

# INTEGRATING FORESIGHT AND TECHNOLOGY ASSESSMENT INTO STRATEGIC DECISION-MAKING

## COMPARATIVE ANALYSIS OF CULTURES OF FORESIGHT

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# AGENDA

1. Project Description
2. Foresight Culture
3. Recommendations
4. Conclusion

# PROJECT DESCRIPTION

Overview, purpose and of methods

# GENERAL PURPOSE AND IDEA

The **Section Digitalization and E-Government** of the **Federal Chancellery of Austria (BKA)** approached the **ISP Center at AIT** with a request to prepare a proposal for a **comparative study**.

- **Aim**
  - To explore how **foresight (FS)** and **technology assessment (TA)** are integrated into public administration across the globe.
- **Objective**
  - To derive key insights and practical lessons for the **effective integration of FS and TA within the Austrian public sector**.
- **Context**
  - The **Federal Chancellery (BKA)** has commissioned this initiative to receive **policy advice** and **scientific support**

# TECHNOLOGY ASSESSMENT & FORESIGHT

## Technology assessment (TA)

- ✓ Analysing the opportunities and risks of new technologies
- ✓ Short to medium-term planning
- ✓ Focus on dissemination and the effects of technology adoption
- ✓ Appropriation processes, e.g. 'reinvention' (unexpected use of new products)
- ✓ Clients: national parliaments or governments
- ✓ Provision of information for political decisions in connection with the introduction, use and regulation of new technologies

Anticipates  
possible effects  
on society in the  
form of  
**possible  
futures**

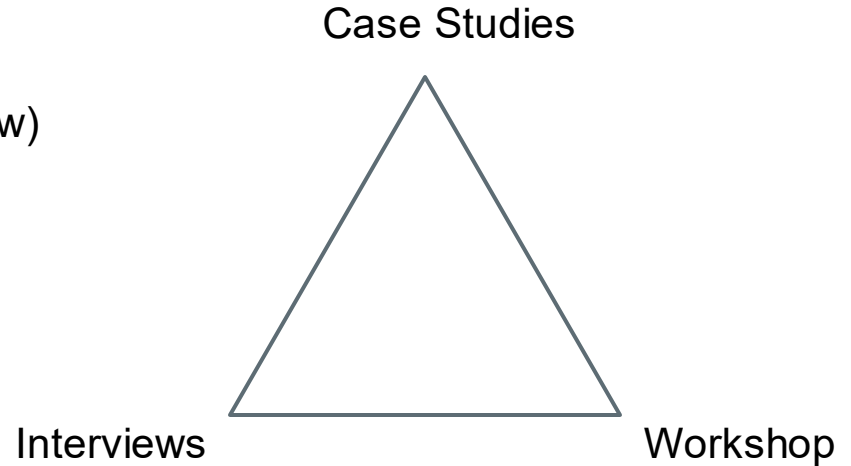
## Foresight (FS)

- ✓ Systematic, participatory process
- ✓ Medium to long-term planning
- ✓ Focus on product development, including gaps and barriers to commercialisation, problems in the product cycle, etc.
- ✓ Client: Ministries or government agencies working on technologies and innovation (e.g. research funding)
- ✓ Providing information for strategic planning of STI policy and dealing with technology development in different policy areas

# METHODOLOGICAL APPROACH

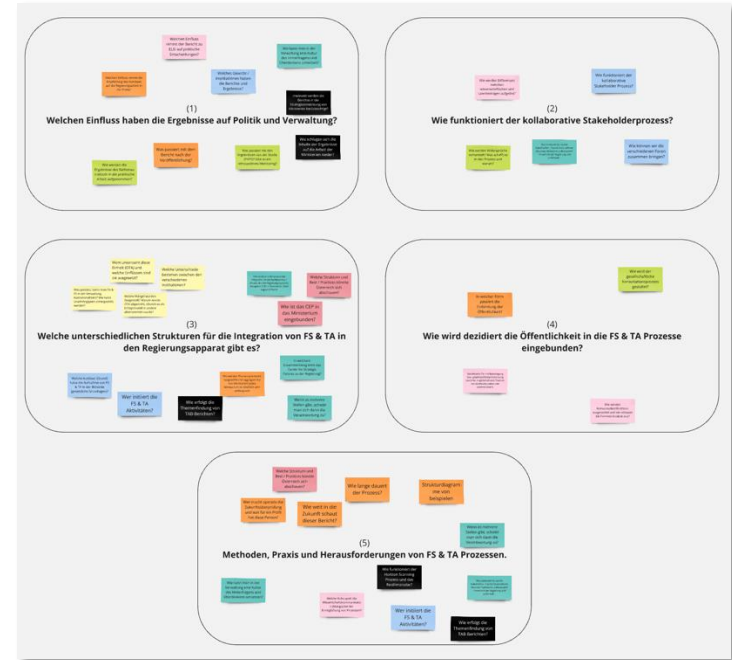
Time Frame: January 2025 – June 2025

- Mixed Method Approach
  - Case Study Analysis (Literature Review)
  - Expert Interviews
  - Online Workshop



