

Delphi Austria: An Example of Tailoring Foresight to the Needs of a Small Country

Georg Aichholzer

Institute of Technology Assessment (ITA)
Austrian Academy of Sciences

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- **Reports in 6 volumes (in German)**

- **available via Internet:**
<http://www.bmwf.gv.at/4fte/materialien/delphi/>

- **brief in English at:**
<http://www.bmwf.gv.at/6extern/forschungsforum/e/deltech.htm>

- **Summary Report in English (Volume 7): forthcoming**

Structure

1 Goals of „Delphi Austria“

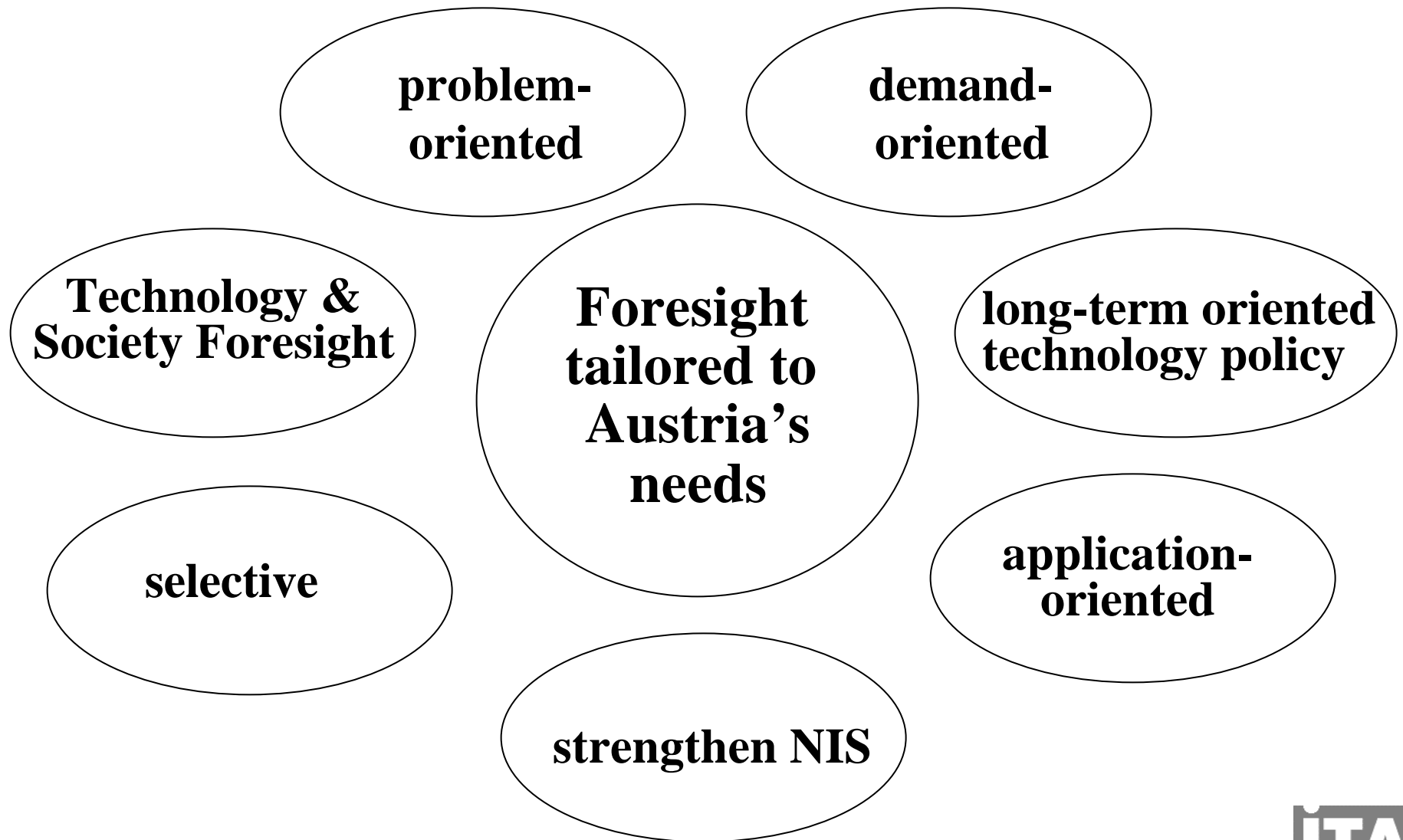
2 „Technology Delphi“

3 Innovative elements

4 Main results

5 Implementation and impacts

Overall Goals of „Delphi Austria“



Main Components

- **Preparatory Studies** (Sept.1996 - Jan.1997)
 - Secondary analysis of Technology Foresight studies
 - Strength/weakness analysis
 - First expert survey (co-nomination process)
 - Consumer survey
 - Media content analysis
- **Expert Panels for each of seven fields**
- **Two Delphi Surveys**
 - 2 rounds each (around 200 respondents per field)
- **Analysis & Reports; Diffusion beginning in April 1998**

