# Re-evaluating evaluation: Looking for value based metrics in public service design

Uttishta Varanasi Department of Computer Science Aalto University Finland uttishta.varanasi@aalto.fi Rūta Šerpytytė Department of Computer Science Aalto University Finland ruta.serpytyte@aalto.fi

Nitin Sawhney Department of Computer Science Aalto University Finland nitin.sawhney@aalto.fi

## ABSTRACT

Design has become an increasingly important asset for cities, as a crucial practice and problem-solving tool from usability of services to strategy and branding. This has spurred the need to evaluate and measure the effectiveness of design-related activities conducted by the city. However, in this paper we argue that the complexity of the public sector means that design and its evaluation need to go beyond quantitative, check-list based measures and towards more value-based metrics. As design researchers and practitioners working in the public sector, we draw on our experiences and perspectives on different approaches to design and their limitations. We contest the idea of universal design while proposing equity and inclusiveness in design frameworks as crucial metrics for the public sector.

#### **CCS CONCEPTS**

Human-centered computing • Human computer interaction (HCI)HCI design and evaluation methods

#### **KEYWORDS**

Public service design, Migration, Digitalization, Design evaluation

#### 1 Introduction

Design frameworks are increasingly being implemented in the public sector and policy design. While a decade ago the role of design was mainly viewed as a problem-solving process [18], recent studies on the City of Helsinki's design capabilities showcase a diversity of design activities [17]. Researchers identified 23 types of design activities that can be summarised in six broad clusters, ranging from design of service solutions to design in strategy and branding. In the very nature of design work, there is an urge to evaluate, measure success to be able to make iterations. However, such diversity of design activities lead to different types of measures [17]. As traditional public administration models tend to approach problems-solutions in a reactive way [1], measuring results can be reduced to checking the boxes of solved problems. However, new trends towards humancentric governance and the complexity of challenges that the public sector is facing calls for rethinking how we evaluate the role of design activities undertaken by the city.

In this paper, we propose re-evaluating design evaluation in the context of digital public services for migrants and other vulnerable populations in Finland, through the lens of design researchers and practitioners working with the City of Espoo. Nordic countries generally have high levels of trust towards the government and take pride in well-functioning public services [15]. Finland is also rapidly moving towards digitalization as shown by initiatives like Digital Identity reform – a new mobile application which will be used as a proof of identity using public services [9]. Such a shift may benefit a large portion of people living in Finland, but it may exclude some migrant groups [2]. While there are challenges to overcome in creating digital services for migrants, the urgency to address them is prominent in strategies set forth by cities. For example, being the best city for integration is one of the seven objectives in the City of Espoo's strategy [4].

The digitalisation of public services governments (at different scales) has been viewed as not only a cost-effective method of service delivery but also as a new avenue for inclusion and access [23]. In the context of Finland, nearly every public service, from the library to social security to health services has been digitised, with the same aim of improving inclusion and access. While access to certain services such as book borrowing in public libraries may not seem pressing, crises such as the pandemic laid bare the challenges faced by migrants with limited access to digital public services [2]. Access to COVID-19 tests, vaccines and other forms of healthcare have been denied to many migrants due to Finland's "strong authentication", which is a prerequisite to use such services securely. While the values of security and privacy behind "strong authentication" are important, creating the same, equal modes of access for public services disproportionately affects different populations. It can be argued that in modern cities, digital services are the interfaces to human rights [6]; and design that does not cater to inclusive services that move beyond digitalisation are by nature, exclusionary.

### 2 Beyond universal design; looking for inclusive and equitable forms of civic engagement

We can examine different approaches for evaluation of design in fields such as Human-centred Design (HCD), Universal Design, Participatory Design (PD), and Design Justice. The realities of human-centred design in practice is that designers end up prioritising some groups over others. Designing for people who have similar experiences creates the risk of primarily creating services for some dominant groups within the population and many groups are inevitably excluded [7]. As some groups are excluded from the creation of services, they tend to use those services less, and because they're not considered the target users, their potential contributions are ignored, and so on (ibid). To address this problem, tools like user profiling, personas, journey maps or scenarios are extremely important in HCD.

The tendency to focus on specific groups is not always applicable in the public sector, as it goes against the idea of developing services for all city inhabitants [16]. Universal design framework goes hand in hand with the "design for all" approach used for design-related activities in the city. In relation to migrant groups, universalism echoes the ideas behind "de-migrantisation" research [8] which aims to look past the binary division of city inhabitants as native citizens vs. migrants. Although the premise of universal design is to include everyone, we argue that its core principles are insufficient and can inevitably exclude many groups. Universalist ideas are based on single-axis evaluation which excludes groups that are intersectionally disadvantaged in the matrix of domination [7].

As both user profiling and universal design approaches have their limitations, it is clear that there is no one design framework that could highlight the needs of disadvantaged groups while creating a better life for all city inhabitants. However, there are attempts to help address the universality vs. specificity value tension by involving vulnerable groups in the design process.

