



**EXPERT EVALUATION NETWORK
DELIVERING POLICY ANALYSIS ON THE
PERFORMANCE OF COHESION POLICY 2007–2013**

TASK 1: POLICY PAPER ON INNOVATION

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1 EXECUTIVE SUMMARY

The Danish innovation policy is structured around specific regional policies. The six regions of Denmark carry out their own innovation policies that are implemented by the regional growth forums. Each region has highly different characteristics, both in demographics, challenges and themes and activities of innovation, consequently strategies focus on different sectors from tourism to the development of networks and knowledge clusters. However, a programme evaluation has concluded that there is a strong coherence between the objectives of the ERDF, the national strategy and the regional strategies of the six regions.

The total support from the ERDF in the period 2007–2013 is 254,788,620 €¹. 82.2 per cent of this amount is to be granted under the innovation and knowledge objective and at the end of September 2009, 35.7 per cent of the total support had been allocated to selected projects². The funding is primarily allocated within the regions and the ERDF programmes work as a catalyst for the majority of the projects.

The structural funds programme for 2007–2013 is now halfway through the programming period. This implies that the evidence of the achievements is relatively sparse for the time being. Only 8 projects have been completed and have conducted a final evaluation. The projects focus on the development of networks, knowledge clusters and platforms for innovation and have been relatively successful, according to the evaluations.

The preliminary findings of this review have shown that the evaluations, on a project level, have a strong focus on the primary output of the respective performances; to fulfil the objectives of the ERDF and the goals set up in the respective applications. The main challenge is to widen the scope of the evaluations and develop evaluations that deal with results and impacts in a methodological and consistent way. To overcome the challenges, and to improve the innovation potential of the EU, the Cohesion Policy programmes need to create measures that deal with results and impacts that can be applied to a supranational programme level. Due to the financial crisis, which has caused rising unemployment rates in Denmark, it is of great importance that the innovation policy generates growth and new jobs.

¹ National Strategic Report 2009

² National Strategic Report 2009

2 NATIONAL AND REGIONAL INNOVATION POLICY AND THE CONTRIBUTION OF ERDF

2.1 NATIONAL AND REGIONAL INNOVATION POLICY

This chapter will give a brief outline of the relationship between the national and the regional innovation strategy. It will examine the basis for the processes of innovation strategy and the role of ERDF by looking into the institutional setup of Denmark.

The levels of the Danish innovation strategy can be summarised in the figure below that outlines the features of the overall organisational framework of the innovation policy.



Danish Enterprise and Construction Authority, who is the legal managing authority, has outlined the objectives and goals of the Danish innovation policy in two different national strategic papers. The following reports summarize the national strategy:

- The Strategic Report 2009³
- The National Strategic Reference Framework 2007–2013

Since 2007, the Danish structural funds have been integrated into the regional development strategies. The six regions in Denmark have set up Growth Forums to implement the respective regional strategies for the development of trade and industry, while the Danish Growth Council is appointed to advise on strategy and administer the implementation of the national policies. The council is also in charge of developing the integration between the national and regional growth policy. Furthermore, the national council is responsible for the allocation of 10 per cent of the total support from the ERDF⁴.

³ This Report covers both the programme of the ERDF and ESF

⁴ A 10 per cent share is not allocated between the regions but allocated through an ongoing national competition fund

The Danish objectives

On the basis of the Lisbon strategy a number of national priority areas have been chosen from the strategic guidelines of the structural funds. Denmark has chosen a thematic approach to an integrated innovation policy that can achieve the goals presented in the competitiveness objective⁵. This has created a strong focus on three growth drivers⁶:

1. Innovation, knowledge sharing and knowledge development
2. Creation and development of new businesses
3. Application of new technologies

First of all, the main objective of the national measure is to ensure that Denmark remains competitive and stays among the richest countries in the world in a GDP comparison⁷. In relation to the objectives, defined by the Structural Funds, the Danish government has decided to focus the support of innovation on small and medium-sized enterprises (SMEs).

Furthermore, Denmark has introduced two global goals in the structural fund programme that relates to the innovation and knowledge objective:

1. At least half of the Danish enterprises should be innovative by 2013 (40 per cent in 1998–2000)
2. Denmark should be among the five most innovative countries in the EU in 2013 (no. 10 in 1998–2000)⁸

To achieve the goals outlined above, the national government allocates 72.7m € for innovation and entrepreneurship each year.⁹ The Danish Council for Technology and Innovation administers the majority of the funds concerning innovation and has supported a number of initiatives, the purposes of which are to promote innovation and dissemination of knowledge between knowledge institutions and enterprises.

