

## Part II

### Chapter 5

#### Maximising the impact of regional innovation agencies

*Regional innovation agencies are established across the OECD to deliver innovation policies at sub-national level. Various agency models are possible. This chapter illustrates the diversity of models in practice, highlights success conditions to achieve a new paradigm for innovation and regions, and discusses the key strategic challenges agencies face. Their primary challenge is to serve as change agents for the regional innovation system. They need to focus on absorptive capacities and learning processes, both for their policy targets and management of the agency itself.*

## Introduction<sup>1</sup>

Many options are possible for delivering innovation policies at the regional level. Establishing regional agencies is one option that grants regions more responsibilities than a fully centralised model. But the agency model is not uniform, as a diversity of models co-exist in practice. There is no one best-practice model, rather experimentation is the rule.

Little is known about the effectiveness of the various agency models. Sophisticated empirical analyses have been used to assess and compare the impacts of more established policy instruments, such as R&D tax incentives or subsidies. However, evaluations of the impact of regional innovation policy as a whole, or of regional innovation agencies (RIA), are rare. At best, evaluations are performed for programmes and then used as a weak proxy for an agency's effectiveness. This dearth of evaluation is a serious concern, as policy makers increasingly face the need to justify their actions to constituencies.

The principal-agent problem is at the core of this chapter: how can policy makers assess and improve the effectiveness of regional innovation agencies? In line with New Public Management practices, the separation of the policy-making and policy implementation functions is becoming more widespread, leading to “agencification”. Agencies are set up to fulfil the implementation function. They have greater proximity to, and thus information about, beneficiaries that can be used to inform policy.

The definition of a RIA is based on four criteria (see Box 5.1). This definition allows for a wide variety of agency models, as found in practice. Despite the absence of reference models and empirical analyses, this chapter draws lessons based on a conceptual analysis using existing examples and experiences. It offers good governance considerations for different models, rather than a prescription for one ideal model.

### Box 5.1. Definition of a regional innovation agency (RIA)

An organisation qualifies as a regional innovation agency for the purposes of this analysis if it fulfils the following four criteria:

1. **public mission:** the organisation's mission is complementary to private services, responding to market or systems failures;
2. **geographically bounded at sub-national level:** the organisation's mission targets a given region, defined along administrative boundaries;
3. **permanent:** these organisations are not projects but structures with an indefinite lifetime; and
4. **promotes innovation in a broad sense:** supporting innovation activities in the region is one of the goals, or the only goal, of the structure. The mission encompasses a wide range of innovation aspects, and not just a single instrument or target group.

This chapter first defines a conceptual background for the analysis of RIAs using elements from the theoretical and policy literature (section 5.1). Section 5.2 reviews the diversity of RIA models in practice given the principles set for analysis. Four case studies are used to identify the key dimensions around which RIAs may differ. By confronting these actual models with the principles, section 5.3 highlights the advantages and drawbacks of various models for the effectiveness of regional innovation policies. The

concluding section provides policy recommendations for governments considering the use of RIAs for the implementation of regional innovation policies.

### 5.1. Role for RIAs in the new framework for regional innovation

The new views on innovation and innovation policy, which have been discussed in prior chapters, have important consequences for the role of regional agencies in charge of promoting innovation. Modern RIAs should display a number of characteristics (Table 5.1).

Table 5.1. **The new context for RIAs**

Issue	Old paradigm	New paradigm
<b>Agencies as part of the system</b>		
Place of agency	Outside of the system	Actor in the system
Role of agency	Top-down resources provider	Facilitator, a node in the system, change agent
Rationale for intervention	Market failures	Systems failures, learning failures
<b>Enterprise-centred innovation system</b>		
Innovation definition	Innovation as exploitation of technological opportunities	Wider concept of innovation, market opportunities as key driving force
Target of instruments	Technology transfer	Firm absorptive capacities Learning capability People, talent, competence, creativity
Learning channels for innovation	Research providers, industry-science relationships	Firm-to-firm interactions, firm networks, public-private partnerships; Importance of innovation environment
<b>An open territory</b>		
Territory definition	Administrative boundaries Local networks focus	Functional definition, cross-border regions A node in global networks
<b>Constructing regional advantages</b>		
Mission	Redistributing funds	Identifying and reinforcing strengths in the system A change agent
<b>Smart policy mixes</b>		
Instruments	Isolated instruments	Portfolio of interacting and co-ordinated instruments ("smart policy mix")
<b>Policy co-ordination</b>		
Organisation of intervention	Fragmented intervention landscape	Policy co-ordination – by fields and levels
<b>Strategic intelligence</b>		
Goal definition	Based on existing structures Static	Problem-oriented Agile
Accountability and monitoring mechanisms	Administrative and financial	Strategic, goal-oriented
Evaluation focus	Input and output additionality	Behavioural additionality and learning capacity Evaluation as learning device Focus on effectiveness
Management style	Traditional	Oriented towards learning
Autonomy	Restricted: executive mission for authorities	Expanded: delegation of strategic decisions

*Source:* Nauwelaers, C. (2009), "Governance of Regional Innovation Policy: Variety, Role and Impact of Regional Agencies Addressing Innovation (RIAs)", background paper for OECD.

### ***A focus on enterprises and people as key engines of innovation***

At the core of the system, key actors for innovation are firms, and as such they constitute the target group for agencies. This approach leads to a change of perspective compared to the linear innovation approach which focuses on technology transfer channels and institutions. Enhancing firm absorptive capacities and learning abilities is seen as a core determinant of innovation performance at firm level. People, skills and learning become the key ingredients of innovative capability. Creativity at individual and company level is also at the core of system performance. The capacity of people and organisations to use, transform, adapt and create value from technology acquires a central role in innovation (systems) performance. Tacit skills and learning-by-doing processes are thus as important for innovation as access to codified information. In this expanded view of innovation, seen as commercial exploitation of new ideas, the notion of innovation is wider than technological innovation. RIA missions and actions should be defined and evaluated using this firm and people focus, including a broad view on innovation.

