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**PUBLIC GOVERNANCE AND TERRITORIAL DEVELOPMENT DIRECTORATE
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CROSS-BORDER REGIONAL INNOVATION POLICIES

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For more information please contact Claire Nauwelaers, Tel + 33 1 45 24 96 11;
Email: Claire.Nauwelaers@oecd.org.

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CROSS-BORDER REGIONAL INNOVATION POLICIES

Summary of project proposal

- **Aim:** to provide recommendation to policy-makers on when and how to design and implement effective border-crossing innovation policies
- **Topic:** analysis of rationales, strategies, instruments, and success conditions for innovation policies implemented in cross-border regional areas (*i.e.* regions sharing borders and forming a functional area, extending over one or several countries)
- **Method:** preparation of a background paper by the Secretariat, including a preliminary analysis of the topic. Comparative case studies on cross-border areas, using peer reviewers from other areas. Assessment on the potential and limits of regional cross-border co-operation in innovation, and policy recommendations
- **Timing:** 24 months, starting end 2010
- **Total Budget:** 450 000€.
- **Participants:** consortia of OECD regions involved in cross-border co-operation, national and supra-national authorities.

1. Rationale for the project

1. Across OECD, regional development policies have evolved from a subsidy-led approach compensating for weaknesses in lagging regions, towards a competitiveness-oriented approach favoring growth in all regions. In this context, innovation has climbed on the top of regional policy agendas: innovation is seen as a main factor for enhancing competitiveness of firms and places. With this shift, regional policies also get a more strategic character: their aim is to develop integrated policy portfolios leveraging on regional assets. The difficulty is that there is no standard innovation policy portfolio, as the bundle of instruments needs to be tailored to specific innovation systems characteristics. The OECD Secretariat is working with national and regional authorities to produce guidelines and strategic intelligence for the development and implementation of efficient regional innovation policies.

2. Much attention is nowadays being paid to the question of adapting regional innovation policies to the specific features of the targeted innovation system. The challenge for regions is to identify their unique advantages and capitalise on them with the view to develop “smart specialisation”. To do so, many regional innovation strategies have followed a “supply matching demand” approach, creating a bias towards autarkic approaches, confined within regional boundaries. However, even in the largest OECD regions, it is very unlikely that innovation drivers, barriers and opportunities, are all operating within regional boundaries. The globalisation of economic activity, the need to tap into and connect to wider knowledge networks, the internationalisation imperative of companies, are all recognised in regional strategy documents. Firm’s co-operation in innovation, and S&T networks extend well beyond regional and national borders. Despite this situation, regional innovation policies mostly deploy their tools in the

restricted space of administrative regions, rather than across functional regions. Thus, amongst the many issues policy-makers face when developing effective policy portfolios, the question of **the relevant geographic space to deploy policies** is a critical, but relatively neglected one.

3. The problem is particularly acute in the innovation policy domain. This is due to three phenomena:

- **Cross-border knowledge spillovers:** many innovation policy instruments are likely to generate spillover effects across regional boundaries. For example, the potential outreach of a technology transfer center is likely to extend much beyond the borders of the administrative region in which it is established. It is hardly possible, and actually, not advisable, to restrict the diffusion of knowledge within borders defined from an administrative perspective. Cross-border spillovers thus create problems of appropriation when the investment is made by one regional authority only;
- **Economies of scale and indivisibilities:** the size of many regions prevents them to invest in a full innovation infrastructure matching all the needs of regional stakeholders. Innovation support services need a critical mass of activities to reach a good level of professionalisation, specialised venture funds can only work efficiently when there is a sufficient base of projects to spread risks, technoparks and similar real estate initiatives with an international outlook need to be branded at the level of larger territories to get good visibility, etc. ;
- **International and global outreach of many innovation activities:** companies are extending their value chains and markets, and their recruitment areas, towards larger territorial spaces. There is no a priori reason why areas of smart specialisation should necessarily correspond to administrative regions. The promotion of inter-company linkages and joint innovative ventures in the form of clusters or competitiveness poles, would need to take this openness into account.