The regional level of innovation policy

The setup of the Danish innovation policy implies a relatively clear-cut division between the national and regional level. The regions have their own specific policies that are implemented by

⁵ NSRF 2007–2013

⁶ The growth drivers are the foundation for the Danish strategy on innovation and in this report the growth drivers are comparatively equivalent to the policy areas described in Annex B. However, these are overall strategic objectives of the entire Danish approach to innovation policy. Some of the Danish evidence on performance is based on the growth drivers, but to maintain a certain level of consistency in this report and to make the Danish performance internationally comparable, we will focus on the policy areas and the FOI codes categorisation as described in Annex B.

⁷ NSRF 2007–2013

⁸ NSRF 2007–2013

⁹ Danish Ministry of Finance, Agreement on the Globalization Funds for 2010–2012

the regional growth forums. The six regional growth forums have highly different characteristics, both in demographics, challenges and themes of innovation. Some focus on tourism and creating jobs while other focus on product innovation and the creation of knowledge. Despite the different policies, they all apply the ERDF objectives in their strategies. Furthermore, the respective growth forums have made an individual partnership agreement with the government concerning the regional strategic contribution to the overall national performance on innovation that has been presented in the national globalization strategy. Thus the national government sets up the strategic framework and the regional growth forums implement the funding and the conditions at a regional level. The table below summarises the strategies of innovation in the six regional growth forums.

Overview of the regional strategies	
Regional Growth Forum	Strategy of innovation
Growth Forum North Jutland	New products and business models Development of new technology Increase work places
Growth Forum Central Denmark	International growth region Improve infrastructure Education
Growth Forum Southern Denmark	International centre for user driven Innovation Improve international attractiveness Create new clusters of business
Growth Forum Zealand	Improve education Strengthen commercial position
Growth Forum Capital Region	Metropol for business in Northern Europe Build international business relation Improve collaboration in the Øresund Region Knowledge as a source for growth
Growth Forum Bornholm	Increase the population Improve the attractiveness for business Growing tourism
Source: New Insight	

Coherence between structural funds and regional implementation

The Danish consultancy company, COWI, has conducted a provisional evaluation of the 2007–2013 Danish structural fund programme. The purpose of the thematic evaluation is to evaluate the coherence between the objectives of the structural fund programme and the priorities and focus of the regional strategies.

By examining the structural and institutional setup of the strategy for innovation the evaluation concludes that there is a strong coherence between the objectives of the ERDF and the regional strategies of the six regions.¹⁰ Additionally, the three growth drivers have proved effective and

¹⁰ The evaluation is based on the following methods: Text analysis of the regional strategies, interviews with executives from Growth Forums, survey including responses from recipients about expected effects (new products, processes, Denmark Final Draft, August 2010

have resulted in an overall alignment between the regional and the overall strategic framework described in chapter 2.1.¹¹

2.2 ERDF CONTRIBUTION ACROSS POLICY AREAS

Currently Denmark is only participating in the competitiveness objective. The support from the ERDF is a relatively modest share of the Danish GDP (approx. 0.03 per cent of the GDP) and even a very successful performance will have limited effects on GDP per capita. However, the support from the ERDF may contribute to the overall goals when combined with the national and regional effort. The main rule is that the amount of money from ERDF equals the regional funding. Additional funding is sponsored by the state, municipalities and private institutions. So it can be concluded that the funding from the ERDF plays a crucial role for projects carried out on a regional level.

The main focus of the support

The regional growth forums allocate 90 per cent of the total support from the ERDF. Accordingly, the contribution from the ERDF focuses specifically on the regional level and is highly integrated in the regional policies on competitiveness. So far the support has been distributed relatively well according to the plan of total support within the present period, as described in the NSRF 2007–2013. 75.3m € of a total 209.5m € were allocated to selected operations in September 2009¹² in the following policy areas:

The Allocation of Support by Policy Area	
Policy area	Share (per cent)
Innovation friendly environment	15.6
Knowledge transfer and support to innovation poles and clusters	32.9
Boosting applied research and product development	51.5
Source: New Insight and NSR 2009	

The characteristics of the recipients are highly fragmented: From small companies with an innovative profile, carrying out technology or product innovation, to huge collaborations between private and public sector companies. A considerable number of projects are conducted by the regional growth houses, which offer guidance for SMEs on product and business process innovation. Also, a lot of the projects include a strong focus on network creation between research, universities and businesses or the development of business or knowledge clusters.

Innovation policy in the inter-regional co-operation programme

networks, jobs and companies), statistical analysis of project data, analysis of six selected innovation projects, interview with a control group.

¹¹ The thematic evaluation is based on allocation data of April 2009 where 109 projects had received support from ERDF under the Innovation Objective

¹² This is based on the Total ERDF resources for the innovation and knowledge objective, and the categorisation of expenditure as described in Annex A. The actual allocation is calculated as of end-September 2009.

