Government Foresight Activities in Germany: The Futur Process

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1. The Background of the German Foresight Process "Futur"

The German foresight process "*Futur*" was launched in spring 2001 on behalf of the German Federal Ministry of Education and Research (BMBF). It is the pioneer process of current comprehensive, non-sector-specific foresight activities in Germany on a national scale (Cuhls 2003, Banthien et al. 2002). BMBF started its first foresight activities at the beginning of the 90`s with a project called "Technologies at the Beginning of the 21st Century" (Grupp 1994) and a broad "Delphi study" of future developments in science and technology, conducted in co-operation with the Japanese Institute of Science and Technology Policy (NISTEP) (Cuhls/ Kuwahara 1994). Since then, the scope and the objectives of foresight in Germany have broadened considerably. With the "Mini-Delphi" studies of 1995 (Cuhls et al. 1995) the methodology was improved, and in 1998, a large German Delphi study followed, taking into account also societal "megatrends" at the global level (Blind et. al 2001; Cuhls et al. 2001).

In order to counter the criticism that only experts were involved into the activities and to open up the German national foresight processes for more and greater variety of participants, BMBF decided to organise a new foresight process called "Futur". This process was the pre-version of the currently running Futur process. It put special emphasis on the use of the Internet as a platform for discussing the different topics. The kick-off meeting took place at a conference in Hamburg in June 1999. The process started with a focus on two fields, "Mobility and Communication" and "Health and Quality of Life". The ministry expected that it would be sufficient to provide a platform and some inputs on the themes to provoke any persons who are somehow interested in the topics to participate in the discussions. This approach failed because too few people knew about the process, and the questions to be discussed were not well defined. Further on, the methodology and objectives were unclear. BMBF decided to restart the process.

In spring 2001, Futur was started, for which the methodology and expected outcomes were pre-defined by BMBF. The procedure relied on a wider process, using a variety of methods and instruments. It was decided that face-to-face meetings of working groups should be the central medium of discussions, and the Internet should be used for information, supporting the transparency and communication of the whole process. A new consortium is responsible for the conceptualisation and implementation. This "new" Futur runs until the beginning of 2003 in its first phase and will be continued.

2. The General Objectives of Futur

Futur aims at introducing fresh ideas into the existing research funding priorities of BMBF, by adding to the traditional mechanisms for agenda-setting and prioritisation. The conventional decision-making process is characterised by a close and rather intransparent interaction between research institutions, industry, project managing agencies (Projektträger) and ministerial bureaucrats in charge of research funding. Strategically oriented officers within the ministry were increasingly concerned about the risk of missing important new issues on the funding agenda, if this were solely based on traditional mechanisms driven by the involved actors.

Futur therefore is oriented towards the identification and inclusion of societal needs in future research agendas and serves as a means of priority-setting for future innovation-oriented research policies. Interdisciplinary, problem-oriented "lead visions" (Leitvisionen) are supposed to be the major outcomes of the process, which shall reflect the demand for research and be translated into publicly funded research programmes or projects. Participation of a broader audience in various kinds of activities and the combination of different creativity, communication and analytical methodologies are characteristics of the process. The implementation of programmes, as well as the provision of budgets for the programme does not belong to the Futur process as such, strictly speaking. BMBF and project management agencies will implement the programmes, though the planning will be supported by the consortium and some participants of the process. Then, the Futur process is supposed to be continued considering new subjects.

2.1. The Principles of Futur

At the beginning of the conceptualisation of Futur, some characteristics and principles were defined, which should be met by the lead visions and the process. Lead visions, as defined by BMBF are not Utopian visions but are pictures with pragmatic, normative features under a broader frame. They are supposed to:

(1) include precise objectives.
(2) include a new quality of problem-solving (by a mix of methods, participants).
(3) be interdisciplinary and integrate multiple perspectives: the outcomes are supposed not to be linked with certain disciplines and technologies, but to be more systemic in character and interdisciplinary in nature - as well as taking into account the different perspectives of heterogeneous stakeholder groups.
(4) start from a societal need and build up the necessary steps in research to meet these needs.
(5) be communicated to the public (be "understandable for everyone").
(6) have a high economic relevance.