4. The above phenomena do not put into question the relevance of the sub-national level for designing and delivering policy instruments to support innovation. Proximity does matter but the issue is that of the right definition of the territory to consider for these policies. The starting point for this project is the idea that the administrative region is not necessarily the right level to take into consideration for innovation, but rather the functional region. **Tailoring policy instruments to functional regions would help avoiding both under- and over-investments in innovation support, and create more synergies in policies.**

5. Generic barriers impede the development of cross-border policies, especially when functional regions spread over country boundaries. Differences in rules and regulations and in institutional contexts, feature prominently amongst these barriers. In the field of innovation, additional barriers are found due to the difficulty to calculate **opportunity costs of fragmented policies**. In this field, because of the inherent uncertainty of the innovation process, and the non-linearity of results from investments in innovation, benefits from cross-border policies are not easy to demonstrate. The project will address this problem of invisibility of returns to cross-border policies for regional policy-makers.

6. Functional regions can be found within countries, or across countries. The study will cover both types of cross-border areas, but a priority will be placed on trans-national border areas, especially in the European Union, where many regions are adjacent to others in a neighbouring country. This focus is justified by the idea that additional benefits (but also higher barriers) are to be expected due to a larger degree of heterogeneity between the various territories in the functional area. Higher diversity is present in functional regions extending over national borders in the following dimensions: institutional and regulatory framework, technological trajectories, access to national and international networks, position of each

region in their own national context, culture, etc. This enhanced diversity offers a good potential for new combinations of competences, knowledge and traditions, and for more diverse open innovation practices, still exploiting the advantages of proximity. Hence, **innovation opportunities for cross-border areas** emerge from: combining different factor endowments in the various regions and countries; exploiting the complementarity between various research traditions and knowledge bases; expanding innovation networks; better use of funding opportunities at various levels; and enhancing visibility and attractiveness of the area due to a larger size and expanded outreach from the various regions and countries involved.

2. Aim of the project

7. The aim of the project is to investigate the prospects for developing regional innovation policies for areas that do not correspond to traditional regional definitions. The project will focus on areas that extend both: i) beyond regional administrative borders, and thus involve some degree of trans-regional collaboration; and ii) over national borders, because of the special opportunities and challenges faced when trying to create policy synergies between regions from two different countries. The hypothesis at the root of this project is that the trans-border innovation potential is under-exploited, and constitutes a missed opportunity for OECD regions and countries.

8. It is a policy-oriented project, hence the attention to the role of governments, principally at regional level, for promoting innovation. The project will not review in detail the diversity and nature of “grassroot” cross-border innovation collaboration at the project level (cross-border R&D projects, transregional clusters, etc.) but use them as elements of the analysis of the cross-border systems targeted by the policies.

9. The focus of the project is thus on **regional innovation policies for cross-border areas**. It aims at identifying benefits, incentives and barriers, analysing existing practices, and providing policy recommendations to develop such policies. The project will build on knowledge accumulated within previous OECD Territorial Reviews with a cross-border dimension (Öresund, Vienna-Bratislava and Pan Yellow Sea) and place a focus on innovation policies.

10. The **definition of innovation** used in this project is a broad one, in accordance with OECD Innovation Strategy: innovation goes much beyond R&D and incorporates product innovation, process innovation, marketing innovation and organisational innovation, as defined by the Oslo manual. Accordingly, the notion of innovation policy covered in the project is broad too, and is not equated to R&D or technology policy: it encompasses a broad range of policies deployed to stimulate and alleviate barriers to those various types of innovation. This places a focus on policies for knowledge absorption, diffusion, and creation.

3. State-of-the-art in governmental cross-border co-operation

Spatial dimension of cross-border co-operations

11. Contemporary regional innovation policies tend to offer policy instruments and support initiatives “in” regions and not “for” regions. In regions with elected governments, regional decision-makers are accountable to local electors, and it is much easier to obtain support for projects and initiatives that are visibly located within regional borders, than for projects of a wider scope (but possibly wider benefits for the regional economy). Joint national-regional initiatives are frequent in regional innovation policies, but shared policy initiatives and instruments involving several regions, are still rare in regional policy portfolios. This is more frequently the case when regions belong to different countries.

