

“Foresight in the Enlarged European Research and Innovation Area”

Ioannina, Epirus, Greece, 15-16 May 2003

Conference Report by Carsten Orwat, ITAS

The Ioannina conference (<http://medlab.cs.uoi.gr/conf2003/>) hosted by the Greek EU Presidency brought together foresight experts, researchers, practitioners and interested persons as well as policy makers to exchange experiences and thoughts on foresight exercises and, in particular, their impact on the enlargement countries. To these ends, conference participants reported from current foresight exercises and discussed how methodologies and practices of foresight could and should be improved. The following selected impressions are based on both the speeches and the accompanying written material.

Some of the welcome addresses – among others by *V. Laopodis* (conference chairman, European Commission and Ministry of Development, General Secretary for Research and Technology, Greece) – mentioned that Epirus is the economically poorest region of the EU and that instruments to improve S&T development are therefore necessary, not only for Epirus but also for all Accession Countries (ACs). In those development processes, foresight would have a key role.

In the first plenary session, *H. Diehl* (Federal Ministry of Education and Research, Germany) pointed out the challenges of the Lisbon strategy and the Barcelona target which stress the priority of research and call for the increase of research budgets up to 3 % of GDP by 2010. While research in the EU is mainly organised according to the subsidiarity principle, Diehl also regarded a common research policy as necessary to maintain international competitiveness. One of the main challenges facing EU R&D is to solve societal problems, and here foresight has a main contributing role. He argued for a better implementation of foresight results into research programmes having in mind especially the forthcoming 7th Framework Programme. He also addressed the German foresight exercise –

the “Futur” process (<http://www.futur.de>). This process will be carried on till 2006 with two “lead visions” to be developed each year. Because the already elaborated “lead visions” of “Futur” were not really “new”, the methods should be improved in this respect (for more details see Dietz in this issue).

The particular relevance of foresight activities for Accession Countries and the possibilities for cooperation were described by *A. Havas* (Institute of Economics, Academy of Science, Hungary). Accession Countries face the dilemma of competition between short-term and long-term policy issues, such as necessary short-term reactions to unemployment etc. versus long-term fundamental organisational and institutional changes. Foresight can play a balancing role in this competition for intellectual and financial resources since it can help to identify priorities. However, fears in Accession Countries that foresight is seen as a new form of central planning have to be addressed.

Since Accession Countries mostly lack foresight experiences and have similar structural problems, cooperation in foresight among Accession Countries seems useful. The types of cooperation encompass simple sharing of foresight experiences and comparing methods and achievements in joint workshops and working relations, joint background studies or devising aligned scenarios, and joint foresight programmes on issues that go beyond national borders. However, the problem has to be recognised that for a cross-border geographic scope of foresight exercises, the participatory character is difficult and costly to maintain.

Additionally, Havas formulated some general challenges to foresight in the shape of three dilemmas: (1) the long-term nature of foresight versus the mainly short-term horizon in policy-making, (2) the strong requirements for resources of foresight exercises versus the independency from the political decision-makers who normally finance the exercises, and (3) the complexity of foresight issues versus the department structure of governments.

J.C. Harper (Council for Science and Technology, Policy Development Unit, Malta) also stressed the role of foresight within Accession Countries’ major change process due to EU accession. Here, foresight has potentials to help in strategic decision making, consensus-

building over time, targeting the whole government, optimising resource use, and exploiting cross-sectoral synergies. She reported from the first Maltese national foresight programme which is a part of the eFORESEE project (<http://www.eforesee.info>). The Maltese part comprises three pilots, namely “Knowledge Futures in ICT and Education”, “Enabling Biotechnologies” and “Marine”. It was described that key policy makers with limited time resources for foresight participation were nevertheless involved through one-to-one interviews and online consultation. The foresight exercise led to further grassroot initiatives, such as “FutureChild” (foresight for children) or scenarios of Maltese Theatre in 2020. The installation of a “narrative database”, which holds recorded (video) conversations between foresight experts, is planned to make experiences available to the public.

As a further representative of an Accession Country, *K. Klusacek* (Technology Centre, Academy of Science, Czech Republic) described the Czech Foresight Programme (<http://www.foresight.cz>) that had as its main objective to propose key research directions for the National Research Programme. Due to its reported success, a second round of foresight activities is planned to start this year, aimed to focus more on horizontal issues and to be more problem-oriented. Foresight should demonstrate how research can help to solve societal problems. In addition to national exercises, regional or pan-European foresight projects could be helpful to develop a strategic and coordinated approach in the EU and to improve communication and cooperation between actors from different sectors of society and between different policy levels on EU-wide issues.