In order to achieve the project goals, the Futur process aimed at integrating the following characteristics:

- the process should be open to results, being independent of existing BMBF-programmes and without thematic frames, to develop "own" interdisciplinary ideas of future developments,
- at the same time, the process should be result-oriented at developing specific lead visions,
- in order to achieve interdisciplinarity of the lead visions the team of participants should stem from different disciplinary, thematic, professional and sector backgrounds,
- participation of "non-experts": the purpose of this principle is to open-up the traditional planning and decision processes by the participation of new actors like users, social scientists, industry, interested persons from civil society....,
- combination of different creativity, communication and analytical methods: different methods are combined to achieve the process goals, shedding a light on possible future developments from different perspectives,
- due to the combination of various activities and methods, it is important to ensure the continuity and sustainability of the process,
- reflexive learning: taking into account the pioneer status of the process, the importance of flexibility to learn (learning process) and adapting to experience is stressed.

2.2. The Process Management

The BMBF division for strategy, planning and research commissioned Futur. It funds the process, participates in different forms in the various activities of Futur and will also guide the implementation of the lead visions into projects and/ or programmes. The process enjoys a strong political backing, where the leading officials of the BMBF, including the Minister Mrs. Edelgard Bulmahn, pledged their support for Futur.

2.2.1. The Consortium

The process itself is organised by a consortium of five institutions, each responsible for a different function.

IFOK (Institute for Organisational Communication, Bensheim and Berlin) is the head of the consortium and responsible for the design and management of the process (including concepts, organising the different workshops, providing facilitators, etc.) and the communication flow.

ISI (Fraunhofer Institute for Systems and Innovation Research, Karlsruhe) has the function of scientific advice, provides its methodological know-how and the international experience on foresight activities, and acts as scientific secretariat for the external evaluation.

IZT (Institute for Future Studies and Technology Assessment, Berlin), with specific knowledge in futures studies and methodologies, has a scientific advisory function, supports especially the visionary work by scenario writing and the realisation of future workshops (*Zukunftswerkstätten*).

Pixelpark AG (Berlin, Köln) designs and hosts the internal virtual (intranet) workspace and the public Internet homepage of the process.

VDI/VDE-Technologiezentrum Informationstechnik GmbH (Technology Centre Information Technology, Berlin-Teltow, short: VDI/VDE-IT) is a project managing agency of BMBF, provides and organises technological expertise (expert papers, subject advisors) and supports the activities of the consortium in subject matters and acts as advisor.

2.2.2. Further Actors in the Process

BMBF divisions and project managing agencies:
The BMBF divisions and the project managing agencies of BMBF are central addressees of the process results, thus being responsible for the planning, organisation and implementation of BMBF programmes. The divisions and project managing agencies were integrated into the process.

Innovation Council (*Innovationsbeirat*):
The Innovation Council was established in July 2001, assembling twelve high-ranking personalities from science, private businesses and society. The purpose of the council is to advise the ministry in the matter of innovation processes for education and research. The council takes part in the Futur process as a kind of BMBF-consultant in questions of the process and the results. It played a role in the different selection phases and in the final decision about the implementation of the lead visions.

2.3. The Internet as Communication Instrument: Homepage and Workspace

The communication activities of the process were supported by the Internet. A public homepage (www.futur.de) was to disseminate information about the process, the results of the different events and foresight processes in general. Furthermore, people could apply to participate in the process via the homepage.

For the actors of the process, a virtual workspace was set-up. Different spaces for the consortium and the participants were provided. The participant space was divided into spaces with different access rights.

3. The Process

3.1. Nominating the Participants

One objective of Futur is to open up the traditional ways of developing research programmes and have a wider set of participants in order to bring in fresh ideas and to question existing perspectives. To accomplish this goal, the objective of the election process of the Futur participants was to compile a heterogeneous group of persons with different professional backgrounds (e.g. science, administration, private industry, management) and different disciplinary foci. The co-nomination method was chosen to

select the participants (Nedeva et. al 1995). The selection process was performed in two steps: first, the members of the consortium nominated 152 people for the initiative circle (*Initiativkreis*). Second, these individuals were asked to co-nominate 4 to 5 persons applying a given set of criteria. In the course of the process, additional participants were nominated by the consortium in order to provide the necessary number of participants for the *open-space conference* (conference for the identification of future trends) and to ensure necessary expertise for the *focus groups* (discussion groups to elaborate the selected themes).

