# Inclusion, Not Just an Add-On

Developed by

# POLLICY

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# INTRODUCTION.

# Why This Guide?

This guide was created to drive conversations within technology entities to reconsider and reconceptualize how they approach inclusive design practices. Historically, inclusion has been a "nice-to-have" add-on within digital platforms, and as such, discriminates against and excludes a large proportion of the world, based on factors such as race, gender, class, ability, sexuality, geolocation, language, religion etc.

The guide is intended to serve as an exercise in thinking about diverse perspectives and needs of unique users when developing programs, policies and platforms. We would like to note that in this guide, accessibility is used interchangeably to refer to 'access to the internet' or as used in disability rights.

# How to use this guide?

First, we will take you through some concepts and frameworks. The guide then presents three personas, i.e. reliable and realistic representations of the patterns of audience, users or customers for reference. These personas reflect the lived experiences, needs, risks and frustrations that they might face. The personas serve as a foundation on how to engage with the four frameworks, Accessibility-by-Design, Gender-by-Design, Privacy-by-Design and Safety-by-Design, as well as other considerations to create inclusive design in technology policies, practices and products.

After each persona, the guide presents a list of challenges and potential solutions. This list is in no way exhaustive, but is a starting point for a larger conversation on a rapidly evolving field. As a result, we encourage you to develop several other personas, especially with regards to the context you are embedded in.

At the end of this guide, the best practices are distilled down to a few overarching principles, together with additional resources and guides for further reading.

**Accessibility-by-Design**

**Gender-by-Design**

**Privacy-by-Design**

**Safety-by-Design**
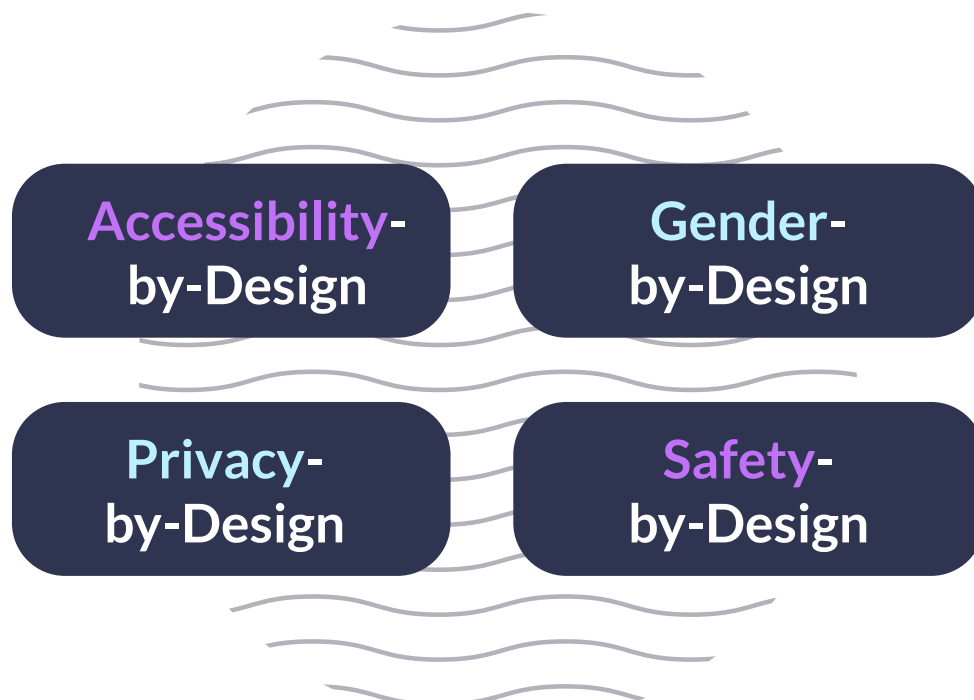
# BUT FIRST,
# INTERSECTIONALITY

Intersectionality addresses how user experiences can be affected by the presence of multiple intersecting identities like race, gender, ability, sexuality, class etc. Intersectionality also accounts for the fact that while technology can harm users, this harm is not distributed equally. As a result, there is a need to reimagine technology design beyond the current mode of designing for a universal user first, then having add-ons to address emerging needs for marginalized populations.

