



# Foresight in Europe and other Regions of the World

*The EFMN Annual Report 2004-2005*

**Date:** October 26, 2005

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The **EFMN** is financed by the **European Commission Directorate General for Research** as part of a series of initiatives intended to provide a **Foresight Knowledge Sharing Platform** for foresight practitioners and policy makers in the European Union. More information on the EFMN and on the Foresight Knowledge Sharing Platform is provided at **[WWW.EFMN.INFO](http://WWW.EFMN.INFO)**



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## The European Foresight Monitoring Network

### What is Foresight?

There is much discussion on the definition of foresight. Some link it to traditional forecasting exercises that were common in the seventies and others use highly bounded definitions based on participation. The EFMN uses the following definition:

*FORESIGHT is a participative approach to creating shared long-term visions that inform short-term decision making processes. It is used by policy professionals who work at the level of the nation, the region or municipality, at the level of the research system, the industry sector, cluster or stronghold and at the level of the supply chain or production system. FORESIGHT mobilizes actors and creates broadly based support for policies that are developed in this way.*

The EFMN does not limit itself to future oriented activities based on this definition. Although the main focus of its work is on foresight related activities, information on other future oriented policy related activities will be monitored and mapped by the EFMN.

### What is the European Foresight Monitoring Network?

The EUROPEAN FORESIGHT MONITORING NETWORK is a part of the FORESIGHT KNOWLEDGE SHARING PLATFORM - a coordinated series of European Commission initiatives to support the professional development of foresight practitioners in Europe. It forms an important part of a strategy to develop the European Research Area and contains three main lines of action:

1. Monitor and disseminate information about foresight developments in Europe and the rest of the world,
2. Promote mutual learning among professionals interested in foresight related issues,
3. Conduct studies on key issues for EU research and innovation policy that provide input to RTD and Innovation related foresight activities in Europe.

The EFMN or European Foresight Monitoring Network will monitor ongoing and emerging foresight activities and disseminate information on these activities to a network of policy professionals and policy researchers as well as foresight practitioners and stakeholders. This will support the work of policy related professionals at regional and national level.

The EFMN approach is based on the continuous process of monitoring and collecting data on foresight exercises conducted not only in Europe, but in other regions of the world as well. This information is collected using experts within the international foresight community. The information gathered provides the basic raw material for the following tasks:

- **PRODUCTION of BRIEFS:** These are short 4-page descriptions of interesting, recent, or ongoing foresight exercises. Our plan is to provide 40 briefs per year.
- **MAPPING:** In addition to simply monitoring on-going activities, we compile detailed data on these activities and publish an annual report that analyzes trends and developments in Europe and other regions of the world.

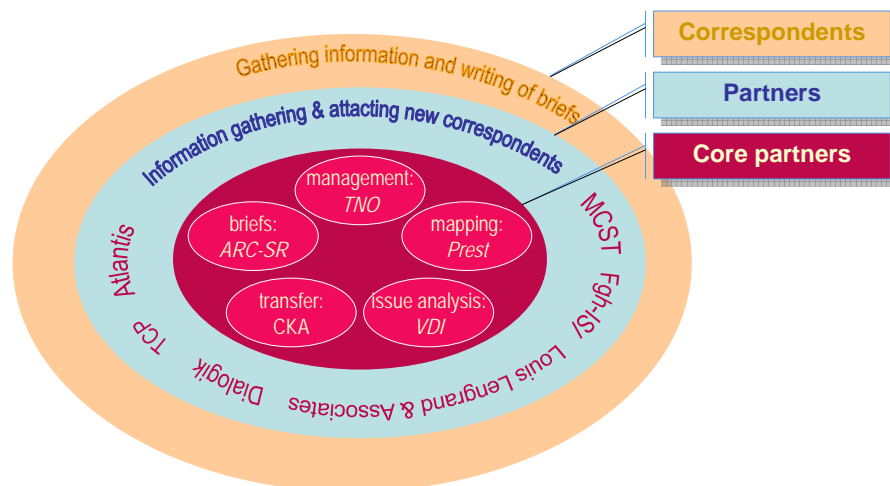
- **ISSUES ANALYSIS:** This analysis allows us to identify emerging issues that may be of importance to the research community in Europe. The intention is to highlight **emerging** issues rather than established and easily recognizable trends. All of this is summarized in an annual report.
- **DISSEMINATION of INFORMATION:** The EFMN portal and its mailing lists located at [www.efmn.info](http://www.efmn.info) provides the main means of dissemination. It is updated continuously as briefs are produced and as new initiatives are identified. It provides links to the main European Commission foresight related initiatives, as well as a calendar and a distribution list that already has about 3,000 members.

The EFMN organizes an annual expert workshop on emerging issues that are of importance for the future of Europe and worthy of amplification on the basis of a dedicated workshop. Experts in the field, together with policymakers from national or regional agencies and authorities as well as experts from the European Commission are invited to discuss the possible impact of the issue on Europe as well as possible actions needed for the future. The results of this workshop are feed into the annual report on emerging issues. This year the focus was on 'Cognitive Science'.

### How Does it Operate?

Although the EFMN team comprises 10 leading organizations in the field of foresight, input from other organisations and experts is crucial to reach the EFMN objectives. Information on past and recent foresight exercises are gathered from a network of expert correspondents across the European Union, its neighbours and the world.

The EFMN relies on a high level of participation of foresight experts from Europe and the rest of the world. Although the EFMN team provides a critical mass to ensure continuity and momentum, it is important that other foresight experts and policymakers are involved in the collection of data. Therefore a three layer organization structure has been set up.



The inner circle, or CORE team of the EFMN is formed by TNO (Overall project coordination), PREST (Mapping), VDI (Issue analysis), ARC systems research (Briefs) and CKA (Information

transfer). These organizations coordinate specific activities and play a role in the overall development of structure and content of the work.

The second layer consists of the other consortium partners - Dialogik, Louis Lengrand & Associates, Fraunhofer-ISI, TCP - Technology Centre AS, ATLANTIS Consulting S.A, and the Malta Council for Science & Technology. The responsibility of these EFMN partners is to provide information and attract new correspondents. They are involved in the gathering and mapping of foresight exercises, issue analysis and production of briefs.

The third layer is made up of the 'correspondents'. These are external foresight experts, policymakers and other individuals who can contribute to the identification of foresight exercises, the mapping and the production of briefs. In 2005 around 100 correspondents were invited to get involved in the Network, but the offer remains open to anyone else interesting in making a contribution. If **YOU** are interested please get in contact with any one of the partners and join us.