### ***An “open” territory definition***

A regional innovation agency, by definition, focuses on a particular region’s needs. But such a focus should not lead to a closed, inward-looking view of the regional innovation system. On the contrary, the role of the agency should be to connect local actors to global value chains and innovation sources. This approach stands in contrast with a localised systems view in which the agency’s intervention area is confined to the administrative boundaries of the region.

### ***A mission focused on “constructing regional advantages”***

The focus of an agency’s mission is to enable strong assets of the targeted areas to contribute to its economic development. Identifying lock-in threats and favouring diversity and evolution of the area become the agency’s core mission. Creating viable growth poles from scratch has proven difficult to achieve in OECD regions; but capitalising on existing strengths is a viable option. While every piece of codified and free information becomes available worldwide instantly through the Internet, what matters primarily is the capacity of agents to access, sort, absorb and use this overflow of information for innovation purposes. Effectively transforming this information demands enhanced absorptive capacities and strategic intelligence tools. Such capacities can be fostered by exploiting the advantages of proximity to exchange and foster tacit knowledge. These new regional advantages therefore need to be “constructed”, based on the development of existing strengths. In this context, regional agencies should act as change agents in the system.

### ***Use of a smart mix of instruments***

As innovation is a complex and multi-faceted process, it can be supported along many dimensions. Accessing a multiplicity of uncoordinated instruments is time-consuming for firms and runs the risk of duplication or negative interactions. Establishing a balanced mix of instruments to cover all system functions is a necessary condition, but the recipe for this mix is not straightforward. The mix depends on the goals to be achieved and the specificities of the target groups and their environment. The challenge for agencies is to identify and manage such an appropriate mix given the regional specificity.

### ***System facilitator based on a systems failure rationale***

Along with classical market failure arguments, the “systemic failure” rationale is gaining support as a justification for innovation policy. The systems failure approach gives way to a broader range of intervention areas than the traditional instruments of R&D subsidy and tax incentives or funding of public research organisations. The objective of policy intervention moves from addressing a less-than-optimal allocation of resources towards ensuring the overall coherence of the system and improving its evolution capacity. Consequently, “systemic” policy instruments are also gaining ground. Such instruments are oriented towards the evolution of the innovation system, preventing lock-in, and favouring the building of spaces for interactions among system actors. Policies in support of creativity are also increasingly important.

The main role for RIAs is to foster the smooth functioning of the targeted innovation system and to eliminate barriers to flows in the system. This facilitator role stands in contrast with a traditional role of a top-down supplier of resources based on market failure arguments. To improve system functioning, a RIA needs to target not only traditional system actors but also informal institutions which play a role in innovation potential and performance, addressing notably cultural barriers to innovation.

### ***Well-co-ordinated policies (horizontally, vertically)***

Ensuring synergies among policy instruments demands a high degree of policy co-ordination. Instruments from various origins and intervention fields need to be co-ordinated and aligned towards well-identified goals. RIAs can internalise several instruments within a broad, multi-purpose agency. In that case, the challenge is to ensure internal synergies towards generic goals, to which the various parts of the organisation should contribute. These actions can also be externalised. In this case, the challenge is to ensure an efficient network of agencies, intermediaries and service providers. Both the networked and the single agency model need to co-ordinate policy intervention across fields of intervention (research, technology, training, etc.) as well as levels of intervention (local, regional, national, and supranational).

### ***Use of strategic intelligence tools***

Defining a smart policy mix which responds to the identified challenges and structure of the innovation “ecosystem” requires strategic intelligence capacities. They are needed at all phases of the policy cycle: from policy design to implementation and evaluation. Such strategic intelligence needs to be supported by sound and robust analytical tools, and monitoring and evaluation practices which are well embedded into the policy cycle. Accountability systems for agencies should be goal-oriented assessments rather than mere administrative and financial conformity checks. Both effectiveness and efficiency of an agency’s actions should be given prime attention. Additionality considerations should be part of the agency’s mission as well as evaluations of its actions. The agency should also be able to renew itself according to identified performance gaps and successes, which requires internal agility. Evaluations need to serve learning purposes, and not (only) be used for monitoring and sanction. For agencies to be able to play a strategic role, they need to be granted a sufficient degree of autonomy. In other words, agencies should themselves become learning organisations.

## 5.2. RIAs in practice

There are important differences between RIAs as they appear across OECD member countries. The United States and EU approaches towards regional innovation policy differ, and so does the concept of an agency in this context. A main difference is that in the United States, there is no tradition of co-ordinated regional policy or regional innovation policy at federal level. At sub-national level, many of the initiatives for supporting innovation are *ad hoc*, based on a variety of partnerships actively involving private sector organisations, and generally with more limited involvement of regional authorities relative to European counterparts. Economic development agencies do exist in many states and their work involves support for innovation or technology-based development. Sub-national partnerships are of variable geometry. The nature of their actions varies across territories and the definition of targeted regions is in some cases more flexible (cross-state partnerships exist).

In the European Union, the role of regions in national innovation policy is becoming more explicit. Regional authorities increasingly take a pro-active role in promoting innovation. Many European regions have established regional innovation strategies. Their support system is institutionalised and subject to government intervention. These strategies are often placed within broader economic development goals, and managed by regional agencies. As a result, regions in several EU member countries are operating with an increasing degree of autonomy to develop their own policies, most often in partnership with national authorities (see Chapters 2 and 3). The same trend can be observed outside of Europe, with highly centralised countries like Chile increasingly recognising the importance of this regional dimension.

Two sets of characteristics can be used as a frame against which to analyse agencies:

- **Descriptive characteristics** of their operation (see Box 5.2). The definition of eight key dimensions for these characteristics is derived from information available from the agencies directly as well as from academic and consultant analyses. The list is not exhaustive but represents the core dimensions of the agency model and reflects the diversity of regional contexts and policy options.
- **Analytical characteristics** derived from the conceptual analysis above (see Table 5.1). It proposes normative dimensions for RIAs. It is expected that a hypothetical agency working under the new paradigm would conform to most of these dimensions. With the exception of characteristic six (degree of professionalisation of services), for which a high degree is expected if an agency conforms to the new paradigm, there is no *a priori* link between the descriptive and analytic characteristics.

