Foresight

- what? -why? -whom? - how?

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Foresight

- What is foresight?
- Why is foresight important?
- Types of foresight
- Who can benefit from foresight?
- Foresight methods
- Foresight resources

DG RTD unit L2 - "Social sciences and humanities - Foresight"

- Promote a European Foresight Area
  - Interconnect and support TF activities at European, national and regional level, in close co-operation with all related actors in Europe
- Internal think tank activities
  - Provide input to EU research and innovation (RTDI) policy development
- Implement projects in support of RTDI policy & foresight development

➢ *Promote foresight co-operation in support of the European Research Area*

Foresight in Europe

- **National Foresight**
  - Interconnect and support TF activities at European, national and regional level in Europe
- **Regional Foresight**
  - Sub-national foresight (Catalonia, Uusimaa, West Midlands, Grand Lyon, Mecklenburg-Vorpommern, etc)
- **Intergovernmental Foresight**
  - FOR-Society, COST 22
- **Foresight by individual public or private organisations**
  - **DaimlerChrysler, ..**
  - **SEFIC…**
- **European Commission**
  - JRC-IPTS
  - DG INFSO, DG ENV, DG TREN
  - DG Research: FP 6; **Foresight Knowledge Sharing Platform (unit L2)**
  - FP 7

Possible objections

"You can't predict the future"

Scientific serendipity

Fatalism

Inertia

Institutional rivalry

Disputes over the scope

Proof of concept

Costs

Broad Philosophical

Practicalities Details

What we are trying to promote?

- Develop strategic knowledge and capacity in Europe, and contribute to global institutional landscape
- Increase synergies: develop and use platforms and networks to disseminate and integrate results from different levels and sectors
- Develop technical tools and societal processes for efficient use and improved policy impacts
- Create forward thinking culture in society as a whole, adapt education & training, improve awareness building
- Develop joint / complementary activities on topics of common-interest

Our tools (1): Research projects

- DFFN - Design For Future Needs (www.dffn.org)
- eForesee - Exchange of Foresight relevant experiences for small Candidate Countries (www.eforesee.info)
- EUROPOLIS - Scenarios for the evolution of European S&T policies (www.obs-ost.fr/fr/projet_europolis.php)
- FoMoFo - Four Motors Foresight initiative (www.foresight.it)
- FOREN - Foresight for Regional Development network (foren.jrc.es)
- FORETECH - Technology & Innovation Foresight for Bulgaria and Romania
- ITSAFE - Integrating Technological and Social Aspects of Foresight in Europe (www.supra.ed.ac.uk/Publications/ITSAFE_FINAL_REPORT.pdf)
- TAMI – Technology Assessment in Europe; between Method and Impact (www.europaeische-akademie-aw.de)

Our tools (2): Research projects

In FP: 9 projects

- FARHORIZON
- IKNOW
- INFU
- SESTI
- SANDERA
- CIVISTI
- **AUGUR**
- **MEDPRO**
- **EFP**

Our tools (2):
Expert Groups

- The European dimension of S&T foresight
- Mobilising regional Foresight actors for an enlarged EU
- Higher Education
- Converging Technologies
- Blueprints for foresight actions in the regions
- Key technologies
- Key (research system) actors
- **The World in 2025**

(Science & Technology) Foresight

- ***Thinking the future***
  - Identifying ***possible*** futures
  - Imagining ***desirable*** futures
- ***Debating the future***
  - A participative process involving many and different stakeholders (public authorities, industry, research organisations, NGOs, etc.)
- ***Shaping the future***
  - Identifying today's RTDI priorities on the basis of scenarios of future developments in science & technology, society & economy
  - Defining strategies
  - Results feed into collective decision-making AND
  - help participants to develop or adjust their individual strategies

Hindsight on Foresight

- **Discovery of the future; Classical political economy**
- **pre WW2 social & technological trends**
- **post WW2: military & business forecasting in US, European "3rd way" - "futurology", "futures studies"**
- **1960s boom: dominance of technological (extrapolation, delphi, or highly technicised forecasts (ecometric, demographic, modelling) on one hand, expert opinion on the other; influential viewpoints (e.g. PIS, ecodoom).**
- **1980s: technological revolutions (infosoc)**
- **1990s boom (21st century studies and especially Foresight: forecasting >forecasts)**

Source: Ian Miles, Brussels 19-20 September 2002

Foresight - why?

