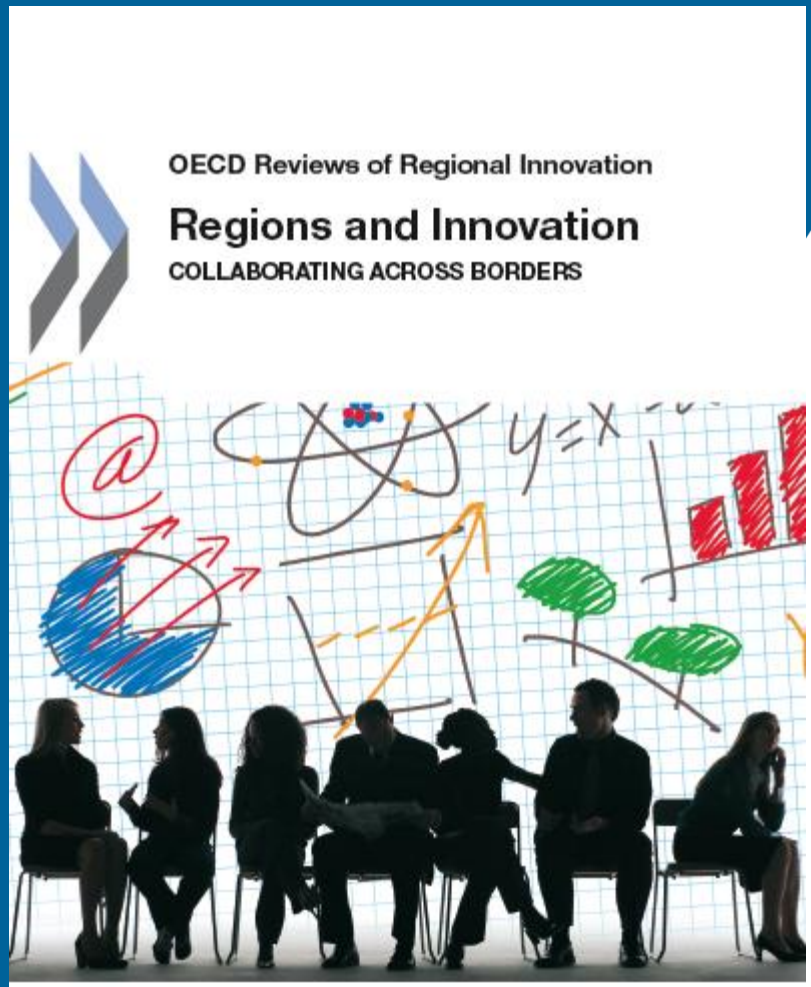
REGIONS AND INNOVATION: COLLABORATING ACROSS BORDERS



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Regional development policy at the OECD: areas of research

Thematic reports

- Regional development
- Innovation
- Multi-level governance
- Urban development
- Rural development

Data

- Regional Database

http://stats.oecd.org/OECDregionalstatistics/#story=0

- Metropolitan Database

http://www.oecd.org/statistics/datalab/metro-explorer.htm

Reviews

- Regional development
  - National territorial reviews
  - Regional territorial reviews
- Urban development
  - Metropolitan reviews
  - National urban policy reviews
- Rural development
  - Rural territorial reviews
  - National rural policy reviews
- Reviews of regional innovation
- Water governance

Lessons from other OECD macro-regional territorial reviews

North Atlantic Region (NORA)

(Faroe Islands, Greenland, Iceland, and the coastal counties of Norway)

- Co-operate on targeted themes and issues
- Draw up a regional development strategy
- Promote greater awareness of the benefits of co-operation
- Develop a "variable geometry" approach to regional co-operation
- Enlarge and refine the role of the NORA institution as a facilitator of co-operation.

