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Knowledge Society Foresight

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Purpose

Knowledge Society Foresight Euforia was a developmental project aimed at identifying and understanding issues and developments of 'knowledge society' (KS) at the level of EU15 as a whole, and it also exercised the emergence of a KS in three countries representing different paths: Finland, Germany and Greece. Outputs should be applied to assess implications of a KS for areas of living conditions, working conditions and industrial relations. New ways of organising, designing and managing foresight activities were to be explored.

Innovative Approach to Foresight

In 2000, a vision of the European Knowledge Society was provided by the Lisbon Objectives: a dynamic and most competitive knowledge economy with social inclusion, better and high job creation and sustainable development. In this year the European Foundation for the Improvement of Living and Working Conditions (a tripartite EU body, whose role is to provide key actors in social policy making with findings, knowledge and advice drawn from comparative research) organised two workshops related to the emerging KS and its influence on areas of central concern to the Foundation.

In 2001, within the context of its four-year work programme 'Analysing and anticipating change to support socio-economic progress 2001-2004' the Foundation undertook the foresight project on the 'European Knowledge Society and its influence on living conditions, working conditions and indus-

trial relations'. Two contracts were designed, and implemented in Europe. The first aimed at producing a Handbook on Knowledge Society Foresight (HKSF). The second contract was to (1) test foresight methods in practice, (2) set up three national foresight points, (3) produce indicator analysis on advancement of KS, (4) find KS drivers, (5) analyse the drivers' impacts on living conditions, working conditions and industrial relations in EU15 countries by 2015.

The three-phased project (2001-2004) was designed also to provide support to the European Commission's DG Research and DG Information Society through the production of a methodology and exploring new ways of testing foresight exercises, and guiding these processes towards politically relevant issues. The project also has close links with the work of DG Employment and Social Affairs. European Foresight has emerged as a new and challenging area within the ERA, but attitude of European institutions and national governments, of



S&T policy makers toward this strategic policy intelligence instrument / research process still seems to be cautious and in the process of defining a position. The Euforia project had to be a 'pioneer' to demonstrate the effectiveness of the Foresight process performing the research in a multi-cultural and cross-regional setting and providing relevant to the Lisbon strategy policy orientations.

Looking at Knowledge Societies

An Advisory Committee for the project was set up by the European Foundation. The project was coordinated and led by PREST at the University of Manchester, and the process was jointly managed with project partners in Finland (FFRC), Germany (Empirica) and Greece (Atlantis). The Office of Taoiseach (Prime Minister) of Ireland actively took part in the Foundation's project implementation. The project activities involved scientists, researchers and policy-makers from a total of 25 countries (18 European and 7 non-European countries). The pilot countries were selected on the basis of a preliminary set of indicators (of information society development, compiled for the SIBIS project) - *Finland* (high on most indicators), *Germany* (roughly average within the EU on most) and *Greece* (relatively low on most). Partner organisations in each country were recruited to run the national case studies. Different stakeholders from the private, public, research, and NGO sectors provided inputs, and collectively produced outputs achieving objectives of a set of KS oriented foresight exercises.

'Soft' and 'Hard' Methods Combined

The methodological framework indicates to three main processes in Euforia. The first one was related to the scanning activities; the second focused on the analysis of data and outcomes, and the third dealt with final reports performed on basis of the various activities executed during the project. 10 foresight methods were used in the project. The 'soft' ones: Environmental scanning, cross-national workshop, Brainstorming (STEEP: Social, Technological, Economic, Ecological, Political Issues), national panels, SWOT analysis, prioritisation, Delphi survey, scenarios, and the 'hard' methods - Performance indicators, and critical influence analysis (CIA). Methods, designed in combinations, comprised a unified project process, where real and virtual/ online work co-existed in many cases.

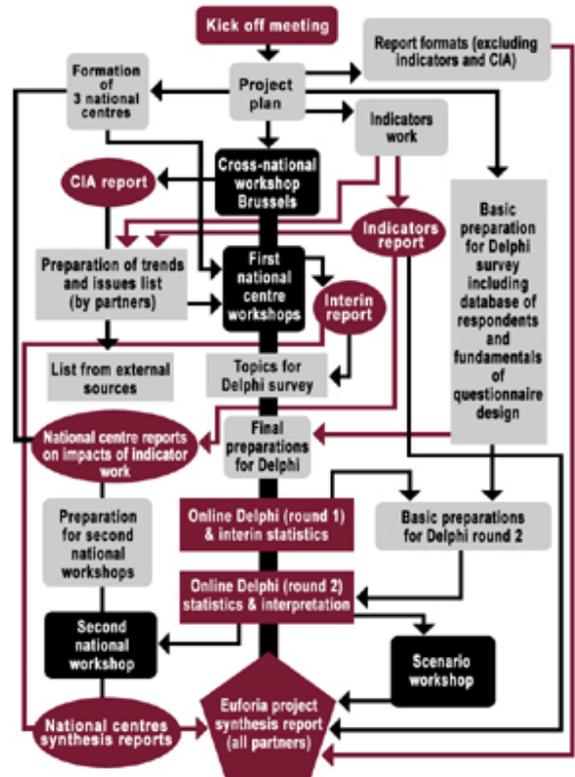
Handbook of Knowledge Society Foresight

The most tangible result of the environmental scanning was HKSF produced in the first part of project. Findings of environmental scanning were used in many other methods undertaken in Euforia, for example for:

