

“Foresight in public research organisation: An instrument for strategic planning and public policy building”

7-8 June 2011

Context

This two days workshop gathered about 70 experts from 15 European countries on the issues related to foresight in public research organisation. Actually, as defined in the aim of the workshop, in a knowledge based society (Lisbon declaration) where economy remains the main driver of development, it is increasingly difficult for research bodies to define forward-looking strategies and priorities. The main reasons which are frequently invoked are the acceleration of the evolution of societies, the global change and its multiple impacts, the world progressive networking and the exponential complexity of main issues. The main shareholders and policy makers, at all scales of decision, are expecting from research organisations a capacity of screening the possible futures and skills to prepare proposals for appropriate public policy.

Foresight analysis is “more an art than a science” as it combines necessarily facts and hypothesis. Numerous methodologies had been experienced and progressively fine-tuned mainly since the end of the Second World War. But the mix of induction and deduction in the process of thinking the complexity may be managed in several manners. As all European countries are facing similar issues, it makes sense to share views and experience about the major challenges in public research policy and notably in the use of foresight tools for strategic planning.

Structure

The workshop was structured in five sessions dealing with five different possible uses or management of foresight: (1) strategic planning, (2) research priorities identification, (3) translation and involvement, (4) policy building, (5) mediation between science and society. The third session was organized in five round tables with an original timing and management: free participation of experts to three round tables (45 minutes each), short brain storming with facilitator (permanent for each topic) and moderator (changing in each provisional group).

The global aim was to benefit, on one hand, of the experience of acting decision makers, who are regularly using foresight tools in their tasks, and, on the other hand, of the broad set of disciplines represented amongst the workshop participants.

The involvement of all stakeholders in the identification of main issues and possible solutions implies to learn how to shift from conflicts to consensus. For this reason, it is more profitable to

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exchange views and to stimulate discussion than to try to select one unique scenario. Indeed, as each method has some bias, a mix of specialized approaches in the analysis of any issue is more valuable for all participants.

Main conclusions per session

According to M. Weber (AIT), who gave an introduction to the workshop, foresight analysis is based on two key-questions:

1. What do we need the day after tomorrow, and not today?
2. How to use foresight recommendations for today, otherwise what would be the usefulness of foresight?

This approach entails in a three steps analysis: exploration of constraints and opportunities, selection of priorities, road sheet. A successful foresight gives the same weight to each step.

Session 1: Foresight in public research organisations: an instrument for their strategic planning

Speakers: T. Loikkanen (VTT, Finland), L. Behlau (Fraunhofer; Germany), S. Paillard (Inra; France)

Whatever the size of the country in which the foresight study is achieved, or the magnitude of the field of analysis, similar observations can be done, when considering the usefulness of foresight analysis for the strategic planning of public research organisations. All foresight studies mix facts and collective perceptions in the frame of a cumulative process. A balanced study has to take in account the Society pull and the Science push with the same weight for each.

Generally, it is considered as very profitable to record all relevant data and previous studies in a specialized database in order to benefit of a mass of relevant information and analysis and save time in strategic planning. Moreover, strategic planning requires to integrate priorities in four fields: long term view, economics, R&D opportunities, support systems and organisation; most of the time, important foresight studies integrate data, experts assessments and scenarios.

A high attention has to be paid to information and communication to decision makers after the study had been achieved; this phase, frequently under-estimated, is part of the task. In most of the foresight studies, the permanent risk is to remain inside the limits of a "Technology driven response" instead of working inside a "Problem driven approach". Actually, strategic planning requires more a corporate vision than a list of necessary disciplines. The results of the foresight studies often show to be a good tool for debate in strategic planning with several open questions and unusual visions.

Session 2: Foresight as an instrument for research priorities identification

Speakers: M. Griffon (ANR), F. Scapolo (EU/Joint Research Centre), C. Moquin Pattey (European Science Foundation)

This topic is a regular request from numerous bodies such as universities, ministries, international organisations, as a world in rapid evolution requires a minimum of long term vision. Research priorities identification is a huge task mobilizing small teams of experts. Necessarily, various tools have to be used in order to increase the opportunities of relevant ideas.

Most of the foresight studies (those which are aimed at research priorities selection), use three types of methods:

- Horizon scan (alert on urgent issues),
- Anticipatory studies (emerging issues),
- Foresight analysis (issues at 10 to 30 years ahead horizon with special attention to crisis/changes).

The usual comment of authorities at the end of the foresight studies deals with the lack of long term vision in the positioning of main research programs. Social sciences are under-represented in the foresight studies although the importance of anthropological issues (psychology, sociology, governance ...) are more and more identified.

In this process, transparency is as important as legitimacy. Indeed, the dialogue between experts has to become a common proposal at the right scale (ministry, EU, NGO...). This process requires time and a variety of dialogue forms. Recent European R&D calls better integrate long term view in their proposals as shown by some topics: *Information society, sustainable manufacturing, food consumption and production in a resource-constrained world, etc.* Consequently, EU is taking more care of foresight view in the selection of its research priorities with the permanent challenge of the balance between sustainability and competitiveness.

Session 3: World café “Organizing Foresight”

This multi-goals session was a mix of “brain storming” and share of experience. The main issue was the interaction between foresighters and external persons, decision-makers, scientists, media... The key point in most of the discussions showed to be the legitimacy and the usefulness of foresight in the process of complex issues. This means that the justification of this tool is as important as the relevance of its results.