12. Nevertheless, there are several experiences of co-operation between regions, which demonstrate awareness by regional authorities of the need to look beyond borders when deploying their action. These co-operations cover areas which can be classified under three main types:

1. **Small cross-border areas:** a limited set of neighboring regions in one or several countries, with adjacent borders, covering a restricted space (smaller than an average country). Typical examples are: the Dutch-German-Belgian Top Technology Region TTR, the Centrope region at the intersection of Austria, Slovakia, Czech Republic and Hungary, the Danish-Swedish Öresund region or the Southern Technology Council gathering 13 US States.
2. **International networks of regions without adjacent borders,** spread over a large territory. Typical examples are: the “four motors of Europe” gathering Lombardia, Catalonia, Rhône-Alpes, Baden-Wurttemberg or the “District of Creativity” Network, gathering 13 regions in 3 continents (Europe, America and Asia). A proliferation of such networks has taken place thanks to EU programmes supporting exchanges of experiences and joint projects between EU regions, such as the “Regions of Knowledge” programme and the INTERREG B programme.
3. **Transnational macro-regions** including a large set of regions from different countries, as well as entire countries, covering a wide territorial area. Typical examples are: the Danube region, the North Atlantic Co-operation Network, covering Iceland, Greenland, the Feroe Islands and the coastal regions of Norway, the Arctic Region. We do not include here macro-regions such as the Baltic Sea region or the Nordic region, as the constituting partners of these networks are countries rather than regions.

Focus on cross-border co-operations

13. In this project, we concentrate on the first type of area, the **small cross-border areas of adjacent regions**, on the hypothesis that these types of co-operations are the most relevant for developing joint (or at least well co-ordinated) regional innovation policies. The reasons are that: *i*) the rationales for co-operation in these cross-border regions are more likely to rest on the identification of micro-economic development opportunities than on broader geostrategic or infrastructure considerations; *ii*) because of geographic proximity, economic exchanges and flows of people, capital and knowledge, are likely to be more intense within such cross-border regions than in the other types; *iii*) the co-operative arrangements are more likely to remain over time (as opposed to specific regions networks formed on a temporary basis thanks to EU project funding); *iv*) these areas are likely to be more homogeneous in terms of economic development than the other two types, and this situation, together with geographic and cultural proximity, creates a more favourable environment for the development of joint or co-ordinated innovation policies. The development of a shared common vision across the regions part of the area, as a basis for joint policy development, is more likely to be achieved in this type of environment.

A glance on existing cross-border co-operations

14. Some cross-border regions have already a long history of co-operation, especially in Europe. The project of creation of the European Union as a borderless area has stimulated cross-border co-operation in many parts of the continent. The regulatory framework evolving progressively towards more harmonisation across EU countries provides a favourable environment. Several cross-border co-operations have been stimulated by the first EU-sponsored INTERREG I programme (1990-93), which has supported the emergence of cross-border structures, called “Euroregions” in Benelux, France, Germany, and other central areas of the European Union. Successive INTERREG programmes, integrated under the Cohesion Policy instruments of the EU, have provided continuous support to cross-border co-operation arrangements. Infrastructural ties are at the origin of several of these co-operations (the Channel between

France and UK, the bridge between Denmark and Sweden), cultural links are also an important driving force in some (*e.g.* between French-speaking regions in Switzerland and French regions), but many of them have evolved over time to incorporate new dimensions, such as education, research and innovation. Well known areas with strong cross-border linkages in Europe are notably:

- Kent (UK)-Nord-Pas-de-Calais (F)-Vlaanderen (BE)
- Öresund (DK– SE)
- Noord-Brabant (NL)- Liège (BE) – Limburg (NL) –Limburg (BE) - Aachen (DE)¹
- Region Lémanique (CH) – Franche-Comté (FR)
- TriRhena covering Alsace (FR), Baden-Wurttemberg (Germany) and North West Switzerland (CH).

15. More recent examples of cross-border regions facilitated by the expansion of the European Union borders to the East, are also interesting to examine, since their origin and the nature of the co-operation are likely to be different from the more traditional “old Europe” Euroregions. Their unbalanced profile, gathering, on the one hand, stronger but slow-growing regions from Old Member States, and catching-up regions from New Member States, is a specific characteristic of these cross-border entities:

- The Villa Manin region², covering Veneto and Friuli-Venezia-Giulia in Italy, Carinthia in Austria, Slovenia, and Istria and Primorsko-Goranza in Croatia;
- The Centrope³ region covering bordering regions of Austria, Hungary, Czech Republic and Hungary;
- The Helsinki-Tallin metropolitan region.