The members of the initiative circle, those co-nominated by the initiative circle and the persons additionally nominated by the consortium form the *inner circle*, which in the end added up to 865 members[1]. The members of the inner circle present the target group to participate in the face-to-face activities of Futur and therefore are the most relevant circle for the development and elaboration of the focus themes.

The participants of the inner circle again nominated four to five persons as participants of the *outer circle.* Further, the interested public had the possibility to join the outer circle by applying to participate via the Futur homepage. The members of the outer circle were asked to participate in the Futur process providing input and feedback mainly through the workspace and participating in the selection procedures of the process. Furthermore, the members have the possibility to participate in the *future workshops.* In some cases, where people possessed special expertise that was lacking in one of the focus groups, outer circle members were nominated by the consortium or a respective focus group to join the group and then became members of the inner circle.

Table 3.1-1: Overview of the numbers of participants according to the different selection mechanisms (Status in May 2002)

Selection Mechanism	**Members of the inner circle**	**Members of the outer circle**	**Total number of members**
Initiative circle	152	4	**156**
Nominated	194	120	**314**
Co-nominated	489	345	**834**
self-application	30	125	**155**
	865 participants	**597 participants**	**1462 participants**

As a rule, the participants of Futur did not get any financial support. Only if the institution the participant was affiliated to did not reimburse the expenses, they could apply for the reimbursement of the travel expenses.

3.2. The Introductory Workshops

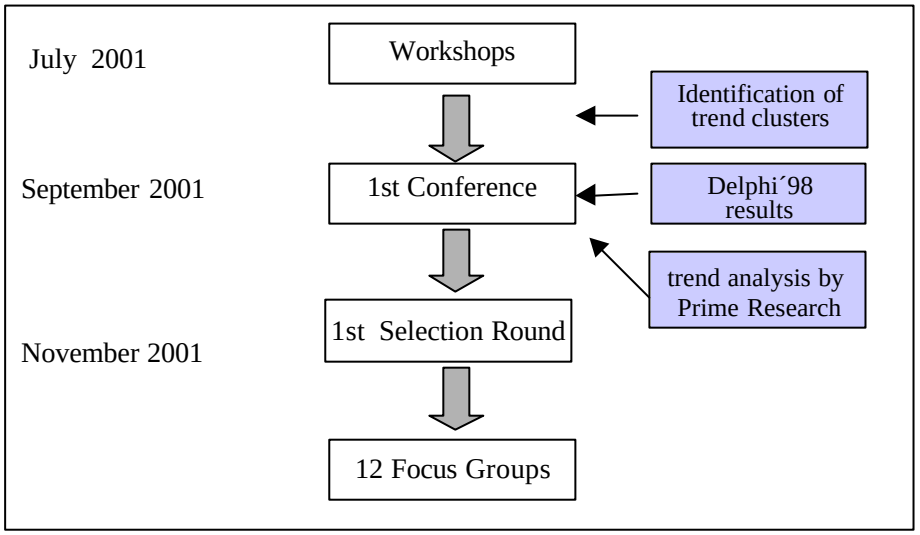
In order to achieve the aims of Futur, different methodological instruments were integrated to shed a light on general future developments and trends from different

1 As the data base is not static but dynamic with some fluctuation, these numbers reflect only a point of time, May 2002.

perspectives. Figure 3.2-1 illustrates the chronological order of the first part of the process. A more detailed picture of the complete process is included in the appendix.

The Futur process started with workshops in June 2001, where actors from the inner circle were invited. Eight workshops with altogether more than 400 persons were organised. The participants were grouped according to their background to "science", "private business industry", "societal groups" and "young professionals". Due to the large number of participants, each workshop was sub-divided into three groups. The objective of the event was to generate a first collection of future trends, which will be important for the society 2020. The central characteristic of the workshops was the openness to results. No thematic fields were predefined, the participants could openly introduce the fields and themes they considered to be important.

Figure 3.2-1: The Process of the Topic Generation



To kick-start the event, the participants were asked what they think the society of 2020 would look like, and to write the trends into a mind map. In the next step, the participants were asked about future-relevant subjects from their own area of work. Questions concerning the future had to be written down in a loosely managed brainstorming session. The presentation of the results (from a matrix to lists) differed between the groups. In the second part of the event, the groups split into smaller sub-groups to deepen the discussion on identified top-themes.