Participatory Design (PD) methodology has been used for empowerment of citizens in urban design scenarios. For example, participatory methodology was used with urban residents to jointly develop solutions and systems, converting their local communities into living labs [3]. PD helps promote the role of people beyond users and participants, but as design partners [11], or co-researchers [13] which makes it an appropriate method for designing with vulnerable communities, from children to the elderly to migrants [2]. PD helps facilitate inclusion of diverse voices, and can be valuable in developing civic engagement within marginalised communities [12].

The aim of PD is to be more inclusive and democratic. However, the participation in workshops (a popular method in PD) itself requires a level of privilege. The larger the gap in power dynamics and socio-cultural standing, the greater the number of barriers are faced in the participation of less privileged participants [20]. Less privileged participants are defined as those with "disadvantages due to not having access to material resources, being unable to exercise their voice, or being discriminated on the basis of their age, sex, disability, race, ethnicity, or economic and migration status" [20]. For example, practitioners speak of basic infrastructural limitations such as a lack of public transport as major barriers to truly inclusive participatory design [21]. We argue that the fast-paced "sprint" like nature of development projects makes it difficult to build trust and lasting relationships with communities to develop safe spaces for PD projects; a necessity in designing inclusive public services for vulnerable groups. Adopting a participatory design approach requires engaging diverse stakeholders throughout the lifecycle of design, creating space, agency, and capacity for participation, and embracing contested values, dispositions and viewpoints to support inclusive and equitable outcomes [22].

Design choices can affect the extent to which values, such as trust or equity, can be ascertained in public service and policy [19]. Designing participatory methods for social equity emphasises how individual and structural barriers (whether as a result of citizen initiatives or governmental institutional design) can create conditions that disproportionately restrict equal engagement and just outcomes [5].

#### **3** Conclusion: Value-based Design Evaluation

Design for social good and impact is a common theme across public sector design organisations, but there is little consensus on how social impact can be defined and what the metrics could be. Current metrics focus on price, technical quality, customer value, customer satisfaction, and design participation. While challenging, we argue that metrics that reflect values such as equity, inclusion, and trust among others are crucial when designing for migrants and vulnerable populations. There have been examples of projects that use more qualitative metrics such as openness and empowerment [14], which creates space for more equitable solutions in public service. Drobotowicz's [2023] work in defining civic empowerment in the public sector of Finland shows that there is a desire for practitioners in public service to engage with the values of transparency, openness, participation, and functionality. However, in practice this remains a challenge due to several obstacles from organisational reluctance and tokenism to bias and lack of representative data.

The aim of designing more inclusive services isn't to take the checklist approach and fill out accessibility criteria, but rather adopt holistic and multi-disciplinary methods of addressing complexity in public sector design [24]. As framed in Design Justice [7], rather than a funnel of narrowing design possibilities for achieving accessibility and inclusion, it's worth thinking of design for equity and fairness as a prism which generates a wide range of possible solutions which better reflect the needs of diverse populations and contribute to the design of trustworthy public services. While the tensions between the checklist approach and desire for true inclusion will continue to exist, there is still much scope to expand beyond universal design principles and metrics in the realm of designing for public services.

#### REFERENCES

- Christian Bason. 2017. Leading public design: Discovering humancentred governance (1st ed.). Bristol University Press. DOI:https://doi.org/10.2307/j.ctt1t88xq5
- [2] Ulla Buchert, Laura Kemppainen, Antero Olakivi, Sirpa Wrede, and Anne Kouvonen. 2022. Is digitalisation of public health and social welfare services reinforcing social exclusion? The case of Russianspeaking older migrants in Finland. Critical Social Policy (July 2022), 026101832211050. DOI:https://doi.org/10.1177/02610183221105035

