.g. city-regions: other types, e.g. cross-border etc
4	Was the strategy or policy part of a EU-funded RIS / RITTS or RIS+?		
5	Has the strategy been assessed or evaluated? By whom (internal/external)? [are the results of the evaluation public, if so please provide the url]		
6	Has the region been beneficiary of the RIS programme previously or is this the first RIS policy?		
7	Has the region subsequently updated, modified or replaced the Regional Innovation Strategy ?		

8	How did the evaluation feed into this [if at all]?				
9	Did you follow the EU RIS methodology for the definition of this new regional innovation policy: or did you adopt a different methodology / approach?			The RIS methodology consists of 6 key themes / steps: 1) building a regional consensus; 2) analysis of the main technological and industrial trends affecting the region from regional, national and international perspectives; 3) strengths and weaknesses of regional firms (demand): assessment of the regional innovation needs; 4) assessment of the regional innovation support supply and the capabilities and objectives; 5) definition of a strategic framework / action plan; 6) design and implementation of a monitoring and evaluation system[5]	
10	If you developed a new approach, was this as a result of learning from the original RIS?				

STAGE 1 **b) Regional context baseline**					
1	What are the most relevant indicators of regional conditions?			This starts with the Scoreboard, Trend chart, other EIS indicators, or other regional indicators, as for example in the chart below. Where possible we should use data in the new EIS 2005 which is already available: http://trendchart.cordis.lu/scoreboards, Additionally, it may make sense to also include the specific regional indicators which have been included in previous EIS, in order to see if these indicators are of some use: please refer to the EIS 2003 or 2002	
2	Which of these indicators, if any, are regularly used for the design, assessment and evaluation of Regional Innovation Strategies/Policies?				

[5] European Commission (1996): *Practical guide to regional innovation actions. Regional Innovation Strategies (RIS). Regional Innovation and Technology Transfer Strategies (RITTS)*. Luxembourg: Office for Official Publications of the European Communities.

3	Do you think that there is an adequate alignment between the policy objectives of RIS and the EIS indicators available?		The Commission is interested in improving the quality and availability of EIS indicators. Please indicate any key problems associated with the use of EIS indicators in your region, e.g. availability (at particular territorial scale, particular time periods), quality, possible misrepresentation or bias (e.g. towards manufacturing sectors or large firms), lack of relevance vis-a-vis policy objectives (lack of indicators of innovation, systemic indicators, etc.)	
4	What other indicators should be in place for understanding & evaluating the RIS?			
5	How might these be represented by quantitative or qualitative indicators?			
6	Which are the most important qualitative issues that should be measured?		This question focuses on the main qualitative issues not recognized in existing indicators, e.g. • Learning processes in firms, organizations, professions • Economic / social structural changes • Individuals, careers, migrations, professions • Technology transfer & diffusion factors • Entrepreneurship & business incentives • Access to global or local networks • Other types of infrastructure.	
7	Have you developed new indicators to fill in any of the above gaps & shortcomings?			

Stage 1:
b) Indicator details

	This list is taken from the EIS 2005. If data is not available at the regional level, then it might be useful to refer to data available at the national level. Please supply data only for the indicators which are relevant to your RIS.	Is this a significant indicator for the success of the RIS?	What is the current & target / benchmark figure (if any)?	Possible data problems, availability, misuse & abuse	Alternative related indicators quant / qualitative
	INPUT - Innovation drivers				
1.1	New S&E graduates per 1000 population aged 20-29				
1.2	Population with tertiary education per 100 population aged 25-64				
1.3	Broadband penetration rate (number of broadband lines per 100 population)				
1.4	Participation in life-long learning per 100 population aged 25-64				
1.5	Youth education attainment level (% of population aged 20-24 having completed at least upper secondary education)				
	INPUT - Knowledge creation				
2.1	Public R&D expenditures (% of GDP)				
2.2	Business R&D expenditures (% of GDP)				
2.3	Share of medium-high-tech and high-tech R&D (% of manufacturing R&D expenditures)				
2.4	Share of enterprises receiving public funding for innovation				
2.5	Share of university R&D expenditures financed by business sector				
	INPUT - Innovation & entrepreneurship				
3.1	SMEs innovating in-house (% of SMEs)				
3.2	Innovative SMEs co-operating with others (% of SMEs)				
3.3	Innovation expenditures (% of turnover)				
3.4	Early-stage venture capital (% of GDP)				
3.5	ICT expenditures (% of GDP)				
3.6	SMEs using non-technological change (% of SMEs)				
	OUTPUT – Application				
4.1	Employment in high-tech services (% of total workforce)				
4.2	Exports of high technology products as a share of total exports				
4.3	Sales of new-to-market products (% of turnover)				
4.4	Sales of new-to-firm not new-to-market products (% of turnover)				
4.5	Employment in medium-high and high-tech manufacturing (% of total workforce)				
	OUTPUT - Intellectual property				
5.1	New EPO patents per million population				
5.2	New USPTO patents per million population				
5.3	New Triad patents per million population				
5.4	New community trademarks per million population				
5.5	New community industrial designs per million population				

5.1.1 Actors & institutions baseline

The focus here is the people, organizations, professions with their roles, responsibilities and interactions: through formal governance, or other informal means.

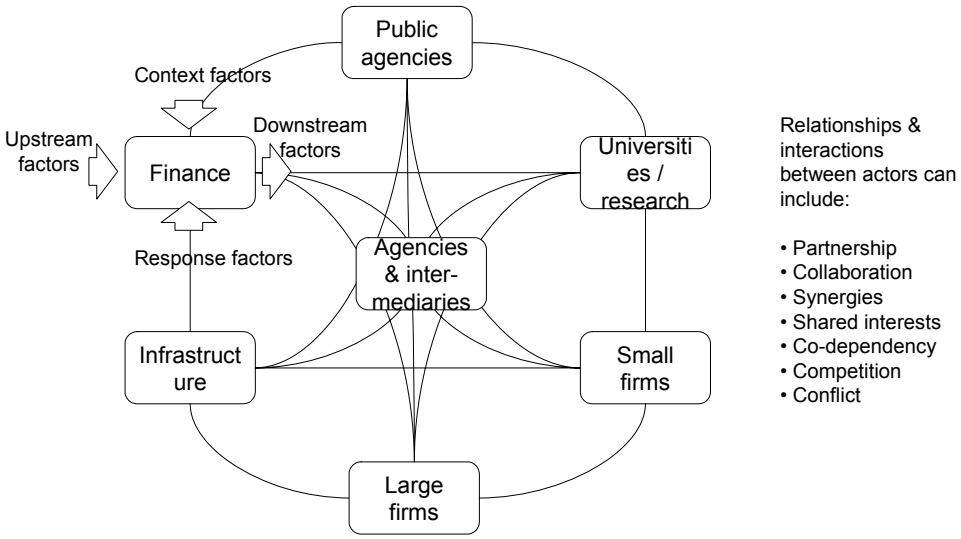
The task is not to list one by one all the people & organizations (this should already be in the regional profile), but to ask a more general evaluation question - how do these actors contribute to, or influence the RIS or regional development in general?

Often, the success or failure of a RIS is not so much related to the policy or funding scheme, but to how it works with real people and real organizations. Again, the questions and the matrix here are only a guide.

Figure 9 illustrates the actor-network analysis approach. Each actor's activity / context can be shown with a summary of the actor-system, shown above in the 'interview guide' Their relationships can be characterized with a range. This of course is greatly simplified, and clearly any regional system of innovation will be much more complex in reality.

Figure 9:

Actor-network mapping approach -
simplified regional innovation system



ACTORS & RELATIONSHIPS	***national* Government department / agency**	***regional* Government department / agency**	***subregional* Government department or agency**	**other Public sector / non-profit agencies**	**universities & public research organ.**	**banking & financial institutions**	**private sector firms**	**private sector research/ technology organ. /intermed**	**other (e.g., trade-unions, NGOs)**
***national* Government department / agency**									
***regional* Government department / agency**									
***subregional* Government department or agency**									
other public sector / non- profit agencies									
universities & public research organisations									
banking & financial institutions									
private sector firms									
research/ technology agency / intermediaries									
other (e.g., trade-unions, NGOs)									

	KEY QUESTIONS		NOTES & EXAMPLES
STAGE 1 – c) Institution baseline			
1	What institutions & actors are most significant in both the RIS and the RSI?		• The list should include: e.g. • national Government department or agency • regional Government department / agency (e.g. RDAs) • subregional Government department or agency • other public sector or non profit agencies (e.g. health service) • universities & public research organisations • banking & financial institutions • firms & private sector • private sector research / technology organisations / intermediaries (tech.transfer /science parks) • other
2	What are their main functions (in relation to both the RIS and the RSI)?		• e.g. Supporting knowledge transfer between research organisations & companies • Providing financial subsidies for innovation and technological development • Boosting human resource supply for innovation • Supporting international co-operation between innovative regions or/and research • Support of networks for regional innovations within the region • Other
3	Which significant actors are NOT represented either in the RIS or RSI? (formally or informally)		

5.1.2 Institutions, networks, interactions

This theme focuses on ***'how it happens'***, i.e. how does the RIS, and the programmes and projects which follow, mobilize their actors, implement their objectives etc.

This involves a new and experimental agenda for promoting networks and partnerships, vision building, Foresight programmes, other forums, policy debates, media initiatives, participative governance, communicative actions and others:

- The challenge is that most of these important factors are almost impossible to measure or quantify with indicators.
- The policy chain effect means that strategic actions e.g. discussions between a few individuals, have a large effect on downstream policies and programmes, but that these effects are impossible to prove or disprove. The 'behavioural additionality' problem means that the impacts and outcomes from any one factor are almost 100% uncertain.