Pan Yellow Sea Region

(the coasts of Northern China (Bohai Rim), western and southern Korea and south-western Japan (Kyushu)

- Transportation network integration
- Human and cultural networking
- Environmental collaboration
- Transborder governance

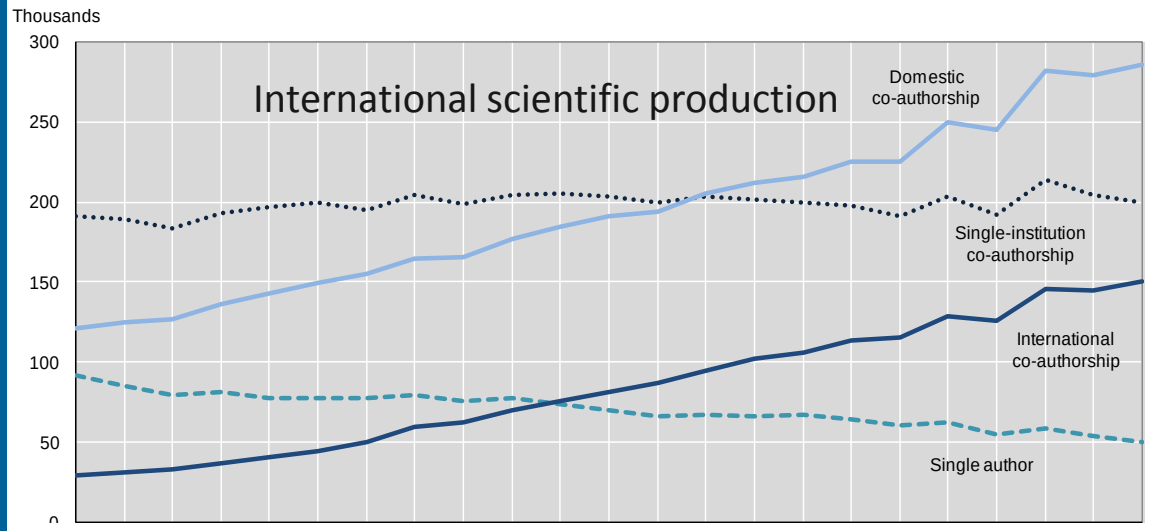
OECD Cross-border study overview

WHEN and HOW cross-border innovation policies should be designed and implemented *by*, *for* and *in* the regions

- When does it make sense to collaborate with cross-border *neighbours* (and when does it not sense)?
- What governance approaches can be used to manage collaboration?
- What policy instruments can facilitate cross-border innovation?

Metropolitan regions	Network of small and medium-sized cities	Sparsely populated areas
Oresund (Denmark, Sweden)	TTR-ELAt (Netherlands, Germany, Belgium)	Hedmark-Dalarna (Norway, Sweden)
Helsinki-Tallinn (Finland, Estonia)	Bothnian Arc (Sweden, Finland)	
Ireland-Northern Ireland (UK) (variety of settlement patterns)		

Innovation collaboration increasingly global…



Source: OECD (2010), *Measuring Innovation: A New Perspective*, OECD Publishing, http://dx.doi.org/10.1787/9789264059474-en.

International scientific co-publications tripling from 7% in 1985 to 22% in 2007.

The share of regional co-patents with foreign inventors has doubled from 10% in 1980 to 20% in 2008.

Source: OECD, based on Eurostat (CIS-2010) and national data sources, June 2013. See chapter notes.