This approach calls for the centering of users with different needs and experiences as a result of their multiple intersecting identities. It also calls for checking for the implications of technology not just on one universal user, but across different users with different identity markers and addressing these implications equitably.

"Intersectionality addresses how user experiences can be affected by thepresence of multiple intersecting identities"

# Accessibility-by- Design Framework

Accessibility addresses discriminatory practices that may restrict the user experience for people with disabilities, in terms of perception, comprehension, navigability and interactivity with web-based services and products.

Accessibility includes both the technical requirements such as underlying code, for example, ensuring compatibility with assistive technologies, as well as the requirements related to user interaction and visual design, for example, to support persons with cognitive disabilities. There are several guides, checklists and documentation on accessibility, but for the purpose of this guide, we have chosen these four principles based on the RGD Ontario interpretation of the Web Content Accessibility Guidelines 2.0.

1. **Content should be perceivable:** Information and user interface components must be presentable to users in ways they can perceive eg. Provide text alternatives for any non-text content such as speech, symbols, braille etc.

2. **Content should be operable:** User interface components and navigation must be operable, that is, the interface cannot require interaction that a user cannot perform eg. Make all functionality available from a keyboard.

3. **Content should be understandable:** Users must be able to understand the information as well as the operation of the user interface eg. the platform should enable users to learn and remember how to use the interface.

4. **Content should be robust**: Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies eg. maximize compatibility with assistive technologies.

If any of these are not true, users with disabilities may not be able to use the platforms.

# Gender-by-
# Design Framework

Gender-by-design is an approach that seeks to use design strategies to reduce gender inequality. This framework acknowledges that technology is mostly built around heterosexual cisgender men's needs, and has disproportionate burdens on women, girls and sexual and gender minorities.

This approach seeks to center the needs of this set of marginalized users with key considerations around content policies, accessibility, affordability, privacy, and security. It calls for the need for technologists to subvert gender norms and biases that technology helps to perpetuate and entrench.

This approach also emphasises on the imperative that technology companies have in discontinuing or giving users options to opt out of products and features that put them at risk of harm. For instance, algorithmic recommendation features like 'Find your contacts' used by social media platforms have been known to out LGBTQIA people and sex workers to their families.

# Privacy-by-Design Framework

[Privacy-by-Design](#) (PBD) is an approach that seeks to protect the privacy of individuals by integrating key considerations around privacy in the conceptualization, design and development of services, processes, products and infrastructure. The framework uses seven foundational principles, namely:

1. **Proactive not reactive; preventative not remedial**
2. **Privacy as the default setting**
3. **Privacy embedded into design**
4. **Full functionality — positive sum, not zero sum**
5. **End-to-end security — full lifecycle protection**
6. **Visibility and transparency — keep it open**
7. **Respect for user privacy — keep it user-centric**

In addition to these foundational principles, it is important for technologists to understand that privacy is determined by context. For instance, the privacy needs of vulnerable people like refugees and sex workers are distinct from needs of other users. As a result, technologists need to work with different sets of users to understand their privacy needs and risks, and design proactive privacy protocols.

Though this approach has been criticized for a lack of clarity, especially as it relates to enforcing the adoption within diverse disciplines, it is a crucial opportunity for designers and developers to restructure their approach to privacy. The EU's data protection law which came into force in May 2018, the General Data Protection Regulation (GDPR), requires privacy by design across all policies, procedures, applications and systems.

# Safety-by-Design Framework

Safety-by-design is an approach that calls for technologists to build responsibly for users by embedding safety and user rights in all design stages, and not as an afterthought. Like PBD, this approach takes a proactive anticipatory approach, rather than having reactive measures. This framework takes into account intersectionality, and acknowledges that safety risks are not evenly distributed. Therefore, it calls for technologists to assess risks across different users with different identity markers. There have been efforts to develop principles for safety-by-design, and the Australian e-safety commission outlines 3 principles that guide platforms on enhancing user safety.