Where possible we should use the Regional Steering Committees for this topic. In most regions we have very important stakeholders on board and they would be ideal to reflect upon processes, networks, etc.

	KEY QUESTIONS		NOTES
STAGE 1 – d) Interactions baseline			
1	How much are the above actors and institutions actively involved in the RIS process?		
2	What kind of interactions are there between these actors? (list the most significant)		E.g, Vision and inspiration Mutual learning & organizational development Complexity and confusion Hostility and competition Inertia and stalemate Several/all of these combined.
3	What are the limits and / or barriers to their contribution to the RIS?		For instance we might find that universities are more interested in academic merit than the regional economy; or that leading firms are more interested in global markets than regional supply chains, etc.
4	How has the RIS process been useful in the following kinds of process and interaction?		E.g., Increase of public funds available for innovation support Raising awareness of innovation among regional firms Creation of an institutional framework for a more efficient use of public and private funds for innovation Improved knowledge / intelligence of the regional system of innovation Promotion of public-private partnerships for innovation Promotion of cooperation and networking between firms Learning from other regions & other levels Did the RIS process create any new actors, new roles for existing actors, or new spaces for interaction and communication between / with stakeholders? Have these changes persisted beyond the time frame of the RIS? Introduction of new innovation policies and instruments and/or improvement of the quality /delivery/efficency of existing ones

	KEY QUESTIONS			NOTES
STAGE 1 – e) Policy baseline				
1	What are the key ***innovation challenges*** which can be identified in the region, that policies should address?			This is an open question, but allows the assessment team to look beyond the stated policies at the 'challenges' / 'issues' / agendas. These might include: Endogenous wider capital approach Human resources & labour market focus Cluster / supply chain & inter-firm focus IT / training / infrastructure focus Procurement & market development focus Networking and foresight focus
2	What are the main objectives and priorities of the RIS and other policies / programmes?			
3	Is there a gap between the challenges and the main objectives and priorities?			
4	What are the key policy instruments / programmes / major projects in the RIS, or otherwise relevant to regional innovation?			
	BELOW ARE COMMON POLICY TYPES WHICH CAN BE ANALYSED FOR THESE QUESTIONS:			
5	Investment potential			Global connections Image & marketing Interregional networking
6	Supply side, technology support infrastructure			SMEs innovation projects with Universities and Technology Centres Technology transfer University-industry links University placements Incubator services Technology facilities and infrastructure
7	Clusters, networking, university links			Clusters and business networks Collaborative research & technology projects

8	Business competence & innovation environment			Information society promotion for SMEs Business advisory service (ex: technology forecasting and technology audits in SMEs) Creation of technology based firms Raising awareness, promotion, communication, dissemination activities Innovation financial engineering: seed and venture capital Other public sector financial support
9	Labour market & human resources			Life-long learning Technology staff/placements and exchanges Training and skills development
10	Strategic intelligence			Creation of monitoring, evaluating and policy development tools

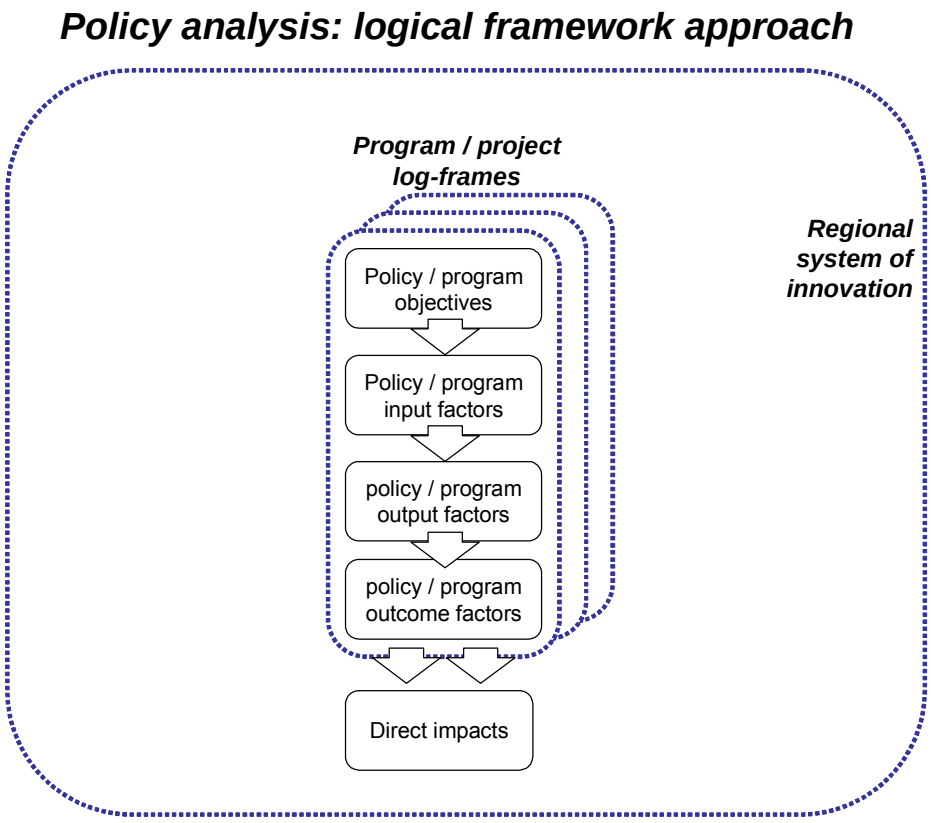
	KEY QUESTIONS			**NOTES**
STAGE 1 – f) feedback to assessment				
	what is the nature and the scope of the RIS assessment / evaluation?			These are some of the common types of evaluation 'modes'. In each of the regions one or more of these may be most relevant, useful and practical. Each may involve different kinds of information, actors & processes: • **Top-down** evaluation of formal RIS, in terms of stated objectives, formal RIS inputs / outputs, pipeline performance • **Bottom up** evaluation of formal RIS, in terms of stated objectives, formal RIS inputs / outputs, pipeline performance • **Policy IA focused** evaluation of formal RIS, in terms of wider objectives & system context • **Networking focused** evaluation of wider regional innovation system, in terms of contribution of RIS • **Policy learning focused -** Evaluation of wider regional innovation system, in terms of wider objectives & system context.
				• Further questions on the assessment method are shown at the end of the cycle, detailed at Stage 4c.

5.2 Stage 2 - detailed template

This takes the baseline information to the next stage, with analysis of the direct features in the context, the policies / programmes and their direct impacts (as shown in Figure 10).

One difficulty in assessment of a multi-level and multi-stage RIS is that strategy may be not directly connected to policies or programmes. For instance, in the NW-UK, a strategy (non-RIS) was discussed in 1995-98: some similar policies were developed in 2000-2003: some projects which might be related, are now being prepared for 2008 onwards under a new funding regime: but there is no clear connection. So, how can we evaluate the strategy, when it is quite uncertain what the effects are?

Figure 10:



There might be alternative approaches for this problem:

- Assessment / evaluation in terms of **actors**, i.e. the question of how far each actor gets what they need? (section 2.3 becomes important)
- Assessment / evaluation in terms of **actions**, by assuming that all of its proposals are implemented and successful (section 2.4)
- Assessment / evaluation in terms of **process**, i.e. does it help to create dialogue and cohesion, as the conditions for implementation later?

	KEY QUESTIONS			NOTES	
STAGE 2 – a) Context analysis					
1	what important factors in the regional innovation context are not represented by the indicators?			• e.g. regional location, geography, resources • competitiveness & entrepreneurship • availability of finance • systems of governance, administration & law • migration, skills shortages • dependency, expropriation by others.	
2	what important assets and opportunities do the indicators hide or mislead?			• e.g. natural & native assets • Skills & entrepreneurship • Intellectual resources	
3	what important problems do the indicators hide or mislead?			• e.g, corruption & fraud • commercial monopoly / buyout • political / ethnic tension & division • branch-plant syndrome	
4	are there indicators (qualitative or quantitative) which might represent these?				