After the event, the discussion results were recorded in form of minutes and published in the internal Internet-workspace. Here the participants had the chance to add to the minutes and to comment on them.
In the next step, the consortium summarised and structured the workshop results to prepare a base for the following event, the open-space conference. It was aimed to map the results without too much distortion, taking into account the complexity and variety of the themes. The results of the different groups were on the one hand structured by

IFOK in a two-dimensional matrix. Every idea was integrated in order not to lose any. Some "clusters" of ideas, mentioned twice and more, emerged.

On the other hand, it was looked for "new ideas" in the set (performed mainly by VDI/VDE-IT as well as ISI, independently). They were clustered according to similarities. For these clusters, generally classifying titles were formulated.

The major outcome of the structuring and classification of the workshop discussions by the whole consortium were 21 trend clusters, which summarised the central topics of the future society identified by the workshop participants. In order to use these results as discussion stimulus for the open-space conference, the consortium defined suggestive headings which grasped the central themes of the trends. Under each of the 21 headings three sub-themes were listed and described, which should inspire deeper discussions of the field.

3.3. The Open-Space Conference

The next step in the process was the open-space conference, which took place in Berlin on 26 September, 2001. The objective of the conference was to identify trends which will influence the future society and to condense these trends into profiles as a basis for the following more detailed discussion in focus groups. First groups should establish themselves in a free manner according to interests in a specific topic. Again, no thematic fields were predefined and the participants could openly introduce subjects themselves. The 21 trend clusters worked out after the workshops with their suggested titles were provided on meta-walls to inspire the group formation. Further, the results of the study "Delphi ´98" and a trend-analysis, carried out by the Institute Prime Research, which summarised themes of some futures studies journals, were presented to stimulate the trend generation. In the end, formatted theme profiles had to be worked out by the group participants to record the results. The workshop results served as guidance or stimulus and could be restructured by the conference participants.

The members of the inner circle were invited to take part in the conference. Approximately 300 of them participated. "Subject advisors" (*Themenpaten*, literally "thematic godfathers") were responsible for each group besides facilitators. The subject advisors are persons from the consortium and were selected because of their specific knowledge in the proposed "trend cluster" field. They played also a more important role during the work of the focus groups, providing expertise and co-operating with the facilitator to elaborate the minutes and additional discussion papers.

3.4. The First Selection Round of the Futur Themes

25 theme profiles were generated from the conference. Most of the groups and themes met the criteria mentioned above. As it was only possible to continue the discussion of 12 themes, a broad selection process was organised to select 12 profiles for a continuation of the discussion. For the selection, the following procedures were taken into account.

(1) **Voting of the participants**: an online-voting was organised in the internal workspace asking for the opinion of the inner and outer circle members. 154 out of about 680 persons addressed, participated in the process from 30 October till 9 November 2001. The participants were asked:
   - to select themes, which they considered most important for future research
   - to judge these themes by given criteria on a five-point scale.
   - to vote on all of the 25 theme profiles, these should be further integrated into the process

(2) The VDI/VDE-IT prepared a short **assessment of the technology content** of the themes

(3) **Workshop of BMBF divisions**: the BMBF strategy division organised an in-house workshop with division and division heads as well as the project managing agency representatives. They voted on the similar criteria as the participants by giving "points" according to the criteria (stickers were put on the wall at the name of the field)

(4) The **Innovation Council** was informed and gave a short statement on the themes

(5) **Workshop of the consortium and BMBF strategy division**: in a session with the consortium, BMBF strategy division decided on twelve groups, taking into account the votes from the participants and divisions, as well as the opinion of their own representatives.

On the basis of the different votings, the background information and the suggestions by the BMBF strategy division, the final decision was taken by the minister Mrs. Bulmahn.