The Danish participation in the European Territorial Co-operation Programme also involves elements of innovation policy. The cross-border co-operations is integrated in the national strategic approach, coordinated by the Danish Enterprise and Construction Agency and implemented by the regions involved. In the present period the funding for Danish participation is approximately 100m €. Denmark participates in 4 cross-border co-operations and 2 transnational ones. All the programmes imply an innovation scope. The purpose of the programmes is to strengthen the capacities of clusters and networks will create innovative environments for small and medium sized enterprises (SMEs), business development and economic growth. These programmes have the potential to generate growth, innovation and new knowledge, especially in peripheral parts of Denmark.

3 EVIDENCE AVAILABLE ON THE PERFORMANCE OF INNOVATION MEASURES CO-FINANCED BY ERDF

The desk research has revealed that the evidence on the performance of innovation policy is relatively sparse. The research has been characterised by some difficulties in data tracking, since the level of online data on concrete projects has been fairly low.

For the time being, only 8 projects have been evaluated. This is due to the fact that most of the projects are still ongoing. Additionally the Thematic evaluation, conducted by COWI, offers an extra 6 analyses of projects supported by the ERDF. These are not final evaluations, but descriptive analyses based on evaluation-like parameters.¹³

To systematize and synthesise the characteristics of the various evaluations this paper is structured around a range of parameters. To perform a general view of the fragmented data and the achievements of the performance, the evaluations are divided into a scheme based on the following parameters: methods, output and result. This paper systematically screens all of the data available with the three parameters in mind.

The methods define how the evaluations are instrumentally carried out and whether they include hard data, interviews and/or indicators such as baseline indicators?

By output objectives we understand the fulfilment of the conditions under which the financial support was granted. First of all we look into the fulfilment of the objectives set up by the ERDF, the fulfilment of the regional objectives and the observance of the respective contract. This output objective also includes the monitoring of activities and the immediate output of the project.

¹³ 3 of the projects are not listed within the frames of the policy areas listed in Annex A. They have other FOI codes, but they still contain elements of innovation and are therefore useful sources for describing the evidence of the Danish performance.

The result objectives operate as a parameter that screens the evaluations for the potential synergy effects, using index and indicators of long-term impacts of the projects. Examining the evaluations through this parameter will uncover evidence that goes beyond simple monitoring of activity and expenditure.

This methodology allows us to sort the various projects into two groups and highlight the characteristics of the evaluations. We will then synthesise the evidence and select one evaluation as an example of good practice.

The following chapter will distinguish between the evaluations at programme level and project level.

3.1 ACHIEVEMENTS UNDER THE COMPETITIVENESS OBJECTIVE

To obtain an overview of ERDF support and the amount of money allocated we will briefly outline some of basic numbers and facts:

- The total ERDF support in the period 2007–2013 was 254,788,620 €¹⁴
- At the end of September 2009, 35.7 per cent of the total support was allocated to selected operations¹⁵
- 82.2 per cent was granted under the innovation and knowledge objective
- 129 projects within the innovation objective had received ERDF support at the end of 2008¹⁶

The overview below offers a brief introduction to the evaluations available.

Overview of evaluations on achievements			
Evaluation	Method	Output	Result
Evaluation of the Danish Objective 2 programme 2000-2006	Hard data Textual analysis Survey Interview	Monitoring output	Long-term impact of the achievements and recommendations for future improvements
Annual Implementation Report 2008 (programme level)	Hard data	Monitoring the completion of started project	- Presentation of a future indicator on results - Presentation of a future indicator on impact
National Strategic Report 2009 (programme level)	Hard data	Statistics on started projects	
Thematic evaluation (programme level)	Hard data Textual analysis Survey Interview	Indicator system on output	- Indicator system on result and long term impact - Proposes baseline index

¹⁴ National Strategic Report 2009

¹⁵ National Strategic Report 2009

¹⁶ Annual Implementation Report 2008. The National Strategic report does not include the exact amount of projects.

Thematic evaluation of 6 projects (project level)	Survey Interview	Monitoring of output	- Effects (term and scope) - Scopes of the partnership structure - Communication potential
8 final evaluation reports (project level)	Hard data Qualitative filling in of the national evaluation guide Baseline indicator	Fulfilment of the objectives stated in the application	- Creation of networks and collaborations - Development of knowledge clusters
Source: New Insight			

Evaluation of the Danish Objective 2 programme 2000–2006

The main objective of the programme was to strengthen growth and development in the peripheral areas of Denmark and to improve structural development in these areas of the country. The programme was evaluated by Danish Technological Institute.