The EFMN has been set up as a service for the European foresight community and other relevant individuals and organizations that can benefit from foresight. If you are involved in foresight, in developing strategies for research and innovation, or in the use of foresight in another way, the EFMN can provide you with useful information or help you link up with experts in areas relevant to your work. To join the network it is sufficient to register at the EFMN portal [www.EFMN.info](http://www.EFMN.info).

### **We Need Your HELP!**

This document is intended to show some of the results obtained by the EFMN in terms of network development as well as progress in the Production of Briefs, Mapping and Issue analysis.

However, we hope to show you with this report that participation in the network is beneficial for you and for your peers. The EFMN enables you to show results of your activities within the field of foresight that others can benefit from. We hope this will stimulate greater interaction between foresight experts in Europe, with policymakers and with business in order to make better use of the capacities on foresight available to improve research, innovation, the economy and society.

But we can not do this alone. We rely on the active participation of correspondents. Join the network by providing information on foresight activities. All contributions help, from providing information on foresight events, mailing us new foresight exercises to writing briefs to inform others about foresight activities in detail. It will help us to improve to see what trends and developments there are in foresight, as well as identify new important emerging issues to help create an innovative European economy. Go to [www.efmn.info](http://www.efmn.info), join the network and get involved by helping in the monitoring, mapping and editing of briefs on Foresight related activities in Europe and other regions of the world!

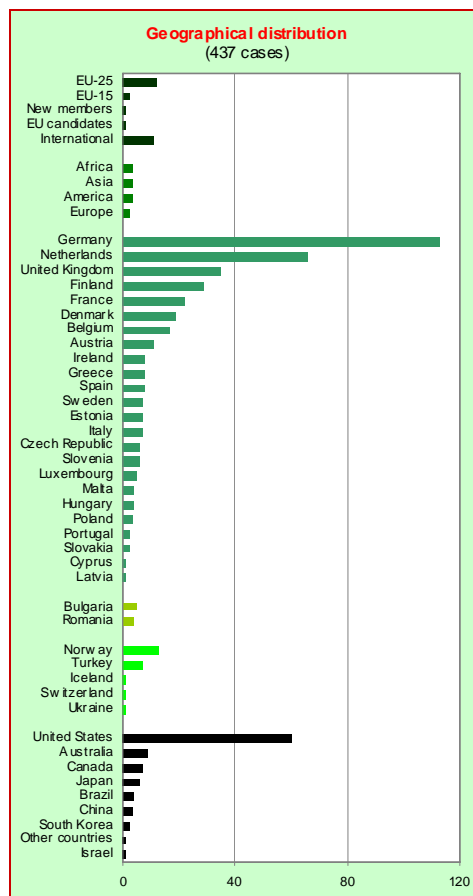
## Monitoring and Mapping Foresight Initiatives

An international network of about 100 correspondents based all across Europe and in other regions of the world around the world is actively involved in this work. The monitoring and mapping of Foresight initiatives is central to the success of the EFMN and it critically relies on the efforts of correspondents.

Although we got off to a slow start the project partners have been busy collecting and entering data whilst data collected in the course of other related projects has also been transferred into the database. Data is being collected in a systematic way and entered into Dynamo from where it can be searched and analyzed via the EFMN web site.

### Already more than 500 cases identified!

Already far more than 500 initiatives have been identified and we expect that this number will exceed 1000 over the four year lifetime of the exercise. The diagram below gives an indication of the geographic distribution of cases identified so far. In terms of **country coverage** the largest EU Member State, Germany, has by far the highest number of exercises mapped into the Dynamo database. This is followed by the Netherlands, the UK, Finland, France, Denmark, Belgium and Austria.



For now the detailed mapping of these exercises is still rather incomplete. This makes interpretation based on frequency counts sometimes unreliable. Patchy data also makes meaningful secondary analysis through cross-tabulation difficult and often impossible. However, by the time of the 2006 Mapping Report, the situation should have markedly improved.

Over the coming 9-12 months, the following data collection activities will be undertaken:

- More exercises will be nominated into Dynamo, especially for those countries that are currently under-represented in the database. The target is to have 600-700 exercises nominated by June 2006.
- All exercises in the database will be mapped to a minimum threshold "Level 1" state. This means that all exercises will be 'tagged' with Country, Date, Sponsor, Time Horizon, Territorial Coverage, Research Area, and Industry. This will not only allow for more reliable and extensive data analysis, but will also improve the way the database can be

searched by potential users.

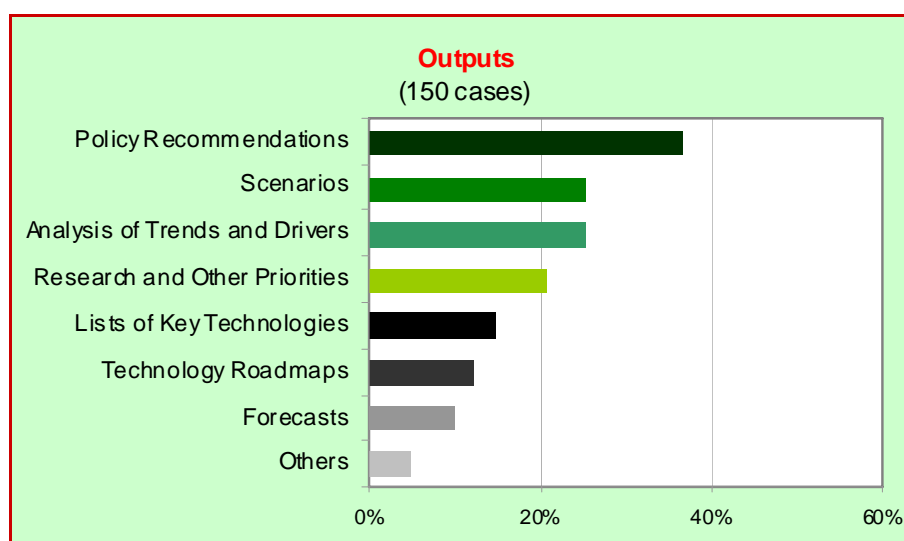
- In addition to this Level 1 mapping a more in-depth mapping will be carried out on selected cases, probably numbering in the region of about 200 exercises. This data will prove invaluable for more in-depth secondary analysis of the EFMN database.

Though incomplete this data provides us with a first comprehensive glimpse of the foresight landscape in Europe. In the future with more data collected by the foresight community, a rich picture of that landscape will emerge. This should prove invaluable to both policy makers and foresight practitioners alike.