Four agencies have been selected to represent a diversity of models according to the above dimensions characterising RIAs. Analyses of RIA impact are rare. And many RIAs operate without a clear mission or results-oriented vision. The selected RIAs are among those rare cases where at least partial evaluations of the agency's work and impact on economic development and innovation are available. The selected case studies include the following RIAs (see Tables 5.A1.1 and 5.A1.2 for a summary of each agency's descriptive characteristics and analytical characteristics, respectively):

- Industrial development centres (IDC), Sweden;
- Scottish Enterprise, United Kingdom;
- IWT, Institute for the Promotion of Innovation by Science and Technology in Flanders, Belgium; and
- Regional development companies (ROM), the Netherlands.

### Box 5.2. Descriptive characteristics of RIAs

1. **Size:** from a few employees and EUR 200 000 turnover in some new EU member countries to 200+ employees and EUR 500 000 in very large Regional Development Agencies (RDAs) (e.g. Advantage West Midlands, United Kingdom).
2. **Scope of intervention:** from a small agency with a role limited to the co-ordination of other intermediaries and service providers, to a large agency providing a wide range of in-house services including funding, infrastructure provision and soft services.
3. **Target of intervention:** differing priority between target groups: start-ups, foreign investors, domestic firms, SMEs, etc.
4. Degree of **vertical integration and extent of regional networking** with other agencies: one agency among others or a central node in the system.
5. **Funding model:** a large variety exists in the share of own resources from service provision, the share of public support and the composition of this support between local, regional, national, and in some cases supranational (EU) sources. In poorer regions of EU countries, EU Structural Funds may represent a very large share of funding. The share of structural versus project funding also varies a lot according to the service portfolio.
6. **Degree of professionalisation** of services: use of formal diagnosis tools (audits, etc.) and evaluations.
7. Degree of **linkage with regional development policy:** from a central instrument for this policy versus an agency with weak linkages to explicit regional policies.
8. **Sector focus:** the most widespread model is mainly generic (covering all economic activities and sectors) but some large agencies work along priority areas and provide specialised activities and staff for each area (such as Scottish Enterprise). Recent initiatives represent atypical cases focused on one sector of activity (life sciences and biotech, such as the Danish-Swedish Medicon Valley Alliance, or the French-German-Swiss Biovalley).

Among the case study examples, the RIAs are agents of the national government, agents of the region only or a hybrid. The Swedish industrial development centres are networks of bottom-up and regionally distributed business development and innovation agencies gathered under one programme supported by both national government and regional authorities. The Dutch regional development companies are arms of the national government for regional development, a mission which includes innovation promotion. The Flemish IWT and Scottish Enterprise are genuinely regional initiatives, the former focusing on R&D and innovation, the latter with a broader remit. The examples from Scotland and Flanders also come from a more decentralised governance context.

The analysis shows that the case study agencies in general seem to evolve, at least partly, towards the new paradigm for regional innovation policy. In particular, they view innovation as a multi-faceted phenomenon, act as nodes or facilitators in the innovation system, and seek to provide a smart policy mix of instruments to foster change or construct regional advantages. However, this new approach demands co-ordination and strategic capabilities and tools, which few agencies seem to have developed at a sufficient scale.

Those agencies with a broader regional development remit, (such as Swedish IDCs and the Dutch ROM), address innovation from a wide perspective. They provide services covering various facets of innovation policy. However, the former seems less well positioned as a change agent than the latter, since ROMs have a more explicit focus on priority and future-oriented sectors. IWT is the agency with the most focused mission of the four agencies, with a remit on R&D and technological innovation. Nevertheless, it is in the process of extending its activities to a wider definition of innovation. Its core mission is complemented by a strategic networking and co-ordination function with other intermediaries that provide specialised and soft support to companies.

Most of the agencies interact with other system agents in a networking role. Even the largest agency with a one-stop-shop model, Scottish Enterprise, is evolving and downsizing towards a more decentralised model. The tension between large agency size and the necessary agility to act in an evolving regional innovation system is at the core of such agency changes.

### 5.3. Key strategic questions for RIAs

Several strategic questions emerge from analysis of the case study examples (see Tables 5.A1.1 and 5.A1.2). Together, these questions provide an agenda for enhancing RIA impact:

- How can RIA effectiveness be assessed?
- Which model should an RIA choose: the networked or the centralised model?
- Which missions should be given to an RIA: a broader development mission or a more focused innovation promotion mandate?
- Should RIA management privilege stability or experimentation?
- What is the most effective RIA funding model?
- What is the relevant territory for RIA action?
- How should an RIA define a suitable menu of services and activities?

#### *Assessing agency effectiveness*

Traditionally, evaluations have focused more on efficiency (are agencies doing things right?) rather than on the more difficult question of effectiveness (are agencies doing the right things?). Both are needed, but agency effectiveness is even more critical within a strategic context. There is no definitive answer as to the right method for assessing an agency's effectiveness. There are several problems associated with this evaluation challenge:

- There is **no counterfactual** for an analyst to observe what would have occurred in the absence of that agency.
- There is a **time-lag problem** for RIA actions to produce their effects, making it difficult to track effects over time.
- The **attribution problem** renders it difficult to observe changes in the innovation system and attribute those changes to agency action.
- There is an **unclear reference** for the evaluation. What are the goals assigned to an RIA within the regional innovation support system? This is often not articulated explicitly. It is difficult to qualify results with respect to unclear expectations. Scottish



Enterprise is a good example with explicit targets for its various missions. A recent evaluation generated drastic changes in its mission, showing that impact assessment can serve to redefine a mission.