- Identifying new potential performance indicators
- Preparing questions for the brainstorming exercises
- Preparing a draft list of STEEP issues (e.g. brainstorming method)

- Informing national panels about major KS concerns
- Providing draft categories for structuring the Delphi process
- Identifying key aspects to be considered in scenario activities.

The chart indicates the direction of the flow of information across the methods combined in Euforia.



The cross-national workshop that took place within the framework of a conference "European Knowledge Society Foresight – the Missing Link between Technology Foresight and the Lisbon Objectives?" (21-22 November 2002, Brussels) provided perspectives for the Euforia national studies, and the synthesis that will follow them, concerning the processes involved in the development of European KS. The work on the HKSF was featured in the conference.

The Handbook tackles the major questions that have to be considered in embarking upon KSF (largely using a question-and-answer format) and sets out methods and approaches to draw a host of conclusions on the KS and its influence on concern areas of the Foundation. HKSF deals with conceptual issues, looks into matters of principle and objectives, provides methodological and practical application. Annexes include resource materials and essays for stakeholders wishing to pursue the KS, knowledge management and foresight intelligence more deeply.

The Handbook suggests that a more useful way of thinking about the knowledge society should involve the intersection of several related trends. These are:

- the development of *information societies* based on the large-scale diffusion and utilisation of new information technologies (IT), which have allowed for unprecedented capabilities in capturing, processing, storing, and communicating data and information;
- the increasing importance of *innovation* (technological as well as organisational) as a source of competitiveness, and an instrument for increasing the efficiency and effectiveness of organisations of all types;
- the development of *service economies*, in which the bulk of economic activity, employment, and output is taking place in service sectors of the economy, and where specialised services are providing critical inputs to organisations in all sectors on a vastly increased scale;
- *knowledge management* arises as a specific issue, as organisations seek to apply formal techniques and new information systems to help them make more effective use of their data resources, information assets and expertise;
- other important developments related to the points above, including globalisation, changes in demographic structures and in cultural practices, and environmental affairs.

This is not a detailed map or model of a KS. 'Dealing with uncertainty', mutually reinforcing and evolving factors, that are foresighted and reflected in HKSF, have implications for both living and working conditions and industrial relations challenging the Lisbon agenda in Europe.

Social Innovation Needed for Improvement of Work and Life

The European KSF project resulted in wide-ongoing outcomes in 2003-2004. A set of reports was published in electronic format and disseminated during the Irish presidency EU conference 'Foresight for Innovation - thinking and debating the future: shaping and aligning policies' (14-15 June 2004, Dublin).

Euforia proved in practice a developmental type of project that encompassed integrative, explorative, experimental, and forward-looking features. The project discovers that KSF is a particular foresight area. It goes further than typical technology foresight, since it is designed to inform a wide range of policies relevant to social and organisational innovation, as well as technological innovation. In Europe, institutions and practices must rise to the challenges of social change in general (e.g. demographic change, globalisation, etc.) as well as to change associated with the production and use of new knowledge. The study indicated various points at which social innovation seems to be particularly problematic - for instance, the work-life balance emerged as a recurrent source of concern, there were problems seen in the adaptability of trade unions, the much-heralded network organisations were felt to be slow in developing, ethical considerations were not expected to take a prominent role in working life, and so on. Social innovations, and the social forces to develop, diffuse and implement them, are clearly called for.

Time Series of Indicators Show Trends of North-South Divide

The ways in which KS issues are mutually shaping, and being shaped by, policies and strategies of many kinds are in the making. Euforia studied problems of the appropriateness and quality of statistical resources and data for the measurement of KS developments. The advancement indicators report provided detailed data on a range of topics. Country profiles were produced for Finland, Germany and Greece, alongside with EU aggregates and overall comparisons of the EU countries. Where possible, the approach was to generate and present time series data on indicators, which would assist in the identification and elaboration of trends. The KS advancement indicators (for the European countries, the US and Japan) and the analysis report provided a key empirical basis on which the subsequent discussions in the workshops and the empirical part of the scenario development were based.

It can be said that the KS has arrived in the EU but not everywhere and not for everyone. A knowledge society north-south divide can still be observed in Europe. Looking at competition and innovation, the European Union, that brings to bear many advantages, has the potential to find its own way, which is likely to differ to that of the US and Japan.

