

Introduction to the Minitrack on Services for All: Inclusion, Accessibility, Diversity

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The concepts of *design for all*, *universal design*, *accessibility*, *inclusion*, *diversity*, and other related terms, all share a similar core notion. They denote the importance of designing experiences, activities, services, and artifacts that are usable by everyone, regardless of their ability, disability, age, skills, gender, race, ethnicity, religion, income, or any other such factors. Design for all is essential to ensure justice, equity, and human rights. Given the importance services have in our society, they would especially benefit from design for all practices that ensures equity and equal access. Services, in this context, are defined malleably as: processes, actions, application of competence, or activities, performed by an entity to fulfill a need for another.

The importance of services and the compositions of their target groups vary significantly. It has been argued that public services are of high significance to society, and hence, should be accessible to and usable by everyone in society. Different governmental agencies have issued numerous directives to ensure equal access to public services, yet, in practice, many services still remain largely inaccessible. On the other hand, in the private sector, there have long been debates on whether private services should comply with accessibility standards, or if the market should be left to organically regulate the matter. With privatization and the increasing significance of private services, the stakes have been raised for these sectors. Private sector services have become akin to essential services that arguably need to be accessible to ensure equitable society. Financial accessibility is similarly a subject of contention between services providers needing to maintain their viability and unfolding international economic crises that can significantly impede access to even the most basic services. Regionally, there are divides between countries and populations in access to services based on location and geopolitics, the latest of which is around AI-based

services, such as ChatGPT, which have been blocked in several regions around the world, leaving their populations behind in technological capabilities.

When it comes to services deemed by some as non-essential, the debate on universal design becomes even more complex. Disagreements exist over whether games, VR, AR, serious games, gamification, and such services that combine utility and entertainment are required to be accessible and inclusive. Nonetheless, we see service providers not only ensuring the accessibility of their services, but also becoming pioneers in it. On the other hand, we see arguments that services are not meant to be accessible or inclusive to everyone. For example, that games require high utilization of different abilities and senses and are not compatible with disabilities. Yet, we also see the release of critically acclaimed games, playable by a wide range of individuals and inclusive of many people with disabilities.

Overall, we see disagreements on what inclusion and design for all mean, how to design, implement, and evaluate it, what benefits can be drawn from it and for whom. This minitrack encouraged a wide range of submissions from any disciplinary backgrounds: empirical and conceptual research papers, case studies, and reviews that investigate design for all in the services context and push it forward.

The minitrack presented multiple angles on the topic of services for all, through different research approaches, methods, and analytical angles. Hassan, in their paper “Accessibility of Educational Games and Game-Based Approaches to People with Learning and Physical Disabilities: A Systematic Literature Review” present a systematic literature study of relevantly recent research on the accessibility of games and game-based approaches in education. They highlight several gaps in research and map where future research is needed to further accelerate the accessibility of educational tools.

Akhgarnusch, Voß, and Ge in their paper "Mystery shopping: Improving quality assurance of public transport services for people with restricted mobility using a prototypical mobile application" investigate how a mobile app, that includes a pre-determined criteria for motor accessibility of public design, could be designed and utilized by a "mystery accessibility shopper" to conduct random accessibility audits. They show the promise of this approach to ensure continuous compliance with services standards, as is seen in retail industries.

Kedziora, Siemon, and Sharada in their paper "'Leanbotics' Case – Exploring Inclusive Synergies Between Robotic Process Automation (RPA) and Process Improvement" investigate the synergy between process improvement and automation for the inclusive digital transformation at a large Nordic organization. They conduct cross-disciplinarity work that merges governance of Robotic Process Automation (RPA) Continuous Improvement (CI) programme, and inclusive service design by developing a 'Leanbotics' programme that allows for more efficient and engaging experience within the organization's community.

Finally, Kan, Liu, Ananthakrishnan, and Tan in their paper "One Size Fits All? Informational Accessibility and Inclusivity in Online Platforms" approach inclusion from a different angle. They partnered with a US-based apparel rental firm and leveraged large-scale customer reviews and click-level consumption data to study the conditions that lead to increased informational asymmetry for plus-sized users. They documented a significant under-representation in reviews and photos from plus-sized users and demonstrated the value of reviews and photos from similar-sized users, and in particular, to plus-sized users on rental conversion rates.

Acknowledgements

This work was supported by the Finnish foundation for economic education [grant number 22-12430].

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