- [3] John M. Carroll and Mary Beth Rosson. 2013. Wild at Home: The Neighborhood as a Living Laboratory for HCI. ACM Trans. Comput.-Hum. Interact. 20, 3 (July 2013), 1–28. DOI:https://doi.org/10.1145/2491500.2491504
- [4] City of Espoo. 2022. City Council approves new programme supporting Espoo's goal of being the best integrator in Finland | City of Espoo. Retrieved May 3, 2023 from https://www.espoo.fi/en/news/2022/06/citycouncil-approves-new-programme-supporting-espoos-goal-being-bestintegrator-finland
- [5] Jill K. Clark. 2018. Designing Public Participation: Managing Problem Settings and Social Equity: Designing Public Participation: Managing Problem Settings and Social Equity. Public Admin Rev 78, 3 (May 2018), 362–374. DOI:https://doi.org/10.1111/puar.12872
- [6] Grazia Concilio, Giuliana Costa, Maryam Karimi, Maria Vitaller del Olmo, and Olga Kehagia. 2022. Co-Designing with Migrants' Easier Access to Public Services: A Technological Perspective. Social Sciences 11, 2 (February 2022), 54. DOI:https://doi.org/10.3390/socsci11020054
- [7] Sasha Costanza-Chock. 2020. Design Justice: Community-Led Practices to Build the Worlds We Need. The MIT Press. DOI:https://doi.org/10.7551/mitpress/12255.001.0001
- Janine Dahinden. 2016. A plea for the 'de-migranticization' of research on migration and integration. Ethnic and Racial Studies 39, 13 (October 2016), 2207–2225. DOI:https://doi.org/10.1080/01419870.2015.1124129
- [9] Digital and population data services agency. Digital identity reform | Digital and population data services agency. Digital identity reform | Digital and population data services agency. Digital identity-reform
- [10] Karolina Drobotowicz, Nghiep Lucy Truong, Johanna Ylipulli, Ana Paula Gonzalez Torres, and Nitin Sawhney. 2023. Practitioners' Perspectives on Inclusion and Civic Empowerment in Finnish Public Sector AI. (2023).
- [11] Allison Druin. 2002. The role of children in the design of new technology. Behaviour & Information Technology 21, 1 (January 2002), 1–25. DOI:https://doi.org/10.1080/01449290110108659
- [12] Ana Maria Bustamante Duarte, Nina Brendel, Auriol Degbelo, and Christian Kray. 2018. Participatory Design and Participatory Research: An HCI Case Study with Young Forced Migrants. ACM Trans. Comput.-Hum. Interact. 25, 1 (February 2018), 1–39. DOI:https://doi.org/10.1145/3145472
- [13] Verity Harrison. 2022. The Co-Researchers Journey in CoAct for Mental Health. DOI:https://doi.org/10.5281/zenodo.7729269
- [14] Elise Hodson, Teija Vainio, Michel Nader Sayún, Martin Tomitsch, Ana Jones, Meri Jalonen, Ahmet Börütecene, Md Tanvir Hasan, Irina Paraschivoiu, Annika Wolff, Sharon Yavo-Ayalon, Sari Yli-Kauhaluoma, and Gareth W. Young. 2023. Evaluating Social Impact of Smart City Technologies and Services: Methods, Challenges, Future Directions. Multimodal Technologies and Interaction 7, 3 (March 2023), 33. DOI:https://doi.org/10.3390/mti7030033
- [15] Sören Holmberg and Bo Rothstein. SOCIAL TRUST THE NORDIC.
- [16] Sampsa Hyysalo, Virve Hyysalo, and Louna Hakkarainen. 2019. The Work of Democratized Design in Setting-up a Hosted Citizen-Designer Community. 13, 1 (2019).
- [17] Sampsa Hyysalo, Kaisa Savolainen, Antti Pirinen, Tuuli Mattelmäki, Päivi Hietanen, and Meri Virta. 2023. Design types in diversified city administration: The case City of Helsinki. The Design Journal 0, 0 (March 2023), 1–19. DOI:https://doi.org/10.1080/14606925.2023.2181886
- [18] Sabine Junginger. 2013. Design and Innovation in the Public Sector: Matters of Design in Policy-Making and Policy Implementation. Annual Review of Policy Design 1, 1 (September 2013), 1–11.
- [19] Tina Nabatchi. 2012. Putting the "Public" Back in Public Values Research: Designing Participation to Identify and Respond to Values. Public Administration Review 72, 5 (2012), 699–708.
- [20] Laura Marí-a Ramí-rez and Aykut Coşkun. 2020. How Do I matter? A Review of the Participatory Design Practice with Less Privileged Participants. In Proceedings of the 16th Participatory Design Conference 2020 - Participation(s) Otherwise - Volume 1, ACM, Manizales Colombia, 137–147. DOI:https://doi.org/10.1145/3385010.3385018
- [21] Salma. 2021. Is Participatory Design Really That Inclusive? Sparks of Innovation: Stories from the HCIL. Retrieved September 28, 2021 from https://medium.com/hcil-at-umd/is-participatory-design-really-thatinclusive-73922b899d4e
- [22] Nitin Sawhney and Anh-Ton Tran. 2020. Ecologies of Contestation in Participatory Design. In Proceedings of the 16th Participatory Design Conference 2020 - Participation(s) Otherwise - Volume 1, ACM, Manizales Colombia, 172–181. DOI:https://doi.org/10.1145/3385010.3385028
- [23] Jannick Schou and Morten Hjelholt. 2018. Digital citizenship and neoliberalization: governing digital citizens in Denmark. Citizenship

Studies 22, 5 (July 2018), 507–522. DOI:https://doi.org/10.1080/13621025.2018.1477920

[24] Valerie Watchorn, Danielle Hitch, Richard Tucker, Patsie Frawley, Kathryn Aedy, and Cathryn Grant. 2022. Evaluating universal design of built environments: an empirical study of stakeholder practice and perceptions. J Hous and the Built Environ (December 2022). DOI:https://doi.org/10.1007/s10901-022-09981-x