### Highlights of the first mapping exercise

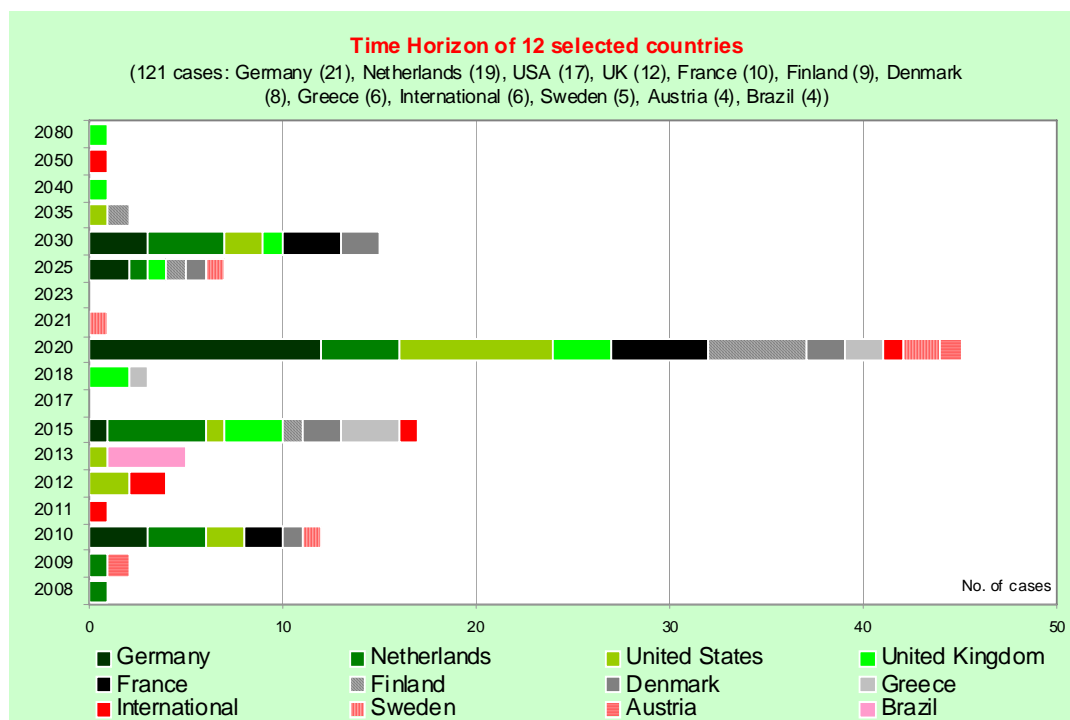
Interesting insights are already available based on data mapped to date. Highlights from the 2005 EFMN Mapping Report include the following:

As we can see below, policy recommendations are the most common type of **output** from the exercises mapped, followed by scenarios, analysis of trends and drivers, and research priorities.



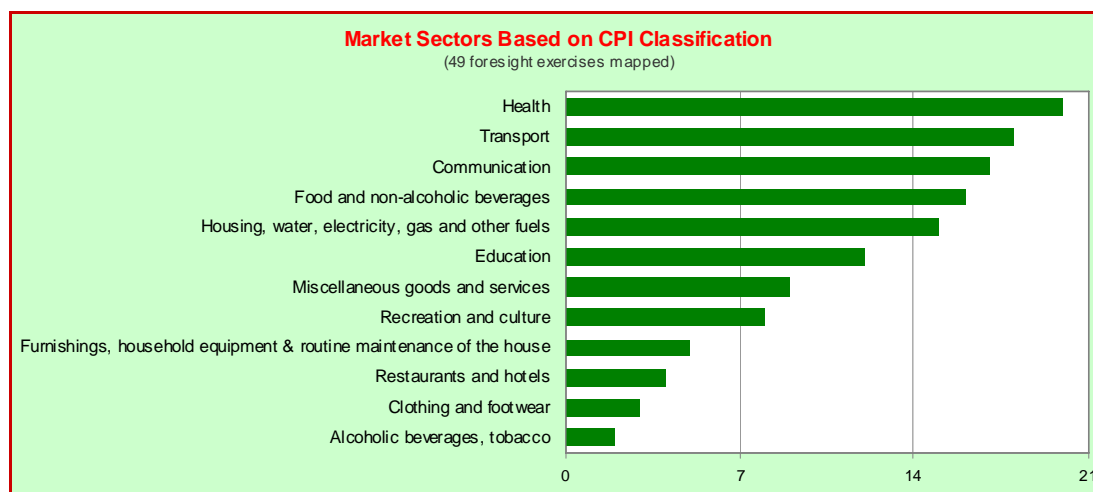
Regarding **territorial scope** the data shows that half the mapped exercises have a national focus and almost 40% a sub-national focus. Government at both national and sub-national is the main **sponsor** of the mapped foresight exercises and accounts for around 80% of our sample. As for the **target audience** for foresight exercises, the data shows these to be broad in scope, with single exercises typically having multiple audiences.

On the **methods** used, four were particularly popular: literature review, scenarios, brainstorming, and expert panels.



The most common **time horizons** for the mapped exercises were 2030, 2020, 2015 and 2010.

In terms of **markets** covered<sup>1</sup> five emerge as the most targeted ones: health; transport; communication; food and non-alcoholic beverages; and housing, water, electricity, gas and other fuels.