Because an agency is part of the innovation system, assessing its effectiveness requires assessing its role and place in that system. Improving its own internal effectiveness will not be sufficient to improve overall system effectiveness. This is even more difficult in the case of changing mandates among support institutions, as observed in the case of Scottish Enterprise, whose role in the system underwent major change. Systemic evaluations are needed to clarify the RIA role. In Flanders, systemic evaluations will explore the role of IWT in the wider perspective of regional innovation promotion instruments.

For agencies such as the ROM or IDC, which have a wider innovation promotion role, it is very difficult to measure results on the basis of traditional indicators. Assessment of the evolution of the innovation culture and the quality of partnerships, among other factors, should be considered, but are hard to measure. Bretagne Innovation, the regional innovation agency in Brittany (France) approaches evaluation from several perspectives (see Box 5.3).

### Box 5.3. Bretagne Innovation: evaluation approaches

Bretagne Innovation is the regional innovation agency for the Brittany region of France. The agency recognises that evaluating innovation support at regional level is needed to help the agency evolve. A shared and co-ordinated regional approach is considered important because the result can be considerably greater, or considerably less, than the sum of the individual parts of the innovation system. A shared methodology for evaluation enables comparison, even across different regions. The agency has found that impact assessment is costly but essential. Developing an evaluation culture was also observed to reduce resistance to change. Ideas are generated from the differences in the priorities, actions and perceptions among different system actors regarding innovation support. The agency therefore takes a three-level approach to evaluation:

- **Evaluate the innovation strategy:** using outside consultants, once every three years.
- **Evaluate implementation:** results compared to priorities, compilation of annual data, benchmarking with other regions, evaluation of impact every two years using company surveys and interviews, feedback for continuous improvement.
- **Evaluate the effects of agency actions on regional development:** While it is difficult to measure the effects of innovation support actions on regional development, two tools are developed by the region to shed some light. First, a categorisation of regional public expenditures for innovation according to the various goals (along the Impactscan methodology). Second, an Innovation Index was developed and includes:
  - **Inputs - innovation potential (people, education, research):** number of researchers, firm expenditure for training, number of private consultants, secondary and higher education results, and participation in European R&D projects; and
  - **Outputs - quality jobs, standard of living:** companies in high-tech industries, per cent of new products, exports, value of fiscal incentives, number of innovative young firms, patents, number of graduates/doctorates staying in the region, per cent of national grants distributed in the region, and starts-ups.

*Source:* Presentation by Bretagne Innovation at the joint OECD-Council on Competitiveness Experts Meeting, 2 July 2008, Washington, DC.

### *Networked versus centralised model*

The networked and centralised models co-exist in the real world of regional innovation agencies, including a variety of hybrid forms in between. An agency which is only a light node in a wider system is at one extreme. An agency which is a self-sufficient one-stop-shop internalising most of the support functions and policy instruments in-house is at the other extreme. The IDC in Sweden is closest to the network model, while IWT is a large one-stop-shop, though not at the other extreme since it manages a network of numerous other intermediaries. Scottish Enterprise moved from the position of a large all-encompassing agency towards one with a more focused mission. The challenges differ between the two extreme types.

The “light node” agency faces the main challenges of legitimacy for, and capacity to, effectively co-ordinate a wide array of other regional innovation support actors. The goal of aligning its mission and activities around a wider generic goal for the regional innovation policy is certainly not easy to reach. This is what IWT tries to achieve with the establishment of the VIS, the network of innovation intermediaries in Flanders. The network relies on a robust monitoring system to provide more coherence and visibility to the whole support system. Several conditions need to be present to ensure the effectiveness of the network model: *i*) an overall clear vision for regional innovation policy translated into clear objectives; *ii*) a good picture of the delivery system and knowledge of the regional system of actors; *iii*) a mechanism of powerful incentives to ensure joint performance of the system; *iv*) credibility and legitimacy of the agency in charge of co-ordination; and *v*) professionalism in the networking and match-making mission, among others. The more diverse the set of service providers, the more difficult it becomes to achieve effective co-ordination and synergies. Innobasque (Basque Country, Spain) is an example of the “light node” agency approach, with a focus on co-ordination and not direct service delivery (see Box 5.4).

#### **Box 5.4. Innobasque: a “light node” agency approach**

The Basque Country (Spain) is a region of 2.2 million inhabitants. During the 1980s, the region underwent a severe economic, political and social crisis with high unemployment and the collapse of basic industry. The Basque economy was restructured after the recession, supported by the region’s business development agency SPRI. This was termed by the region its “First Great Transformation”. Now the region has above average GDP per capita and growth rates relative to OECD regions.

To lead the process of the so-called “Second Great Transformation”, the Basque Country is seeking to build an innovative society in all aspects. To complement the actions of the service delivery agency, the public-private partnership Innobasque was launched in 2007. The agency has a small budget (approximately EUR 6 million) but plays an important networking role for the region with a board of directors composed of leading innovation system actors. It also raises public awareness of innovation with a wider range of stakeholders than traditionally reached with innovation policy. There are over 40 cross-sectoral working groups involving hundreds of regional actors. The areas of focus for the agency include: *i*) technological innovation; *ii*) social innovation; *iii*) internationalisation of the Basque innovation system; *iv*) business and organisation transformation; *v*) advanced entrepreneurship; *vi*) communication and promotion; and *vii*) regional development.

*Source:* OECD (2011), *OECD Reviews of Regional Innovation: Basque Country, Spain*, OECD Publishing, Paris.

The “one-stop-shop” agency runs a higher risk of sclerosis and immobility, due to its large structure. Thus the core challenge for such an agency model is to develop internal organisational agility. Professionalism of staff and the use of goal-oriented management and evaluation are key requirements for the success of this model. The case of Scottish Enterprise illustrates this challenge: an evaluation highlighted the agency’s risk of becoming rigid and the need for the staff to have greater knowledge of their target group.

