



BRIDGING DIVIDES, DISMANTLING POWER STRUCTURES!

LINKING FEMINIST DEVELOPMENT POLICY AND DIGITAL TRANSFORMATION

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This publication represents a collective effort to reevaluate the status quo of today's digital transformation through the lens of intersectional feminism, highlighting the critical examination of power dynamics and asymmetries. It focuses on the intersection of feminist concerns of gender equality and human rights while also addressing challenges emerging in the digital space. Within the context of feminist development policy and the quest for gender equality in the digital space, this publication aims to encompass both current feminist engagement and perspectives from the Majority World.

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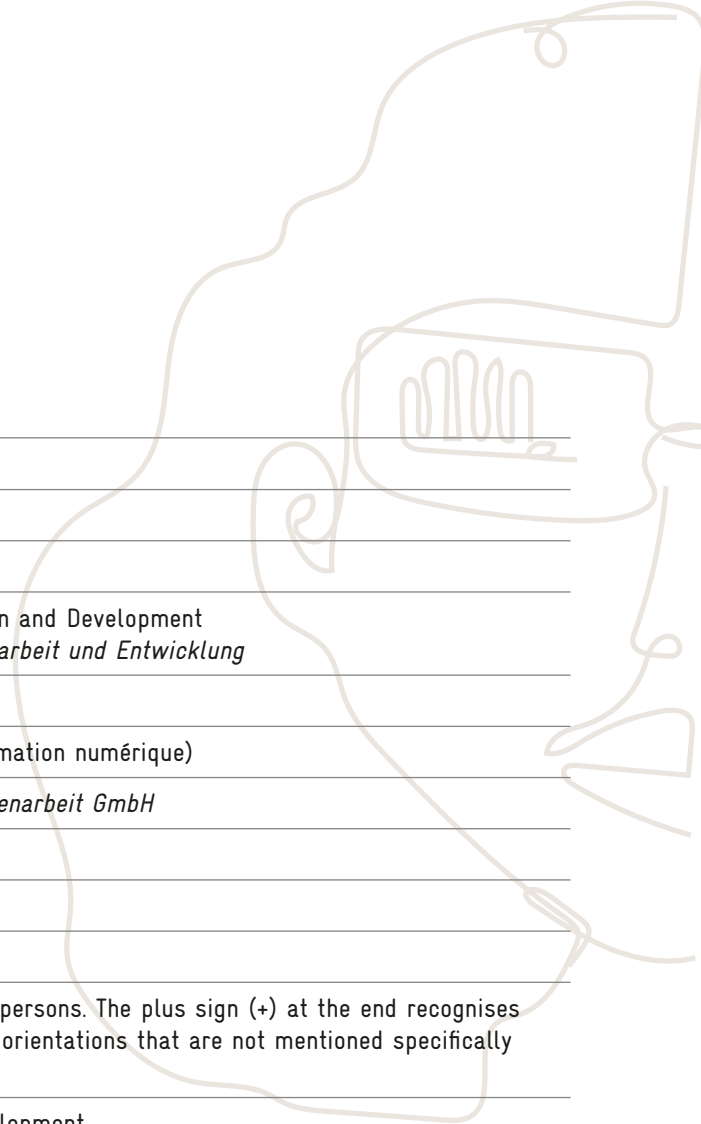
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About betterplace lab:

The betterplace lab is a digital-social think-and-do tank from Berlin, Germany. We are the sister of betterplace.org, Germany's largest online donation platform. We want to shape digitisation socially and make it usable for the common good. To this end, we conduct research and experiment with innovative projects. We build bridges between sectors and break open silos in our heads, in organisations and within our society.

ABBREVIATIONS



AI	Artificial intelligence
APC	Association for Progressive Communications
BlPoC	Black, Indigenous, and/or People of Colour
BMZ	German Federal Ministry for Economic Cooperation and Development <i>Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung</i>
FPI	Feminist Principles of the Internet
DTC	Digital Transformation Centre (Centre de transformation numérique)
GIZ	<i>Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH</i>
GSMA	Global System for Mobile Technology Association
ICT	Information and communications technology
ITU	International Telecommunication Union
LGBTIQ+	Lesbian, gay, bisexual, trans, intersex, and queer persons. The plus sign (+) at the end recognises that there are other gender identities and sexual orientations that are not mentioned specifically in the abbreviation.
OECD	Organisation for Economic Co-operation and Development
STEM	Science, technology, engineering, and mathematics
TFGBV	Technology-facilitated gender-based violence
UN	United Nations

EXECUTIVE SUMMARY

This publication is the first attempt to link the cross-cutting issues of digital transformation and gender equality on the basis of Germany's feminist development policy.