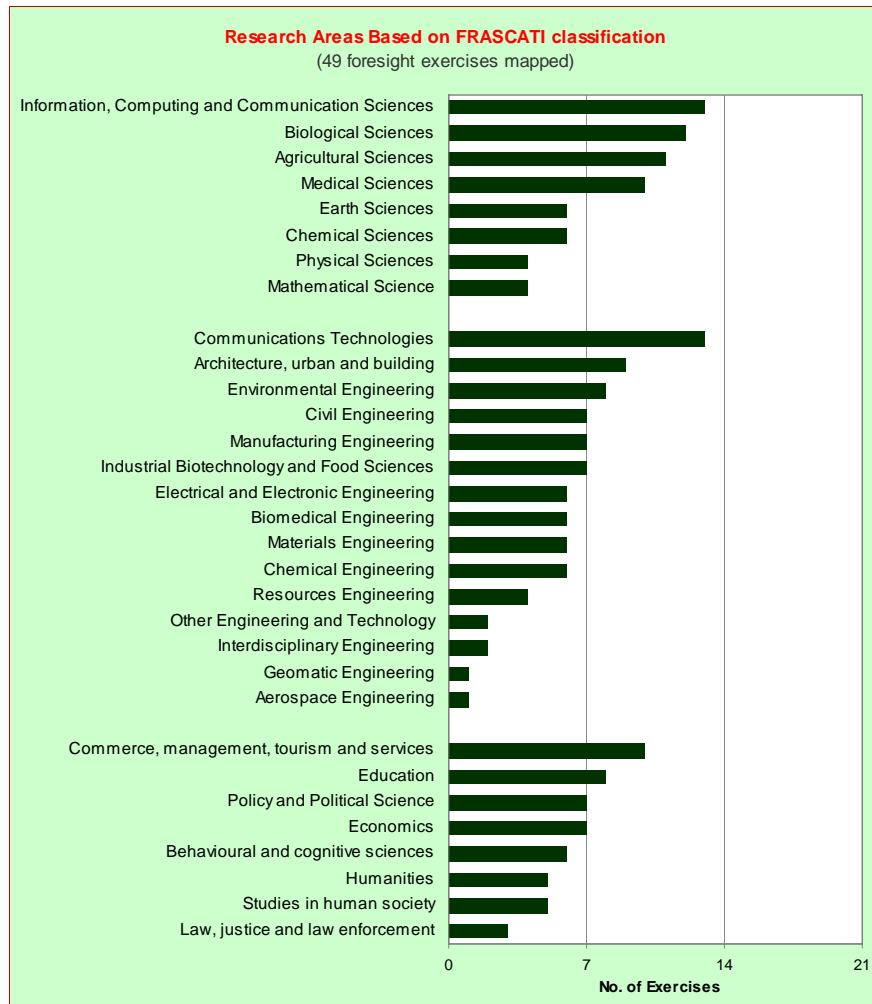


From the 17 **industries** mapped using the NACE classification most exercises have focused upon transport, ICT, construction, electricity, gas and water supply, manufacturing and agriculture.

<sup>1</sup> As defined by the Consumer Price Index or CPI



The **research areas** covered<sup>2</sup> have been broad-ranging although those related to Information and Communications Technologies (ICTs) have proven the most popular.



<sup>2</sup> As defined by the Frascati Manual

## Emerging Issues

### What's this all that about?

The EFMN issue analysis aims at identifying and analyzing key emerging science and technology issues that are relevant for European Union policies. Each year, a selection is to be made of the international foresight themes, issues and activities that offer the highest potential to support European science and technology policies.

On an annual basis, the EFMN Network will use the results of the foresight mapping to analyze the policy issues emerging from Foresight exercises around the world. Then it will identify and assess emerging issues that may have an impact on S&T policy making across Europe. Finally it will prepare, convene and report upon an annual workshop involving the EU Commission and external experts. In 2005 this work consisted of the following steps:

- Development of a process concept for identification, selection and clustering of issues,
- Development of an inventory of exercises available via Dynamo and the EFMN portal,
- Identification of current and emerging S & T issues on the basis of Dynamo content,
- Selection and clustering of emerging issues (this required an adaptation of Dynamo), and
- The validation of the selection on the basis of bottom-up consultation of the EFMN network.

This process resulted in a list of 21 'Emerging S&T Issues 2005'. These were ranked by backcasting on the basis of their frequency of occurrence in the foresight exercises and by forecasting their possible future importance on the basis of voting by experts.

### What is an 'emerging issue'?

The selection criteria for S&T issues emerging in (inter)national foresight exercises were that the issue is:

- Likely to take place over the next five to ten years
- Could lead to the possibility for other scientific development
- That these could benefit from international or global collaboration
- Require new approaches to multi- or interdisciplinary co-operation
- Likely to result in major benefits to society
- Raise new and important ethical considerations.

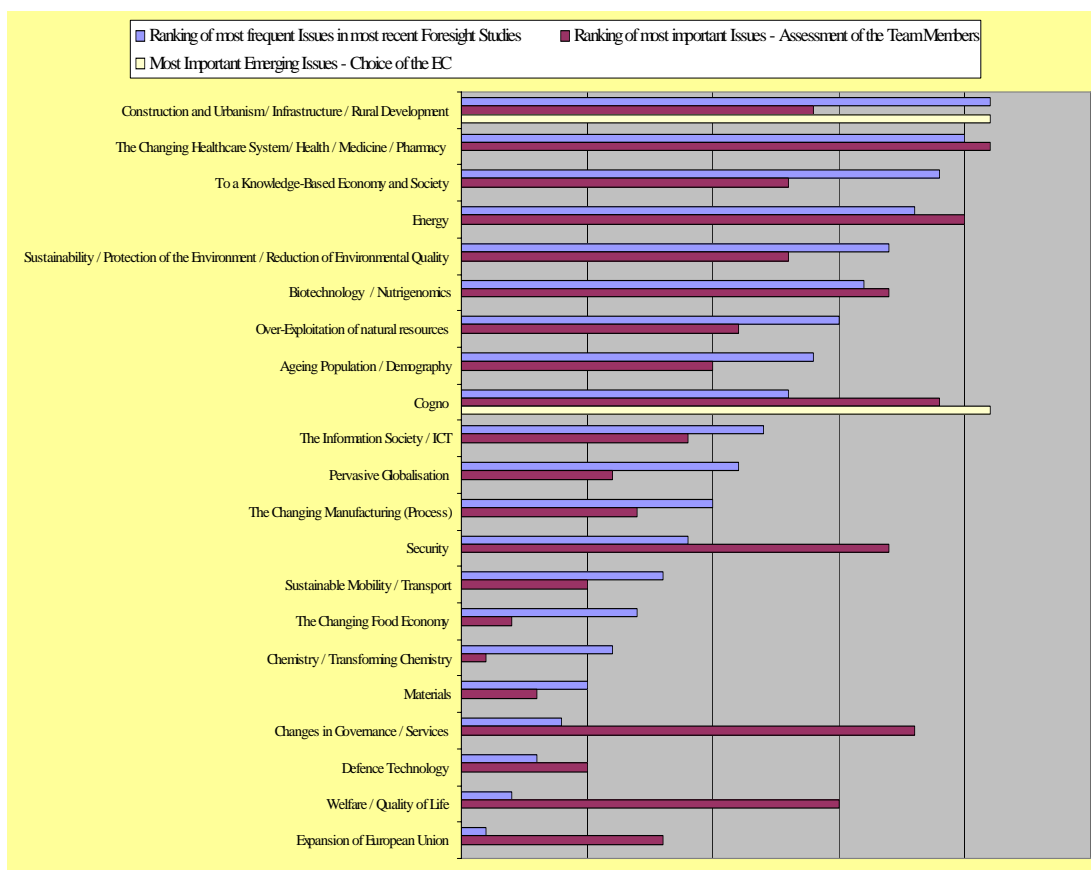
EU specific criteria also apply for example:

- The issue may be one of current importance or likely to become important for Europe in the medium to long term,
- There may be strong potential for excellent research and technological development, or
- There may be a need to disseminate and convert results into social and economic benefits,
- There may be a need for additional intervention at a European level.