1. **Service Provider Responsibility.** The responsibility of providing safeguards falls upon the developers of a technology. The burden of safety should never fall solely on the user.

2. **User Empowerment and Autonomy.** Platforms need to ensure that their safety tools and measures are accessible and perceivable to all users, and that accounts are set to the most secure settings by default. They should also clear processes for reporting violations, and supporting users who are exposed to safety risks.

3. **Transparency and Accountability.** Platforms need to not only make their product and content policies clear and understandable to all, but also need to make it clear how they formulate and enforce these policies.
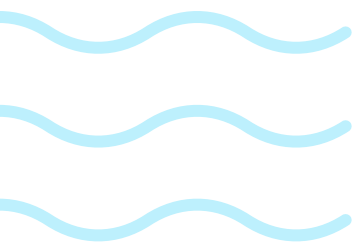
# Accessibility as a Foundation, Not Afterthought

# Who is Luca?

Luca is a 13 year old boy from Bucharest, Romania. He has lived his entire life with significant visual impairment. His family spends extra money to send him to a school that caters to the needs of children with visual impairments. Luca wants to be a software engineer when he grows up.

His family can not afford to buy more sophisticated assistive devices or enroll Luca in specialized after-school courses due to financial constraints. As a result, Luca often feels left behind in his coursework and unable to keep up with his online coding tutorials.

## How does Luca Experience Technology and the Internet?

Luca likes to stay connected with his friends from school. He loves learning, listening to video game livestreams and building mobile applications. Luca needs assistive devices to browse the internet, participate in his classes and access the platforms he uses to build his coding and programming skills.

Luca often gets frustrated with poorly designed websites or online platforms that do not accommodate his needs. He sometimes feels excluded and isolated when his siblings play video games or outdoor sports.

| Challenges | Best Practices |
|---|---|
| *Financial Challenges*<br>Affordability of assistive devices<br><br>*Differently Abled Challenges*<br>Visual impairment Cognitive impairment<br><br>*Platform-related Challenges*<br>Lack of accessibility within platforms<br>Interoperability challenges between digital platforms and assistive devices<br>Ableist language (from both platforms and users)<br><br>*Policy or Societal Challenges*<br>Lack of awareness of available tools and services by caregivers<br>Socio-cultural biases against people with disabilities | Implement accessibility-by-design framework<br>Incentivize the use of alternative text (alt-text) by platform users<br>Provide subtitles or closed captions for all geographic zones<br>Enable audio options (eg. for CAPTCHA)<br>Disallow fonts that impede assisted reading<br>Develop text-to-speech and speech recognition services for different accents and speech disabilities |