16. In OECD countries outside of Europe, similar cases of cross-border co-operation partnerships are less frequent. This is due to the large size of regions in Canada or the US, and to the fact that borders remain as more important barriers than within the European Union context (the NAFTA agreement cannot be compared to the EU treaties). In the US and Canada, the issue of (domestic) inter-States and inter-Province co-operation on innovation is gaining attention in policy circles, and should come under scrutiny in such a study. Cases of cross-border regional co-operation outside the EU include:

- The Pacific North West Economic Region (PNWER) gathering the US states of Alaska, Idaho, Montana, Oregon, and Washington; and the western Canadian provinces of Alberta, British Columbia, Saskatchewan and Yukon; and Northwest Territories;
- The Southern Growth Policy Board gathering 11 US States, and promoting a sound “Southern Innovation System”;
- The partnership between the Shangai municipality and neighbouring provinces of Zhejiang and Jiangsu around science and technology;

¹ http://www.bakbasel.com/downloads/services/reports_studies/2008/200812_bakbasel_benchmark_ttr_limburg.pdf

² http://www.bakbasel.com/downloads/services/reports_studies/2009/20091120_bakbasel_villamanin_en.pdf

³ <http://centrope.com/centropenew>

- The Conference of Governors for four US and six Mexican border regions, committed to promote economic growth over the border.

17. Some countries and groups of countries have established **structures** to promote cross-border co-operation. A new EU legal instrument was adopted in 2006: the European Grouping of Territorial Co-operation (EGTC), which provides a legal framework for such territorial co-operations. The recently created EGTC cover areas as diverse as: health, civil defence, economic development, protection and promotion of natural resources, training, research and innovation policy, etc. Examples of organisations in charge of supporting cross-border regional co-operation are:

- Cross-Border Operational Mission (MOT: Mission Opérationnelle Transfrontalière) in France ;
- Grande Région, gathering the regions of Wallonia in Belgium, Lorraine in France, Saarland in Germany and Luxembourg;
- The Upper Rhine Council for Alsace, Southern Baden and North-West Switzerland.

18. The **operational content** of these cross-border co-operations extend from platforms limited to exchanges and representation, at one extreme, towards in-depth co-operative initiatives involving joint resources commitment, at the other extreme. It is not always easy to assess the substance of co-operative activities behind the territorial marketing actions. The types of innovation-related activities often carried out by cross-border governmental arrangements include:

- Human resources development: exchanges of students, at various educational levels; joint training schemes; joint degrees in tertiary education institutions; brokerage desks for employment services; etc.
- Co-operation in infrastructures: joint research and technology transfer infrastructures; cross-border science and technology parks or incubators; real or virtual joint structures for innovation promotion; etc.
- Joint or co-ordinated innovation support initiatives: support to cross-border clusters or specialised poles; joint foreign missions; cross-border research funding programmes; organisation of joint participation in EU projects; cross-border innovation support schemes (advisers networks, innovation vouchers,...); etc.
- Exchanges of experiences on particular policy instruments (clusters, *e.g.*);

4. Key questions for a project on cross-border innovation policies

19. **Three key topics** will be addressed by this project: *i*) identification of potential for cross-border co-operation in innovation policy and the emergence of cross-border partnerships; *ii*) ways and means to implement cross-border innovation policies; and *iii*) assessment of cross-border innovation policies. The points below suggest more detailed questions under each topic. For most of these questions, a historical view should be taken, *i.e.* the evolution of the various aspects of the cross-border co-operation over time should be documented and analysed.

How to identify benefits, but also limits of potential cross-border co-operation for regional innovation?

- How is the **functional cross-border region** defined? What kind of cross-border relationships are present and justify the claim for the existence of a functional region? How is “functional distance” within the cross-border region measured? What is the evidence base?
- What are the **rationales** for establishing formal cross-border co-operation partnerships, involving at least two regional authorities from one or several neighboring OECD countries? What are the driving forces of these co-operations, and which rationales do lead to lasting and in-depth co-operations? Are the partnerships based on similarities or complementarities?
- Who are the **key actors** at the origin of the crossborder co-operation? Is the partnership mainly publicly- or privately-led? What is the balance of power between the various partners running the co-operation?
- What are the **thematic priorities** of cross-border co-operation programmes and what is the weight of innovation in these programmes? How are they determined? How are the priorities evolving over time, which ones are gaining/losing strength?
- What role does **specialisation** of economic fabric play in the emergence and dynamism of cross-border co-operations? Should economic structures over the borders be similar or rather complementary in order to provide a good basis for a cross-border regional innovation system?
- What are the requirements in terms of **institutional powers** of regions involved in cross-border co-operations?