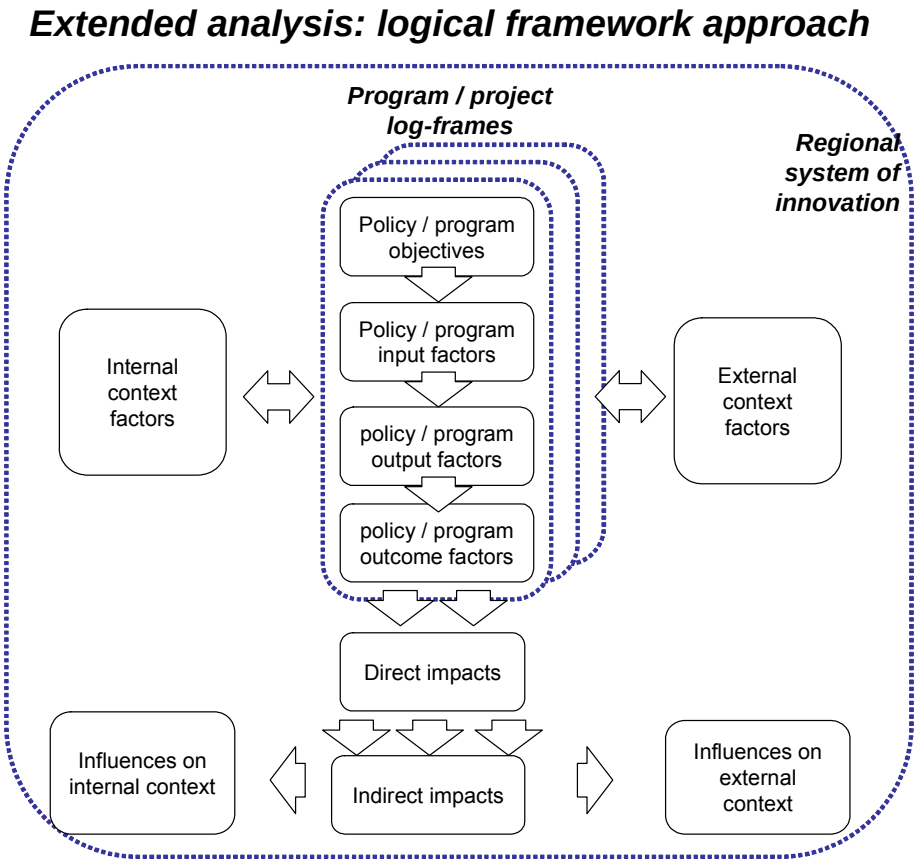
	KEY QUESTIONS			NOTES	
STAGE 2 – b) Policy analysis					
1	for each of the policies / programmes / major projects below, identify the 'logical framework' as far as possible.			• e.g. objectives & targets • inputs & resources • performance • outputs • outcomes • expected impacts NOTE: the assessors will need to decide the most useful level of detail, in terms of the size of the region, scope of assessment and resources available.	
	BELOW ARE COMMON POLICY TYPES FOR THESE QUESTIONS				
2	• Investment potential			• Global connections • Image & marketing • Interregional networking	
3	• Supply side, technology support infrastructure			• SMEs innovation projects with Universities and Technology Centres • Technology transfer • University-industry links • University placements • Incubator services • Technology facilities and infrastructure	
4	• Clusters, networking, university links			• Clusters and business networks • Collaborative research & technology projects	
5	• Business competence & innovation environment			• Information society promotion for SMEs • Business advisory service (ex: technology forecasting and technology audits in SMEs) • Creation of technology-based firms • Raising awareness, promotion, communication, dissemination activities • Innovation financial engineering: seed and venture capital • Other public sector financial support	
6	• Labour market & human resources			• Life-long learning • Technology staff/placements and exchanges • Training and skills development	
7	• Strategic intelligence			• Creation of monitoring, evaluating and policy development tools	

	KEY QUESTIONS			NOTES
STAGE 2 – c) External impact analysis				
1	for each of the policies / programmes / major projects above, identify the ***downstream external impacts*** from the 'logical framework' as far as possible.			• Direct external impacts • Indirect external impacts • -e.g. damage to health and/ or the environment NOTE: the assessors will need to decide the most useful level of detail, in terms of the size of the region, scope of assessment and resources available.
2	for each of the policies / programmes / major projects above, identify the possible, indirect or intangible effects, even where these are very uncertain and speculative.			Possible indirect / intangible impacts might include: • effects on trust & reciprocity between firms • entrepreneurship & competitiveness • commitment to local & regional cohesion

5.3 Stage 3 – detailed template

This is aiming to push the 'rational' log-frame approach beyond the boundaries of the typical programme / project, to identify a wider set of critical factors, and the extended impacts of policy on the regional innovation system (as in the diagram).

Figure 11:


Extended analysis: logical framework approach
Program / project log-frames
Regional system of innovation
Policy / program objectives
Policy / program input factors
policy / program output factors
policy / program outcome factors
Internal context factors
External context factors
Direct impacts
Indirect impacts
Influences on internal context
Influences on external context

	KEY QUESTIONS			NOTES
STAGE 3 – a) Causal path analysis				
1				note: this section may benefit from a graphic network mapping technique. This may be carried out with / without stakeholder participation. See the attached guidance manual (to follow)
2	for each of the policies / programmes / major projects above, identify the possible ***extended upstream causal chains*** / influencing factors. (even if indirect & uncertain)			E.g. example of upstream causal chains, leading to a policy objective: • inadequate legal protection of IP • Leads to - High perceived risk levels for venture capital • Leads to – entrepreneurs lack access to finance • Therefore a policy objective may be to encourage VC
3	what is the confidence / uncertainty level in this assessment?			E.g. a range of confidence levels: • Expert judgement with no hard evidence • Some partial evidence • Full evidence & analysis
4	for each of the policies / programmes / major projects above, identify the possible ***extended downstream effects*** / impacts. (even if indirect & uncertain)			• E.g. – a typical venture capital 'angel' project • Introduces VC to 30 small businesses • Half of these go forward directly • Half of these produce 'innovations' directly • Indirectly, the attitudes change of all hi- tech small businesses • Indirectly, there are more partnerships & exchanges with the university • Indirectly, the climate is changed for larger FDI .
5	what is the confidence / uncertainty level in this assessment?			a range as above.

	KEY QUESTIONS			NOTES	
STAGE 3 – b) Actor-network analysis					
				note: this section may benefit from a graphic network mapping technique, (as in the diagram). This may be carried out with stakeholder participation where possible. See the attached guidance manual (to follow)	
1	for each of the types of actors / institutions above, what are their embedded / hidden objectives and incentives?			E.g. commercial monopoly Increase in shareholder value Increase in gross turnover Increase in net added value Professional & career value Policy discourse & hegemony	
2	for each of the types of actors / institutions above, what are the hidden barriers and conflicts?			E.g. policy conflict Commercial direct competition Institutional zero-sum	
3	for each of the types of networks / interaction processes identified above – what are the positive and negative factors?			Formal partnerships - reward / risk balance Informal partnerships - influence / conflict balance Informal networks – investment / reward balance	

	KEY QUESTIONS			NOTES	
STAGE 3 – c) Pipeline analysis					
1	What features of the programme / project 'pipeline' are influences (positive or negative) on the outputs and outcomes?			• E.g. objectives & targeting • Delivery partners • Infrastructure factors • Skills & human resources • Funding & finance streams • Project size & distribution • Programme participation rates • Milestones & deliverables • Monitoring & reporting • Assessment & evaluation framework	
2	What features of the programme / project 'pipeline' are influences (positive or negative) on the impacts, direct / indirect?			Consider the above pipeline factors in relation to the direct / indirect impacts in section 3a).	

5.4 Stage 4 – detailed template

This stage takes the assessment result into a policy-focused benchmarking frame. It compares the 'impacts' against policy 'opportunities / best practices', and so provides feedback to future development of policy and monitoring systems.

	KEY QUESTIONS		NOTES
STAGE 4 – a) benchmarking of impacts			
1	Identify for each programme / major project the impacts on the RSI: • overall short term & direct impacts • comparison of 'actual' with 'expected' impacts where these are identified. • uncertainty and confidence levels		This is to provide a summary list of direct & short term impacts. Where possible we should compare impacts before and after (although in many cases this will not be possible): • The ex-ante expected impacts are likely to be focused on the funding and the direct outcomes. • The ex-post estimated impacts are likely to be influenced by many contingent factors in the RSI (e.g. finance, macro-economic trends, project pipelines etc).
2	Identify for each programme / major project the impacts on the RSI: • overall longer term & indirect impacts • uncertainty and confidence levels		This is to provide a summary list of indirect and long term impacts: • Each of these is likely to be at a very high level of uncertainty. • The impacts may be over-taken by contingent factors in the RSI (e.g. finance, macro-economic trends, project pipelines etc). • Therefore a scenario approach may be useful: i.e. to say 'what if' key factors were more or less significant influences (e.g. the macro-economic trend) • Overall this stage depends on the experience of stakeholders and advisors
3	Identify as far as possible indirect & long term impacts on regional context as measured by statistical indicators.		This stage aims as far as possible to complete the 'causal paths' links between policies / programmes / projects, and the regional context indicators.
4	Then identify for combined packages of policies: • overall short term impacts • overall long term impacts • uncertainty and confidence levels		This is to provide an overall summary in non-technical language.

5.4.1 Indicators for benchmarking

There is a major challenge for benchmarking, i.e. the systematic comparison of indicators for the purpose of policy learning and development. Every region is unique, and policy generally has many possible effects and stakeholders, as discussed above. So it is not so useful to compare simple indicators which are the focus of the EIS and similar databases.

Take the indicator for *'patents per 1000 population':* there may be many contingent factors which influence this factor 'upstream', e.g. the *'centralizing structure of large firms'*. There may be many other factors which are influenced by this 'downstream' – e.g., the *'regional retention of larger firms*'. It can be difficult to find simple indicators for some of these factors, but they are at least as important as other factors which are lucky to have simple indicators.