***Mission definition: innovation specialisation or broader regional development mandate***

Agencies can be dedicated to innovation promotion only (as is the case for IWT), or include this mission among others in a broader economic development mission (this is the case for the other three agencies). In between, there are development agencies with a generic mission that includes a greater, or lesser, focus on innovation. Among the three generic agencies, Sweden’s IDCs present a less intense focus on innovation than the ROMs and Scottish Enterprise. The larger the degree of agency autonomy, the wider the diversity in missions observed among different agencies in the same country. In the Netherlands, a study found that the focus on innovation is largest in the Limburg agency, due principally to the prevailing innovation-oriented regional business fabric, but also to strategic decisions by its board of directors. Arguments in favour of a dedicated innovation agency suggest that the agency’s stability would help policy makers focus on long-term objectives. The concern is that these long-term objectives would otherwise be over-shadowed by more politically attractive objectives which deliver quicker or more visible results (such as “brick and mortar”-based interventions). This is also a generic argument for agencification: to dissociate shorter term policy concerns from the long-term needs for policy operations. The case of IWT illustrates this option.

Arguments against a dedicated innovation promotion structure are linked to the policy fragmentation debate. By including innovation promotion inside a single structure in charge of economic development broadly (infrastructure, skills and training, export promotion, etc.), such as Scottish Enterprise or the Dutch ROMs, it is theoretically easier to achieve more integrated policy mixes. The condition for integration is of course that the agency’s internal organisation favours such synergies. This integration has indeed been found as a positive element in the ROMs. Their “hard” investment functions give credibility to the “softer” mission and advising functions of ROM advisors. This model also demands a range of competences within a single agency. Small agencies such as the Swedish IDCs are designed recognising that innovation is a multi-faceted phenomenon. Hence the agency sees innovation as a holistic process, of which managerial capabilities and skills are the core. The suppression of the “skills and training” function from Scottish Enterprise casts doubts on the capacity of the agency to manage this function efficiently in the past. The regional development agencies (RDAs) in England had a different model than Scotland given the asymmetric decentralisation in the United Kingdom. The model of these agencies, which since the 2010 elections are being restructured to favour more localised development approaches, was based on a wider regional development mandate (see Box 5.5).

### Box 5.5. RDAs in England: managing innovation and regional development

The regional development agencies (RDAs) in the United Kingdom were created by legislation in 1998 and following the 2010 elections are being disbanded in favour of more localised development approaches. The five statutory purposes of an RDA at its origin, applying to both rural and urban areas, were:

- to further the economic development and regeneration of its area;
- to promote business efficiency, investment and competitiveness in its area;
- to promote employment in its area;
- to enhance the development and application of skills relevant to employment in its area; and
- to contribute to the achievement of sustainable development in the United Kingdom where it is relevant to its area to do so.

Given a failed Regional Assembly referendum, the RDAs at the time were the principal economic development agents at the regional level, working in partnership with a range of local and national bodies. The RDAs operated under a ten-year regional economic strategy and a three-year corporate plan. The corporate plans were produced annually on a rolling basis, and every second plan was submitted to the central government.

Given this very broad mandate, innovation was only one of many RDA responsibilities. RDAs controlled only a modest share of the public funding to support innovation in the regions. The spending in regions on innovation is significantly less than the allocable national science and technology expenditures that flow to the regions. Given that some areas of enterprise support also support firm efforts to increase productivity, if the wider enterprise support figures are included, the total share of RDA budget allocations to innovation and enterprise support among Northern regions was 35% (North West region) 44% (North East region), and 33% (Yorkshire and the Humber). The investments by RDAs in innovation were expected to contribute to increased productivity to support economic growth.

*Source:* OECD (2008), *OECD Reviews of Regional Innovation: North of England, United Kingdom*, OECD Publishing, Paris, doi: 10.1787/9789264048942-en.

### *Stability versus experimentation*

Stability is important for an agency's customer base. Simplification of the public support system can also increase agency visibility. From an internal perspective, stability also allows staff to specialise and promotes the accumulation of experience, which in turn contributes to the credibility of staff with clients.

However, a stable agency will face more difficulty to re-orient its missions and activities according to new emerging needs or evaluation results. Agencies focused primarily on stability run the risk of inducing regional actors to stay locked into existing development paths, rather than helping them explore new ones.

Regional agencies as change agents in a system should be able to deliver their services "a step ahead" of their customer base. They need to respond to latent system needs as well as those that are expressed. This ability to anticipate system needs was one of the most important challenges identified for the Swedish IDCs.

### *Funding structure*

There is also tension between stability and agility in the funding structure of RIAs. Agencies that benefit from stable funding sources can more easily plan their work, define strategic orientations based on a clearer view of future resources, and maintain qualified

personnel in-house, or recruit new personnel. But they also face fewer incentives to deliver efficiently and effectively. The case of IDCs in Sweden illustrates the difficulty for planning when funding is allocated annually without commitments for future budget years.

Agencies for which funding is heavily dependent on performance are more likely to implement their actions more efficiently. The performance targets provide a clearer mandate to define their role and, with sufficient flexibility in implementation, fine-tune their portfolio of activities and become more effective. When there is competition between several agencies, performance-based funding can serve to focus resources on the best-performing agents and eliminate redundant or inefficient ones. An agency with a highly unstable funding base faces challenges for management and human resource policies. A high share of resources coming from commercial activities is an indication of success, but does not necessarily broaden the base of innovative enterprises.

The case of IDCs in Sweden illustrates that in certain circumstances, commercial success may mask other problems. One IDC in the country was found highly dependent on a single large firm, and hence failed its public mission to increase the number of innovative SMEs. The public funding base for Scottish Enterprise was noted as a risk with respect to agency agility and effectiveness. Dutch ROMs, with a large budget share originating from risky investments in innovative businesses, are likely to be driven more by future-oriented considerations than by stability.

### ***Territory definition***

Most agencies operate within administrative boundaries because they are partly financed by regional authorities accountable to their citizens. This is the case for IWT and Scottish Enterprise, whose target groups are firms (and public research organisations) located in the region. There is a correlation between the strength of the regions in their national context and this limit of administrative boundaries. The cases of Flanders and Scotland are emblematic of regions with a strong identity and a clear strategy to strengthen autonomous powers.