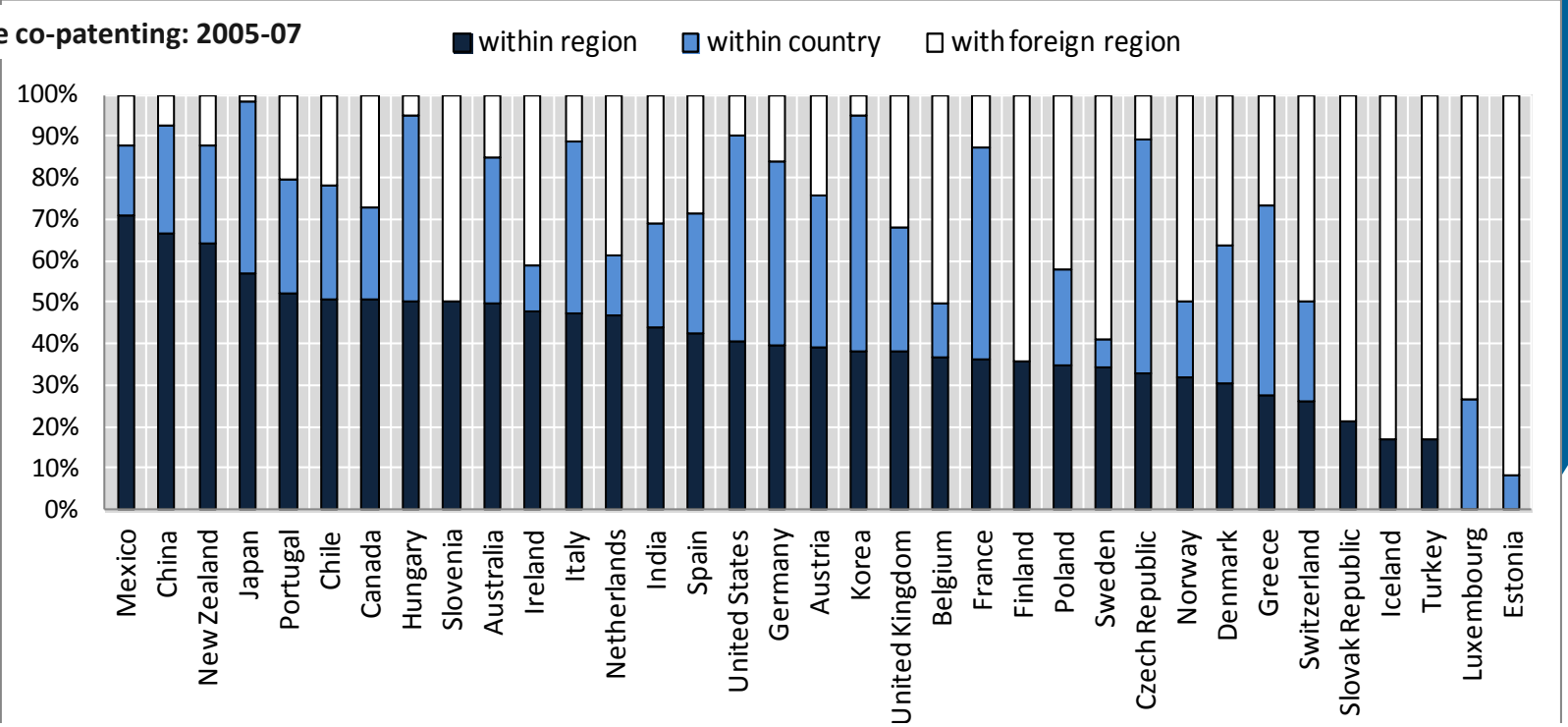
Source: OECD Science, Technology and Industry Scoreboard, OECD Publishing. *http://dx.doi.org/10.1787/888932891416*

…. But proximity still plays a role

Over 33% of R&D in the top 10% of large regions; 58% of patents in the top 10% of small regions

Spatial decay (150-200 km); neighbourhood effects; "cost" of the border increasing over time

Share of public-private co-patenting: 2005-07



Source: OECD (2011), *OECD Regions at a Glance*, OECD Publishing, http://dx.doi.org/10.1787/reg_glance-2011-en.

Ten conditions favourable to cross-border collaboration… and for macro regions?

Framework conditions
1. Geographic accessibility
2. Socio-cultural proximity
3. Institutional context conditions
4. Cross-border integration
Innovation system conditions
5. Economic specialisation
6. Business innovation model
7. Knowledge infrastructure
8. Innovation system interactions
Governance and policy context
9. Governance
10. Policy mix

Source: OECD (2013) ; adapted and insspired by Trippl (2009)

Proximity	Favourable conditions
Geographic	Short spatial or physical distances allow for "tacit" knowledge flows
Cognitive	Shared knowledge base (need novelty but also common base). Concept of "related variety"
Organisational	Control uncertainty and opportunism (avoid lock-in)
Social	Trust and commitment for interactive learning (avoid lock-in and opportunism)
Institutional	Enabling factor providing stable conditions (need common practices but avoid lock-in and inertia)

Source: Derived from Boschma (2005).