### Major Emerging Issues for 2005

From the information gathered a list of 21 'Emerging issues 2005' was derived and ranked according to their frequency of occurrence in recent or ongoing foresight initiatives. The S&T issue clusters that featured most prominently in the investigated foresight exercises were:

- Construction, Urbanism and Rural Development,
- Changing Healthcare Systems,
- The Knowledge Based Economy and Society.



The results of this backcasting approach indicated on the one hand that these S&T issues have already been relevant for a long time and are relevant for future national S&T policies. On the other hand these results confirms the importance and partly the emergence of more specific S&T issues, such as

- Construction and Urbanism, Infrastructure and Rural Development,
- Biotechnology and Nutrigenomics, and
- Cognitive science.

By virtue of their scientific knowledge, the EFMN team as well as the involved experts from EC staff had diverse opinions on:

- Whether major scientific advances were likely in any given area over the next five to ten years,
- The likely impact on other S&T issues, or on
- The extent to which these fields are likely to be a priority for EU S&T/R&D policies.

The ranking of S&T issues through forecasting on the basis of voting by a diverse team of experts including experts from the European Commission arrived at a different short list, with a predominance of:

- Construction and Urbanism, Infrastructure and Rural Development,
- Changing Healthcare Systems,
- Energy,
- Cognitive Sciences and Systems.

The selected S&T issue from Foresight Exercises was for the EFMN year 2005 “Cogno” as represented in the most recent German, UK, and Danish foresight exercises. Cognition and Robotics / Understanding the Thought Processes/Cognitive Sciences.

### **The Issue Analysis Workshop**

An issue analysis workshop 2005 on Cognitive Sciences took place in September 2005. The workshop was intended to bring together representatives from the issue related specific S&T scene (this year Cogno), to help consolidate the assessment of the 2005 EFMN foresight issue “Cognitive Science” for European policy and to foster cooperation between Member States that developed relevant foresight activities on cognitive sciences issue.

The basis for the workshop was a consolidation paper on ‘Cognitive Sciences’ in Foresight Exercises that entailed an analysis of foresight exercises and initiatives in various EU countries, the issue analysis process, the criteria to identify thematic domains, the 2005 selection-process and the results. Global and EU perspectives on the cognitive sciences were presented together with an overview of the national foresight exercises in the field of cognitive sciences.

The workshop gave the participants an opportunity to discuss the options for strategic policy support through the ‘Cogno’ community. The immediate concern was to discuss how to interlink national foresights in related areas and which barriers to mutual learning might be anticipated.

### **Conclusion - there is a need for a European Vision on the Cognitive Sciences!**

Cognitive Science is the integrated study of mind and brain, where the notions of information (or representation) and computation are not predetermined but evolve as Cognitive Science evolves giving rise to scientifically normal and fruitful debates within the field. In the workshop it was felt that this definition was highly incomplete and some arguments for its completion were given, recalling lessons from history and recommending paths that would lead cognitive science into the future:

- Strengthen the cognitive kernels within the main disciplines when they are worth strengthening,
- At the same time and with equal determination, develop a strong, inclusive, federative structure, which can oversee or initiate graduate programs, workshops, networks, and research funding, leaving no good team or community outside,
- Set up foresight and policy groups composed of top researchers who really can, and want to, do some hard thinking and present the case to the policy makers.

The participants of the workshop agreed that this interdisciplinary workshop was a useful and interesting experiment and that much could be learnt from a review of recent experiences:

- The UK, Danish and German foresights,
- The EC Vision project, and other EC Services' work such as
- The IPTS study on Converging Technologies for Enabling the Information Society, NEST and the FET programme.

The workshop gave an impetus to further observation of the driving forces in cognitive sciences, and how the S&T/R&D environment will evolve, particularly as to how national governments would shape their research activities in response to changes in the field. The participants appreciated the opportunity to acknowledge how other community, national and regional foresight exercises dealt with cognitive sciences and to learn what is 'in the pipeline' even though direct comparisons are difficult due to differing aims and motivations of individual foresight exercises. The workshop was perceived as a useful tool for an inter-disciplinary exchange of information on what the future of Cognitive Science holds, for a discussion on good practice and for an understanding of the state of the art in strategic policy support in the field.

A major finding was that the EC is NOT lagging behind other parts of the world such as the US and Japan and that there exists a unique opportunity for the EU to integrate and interlink various disciplines and approaches into Cognitive Science without exclusion. Nevertheless a number of open questions remained at the end of the day, open questions such as

- How to design a roadmap for European Cognitive Sciences in a Sustainable Knowledge Society?
- Are national S&T areas leading the EU cognitive sciences agenda or vice versa?
- How to interlink national foresights in Cognitive Sciences?
- What kinds of strategic conclusions should be drawn by the European Cognitive Science community?

## Foresight Briefs as Digests of Recent Foresight Exercises

### The Purpose of the Foresight Briefs

Foresight briefs are meant to provide readers with concise, up-to-date overview information on the motivations, the process and the results of recent or ongoing foresight exercise. They are meant to be sufficiently detailed to enable the reader to assess whether it would be worthwhile to take a closer look at the original sources or contact the people involved in the implementation of an exercise. A key requirement is also that the content presented should be relevant to decision-makers in European, national and regional policy, as well as in industry. It is considered that interested stakeholders, strategists, practitioners and researchers also count as potential users of the briefs. With this audience in mind, foresight briefs should be concise and easily accessible in terms of language and style, and at the same time contain up-to-date useful information.

Four main criteria can thus be formulated that should be met by a good foresight brief:

- **Actuality:** The foresight results reported should be of recent nature and certainly not older than two to three years. Intermediate results from ongoing activities are also highly welcome.
- **Relevance:** The briefs should focus on issues that are likely to be of interest to policy professionals especially to RTD policy and they should elaborate on issues of relevance to RTD policy.
- **Anticipation:** The foresight exercise reported should look at medium- to long-term issues and at a time horizon of 5-20 years depending on the S&T dynamics of the area under consideration.
- **Participation:** The underlying activities should be highly participatory in nature.

From the point of view of potential authors, who are themselves often actively involved in the implementation of specific foresight exercises, the foresight briefs represent a unique opportunity to present their work to an international community of peers and enter into a process of exchange of information with other experts and practitioners. The success of the foresight briefs thus depends on the willingness of the foresight community to make interesting contributions to the growing list of briefs and thus jointly build up a rich content-driven information base on the most recent foresight activities not only in Europe but in other regions of the world.