The themes, which were selected for further elaboration, were:

(1) Forward Planning and Design of Worthwhile Work in the Knowledge Society
(2) Germany as a Location for Learning – Competition Factor Learning Society
(3) Living in the Networked World: Efficient, Self-Determined, Secure
(4) The Promotion of Inter-cultural Potentials
(5) Handling Knowledge
(6) Sustainable Mobility
(7) Individualised, self-determined and human: Medicine 2020
(8) Consumption, Quality and Supply - Nutrition in the System
(9) Sustainable Agrarian Production in Global Responsibility
(10) Natural Resources as Mankind's Natural Environment – Sustainable Future based on Biodiversity and Climate Research.
(11) Decentralisation - Strategy for Sustainable Economies and Life
(12) Intelligent Products and Systems for Tomorrow's Society/ the Intelligent Product

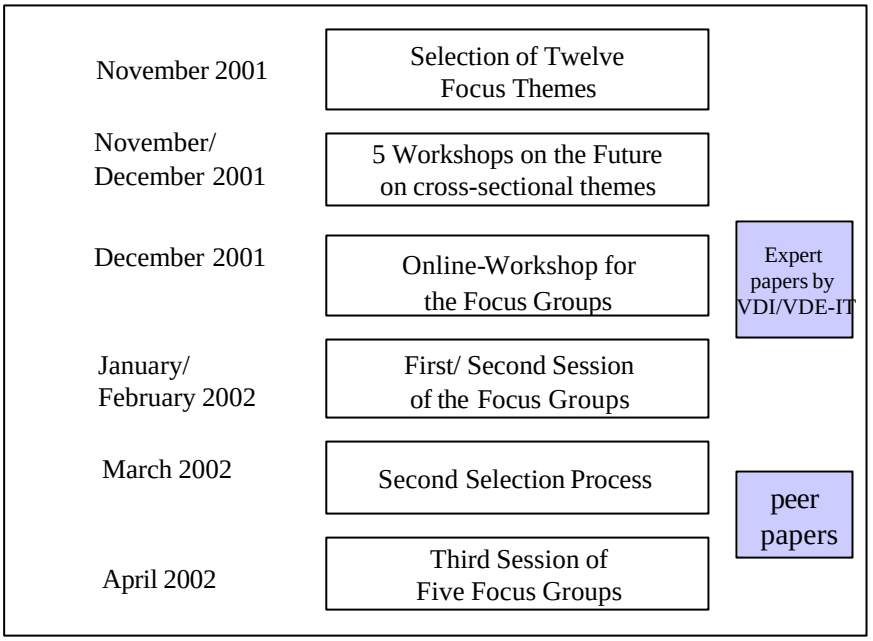
3.5 The Process of the Further Elaboration of the Themes

After the selection of the focus themes, focus groups were organised. Their objective was:

- to focus and to concretise the subjects in accordance with the Futur criteria,
- to identify key factors for the development of the field and evaluate them according to their relevance, uncertainty and interaction with other factors,
- to identify the demand for research,

- to develop basic ideas for respective lead visions and scenarios.

Figure 3.5-1: The elaboration of the themes



Invited participants of the focus groups were the members of the inner circle, who had already participated in the respective groups at the open-space conference. The additional members of the inner circle also could register to participate and the outer circle members had to apply formally in order to join the groups. Those, who applied were put on a list. On the basis of this list, the consortium appointed additional persons to the focus groups. Additionally, the list was presented to the focus groups, which could choose further participants for their group according to the competencies that were still missing.

The work of the focus groups was prepared by an online-workshop, followed by three one-day-workshops. The first two workshops were realised for the twelve focus groups. After the second session, a second selection process was initiated, where the five most advanced and promising focus themes were selected out of the given 12 themes. These five favourite themes were the objective of a third session of the corresponding focus group. The focus themes, which were not selected, were not completely deleted but it is planned to continue their elaboration in a next Futur phase.

3.6. The Online-Workshop

The online-workshop took place between 12 and 18 December 2001. It had three concrete objectives: to constitute the focus groups, to offer the participants information on the respective thematic fields and to clarify further demand on specific competence. A subordinate goal was to start the discussion and specification of the focus themes.

3.7. Future Workshops

Parallel to the online-workshop, five future workshops (*Zukunftswerkstätten*, as conceptualised by R. Jungk, see Jungk/ Müllert 1996) were conducted in Berlin in November and December 2001. The IZT, as expert institution on this field, was responsible for the realisation. "Future workshops" is a method to develop "desirable" (normative) futures in an open room without hierarchies, and to look for concrete chances for their realisation. Methods for visualising, brainstorming and creativity methods are applied. In Futur, the future workshops were used

- to develop visions of possible futures which could be used for the work of the focus groups,
- to support the prioritisation of the themes,
- to develop ideas on how research and development could possibly support the realisation of the visions.