- Provides guidance to public & private decision-makers & stakeholders
- Links activities markets, public policy, research organisations, etc
- Pushes horizon of strategic planning: bird's eye's view of possible futures
- Strengthens corporate identity - both inwards & outwards – provides a communication tool
- Creates readiness for change & adaptability

What foresight does

- Foresight contributes to the democratic process:
  - ➢ Provides people with a social (general) vision to people
  - ➢ help understanding the dimension of time
  - ➢ allow holistic examination of changes and their impact on a given place
  - ➢ develop a personal and collective philosophy of action

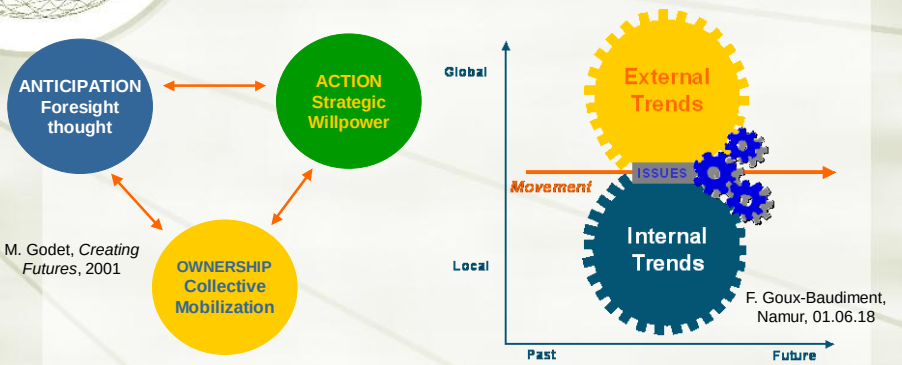
Source: ***Philippe Destatte, TRANSVISION blueprint, Brussels 23/9 2004***

Who needs foresight?

WHO is the target?	WHY is there a problem?	HOW will foresight gain access?	WHAT will be the benefits?
Institutions	Resistance to change and poor contribution to economy / society	Via public projects, (strategic futures) and expert task groups	Reduced bureaucracy, informed decisions and efficient services.
Industry	Severe weaknesses in industrial structures & access to knowledge	Via sector or cluster activity and capacity building with SMEs	More small firms with outward focus and knowledge utilisation
Individuals	Low appreciation of the value of innovation and wealth creation	Via schools activity, vocational courses & life-long learning	Positive attitudes to science, business and entrepreneurship

Source: *Gordon Ollivere*, UPGRADE *blueprint*, *Brussels*, *23/9*, *2004*

(Regional) Foresight – how?



M. Godet, *Creating Futures*, 2001

F. Goux-Baudiment, Namur, 01.06.18

Source: *Philippe Destatte, TRANSVISION blueprint Brussels 23/9 2004*

Foresight - how?

- Activities need to transcend horizontal & vertical boundaries
- Be part of a wider strategic context
- Focus on questions that foresight can influence
- Mobilisation – be "sold in" to key stakeholders
- Balanced participation (experts, public, private, NGO, citizens, …)
- Not in isolation => linked to other initiatives
- Concrete & tangible results
- Built in evaluation
- Continuity

Foresight – when?