However, innovation is a borderless phenomenon. Hence the challenge for RIAs is to take into account outside sources of knowledge and actors, while maintaining a focus on regional actors as target beneficiaries. A more geographically open approach is easier to achieve when the agency's strategic goals are articulated around results rather than inputs. For example, Dutch innovation vouchers are available to regional actors but can be used with providers outside of the region or even the country (see Chapter 6 for a discussion on innovation vouchers). When agencies are managed as private companies, such as the IDCs in Sweden, activities appear to be less constrained by administrative borders.

There is also much scope for inter-agency collaboration and joint action spanning regional borders. Inter-agency action seems largely under-exploited due to a lack of results-oriented agency management. The European Research Area is paving the way towards international openness of innovation agencies. The Northern Way in England is an example of domestic cross-border collaboration across RIAs.

### ***Defining the scope for intervention***

The RIA's policy mix can be drawn from a large set of possible activities (see Table 5.2). Some agencies promote a full range of activities; others focus on a limited number. The presence or absence of instruments to fund firms or infrastructure in the RIA

portfolio influences characteristics of an agency such as size, funding structure, accountability mechanisms and the role of the agency in the system. The integrated Scottish Enterprise and IWT, also providers of direct funding to companies, have a larger and more diverse portfolio. The Dutch ROMs derive an important turnover from property sales and management.

An agency's choice of the right menu of services depends on five elements:

- The regional policy objectives to which the agency's actions should contribute.
- The structure of the innovation system and its needs in terms of market or system failures.
- The availability and quality of other services (public and private) accessible for the target groups. The agency should avoid unfair competition with, and crowding out of, private service providers.
- The opportunity to create internal synergies across elements of the menu. The case of ROMs illustrates successful synergies in combining innovation support with FDI promotion.
- The internal capabilities of the agency to deploy the activity effectively. The case of Scottish Enterprise shows a need to separate the training function from the agency mission, on the grounds that it would be implemented more effectively by another specialised agency.

Because agencies are part of the innovation system, this portfolio definition should consider the overall system, and not only internal agency issues. Firm representatives on an agency board of directors (such as the Industry Advisory Councils of Scottish Enterprise) help in this respect. Board membership should also include individuals with a forward-looking view on regional development.

Table 5.2. Types of services delivered by RIAs

Type of support	Examples
Soft support to firms	<p><b>Generic support</b></p> <ul style="list-style-type: none"> <li>-Information provision</li> <li>-Awareness raising</li> <li>-Training</li> <li>-Stimulation and/or running of networks and clusters</li> <li>-Promotion of internationalisation</li> <li>-Promotion of foreign investors</li> </ul> <p><b>Individual support</b></p> <ul style="list-style-type: none"> <li>-Coaching, advice</li> <li>-Training</li> <li>-Needs assessment, audit</li> <li>-Support for start-ups</li> <li>-Access to finance, intermediary with business angels</li> <li>-Science and technology services</li> </ul>
Finance	-Delivery of public subsidies and loans
Infrastructure provision	<ul style="list-style-type: none"> <li>-Incubators</li> <li>-Science parks</li> </ul>
Support to policy	<ul style="list-style-type: none"> <li>-Support to policy design (e.g. Structural Funds programmes)</li> <li>-Monitoring and evaluation of regional policies</li> <li>-Acting as a node for regional partnership</li> <li>-Acting as a central co-ordinating body for a network of innovation support actors</li> <li>-Regional marketing</li> </ul>

### Summary of key challenges

Drawing from the above analysis, Table 5.3 summarises the strengths, weaknesses, threats, opportunities and success criteria for RIAs.

Table 5.3 SWOT analysis of RIAs

Category	Key issues
Strengths	-Knowledge of specific situation of local companies -Proximity to local public and private actors in charge of innovation promotion -Central position that can enhance regional partnerships and social capital, facilitator role -Well-placed to achieve horizontal co-ordination of the portfolio of services
Weaknesses	-Unclear mandate -Lack of impact evaluation -Difficulty to find and retain qualified staff (due to unstable funding) -Inward-looking perspective constrained by administrative boundaries – lack of vertical co-ordination
Threats	-Unfair competition with private service providers -Fragmentation of projects due to agency need for fundraising -Public status and absence of competition offers insufficient incentives for performance -Inward-looking strategies – unnecessary competition with other regions
Opportunities	-Co-ordination and synergy of regional innovation support (to overcome fragmentation) -Acquiring legitimacy through demonstrated results – need for strategic evaluations -Development of tools and professional support for own governance and to fuel strategic policy intelligence -RIAs as change agents in the regional innovation system, “one step ahead” -Overcome administrative boundaries for effective innovation promotion
Success criteria	-Institutional recognition as a legitimate regional policy instrument -Complementarity of services, either internally in the integrated model or externally in the networked model -Flexibility in services portfolio definition (adaptability to new needs) -Strategic management capacities -Goal-oriented approach and (partly) performance-based funding -Quality of human resources (professionalism, specialisation) -Suitability of structural funding sources (not too high, not too low)

### Conclusions: RIAs as learning organisations and change agents

The above analysis of RIA profiles and challenges, in light of the new conceptual framework for regional innovation policy, leads to the following concluding points.

- There is a need for explicit and **strategic innovation policy** as a founding piece for the definition of RIA mission, goals, and as a reference for effectiveness assessment. The bridge between broad policy statements and implementation is often weak or missing, limiting possible evaluations of agency effectiveness.
- There are **no overall best practice models for RIAs**, but different challenges faced by different models.
- Whatever the model chosen, RIAs are (sometimes key) **actors in the system**, not just structures to deliver services. Their overall influence on the evolution of the system needs to be assessed, as well as the results of individual actions or programmes. A robust view on a RIA’s effectiveness requires a functional analysis of the whole innovation support system.