The themes of the workshops were based on clusters of problems, which were touched by several groups on the conference (without necessarily being the heading of one of the competition profiles) and which were approved by BMBF. These were as follows:

(1) Future of health and well-being – Visions for an era of prevention (What belongs to a healthy and active life?)
(2) Balancing work and life – Visions for the work, leisure and family world of tomorrow (What does the balance between work, leisure and family look like?)
(3) Ageing in a sustainable society – Visions of life in old age and a new togetherness of generations (Which new opportunities for a new co-existence of generations can be opened up in an ageing society?)
(4) Urban conglomerations of tomorrow – Visions for urban life in the 21st century (Which images, wishes and opportunities for new forms of life and living have an impact on the city of tomorrow?)
(5) Learning worlds of the future – Visions for a knowledge-based society (What do the optimal forms of learning, education and knowledge in a networked knowledge society look like?)

To participate in the workshops, the members of the inner and outer circle could apply, and self-application of interested individuals were possible (there was for example a note in a futures newsletter). The number of participants was restricted. The results of the different future workshops were summarised in minutes, illustrated by photographs, rendering the individual ideas and group discussions of the different phases. The minutes were put into the workspace, where they could be read by the inner circle and the focus groups.

3.8. The First Focus Group Session

The first presence session of the focus groups took place on 15 and 17 January 2002 with altogether about 160 participants. The sessions of two groups (decentralisation and sustainable agrarian production) were postponed. The objective of the first session was to constitute the groups and to focus the themes. This was necessary because new

members had joined the group after the conference. The work orders for the focus groups were the following:

1. "Identify innovation fields[2], which concretise the focus theme". The purpose of this task was to stimulate the groups to narrow the focus of their theme and to deepen the discussion on the specific foci.
2. "Name concrete areas of research which are connected with the fields of innovation". Here the selected foci of the groups should be filled, defining concrete research questions and fields of application.

3.9. The Second Focus Group Session

The second focus group session took place on 19 and 20 February 2002. The purpose of the second focus group session was:

- to make the final selection of the innovation fields, which the groups considered to be the most relevant,
- to formulate a heading for the focus theme, which comprises its key ideas,
- to qualify the innovation field defining a clear heading, concrete application areas, the research demand and clarifying the relevance of research,
- to identify key factors, which have influence on the development of the topic,
- to generate visions, which resume possible future developments around the theme (this objective was optional due to time constraints).

Starting point for the group discussions were a variety of documents, which had been presented to the participants in the workspace and as a hand-out:

- the minutes of the first focus group meeting,
- in some groups: a discussion paper resuming contributions by the participants in the workspace, further research results conducted by the facilitators and subject advisors and suggestions for possible emphasis and concretisation of the innovation fields,
- an overview of the further proceedings and definitions of expressions used,
- an overview of the expectations on the second focus group session.

3.10. The Second Selection Process of the Futur Themes

The second round of selection was necessary to reduce the number of the themes to be developed further from 12 to 5. As in the first selection round, the second selection was based on a variety of votes on the respective themes:

- An **online-voting** was realised in the workspace from 5 to 17 March 2002 to ask the members of the inner and outer circle about their priorities and opinion. 332 people participated. The results were a Top-5-Theme-Ranking, a judgement on the importance of the themes as lead visions and an evaluation of the individual themes according to the criteria of "research perspective" and "societal demand".

2 As "innovation fields" sub-foci of the focus themes were defined.

- The **project managing agencies** and **specialist divisions of BMBF** ranked the themes according to their opinion of relevance of research, the societal demand, the status of maturity of the themes and the possibility of political usability.
- The **Innovation Council** discussed the innovativeness and quality of the focus themes. As result, the council came up with the suggestion to structure the lead visions in a broad political context and frame them in "roofs" (resuming the strategic orientation of the research policy in a wider context, e.g. living better, healthier and longer) and "columns" (conceptualisable focal points which emphasise the societal demand and include a concrete objective and a new quality in the problem-solution process for which interdisciplinary actors are necessary due to the complexity).