### The Content of Foresight Briefs

The decisive quality of a Foresight Brief consists of *highlighting interesting results from recent foresight activities, pointing to future challenges and opportunities for policy and society*. The following main types of Foresight Briefs can be distinguished:

- **Overview Briefs** covering the full range of activities within a larger-scale foresight project (e.g. a national programme), with the aim of giving an overview of its main activities and some key findings.
- **Single Issue Briefs** highlighting selected and interesting findings from individual foresight activities. They can cover scientific-technological issues, but equally socio-economic aspects or concentrate on system-level considerations for STI-policy.
- **Other Briefs** highlighting other interesting findings in relation with foresight activities. This may be in particular first evaluation results of the impact of past foresight activities, or good

practices as regards the integration of foresight in policy-making processes. In some selected cases, also interesting methodological inroads may be addressed.

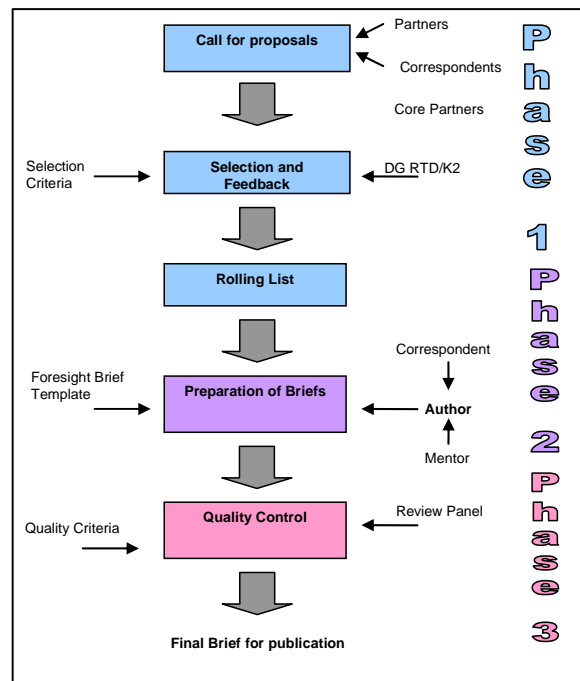
For now the foresight briefs are four-page documents that follow a well defined common structure. Those already available on the EFMN website give a good idea of what is expected from authors. In general, foresight briefs should be based on the results of particular Foresight or Foresight-related exercises. They may draw upon foresight experience of individual countries, regions and industries, but also on activities undertaken in wider groupings up to and including international activities.

### The Production of Briefs

The process of preparing foresight briefs should be fast and simple in order to allow for very recent foresight results to be taken into account. At the same time, a high level of quality control must be ensured for three main reasons:

- The selection of foresight briefs has to take care of a good balance in terms of geographic and thematic coverage.
- The accuracy and relevance of the content presented must be checked by a review process.
- Foresight briefs are supposed to follow certain guidelines in terms of structure format and style.

As a consequence, a three stage process has been designed, distinguishing between a selection, a preparation and a quality control phase. This process is led and overseen by ARC systems research, but the core partners of EFMN also intervene at different stages of the process to help the authors of foresight briefs and ensure the networked operation of briefs production:<sup>3</sup>



- The regular calls for abstracts are issued and supervised by **ARC systems research** as the lead partner for the production of foresight briefs.
- The national correspondents are in charge of identifying and getting in contact with potential authors, based for instance on overview information on foresight activities from the **Dynamo** database, in order to raise awareness of and interest in the call for foresight briefs.
- Based on the submitted abstracts of briefs the **EFMN core members**, in conjunction with DG RTD/K2, select those briefs that should be produced in the upcoming round. The other proposals are retained on a rolling list of candidate briefs that could be produced at a later round.

<sup>3</sup> For more details on the overall process of producing briefs, see the Foresight Briefs Reference Manual on the EFMN website.

- **Mentors** are designated from the group of core partners to advice authors on any questions they may have in the course of the preparation of a brief.
- A review process of draft briefs is foreseen which is also coordinated by **ARC systems research** and involves staff from the core partners as reviewers.
- Finally, formatting and publication on the **EFMN website** is in the hands of **CKA**, the core partner in charge of dissemination.

This process may at first sight look more complicated than it actually is. In fact, the first two calls could be successfully completed within the foreseen timeframe of three months, delivering more than thirty foresight briefs of a quality and coverage that could hardly be expected at the outset. It is now important to maintain the momentum, diffuse the available foresight briefs and make sure that further interest is raised in contributing to the preparation of further briefs over the coming years.



## Information Infrastructure

### The DYNAMO Expert System

The information management system used in the Network is the TNO Dynamo expert system. Dynamo is developed in co-operation with the Dutch Ministry of Economic Affairs and designed to systematically gather information about future developments.

The basic function of Dynamo is to offer an interface to efficiently collect information about identified foresight exercises. The main feature of Dynamo is the use of several predetermined classifications (e.g. type of audience, method, time horizon, budget, etc.). This enables quick characterization of the foresight exercises in minutes because the information is entered by just clicking on the relevant classes. Also this feature enables cross tabulation, comparing for example methods used with specific sponsors. Many of these cross tables are on-line available and 'live' representations of the information present. Some examples are:

- Straight overview of foresight exercises included per country and year,
- Cross tables from type of audience vs. countries,
- Overview of foresight exercises focusing on specific industrial sectors, markets or research areas,
- Overview of outputs delivered, using specific methods,
- Downloading of reports of specific foresight exercises.

Another feature is that Dynamo offers an open source structure where the entered information can be adjusted by other users of Dynamo. If other experts have additional information on specific exercises, they can easily add this information. The Dynamo system is also used to gather contact information on the correspondents. In October 2005 the number of correspondents

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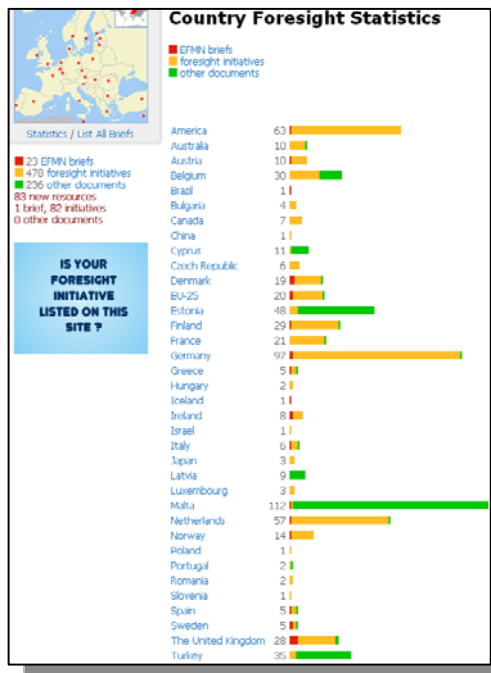
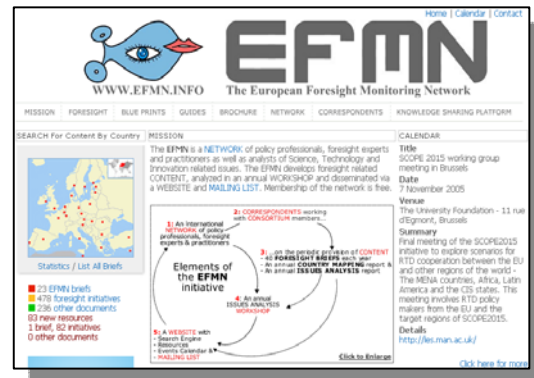
using Dynamo was around 100. Topics collected as subjects for candidate 'briefs' are managed in the Dynamo system as a **Rollinglist**.

