



## Foresight - between science and fiction

3<sup>rd</sup> annual iFQ conference 2008

11<sup>th</sup> and 12<sup>th</sup> of December,  
at *caesar* – center of advanced european studies and research,  
Ludwig-Erhard-Allee 2, 53175 Bonn, Germany

Global warming, questions of national security, genetic engineering, medical innovations and efficient use of energy resources are today only the most apparent examples of how research systems around the world face the challenge of growing public and political concerns.

A maelstrom of instruments have been established to deal with such uncertainties in the future: Science and Technology Roadmapping, Technology Foresight, Technology Assessment and related measures are generally concerned with helping a research system identify possible future trends and developments in the national and international social context.

With the conference we would like to address this diversity of foresight activities by concentrating on the multitude of players and areas of application involved. Attention will focus on the question of how the complex set of relationships between players in the innovation process is interconnected and eventually yield innovation.

In the first part, we will discuss the process of innovation by borrowing from science fiction: Whether or not modern societies are ever able to arrive at the technological level of Star Trek Universe innovations and futures will nevertheless often have been inspired by visions and utopia.

In the second part we would like to focus on recent trends in foresight activities. We will critically reflect on the question how science conducts foresight as a policy-guiding instrument and how at the same time it helps to explore and predict 'white spots' of heterogenic datasets.

The third part deals with the science taking place within governance programmes. Under the paradigm of new governance, foresight instruments help research institutions set research priorities. We would like to highlight the question of how different countries cope with the matter of directing science and where the borders lie between planning and controlling science. We will mainly focus on how national innovation systems differ in identifying promising fields of science and how foresight activities eventually translate into policy.

The two final parts of the workshop will center on theoretical dimensions and methodological aspects of foresight. Starting with a brief overview of the state of the art in theoretical and methodological approaches to innovation research and analysis, attention will also be given to the question of what lessons we can learn from studies in the past? What are the implications of different approaches and how do they affect outcomes?

Closing with a critical reflection on the prediction constructed by foresight and observed technological and social developments; we would like to contribute here by discussing how instruments of foresight should continue to be developed, how evaluations should be carried out, and how the process of innovation might best be fine tuned.

**Conference languages** are English and German. Translation from German into English will be provided.



### **Special event**

We are pleased to present the exhibition Places & Spaces: Mapping Science at the time of the conference. Exhibition will be opened until December 19<sup>th</sup> 2008.

**Places & Spaces: Mapping Science** is meant to inspire cross-disciplinary discussion on how to best track and communicate human activity and scientific progress on a global scale. It has two components: the physical part supports the close inspection of high quality reproductions of maps for display at conferences and education centers; the online counterpart (<http://scimaps.org>) provides links to a selected series of maps and their makers along with detailed explanations of how these maps work. The exhibit is a 10-year effort. Each year, 10 new maps are added resulting in 100 maps total in 2014.

### **Important dates**

11<sup>th</sup>-12<sup>th</sup> December 2008: Conference

11<sup>th</sup>-19<sup>th</sup> December 2008: Exhibition "Science Mapping"

For contributors:

31<sup>st</sup> October 2008: Deadline for abstracts, short CV

15<sup>th</sup> January 2009: Deadline for full papers (max. 20 pages)

### **Organising Committee**

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**Online registration** at: [www.research-information.de](http://www.research-information.de)

### Location and travel information

The conference will be held at the caesar (center for advanced European studies and research) Ludwig-Erhard-Allee 2, 53175 Bonn, Germany.  
Phone: +49-228-9656-0

→ Arrival by plane

Taxi-transfer (30 minutes) which costs about EUR 30. Or bus line heading for Bonn, get off at Hauptbahnhof (central station), take bus line 610 (heading for Heiderhof), get off at the bus stop Kennedyallee.

→ Arrival by train

By bus, you will get to caesar from the central station in about 20 minutes, taking the 610 line heading for Heiderhof. You get off at the bus stop Kennedyallee.

→ Arrival by car

Motorway 59 / 562 towards Bonn-Bad Godesberg, Exit Rheinaue, turn left into Ludwig-Erhard-Allee. Motorway 565 towards Koblenz, Exit Bonn-Poppelsdorf, via Reuterstrasse into Willy-Brandt-Allee/Friedrich-Ebert-Allee until crossing Hochkreuzallee where you turn left into Kennedyallee and carry straight on until crossing Ludwig-Erhard-Allee/Kennedyallee.





## Programme

**Thursday, 11.12.2008**

10:30 Opening  
*Stefan Hornbostel, iFQ - Institute for Research Information and Quality Assurance*

### **I. Science fiction and science**

11:00 Utopian stories and visions in science  
*Thomas Macho, Humboldt-University of Berlin*

11:30 Science fiction as a provider of guiding images for innovation – historical examples, experiences from innovation processes – a critical perspective of a futurist  
*Karlheinz Steinmüller, Z\_punkt The Foresight Company*

12:00 Discussion

12:30 Lunch

### **II. Science in foresight: recent trends and prognosis**

13:30 Technological forecasting and implications for planning  
*Uwe Wiemken, Fraunhofer Institute for Technological Trend Analysis INT*

14:00 Studying knowledge dynamics for foresight an approach and some examples  
*Peter van den Besselaar, Science System Assessment, Rathenau Instituut & Universiteit van Amsterdam*

14:30 Discussion

14:50 Foresight in research on civil security  
*Sylvie Rijkers-Defrasne, VDI Technologiezentrum GmbH*

15:20 Many foresee more than one: A collaborative approach to *in silico* science  
*Christine Chichester, KNEWCO*

15:50 Discussion

16:10 Coffee break

### **III. International trends in science policy and foresight strategies (1)**

16:40 Setting European research agendas: European foresight strategies in context  
*Rüdiger Klein, ESF - European Science Foundation*

17:10 Technology foresight in the German context: emerging technological and scientific fields in Germany  
*Otto Bode, Federal Ministry of Education and Research, BMBF*

17:40 Discussion

18:30 *Champagne reception and dinner speech*

Places & Spaces: Mapping Science: Introduction into the exhibition  
*Katy Börner, Indiana University*



**Friday, 12.12.2008**

**III. International trends in science policy and foresight strategies (2)**

- 9:30 Science and technology foresight in Japan  
*Kerstin Cubls, Fraunhofer Systems and Innovation Research ISI*
- 10:00 Foresight in Latin America: Experiences in six countries  
*Yuli Villarroel, Universidad Nacional Experimental Simón Rodríguez*
- 10:30 Discussion
- 10:50 Coffee break

**IV. Theory and methods: New dimension in foresight studies**

- 11:20 Foresight methodology - overview  
*Rafael Popper, PREST Manchester Institute of Innovation Research*
- 11:50 The expert-delphi: Methodology and approach of technology foresight and monitoring  
*Oliver Pfirrmann, Prognos AG*
- 12:20 The scope of bibliometric approaches in foresight studies  
*Anthony F.J. van Raan, Centre for Science and Technology Studies (CWTS), Leiden University*
- 12:50 Discussion
- 13:20 Lunch

**V. Foresight and reality: How valid are findings?**

- 14:20 Evaluation of the BMBF foresight process  
*Melanie Kramp, Institute for technology and employment*
- 14:50 "Der Studentenbergr": Prognosis and reality  
*Dieter Dohmen, Institute for Education and Socio-Economic Research and Consulting, FiBS*
- 15:20 Discussion
- 15:40 Concluding remarks  
*Kalle Hauss and Saskia Heise, iFQ - Institute for Research Information and Quality Assurance*