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FORETECH – Bulgarian Technology and Innovation Foresight 2015 **Foresight Brief No. 028**

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The Bulgarian Ministry of Transport and Communications
The European Commission – STRATA Programme
The German GTZ Office in Bulgaria
Type: This national foresight exercise consists of a series of two sectoral pilots in domains that are considered to be of great importance for the future of the Bulgarian economy: Biotechnology and e-Government
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The Hungarian Technology Foresight Programme - National Committee for Technological Development
Technology Centre AS of the Czech republic
The Foundation for Research and Technology - Greece
The School of Slavonic and East European Studies in London
PREST at the University of Manchester
Duration: 2003-2004 **Budget:** €40,000 **Time Horizon:** 2015

Purpose

This first-ever foresight initiative in Bulgaria was developed for the purpose of introducing the use of foresight as a tool for policy development at national, regional and sectoral level. The aim was to adapt foresight techniques and methodological frameworks to the Bulgarian environment. This was achieved by implementing two foresight pilots in the fields of:

- e-Government, as well as
- Agriculture & Biotechnology.

Starting Up a Foresight Initiative

The overall rationale for the project was to introduce foresight and begin the process of embedding it as a routine part of the policy development process in Bulgaria. To achieve this two pilot foresight exercises were undertaken, one in the area of Agriculture & Biotechnology, the other in the area of e-Government.

In the case of Agriculture & Biotechnology the key priority of the government was the adoption of a national integrated strategy for the sustainable development of agriculture that is at once compliant with Bulgaria's specific and unique physical

features and with the European Union Common Agricultural Policy.

New production methods and new investment policies are needed to make Bulgarian agricultural products more competitive. There is crucial need to enhance and facilitate the development of national capacities for the assessment and management of current and future developments in biotechnology that can help Bulgarian producers to achieve this goal.

The development of expert human resources in biotechnology and capacity building for policy development in this area is a



priority. The implementation of a foresight exercise in this field was intended to provide useful policy options to support economic activities that will rely on the application of biotechnology.

In the case of e-Government, Bulgarian policy makers have already designed a programme and strategy for this area. The purpose of a foresight exercise in this domain is to help stretch planning horizons beyond that considered in the existing plans.

Raising Awareness and Creating New Policy Options

The overall objectives behind the initiation of two pilot foresight exercises in Bulgaria were to:

- Inform policy makers of possible future developments in each domain.
- Provide guidelines and recommendations that could be used in devising innovation policies for related sectors.
- Encourage long-term strategic thinking among all stakeholders and reach public consensus on the future course of development.
- Develop and strengthen networks and cooperation among various actors such as government agencies, private sector companies, universities and research centres.
- Mobilize the forces of those capable of action in these domains.

Moving Forward with a Mixture of Methods

The methodology for the foresight pilots was initially developed by the project team at the ARC Fund. This was clarified and evolved on the basis of consultation with knowledgeable consortium partners from the UK, Greece, Hungary and the Czech Republic.

Foresight not only employs specific tools and approaches to thinking about the future such as:

- Scenario planning and
- Delphi surveys.

It requires the ability to:

- Scope,
- Build Coalitions,
- Organise, manage and implement.

In the Bulgarian case the two pilots followed the same methodology and applied the following specific tools:

- SWOT analysis,
- STEEPV analysis based on a consideration of drivers of change that are Social, Technological, Economic, Ecological, Political, Value based in nature,
- Stakeholder mapping to understand interest groups,
- Scenario Writing, and
- The elaboration of recommendations for actions that could help to achieve desired scenarios or avoid undesirable future developments.

An International Capacity Building Workshop was held in June 2003, at the very beginning of the foresight exercise. It was targeted to provide basic insight on the selected set of foresight tools.

The main goal of this workshop was to clarify the foresight methods by putting them in a concrete context: Experts gave account of their experience designing and implementing exercises in:

- Ireland,
- Hungary,
- The Czech Republic and
- Venezuela.

The workshop also contained tailor-made sessions that focused on the use of tools:

- The STEEPV framework for eliciting driving forces,
- SWOT analysis,
- Scenario writing, and
- Prioritisation.

In this workshop theoretical sessions were followed by practical exercises to put the knowledge acquired into practice and to balance the abstract impressions of the panellists facing foresight activities for the first time.

The experience of experts involved in foresight exercises in countries such as Hungary and the Czech Republic focused on the foresight process, the methods used and the lessons learned. This kind of mutual learning among peers is of considerable value to those starting out to design and implement foresight for the first time.

Expert panels were the mainstay of the pilot studies. Panel chairs and secretaries proved important in maintaining panel momentum. Each panel consisted of around 15 persons. The e-Government pilot engaged another 100 persons through workshops and a web-based forum. The Agriculture & Biotechnology panel engaged around 40 persons in this way.

Panels met fortnightly over a 6-7 months period, with workshops and online discussions interspersed between these.

The ARC Fund was the project manager, and with occasional help of foreign experts, facilitated the use of various methods.

In the case of the e-Government pilot, a steering group was formed representing the relevant ministries and other stakeholder groups. Its role was to advise and monitor the

foresight pilot and to ensure its continuing political and community support.

Finally, a wider pool of experts was involved to disseminate and validate results emerging from the exercise.

