

# |the| technopolitan

*The newsletter of* Technopolis<sub>[group]</sub>

A European research business focusing on the evaluation and development of policy in the fields of research and innovation

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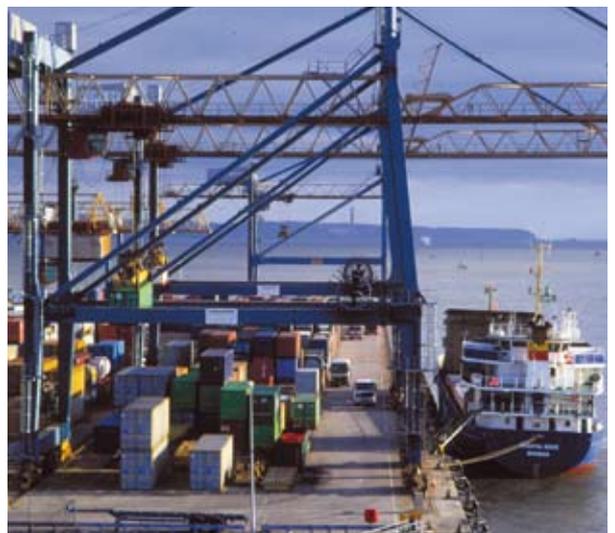
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## Exploring innovation in ERDF co-financed projects

On page 4 we report on a Technopolis' study for the European Commission's Directorate-General for Regional Policy on the innovative projects co-financed from the European Regional Development Fund (ERDF) in 2000-2006.

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Urban Pilot Project: Belfast harbour. Northern Ireland



# Learning lessons from supporting Swedish automotive industry

*Technopolis reviews long-term research and development programme*

The state of the automotive industry and its future prospects have been among the major concerns for vehicle makers, their suppliers and Governments since the industry entered a period of exceptionally severe strain in 2008. This sense of crisis has created loud and insistent calls for different forms of state intervention. Faugert & Co Utvärdering, the Technopolis company in Sweden, has recently presented a major report on the Swedish Vehicle Research Programme. Our study has examined the impact of the first eight years of this programme's fifteen year life. It provides an interesting and helpful perspective in which to see contemporary pressure for more state action.

The programme was designed in close collaboration with the Swedish vehicle industry and aimed to address the industry's needs for applied research and research-trained people. Government and industry each contributed equally – around SEK 30million per year each in the early years – in order to create a research capacity that could support the major vehicle companies Saab Automobile, Scania, Volvo Cars and AB Volvo, as well as their suppliers.

The programme can be said to have acted as an intervention at an innovation-system level. It has made a significant contribution to maintaining the competitiveness of the Swedish automotive industry on the international marketplace by

- Strengthening research expertise and absorption capacity
- Strengthening partnerships with universities and research institutes
- Strengthening internal competitiveness for Saab Automobile and Volvo Cars within the foreign-owned groups
- Universities and research institutes contributing expertise to the research base, and
- Providing important research results applicable to product and process development

Our study makes clear that it is not possible simply to replicate past programmes in order to meet new and more intense challenges that all manufacturers now face. However, we argue that it is possible to draw some general policy conclusions regarding government support for this kind of research

1. The programme was an early success as well as a trendsetting example of Triple Helix collaboration with broad official involvement, which

- a. Made it possible to factor in a number of public interests such as quality, environment and safety
- b. Involved genuine user-controlled research and offered companies as well as universities and research institutes something they needed
- c. Followed rules that compelled companies to collaborate with universities and research institutes at project level and thereby achieved a genuine behavioural additionality, meaning that industry continues to run its development work differently than it would have done otherwise, and
- d. Served as an effective focusing device (positive feedback loop) at programme level

2. The programme has made it possible to maintain and further build up on expertise and research capacity of critical mass within the companies. Amongst other things, this has led to an increased capability to participate in the EU framework programmes and generally better conditions and readiness for innovation within the companies. It has also provided a fairly large number of research-trained people to the industry.

3. Of major significance for these results was the success of the programme board in building up trust between the parties to the agreement and creating a flexible organisational platform for subsequent research programmes.

4. A potentially beneficial side-effect was the creation of what might be termed a knowledge value collective. It is an open question whether this knowledge value collective can continue to flourish if the immediate driving force – the presence of domestic passenger car manufacturers for example – ceases or diminishes.

The programme did reveal some important limitations. Research resources have remained fragmented within a knowledge infrastructure that lacks cohesion and it is fair to wonder if cohesion can be achieved by sectoral programmes. Against this is the evidence of many product development, collaboration and economic advantages that convinced us in our work that this programme had created important benefits. We would urge policymakers looking for ways in which to assist the vehicle industry through its immediate problems to consider the longer view.