# Questions

What challenges might differently abled persons run into when accessing your digital platform? How might these challenges be mitigated?
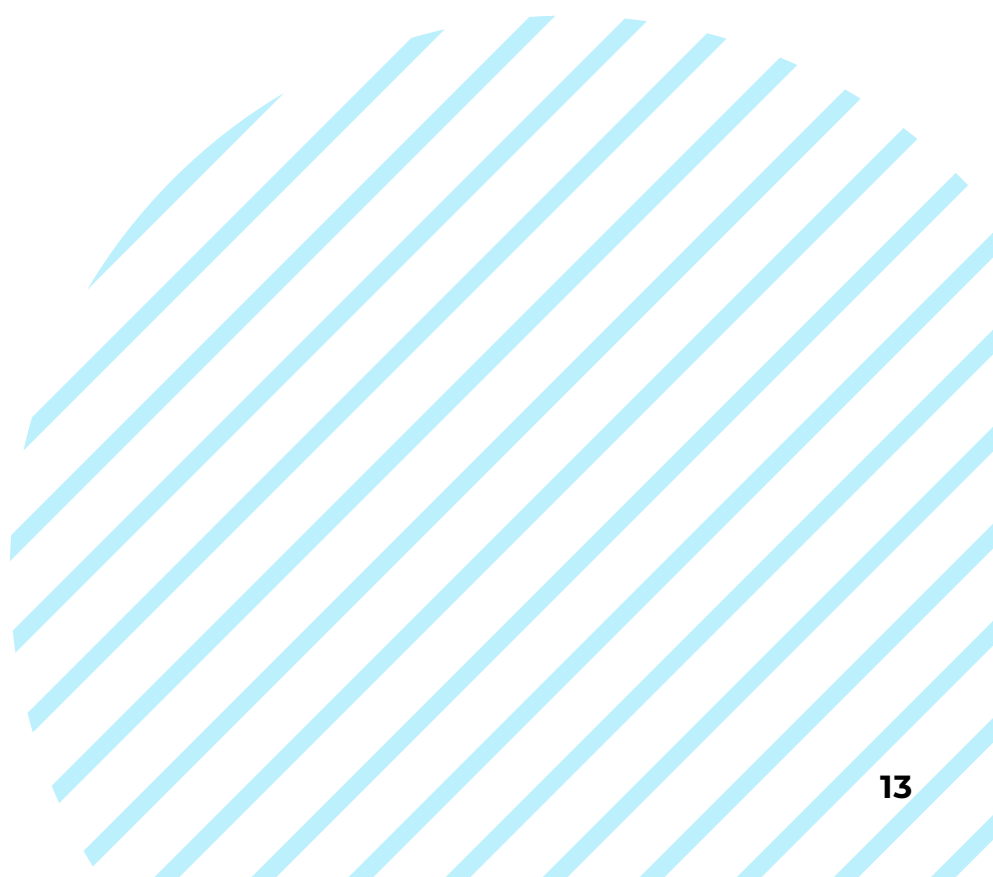
# Meaningful Connectivity in Low-Resource Settings

# Who is Jemima?

Jemima is a 45-year old vegetable seller from the outskirts of Lira, in Northern Uganda. She often travels to the nearby urban center to sell vegetables that she grows on her farm. She is a widow who uses all the money she earns to support her family.

Data is expensive in Uganda and the internet speeds are often low. As a result, Jemima checks her messages infrequently. Sometimes, she misses out on important messages from her children's schools and the market women groups. Jemima's village is just two poles away from a connection with the electricity grid. A lack of electricity means that she has to set aside money to charge her phone at the nearby shop in the market. Sometimes she charges it with her solar charger, however her phone's charge doesn't last for long, especially when the children are around.

## How does Jemima Experience Technology and the Internet?

Jemima is actively engaged in her market women's Savings and Credit Cooperative Organization (SACCO). The SACCO is in the process of transitioning to a digital savings product, replacing the previous method of using a deposit box with several keys distributed amongst members. However, Jemima contends with spotty internet connectivity and the savings app is incompatible with her older model smartphone. Furthermore, the app is only available in English. Jemima worries about losing her password, pressing the wrong buttons or even worse, losing all the SACCO money from online hackers. She's heard many stories of mobile money fraud at the market.

She used to have a Facebook account but she has not been able to access it since the internet shutdown in January 2021. She does not have space for more apps on her phone, hence using a VPN is out of the question. Jemima is also worried about her safety as she received strange messages and images from an unknown number on Whatsapp a few weeks ago. She stopped using Whatsapp for several weeks after the incident, but after missing out on a number of business opportunities and communication from the schools, she is now

back to online platforms that do not accommodate her needs.