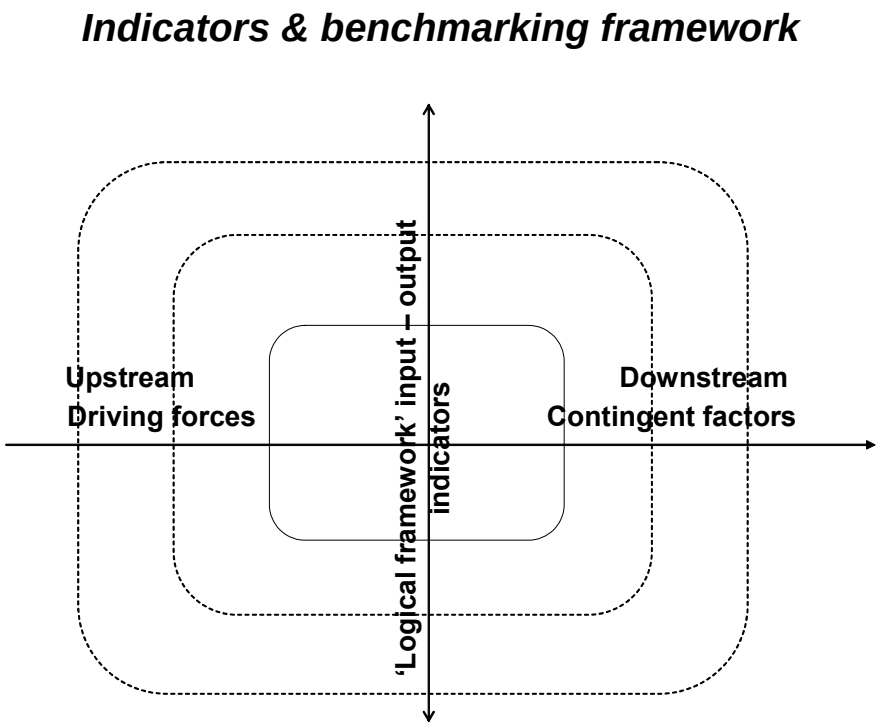
Therefore to understand and assess the full impact of policies and programmes, and to monitor and benchmark their performance and effectiveness, we have to work within a wider framework. This should be based on the 'extended logical framework' analysis, which is the core of the RIPIA method.

The proposed benchmarking framework is shown in the table and figure below. The vertical axis shows the 'logical framework' steps as in the main method above. The horizontal axis shows the 'upstream – downstream' dimension, from the underlying driving forces, to the other factors which are influenced by the steps of the policy.

At this stage this is a concept outline, which is to be tested and developed further during the regional field work.

UPSTREAM FACTORS	*POLICY LOG-FRAME*	*DOWNSTREAM FACTORS*
underlying factors which drive the 'agenda' and the objectives	objective / targets	other factors which are downstream of the objectives
factors driving the inputs	input indicators	other factors which are influenced by the inputs
factors which influence the outputs	output indicators	other factors which are influenced by the outputs
factors which influence the outcome	outcome indicators	other factors which are influenced by the outcomes
factors which influence the impact	impact indicators	other factors downstream of the impacts
factors which influence the indirect & longer term	indirect & longer term effects	other general factors downstream

Figure xxx :



	KEY QUESTIONS			NOTES
STAGE 4 – b) feedback to policy				
	For combined packages of policies & programmes: • compare with similar policies in similar regions • identify key indicators for the most significant policy inputs • identify key indicators for the most significant policy outputs and impacts			This comparison is the focus of conventional 'bench-marking'. In this method we are aiming towards a 'component level benchmarking': • This does NOT try to compare one region to another in a scoreboard, taking no account of regional differences and external factors. • It does try to compare the main components (inputs / outputs / outcomes) of policies / programmes, from one region to another, for the purpose of learning.
	From the impact assessment, identify for each type of policy / programme: • critical success factors • critical barriers			From the comparison of impacts and the above 'component level benchmarking', we can then begin to discuss 'critical success factors and barriers': • Each of these is likely to emerge through discussion, rather than desk study. • However methods may be useful such as cross-impact analysis and graphic causal path analysis.
	From the impact assessment, identify for each type of policy / programme: • best available practice • failure stories • potential opportunities • next steps and further improvements			From the success factors above, this should point towards • Best available practice, in other areas or regions • Potential opportunities, applying the best practices back to this region • Next steps and further improvements, in terms of the next policy cycle. Failure stories will show how negative unintended impacts can outweigh intended objectives. Note that these items are not to replace the policy development process but simply to apply the results of the impact assessment.
	From the impact assessment, identify for each type of policy / programme: • the most significant & policy relevant statistical indicators • the most significant & policy relevant qualitative benchmarks. • Any improvements to data management and analysis			

5.4.2 Stage 4: feedback to assessment & evaluation

A successful assessment / evaluation should be able to bring lessons, not only for policy directly, but for future cycles of assessment / evaluation: either,

- technical quality, of better data and more accurate assessments
- process factors, in terms of communication and consultation and mobilization of stakeholders.
- applications, in terms of feedback to future policy learning & development

	KEY QUESTIONS			NOTES
STAGE 4 – d) feedback to assessment				
	what is the nature and the scope of the assessment / evaluation?			These are some of the common types of evaluation 'modes'. In each of the regions one or more of these may be most relevant, useful and practical. Each may involve different kinds of information, actors & processes. • **Top-down** evaluation of formal RIS, in terms of stated objectives, formal RIS inputs / outputs, pipeline performance • **Bottom up** evaluation of formal RIS, in terms of stated objectives, formal RIS inputs / outputs, pipeline performance • **Policy IA focused** evaluation of formal RIS, in terms of wider objectives & system context • **Networking focused** evaluation of wider regional innovation system, in terms of contribution of RIS • **Policy learning focused -** Evaluation of wider regional innovation system, in terms of wider objectives & system context.
	what is the hidden or higher purpose of the evaluation?			This reflects the different roles and users of evaluation itself, e.g. • Evaluation as a pure tactic – i.e. to get the money, or report on the money • Evaluation as top down benchmarking: (comparibility between regions) • Evaluation as bottom up benchmarking: (comparibility between actors & projects) • Benchmarking itself as a functional management tool (organizational improvement, change management etc) • Evaluation as an institutional process: learning structure: culture change process: networking & mobilization
	what are the main types of policy opportunities which might be helped by the evaluation?			This is pushing in the direction of new initiatives, where the evaluation might have a role as a catalyst to creative developments. E.g. • Learn about how regional innovation works • Learn about the potential of the stakeholders • Opportunities for greater networking and capacity building • Opportunities for greater mobilization of supply chains.

6 Reporting Template

(CIR text)

This is the recommended template for the regional synthesis report. It should include both:

- a review of the data collection process (A);
- and a synthesis and analysis of interview and survey material (B).

There is a suggested summary template in Section 4: this specifies a format for comparing and benchmarking between sectors and regions, as far as possible.

NOTE –

- Since the method focuses on dynamic and cross-policy aspects of regional innovation policy it would be necessary to involve analysts from different disciplines – economics, sociology, political science, etc.

- Nevertheless, in order to facilitate data collection and processing, it is possible – if relevant – to select a priority area of the regional innovation policy under assessment, on which analysts will focus during field work.

6.1.1 Review of the data collection process

The review of the data collection process should include the following points:

- Semi-structured interviews (policy-makers / designers, experts, intermediaries):

Please describe the interview process:

➡ Difficulties encountered in using and adapting SSI template (see Appendix 2.1) to each specific interview context.

➡ How many interviews were conducted? Difficulties encountered in making appointments (e.g. in convincing policy-makers of the usefulness of the interviews). With whom these interviews were conducted (list of interviewees – institution, position of the interviewee)? Selection criteria for institution and person? Methods used to carry out SSIs (the number of face-to-face, phone etc. interviews)?

➡ Other difficulties encountered during the interview process.

● Questionnaires (policy-specific target groups):

➡ Difficulties encountered in adapting questionnaire template (see Appendix 2.2) to the specific context of the survey / to the specific case study.

➡ Difficulties encountered during the selection process. How many questionnaires were sent out? To whom (sampling criteria) these questionnaires were sent out? What was the return rate of the questionnaires? Which methods were used to circulate the questionnaires (the number of online, post-mailed etc. questionnaires)?

➡ Difficulties encountered in using questionnaire template. Difficulties encountered in processing responses.

➡ Other difficulties encountered during the questionnaire process.

6.1.2 Data synthesis and analysis

This is the frame of reference for data processing. It addresses the main aspects of regional innovation policy we want to illuminate and compare: how is innovation understood and steered in the region?

Thus, it is expected to process, synthesize and report on raw field work data (interview material and questionnaire survey data) according to the four identified components of the policy cycle:

- Strategy and discourse:
- Policies / programmes / projects, objectives and structures:
- Policy direct inputs and outputs:
- Policy indirect outcomes and impacts:

The links between the SSI's and questionnaire's questions and main areas of regional synthesis report are presented in Appendix 2.3 (*Matrix: Interrelations between the regional synthesis report template and fieldwork guidelines*). This standard approach will enable comparison and benchmarking between participating regions.

Below are more detailed explanations on this "five-fold" data reporting approach, with references to the relevant parts of the detailed RIPIA scheme D10 (*Regional Innovation Policy Impact Assessment Scheme*):

6.1.3 Analysis of Innovation Strategy

The strategy analysis includes the regional level. The information for this part of the analysis has to be gathered via interviews.

➡ *Regional strategy* ***(see section 1 of SSI template below)***: relevance/centrality of innovation in regional development strategy (either part of EU RIS/RITTS or similar initiatives) and financial resources dedicated to this policy.