- The biggest challenge for RIAs is to **become change agents** for innovation-based regional development. Structures that are too static do not help in this respect. A focus on absorptive capacities and learning processes supports a change agent approach. This creates a radical departure from traditional missions based on resource allocation, rather than on networking and learning.
- Beyond the choice of structure, the effectiveness of an agency will chiefly depend on the **quality of the internal organisation** and whether it:
  - favours creativity and innovation in-house;
  - has outward-oriented skills to network and be embedded in a wider system (regional and beyond);
  - operates as goal-oriented;
  - employs skilled human resources that contribute to its legitimacy with clients;
  - allows agility to incorporate lessons and evaluations from past activities in future work (evaluations as learning devices);
  - possesses sufficient management autonomy, vision and skills to play its strategic role; and
  - is subject to the right principal-agent accountability mechanisms to serve policy goals and not only its agency goals.
- Last but not least, increased use of **strategic intelligence tools** in agency management, and more particularly, of systemic and portfolio evaluations integrating the dimension of behavioural additionality, is the way forward for RIAs to become effective change agents.

## Note

1. This chapter draws on an earlier paper by Claire Nauwelaers (2009). Comments on an earlier version of this paper by Karen Maguire, Claire Charbit and Andrew Davies are gratefully acknowledged.



## Annex 5.A1

### Case study summaries

Table 5.A1.1. Summary of characteristics: case study RIAs

	Swedish industrial development centres	Scottish Enterprise	IWT Flanders	Dutch regional development companies
General presentation	A network of 22 regionally distributed, specialised business advisory centres, business-oriented and -run, focusing on innovation support to SMEs. Partly State-funded. Variety in size and profiles across regions	A single agency in charge of a broad regional development mission, funded by the regional government. Deploys a wide range of services and funding schemes with a focus on priority sectors. Underwent reorganisation and downsizing	A large regional agency responsible for innovation promotion through R&D and technology. In charge of funding industrial R&D in public and private sectors, and co-ordination of intermediaries network	The four agencies serve as regional arms of the Ministry of Economy for its regional development and innovation policies. In charge of support to innovation, FDI attraction, and start-ups. Variety of forms across regions, which do not coincide with provincial administrative boundaries
Size	From SEK 2 to 60 million turnover depending on the centre	Downsizing Total annual budget: GBP 550 million (2007), GBP 300 million subsequent years Staff: from 2 000 down to 1 100	Annual budget EUR 288 million and increasing A staff of 125	Between 29 staff and EUR 5 million turnover in the smallest company, to 57 people and EUR 8 million in the largest
Scope of intervention	-Support for innovative product development (loans) -Feasibility studies (start-ups) -Business advice, coaching, market analysis -Intermediary with S&T sources, technology brokerage -Competence development (training, life-long learning supply)	-Support to start-ups -Funding of research in HEI leading to high-tech start-up creation -Risk capital -Technology institutes, undertaking market-led technology research -Subsidies for R&D in companies -Funding for post-graduate students at Scottish Research Institutes of universities -Support for expansion abroad and export, FDI -Investments in infrastructure	-Subsidies for R&D in companies, special SME programme -Subsidy for industry-oriented public research, collective research -Grants for researchers -Co-ordination of intermediary networks -Funding of intermediaries	-Development and innovation: promotion activities, information diffusion, support to establishment of firm clusters and networks, establishment of knowledge clusters with firms and knowledge institutions, and support to start-ups -Pre-finance loans for projects -Foreign investment promotion -Equity participation (mostly) in start-ups -Land and buildings for establishment of companies

Table 5.A1.1. Summary of characteristics: case study RIAs (cont'd)

	Swedish industrial development centres	Scottish Enterprise	IWT Flanders	Dutch regional development companies
Target of intervention	SMEs and start-ups at all levels of technology intensity. Focus on starting phase of innovation	Companies in priority sectors, start-ups, research institutes. Start-up phase and business development	Companies, special focus on SMEs, research institutes for applied research	SMEs and start-ups in priority sectors. Focus on starting phase of innovation
Degree of vertical integration	Low: IDCs appear mostly as intermediaries in the system, with a mission to refer clients to external sources	Large: Scottish Enterprise is a one-stop-shop agency with many services in-house. Skills and training and first-stop advice recently transferred	Medium: integration of S&T&I services in-house, and co-ordinated via VIS network, economic development apart	Medium: a number of in-house services but important collaboration with other service providers
Funding model	IDCs are funded in a variable proportion by private revenues and a limited-in-time State appropriation for its public mission	Funding comes mainly from regional government	Funding comes mainly from regional government	One quarter from national and provincial sources, large part from revenues from investments in companies, land and buildings
Services Professionalisation	State appropriation for its public mission Highest for training activities	High: Performance monitoring carried out. Customer satisfaction monitored	High: performance control and audits, customer satisfaction surveys and evaluations carried out	Evaluations surveys regularly carried out. Quality of professional management according to external evaluation
Linkage with regional development policy	Most IDCs are part of regional growth agreements but they are not in charge of implementing this policy	SE is the central arm of the Scottish government: it is a main actor for delivering regional policy	IWT is closely linked, executes and contributes to the development of regional innovation policy	Direct connection: ROMs are arms of the national ministry for its regional development policy
Sector focus	Each IDC is specialised in a sector or technology, together they form a network	Focus on priority sectors (high-tech). Minor priority on activities of local importance	No sector priority, but the government invests in dedicated competence centres	Target towards most promising sectors (focus and mass)