| Challenges | Best Practices |
|---|---|
| **Infrastructural Challenges**<br>Poor internet connectivity<br>No or intermittent electricity access Older devices and outdated operating systems<br><br>**Financial Challenges**<br>High cost of meaningful connectivity<br>Affordability of Devices<br><br>**Skills-based Challenges**<br>Insufficient digital literacy skills Insufficient digital safety skills<br><br>**Platform-related Challenges**<br>Language barriers<br>Lack of localized and relevant content Online violence<br>Dis- and misinformation<br>Digital security and privacy concerns<br><br>**Policy or Societal Challenges**<br>Internet shutdowns<br>Technology (eg. cryptocurrency) or platform (eg. Facebook or Twitter) bans<br>Regressive policies such as social media taxation<br>Cultural, religious or patriarchal barriers<br>Time (eg time that could be spent online is spent working both in and out of the home) | Develop low bandwidth content without restricting or limiting other content sources<br>Consider device limitations<br>Consider content that can be used when offline<br><br>Provide financial support for digital participation (eg. data refunds, child-care allowances)<br><br>Translate and localize content<br>Use visual or auditory content to overcome language barriers<br>Develop jargon-free and clear language<br>Simplify reporting mechanism and provide clear information on expectations and timelines for resolution<br><br>Engage with users and grassroots organizations<br>Engage with decision makers (eg. politicians, technocrats)<br><br>Consider power dynamics within spaces<br>Consider timing of events, workshops or other activities (eg. when are women most likely to be available?)<br><br>Promote women-only spaces, but take intersectionality into account, as not all women have the same experiences, or will be equal in these spaces. |

# Questions

What are potential means to obtain user feedback from users in low-resource settings?

What are meaningful ways to design scalable policies and products for diverse sets of users?

# CASE STUDY.

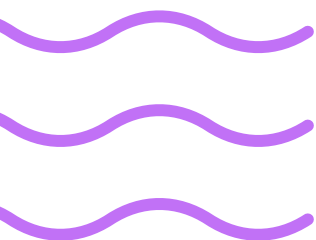# Safeguarding Vulnerable Children and Adults

# Who is Adnan?

Adnan is a 22-year old from Aden in Yemen. Yemen has been engulfed in a civil war since 2014. Adnan came to Germany on a Tourist Visa which has since expired. Previously, Adnan was studying to become a dentist in Sana'a and he hopes to continue his university studies in Europe. Adnan loves spending his time watching Instagram reels, visiting gay bars on the weekend and meeting open-minded people from different countries.

Adnan is worried about his immigration status. He works as a dishwasher at a restaurant in a busy neighbourhood in Berlin. Adnan recently dropped and broke his phone. He is currently saving up to buy a new phone, even though money is hard to come by. Adnan uses the computers at the local library to apply for universities and scholarships.

## How does Adnan Experience Technology and the Internet?

Adnan wants to continue his education in Europe, but is agnostic in terms of which country he could settle in. He wishes to gain lawful residency in the EU but is unsure on how to do so. Adnan is fearful of being deported and oftentimes feels isolated, anxious and depressed. Being deported would also mean that he would lose the freedom he has to commune with other queer people. He is currently trying to save up money to buy his phone, pay for rent and send some back home as well.

Adnan tries to communicate regularly with his family and friends back home, to update them about his well-being. His mother has been asking him to return home and support his father in the family business.

| Challenges | Best Practices |
|---|---|
| **Platform-related Challenges**<br>Lack of privacy and anonymity<br>Online violence<br>Dis- and misinformation<br>Non-consensual collection of data by private entities<br>Censorship of content (eg. regarding experiences of racism, colonialism, islamophobia etc.)<br><br>**Policy or Societal Challenges**<br>Hate speech and harmful narratives (eg. against immigrants, racism, islamophobia, homophobia etc.)<br>Surveillance<br>Non-consensual collection of data by state entities<br>Access to social services such as healthcare, education, counselling etc.<br><br>**Personal Challenges**<br>Mental health struggles<br>Financial struggles | Implement privacy-by-design framework<br>Uphold anonymity on digital platforms<br>Ensure encrypted communication<br>Ensure digital security features and tools are easy to find and use<br><br>Appropriate content moderation<br>Build cultural sensitivity internally to countering harmful narratives Develop transparency around content censorship and shadowbanning<br><br>Facilitate deleting of online history<br>Dump dark pattern designs that exacerbate mental health disorder |