The report, including an extended Executive Summary in English, is available at <http://www.vinnova.se/Publikationer/Produkter/Effekter-av-statligt-stod-till-fordonsforskning/>.

# Technopolis Group Turkey completes the first stage of the Public Sector Innovation Initiative

*Technopolis is looking at innovation across the entire public sector in Turkey*

A new approach to public management was introduced in Turkey in 2003. At that time the “Law no. 5018 on Public Financial Management and Control” was ratified. This law provided for the development of a flexible, efficient and effective public sector. Together this new legal basis, the effects of globalisation and Turkey’s integration with the European Union have triggered a transformation process for the Turkish public sector.

It was recognised from an early stage that this transformation process had to be carefully and successfully managed so that it created a platform for higher economic growth and the social and cultural benefits that growth makes possible. The public administration was encouraged to see innovation as a core activity that would allow institutions to respond to the needs and expectations of customers, minimize costs, improve performance, increase public value and refine strategies in all areas. However, innovation management systems and techniques developed and used all over the world mainly focus on the private sector seeking to earn profits. These systems concentrate on the commercial dimension of innovation. It was not easy to see how these approaches could be applied without extensive adaptation to public policy contexts.

In an effort to resolve this problem an initiative - the ‘Innovation in Public Sector’, KamIn – was started by Technopolis Group Turkey. Its intention has been to build innovation culture in the public sector, and adopt tools and techniques for strategic and systematic management of innovation. Pilot implementation of KamIn was started in January 2008 at the Strategy Development Department of the Ministry of Finance (SGB). In addition, with the leadership of the SGB, a high level committee (the ‘Platform for Public Sector Innovation Leaders’) has been formed by the representatives from the leading Ministries and key public organisations to increase commitment to the process and to lead the wider dissemination of results and learning points.

The main objective of the initiative is to increase the innovation activities and innovation performance of the public sector in Turkey through a systematic and strategic approach that will support the achievement of national development goals.

The first stage of activities under the KamIn initiative included the following elements

- A literature survey on innovation in the public sector and innovation management
- Definition of the innovation process in public organisations
- Design of a system that will be able to support this process
- Development and adaption of a set of tools and techniques for effective functioning of the system
- Identification of the relevant innovation metrics and how to capture and record them
- Testing of the system, tools and techniques in a live operating environment at the SGB
- Conducting two general surveys on innovation performance and innovation climate in the public and private sectors in Turkey to compare results and draw lessons

As an important cross-cutting activity, the initiative includes a wide range of events for awareness raising on innovation within the public sector. This has included local study visits, seminars and conferences with the involvement of speakers from Turkey and abroad. In addition, a study visit to the UK was organised in February 2009 with the participation of representatives from the ‘Platform for Public Sector Innovation Leaders’. The UK Government Departments and Organisations visited included the Department of Innovation Universities and Skills, National Audit Office, Department of Health, National School of Government, Home Office, NESTA, Department for Business Enterprise and Regulatory Reform and the Department for Children, Schools and Families.

The second stage of activities will be completed during 2009. These will include dissemination of results. Anyone wishing to know more of the work that Technopolis has carried out on this project should contact [sirin.elci@technopolis-group.com](mailto:sirin.elci@technopolis-group.com)



Sirin Elci, Director Technopolis Turkey

# Exploring innovation in ERDF co-financed projects

*Technopolis performed the major study for the European Commission's Directorate-General for Regional Policy on the innovative projects co-financed from the European Regional Development Fund (ERDF) in 2000-2006.*

The European Commission has overall knowledge of thematic coverage and the main results of the Structural Funds Operational Programmes. Its access to the evidence from the project level is, however, rather limited. In this context, DG Regional Policy contracted Technopolis to undertake a major study of ERDF co-financed innovative projects including a series of case studies and thematic analyses.

## Case studies

The study comprised 60 case studies on innovative projects in various ERDF intervention fields and different regional contexts implemented during the 2000-2006 period across EU. The range of projects examined was significant. The budgets ranged from €50,000 (a sub-project of an INTERREG IIC Regional Framework Operation in Poland) to €200m (Regional Competence Centres programme in Italy). The median total budget was €3.4m and the median ERDF contribution was €1.4m.

The Commission was interested in learning about innovation in terms of both the projects' results and the projects process, including issues of planning, management as well as monitoring and evaluation. Technopolis consultants undertook the majority of cases using their experience of work across the EU. In-depth interviews with the project stakeholders and on-sight visits were performed for each project analysis.