For detailed methodological background information, please see D10 pp.36-37 (RIPIA method Stage 1-a)

> *In some cases, innovation may be very central to the regional development strategy (in the form of education, R&D investment, etc.) but there will be no explicit use of the term "innovation"; or, the other way around, there will be a lot of "hot air" on the importance of the knowledge economy, etc., but no real actions to do anything relevant to the local context. Also regions may consider innovation to be a very important part of development strategies, but there are insufficient financial resources allocated to support these plans.*

6.1.4 ii. From strategy into specific policy measures

➡ What kind of policies and programmes constitute the most important parts of the regional innovation strategy (specific aims and related activities)? ***(see section 2 of SSI template below)***

6.1.5 iii. Context analysis of Innovation Policy

This part of the analysis should connect the conditions of economic environment mentioned both by interviewees and enterprises with the innovation policy which is under analysis. The context analysis should give an answer to the following questions:

➡ How does the innovation policy fit into the region? What are the most relevant indicators of regional conditions? Which of these, if any, are in regular use for the design of regional innovation strategies/policies? What factors hamper innovation activities in enterprises? Does the policy (its aims and activities) match the needs of the region and enterprises? ***(see section iii of SSI template and question 4 of questionnaire below)***

During the interview, the interviewee could focus on the following aspects:

● The location/geography of the region

● Resources: knowledge sharing, market intelligence, finance, training, support system for basic research, support system for R&D, support system for entrepreneurship, etc.

● Infrastructure: political (systems of governance), legal (administration & law, taxation environment), physical (communication infrastructure), educational (basic educational system, professional education and training, university system), human (migration flows, professional skills profile), etc.

● External context factors: international and interregional competition (and/or cooperation), multi-level governance, national and international regulations, etc.

6.1.6 iv. *Actor-Network analysis of Innovation Policy*

Interactions/Cooperation/Coordination at regional level:

➡ What we would like to understand here is how well a specific regional innovation system functions. Which institutions are the main engines of innovation policy's implementation? How is organized the decision making process and coordination between different organisations/institutions? How the system could be improved? More specifically this analysis has to be focused on multi-level coordination.

● *Multi-level coordination (innovation does not strictly keep to regional boundaries)*

→ Main actors of innovation policy in the region

→ The hierarchy of the institutions coordinating the policy in the public sector.

→ The strengths and weaknesses of coordination in the public sector ***(see section 4 of SSI template below)***

For detailed methodological background information, please see D10 p.47 (RIPIA method Stage 1-d) + D10 p.56 (RIPIA method Stage 3-b) +

v. *Innovation Policy's Impact Assessment*

➡ Policy/project impacts – short & long term, intrinsic & extrinsic:

● Propensity and capacity to assess the various impacts of regional research and innovation policies / industrial projects at regional level. ***(see section 5 of SSI template below)***

● Propensity and capacity to use an impact assessment and develop "sustainable innovation" culture at regional innovation strategy level.

(see section 5 of SSI template below)

● The outcomes of the policy at the organizations' level. How the policy has influenced the organizations and their activities. (see questions 5-15 of questionnaire)

● Organizations' opinion about the public sector activities in the area of innovations. (see questions 16-20 of questionnaire)

While analysing the results of the questionnaires (questions 5-20) analysts can use summarizing graphs and tables to illustrate the result.

For detailed methodological background information, please see D10 p.49 (RIPIA method Stage 1-e) + D10 p.55 (RIPIA method Stage 3-a) + D10 p.56 (RIPIA method Stage 3-b) + D10 p.57 (RIPIA method Stage 3-c)

7 Fieldwork guidelines

7.1 Semi-structured interviews (SSI) guidelines

The Purpose of the Interviews

The main objective of the interviews is to assess if, and to what extent, innovation policy is seen as a pathway to – and impacts on – regional (sustainable) development. The target group of the interviews includes policy-makers/designers, intermediaries and policy experts (academics, consultants).

7.1.1 Which and how many people are to be interviewed?

Number of interviews: **at least 10 (in smaller regions the number of interviews can be smaller)**

Distribution of interviews:

Regional development & innovation policy-makers/designers: at least 5

→ national Government authority (including decentralized State services / decentralized innovation support agencies): at least 1

→ regional Government authority (including regional support agencies): at least 3

→ sub-regional Government authority (including sub-regional innovation support agencies): at least 1 if relevant

● **Intermediary organizations: at least 2** (competence/technology transfer centres, incubators, seedbeds, science parks, etc.)

● **Individual experts (academics or consultants): at least 2**

● **Representatives from employers' organisations and/or formal industry clusters (such as "competitiveness clusters" in France) : at least 1**

Where possible you should use the Regional Steering Committees as a networking resource.

7.1.2 Targeting the questions to respondents

The following list of questions is sent for your guidance, but you are free to conduct interviews in a more flexible way **provided that you address all 5 major areas listed above** ("Synthesis report template").

Questions need to be formulated in *simple* and *very concrete* terms: these should primarily focus on the specific regional innovation strategy and related measures/policies (as well as on personal experiences and representations of the interviewee himself, whether he/she expresses him/herself purely in an individual capacity or as a representative of an organization. Within these bounds, we should be careful not to consider policy-makers as "policy analysts" (with the risk of reducing the analytical process to the ratification of policy-makers' needs or demands), but consider their viewpoints primarily as a source of information, and clearly distinguish between the *data collection process* on the one hand, and the *analytical process* on the other hand (which is our own responsibility).

In this respect, Regional Steering Commitees have an intermediate status: they are either a useful framework for collecting information, connecting people and tackling cross-sectional issues, or a genuine window opportunity for discussing and validating our first analysis. But this flexibility can also be a source of ambiguity.

However, the degree of sophistication and generalization of the questions can be increased (see RIPIA method – full templates) when you interview not a policy-maker but an observer, individual expert or a consultant.

7.2 Semi-structured interview template

7.2.1 Regional development / innovation policy-makers & intermediaries

(*Variant*: *Policy experts*)

General information	
Name of the organisation:	
Address:	
Job title of the interviewee:	
	Notes / outstanding questions
i*. Analysis of Innovation Strategy*	
To what extent is innovation support a central goal and purpose of regional development policy and why?	**Very open, introductory question**
Did you follow the EU RIS/RITTS methodology for the design of your regional innovation strategy? If yes, please specify (benefits, problems etc.)	
How participative was the process at the very earliest stages of strategy planning (e.g. expert consultations *vs* citizen juries)? How well did the process engage with key stakeholders and/or (intermediate or final) users?	**How much consultation is taking place and who is involved in it**
What is the share of regional budget explicitly dedicated / committed to innovation support? How did this share evolve over the last few years?	**There's a lot of room for interpretation here: covers all kinds of support instruments**
ii. *Analysis of Innovation Policy*	
What kind of policies and programmes constitute the most important parts of the regional innovation strategy?	
iii. *Context Analysis of Innovation Policy*	
What are the main **strengths/weaknesses** of the city / region both in terms of industrial base and research base?	**Broad question, interviewer needs to add local context to make it more specific**
What are the most relevant indicators of regional conditions? Which of these, if any,	**Interviewer already knows which indicators are available in the region**

are in regularly use for the design of regional innovation strategies/policies?	
How does the policy/strategy respond to the needs of the region ?	**Broad question, interviewer needs to add local context to make it more specific**
Is the policy / strategy responding to the needs of the region (Policy experts)	**Or is it just copying what has been done in other regions/countries?**
iv. *Actor-Network Analysis of Innovation Policy*	
Which (intermediary) organization(s) is/are the main engine to support/implement innovation strategy in the City/Region and what is its/their mission?	
Describe the interdependence between the different levels of decision-making (subregional, regional, national, supranational)?	**For example, how well do the linkages between these levels work?**
How well do the linkages between policy-makers and intermediaries work?	**Ask interviewee to provide concrete examples if possible**
What are the main strengths and weaknesses in terms of coordination (if any)?	
To what extent have foresight or "awareness raising" exercises contributed to defining / refining regional policy/strategy? How have these exercises actually improved the functioning of the RIS?	**Only ask this question if you know such exercises have taken place**
v. *Innovation Policy's Impact Assessment*	
Has there been any earlier evaluation or impact assessment of your regional innovation policy? When and by whom (internal / external experts) was this was carried out?	
What were the main conclusions of this assessment? Was it able to measure the impacts of innovation policy on the region, and in what ways (qualitative, quantitative)?	**How should these impacts be measured, in your opinion?**
Are the results of the above-mentioned evaluation / assessment public? If yes, could you please provide the references?	

How participative was the evaluation or impact assessment process (e.g. expert consultations *vs* citizen juries)? How well did the process engage with key stakeholders and/or (intermediate or final) users?	
Has the region subsequently updated, modified or replaced its innovation strategy, either based on the results of the above assessment or independently of it? If yes, how?	**Interviewer should already know if there is a new innovation strategy, but wants to find out about its connection with the old strategy**
To what extent would the actual developments in the region be different if there had been no regional innovation strategy (as the specific document), and in which ways? (Policy experts)	**Did the regional innovation strategy make any difference in practice?**
Is the regional innovation strategy described/seen as a possible link between the economic, social and environmental aspects of regional development? (e.g. innovation as a path to sustainable development through local Agenda 21 initiatives)	**In other words: is innovation pursued for its own sake, *or* as part of sectoral technology policy, *or* is it seen as a means for a more sustainable development of the region and is it integrated with other policies?**
Is there any specific policy/programme explicitly dedicated to "sustainable innovation"? (e.g. the call for projects known as PICRI – for "institutions-citizens partnerships for research and innovation" – in the Ile-de-France region)	**If not, is there any policy/public discussion about the sustainability aspects of innovation?**

7.3 Questionnaire survey guidelines

7.3.1 Completion and sample of the questionnaire

In the questionnaires, some questions need to be customized according to a specific timeframe (Questions 6, 7, 14, 15 and 18). In every region the timeframe presented in questions has to comply with the timeframe of the policy under analysis. For example if the duration of the specific policy has been 2000-2006, then the timeframe in the question should also be 2000-2006.