Access to Dynamo is restricted to the EFMN team and the correspondents. In October 2005 almost 500 foresight exercises are collected. Not all of the information collected in Dynamo is 'up to date' and some checking needs to be done. Progress has been made to map all collected foresight exercises to the level that title, description, sponsor, executor, contact, website, uploaded reports, country and time horizon are available. This information will be linked to the EFMN public website. As Dynamo is mainly a platform for collecting information, other projects also make use of the information present, like *ForSociety* and *ForLearn*. Subsets of information on foresight exercises will be made available using a link to Dynamo. This will enhance efficiency and effectiveness of data collection.

### The EFMN Portal [www.EFMN.info](http://www.EFMN.info)

One of the most important interfaces to the public is the public website [www.efmn.info](http://www.efmn.info). The goal of the website is to broadly disseminate results derived on the basis of the EFMN contract.

Our ambition is that the EFMN site will be recognized as the most important and most visible reference for foresight in Europe. To make the site more generally useful and attractive to foresight professionals and policy researchers a range of functions are offered.



The following basic foresight related resources are provided:

- A description of the EFMN initiative,
- A description of 'The Knowledge Sharing Platform' of which the EFMN is a part,
- The Country Guides to Regional Foresight,
- The Blueprints on regional foresight,
- A Calendar of foresight events in the coming months,
- An overview of the Briefs produced by the EFMN (downloadable),
- Access to most of the foresight exercises and other future studies identified.

An important aspect of the web-site is support for the visualization of information gathered under the mapping and brief writing activities.

An interactive EU map is provided that executes a

search by simply clicking on a country. An interactive World Map executes a search by simply clicking on a region. This map is accessed by clicking on the inset of the EU Map.

### Interactive Searches and the Visualization of Mapping Data

The intention is that a visitor to the site is able to execute a search in a simple intuitive way and without any initiation. This will reassure the user that the site contains useful information and encourage them to explore further. The current default is that the search lists all resources related to a given country. These resources are 'briefs' that result from the brief writing task, 'initiatives' that have been mapped under the mapping initiative as well as 'other documents'.

This category is quite open and could include for example the country guides, the blueprints or the reports derived from other activities of the Knowledge Sharing Platform. The 'briefs' are contained in the database on the EFMN site whereas the initiatives reside on the DYNAMO system. The EFMN site is linked to the DYNAMO site to make all of this information online available through a single integrated view.

An interactive bar-chart gives an overview of the resources available in the site. For the moment this bar chart interface provides a breakdown by country of the number of written briefs, mapped initiatives and available other documents concerning that country. These three items are represented by 3 different colors. These bars are 'interactive' in the sense that if you click on the yellow part of the bar for Denmark a list of the mapped initiatives for Denmark is generated. The intention is that the interactive bar-chart allows a comparison by country as well as simple and easy exploration of the detail represented by each bar.

A series of 'Quick Searches' are also available simply by clicking on 'briefs', 'initiatives' and 'other documents', 'new resources' etc.

At this moment about 750 resources are currently available on the site are. After a full four-year project-cycle the projected resources are over 1500 and quality will increase significantly.

Available resources

Resource	Current Number	Projected 2008
Briefs	30	160
Initiatives	503	1000
Other Documents	236	500

To facilitate the gathering of data on existing initiatives, the website supports an interactive form via which any visitor to the site can inform the EFMN team. Information on additional foresight initiatives that are worthy of mapping are asked to be send to the EFMN team.

### The EFMN Mailing Lists

To facilitate work and dissemination of information, mailing lists have been established. These mailing lists are usable by the public to get in contact with the network "layers" of the EFMN, but are managed so spam is filtered. The main mailing list is the news list. It contains 2,052 members and is used to send updates of new information available on the site. The Correspondents list has 108 members and is used for general communication with the correspondent network.

## The Work that Lies Ahead

### How to Become a Correspondent

If you are interested in becoming a correspondent for the EFMN, we would like to ask you to get in contact with the EFMN team. The task of facilitating the work of correspondents is divided up among the members of the EFMN team as presented in the following table.

EFMN Partner	Countries Covered
ARC-sys	Austria, Sweden, Spain, Portugal and the IPTS
Atlantis	Greece, Cyprus, Romania and Bulgaria
Dialogik	Italy, Germany (National foresights), Switzerland and Liechtenstein
Fgh-ISI	Germany, China, Japan and Multi-country Foresight initiatives
MCST	Malta, Slovenia and Italy
LL&A	France
PREST	United Kingdom, Ireland, Japan, Hungary, Iceland, Turkey and Brazil
TCP	Czech, Slovakia, Poland, Latvia, Estonia
TNO	USA, Korea, Netherlands, Belgium, Luxemburg, Canada, Norway and Israel
VDI	Germany (regional foresights), Denmark and Finland

To become a correspondent, it is sufficient to send an email to your coordinator including name, organization, email, phone number and country. These can be contacted directly by email by clicking on the name in the EFMN portal. They will get in touch with you to discuss your possible role in the network. You will be send background information on the EFMN, as well as documentation on how to write briefs and fill in information on foresight exercises and TNO will provide you with a login and password for DYNAMO.

As a correspondent we expect you to play an active role in the EFMN. Possible contributions are:

- Attracting other possible correspondents,
- Including new foresight exercises into Dynamo,
- Identifying new possible topics for briefs,
- Production of briefs.

As a correspondent you will have full access to Dynamo including in depth information on foresight exercises and you may be invited to the annual Issue Analysis workshop. An EFMN conference is scheduled for 2006 and all active correspondents will be invited. The briefs you produce will be distributed to the foresight community giving you and our organization exposure and recognition by the greater foresight community. Becoming an EFMN correspondent is one way of getting more involved in an active global network of foresight researchers and policy professionals.