How to organise effective cross-border co-operation for regional innovation?

- What are the **multi-level governance arrangements** used for these co-operations? What is the role of supra-national, national, regional and local bodies in initiating and implementing cross-border co-operations? How different are the models of co-operation with a top-down drive (strong role for national authorities) versus bottom-up regional driving force? How to cope with the diversity of institutional structures across the borders (*e.g.* between regions in federal versus centralised states)?
- What kind of **organisational structures** are put in place to manage cross-border co-operations, which ones are the most effective under various environments? What is the respective role of formal structures versus informal networks in driving co-operation forward? How successful are these structures to ensure aligned stakeholders involvement across the borders? How are strategic orientations decided?
- What is the role and origin of **financial incentives** to foster cross-border co-operation? What is the origin of this funding? How far are the co-operation dependent on funding, is there a typical transition period after which the co-operations should become self-supported?
- What are the **funding arrangements** for joint cross-border innovation policy instruments? How much funding is involved and how does this compare to regional and national funding for innovation? How are the barriers to joint funding overcome in the successful cases?

- Which types of **innovation policy instruments** are included in cross-border partnership agreements and how do the “cross-border policy mix” differ from traditional regional mixes? What is the specific role of these cross-border instruments?
- What kind of other joint activities/policies are seen as necessary **complements** of cross-border innovation policies? (*e.g.* labour market policies? Transport infrastructures?)

How to assess success of cross-border co-operation for regional innovation?

- What is the **level of co-operation** achieved in joint activities: from voluntary exchange of experience to genuine joint instruments involving commitment of funds, no “juste retour” considerations, etc.? How can the cross-border dimension be assessed, how to distinguish between truly synergetic instruments and simple juxtaposition of instruments?
- What are the **barriers and incentives** faced by regional authorities involved in cross-border co-operation, what are the good practices in alleviating the barriers and using the incentives? How to ascertain that the expected balance from cross-border co-operation is positive? (*e.g.* that displacement of people and economic activities will in the end benefit all parties ?) How to balance competition and co-operation (*e.g.* in attracting talent)?
- How can the **success** of cross-border co-operative initiatives be assessed? How to evaluate impacts on a cross-border basis? What **indicators** do exist to measure the degree of integration of the cross-border region, from the point of view of innovation?
- Can cross-border regions with **unequal potential** fruitfully engage in such partnerships?
- What role does **size** of the cross-border region play in the success or failure of the cross-border co-operation?
- How far can the **lessons** from successful cases be transferred from one environment to another?

5. Implementation of the project

Timing: 24 months, starting end 2010.

Partnership: a group of cross-border regions, and national and supra-national governments interested in the topic. Co-ordination by the OECD Secretariat.

Structure: three phases:

1. A **concept paper** prepared by the OECD Secretariat, including a literature review, preliminary outline on the key questions highlighted above, and draft typologies of cross-border co-operation in regional innovation.
2. A series of **case studies** of cases of cross-border regional innovation co-operation. The sample of regions should cover a diversity of situations in terms of: growing versus lagging regions; central versus peripheral; large versus small areas; regions well endowed in R&D infrastructure versus regions relying on other assets; regions with a tradition in cross-border co-operation versus regions newly engaged in it; the variety in focus in innovation promotion (*e.g.* cross-border industry-science partnerships; new firms promotion; trans-border clusters development, etc.). The

role of each cross-border region is to contribute with: a background report (structure defined by OECD secretariat) and peer reviewers involved in at least one other cross-border case.

3. A **horizontal analytical phase** drawing lessons from the case studies.

Funding: total budget 450 000€. To be funded by voluntary contributions from several sources:

- Consortia of cross-border regions: an estimated budget of 75 000€ per cross-border area would be needed to include the area as a case study in the project.
- National and supra-national governments interested in the horizontal analysis of cross-border co-operation in innovation policy.

Contact: Claire Nauwelaers - Innovation Unit - Regional Development Policy Division,
OECD Directorate for Public Governance and Territorial Development.
Claire.Nauwelaers@oecd.org. Tel: 33 (0)1 45 24 96 11.