# Questions

How can your platform preserve the privacy of vulnerable or marginalized people such as refugees, internally displaced people, queer people, sex workers, etc.?
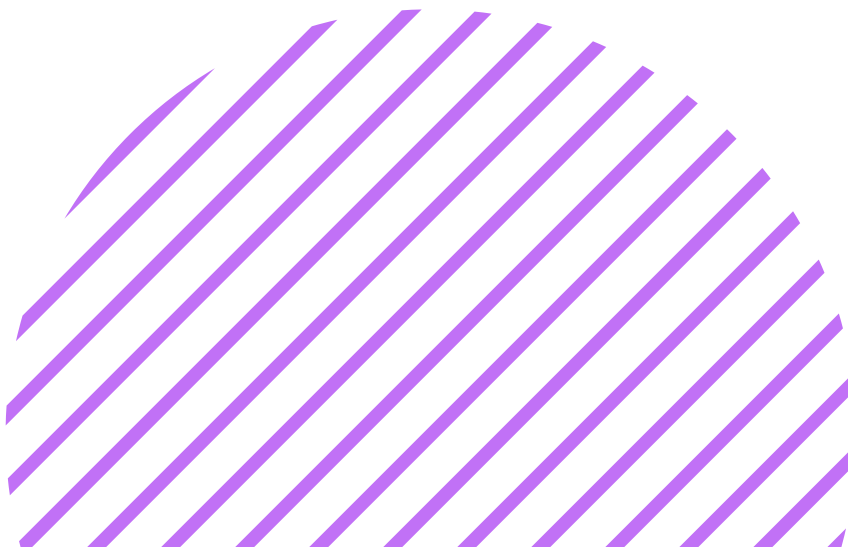
# BEST PRACTICES FOR INCLUSION

## 1. Accessibility

*Consider that different users perceive and encounter different barriers and constraints when using technology, and design systems that match their needs.*

Example: For the longest time, blind and low vision (visual impairment that cannot be corrected with eyeglasses or contact lenses) found Virtual Reality (VR) products inaccessible. To match the need for millions of visually impaired people worldwide to enjoy the benefits of VR, Microsoft developed Seeing VR. This is a toolkit that can be applied to VR applications to enhance user experience. It includes tools like text augmentation, magnification, object identification, depth measurement, recoloring and peripheral remapping. Seeing VR offers users control over their experience, as they can combine and configure the tools in line with their specific needs.

## 2.  Inclusion

*Consider that your users are diverse, and embrace design choices that appreciate the full range of human diversity.*

Example: Non-binary and non-conforming social media users are often forced to misgender themselves when they are forced to pick from options that only favor the gender binary system. With this need in mind, Grindr offers open text fields for their diverse users to self-identify. They also acknowledge that open text fields can attract trolling entries and have an active moderation cue that takes this into account. Instagram and LinkedIn are other platforms that include open text fields for users to add their pronouns.

## 3.  Localization

*Consider that users from different parts of the world feel valued when products mirror their realities and are culturally adaptive.*

Examples: Voice enabled applications often use white Americanized accents to communicate commands. When options for different accents are offered, the choices are mostly different English accents from Global North countries. Identifying the need for localized accents, Google worked with local linguists to develop a Nigerian accent for Google Maps in the country. As they developed the accent, they acknowledged and included variations that paid homage to, yet did not favor any ethnic community over another. They also added informal routes to the maps, acknowledging local ways of getting around as opposed to only mapping formal routes, a system that only favors Western locations. Mozilla is also working on diversifying the languages and accents that can be recognised by voice enabled applications. Through its Common Voice program, Mozilla is mobilising people from all over the world to share recordings of their voice in low resourced languages. These recordings are verified, then made available in open source datasets so that all technologists can use them to train voice-enabled products.