In questionnaire some questions (Q7 and 15) should include the list of existing public support measures in the region. Currently these questions include just a sample of measures which are not linked to any specific region. Adoption of the list of measures according to partner region's policy would help to establish the connection between regional policy measures and their influence on firms' activities more clearly.

Without modification in timeframe and list of policy measures the questionnaire would not be relevant enough for organizations included into the sample. Also the questions would not be region-specific enough.

If there are similar surveys recently carried out in the region and these surveys overlap with the topics/ areas covered by RIPIA questionnaire there is no need for additional survey. Regions can use existing databases to evaluate the innovation policy of the region.

7.3.2 Distribution of questionnaires**:**

The main target group of the questionnaire survey is the organizations located in the region. Each region can take a targeted (case-study) approach to evaluation procedure by focusing only on specific policy priorities/areas, i.e. targeting organizations active in one (or several) sector(s) of particular policy interest of the region. In any case, the survey should cover a good mix of different organizations to get representative sample:

- hi-tech large (>250 employees) and small firms (<250 employees),
- low-tech large and small firms,
- universities and higher education organizations,
- private and public R&D institutions.

Questionnaires can be sent either by e-mail or by post. To receive better response rate it is not recommended to use general e-mail addresses of organizations or send out the questionnaires through mailing lists. It would be advisable to use individual e-mails, contact the organizations in sequential waves and contact every organization via phone after the first wave of e-mails or post.

It is possible to use on-line environments for conducting the survey. One possibility is to use *"phpSurveyor"* which is an open Source PHP web application to develop, publish and collect responses to online and offline surveys.

7.3.3 Questionnaire template

The Purpose of the Survey

The main objective of this survey is to provide information on the "innovativeness" of regional innovation stakeholders (mainly companies, private R&D institutes, universities and public research organisations).

Please complete the following to assist our sampling process:

● Name of the organization:

● Name of the interviewee:

● Position of the interviewee in the organization:

● Sector of activity of the organization:

● Number of workers in 2005:

1. 0…9
2. 10…49
3. 50…249
4. 250 and over

● To categorize the organization, please indicate approximately how large the company's turnover/organization's budget was in 2005?

1 up to 25 000 €

2 25 001 to 100 000 €

3 100 001 to 1 million €

4	1 000 001 to 10 million €
5	10 000 001 to 50 million €
6	over 50 million €
7	don't know / refuse to say
8	no turnover

1. To what extent is the introduction of new (modified) products and/or services central to the strategy of your organization? Please tick the appropriate box below:

Negligible ☐
Not important ☐
Important ☐
Very important ☐

2. Have you introduced or developed any new (modified) products and/or services during the period 2000-2006

YES ☐
NO ☐ ->go to Q5.

3. What is/was the motive to develop new products/services and introduce them to the market? (you can choose several answers)

1 wish to maintain market position
2 wish to strengthen market position
3 wish to enter the market
4 other (PLEASE EXPLAIN)

4. Please indicate the <u>most important information source</u> at regional level for new ideas (whether product-oriented or process-oriented) for your organization:

1. Innovation-support agencies at regional level.
2. Technical support providers (e.g. intermediary organizations, technological transfer platforms, etc.) at regional level.
3. Local universities and public research organizations.
4. None of these but another source at regional level. (PLEASE EXPLAIN)
5. None of these and no other source at regional level.

6. Other sources outside the region (PLEASE EXPLAIN)

5. If your organization experienced any factors hampering the innovation activities, please indicate the relevant factors (you can choose several answers) **[If your organization did not experience any factors hampering the innovation activities go to Q6]**

1 too expensive
2 shortage of financing sources
3 shortage of qualified workforce
4 too great a risk
5 international competition too great
6 domestic competition too great
7 lack of cooperation partners among companies
8 lack of cooperation partners among scientific and development institutions
9 uncertain demand for innovative products and services
10 complexity of the administrative/regulatory environment
11 other (PLEASE EXPLAIN)

6. Has your organization received public sector support in YYYY-YYYY?

1 yes
2 no
3 don't know

[If you answered "NO" or "DON'T KNOW" to Q6. go to Q14.]

7. What type of public sector support measure(s) has/have your organization received in YYYY-YYYY (you can choose several answers)

1. Product development
2. Training subsidies
3. Consulting subsidies
4. Start-up support for new companies
5. Support for developing the organization's infrastructure
6. Export plan program
7. Support for scientific and development activities
8. Cooperation with scientific and development institutions
9. Cooperation with public and/or private companies
10. Support for environmental projects
11. Investment supports for agricultural production
12. Supports for diversifying economic activities in rural areas
13. Other (EXPLAIN)

8. Please provide a short description of the project(s) realized in your organization due to the received and applied public sector support measure(s) you mentioned in Q7.

Name of the measure	Brief description of the project realized due to the applied measure (whether it is product-oriented or process-oriented)

9. The mentioned public sector measure(s) (Q7) may have resulted in different effects for your organization. Please indicate which one(s) (you can choose several answers):

1. increased range of goods or services
2. increased market or market share
3. improved quality in goods or services
4. improved production flexibility
5. increased production capacity
6. improved knowledge capacity
7. improved network capacity
8. reduced labour costs per produced unit
9. reduced materials and energy costs per produced unit
10. improved environmental impact or health and safety aspects
11. meeting regulations or standards
12. others (PLEASE EXPLAIN)

10. The public sector support measure(s) mentioned in Q7 may have influenced different stages of innovation process taking place in your organization. Please indicate which stage(s) (you can choose several answers):

1. Idea finding,
2. Selection of the new idea
3. Development of the product/service
4. Production phase
5. Market entering

11. Have applied public sector support measure(s) (mentioned by you in Q7) influenced the cooperation between your organization and other companies, organizations and/or institutions (by cooperation, we mean active participation in a common activity with other companies and/or universities and/or scientific institutions etc, except for cooperation damaging to free competition):

YES, cooperation intensified ☐

YES, cooperation loosened ☐

NO ☐

12. Would you have completed the innovation project without the measure(s) you mentioned before?

1 yes
2 no
3 don't know

13. Please describe shortly how could the public sector support measure(s) mentioned by you in Q7 be improved to meet your needs (open question)?

14. Has your organization applied in YYYY-YYYY for any other public sector support(s), which you did not receive?

1 yes
2 no
3 don't know

[If you answered "NO" or "Don't know" to Q14. but did receive public sector support in this time period, go to Q17.

If you answered "NO" or "Don't know" to Q14, and didn't receive any public sector support in this time period go to Q18.]

15. What type of public sector support measure(s) has your organization applied for **but not received** in YYYY-YYYY (you can choose several answers)

1. Product development
2. Training subsidies
3. Consulting subsidies
4. Start-up support for new companies
5. Support for developing the organization's infrastructure
6. Export plan program
7. Support for scientific and development activities
8. Cooperation with scientific and development institutions
9. Cooperation with public and/or private companies
10. Support for environmental projects
11. Investment supports for agricultural production
12. Supports for diversifying economic activities in rural areas
13. Other (PLEASE EXPLAIN)

16. Did you complete the project, for which you had applied for support, with your own resources anyway?

1 executed the project as planned
2 executed the project on a smaller scale
3 cancelled the project
4 other (PLEASE EXPLAIN)

17. What were the main problems during the application process for public support mkeasure(s) and/or received public support measure(s) (you can choose several answers)?

1. Application process too complicated
2. Project administration too complicated
3. Lack of consulting competence on the part of the public sector
4. Constantly changing rules
5. Size of self-financing
6. Small size of possible financing
7. Other (PLEASE EXPLAIN)

[If you answered Q17, go to Q19.]

18. Your organization did not apply for public sector support in YYYY-YYYY for the following reasons (you can choose several answers)

1 no need
2 don't know about the various support programs
3 there was no suitable support program
4 lacked the necessary self-financing
5 lacked management skills

6 lacked cooperation partners among companies

7 lacked cooperation partners among scientific and development institutions

8 lacked qualified workforce

9 too much bureaucracy

10 other (PLEASE EXPLAIN)

19. Please rate whether you think that the public sector should

1 yes, definitely

2 rather yes

3 indifferent

4 no, rather not

5 no, definitely not

	Rating
Offer specialized support measures for the introduction of information technology for the purpose of promoting R&D and innovations in the private sector?	
Offer support in the field of R&D and innovation through consulting on the preparation and implementation of business plans?	
Offer risk capital for the financing of R&D and innovation?	
Support inter-company cooperation for R&D and innovation (with substantial financing of all cooperation project costs by the public sector)?	
Support cooperation between companies and scientific and development institutions for R&D and innovation (with substantial financing of all cooperation project costs by the public sector)?	
Support cooperation between companies and educational institutions for R&D and innovation (with substantial financing of all cooperation project costs by the public sector)?	
Support the hiring and training of R&D engineers?	
Support regional cooperation among companies for R&D and innovation (for instance based on counties, etc.)?	
Financially support the patenting and licensing of knowledge for R&D and innovation?	
Support with consulting services the patenting and	

	licensing of knowledge for R&D and innovation?	
	Support training related to R&D and innovation	
	Support R&D and innovation by some other means? PLEASE EXPLAIN!	

20. Should the public sector change and/or improve opportunities for organization feedback regarding effective policies and measures?