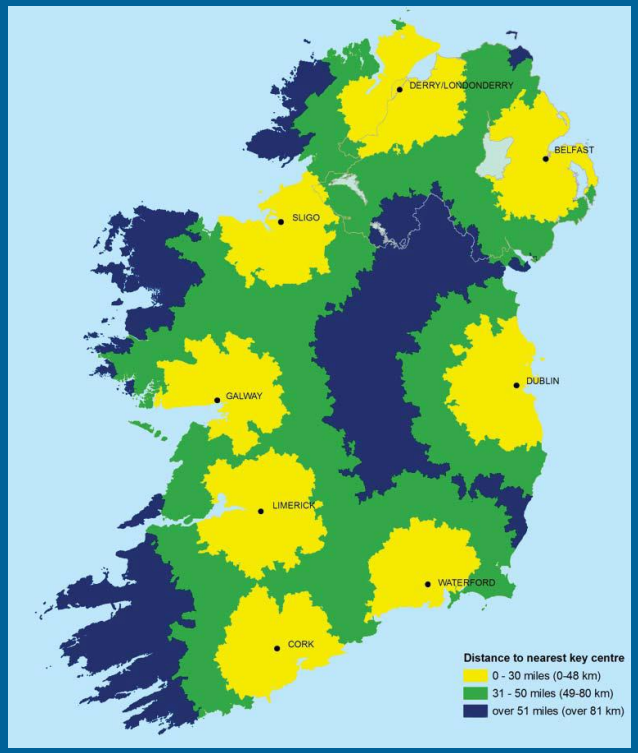
Innovating beyond borders: Why and when to collaborate

Acting beyond borders	• Innovation does not stop at the border
Borders as bridges	• Openness cross-border goes hand-in-hand with better integration and competitiveness in global networks
Borders as opportunities	• Benefit from proximity, critical mass, complementarity expertise, greater international attractiveness, etc.
Defining the functional area	• Data reveal the innovation-relevant “functional” region ≠ administrative region, resulting in variable geometry
Checking for the right conditions	• Checklist of ten conditions for a more or less favourable environment for cross-border regional innovation policy

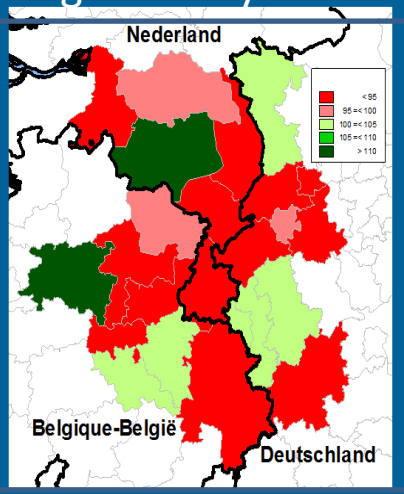
Defining the “functional” cross-border area for innovation support differs from other functions

Narrow border area

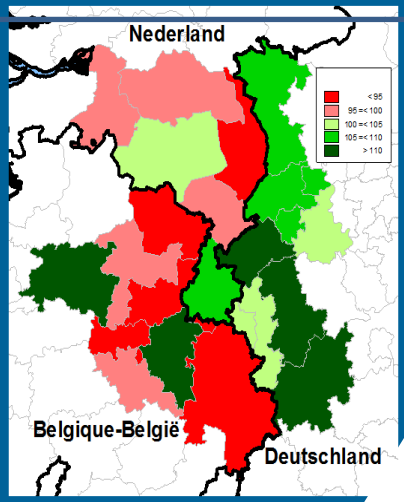
All-island definition
(international border denoted by gray line)



High-tech systems



Life sciences



Note: These maps are for illustrative purposes and are without prejudice to the status of or sovereignty over any territory covered by these maps.
Source: Special EU Programmes Body.

Source: Irish Academy of Engineering & InterTradeIreland (2010), *Infrastructure for an Island Population of 8 Million.*

Source: Competitiveness Indices: BAK Basel Economics, 2012

Governing cross-border collaboration: Public and private engagement

Raise public interest at different government levels	• Each level of government (local, regional, national and even supra-national) has a role to play
Identify overarching vision	• Need a common purpose to unify different actions
Demonstrate mutual benefit	• Each side of the border will make its own assessment of the costs and benefits, and its share of these
Governance beyond government	• Use top-down and bottom-up levers, formal and informal governance that contribute to long-term relationships of trust
Private sector engagement	• Ensure the private sector takes a sufficiently prominent role in promoting the cross-border area

Different rationales for cross-border collaboration

Economic concept	Driver	Explanation
Economies of scale	**Critical mass**	Larger labour markets; wider business and knowledge networks
	Political power	Better compete for higher level government resources
	Specialised services	Innovation support services of higher quality
Economies of scope	**Complementarities**	Diversity of assets (research, technology and economic base); “related variety”; price levels
Public and club goods	**Regional identity**	Increase internal recognition; social capital
	Regional branding	International attractiveness (firms, workers, etc.)
	Specialised infrastructure	Reduce costs and share risks
Externalities	**Border challenges**	Day-to-day issues associated with flows of people, goods, and services