N. Konstantopoulpos (General Secretariat for Research and Technology, Greece) drew a line from the currently running Greek Foresight Programme (<http://www.foresight-gsrt.gr>) to the Greek legacy of forecasting with Delphi and Dodoni Oracles, Cassandras and Kalkahs. The current foresight activities were seen to happen in a situation of – among other things – lack of overall strategies through unprogrammed development and shortsightedness of targets and visions. It is expected that the foresight programme will deliver clear and truthful answers, consensus about the vision of the

future, popularisation of technological choices and better interaction between science and society. Interestingly, the foresight programme was also expected to help get rid of the old and harmful planning and implementation practices in Greek’s public administration. Finally, the neighbouring countries of the Balkan peninsula were seen not only as interested parties in the Greek foresight exercise, but also as future partners in a regional foresight exercise.

Also *G. Koukios* (Foresight Programme Coordinator, Greece) and *D. Agrafiotis* (Professor of Sociology, National School of Public Health, Greece) both described the current Greek foresight programme with the innovative feature of the combination of macro scenarios as the result of a top-down approach and micro scenarios as a bottom-up approach focussing on specific thematic areas. Since foresight was seen as a socio-cultural process, Agrafiotis suggested to consider the foresight exercise by asking questions on three levels: (1) the meanings attributed to social and technological changes, (2) the patterns of actions (e.g. collective or personal, public or private), and (3) the forms of social interaction (e.g. number of actors, loci of exchange, type of communication). The structure of the Greek foresight exercise was influenced by this approach.

A. Brandsma (Institute for Prospective Technological Studies, Joint Research Centre, European Commission) pointed out that for the Accession Countries the main requirements of the enlargement process and the Lisbon agenda are in the fields of knowledge-based competitiveness and employment, sustainable development and the transition in agriculture. In some fields indicators have already been established, but the way to achieve realisation is still mainly unclear. Several tools may help, including prospective studies on National Innovation Systems or the setting up of the European Foresight Academy (<http://www.jrc.es/projects/foresightacademy/>). He also mentioned the enlargement studies of ESTO (European Science and Technology Observatory, <http://esto.jrc.es> with participation of ITAS in projects “Tigers” and “MAB”; cf. TA-TuP 12(2003)1, pp. 170-173).

The future of S&T foresight was treated by *L. Van Langenhove* (United Nations University,

Belgium). He saw three major current trends, i.e. the definite move away from forecasting towards future studies, the emerging institutionalisation of foresight, and the spatial dimension of foresight. The current major problems are the still limited impact on science policy, the limited focus on societal trends and issues, and the need for alliances with the social science communities. For the future, he emphasised three issues to overcome those problems, i.e. to pay more attention to global aspects including an upward scaling of foresight (due to the global dimension of problems and the global competitive situation), to emphasise the societal dimension (to secure the European social model), and to further develop the participative elements and to include the expertise build up by the Technology Assessment community (for more details see Van Langenhove in this issue).

Four *parallel sessions* addressed the topics “Assessing Foresight Exercises”, “Managing Foresight Knowledge Pools”, “Foresight, Science and Society” and “Foresight, Higher Education and Human Resources”. To give some impressions from the „Assessing“ session, it was emphasised that the multiple reasons for foresight exercises imply multiple purposes of assessment, ranging from accountability, justification, benchmarking, learning by doing, to building capabilities. While “accuracy” issues belong mainly to the “1st generation” foresight, “networking” to the “2nd generation”, “stakeholder satisfaction” could be attributed to the “3rd generation” foresight (L. Georghiou, PREST, University of Manchester, UK). Regarding the further development of assessment approaches, it is important to “build in” assessment into foresight exercises from the start, to avoid either “cults” (broad range of people instead of “unassailable” experts) or inquisitors (establish a friendly atmosphere), and to exploit the existing infrastructure and dynamics of the foresight exercise to gain more acceptance of the assessment.

