Addressing the Future: Enhancing Government through the Transforming Application of Foresight

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21st Century focus

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Innovation in a Global Knowledge

Foresight – an evolving scope

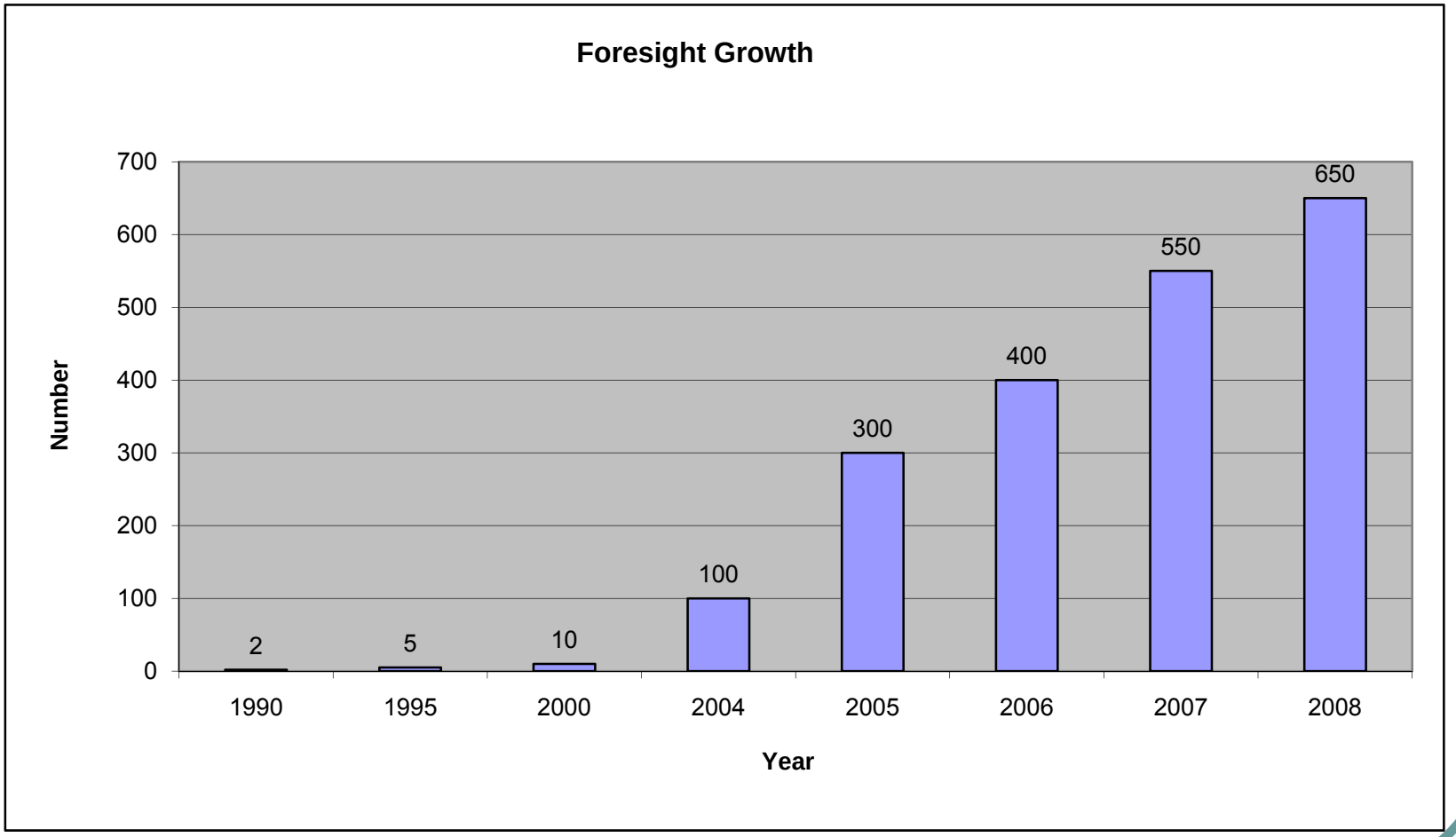
From

"a systematic means of assessing those scientific and technological developments which could have a strong impact on industrial competitiveness, wealth creation and quality of life" (Georghiou, 1996)