Innovative Elements

- **Technology Delphi & Society/Culture Delphi**
- **„Decision Delphi“ instead of „classical Delphi“**
- **Broader concept of „expert“**
- **Higher degree of „finalisation“**
- **Extended function of „megatrends“ assessments**

Combination of Technology Delphi with Society/Culture Delphi

Technology Delphi:

- 1 Lifelong learning
 - 2 Environmentally sound construction and new forms of housing
 - 3 Medical technologies and supportive technologies for the elderly
 - 4 Cleaner production and sustainable development
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- 5 Tailor-made new materials
 - 6 Mobility and transport
 - 7 Production and processing of organic food

Society/Culture Delphi:

- 1 Lifelong learning
 - 2 New forms of housing and living
 - 3 Health and illness in social transformation
 - 4 Cleaner production and sustainable development
-
- 5 Ageing and life cycle
 - 6 Structural change of work
 - 7 Social segmentation

What did we ask?

- **individual assessments of about 300 technical and organisational innovations (around 40 per area):**
 - respondent's expertise on the topic
 - degree of innovation
 - importance
 - (social) desirability
 - chances of realisation
 - chances for Austrian leadership:
 - R&D
 - economic exploitation and
 - organisational-societal application
- **assessment of appropriate measures**
- **assessment of general trends (“megatrends”)**

Delphi Austria: Most promising innovation areas

- Simulation and modelling tools
- High-tech steels and light materials
- Recycling of combined and composite materials
- Low-noise railway equipment
- Cleaner production processes (metal, paper, ...)
- Timber products (construction, new materials)
- Ecologising the building industry
- Organic food and related technologies (seeds, testing, conservation)
- Technical aids for the elderly
- Organ- and functional substitutes
- Tailor-made training-packages and “knowbots”

Overall Conclusions

- **Austria can achieve leadership in several fields of innovation identified**
- **the switch from technology user to technology developer has yet to come**
- **a double-strategy is required:**
 1. short- and mid-term: focus on leadership with hi-tech integration into medium-technology fields
 2. long-term: leadership in selected high-tech niches