# RESEARCH QUESTIONS

- **What structures and models exist internationally for integrating foresight (FS) and technology assessment (TA) into public administration?**
- **How can public administrations utilize the outcomes of FS and TA processes effectively?**
- **How do collaborative stakeholder processes function within FS and TA initiatives?**
- **What are the key methods, practices, and challenges in implementing FS and TA processes?**



## CASE-STUDIES

- Finland
- Singapore
- Japan
- USA
- Portugal
- Germany
- France
- Netherlands



# WORKSHOP: INTEGRATION OF FORESIGHT (FS) AND TECHNOLOGY ASSESSMENT (TA) IN STRATEGIC POLICY PROCESSES

## Aim

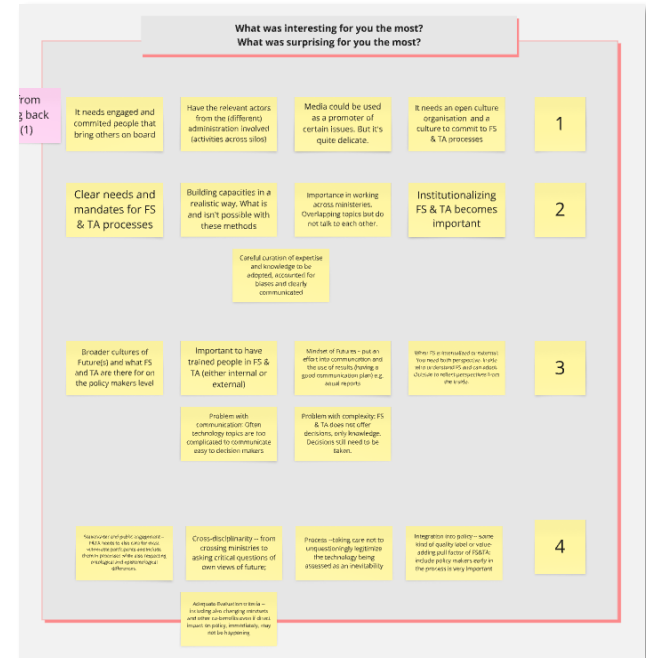
- Facilitate an exchange on the **integration of foresight (FS)** and **technology assessment (TA)** in policy-making processes
- Collect **best practices, experiences, challenges,** and **recommendations**

## Approach

- Plenary discussion and group work**
- Exploration of **four key questions**
- Closing session** to consolidate and share recommendations

## Participants

- Experts representing **five continents**



# THREE TYPES OF FORESIGHT CULTURES

International comparison



# STRUCTURES AND MODELS

## Foresight culture in international comparison

- **Three Types of Foresight Culture:**
  - Low Foresight Culture (minimal or no activities)
  - Emerging Foresight Culture (unstructured)
  - Established Foresight Culture (centralized)

*„Culture eats strategy, and strategy eats structure for breakfast“*

- Peter Drucker modified by Aaron Maniam

**Low**

**Emerging**

**Established**

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Portugal

USA

Finland

Germany

Japan

France

Singapore

Netherlands

# STRUCTURES AND MODELS

## Low Foresight culture

- **Hardly Any Integration**
  - Few foresight processes within public administration or political decision-making
- **Example: Portugal**
  - Occasional initiatives, including from think tanks, but no structured use within administration or politics

„Ministries have foresight instruments, but the results are usually overwritten by what’s regulated on the EU level“  
(quote from interview)

# STRUCTURES AND MODELS

## Emerging Foresight culture

- **Different forms of knowledge production**
  - Horizon Scanning, Trend-Radar, Foresight & TA-studies (e.g. Parliamentary TA)
- **No Coordination**
  - Foresight activities do take place but are **not coordinated across institutions** (e.g., across ministries); lack of established networks
- **No institutionalization**
  - Typically, there are **no in-house FS/TA experts**; expertise is sourced externally
  - Some **isolated initiatives aim to improve coordination** (e.g., BAKS in Germany), but often fail due to **structural issues** (e.g., questions of resources and responsibilities)