The evaluation concluded that the goals of the programme had been achieved, but that positive effects were not sufficient to modify the existing trend. However, the programme generated some positive effects on employment, level of education, regional cooperation and competitiveness of enterprises.

- By mid 2005, approximately 5,000 jobs had been created or maintained
- The number of people with a low level of education fell by 3.5 to 4.0 percentage points between 1999 and 2005
- ERDF policies and other national policies were coordinated in order to be synergic
- –The competitiveness of the enterprises has been affected by new knowledge and capacity to change

The evaluation recommended, among other things, that future programmes should:

1. Retrieve unrealised potential of private and public co-financing
2. Improve involvement of research and knowledge institutions
3. Strengthen exchange of experience across projects
4. Improve information about the programme
5. Focus on network and bridge-building projects

The Annual Implementation Report 2008

The annual implementation report primarily focuses on hard data and the objectives of the national performance. It describes the quantitative monitoring of activity and the statistical allocation of the funds. But it also includes a framework for measuring effects on three different levels:

- output indicator (the actual completion of the started activities)
- result indicator (the regional contribution to the ERDF objectives)

- impact indicator (the global goals of the programme)

By setting up a baseline instrument for the three levels, the report provides a possibility for a future comparison between the objectives of the growth drivers and the actual performance of the programme. Since none of the projects within the present period had been completed, the report does not conclude on the achievements so far, but the indicator system is likely to become a useful and valuable tool for future quantitative measuring of output, results and impact.

National Strategic Report 2009

The report ultimately focuses on the fulfilment of the ERDF objectives and the quantitative allocation of the resources. It is based on the expected results of allocation and not the actual allocation itself. The report emphasizes the due to the global financial crisis that the possibility of obtaining the overall global goals (mentioned in chapter 2.1) has been undermined, but it concludes that the innovation objective has reasonably good chances of being fulfilled if the expectations stated in the applications are met.

Thematic evaluation

The thematic evaluation, conducted by COWI, proposes an indicator system on the project-level, which has not yet been applied for evaluations of specific projects. The system is an instrument for all future evaluation and monitoring on impact-, result- and output-level. The system suggests that all the levels should include the following parameters: goals, data sources, baseline and an annual follow-up on goals. The use of indicators should help the recipients to remain focused on the short-term and long-term effects of the project.

The thematic evaluation includes an analysis of six selected projects that have been carried out during the present period. The analyses are not final evaluations conducted by the recipients, but an overview of the characteristics of the projects. The analyses are based on interviews with the project co-ordinators and textual analysis of the project descriptions. The analyses of the respective projects go beyond the output level and elaborate the potential results and long-term impact of the projects. It must be stressed that the analysed projects are still ongoing. This means that the analyses of the projects do not have to fulfil the official requirements of a final evaluation. However some of the tendencies of the analyses are certainly useful input for future final evaluations. The analyses of the respective projects pays highlight the following parameters:

1. Potential effects concerning the ERDF programme objective (potential to deliver visible and measureable effects and synergy effects)

2. Partnership structure in relation to innovation (the Triple Helix Model¹⁷ and user-driven innovation)
3. Organisational anchoring beyond the region and widening the scope
4. The potential of communication

Overview of the six analyses					
Project	Budget and ERDF-Funding in €	Partners	Policy area (or categorization of expenditure code)	Purpose	Result
Intelligent Energy Management in Greenhouses	8m ERDF: 1.4m	- University of Southern Denmark - A private greenhouse - A Private engineering company	Other investment in firms (expenditure code)	To achieve up to 50 per cent energy savings in green houses through intelligent energy management	1. Clear and measurable objective with a transferable technology 2. Triple Helix partnership with generative dynamics 3. Participation of stakeholders from other regions 4. Easy to communicate
International Center for Innovation	11.8m ERDF: 5.9m	- University of Aalborg - 100 private companies	Boosting applied research and product development	To establish an innovation platform, which helps companies generate knowledge and to develop new global business models through 15 various networks	1. Difficult to measure the immediate effect 2. User-driven innovation 3. Out-of-region relations and involvement of different business clusters. 4. Difficult to communicate the long-term effects
Posture and capability of functioning	0.46m ERDF: 0.23m	- University of Aalborg - 4 private companies	Knowledge transfer and support to innovation poles and cluster	To develop new products and knowledge about posture through a co-operation between companies and knowledge institutions	1. New products are easy to measure, while the created knowledge will create a long-term impact 2. Triple Helix partnership with generative dynamics 3. Only regional partners, but potential of transfer of the process to other businesses 4. Easy to communicate with an aspect of peripheral area effect
Playing and Learning	4.2m ERDF: 2.1m	- Universities - 3 private companies	Boosting applied research and product development	To generate knowledge about the development of innovative and experienced-based activities for children and youngsters	1. Difficult to measure the immediate effect 2. Triple Helix partnership with generative dynamics and user-driven innovation 3. Many different