# 4.  Non-discrimination

*Ensure that you offer fair and unprejudiced treatment of your diverse users, and that benefits are evenly and equally distributed.*

Example: Nipples are some of the most contested topics on social media with platforms like Instagram choosing to ban photos of female nipples on the platform. However, moderation of nipples on platforms has been discriminatory, not just to female identifying people, but also to anyone who does not identify as a cisgender man. Grindr takes a different approach to this moderation, as they believe that gender identity should not be the basis for moderation of nipples. They acknowledge that in this situation, only cisgender men get fair and quick moderation, which is often an approval, while everyone else's photos get banned.

# 5.  Collaboration

*Acknowledge that your users are experts over their lived experiences, and that partnering with them enriches their experiences on platforms.*

Example: Automated content moderation systems are increasingly being preferred over human moderators. However, this shift has come with challenges as automated systems are not well trained to moderate many languages across the world, and understanding different contexts and nuances in these languages. Working with civil society organizations to develop context-specific lexicons of speech that can be used to train AI enabled content moderation systems is a good practice. This practice could improve content moderation and prevent the harms that come from leaving dangerous speech unmoderated. In addition, platforms should be transparent about how their algorithms work and the values embedded in them to promote algorithmic accountability.

# RESOURCES FOR DESIGNERS AND DEVELOPERS

## Guides

1. Guide to Inclusive AI
2. Orbits — a field guide for survivor-centric interventions to tech facilitated gender violence
3. Grindr- Best Practices for Gender Inclusive Content Moderation
4. Intersectional AI Toolkit
5. Implementing AI-Enabled Assistant Tools to Make Workplaces More Inclusive
6. The Accessibility Playbook for Emerging Technology Initiatives
7. Inclusive Design Principles
8. A11Y Style Guide

## Principles and Values in Inclusive Tech

1. Design Justice Principles
2. Allied Media Network Principles
3. Detroit Digital Justice Coalition Principles
4. Privacy by Design: The 7 Foundational Principles - Implementation and Mapping of Fair Information Practices
5. Design Principles for Gender-Identity Inclusion
6. Safety By Design - E-Safety Commissioner Australia

# CONCLUSION

What some experts might consider extreme use cases may actually be the lived reality for millions of people across the world. For a long time, digital platforms have been developed without the needs of the marginalized in mind, for a variety of reasons such as poor business cases, lack of diversity within teams or lack of contextual and cultural awareness. As connectivity continues to grow, it is important to consider the needs of all users to create platforms that are truly inclusive and responsive to the needs and safety of everyone, regardless of age, gender, ability, race, ethnicity, religion, sexual orientation, nationality, class, language, etc. We hope that you will find this guide useful in your conversations, your planning and your development of programs, policies and platforms.

# ABOUT THE AUTHORS

**Neema Iyer** is an artist and a technologist. She is the founder and director of Pollicy, a feminist civic technology collective based in Kampala, Uganda and is a co-host on the Terms and Conditions podcast. Pollicy works on understanding how technology impacts societies and can be used to improve life experiences. Neema has a Masters in Public Health from Emory University and has worked on large-scale mobile and digital projects across Africa as part of TTC Mobile (previously Text to Change) and Viamo (previously VOTO Mobile). She is a Fellow with Stanford's PACs and is a Women's Safety Expert Advisor for Meta. She currently leads the design of a number of projects focused on building data skills, on fostering conversations on data governance and digital security, and on innovating around policy. Social media handles: @pollicyorg @neemaiyer

**Garnett Achieng** is a researcher and writer. She is a Data & Digital Rights Researcher at Pollicy. She is obsessed with internet cultures and conducts research in content moderation, online harms, the feminist internet, and algorithmic bias. Garnett has a Global Challenges degree from the African Leadership University. She is a Tech & Public Policy fellow at the Tony Blair Institute and sits in Facebook's 2021 SSA Women's Rights Working Group. Social media handles: @garnettachieng