RTA Rail Tec

Arsenal

Fahrzeugversuchsanlage GmbH

The New Vehicle Testing Facility

Climatic-Wind-Tunnel Vienna



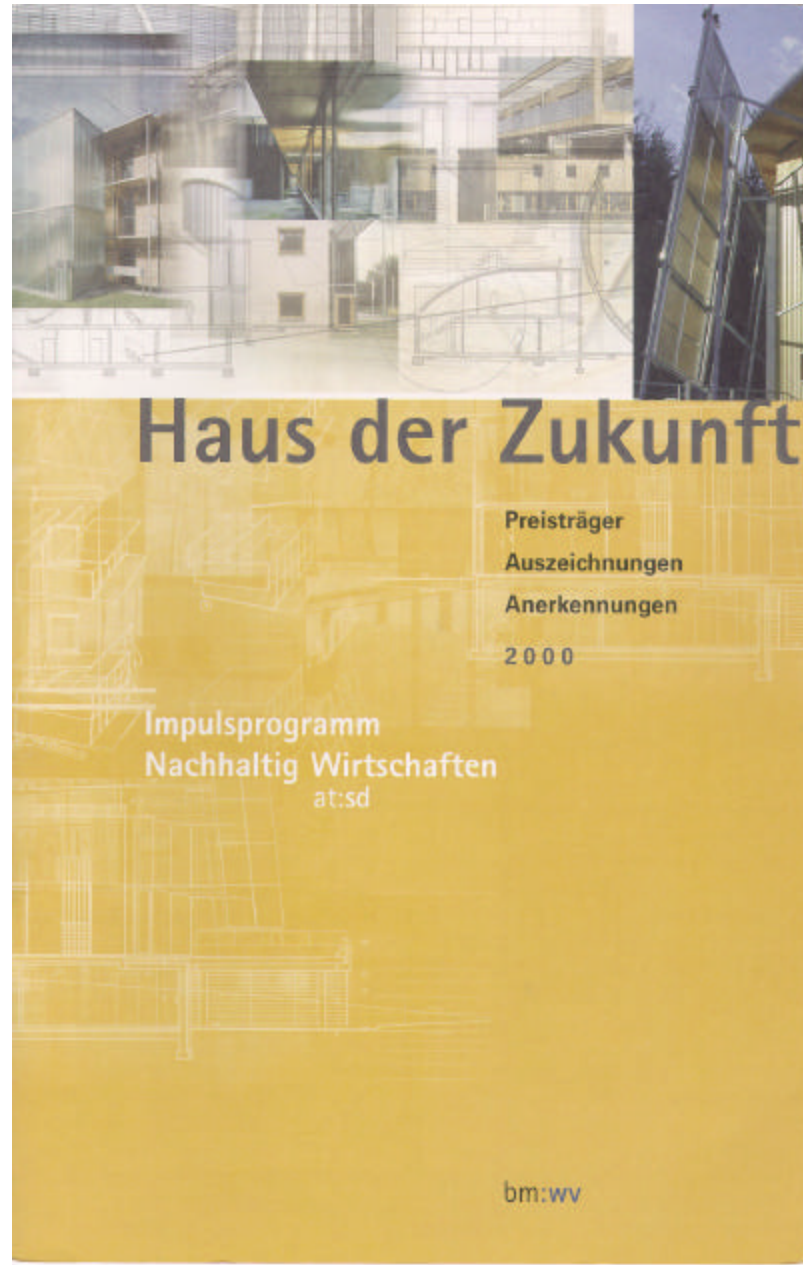
Project Information

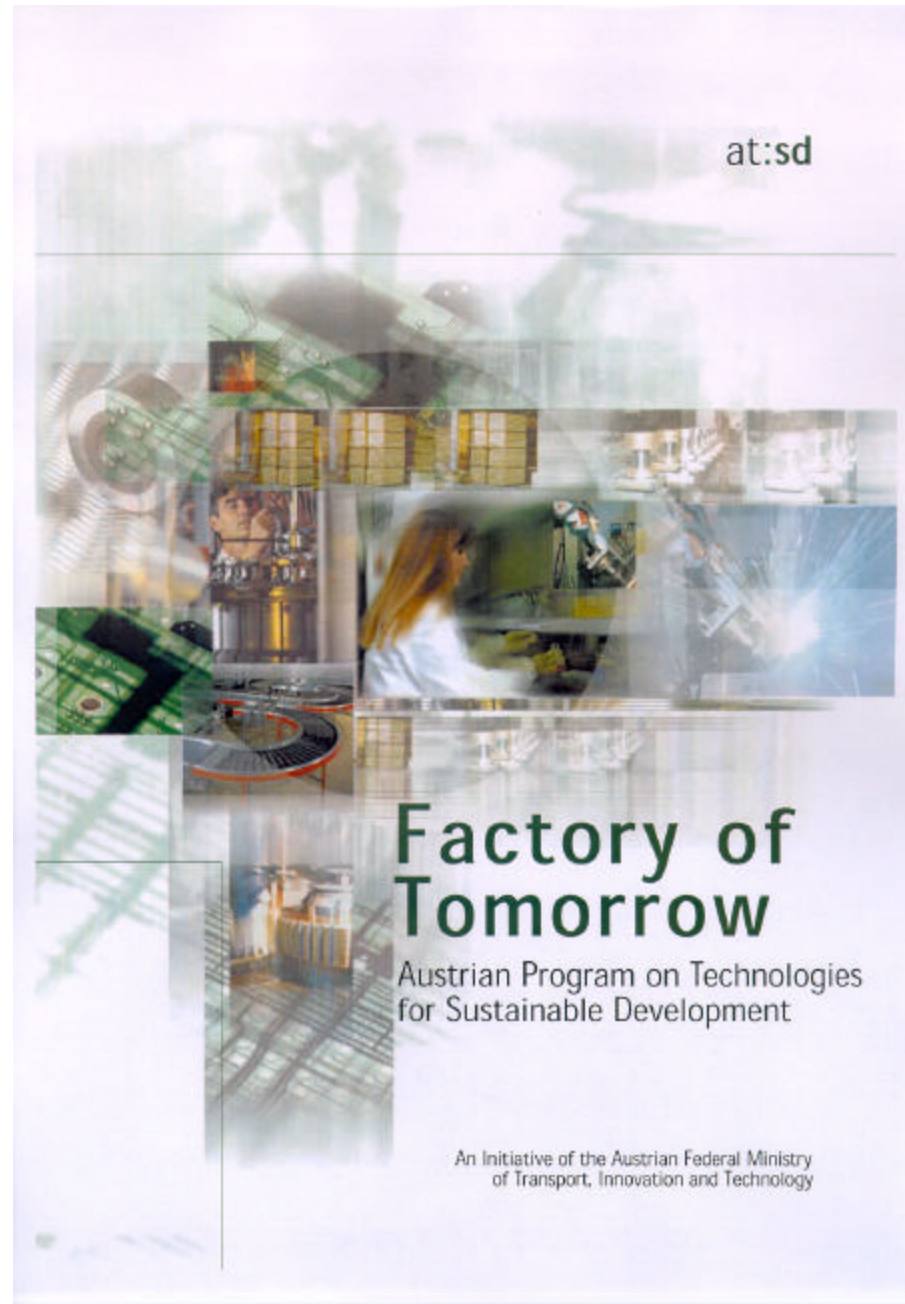
November 2000

F. Hrachowitz

Implementation and Impacts

- **Direct policy measures**
 - targeted impulse programmes (“Sustainable Production”, “House of the Future”, “MOVE”,)
 - “K plus programme” (centres of excellence)
 - stimulation of cluster building (“Organic Food”)
- **Indirect effects**
 - input for Austrian Research Strategy
 - new research centres in recommended fields
 - stimulation of sectoral Foresight projects
 - plans for IT-related further analysis and follow-up
 - foresight transfer through broad distribution of results





Tentative Evaluation

- + demand- and problem-orientation realised**
- + promising innovation areas identified**
- + good response and process participation**
- + policy relevance (science & technology ministry)**

- moderate innovation horizons elicited**
- low integration of Technology- and Society Delphi**
- less certain effects on enterprise level**