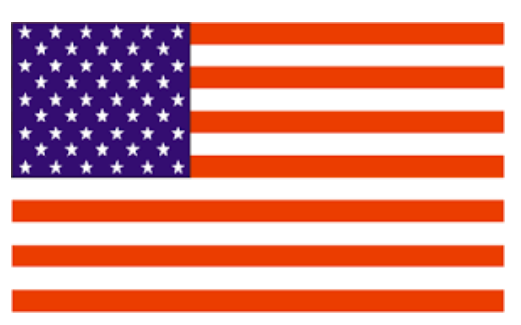


Addressing Generative AI in Technology Assessment and Scientific Policy Advice: International Perspectives

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The rise of generative artificial intelligence (AI) has sparked both fascination and concern also in scientific policy advice. The study explores how Technology Assessment (TA) institutions with an advisory mandate and a problem-oriented research approach respond to the emergence of generative AI and its role for their own knowledge production.

TA Institutions



U.S. Government
Accountability Office



UK Parliament
POST



Parliamentary Office of Science and
Technology & The Autonomy Institute



Committee for the
Future in the Finnish
Parliament

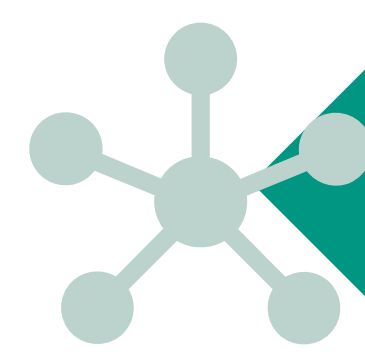


Norwegian Board of Technology
(Teknologirådet)

Methods



Data Collection: Semi-structured
interviews with TA experts
(parliament, ministries) 06-08/25



Topics: AI integration, potentials and
risks, regulation, factors of change,
and future outlook of TA expertise



Analysis: Qualitative content analysis
(Mayring 2022)

Results

Activites

- Skill building: *"Have people who [...] have the teeth in AI specifically, and then others who have different domain experience or knowledge, but they need kind of that basis in AI."*
- Transforming scientific policy advice: *"then turn it into a specific recommendation [...] Justifying that process, showing the trail of bread crumbs [...] I don't think AI is there, right now, to do that in a reliable fashion that could meet our standards."*

Drivers

- Develop use cases, standards, experiments, AI strategy, internal guidelines: *"AI was helping us to envision the importance of humanoid robots in the future."*
- Internal peer-review processes and research diaries: *"one is kind of understanding its strengths and weaknesses, and then doing some experimentation to figure out how we could use it in our work."*
- Training and workshops, identify gaps in adoption

- Quality assurance and missing standards: *"our reliability assurance depends on seeing the process by which you arrived at the answer."*
- Up- and Deskilling processes: *"if you're letting a tool do that for you, then you are undermining, inevitably, your own skill in doing that thing. [...] All the skills that go into it, [...] they tend to degrade."*
- Shift in advisory roles towards knowledge curation

Challenges

Conclusion & Outlook

- High reflectivity in TA community regarding AI opportunities and risks
- Wide range in degree to which institutions adopt generative AI, as well as in individual versus institutionalized usage
- AI-driven transformation depends on training, the development of structured workflows, and institutional support
- Risk mitigation is achieved by embedding systematic human oversight and "human-in-the-loop" workflows
- Institutions are balancing the pressure to innovate while safeguarding the core values of relevance, legitimacy, and credibility of scientific policy advice and maintaining the "honest broker" role (Pielke 2007)



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