Therefore, the main recommendations could be listed as presented below:

Inside the organisation:

- To convince the top management
- To explain and to demonstrate the interest of foresight analysis to scientists and administration
- To legitimate the study by internal and external scientists and experts
- To show concrete applications and successful cases

Outside the organisation:

- To stimulate the interest of a broad set of partners, at a national and international level, by their progressive involvement: everyone can be in the network!
- To mobilize several methods and analysis tools in order to facilitate their understanding by all
- To make clear the goals of the foresight and the interest of free ideas sharing and discussion
- To learn how to think 20 years ahead with a collective intelligence and not a collection of expertise

The cognitive revolution is on its way for this century in a rapid changing context including “natural” environment. The ancient structure of social groups, based on power over knowledge and living bodies, has to shift to a new paradigm in which mankind long term survival becomes

a priority. "To avoid destruction, we have to build together a collective intelligence", as T. Gaudin summarized the first day of the workshop.

Session 4: Foresight as an instrument for public policy building

Speakers: W. Ritter (EU/SCAR), L. Limola (IIASA, Austria)

Three recent studies in the field of agriculture (Which forms of agriculture according to 4 scenarios in 2025?; The 7 challenges of the EU agriculture; Which actions to secure sustainability in agriculture in Europe?) converged to clear main conclusions for public policy building: it becomes urgent to restructure the production systems in agriculture in Europe in order to reduce the inputs, to prepare to adapt to climate change, to share responsibilities from the producer to the consumer, to develop networks of producers, distribution bodies and consumers associations as "*Anthropocen era is now a reality in Europe*".

The global challenge is to transform high scientific level analysis into concrete and practical proposals for decision makers. Actually, as shown by the studies published by the international institute for applied systems analysis (IIASA), marginal events, which were not precisely predictable (e.g. Fukushima nuclear accident) and mega-trends as well (e.g. Climate change) require higher capacity of reaction of human societies. Key uncertainties are then as important as megatrends in the foresight work, whatever the method used. The main steps of this global approach can be synthesized in four phases:

1. Identification of "Extreme worlds" and "Game change" factors;
2. Realistic strategies in each "Extremes worlds" and their benefits
3. Matrix analysis crossing each targeted sector (e.g. Food security in Europe, and main "Game change" factors (e.g. Development level in Asia)
4. Graph allowing to compare the impacts of the various "Worlds" and to identify the key factors

Session 5: Foresight as a mediation instrument between science and society

Speaker: M. Sotoudeh (Austrian Academy of Sciences)

In the last session M. Sotoudeh presented the findings of the Civisti study, which was funded within the FP 7 SSH Programme and aimed to involve citizens in the development of visions. Her presentation shows interesting opportunities to reduce the gap between science, including foresight analysis, and society and revealed that priorities profiles with respect to important societal challenges differ between different citizens and researchers.

At the end of the 1,5 days lasting event **D. Rossetti di Valdabero** (EU Commission/DG Research) summarised the workshop and presented some conclusions from the perspective of an policy maker. Numerous European foresight studies try to explore various scenarios in a number of fields since the 1990s: "Europe 2030", reports as STOA, FAST, Roadmap to low carbon economy in 2050, Transports 2050.... He recalled first the necessity of modesty in foresight, notably when looking at the recent past (Who anticipated the financial crisis, the Arab spring and the role of social networks through mobile phones...?). Mr. Rossetti di Valdabero also addressed the question: What to do with "complexity"? It is necessary to simplify, but which is the limit?

Today, the European Foresight platform² give an abstract on several foresight studies such as Augur, Farhorizon, Futur agenda, Iknow, Global Europe 2030/2050 and Pashmina, Infu, Demeter, Civisti, Medpro, EuroMed 2030, Pact, European forward looking activities... and more to come through FP7 SSH 2011 (Forward visions on the European research area) and FP7 SSH 2012 (Innovative foresight tools and methods for answering major societal challenges).

Foresight analysis is with no doubt useful for EU bodies to anticipate, inspire, assess, screen the horizon and finally, to shape a better future.

Final Conclusions

The global change cannot be denied any more as scientific reports regularly confirm this megatrend. Decision makers know also that the right answers to coming crisis require social knowledge more than technologies. Therefore, foresight analysis has to shift progressively from a « *technology driven* » analysis to a « *demand driven* » approach, which is quite new for most research institutes in Europe.

The necessary changes in R&D policies are all the more easily to manage that they are foreseen. This observation implies a steady effort in foresight analysis, in the frame of networks open to experts and society as well. Actually, the multiple forms of crisis recall the urgent usefulness to replace politics founded on power by politics shaped by collective intelligence. This could show to be not a simple wish but a condition to secure the best scenario for mankind evolution.

The seminar confirmed the use of foresight at several levels of RD organisation and Europe (funding agencies, research organisation, reports advising public policy) and by that mean promotes the idea of dissemination of basic Knowledge about Foresight objectives, practices, and limits to the broad European scientific community.

More research on Foresight practice is certainly needed and some proposals could be designed by the European partners present in Vienna in this workshop and send towards DG Research in autumn 2011.

² www.foresight-platform.eu