## Comparative analyses

Technopolis prepared 10 thematic comparative analyses in order to draw lessons from the case studies. The comparisons focused on two types of topics. On the one hand, selected policy intervention areas, such as clusters, business incubation or science-industry relations, were targeted. On the other hand, a number of transversal topics have been analysed, including project governance, project planning and design as well as assessing the value added of ERDF intervention.

The approach adopted to undertake comparative analyses was to analyse a number of thematically related case studies in order to draw more general lessons and conclusions, which can benefit other regions. This approach was experimental in the sense that the usual evaluations start from a programme level analysis; case studies are sometimes added as illustrations of specific outcomes. Interestingly, the more recent evaluations commissioned by DG Regional Policy after this study was completed (i.e. ex-post evaluations of ERDF in 2000-2006 period) give the case study method a much more prominent role than previously.

## Key messages from the study

The study gave pointers to a number of practical policy issues requiring special attention in the future EU Structural Funds programming and implementation

- Cohesion policy promoting "structural economic change" should encourage funding innovative, risk-taking and flexible approaches to designing and rolling out the projects. A number of the case studies illustrated that solutions can be found to ensure that Structural Fund projects are not simply business as usual.
- Project-level governance and partnerships appear to be one of the most critical success factors of the projects. This includes the composition of partnership and more formal issues such as the choice of legal model supporting the partnership.
- A deep reflection on exit strategies at the project level should be required from the project design phase onwards in order to ensure that ERDF project funding is not a one-off event.
- Existing project level evaluation and monitoring techniques are often inadequate. If programme level evaluations are to be improved and carried out cost-effectively then they require access to more structured and evidence based appraisals of the (at least major) projects funded.

In conclusion, as policy-makers look towards defining the priorities for the post 2013 period, more effort needs to be put into building a more robust knowledge base on policy implementation on the ground, to which both strategic planners and programme managers can turn for inspiration and guidance.



### Case study manual

The study was a test bed for new tools used for case studies. Technopolis developed a case study template and manual (see on the left). All the case study reports followed a common structure and consisted of descriptive and analytical sections on the project's strategic context, planning, management, implementation process and results. An emphasis was placed on the factors considered critical for the project performance. DG Regional Policy actively encourages its desk officers as well as member states administrations to use the manual in the future.

The study was concluded in 2008. All reports written in the framework of the project are available from the DG Regional Policy website.

Final report:

[http://ec.europa.eu/regional\\_policy/sources/docgener/evaluation/pdf/innovative\\_projects\\_fin.pdf](http://ec.europa.eu/regional_policy/sources/docgener/evaluation/pdf/innovative_projects_fin.pdf)

Case study reports:

[http://ec.europa.eu/regional\\_policy/cooperation/interregional/ecochange/studies\\_en.cfm?nmenu=5](http://ec.europa.eu/regional_policy/cooperation/interregional/ecochange/studies_en.cfm?nmenu=5)

Case study manual:

[http://ec.europa.eu/regional\\_policy/cooperation/interregional/ecochange/doc/evaluation\\_brochure\\_062008\\_en.pdf](http://ec.europa.eu/regional_policy/cooperation/interregional/ecochange/doc/evaluation_brochure_062008_en.pdf)

## Monitoring European Trends in Social Sciences and Humanities (METRIS)

The European Commission's Directorate General for Research (DG Research) recently awarded Technopolis an important contract, to develop a reference tool for social sciences and humanities (SSH) at national and European levels. This will sit easily along side the existing projects that Technopolis manages in the fields of research and innovation as part of the ERAWATCH and ProInno Trendchart projects. Metris is intended to

- Inform relevant policy-makers and all other stakeholders of significant developments in relevant fields of research
- Increase the visibility of the research effort throughout the Union
- Increase the visibility of these fields and their influence in European policymaking and throughout the wider civil society

DG Research wants to build a state-of-the-art system. It plans to maximise the further access to and use of the information through a number of measures, such as forming a network of country correspondents to collect the

information: strategic conferences to discuss issues arising from the project. It also aims to publish a European report on main and emerging trends in the social sciences and humanities.

Technopolis will be responsible for the establishment of a database of information that is comparable across all European countries. This will include

- The management and performance of the network of country correspondents (CCs)
- The provision and maintenance of a system for keeping the information up-to date and making it accessible to provide the collected information to the public
- The form of deliverables, in particular a report which will provide comparative analysis and the identification of important features of the whole of the SSH landscape in Europe. This report will be included on the website and may be further disseminated by DG Research

In this context, METRIS will serve as the leading platform for the structured collection and aggregation of the wide range of national-level information available on social science and humanities research policies, actors, and trends. It will make use of past and current EU level studies, projects, networks, and EU level policy monitoring activities such as ERAWATCH and ProInno Trendchart where Technopolis has an established expertise.