# STRUCTURES AND MODELS

## Established Foresight culture

- **Recognition of FS & TA at the institutional level** and their use within public administration (Ex. Finnish **Committee for the Future** or Singapore **Centre for Strategic Futures**)
- **Establishing commitments**
- Regular reports and foresight activities (e.g. National Scenarios) within ministries
- **Presence of FS units**
- FS units within institutions or at least individuals who understand and value foresight
- **Collaboration with external expertise**
- Cooperation with academia and think tanks

„The ministries see it as important to gain knowledge about FS practices, traditions and paradigms.“ (quote from interview)

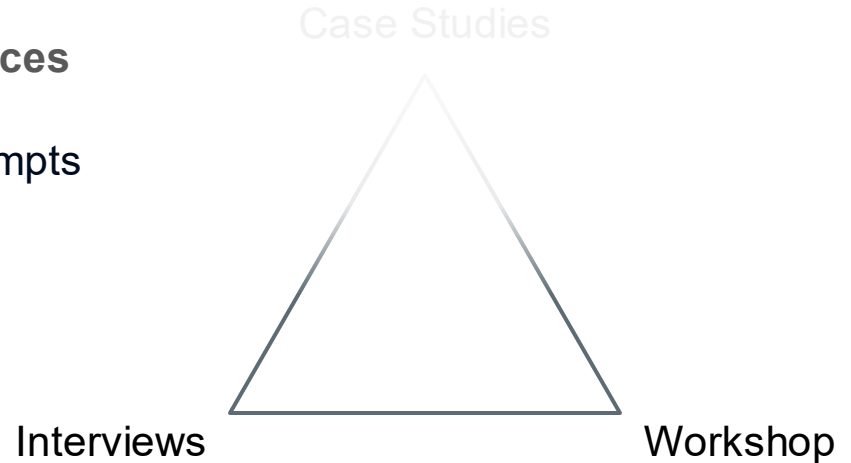
# RECOMMENDATIONS

How to integrate Foresight into strategic decision making

# RECOMMENDATIONS BY THE EXPERTS

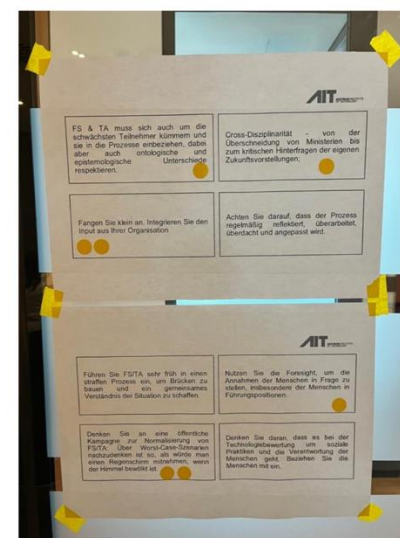
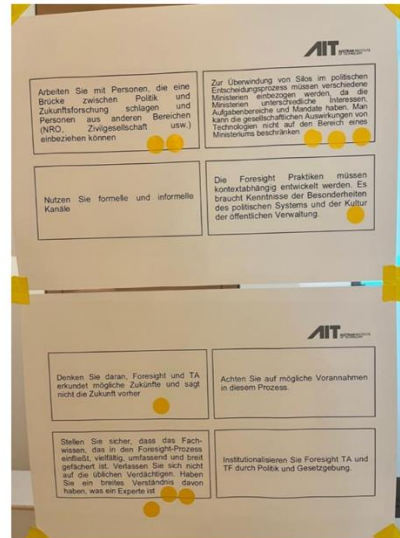
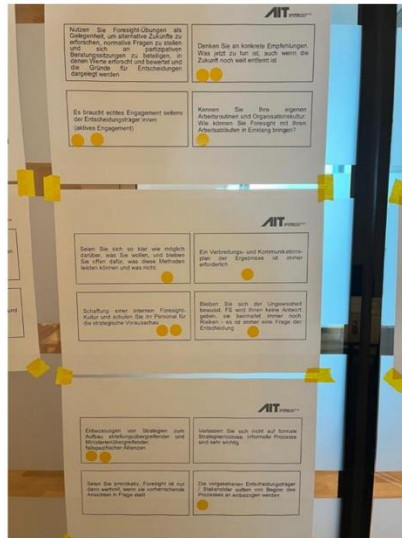
## Aim of the interviews & workshop

- Exchange **experiences and good practices** among practitioners
- Discuss **challenges, hurdles, failed attempts** and **lessons learned**
- Develop **“do’s and don’t’s”** on how to integrate foresight into policy processes