Table 5.A1.2. Summary of key issues: case study RIAs

	Swedish industrial development centres	Scottish Enterprise	IWT Flanders	Dutch regional development companies
<b>Agencies as part of the system</b>				
Place of agency	A small actor in the system, at the core of business networks	A core actor in the system, but losing importance after the transfer of some functions. Concentration in "top" sectors	A key actor in the system, a reference point for R&D and technological innovation	An important actor in the regional system, well networked with complementary bodies
Role of agency	Facilitator, intermediary, and resource provider to a lesser extent. May be weak as a change agent due to focus on limited forms of support to existing local firms	Scottish Enterprise is a resource provider (several programmes to fund firms and infrastructure). Cluster facilitator in key sectors. Positions itself as a change agent towards industrial restructuring in key sectors	Resource provider through grants. Facilitator through co-ordination of intermediaries network VIS	Resource provision (equity participation and grants). Facilitator through efforts towards clusters and networks creation. Potential change agent by supporting major innovative projects
Rationale for intervention	Mostly learning failures, system failures (fostering interactions and linkages), market failures (funding gap for new projects)	Market failures (funding gaps). System failures (technology brokerage). Learning failures through tailor-made advisory support to companies	Market failure (R&D funding), system failures (knowledge flows)	Market failures with seed capital and equity participation. Systemic failures (interface between companies and other actors)
<b>Enterprise-centred innovation system</b>				
Innovation definition	Wide view of innovation based on market opportunities, organisational aspects. No restriction to services covering any aspects of innovation process	Focus on technological innovation and commercialisation of research base. Innovation as a multi-faceted process, including internationalisation.	Focusing on technological innovation, prospects towards broader definition, but implementation of this extended view still unclear	Wide view on innovation incorporating technological, managerial, and marketing elements
Target of instruments	Firm absorptive capacities, managerial abilities, competences development, life-long learning attitudes	Technology transfer, funding mainly. Tailor-made advice considering managerial learning and organisational capacities	R&D and technology transfer	Targets absorptive and managerial capabilities. Infrastructure and capital provision
Learning channels for innovation	Firm networks mainly, also connection to knowledge providers	Industry-science relationships. Firm clusters	Fostering public-private co-operation in R&D	Firm networks mainly, also connection to knowledge providers
<b>An open territory</b>				
Territory definition	Functional definition, but rather limited scope	Regional borders and consideration of sub-regions	Regional borders but growing concern for system internationalisation	Functional definition, partly overlapping with provinces
<b>Constructing regional advantages</b>				
Mission	Fostering innovation in SMEs, broadening the base of innovative companies. Not clear that IDCs act as change agents due to likely focus on existing activities (success in this respect varies across IDCs)	Growth of future-oriented, promising key sectors. Targeting both existing and new firms	Support innovation in the region through the exploitation of science and technology. Mostly addressing innovative companies, but also broadening its base through the diffusion of new knowledge	Focus on future-oriented sectors with critical mass. Some ROMIs are positioned as change agents by initiating and supporting new endeavours

Table 5.A1.2. Summary of key issues: case study RIAs (cont'd)

	Swedish industrial development centres	Scottish Enterprise	IWT Flanders	Dutch regional development companies
Instruments	Loans, advice and training offer, linkages to other sources, no guarantee that the mix is balanced	<b>Smart policy mixes</b> Subsidies, risk capital, infrastructure, business advice. Industry Advisory Councils may foster integration of policy portfolio. The individual "account managers" care for SE services integration	Subsidies and soft advice. No integrated policy mix evaluation but many single programme evaluations and reviews have enlightened complementarities. Rationalisation of portfolio took place	Mix of soft services, interfacing mission, capital provision, infrastructure and brokerage with other actors. Complementarity across the range of activities assessed as good, especially for innovation and seed capital
Organisation of intervention	Co-ordination with other providers is within the mission but fragmentation is likely	<b>Policy co-ordination</b> First-line support and training are now in separate organisations (this may impede co-ordination) Concern for, but no evidence of, policy co-ordination with other agencies and levels (training, local governments, EU for ERDF). Low, according to Lyall (2007).	Co-ordination of innovation service providers is a mission, undertaken with increasing use of strategic intelligence tools. No clear evidence of co-ordination with economy department	Complementarity with other actors has been positively assessed. Target groups and missions are well defined and differentiated
Goal definition	Fine-tuned to specific local circumstances. Driven by business views and needs, not so much by analysis of past results and successes	<b>Strategic policy intelligence</b> Strategic studies carried out and Industry Advisory Councils ensure linkage with firm needs. Major reorganisation following an official review. Large dependence on public funds does not favour agility	IWT's mission is evolving in an incremental manner over time, following reviews and evaluations. The latter have brought feedback from companies into programme design	Reviews and performance assessments are carried out. Mostly top-down definition of mission by Ministry of Economy, but room for regional diversity
Accountability and monitoring mechanisms	Due to private nature of IDCs, results-oriented management is the rule. Additionality not explicitly demonstrated	Indicator-based monitoring system, mostly results oriented, evolving towards impact assessment. Additionality explicitly considered	Combination of administrative and goal-oriented control mechanisms. The Flemish Council provides advice based on systems overview	Targets are set and monitored, and used for performance-based funding. External in-depth evaluation in 2004
Evaluation focus	Focus on results rather than on impacts. No measure of behavioural additionality although this is the focus of intervention	Focus was on results and evolving towards impact. Additionality of SE services in terms of business turnover, additional R&D and leverage on investments is measured. The 2007 evaluation suggests that part of SE activities did not meet expectations and hence were transferred to another body	Evaluations increasingly focus on behavioural additionality. Evaluations used as learning device, and integrated into the "Monitoring and Analysis" unit of IWT. Use of international benchmarking	Many initiatives are evaluated, incorporate behavioural additionality, focus on impacts. Transfer of good practice from one ROM to another
Management style	Difficult to ascertain and variable across IDCs. Flexible and learning-oriented, but lack of prospective capacity in some cases	No evidence available. The 2007 reorganisation called for cut in top functions and more staff in direct contact with businesses. A possible sign of rigidity	No evidence available, the monitoring and analysis activities provide stimulus for in-house learning	Quality of management positively assessed in external evaluation
Autonomy	Large degree of autonomy, decisions by Board led by business executives	Large degree of autonomy of Board	Autonomy within a large range of programmes; the government decides on large investments	Little autonomy for broad mission definition, large autonomy in programmes and launching of new initiatives

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