## Technopolis study looks at Chinese Participation in Framework Programmes

*Technopolis together with Sylvia Schwang-Serger of Lund University and VINNOVA has recently completed an evaluation that assesses Chinese participation in the Fifth and Sixth Framework Programmes for Research and Technological Development of the European Commission.*

Western research cooperation with China began in the late 1970s, with the USA, Germany, UK and France among the first movers. More recently, it has seemed as if almost everyone in the West has wanted to extend such cooperation and the resulting picture is both complex and extremely fragmented. There are multiple agreements at government, research funder and research performer levels. The motivations for all this activity are not well articulated. It was in this context that Technopolis undertook its evaluation.

Chinese participation in the EU Framework Programmes has been encouraged since 1999. Key aspects of participation from the Chinese perspective have been access to knowledge and learning, access to EU research infrastructures and establishing China's credentials and legitimacy in cooperative R&D.

About three hundred Chinese organisations have participated in FP5 and FP6. The number of projects with Chinese participation more than doubled between FP5 and FP6, with an increased concentration on IST and environment projects. The EU partners in projects with Chinese participation have become increasingly concentrated to Germany, the UK, France, Italy and the Netherlands (countries that are not only among the bigger EU economies but are also those with long-established scientific cooperations with China).

State research performers dominate participation. They account for 80% of Chinese FP6 participations. Industry's share has doubled from 9% to 19% between FP5 and FP6, mostly driven by increased participation by Chinese IT companies – though over half the industrial participants across FP5 and FP6 are state-owned enterprises and a quarter are foreign.

Generally, the Chinese participation happened as a result of an EU-based partner's initiative. The main reasons for seeking Chinese partners were to launch new collaborations, improve their proposal's probability of being accepted by the Commission, to access Chinese experience and data and to find new markets. Market access was twice as likely to be a factor in involving China as with other countries outside the EU.

The projects involved a wide range of activities, from basic research to technology transfer and exploratory networking. Almost three quarters of participants said the project contained an element of applied research. There was disappointment about the extent to which new business alliances had been formed. Reactions were polarised on the extent to which new relations had been built with Chinese organisations: some were very positive; others very negative. EU industry tended to be disappointed with the extent to which it could influence technical standards or reduce risks through participation. Contacts with the Chinese partners were somewhat infrequent. EU partners generally saw the role of their Chinese partners as primarily relating to research issues rather than to commercialisation questions.

Incomplete information and the difficulties of mobility between China and the EU hamper project startup and constrain Chinese contributions to projects that are EU-focused. Chinese participation can be especially valuable where projects focus on specifically Chinese issues or address global problems.

Important obstacles to cooperation include the obvious factors of distance, obtaining visas and travel budgets, time zones, culture and language but can also involve clashes of decision-making styles between EU and Chinese organisations and a tendency for novice collaborators not to understand the unwritten 'rules of the game' that shape consortia and govern behaviour within projects. Differences in the way European and Chinese national research funding work means that there is some incompatibility with the FPs. These also appear to underlie the comparatively limited interest of the Chinese research performing institutions in obtaining funding, which was not normally its top priority. Generally, funding rules, structures and mechanisms were not completely understood. Neither the Chinese nor the European side tended to have a good understanding of the shape of the other's research communities, suggesting partnership opportunities are being missed, especially outside the high-status and internationally most visible institutions.

Our study concluded that a commitment to the longer term is needed – both at the level of officials and project participants – in order to build upon the present period of learning, increasing the scale and sustainability of network relationships that will underpin further cooperation. The full report with our conclusions and recommendations is available at

[http://www.technopolis-group.com/resources/downloads/reports/893\\_China\\_FPs\\_Final\\_090307.pdf](http://www.technopolis-group.com/resources/downloads/reports/893_China_FPs_Final_090307.pdf)

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*About three hundred Chinese organisations have participated in FP5 and FP6.*

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## 6th Framework Programme Evaluation

*Technopolis' Erik Arnold acted as rapporteur for the expert group that recently evaluated the Sixth Framework Programme (FP6, 2002-6). Ernst Th. Rietschel of the Leibnitz Gemeinschaft chaired the group, which looked at the rationale, implementation and achievements of FP6. This evaluation had much more evidence at its disposal than previous ones and was therefore able to produce a more detailed, component-by-component analysis. Evidence about impacts – especially in the longer term and in relation to the 'core' FP activities that tend to carry on from programme to programme – was, however, limited.*

The Framework Programme produces a large volume of high-quality R&D of importance to science, industry, standards-creation, health, nuclear safety and a range of other objectives. The teams involved include leading scientists and are becoming increasingly large. FP6 aimed to be a key part of implementing the European Research Area, so it included new funding instruments intended to 'structure' and strengthen Europe's research communities. Other aspects of its design were hard to understand and should be more transparent if the FP is to become more effective.