To

"a systematic, participatory, future intelligence gathering and medium-to-long term vision-building process aimed at present-day decisions and mobilising joint action" (Foren Project)

Growth of Foresight Activity



Focus of Foresight (EFMN)

1. ITC
2. Knowledge Society/Youth
3. Regional
4. Life/Bio/Health
5. Nano
6. Energy/Climate Change
7. Agriculture/Food
8. Electronics
9. Transport (EFMN)

Focus of Foresight (FinnSight 2015)

1. Learning and Learning Society
2. Services and Service Innovations
3. Well-being and Health
4. Environment and Energy
5. Infrastructure and Security
6. Bio-expertise and –security
7. ICT
8. Human Interaction
9. Materials
10. Global Economy

(FinnSight 2015)

Transformation of Foresight

- Emphasis – from methods to outcomes and policy
- Tool – from specialised to embedded
- Focus – from national to regional/sectoral/local/ organisation (Companies, Govt Departments, Universities)
- Application – from priority-setting for public research to strategy, planning, decision-making, innovation
- Scope – from technological to socio-economic
- Scale – from ‘macro’ to ‘meso’ and ‘micro’
- Increasingly IT/Internet-enabled
- Growth in foresight infrastructure capacity

Impacts of Foresight

- Generating strategy
- Prioritising resources and maximising realisation
- Building partnerships/networking
- Enhancing intelligence
- Early warning systems
- Enhanced societal learning
- Knowledge management
- Enhancing innovation

Some Case Studies of Foresight Projects
I - *Promotion of Industry Clusters*

Advanced Medical Device Sector

- 2000 establishments
- Revenues of $832 million
- Imported goods worth $1.9 billion
- Employed more than 5,500 people
- high levels of expenditure on R&D
- A highly specialised and skilled workforce
- Predominantly small to medium-sized enterprises
- A significant degree of fragmentation
- Small number of globally recognised products/ companies.

Scenario planning was used to address the agreed objectives of:

- considering the major forces likely to shape the future of the Australian medical devices industry over the next twenty years (to 2025);
- identifying major threats and opportunities;
- developing viable scenarios of the future of the Australian medical devices industry; and
- developing strategies addressing these possible futures to guide decision-making and provide a sound basis for the Action Agenda.

Outcomes

- The commitment of all major companies to a shared vision of the industry based on developing world-class capability, increasing speed to market, and expanding market opportunities.
- The Government has committed funding to assist the industry to address the major challenges it has identified for the future growth of the sector.
- Foresight provided a means of identifying and developing shared interests between companies and the basis for constructing a consensual vision of the future.
- An industry cluster began to emerge through joint development projects.

II – *Future of Irrigated Agriculture*

Objectives:

- enable key stakeholders to develop a shared vision for the future of irrigation in a major catchment area over the next 30 years and to identify major constraints and opportunities and regional response options;
- understand the social, economic and environmental consequences of various scenarios through impact assessment;
- build a consensus on preferred regional options for future irrigation, and recommend regional follow-up actions; and
- develop a methodology that can be applied elsewhere in Australia for sustainable irrigation planning at a catchment scale.

Specific outcomes

- Many irrigators changed their business model, crops and management practices
- the organisation responsible for water supply and management introduced a major reconfiguration of the irrigation distribution system to dramatically increase flexibility based on scenario implications;
- the catchment management authority reshaped its five-year plan for catchment management to meet the major contingencies that emerged through the scenario planning process.
- local Councils reviewed the implications of the scenario conditions for their land-use planning, and economic and demographic projections.

III – Strategic Directions for Research in Antarctica

- Scenario-based analysis to 2020 of the economic, technological, environmental and geo-political forces likely to shape the future demands on the Antarctic
- Outcomes:

  - significantly increased government investment;

  - a progressive shift to airborne rather than ship-based transport;

  - a new emphasis on remote experimentation.

Lessons from these case studies

- A clear and shared focus
- Engagement of relevant stakeholders
- Targeted foresight processes
- Embedding of foresight in the existing planning and decision-making structures
- Explicit outcomes

Take-up of Foresight within Governments?