¹⁷ A collaboration between society, research and industry. The aim is to create innovation and development through projects, which are carried out in a dialogue based co-operation between the three partners.

					businesses involved 4. Complex communication
Managing Experience Economy in Peripheral Areas	1.48m ERDF: 0.74m	- Regional Center for Tourism - University of Roskilde - Private companies	Knowledge transfer and support to innovation poles and cluster	To create an internet-based university-level education in tourist management in Bornholm, located in a peripheral area of Denmark	1. Clear objective and easy to measure 2. Triple Helix 3. Regional based, but easily transferable 4. Easy to communicate
Competence Development for Architects through Innovative Networks	0.54m ERDF = 0.27m	- Academy of architecture - The Architect Union - 2 private companies	Knowledge transfer and support to innovation poles and cluster	Innovative networks to conceptualize and develop a systematic competence development programme for architects	1. It is difficult to measure the short-term results of the project, but the long-term effect will possibly be a better competitiveness within the business 2. Triple Helix and user-driven innovation 3. Geographical possibilities outside the region 4. The rationale of the project is easy to communicate
Source: New Insight and COWI					

8 final Evaluation Reports

As only a small number of final reports have been drawn up, the data cannot be representative for all projects, however, the evidence available can grant some insight.

All of the 8 specific project reports focus primarily on the output of their respective performances; to fulfil the objectives of the ERDF and the goals set up in the respective applications. Only a few of the evaluations elaborate on the result level and mainly to a limited extent. In relation to this, it must be stressed that the recipients mostly conduct the evaluations themselves. This may affect the results of the evaluation in various ways. First, the recipients may tend towards a more positive interpretation of the results and secondly, the level of evaluation resources may be relatively limited. The 8 reports are not necessarily the best evaluations, but the only ones available in April 2010.

Overview of the 8 final reports						
Project	Recipient	Budget / ERDF Funding in €	Policy area (or categorization of expenditure code)	Purpose	Output	Result
Public-private collaboration on the Climate Policy	Aarhus University	588,000 ERDF: 213,000	Innovation friendly environment	-An international climate conference - Demonstration of climate competencies - Regional collaboration on sustainable energy	- An international climate conference - Demonstration of climate competencies - Regional collaboration on sustainable energy	The knowledge and experience created during the project has resulted in a new application for the creation of a new consortium

Copenhagen Finance IT Region (CFIR)	The Danish Bankers Association	328,000 ERDF: 164,000	Innovation friendly environment	To prepare the IT and Finance cluster for the future competition between global metropolises	<ul style="list-style-type: none"> - Establishment of steering committee - Establishment of a secretariat - Analysis of Copenhagen's competitive position on The Global Financial Centres Index (GFCI) and other indexes - Kick-off press launch - Workshops 	- Improvement of long-term competitiveness and relative improvement of the conditions for other industries. The improvement should be measurable on a large variety of international index instruments. - Examination of factors for improvement of the position in comparison to Copenhagen's direct competitors
The Interactive House	Danish Producers Association	87,000 ERDF: 43,500	Boosting applied research and product development	<ul style="list-style-type: none"> - To strengthen the potential of growth in the interactive entertainment business by creating a physical space for more than 100 entrepreneurs in the computer games business - The project was a pre-study for exploring the possibilities of a bigger project supported by ERDF 	Presentation of programme and budget	
Experience- and Learning project "Light and Sound"	Copenhagen International Theatre	584,000 ERDF: 292,000	Development of cultural infrastructure (expenditure code)	To engage creative businesses and public sector planning departments in the creation of experience concepts and the development of knowledge about innovation collaboration	<ul style="list-style-type: none"> - Workshops and residencies that created learning and useful networks - The development of 13 concrete projects in the Copenhagen area. 	<ul style="list-style-type: none"> - Collaborations for future development of the field - Elaborations concerning the difficulties of the practical public-private partnership
Northern Jutland as Destination for Tourism	The Destination Company "The Top of Denmark A/S"	223,000 ERDF: 53,000	Promotion of natural assets (expenditure code)	The creation of further growth in tourism business by creating networks and concepts dealing with: <ol style="list-style-type: none"> 1. Attraction 2. Northern Jutland as a full-year tourist destination 3. Quality development 	<ul style="list-style-type: none"> - Kick-off conference - The establishment of four networks - Survey on demand 	Development of new useful methods of best practice planning within the business.
The Business Cluster of Mechatronics	Mechatronics Cluster Denmark	166,000 ERDF: 79,000	Knowledge transfer and support to innovation poles and cluster	<ul style="list-style-type: none"> - To establish MCI Academy as an annual concept - To develop a communication platform to promote 	<ul style="list-style-type: none"> - Holding of the first annual MCI Academy - The development of a homepage 	The MCI Academy generated new networks that have created more than 10 collaborations between The Center for Product