There was limited evidence that 'structuring' had succeeded, but FP6 did cause greater agreement that was a desirable goal. Industry participation continued its slow decline, despite the FP's objectives ultimately "strengthening the scientific and technological basis of Community industry". Twelve New Member States joined the EU during FP6. Their initial role was generally modest as their researchers built up their networks and learnt the 'rules of the game' but it is clear from the early part of FP7 that participants from these countries are now playing increasing roles.

A key feature of FP6 was the encouragement of self-organisation, through ERANETs and European Technology Platforms. Future FPs seem likely to encourage self-organisation even more. The expert group said Europe and the FPs should not only consider the European Research Area. They should become much more international in their outlook: it is time for Europe to stop navel-gazing and engage with the world.

The group's recommendations were (in a highly summarised form)

1. Better, more transparent design
2. Bigger role for the MS; avoid the tendency towards a Commission monopoly of new European initiatives (eg ERC)
3. Develop focused but separate strategies for different types of 'Third' countries: OECD; BRICs (Brazil, Russia, India, China), poor countries
4. Add more bottom-up experimentation to avoid lock-in
5. SMEs matter but stop setting participation targets and

- let them join in where it makes sense for them
6. More research infrastructure, for example through ESFRI
7. More female participation
8. More young people and mobility
9. Radical overhaul of administration - no more tinkering - cut the 'time to contract' by 50%
10. Take a broader evaluation approach - we know more than before but still far from enough

You can download the full report from [www.europa.eu](http://www.europa.eu) or from Technopolis' downloads page.

### Technopolis and the Sixth Framework Evaluation

Technopolis provided the rapporteur for the recently-published Evaluation of the Sixth EU Framework Programme, 2002-6. However, we have also been involved in generating a lot of the evidence that lies behind the overall evaluation as well as policymaking at the national level. This includes evaluations of FP6 environmental research; the evaluation of FP5 and FP6 non-nuclear energy research; and a bibliometric study that assesses the scientific excellence of FP6 participants; a study of the new instrument in FP6; impact evaluations in the IST area; and studies of research infrastructure. At the national level we have produced a study of the impacts of Framework Programmes 3-6 in Sweden and are currently evaluating the impacts of FP6 in Ireland, The Netherlands and cooperating with NIFUSTEP on a similar study in Norway.



## Directors' profiles

*On 1 May 2009 Sven Faugert retired as Director of Faugert & Co Utvärdering in Stockholm. Tomas Åström, who has been with the company since 2006, has replaced Sven as Director. Sven remains with the company on a full-time basis until October and on a part-time basis thereafter.*

Tomas holds an MSc in Aeronautical Engineering and a PhD in Lightweight Structures, both from the Royal Institute of Technology (KTH) in Stockholm, and has a background as full professor in Lightweight Structures at KTH and subsequently chief executive officer of a research institute engaged in polymer material science. Tomas has ample experience in the fields of materials and manufacturing and has worked extensively with manufacturing industry, in particular in the sectors of automotive, aerospace, marine, polymers, textiles and composites. Since joining Technopolis, has mainly worked on programme evaluations and impact studies, as well as on national and regional research and innovation policy studies.



*Geert van der Veen is Director of the Amsterdam office since 2008. He joined Technopolis in 2003 and has more than 15 years of experience in the field of innovation and sustainable technologies.*

Geert's projects focus on innovation policy, research institutes & consortia and innovation agencies. Topics in which he has built up years of experience are environmental sustainability and renewable energy. A large share of his work takes place in The Netherlands, Flanders and Germany and includes work for the European Commission. Geert began working as a researcher at TNO Environmental Technology in 1988. He moved to Senter (The Dutch Agency for Technology Implementation) in 1989 where he was a project officer for various Environmental Technology programmes and co-ordinator for programme monitoring and evaluation. During the last few years of his period with Senter he was Director of the Economy, Ecology and Technology Programme Office. Prior to joining Technopolis, Geert worked at the Wageningen Research Institute for Agrotechnological and Food Innovations (2001-2003) as Director of the Business Unit for Renewable Resources and Biorelated Products.



### Information

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### Moving notice

At the end of August 2009, Faugert & Co Utvärdering will move to new offices on Grevgatan 15, 114 53 Stockholm. All other contact details will remain the same.