

1. PUBLISHABLE SUMMARY



Proposal Acronym: TARGET

Proposal Full Title: *TARGETED R&D POLICY*

Grant Agreement No.: 234522

<http://www.targetproject.net>

A. TARGET Project Goal

The main goal of TARGET Project is to provide a Guide (referred to as the 'ToolKit') for policymakers who wish to formulate and implement Targeted R&D Policies. The ToolKit will enable a country or region to develop and to implement targeted policies successfully as well as to take concrete policy making decisions. It will contain a structured and valorised set of guidelines and recommendations for diversifying a country's policy mix, taking into account the unique characters of its innovation/R&D system and geopolitical reality. In order to achieve the above goal, TARGET project will aim for the following objectives:

- Main Objectives:
 1. Identifying the policy capabilities required in order to formulate successful targeted R&D policies;
 2. Identifying coordination mechanisms between the different mix of policies within a targeted policy.

B. The Rational Behind TARGET Project

Due to radical changes in the global environment which manifested during the post 2000 period, it has been emphasised that countries need to re-define their proper mix of R&D policies (Avimelech and Teubal, 2008)². These changes include: an ever-enhancing complexity of economic systems, at both local and global scales; the emergence of new technological areas resulting in enhanced turbulence, dynamism and radical uncertainty; and the rise of new, important players in Asia including: China, India and others. These changes expose business sectors to major threats on the one hand, while introducing them to various new opportunities on the other hand.

Policy makers face significant challenges in such terms and are required to target subsequent opportunities by enabling or promoting the business sector to take advantage of them. Existing horizontal R&D policies focused on promoting R&D activity in individual firms are often lacking in this respect. Thus, current and future scenarios require not only the design of new policies but also the adoption of a whole new type of policy process, namely 'Targeted R&D' (Teubal, 2008)³. While *market failure* justifies the use of horizontal R&D policies, both *system failures* and *system*

² Avimelech and Teubal "Evolutionary Targeting", *Journal of Evolutionary Economics*, 2008

³ M. Teubal, DIRECT PROMOTION OF 'COMMERCIAL' INNOVATION (CI) IN LEAST DEVELOPED COUNTRIES (Ldcs): A SYSTEMS EVOLUTIONARY (S/E) PERSPECTIVE, *paper presented to UNCTAD*, 2008

imperfections require *Targeted R&D policies* in order to be solved. The central idea behind targeting is to leverage existing high quality market forces for the purpose of accomplishing the country's strategic priorities.

C. Building a Knowledge-Base about Targeted R&D Policies

As mentioned, the main goal of the project is to produce a Toolkit for policymakers. In order to do so, three distinctive phases of the project will be carried out. The first, *Study of Successful Cases*, will include, as its name indicates, the study of different cases that are recognized in the literature as successful implementations of targeted policies. In the second phase, *The Study of Gaps*, the research team will concentrate on the countries participating in the consortium and will study each country's attempt at promoting biotechnology. This will enable the research team to contrast the successful cases with each country's experience and to learn about possible gaps and barrier to implementation. After phase two, and based on the knowledge-base that was created thus far, the research team will be able to design the Toolkit. The third phase, *Testing the Toolkit*, will ensure that the toolkit is applicable enough. This phase will consist of policy exercises that use the Toolkit to formulate policy for Lithuania and Slovenia.

D. Work Performed in TARGET Project's First Year

The first year of the project saw the successful completion of both the First and the Second phases of the project, namely the study of successful cases and the evolution of the consortium countries. During the First phase, Study of Successful Cases, the following cases were selected as examples of successful planning and implementing targeted R&D policies: Singapore, North Carolina, Medicon-Valley (in Sweden and Denmark), Scotland and Cambridge, UK. Each case was evaluated and studied by the research team, both by reviewing available literature as well as by visiting the sites themselves and interviewing policymakers and private enterprise.

Complementing on the knowledge that was accumulated during the First stage, the Second stage included a benchmarking study of the consortium countries; France, Israel, Slovenia, Lithuania and Galicia were evaluated and compared with the successful models that were identified during the First Stage.