# THREE THEMES

- Start slow and grow
- Thinking beyond silos
- “Not your usual experts”



# START SLOW AND GROW

## Creating networks of interested participants

- “It needs an **open culture organisation** and a culture to commit to FS & TA processes”
- “**Mindset of Futures** – put an effort into communication and the use of results (having a good communication plan) e.g. annual reports”
- „I want **one person**. I want to meet him every month to discuss about the future“  
(Peter Ho (FS pioneer in Singapore))
- “Do not rest on formal strategy processes. **Informal processes** [and channels] are very important”
- (...) policy strategies should have stamps "**Contains Foresight**"
- **Normalize FS/TA**: “Thinking about worst case scenarios is like taking an umbrella when sun shining”

# THINKING BEYOND SILOS

## Involving different departments and ministries

- “Culture of **critical reflexivity** is important”
- “Be **cross-ministerial where possible**, engaging experts across government”
  
- Capacity Building: “Get your staff **trained for strategic foresight**”
- “Support from the ministry for logistical processes of FS and TA team's search for information”
  
- “Strategies to build **case specific alliance** across departments”
- “**Cross-disciplinarity culture of FS** – from crossing ministries to asking critical questions of own views of future”

# “NOT YOUR USUAL EXPERTS”

## Different perspectives and decision makers – early on

- “Care for vulnerable groups and respecting **ontological and epistemological differences**”
- “Be **cross-ministerial where possible**, engaging experts and **decision makers** across government”
- “**Introduce FS/TA early on** in a strategy process, to build bridges and create a joint understanding”
- “Preparing internal and external work **teams from different perspectives**”
- “FS & TA does not offer decisions, only knowledge. **Decisions still need to be taken**”
- “Genuine commitment from the side of policymakers (**active engagement**)”

# CONCLUSION

# CONCLUSION

## 3 Take Aways

- **Graduate model of Foresight Cultures**
  - Low, emerging and established structure to do Foresight
- Different levels of culture ask for **different approaches**
  - E.g. trainings are more important in low culture than in established structures
- The community is a rich repository of **recommendations**
  - E.g. the recommendations presented
  - We need structures to engage in conversations and best practices to foster **Foresight Cultures**

# THANK YOU VERY MUCH!

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Work with people who can bridge the gap between policy and foresight and involve people from other sectors (NGOs, civil society, etc.)

To overcome silos in the political decision-making process, different ministries must be involved, as the ministries have different interests, areas of responsibility and mandates. The social impact of technologies cannot be limited to the remit of one ministry

Use formal and informal channels

Foresight practices must be developed in line with the context. Knowledge of the specifics of the political system and the culture of public administration is required.

Use foresight exercises as an opportunity to explore alternative futures, ask normative questions and engage in participatory deliberative sessions where values are explored and evaluated and the rationale for decisions is articulated

Think of concrete recommendations. What to do now, even if the future is still a long way off

Real commitment is needed on the part of the decision-makers  
(active commitment)

Know your own work routines and organisational culture. How can you harmonise foresight with your work processes?

Remember, foresight and TA explores possible futures and does not predict the future

Pay attention to possible assumptions in this process.

Ensure that the expertise that feeds into the foresight process is diverse, comprehensive and wide-ranging. Don't rely on the usual suspects. Have a broad understanding of what an expert is

Institutionalise foresight TA and TF through policy and legislation.

Be as clear as possible about what you want and keep an open mind about what these methods can and cannot do.

A dissemination and communication plan of the results is always required

Create an internal foresight culture and train your staff in strategic foresight

Remain aware of the uncertainty. FS will not give you an answer, it still involves risks - it is always a question of choice

FS & TA must also take care of the weakest participants and include them in the processes, while also respecting ontological and epistemological differences.

Cross-disciplinarity - from the overlapping of ministries to critically scrutinising one's own ideas for the future;

Start small. Integrate the input from your organisation

Make sure that the process is regularly reflected upon, revised, reconsidered and adapted.

Introduce FS/TA very early in a streamlined process to build bridges and create a shared understanding of the situation.

Use foresight to challenge people's assumptions, especially those in leadership positions.

Think of a public campaign to normalise FS/TA: thinking about worst-case scenarios is like taking an umbrella when the sky is cloudy.

Remember that technology assessment is about social practices and people's responsibility. Involve the people.

Development of strategies for building cross-departmental and cross-ministerial, case-specific alliances

Do not rely on formal strategy processes. Informal processes are very important

Be provocative. Foresight is only valuable if it challenges prevailing views

The intended decision-makers/stakeholders should be involved from the start of the process.