Governance issues very difficult for cross-border areas to manage

Characteristic	Specification	Comments
National political capitals	Yes, each side	Helsinki-Tallinn
	Yes, at least one	Oresund, Ireland-Northern Ireland
	None	TTR-ELAt, Hedmark-Dalarna, the Bothnian Arc
Longevity of public co-operation	20 years+	TTR-ELAt, Oresund
	10-20 years	Ireland-Northern Ireland, the Bothnian Arc, Helsinki-Tallinn
	<10 years	Hedmark-Dalarna
Innovation policy competencies	Balanced, strong	--
	Balanced, weak	the Bothnian Arc, Helsinki-Tallinn, Hedmark-Dalarna
	Unbalanced	Ireland-Northern Ireland, TTR-ELAt, Oresund
Political commitment	Balanced, strong	Ireland-Northern Ireland, Oresund (sub-national)
	Balanced, weak	the Bothnian Arc, Hedmark-Dalarna; Helsinki-Tallinn
	Unbalanced	TTR-ELAt
Institutionalization of funding sources	Present, strong	Ireland-Northern Ireland, Oresund
	Present, weak	Bothnian Arc, Helsinki-Tallinn, Hedmark-Dal TTR-ELAt

Making cross-border instruments work: Learning from international examples

Implement a strategy	• The vision needs to be translated into targets, actions, funding, and monitoring/evaluation
Develop a cross-border policy mix	• Co-ordinate and align different instruments to fulfil the strategy, addressing failures in the cross-border innovation system
Promote policy learning	• Design relevant policies based on needs and lessons learned from prior projects and programmes
Identify long-term funding	• Strive for sustainable funding opportunities, such as mainstreaming the cross-border element in existing instruments

Instruments applied cross-border

Strategy and policy development

- Analytical exercises and mappings (mapping of clusters or value chains, technology foresight exercises)
- Benchmarking and policy learning
- Joint branding of the cross-border area

Technology transfer and innovation support

- Cross-border innovation advisory services (vouchers, intermediaries)
- Advisory services to spin-off and knowledge-intensive start-ups
- Other technology transfer centres and extension programmes

Science and technology parks and innovation networks

- Cross-border science and technology parks
- Cluster or network initiatives

R&D support

- Joint public research programmes
- Joint research infrastructure, shared access to research facilities
- Cross-border private R&D funding programmes (generic and thematic)

Educated and skilled workers

- Scholarships/student exchanges
- Joint university or other higher education programmes
- Talent attraction and retention or mobility schemes
- Cross-border labour market measures

Other instruments

- Financing (venture capital funds or angel networks)
- Public procurement/ border as a source of innovation/ innovation awards

What instruments work well? Less well?

- What generally seems to work?
  - Cross-border linkages of firms with providers (e.g., innovation vouchers)
  - Cluster-related support for areas of common competencies
  - Joint prioritised research
  - Access to shared S&T parks , scientific installations, joint centres
- What is not generally working as well?
  - Attempts to allow funds from one country go to another (some exceptions)
  - Innovation projects in highly regulated sectors (health, energy)
  - International branding efforts are often caught up in political sensibilities
- Where are there examples of both success and failure?
  - Broad university collaborations
    - Collaboration in specific fields easier
    - Researchers look for excellence over proximity
    - Students need framework conditions
  - Firm networking and matchmaking; leading to collaboration?

Overview of recommendations

Innovating beyond borders

Defining the functional area

- Look at what the data says, but don't wait to start
- Only pursue the cross-border element when it makes sense
- Allow flexibility in the area definition so as to not create unhelpful new borders
- Don't under-estimate the importance of other "hard" and "soft" factors beyond innovation

Governing cross-border collaboration

Aligning incentives and working together

- Give politicians a reason to care about the issue
- Identify for supra/national governments where they can help local/regional efforts
- Understand different costs and benefits, and their alignment, for a long-term, trust-based collaboration
- Engage non-public actors in governance, with some form of secretariat

Making cross-border instruments work

Learning from international lessons

- Devote more efforts to strategy development and policy intelligence
- Mainstream the cross-border element, and if not, align or allow for programme flexibility
- Make greater use of opportunities created by the border
- Publicize success stories of cross-border instruments