Upon completion of the Second phase, a research workshop was held in Edinburgh. The entire research team gathered to discuss the findings and to consolidate the different studies into a coherent conceptual perspective.

All publicly available results of the TARGET project can be found on its website:

www.targetproject.net

E. Main Results

A primary result of the first and second phases was the creation of a knowledge base about targeted R&D policies. The research team was able to identify several best-practices for countries that desire to target specific fields and in particular for biotechnology. *These phases cumulated into a list of benchmarks for successful targeting in biotechnology.* The indicators will be incorporated

into the Toolkit and will assist policymakers in evaluating their country's position in terms of targeting. For instance, the list of indicators includes: A Strong Political Commitment to the Process, The Quality of the Science Base, The Existence of Interested Entrepreneurial Individuals, etc.

While working on the list of indicators and discussing the toolkit, *the research team developed a framework for targeting, titled "Strategic Road-Mapping"*. Due to the unclear nature of the objective of targeting, as in the case of biotechnology, policymakers are not dealing with a 'simple' challenge of cluster development. In the latter, the intervention of policy is usually one-dimensional – for instance by supporting the VC Industry or by granting R&D subsidies. With biotechnology, the road which leads to the desired objective that is being targeted isn't clear and frequently the conceptualization of the challenge needs to be a multidimensional one. In other words, the policy-maker must think about different dimensions of intervention such as: the dimension of the industry (e.g. supporting R&D activities), the knowledge base (e.g. supporting universities and research institutions), aspects of regulation, finance supply (e.g. supporting VC), etc. By addressing the challenge as a multidimensional one, policymakers are acknowledging the fact that not all information is available and that acting on different scenes will enable them to learn from experience and to adjust towards the targeted objective as time passes. The framework of Strategic Road-Mapping details how such a process should be undertaken. This conceptual framework is a major result of the first year of TARGET project and it will be used as the basis of the upcoming Toolkit. Furthermore, the framework is highly communicable and could be helpful for policymakers in different levels.

As mentioned, when working with a Strategic Road-Map, learning procedures are of the up most importance. *A derivative result of devising the conceptual framework of Strategic Road-Mapping is the concept of a Body of Knowledge (BoK)*. The research team identified that successful targeting processes were driven and accompanied by different stockholders that fulfilled the function of a BoK. This means being responsible for 'filling in the question marks in the road-map' as time unfolds. The BoK could take several forms of organization. It can be based on existing private/public/governmental bodies or it can be formed especially to fulfill this task. It can be based on a formal secretariat or it can be in the form of advisory committee. Whatever form the BoK will take it must consist of people being able to collect and assess information which is generated by different stakeholders or being generated by experts. The BoK should be able to translate this information into a road map and to create the drive for such a road map to be implemented. Additionally, the BoK should be responsible for monitoring progress, ensuring an on-going learning, enabling feedback from different stakeholders and constructing policy that will deal with the missing parts of the Road-Map as information becomes available.

During the first year of the project many policy makers have been introduced to the notion of targeting and discussions on this concept have been started in all the countries involved. The country reports were discussed in a special meeting held in Edinburg with the participation of policy agents from the participating countries. In the case of Israel, and as a direct result of the project, the 2011 national budget already includes a reference to the concept of targeting and the Ministry of Finance is planning to establish a dedicated committee that will promote Strategic Targeting in Israel. The Israeli, the Lithuanian as well as the Slovenian partners are already

planning special workshops with high level policy makers to present the initial results of the project. Such workshops are planned for the second half of the project.

In addition, the consortium partners are now joining forces in order to submit a new proposal for the current Call for Proposals “*PRO INNO Europe®: Better policies and instruments in support of eco-innovation (PROINNOEurope-ENT-CIP-09-C-N02S005)*”. In this new proposal, the knowledge that has been collected in the current TARGET project will be applied to provide better policies and instruments in support of eco-innovation.