Delphi Across Disciplines and Countries

The KS Delphi was the way chosen for eliciting expert opinion on the likely occurrence of specific topics. It required the preparation of a carefully designed sequence of interrogations, through web-designed questionnaire, interspersed with the recycling of earlier results. The Delphi looked at 12 cross-national social, technological, economic, environmental, political and values-related (STEEP) trend statements, clustered into six categories: *governance and mobility, health and privacy, industrial relations, living conditions; sustainable development, and working conditions*. This exercise became a unique example of foresight practice where new forms of networking and technical skills were combined to produce cross-national and multi-lingual online instrument. Rich information was produced about respondents' perception on how developments towards a European KS would impact over the future of *working conditions, industrial relations and living conditions* at both the national and the EU contexts. Results of the Delphi were used as input for the discussions at the national scenario workshops as well as to prepare a full Delphi-based scenario.

Scenarios to Point to Different Futures

National workshops indicated different possibilities of the KS development in the pilot countries. They also illuminated new organisational forms that allow for new ways of generating and mobilising knowledge. The Euforia scenarios were developed from the application of various foresight methods providing outcome of a consistent and critical analysis of some of present and emerging drivers/trends in European societies (STEEP framework). E.g. in Greece, based on the current situation and the major drivers and trends that characterise

country's path towards the knowledge society, experts have developed three scenarios:

- The 'awakening' scenario, which is characterised by social change and radical reconsideration and where conditions are created for the trends to have a positive impact and for the negative effects to be tackled
- The 'lethargy' scenario, which shows no major changes from today. This was presented to verify once more the current trends and drivers and their interactions and impact rather than to develop a specific scenario
- The 'nightmare' scenario, which shows negative effects resulting from ineffective measures, an absence of real change and other external factors that have serious consequences.

Policy Implications Reaching from the North to the Mediterranean

Both processes and results related to Knowledge Society Foresight Euforia have a number of implications for policy makers. The project indicates that coordinated policy actions will help shape the KS, and foresight provides an opportunity to reflect on just what sort of KS is in the making. This interrelation helps to overview the positive paths of development towards the KS and to avoid negative paths. The KSF contributed to EU Information Society policies and programmes dealing with the Lisbon and Sustainable Development strategies and issues.

Euforia managed to raise awareness and interest on KS concerns in various EU countries; inspired the European Foundation to produce a general model for national KS foresights and adopt foresight methodology as a part of its research strategy; motivated the Greek Technology Foresight Programme to create a new working group on Foresight and Society; influenced the 2004 discussions on the KS strategy of the Finnish Parliament; motivated KS research in New Member States, particularly in Malta; inspired further research at PhD level (e.g. in

Scenarios show optional ways of how the future may look like in Finland, Germany and Greece. They aim to specify necessary policy implications, social innovations and roles of key players to achieve them. Scenarios could be useful for consensus development on vision of the KS future.

Euforia was not intended to be a comprehensive foresight study. The modest nature of the project lead the Euforia project team to caution against simplistic extension of the outcomes into fields and uses that the data and information reported do not support.

Greece, Germany); stimulated KS initiatives at the academic & public sectors in Latin America. Euforia's online Delphi structure and platform has been used by PhD researchers in the UK and governmental authorities in Latin America to design other studies. The Euforia developed methods have been applied in European foresight, e.g. FISTERA. In 2005, a report 'Ireland and the knowledge society' outlined the steps taken in Euforia that could be used to inform an Irish KS project. Options for further development of KSF were explored in an Irish context. The Euforia results are stimulating inputs for foresight and other Strategic Policy Intelligence processes, and projects (e.g. RegStrat) undertaken in this context to inform S+T+I policy decisions.

Practical implications of Euforia point to the 'localisation' of KSF. The Lisbon process discovered diverse forms of emerging KS within the EU. The KSF project provided considerable scope for learning not only about how to achieve objectives, but also about what objectives are worth pursuing (and perhaps this is the most fundamental sort of knowledge that a KS could be creating and acting upon). KSF work needs to be much more embedded in the country/region and organisations involved.

Sources and References

The results include: European knowledge society foresight: the Euforia project synthesis (report); Handbook of Knowledge Society Foresight; Advancement of the knowledge society: Comparing Europe, the US and Japan; The EUFORIA cross-national workshop; The EUFORIA Project Delphi Report; The Knowledge Society in Finland: Current situation and future trends (report); The Knowledge Society in Germany: Current situation and future trends (report); The Knowledge

Society in Greece: Current situation and future trends (report); Xtreme EUFORIA: Combining Foresight Methods; a.o. The reports published by the European Foundation can be downloaded at:

- <http://www.eurofound.eu.int/areas/industrialchange/knowledgesociety.htm> .
- The Euforia web site <http://les.man.ac.uk/PREST/euforia/>
- Ian Miles. *Ireland and the Knowledge Society*. The European Foundation, 2005. <http://www.eurofound.eu.int/publications/files/EF0408EN.pdf>

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.