- Activities that have direct impact
- Actors that have direct impact
- Autonomy / influence required
- Focus on foresight for change

- If it cannot be tied to action =>

Types of foresights

Strategic Foresight	**Improved consultation/public satisfaction Better intelligence/information systems Flexible and forward looking policies**
Scientific Foresight	**Better knowledge of future markets Improved targeting of R&D funding Better exploitation of research results**
Industrial Foresight	**Improved profits in existing industry Better rates of new business start-up Greater engagement in new technologies**
Educational Foresight	**Industry satisfaction with workforce Individual interest in life long learning Greater propensity to innovate**
Social Foresight	**Improved quality of life indicators Better infrastructure and utilities Improved response to emergencies**

Source: *Gordon Ollivere, UPGRADE blueprint, Brussels, 23/9, 2004*

20 key questions

Clarity & Commitment	Knowledge & Resources	Foresight Methodology	Practical Applications	Programme Management
Step 1 What is the 'policy-makers' vision for the future of the region?	Step 5 What size & scope of foresight project do we wish to have?	Step 9 What experience & lessons can we gain from outside?	Step 13 Which actions for the upgrade of industry sectors & companies?	Step 17 How can we select & support the central focal point for foresight?
Step 2 How promote the value of foresight to enrich this vision?	Step 6 Where can we find the specialist knowledge in the local context?	Step 10 What tools/skills do we need to develop in the local context?	Step 14 Which actions for the **upgrade** of the science and knowledge base?	Step 18 How build a network of partners to help deliver foresight?
Step 3 What are the critical areas for application of foresight methods?	Step 7 How can we widen the context to take account of global issues?	Step 11 What methods will we use to explore future possibilities?	Step 15 Which actions for the **upgrade** of education and skills?	Step 19 How should the regional programme be managed and marketed?
Step 4 How secure commitment from the sponsors/ stakeholders?	Step 8 What funding, human and material resources are available?	Step 12 What process will we use to decide on the detailed plan?	Step 16 Which actions to **feedback** and inform regional strategy?	Step 20 How will we measure success and ensure long term sustainability?

Source: *Gordon Ollivere, UPGRADE blueprint, Brussels, 23/9, 2004*

Desired Outcomes

- Rationales
  - What are the problems / challenges?
  - How can foresight help?
  - Relates to foresight's 'theory of action'
- Objectives
  - Refers to higher and specific goals
  - Their achievement should be verifiable
- Expected Outcomes
  - Outlined in rationales and objectives
  - How will we know these have been realised?
  - When can these be expected to materialise?

Source: Michael Keenan, Brussels September 2002

Target Audience

- Those actors expected to act 'in' & 'as a result of' an exercise
- Dependent upon the starting point & desired outcomes of an exercise
- Typically include:
  - Scientists and technologists (public & private)
  - Policy makers
  - Business decision makers
  - Citizens and societal groups

Source: Michael Keenan, Brussels September 2002

Policy Milieu

- Are policy and socio-economic practices open to foresight-type activities?
- Policy space and time
- Review existing arrangements:
  - What activities already exist in this area?
  - Who are the main players?
  - What value-added could Foresight provide?
  - How might Foresight 'mesh' with existing policies and programmes?
  - Could Foresight 'threaten' the continuation of certain activities in this area? Good/Bad??
  - Do you anticipate resistance and/or support?

Source: Michael Keenan, Brussels September 2002

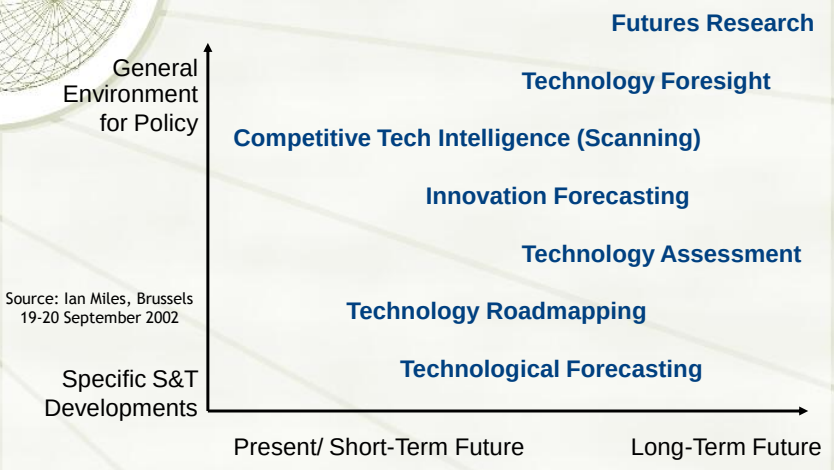
Time horizon

- Typically between 5-30 years
- Should be beyond normal planning horizons
- Will be dependent upon things like the issues to be considered, and the needs of strategy and decision making