In his keynote speech, A. Mitsos (Director General, DG Research, European Commission) addressed the envisaged research funding (3 % of GDP) and the new governance of research, which is mainly characterised by an “open process of coordination” (he would like to call it a “method of open coordination”). He attempted to remove fears of more bureaucracy by refer-

ring to the simple underlying rules, i.e. (1) setting common targets for the member states, (2) diversified implementation, (3) a process of monitoring, benchmarking and reporting on national policies, and (4) funding and legislation at the EU level where gaps on the national level exist. In this coordination process, foresight plays an important role in identifying key trends and defining priorities. In response to a question on basic research, he answered that there are reasons for more basic research on the EU level, but the EU treaty would have to be changed. He also mentioned in the discussion, that the current cost sharing model of research funding has to be rethought since it leads to cumbersome procedures. Furthermore, the 3 % goal has to be implemented and monitored to be more than a beautiful slogan, but also the availability of human resources was seen as a problem for the realisation. Therefore, further measures to increase mobility between academia and industry are envisaged.

The next plenary session considered some instruments and approaches for cooperation in foresight, e.g. the eForesee project (<http://www.eforesee.info>), the ForeTech project (Foresight in Bulgaria and Romania), the aspects of regional foresight within the European Research Area, the FISTERA thematic network (<http://fistera.jrc.es/>), the EUFORIA project (<http://les.man.ac.uk/PREST/euforia/>), and the project Euro-Perspectives in the Mediterranean region (<http://www.europrospective.org/>).

P. Caracostas (DG Research, Unit K2 Scientific and Technological Foresight, European Commission) drew some conclusions on the Ioannina conference. He mentioned the “foresight paradox”, that there exists a lot of foresight, but not in decision-making. Several issues have to be addressed to overcome the foresight paradox, in particular the mutual learning from foresight exercises by cooperation. To these ends, he categorised instruments of cooperation in “3Cs” stages. The current stage is that of “Catalysis”, in which the stimulation of foresight exercises happens by events, handbooks, information of foresight practitioners etc. The next stage of “Consolidation”, which he expected for 2003 to 2006, is characterised by mutual learning and the establishment of a knowledge sharing platform. In the last stage of “Crystallisation”, the mobili-

sation of knowledge and the linking to policy-making should take place as well as the cultural diffusion of foresight. In the near future, a call for ideas will follow, also events that should address geo-political challenges, e.g. the European model of society, and a guide to foresight exercises in FP6. Instead of strict rules of doing foresight, which should secure quality and reputation, he preferred the “learning by doing” approach and the accumulation of experiences. Here, the key issue is the evaluation of foresight impacts to legitimate foresight exercises. In particular, the learning impacts in decision-making should be elaborated and demonstrated.

At the end of the conference, the revised “*Ioannina Manifesto*” was presented and agreed upon by the participants (see conference website quoted at the beginning of this article). It mainly describes the will to cooperate in foresight and its different types.

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Integrating Technological and Societal Aspects of ICT in Foresight Exercises

by Barend van der Meulen, University of Twente, The Netherlands

This article reports on the analysis of past foresight activities with respect to the integration of social dimensions of technology in the domain of ICT. Special emphasis was given to the conceptualisation of the relation between social and technological dimensions and to the balancing of impacts. Good examples for the integration of aspects are provided for each of the major foresight methods (panels, scenarios, Delphi surveys). Conclusions are drawn on the factors that made some studies more successful in integration than others.

1 Introduction

In January 1994 one of the first European Digital Cities went online in Amsterdam. The initiators, a mix of progressive commentators and computer “nerds”, aimed at providing *all* Amsterdam citizens access to the infrastructure of Internet, and via Internet to public information and public debate. The experiment was a great success: within a week, the new “city” had already 3,500 residents and 2,000 visitors a day. Modems were sold out in Amsterdam, and the infrastructure to enable access had to be doubled. In their proposals for the Digital City, the initiators had emphasised that they wanted to include especially the traditional non-users of ICT: women, elderly people and even the homeless. Terminals were installed in buildings for the elderly and in public places like pubs, the city hall and on the street. Amsterdam Digital City really started with an idealistic view of opening the new communication channels for everyone, and gave them access to political information and power.

After a few months, the success of the experiment made the City Council and the national government decide to continue their support. Despite the policy of accessibility the users did however not represent the Amsterdam population in terms of age, gender, income, social status etc. A survey showed that most of the residents of the Digital City were young, highly educated men. For this group, the Digi