### Activities planned for the period 2005-2006

This first year of the EFMN initiative 2004-2005 was the year for getting things going and initiating the Network. This proved to be a complex and challenging task and we learned many things along the way. The period 2005-2006 will see some changes made and the existence of the

EFMN will be broadly communicated to the existing foresight community and to other users of foresight information.

The number of correspondents connected to EFMN can be improved. Also their active involvement is limited. Next years we are aiming at more correspondents which are also more actively involved by gathering new foresight information and including into our database. Also correspondents will be asked to produce briefs and gather information about emerging issues. The possibility of having an **EFMN Day** where active correspondents and the EFMN team can meet and discuss foresight in Europe and the rest of the world is being considered.

The **mapping of foresight exercises** will continue throughout next year. The EFMN team is aiming at collecting an additional 250 exercises over this period. However one of the most important aims will be to increase the quality of the exercises already collected. Improving this information and creating a more balanced knowledge base will enable interesting analysis of high added value to the foresight community dealing with issues such as shifting focus or important new methods and outcomes. The remainder of 2005 will be used to increase quality of collected exercises and in the spring of 2006 a new 'Call for Exercises' will be issued to the network. The data gathered will be analyzed before summer 2006 and will provide information for the second 'Annual Mapping Report'.

The **issues analysis** carried out in 2004-2005 was based on limited available information. Nevertheless it lead to an interesting workshop about Cognitive Science. Next year, the connection to the mapped exercises will be improved and we are confident that even more interesting information will come to surface. A systematic overview of emerging issues is scheduled. Also a new important issue will be selected for a in dept analysis next autumn.

The **briefs production** is well on its way. Next year some 40 additional briefs are to be produced, but the input of correspondents is important. Also the possibility of new types of briefs is explored, for example to quickly describe ongoing foresight exercises. Three 'Calls for briefs' are scheduled for the period 2005-2006, one in November 2005 and one each in February and May 2006. You are invited to get in contact with the Work Package Leader for the briefs production if you are interested in contributing to this task.

The **information structure** will be further developed in the coming period. The EFMN website and the Dynamo system are being continuously improved and comments from the user network are always appreciated. Our ambition is to eventually achieve a total circulation of about 10,000 subscribers. About 2,400 names have been gathered in the course of 2004 but this task will become more intensive in the next year. We have delayed mass mailings until the site is stable and contains information of interest to the foresight community. If you are interested to receive information, please get in contact with the Patrick Crehan either via the site or by email at [Patrick.Crehan@cka.be](mailto:Patrick.Crehan@cka.be).

To conclude the EFMN is now in place and will play its role as a spider in the foresight community, offering a platform for knowledge dissemination.

## Overview of Briefs Produced in the Period 2004-2005

No.	Brief	Author(s)	Country
1	Futur – The German Research Dialogue	Susanne Giesecke - ARC-sys	Germany
2	Swedish Technology Foresight 2004	Sami Mahroum - ARC-sys	Sweden
3	Milanese SME Internationalization 2012	Verena Huebner - ARC sys	Italy
4	Anticipating change for European Industries 2020 to 2025	Colin Blackman - Foresight Journal	EU-25
5	Danish Technology Foresight 2015	Sami Mahroum – ARC sys	Denmark
6	Foresight Vehicle Technology Roadmap	Sami Mahroum - ARC sys	United Kingdom
7	Archaeology in Ireland 2020	Gabriel Cooney, Liam Downey and Muiris O'Sullivan All from University College Dublin	Ireland
8	Foresight Embedding in Malta	Jennifer Casingena Harper - MCST	Malta
9	Foresight in Information Society Technologies in the European Research Area 2020	Matthias Weber - ARC-sys	EU-25
10	Cyber Trust and Crime Prevention 2018	Jane Jackson - DTI	United Kingdom
11	Nordic Hydrogen Energy Foresight 2030	Birte Holst Joergensen - Risoe National Laboratory	Denmark
12	Greek National Technology Foresight 2021	Tonia Damvakeraki - Atlantis Research	Greece
13	Green Technological Foresight on Environmentally Friendly Agriculture 2024	Kristian Borch - Risoe National Library	Denmark
14	Universities and the City-Region as a 'Knowledge Capital' 2008	Luke Georgiou – PREST at the University of Manchester	United Kingdom
15	Production Chains 2016 – The Brazilian Technology Foresight Programme	Rafael Popper - PREST at the University of Manchester	Brazil

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<b>No.</b>	<b>Brief</b>	<b>Author(s)</b>	<b>Country</b>
16	The BMW Region of Ireland 2025	Kieran Moylan & Louise Kinlen - The BMW Regional Assembly	Ireland
17	Bionic Buildings 2020	Susanne Giesecke - ARC-sys, Sabine Hafner-Zimmermann - Steinbeis Europa Zentrum	Germany
18	The Dynamo System 2004	Maurits Butter - TNO	Netherlands
19	Transport and Mobility 2020	Liana Giorgi - Interdisciplinary Centre for Comparative Research in Social Sciences	EU-25
20	The US Hydrogen Roadmap 2030	Michael W. Chinworth - Vanderbilt Institute for Public Policy Studies	USA
21	Transition to Sustainable Production Systems – Austria 2020	Matthias Weber - ARC-sys	Austria
22	UK Foresight on Cognitive Systems 2020	Jane Jackson - DTI	United Kingdom
23	UK Foresight on Exploiting the Electro-Magnetic Spectrum	Jane Jackson - DTI	United Kingdom
24	“Operation Futuris” Future of Research, Innovation, Society	Julie Rachidy, Isabelle Chatrie - LLA	France
25	Chemical Sector In Flanders - Towards 2010	Arnold Verbeek - IDEA	Belgium
26	Food Sector in Flanders - Towards 2010	Arnold Verbeek - IDEA	Belgium
27	AGORA 2020	Julie Rachidy, Isabelle Chatrie - LLA	France
28	Foretech – Innovation and technology Foresight Bulgaria	Tonia Damvakeraki - Atlantis Consulting S.A	Bulgaria
29	Future Radar 2030: Demographic Change – Challenges and Opportunities for Rheinland Pfalz	Chritoph M. Hadnagy - ZIRP	Germany
30	Vision 2023: Turkish National Technology Foresight Exercise	Ozcan Saritas – PREST at the University of Manchester	Turkey

## How to Contact Members of the EFMN

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# Foresight in Europe and other Regions of the World

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The **EFMN** is financed by the **European Commission Directorate General for Research** as part of a series of initiatives intended to provide a **Foresight Knowledge Sharing Platform** for foresight practitioners and policy makers in the European Union. More information on the EFMN and on the Foresight Knowledge Sharing Platform is provided at **[WWW.EFMN.INFO](http://WWW.EFMN.INFO)**