Social Trends and Impacts

E-services Central to e-Government Policy

During workshop discussions the e-Government stakeholders expressed a common view that the foresight exercise should focus on the following priority topics:

- The development of e-Government services,
- The development of e-Government enabling technologies,
- Financial aspects of e-Government implementation,
- Education, vocational training and human resource development for e-Government,
- Legal aspects of implementation and development of e-Democracy,
- Development of the channels for provision of e-Services,
- And the need of a differentiated approach for delivering eServices to the targeted users.

During the sixth working meeting of the foresight panel, the e-Government experts decided to put the focus on eServices considered as a process, being a central component of e-Government. The decision was based on the analysed information of the STEEPV and SWOT analysis of e-Government carried out during the previous working meetings of the panel. A working definition of the eServices being a focus of the foresight exercise was elaborated and the framework for the future scenarios was set.

Picking Buffalos and Wine

The 'agro-food' sector is the most important indigenous industry for Bulgaria and as the country has accepted biotechnology as a core technology of the 21st century with enormous potential for benefits, the biotech agro-food sector was chosen as a target for the national foresight exercise. The foresight project is a pilot for Bulgaria and was initially decided to be used to harness the whole production chain. Purpose was to cover areas from the food and drinks industries as well as plant growing and livestock breeding but the focus was finally streamlined only on two pilots in the agricultural area:

The Wine and Vine Industry

Bulgaria is interested in further improving the wine production in the country. Biotechnology is considered as a helpful means for the promotion of the agricultural cultivations in the future and possibly for wine.

Ecological Buffalo Breeding

Ecological buffalo breeding means the traditional breeding of cattle, on farms (not in breeding houses), where they will only be fed natural foods (grass, crops, etc.) and not any processed foods. As much as this exercise is concerned, buffalo breeding is not connected to biotechnology.

Foresight and Policy Reaction and Key Policy Recommendations

The recommendations evolved from scenarios elaborated on the basis of a normative approach. In this approach scenario writing focuses on the possible sequence of events that could lead to a desired future and the key actions that needed to be taken now in order to ensure the occurrence of that future course of development.

e-Government improving Quality of Life & Performance of the Economy

The interim progress report of the ForeTech project was based on the country review framework, and stressed the importance of the information society and the application of information society technologies to the economy.

During the transition towards the information society, it is very important that public information and services should become widely available to citizens through electronic means.

e-Government services are of major importance for the life of citizens and for the performance of the economy. Bearing in mind that e-Government is a combination of information and communication technologies accompanied by organisational changes and new skill development, e-Government experts from the foresight panel proposed the following set of recommendations to national government:

- The national government should set clear policy goals for e-Government. They should provide roadmaps and create a continual political focus to ensure that identified strategic goals continue to be addressed and continue to feature high on the political agenda.
- e-Government policy should be adaptable and demonstrate long-term commitment. It should allow risk taking and pursue of long-term objectives. Rather than adopting a centralised approach it should play a co-ordinating role.
- It is necessary to establish a responsive legal framework which takes into account of the challenges posed by internet-based information and communication environments.
- A clear vision is needed for ICT development in the public sector, backed up by a strategy for development and deployment.

The Creation of International Networks in the area of Agriculture and Biotechnology

Thanks to the successful implementation of the foresight initiative, foresight is now seen by biotech stakeholders as an effective policy-making tool and as an efficient instrument for consensus building.

By sharing a common vision of the future of wine production and buffalo breeding, the stakeholders actually influence the development towards a foreseen desirable future. Their knowledge of the results achieved makes them stronger

players as they striving to have an impact on policies created by decision makers in relevant domains.

This exercise created a common platform for future-oriented thinking among all stakeholder groups. It led to the creation of new networks and partnerships. It even laid the ground for creating new clusters in the field that involve:

- Bulgarian and German Associations of buffalo breeders,
- Bulgarian veterinarian and research institutes,
- Local buffalo breeders, as well as
- Meat and milk processors.

The exercise drew the attention of the Ministry of Agriculture and Forestry to the strengths and perspectives of the buffalo-breeding sector.

Policy Reaction to Foresight Recommendations

The recommendations that emerged from the exercise provided a clear input to the development of an action plan for e-Government strategy implementation. The use of foresight methods has now been included in the general framework for the development of e-Government policy in Bulgaria. As a result of foresight related capacity building among representatives of the state administration, there is now a broader consensual basis for the development of e-Government services.

The Institute of Public Administration and European Integration, responsible for the training of state employees, has scheduled a series of executive training seminars on foresight as part of its e-Government training programme.

Sources and References

http://foretech.online.bg/confbg_2.php

About the EFMN: Policy Professionals dealing with RTD, Innovation and Economic Development increasingly recognize a need to base decisions on broadly based participative processes of deliberation and consultation with stakeholders. One of the most important tools they apply is FORESIGHT. The EFMN or European Foresight Monitoring Network supports policy professionals by monitoring and analyzing Foresight activities in the European Union, its neighbours and the world. The EFMN helps those involved in policy development to stay up to date on current practice in Foresight. It helps them to tap into a network of know-how and experience on issues related to the day to day design, management and execution of Foresight and Foresight related processes.