				the mechatronics cluster		Development and various companies
The Application of new Technology in Tourist Information	Destination Bornholm ApS	110,000 ERDF: 55.000	Innovation friendly environment	To offer tourists visiting Bornholm tourist information through GPS and Bluetooth for cell phones	- Contract with a supplier for the Bluetooth solution - Concept for a role play	Bornholm as a tourist destination is a first-mover in the new technology. This will increase the attractiveness for the potential audience.
WEB123 integrated for the Microsoft ERP-system C5 in a hosted environment	JF Data Service ApS	250,000 ERDF:12 5,000	Knowledge transfer and support to innovation poles and cluster	- The establishment of a development environment with a high level of knowledge - Buying of external knowledge for certification of the product - Marketing tests - The development of a support unit	- The employees of the company have participated in conferences and created a useful network - The company has been certified as a Microsoft partner - The company has worked with marketing	The company has consolidated its position on the market and within the business cluster
Source: New Insight and Danish Enterprise and Construction Agency						

As the table shows, the projects have various ways of dealing with the result level. This means that we cannot go beyond the immediate monitoring of activities. On the other hand it must be stressed that a predominant share of the projects involves the creation of cross-sector networks or platforms for innovation. Thus it is difficult to measure the result and long-term impact of the immediate output. The challenge is to develop evaluations that deal with result and impact level. The complex characteristics at the result level mean that it is fairly difficult to measure the relative impact of conferences, networks, knowledge clusters and innovation platforms. These interventions are widespread and hard to quantify. To this aim the number of patents or new products must be observed, or a qualitative description of the relative value of the interventions must be carried out. Another option would be to involve global or national index systems, which creates the opportunity to compare relative positions and various parameters.

Good practice evaluation

The evaluation of the project "Copenhagen Finance IT Region" (CFIR) contains some of these requirements mentioned above. It focuses primarily on the result and impact-level of the project. The improvement should be measurable on the basis of different international index instruments. It provides a baseline value to measure the effect of the performance. Furthermore, it focuses on the improvement of long-term competitiveness of the beneficiary firm and relative improvement with respect to other sectors. At the same time the evaluation measures the overall potential of future competitiveness. This may be due to the fact that the project core deals with the exploration of potential and competitiveness. However, the evaluation offers a good practice when it comes to the deliberation of instruments and parameters that are useful for the final evaluation.

Expenditure and new applications

The majority of the projects are expected to be extended beyond the project period, but some of the projects are ultimately dependent on further external support and some have already applied for more ERDF support. A few of the projects have not been able to keep their expenditure within the budget frame. As a consequence new partners have been involved during the project period or some of the minor activities have been cancelled.

4 CONCLUSION: MAIN CHALLENGES FACED BY COHESION POLICY PROGRAMMES

It became clear almost from the start that at present the number of final evaluations is relatively limited. The national reports on the Danish performance outline instruments for measuring future achievements, but so far the content of these reports have dealt primarily with monitoring activity and processes on a programme level. This is due to the fact that a large majority of the actual projects have not yet been completed. The annual implementation report 2008 and the thematic evaluation by COWI both propose an indicator system of considerable value for the future measuring of performance on all levels.

The evidence focuses on output

This paper has examined some of the quantitative and qualitative evidence on the Danish performance. On the basis of these preliminary findings it can be concluded that the evaluations, on a project level, have a strong focus on the primary output. The characteristics of the recipients are highly fragmented as they span from small companies with an innovative profile, carrying out technology or product innovation, to huge collaborations between private and public sector companies. The achievements are also fragmented. However, there is a tendency towards multi-partner projects with an element of network creation and/or the development of innovation platforms.

Contribution of the ERDF on a regional level

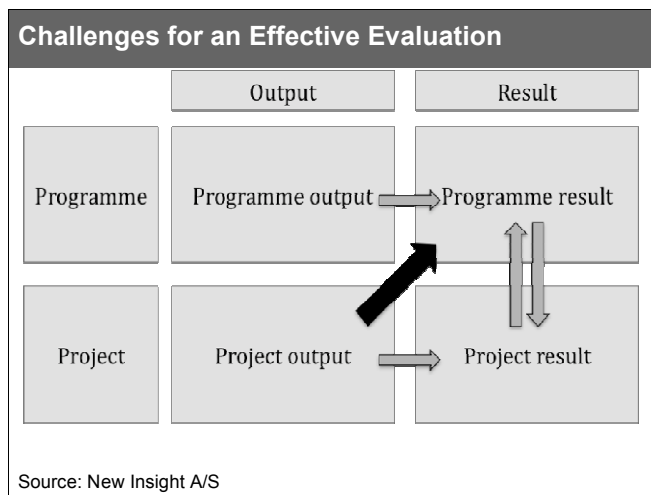
The overall Danish organisation of the innovation policy generates a strong coherence between the objectives of the ERDF and the implementation of the regional strategies. Nevertheless, ERDF support adds up to a relatively modest share of the Danish GDP and the performance of even very successful performances will be difficult to measure. On the other hand it is likely that when combined with national and regional effort, ERDF support will contribute to the overall goals. It must be concluded that ERDF support plays a crucial role for projects carried out on a regional level. Without the funding from the ERDF a vast majority of the project would not have been executed.