Yes ☐

No ☐

Don't know ☐

21. Do you feel that public sector measures are unnecessary?

Yes ☐

No ☐ ->go to 23.

Don't know ☐ -> go to 23.

22. The public sector measures are unnecessary because (you can choose several answers):

1 the measures are directed at solving insignificant problems from the organizations

2 the measures distort market competition

3 the state should sooner reduce taxes than support organizations

4 the state is not capable of rationally and honestly distributing support

5 of other reasons (EXPLAIN)

23. Please think about the various dimensions of your business activities. Are public support measures at different government levels relevant for your organization (please tick the relevant boxes)?

	support	at regional level	at national level	at international level	none of them
financial aspects		☐	☐	☐	☐

access to information	☐	☐	☐	☐
building and fostering networks	☐	☐	☐	☐

24. Does your organization report on the social and environmental impacts of its activities (e.g. through the notion of “Business Social Responsibility”, BSR)?

Yes ☐

No ☐

If yes, please specify (in a few words):

You have completed the questionnaire. Your cooperation has been very much appreciated. We will inform you of the results.

- Thank you -

7.3.4 Appendix 2.3: Matrix

			SSI guidelines					Questionnaire survey guidelines	
			Section 1	**Section 2**	**Section 3**	**Section 4**	**Section 5**	**Question 4-5**	**Questions 6-22**
Data synthesis	**i. Analysis of Innovation Strategy**	**Regional strategy**	×						

ii. Analysis of Innovation Policy	**Policy level**		×					
iii. Context Analysis of Innovation Policy	**Policy level**			×				
	Organization level						×	
iv. Actor –Network Analysis of Innovation Policy	**Multi-level coordination**				×			
v. Policy impact assessment	**Regional level**				×			
	Organization level							×

8 System mapping using graphic method

The 4-stage process can be summarized in terms of 4 steps in each stage, i..e a total cycle of about ’16 steps’. For each step, a graphic mapping approach is often the best way to analyse complex systems and cognitive structures. It will be more effective where used by experts with some experience of graphic systems analysis and visualization.

The results of this prototype method are being tested with regional stakeholders, and will be reported in a supplementary paper available in January 2008.

8.1.1 Stage 1: baseline.

8.1.2 Stage 2: policy analysis

8.1.3 Stage 3: extended analysis

8.1.4 Stage 4: Feedback

9 Example summary report template

This example summary report template is based on the North West England case study.

This case study looked at 'procurement for innovation' – a package of policies and programmes aiming to focus the very large expenditure in public sector procurement in order to stimulate innovation in regional firms and clusters.

The case is typical of the UK and other advanced economies, in that there is often not an explicit 'innovation policy': rather there is a complex set of actors and institutions: sectoral and cluster issues: other factors such as legal and financial issues: and a 'policy mix' working on many levels. In this kind of situation a realistic policy impact assessment has to take a broad approach, looking for extended chains and components via a benchmarking process.

The summary template is therefore the best available means to represent a complex and fuzzy reality, in a structure which enables some comparison and benchmarking with similar regions, sectors or policy mixes.

	MAIN ISSUES to report	CASE STUDY notes	CASE STUDY comments	BENCHMARKS (indicator & other)
A) CONTEXT				
	sponsor / client – objectives, scope	the Eurocoop partnership		
	topic or theme area	public procurement for innovation DTI 2003 Innovation Report, HM Treasury (2007) 'Transforming Government Procurement'. 2003 Kelly review "Increasing Competition and Improving Long-Term Capacity Planning in the Government Market Place" Gershon's 2004 review "Releasing Resources for the Frontline". Cox Review of Creativity in Business (2005)	Public procurement for innovation is high in the innovation policy agenda in the UK, both at the national and local levels, and also with respect to SMEs	Levels of expenditure of national and local governments: UK spends approximately £150 billion p.a. on procurement The Local Government sector spends some £40 billion p.a. on procurement.
	scale issues - region /city / network	debate between region & city-region: debate on polycentric UK	there are significant tensions and complexities which affect policy & projects.	Innovation policy at the regional level is linked to PSA targets
	time issue – strategy / programme, short / long	DTI five year programme 2004 National Procurement Strategy for Local Government in England (2003-2006)	The debate about procurement and innovation has gained impetus in the last 5 years, both at the EU and the UK level.	
	regional typology	relative to UK, the NW region is low-skill, low entrepreneurship, diverse economy, high growth potential	Per capita GDP is 90% of the UK average and 87% of the EU-15 average. The unemployment rate in the region is 5.3%. Around a quarter of total employment is in the public sector. Manufacturing is a major source of output as well as jobs, contributing around 27% of output (for 22% of employment). The chemicals, textiles, food & drink and engineering sectors account for 75% of this.	Regional GERD and BERD, industrial structure,…
	political issues	political competition for regional authority: conflict between economic & spatial planning	Political issues driving the agenda are: competiveness through innovation (competition from far east), pressure on public sector budget (efficiency) and societal issues (climate change and sustainability)	Raise levels of R&D Efficiency savings (how much??) Cut in carbon emissions?
	discourse / agendas / problems	value for money', 'intelligent costumer', 'lead markets', demand-driven innovation 'sustainable procurement' 'sustainable construction': 'sustainable communities': 'sustainable urban regeneration' etc. '	the discourse has changed rapidly: more awareness of policy integration & sustainability agenda: but competition with 'value for money', transparency etc.	Creation of new markets New clean technologies Clean housing
	other			

	MAIN ISSUES to report	CASE STUDY notes	CASE STUDY comments	BENCHMARKS (indicator & other)
B) ACTORS – institutions, stakeholders, networks				
	national / international authorities	Dept. of Business & Enterprise: Dept. of Communities & Local Govt; Government Office NW – SPD Office of Government Office National Health Service Small business service	procurement policy is implemented at and requires coordination across various levels of public intervention (EU, national and local).	Lisbon agenda of 3% investment on R&D National targets of -increased efficiency - % public sector contracts by SMEs - Increased innovation
	city-regional authorities	Local authorities (LA) Greater Manchester Economic Forum: NW Development Agency: operates cluster policy NW Regional Assembly NW Science council NW Centre of Procurement Excellence Local/city regional Manchester:Knowledge Capital Local and district authorities Local Government Agency (LGA), the Public Private Partnerships Programme and the Improvement and Development Agency (IDeA).	The NWDA is charge of promoting economic development and regeneration in the NW region. There is no explicit innovation policy at the level of the Manchester city region, besides a number of ad hoc partnerships and initiatives, most notably the Manchester: Knowledge Capital partnership. Local authorities and local agencies (more specifically Manchester Enterprises) are in charge of implementation of policies designed at higher spatial levels.	- performance targets of local authorities - efficiency targets - PSA targets for regional development agencies
	education & training	5 universities in Greater Manchester: technical colleges	Insufficient demand is one barrier for firms making use of universities' research. Procurement could create incentives to draw more strongly on the university skills and knowledge base as a means of stimulating innovation, growth of SMEs and university-business interaction.	
	finance	Size of contracts	Demand is often fragmented and thus the financial rewards are not sufficient as stimulus of innovation in firms. Aggregation and bundling of related requirements into larger contracts, is often done in order to achieve economies of scale, and reduce transaction and contract management costs.	
	SMEs	Small Business Research Initiative (SBRI) was launched in 2001 with the aim of boosting innovative government procurement from SMEs. Modelled upon the SBIR in US	SMEs often have greater difficulties in accessing public sector contracts. Policy initiatives are in place to encourage participation of SMEs in public sector contracts, such as improving information of public sector procurement. 80% of transactions in the NW are with SMEs	% of total contracts for SMEs
	large firms	large firms/MNEs	Large firms could be better placed to introduce innovations as a result of public procurement as they can benefit from scale economies and are more likely to conduct R&D activities. However, they may offer less flexibility than SMEs to respond to market opportunities.	Levels of local subcontracting of large firms

	professions	Procurement officers need the skills and knowledge to bring forward the innovation procurement agenda	Need for professionalization of procurement Focus by NWCE on procurement skills and capacities. Chartered Institute of Purchasing and Supply (CIPS) professional qualification	Levels of qualification of procurers
	technology, R&D bodies	procurement consortiums, Procurement hubs,	the promotion of innovation still does not play an important role in local procurement practices. Recent initiatives to improve procurement practice, raise skills and encourage collaboration between councils to increase buying power	
	agencies & intermediaries	Manchester Knowledge Capital: NW Centre Construction Innovation NW Centre of Excellence in public procurement RENEW – regional body Development Agency for local government (IDeA) In health NHS North West Collaborative Procurement Hub	A number of intermediaries on procurement and innovation at the national, regional and local level. Still some agencies and intermediaries in charge of regional policies, such as the RDAs could play a greater role in procurement. For instance MKC could be 'demand side' broker & intermediary for public sector procurement. In general there is a need for better coordination between procurement policy, innovation policy and sectoral policy	
	other			