- Limited
- Sporadic
- Reliant on occasional champions
- Largely associated with STI agencies
- Short time-horizon
- Reactive rather than anticipatory
- Consumed by the urgent, limited capacity for the important

1. Attitudes about what shapes the future

- Extrapolators – the future is an extension of the past, so identify trends and extrapolate
- Pattern Analysts – patterns (cycles) recur so analyse analogous situations from the past
- Goal Analysts – future determined by the actions of individuals and institutions
- Counter Punchers – future results from unpredictable and random events, so monitor change and maintain flexibility to react
- Intuitors – complex mess, so be informed and intuit possibilities (ie muddle through)

2. Limitations on government

1. Scale and Scope of Challenges

1. Loss of legitimacy and authority

2. Increasingly ‘wicked’ nature of problems

3. Declining service delivery capacity

4. Limited learning capability

Profound Challenges

- Food availability and price
- Energy availability and price
- Water availability and price
- Climate change
- Population and demographics
- Securing cyberspace
- Managing increasing complexity

Loss of legitimacy and authority

- In the age of Internet-based social networking, traditional expert knowledge is losing its former authority
- Every person has one relevant fact and no-one can explain the nature of a system
- Emerging power of narrow sectional interest groups
- Reduced legitimacy of central governments, but paradoxically, greater expectations on them

Emergence of problems with new characteristics

Type 1 - Simple isolated problems – *address tactically one at a time*

Type 2 - Inter-connected problems – *requires a strategic approach; leads to bureaucratic hierarchy, centralised control; government in charge*

Type 3 – Dynamic interactive problems – *changes in one problem area affect others, so multiple claims of responsibility; government and governed must cooperate to address problems*

Type 4 – Aggressive interactive problems – *they have a momentum of their own, high uncertainty, impact of interventions are unpredictable; the resulting turbulent environment requires government and governed to work closely together to address problems where they may be no obvious solution*

Declining service delivery capacity

- A consequence of the ‘New Public Management’ model with its emphasis on business principles of efficiency and transparency?
- Declining popularity but still has a stranglehold on many governments
- Has contributed to a dramatic increase in institutional and policy complexity and an emphasis on homogenised process to deliver outcomes rather than addressing specific content
- Ignores the possibility of cycles in economic behaviour that require different government roles at different times eg different phases of the techno-economic Long Wave

Limited learning capability

- The new rules of the global knowledge economy place great emphasis on organisational ability to learn in a rapidly changing environment and to think and act in concert at a system level
- This is leading to new forms of business which are structured to mobilise and capture relevant knowledge wherever it resides
- NPM, with its emphasis on process and outcomes, has eroded the interest and capacity of governments and their officials to engage in active, continuous learning

Three Important Actions

- **Development of a Strategic Intelligence Capacity** – through over-the-horizon scanning, roadmapping, scenario planning, web-based engagement of multiple insights
- **Fostering of 'Intentional Innovation Communities'** – specific internal (+ external) organisational capacities to generate innovations continuously
- **Establish spaces for experimentation in policy** – combine the private sector of 'fast failure' in innovation with active processes of review and learning eg the Cochrane and Campbell Collaborations

Charter of Good Practice in the Managerial Application of Foresight

- A well-resourced over-the-horizon scanning capacity
- Significant analysis of weak signals of change
- Planning and decision-making conducted within a significant future-oriented environment
- ‘What if ?’ analysis embodied as a regular component of risk analysis and management
- Regular web-based engagement of multiple perspectives
- Strategic conversation as a recognised KPI
- Routine roadmapping towards defined objectives
- All staff trained in use of foresight tools

Charter of Good Practice in the Transformative Application of Foresight

- A Strategic Intelligence Unit (SIU) at the level of the Cabinet Office, or equivalent
- SIUs or SI capacity in every major government department and agency
- Mechanisms for collaboration, coordination and exchange of information between all SIUs
- Regular production and communication of SIU analysis and findings
- Establishment of an appropriate community of practice around each SIU
- Open communication models with all information routinely available to the public
- Engagement with all forms of media to promote a reflective future orientation