Main challenge: Widening the scope

The main challenge is to develop evaluations that deal with the result and impact level in a consistent way. The level of complexity rises when it comes to the measuring of result and impact

of networks and innovation platforms. It is a great challenge to create an overall template for evaluations when the projects vary greatly in concept, purpose and objectives.

Ultimately, the challenge is to bring the evidence from the output-level of the projects to the aggregate result level of the structural funds programmes. The table below displays some of the dynamics needed to monitor the relative effect of the support from the ERDF. The black arrow represents the overall objective of the evaluations: to monitor the result on a programme level.



This challenge requires the installation of various instruments represented by the grey arrows. First of all, one of the challenges is to take the project evaluations from output to the result level. Secondly, these results should be related to the overall programme result. This dynamic process calls for methodological consistency in the requirements at programme level. The use of baseline a instrument, index systems or other instruments could provide a cross-national standard reference.

For example, the majority of the evaluations are aware of the importance of the partnership structure, which is a part of the requirement for a final evaluation. But the descriptions are often relatively unmethodical and do not elaborate on parameters, as do The Triple Helix-model or user-driven innovation that could function as consistency factors of the evaluation.

The main challenge is therefore to provide the evaluators – external or internal – with a methodological framework or a set of instruments to enable them to elaborate on the result level in a comprehensible and consistent way. The introduction of baseline studies and index system could possibly serve as relevant instruments for monitoring of relative effects, if they are integrated at an early stage of the project process.

Another challenge is the financial crisis and its impact on unemployment. Until the beginning of the financial crisis, Denmark had a record low unemployment rate, but after the global economic recession in late 2008, the unemployment rate has risen dramatically. Especially the peripheral areas of Denmark have lost a huge number of industrial jobs of critical value to the regions. This inevitably implies the growing importance of job creation and the employment impact of the innovation policy.

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- Final evaluation of Public–Private collaboration on the Climate Policy, Danish Enterprise and Construction Authority
- Final evaluation of The Application of new Technology in Tourist Information, Danish Enterprise and Construction Authority
- Final evaluation of The Business Cluster of Mechatronics, Danish Enterprise and Construction Authority
- Final evaluation of The Interactive House, Danish Enterprise and Construction Authority
- Final evaluation of WEB123 integrated for the Microsoft ERP–system C5 in a hosted environment, Danish Enterprise and Construction Authority
- National Strategic Reference Framework 2007–2013, Danish Enterprise and Construction Authority, November 2006
- National Strategic Report 2009, Danish Enterprise and Construction Authority, 2008
- **Thematic evaluation by COWI**, Danish Enterprise and Construction Authority, September 2009

ANNEX A – BACKGROUND DATA ON EU COHESION POLICY SUPPORT TO INNOVATION

Programmes	Total ERDF resources for innovation	Innovation support as per cent of total ERDF	Main initiatives implemented
National/Multi-regional	209,491,971	82.2	- The Danish

programme			Globalization Strategy - National Strategic Reference Framework 2007-2013 - Annual Implementation Report 2008 - National strategic report 2009 - Six regional growth forum strategies
<i>Total Competitiveness Obj.</i>	209,491,971	82.2	
<i>Total country</i>	209,491,971	82.2	

Table 1 – Total ERDF resources allocated per programme (2007–2013)

Source: core team on EC data.

Table 2 – ERDF contribution to innovation by policy area (2007–2013)*Competitiveness and Employment Objective*

Policy area	Categorisation of expenditure (corresponding FOI codes)	Total ERFD/Allocated to selected operations	Per cent	
			Regional share	National share
Innovation friendly environment	05	25,980,691/7,396,235		
	11	8,271,597/ 3,288,742		
	12			
	13			
	14	8,271,597/0		
	15	8,271,597/1,073,826		
	74			
Knowledge transfer and support to innovation poles and clusters	02	25,980,691/877,756		
	03	25,980,691/19,254,953		
	04	25,980,691/4,619,741		
Boosting applied research and product development	01	25,980,691/9,945,713		
	06	25,980,691/8,846,234		
	07	2,812,343/2,909,480		
	09	25,980,691/17,073,672		

Source: core team on EC data.