BMBF, with support of the consortium, reviewed the different statements with regard to the Futur criteria. The final decision of the 5 favourite focus themes was again taken by the minister Mrs. Bulmahn. Some selection decisions of the themes were accompanied by requirements, stimulating the group to emphasise their further discussion on certain focal points. In addition to the five favourite themes, it was decided to recover the theme "understanding thought processes", which had been discarded during the open-space conference due to the lack of interested participants. But the topic was regarded to be "very interesting" by BMBF, the project managing agencies, the Innovation Council and the consortium, so that they established an additional expert group to work out the theme in a workshop.

The five themes selected are:

(1) "Germany As a Location for Learning Society" as competitive advantage with the innovation field "Open Access to Learn Worlds"

(2) "Living in a Networked World: Efficient, Self-Defined, Secure" with the innovation field "Personalised Interaction Environment"

(3) "Handling Knowledge" with the innovation field "Life-Cycle of Knowledge"

(4) "Medicine and Health 2020" with the innovation field "Health at a Reasonable Price Till Old Age Due to Prevention"

(5) "Intelligent Products and Systems for Tomorrow's Society/ The Intelligent Product" with the innovation field "Innovation and Value-Added Processes for Client-Oriented and Sustainable Products".

3.11. The Third Focus Group Session

The third focus group session took place under the heading "workshop for the identification of the basic ideas for the lead visions and the premise of the scenarios" in Berlin on 16 April, 2002. The general objective was to further develop the focus theme in direction of the lead visions and scenarios. For some groups, it was still necessary to better profile their theme according to the innovation field selected by BMBF. All the groups had to discuss what aspects of their theme were relevant for the every-day-life of the people and to work out the visionary aspects of their themes. To accomplish this goal, the following questions were to be discussed by the groups:

- Which part of the future world of society do we want to describe?
- Which key factors are central for these parts?

- What could and what should be accomplished in this thematic field in about 20 years? What could be concrete examples?

In the afternoon phase, future titles of well-known newspapers or magazines (in the year 2020) should be formulated and the groups should work out, what the field might look like in 2020 (parts of scenarios). The minutes were again put into the internal workspace, commented on and added by the participants.

3.12. Scenarios and Lead Visions

The work of the focus group and especially the third session served as basis for the development of the scenarios and lead visions. IZT developed scenarios for the five focus themes.

In order to develop the lead visions, a "lead vision team" was set up for each theme. A lead vision paper comprises the final heading, the objective and vision, a description of the theme including its significance for the society and economy, the problem to tackle and the chances to overcome the problem, as well as the risk of the consequences of ignoring the problem. Further the scenario, the state of research including existing research programmes in the respective field, focal points for future research, information on the scientific significance, research questions, possible methods of solution and disciplines involved are included.

The lead visions were debated by the Innovation Council. The council accepted four out of the presented five themes and recommended the theme "Intelligent Products" as cross-sectional theme to the respective BMBF divisions. The theme "Understanding Thought Processes", which had been taken up parallel to the selected themes, was approved as lead vision. The scenario for the theme has been worked out by IZT (with an additional workshop etc.) in January 2003. The focus theme "Handling Knowledge" with the innovation field "Life-Cycle of Knowledge" was regarded as a good candidate but as it is impossible to work out research questions on the full life-cycle of knowledge, it needs further focussing. The following recommended lead visions were decided on by BMBF:

(1) Create Open Access to Tomorrow's World of Learning
(2) Living in the Networked World: Individual and Secure
(3) Healthy and Vital throughout Life through Prevention
(4) Understanding Thought Processes.

4. Implementation and Outlook

The BMBF is now responsible for the implementation of the lead visions. This will take place in different forms.

For the lead vision "Understanding Thought Processes", an additional workshop took place to develop ideas for a scenario as this was still missing. The scenario is

meanwhile completed.

Since summer 2002, an evaluation of the process by an international panel is taking place. ISI is the scientific secretariat of the panel. The panel will hand over the report at the beginning of 2003. The evaluation is based on surveys among the participants, the consortium, the mediators and subject advisors as well as BMBF. Documents about the different steps of the process and an analysis of hypotheses about Futur added to the information. A one-day workshop allowed direct questioning of consortium and BMBF. The chair of the panel, Prof. Luke Georghiou, PREST, Manchester, had an additional discussion with the secretary of state of BMBF, Dr. Uwe Thomas. The purpose of the evaluation is to learn from the first Futur experience, especially in methodological aspects. As the implementation is not yet finished, it plays a minor role in the report.

A continuation of Futur is in preparation.

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