Source: Michael Keenan,
Brussels September 2002

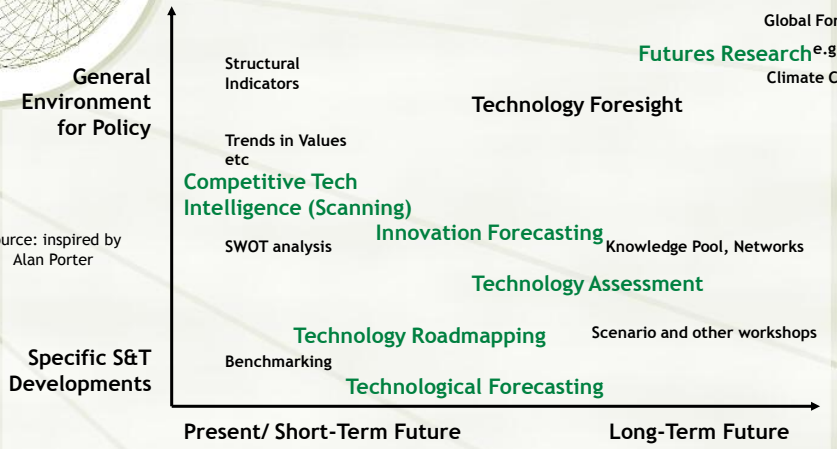
Overview of common methods

Spectrum of Approaches...



Source: Ian Miles, Brussels 19-20 September 2002

...which can be extended



Source: inspired by Alan Porter

Forecasting Methods

	Exploratory	Normative
Data-based	(Scenarios) Time series extrapolation Regression analyses Multivariate models Simulations Nonlinear models, genetic algorithms, etc.	Scenarios and profiles Technology sequence
Expert-based	Scenarios Delphi (standard), surveys Probabilistic methods (cross-impact, trend impact) Focus groups, interviews, expert groups Genius forecasting SF	Scenarios Goals delphi, surveys Morphological methods Scenario workshops, focus groups, interviews, expert groups Genius forecasting SF

Source: Ian Miles, Brussels 19-20 September 2002

Most important tools

	Which of the following tools and techniques should your foresight programme be adopting?	Score
1	Scenario building workshops and events	27
2	Setting up of sector panels or futures groups	23
3	Regular consultation events on thematic issues	19
4	Seminars in specific thematic areas	18
5	Intensive work with individual organisations/companies	17
6	Small scale training events and courses	16
7	Organisation and participation in conferences	12
8	Circulation of foresight news and information	10
9	Supply of funds to SME pilot projects	8
	Total (10 questionnaires, 5 given to most important tool, 4 to 2nd, etc)	150

Sources of information

- European Commission- DG Research - Science & Technology Foresight unit http://www.cordis.lu/foresight/home.html
- Futuribles http://www.futuribles.com
- LIPSOR http://www.3ie.org/lipsor/
- Global Management Forum
- Global Business Network http://www.gbn.org
- Institut Jules-d'Estree http://www.destree.org
- Institut Prospectiker (Espagne) http://www.prospektiker.es
- Institute for Prospective Technological Studies http://www.jrc.es/welcome.html
- Institute for the Future http://www.iftf.org
- Millennium Project http://millennium-project.org
- Observatoire International de Prospective Régionale
- http://www.reperes-oipr.com
- Organisation for Economic Co-operation and Development (OECD) http://www.oecd.org
- Population et Avenir http://www.population-demographie.org/
- Strategic Futures International (SFI) http://www.sfutures.com/
- Prospective - Foresight Network http://www.prospective-foresight.com
- The Hudson Institute http://www.hudson.org
- The Rand Corporation http://www.rand.org
- The World Future Society http://www.wfs.org
- UK Strategic Planning Society http://www.sps.org.uk
- Technology forecasts from Batelle http://www.battelle.org/forecasts/default.stm
- Corporate Foresight Network http://www.corporateforesight.net/