	MAIN ISSUES to report	CASE STUDY notes	CASE STUDY comments	BENCHMARKS (indicator & other)
c) FACTORS – structural / socio-technical issues				
	Intellectual property	IP and knowledge protection can be a barrier	Policies on IP also influence demand for innovation (together with regulation, standards and procurement). It is important to have conditions that allow transfer of intellectual property to the suppliers, and hence allow them to exploit their innovations in wider markets	
	professional standards	construction & engineering is generally conservative	procurers need a much more require knowledge of future needs and of potential improvement as regards public service as well as of the market that offers or may offer new solutions.	
	regulation & legislation	UK Building Regulations are based on performance standards, which are complex to manage.	Regulation (e.g. at the competiton regulation at EU level) influence the use of procurement for innovation. The new EU directives 2004/18/EC and 2004/17/EC have created opportunities for public authorities to purchase innovative solutions Regulation and standards (e.g. environmental regulations) also influence demand	EU regulations
	legal & contractual	The complexity of larger contracts is a barrier to risk taking or risk sharing.	Legal, contractual and management issues such as the use of functional specifications, M.E.A.T (most economically advantageous tender), competitive dialogue with suppliers, evaluation criteria, tresholds for competitive tendering, etc. also influence the use of procurement to promote innovation.	
	financial & risk profile	Procurement is under pressure to increase contract size, this is a barrier to SME innovation	In procurement government acts as a risk-taker, however public actors are largely risk averse.	
	education skills & training	Need to improve training and professionalization	Need for expertise in technologies and markets	Capacities of procurers
	other –			

	MAIN ISSUES to report	CASE STUDY notes	CASE STUDY comments	BENCHMARKS (indicator & other)
D) SECTORS – issues with the industry, technology or profession				
	spatial & network issues	Procurement is local and national. the links between procurement practices and the local economy, will depend on the discretion over spending held by local and regional authorities, the scale and scope of procurement in the region, and the procurement strategy followed.	Issues influencing innovation include the degree of control over regional purchasing, the overall regional budget and the likelihood that innovative activities will take place within the boundaries of the region. In the NW, 15% of expenditure has been spent within local authorities borders, and 60% is spent with suppliers with NW postal addresses	% of expenditure within local authorities % of expenditure within the region % of no suppliers within regional boundaries %No of local and regional SMEs of total suppliers
	sector & industrial structure	The impact on innovation of procurement policies will depend on regional characteristics in terms of sector and industrial structure.	it is important to take into consideration: the degree of competition, industrial structure and specialization, export orientation, characteristics of the supply chain and degree of vertical integration, characteristics of innovation, the novelty of the product in the market and future market changes. There is a need to coordinate sectoral policy with procurement and innovation Supply-chain management is essential	Regional clusters Sector specialisation Size of firms Exports
	contracting & management	The greater or lesser commitment to strategic procurement and more specifically issues related to tendering processes, contracting and monitoring can give an indication of their ability to influence innovation. In particular whether the public sector acts as 'intelligent customer' in relation to: • identification of needs and technological and market opportunities. • specification of functional, cost and quality requirements. • adequately design and manage the contract,	Only some English councils have a written procurement strategy. Experts in the NW reveals poor use of supply chain management, value analysis or relationship management.	Local authorities with procurement strategy Presence of procurement units Use of fuctional specifications Dialogue with potential suppliers (e.g. meet the buyer events, etc.) Use of M.E.A.T to assess tenders
	skills, training, career incentives	Procurers need knowledge of future needs and of potential improvement as regards public service, the market potentially providing solutions, and the ability and skills to assess tenders.	The ODPM review highlighted the need for local government procurement to be professionalised. Local authorities need a more sophisticated/advanced procurement capacity. In the NW is proposed the creation of 'lead procurement hubs' which will each pool regional procurement expertise in specific areas in order to raise and sustain procurement capacity in the region. Pooling expertise in hubs will allow for knowledge to be accumulated and retained.	Chartered Institute of Purchasing and Supply (CIPS) professional qualification of procurers Training activities
	intermediaries / gate-keepers	construction & property sector has many inte-mediaries, with one motivation. In health NHS North West Collaborative Procurement Hub		Role and functions of intermediaries

	technology & diffusion issues	new technology has 'uneven' diffusion, as many decisions are made on short term financially conservative thinking.	Related issues concern the wide potential market, e.g. what is the nature of potential demand beyond the original procurer? And the relative importance of the public sector as customer for this market? How does the public sector dominate or influence demand in this market?	
	other			

	MAIN ISSUES to report	CASE STUDY notes	CASE STUDY comments	BENCHMARKS (indicator & other)
e) ACTIONS – policies, programmes, projects				
	type of policy / programme	macro-level policy is to set up new intermediaries – CCINW, MKC, NWCOE micro-level policies as below	The National Procurement Strategy for Local Government was launched in 2003 to draw together the different policy regulations and guidance available to create a more coherent strategy for local government procurement. One of the proposals in support of the National Procurement Strategy included the creation of regional centres of excellence.	
	objectives	the North West Centre of Procurement Excellence "identifies, promotes and develops effective procurement structures and solutions for local authorities in the north west and supports the creation of effective collaborations between authorities that will inspire efficiencies and improvements".	The NWCE has developed its programmes over the past two years along six key priority themes: Research and short-to-medium term gains E-procurement Construction procurement Health and social care Waste management Passenger transport	
	inputs	staff time, expert group networking, subscription to national database.		
	outputs	a) new technical standards platform b) new coordinated procurement system	full e-procurement suite for local authorities. framework purchasing agreements efficiency gains purchase spend analysis Assessment of skills needs	
	outcomes	approx x% shift to near-market innovative products / services	Interesting initiatives: Building Schools for the Future programme. Innovative solutions such as glass pulverisation project and the 'slipper' lamppost replacement system	
	finance / management issues	cost-benefit not yet assessed. Pipeline & diffusion effects not yet assessed. Impact on innovation not assessed	Capacities at the level of procurement officials is still an issue. Little use of supply chain management, value analysis or relationship management because of the lack of capabilities/capacity. Procurers need the knowledge, skills and time to do all these things properly. Idea of 'procurement hubs' which could co-ordinate procurement and consolidate expertise.	
	final impact assessment			

10 Appendix

10.1 Abbreviations

ATP	Advanced Technologies Programme
BERD	business expenditure on research & development
EC	European Commission (also known as CEC)
EIS	European Innovation Scoreboard
EPEC	European Policy Evaluation Consortium
ESPRIT	European Commission's Information Technologies programme
EUREKA	European network for market-oriented, industrial research & development
FDI	foreign direct investment
GERD	government expenditure on research & development
HEI	Higher Education Institution (e.g. a University)
ICT	Information & Communications Technology
IKED	International Organisation for Knowledge Economy and Enterprise Development
IPE	Innovation Programme Evaluation
NSF	National Science Foundation (US)
PTO	(patent applications)
R&D	Research and development (also sometimes referred to as RTD)
RIS	Regional Innovation Strategy
RITTS	Regional Innovation & Technology Transfer Scheme
RSI	regional system of innovation
ROAME	Rationale, Objectives, Appraisal, Monitoring, Evaluation
SII	summary innovation index
SME	small & medium enterprise
S&T	science and technology
USPTO	US Patent Office

10.2 References

Borrás, S & Jacobsson, K (2004) "The Open Method of Co-ordination and New Governance Patterns in the EU", *Journal of European Public Policy*, 11 (2) pp. 185-208.

Buisseret Tim, Cameron Hugh, and Georghiou Luke (1995), "What difference does it make? Additionality in the public support of R&D in large firms" International Journal of Technology Management, vol.10 (nos. 4-6) pp.587- 600.

European Commission (1996): Practical guide to regional innovation actions. Regional Innovation Strategies (RIS). Regional Innovation and Technology Transfer Strategies (RITTS). Luxembourg: Office for Official Publications of the European Communities.

Georghiou, L. (1998), "Issues in the evaluation of innovation and technology policy", *Evaluation,* Vol. 4(1), pp. 37-51.

Kaiser, R & Prange, H (2004a) "Managing Diversity in a System of Multi-Level Governance: The Open Method of Co-ordination in Innovation Policy", *Journal of European Public Policy*, 11 (2), pp. 249-266.

Latour, Bruno (2005). *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press).

Law J, and Hassard J (eds) (1999). *Actor Network Theory and After* (Oxford and Keele: Blackwell and the Sociological Review).

Louis Lengrand & Associates, (coordinators) PREST, ANRT, Reidev Ltd: (2006): *SMART INNOVATION: A Practical Guide to Evaluating Innovation Programmes:* A Study for DG Enterprise and Industry: available on http://www.mbs.ac.uk/research/engineering-policy/publications/documents/SMARTInnovation.pdf

OECD (1997a), Policy Evaluation in Innovation and Technology: Towards Best Practices Paris, Organisation For Economic Co-Operation And Development.`

Ravetz J (2006): The role of evaluation in regional sustainable development: experience from the REGIONET project. In: George C & Kirkpatrick C (Eds), *Impact Assessment for a New Europe and Beyond:* Edward Elgar Publishing: pp65-89

Ravetz J, Coccossis H, Schleicher-Tappeser R, Steele P (2004): Evaluation of regional sustainable development – transitions and prospects *Journal of Environmental Assessment Planning & Management* **6**(4):585-619

Room, G (2005) "Policy Benchmarking in the European Union: Indicators and Ambiguities", *Policy Studies*, 26 (2), pp. 117-132.

Ruegg, Rosalie & Feller, Irwin (eds.) (2003) A Toolkit for Evaluating Public R&D Investment - Models, Methods, and Findings from ATP's First Decade: Washington: NIST; July 2003 available at: http://www.atp.nist.gov/eao/gcr03-857/contents.htm

Scott, J. (2000). Social Network Analysis: A Handbook 2nd Ed. Newberry Park, CA: Sage.

Shapira, P. and Kuhlmann, S. (eds. 2003), Learning from Science and Technology Policy Evaluation: Experiences from the United States and Europe, Edward Elgar: Cheltenham, UK.