ANNEX B – CLASSIFICATION OF INNOVATION POLICY AREAS, INSTRUMENTS AND BENEFICIARIES

Policy area	Short description
Innovation friendly	This category covers a range of actions which seek to improve the overall

environment	<p>environment in which enterprises innovate, and notably three sub groups:</p> <ul style="list-style-type: none"> • innovation financing (in terms of establishing financial engineering schemes, etc.); • regulatory improvements and innovative approaches to public services and procurement (this category could notably capture certain e-government investments related to provision of services to enterprises); • Developing human capital for the knowledge economy. This category will be limited to projects in higher education aimed at developing industry orientated courses and post-graduate courses; training of researchers in enterprises or research centres. <p>The category also covers initiatives geared towards improving governance capacities for innovation and knowledge policies (e.g. specific technical assistance funding, support for regional foresight)</p>
Knowledge transfer and support to innovation poles and clusters	<p>Direct or indirect support for knowledge and technology transfer:</p> <ul style="list-style-type: none"> • direct support: aid scheme for utilising technology-related services or for implementing technology transfer projects, notably environmentally friendly technologies and ITC; • indirect support: delivered through funding of infrastructure and services of technology parks, innovation centres, university liaison and transfer offices, etc. <p>Direct or indirect support for creation of poles (involving public and non-profit organisations as well as enterprises) and clusters of companies</p> <ul style="list-style-type: none"> • direct support: funding for enterprise level cluster activities, etc. • indirect support through funding for regrouping R&D infrastructure in poles, infrastructure for clusters, etc.
Boosting applied research and product development	<p>Funding of "Pre-competitive development" and "Industrial research" projects and related infrastructure. Policy instruments include:</p> <ul style="list-style-type: none"> • aid schemes for single beneficiary or groups of beneficiaries (including IPR protection and exploitation); • research infrastructures for non-profit/public organisations and higher education sector directly related to universities. <p>Any direct or indirect support for the creation of innovative enterprises (spin-offs and start-ups)</p>

Instruments	Short description
Infrastructures and	Building and equipment for laboratories or facilities for university or research

facilities	centres, Telecommunication infrastructures, Building and equipment for incubators and parks for innovative enterprises
Aid schemes	Grants and loans for RTDI projects Innovative finance (venture capital, equity finance, special bonds, etc.) for innovative enterprises
Education and training	Graduate and post-graduate University courses Training of researchers

Beneficiaries	Short description
Public sectors	Universities National research institutions and other national and local public bodies (innovation agencies, BIC, Chambers of Commerce, etc..) Public companies
Private sectors	Enterprises Private research centres
Others	NGOs
Networks	cooperation between research, universities and businesses cooperation between businesses (clusters of SMEs) other forms of cooperation among different actors

ANNEX C – CATEGORISATION OF EXPENDITURE TO BE USED FOR CALCULATING EU COHESION POLICY RESOURCES DEVOTED TO INNOVATION

FOI Code	Priority Theme
	Research and technological development (RTD), innovation and entrepreneurship
01	R&TD activities in research centres
02	R&TD infrastructure (including physical plant, instrumentation and high-speed computer networks linking research centres) and centres of competence in a specific technology
03	Technology transfer and improvement of cooperation networks between small businesses (SMEs), between these and other businesses and universities, postsecondary education establishments of all kinds, regional authorities, research centres and scientific and technological poles (scientific and technological parks, technopoles, etc.)
04	Assistance to R&TD, particularly in SMEs (including access to R&TD services in research centres)
05	Advanced support services for firms and groups of firms
06	Assistance to SMEs for the promotion of environmentally-friendly products and production processes (introduction of effective environment managing system, adoption and use of pollution prevention

	technologies, integration of clean technologies into firm production)
07	Investment in firms directly linked to research and innovation (innovative technologies, establishment of new firms by universities, existing R&TD centres and firms, etc.)
09	Other measures to stimulate research and innovation and entrepreneurship in SMEs
	Information society
11	Information and communication technologies (access, security, interoperability, risk-prevention, research, innovation, e-content, etc.)
12	Information and communication technologies (TEN-ICT)
13	Services and applications for the citizen (e-health, e-government, e-learning, e-inclusion, etc.)
14	Services and applications for SMEs (e-commerce, education and training, networking, etc.)
15	Other measures for improving access to and efficient use of ICT by SMEs
	Human capital
74	Developing human potential in the field of research and innovation, in particular through post-graduate studies and training of researchers, and networking activities between universities, research centres and businesses