





## Science, technology and innovation governance for the 2030 agenda



### Governing Ability Expectations: A Prerequisite (or Accompanied) Goal to the Democratization of Technology

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#### Background

- Scientific research and technological developments (SRTD) are advancing at an ever faster rate.
- Intended and unintended consequences of emerging SRTD have substantial implications for people with disabilities, among other socially disadvantaged groups.
- Technologies are regarded as having political content to "the extent that it involves, facilitates, or limits the exercise of power over human beings"<sup>[1]</sup>.
- Technology has the power to change ability expectations<sup>[2]</sup>.
- Ability expectations have the power to influence technology development and application agendas.
- Powerful social groups and individuals have the power to influence technology R&D agendas to fit their ability expectations.





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### Figure 1









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### Democratization of Technology (DT), Anticipatory Governance (AG) and Anticipatory Advocacy (AA)

- Technology governance is regarded as an important goal <sup>[3]</sup>.
- AG is a foresight framework aimed at understanding potential social, ethical, and political impacts of emerging SRTD through "reflexive" practice <sup>[4]</sup>.
- Implementing AG practice means that discussions of the implications of SRTD products will begin even before product development.
- DT is another discourse that wants to increase the influence of the public in shaping technological futures.
- Who becomes involved in DT and AG becomes an important component to the technology's outcome.
- Need for anticipatory advocacy: advocating with a foresight vision for one's involvement in AG and DT.
- Engagement AG and DT requires certain abilities (Figure 1).
- People with disabilities and other socially disadvantaged groups face several barriers (Figure 1) and as a result, often experience under-representation in, or exclusion from, AG and DT discourses.
- DT needs democratization of whose ability expectations can shape technology R&D.
- DT needs democratization of what ability expectations are a prerequisite for being part of AG and DT.







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#### Conclusion

- AG and DT are supposed to broaden the utility of foresight and responsible technology development.
- AG and DT assumes certain abilities as a prerequisite for being part of the discourse.
  - However, many cannot meet these abilities (Figure 1).
- As is, AG and DT are privileged discourses, limited to those who have access to knowledge and who can afford to participate → increasing the influence gap → myopic view of AG and DT for what the technological future should and could be.
- We posit the need for AA by people with disabilities and other socially disadvantaged groups:
  - Advocating for engagement in AG and DT, addressing barriers which exclude access from participation.
- We posit the prerequisite (or accompanied) goal of democratization and governance of ability expectations to manage and engage in responsible technology development.
- Engagement of the "lay public" or integration of different research disciplines does not necessarily mean there will be an uptake of interest by those who can afford to participate <sup>[5,6]</sup>
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#### References

<sup>[1]</sup> Schickler, E., Democratizing Technology: Hierarchy and Innovation in Public Life. Polity, 1994. 27(2): p. 175-199.
<sup>[2]</sup> Wolbring, G., Nanotechnology for Democracy versus Democratization of Nanotech: An Ableism Analysis, in Little by Little: Expansions of Nanoscience and Emerging Technologies, H.v. Lente, et al., Editors. 2012, AKA-Verlag/IOS Press. p. 89-105.
<sup>[3]</sup> de la Mothe, J., The institutional governance of technology, society, and innovation. Technology in Society, 2004. 26(2–3): p. 523-536.

<sup>[4]</sup>Guston, D., *Understanding 'anticipatory governance'*. Social Studies of Science, 2014. 44(2): p. 218-242.

<sup>[5]</sup> Wolbring, G., Diep, L., *The use of technology governance in social work education as a means of preparing future social workers to work with people with disabilities. International* Journal of Continuing SocialWork Education, 2014. [accepted] <sup>[6]</sup> Diep, L., Cabibihan, J., Wolbring, G. *Social robotics through an anticipatory governance lens.* B. Johnson et al. (eds.) Proc. ICSR 2014, LNCS, 8755