Germany's feminist development policy seeks to make a difference within a global system pervaded by an unequal distribution of social, economic and political power. The challenges and obstacles are numerous: from armed conflicts to climate extremes, rising hunger and poverty, to the worldwide upsurge of anti-gender movements. **Here, digital transformation adds another layer of complexity.** Digital technologies – ranging from internet-enabled phones, smart devices and software applications to artificial intelligence (AI), digital platforms and blockchain – provide many **opportunities for empowerment and social change.** At the same time, **technology mirrors the physical world and its systems of marginalisation and oppression,** such as patriarchy, racism and colonialism. Despite the inequalities ingrained and replicated in it, the drive to harness the potentials of digital transformation has for a long time been a field of action of German development cooperation.

Germany's new feminist development policy builds up on this past engagement while simultaneously **breaking new ground.** On the one hand, it commits to a gender-equitable digital transformation and digital inclusion for all. On the other hand, it seeks to eliminate all forms of structural and systemic causes of inequality deeply ingrained in today's global society. In particular, the latter aspect also means fundamentally questioning the status quo of today's digital transformation and digital development policy.

As this study lays out, a **feminist development policy for the digital space** is a multi-level endeavour covering a broad range of intersecting topics. First and foremost, to pursue a feminist development policy for

the digital space means **bridging the persistent gender digital divide:**

- **Access:** Globally, internet access remains heavily gendered, with women and girls in all their diversity and marginalised groups losing out. Hence, 69 per cent of men used the internet in 2022 but only 63 per cent of women. Women are 12 per cent less likely to own mobile phones than men. The barriers that keep women and girls in all their diversity and marginalised groups from accessing the internet are the lack of relevant infrastructures, high costs of devices and data bundles, lack of literacy and basic digital skills as well as discriminatory social norms. Moreover, the internet is far from being a multi-lingual space which impedes women and girls in all their diversity and marginalised groups from finding content in their language and relevance to their lives.
- **Use:** The digital gender divide further applies to questions of usage. Several barriers and phenomena stand in the way of women and girls in all their diversity and marginalised groups, restricting an active and self-determined use of digital technologies and the internet. These main barriers include for instance the divide in digital skills, persisting discrimination in the platform economy and technology-facilitated gender-based violence, as well as gender-biased tools and a lack of technology matching women's and girl's lives.
- **Tech development:** Gender equality is similarly lacking regarding the design and development of digital technologies. While gender stereotypes and discriminatory social norms discourage girls from pursuing careers in STEM at an early stage, the girls and women who do pursue STEM careers face further barriers, such as lower wages

and discrimination in the workplace. Here the 'leaky pipeline' phenomenon describes the gradual loss of women across STEM education, careers and leadership (see [→ graphic on page 21](#)).

It is thus a crucial step to close the gender digital divide and advocate for digital inclusion, while the **feminist development policy's 'three Rs' approach** (rights, resources and representation) provides a useful framework opening up critical points for concrete action. However, as systemic change lies at the heart of a feminist development policy, a more transformative approach is of the essence. With the support from contributing experts, this study explores further areas that must be considered on the **pathway from digital inclusion towards transformative change**:

- **Digital economy:** The current digital economy as controlled by Big Tech undercuts gender equality and is antithetical to any vision placing people and the planet at its centre. A new digital economy that prioritises local livelihoods, economic autonomy and social wellbeing can only become a reality if unaccountable corporate power is tackled and democratic deficits are addressed in tech governance.
- **Tech governance:** When getting involved in tech governance, a feminist development policy needs to take on a bird's-eye view of technology and go beyond what are the most visible parts of the tech sector. Instead, a feminist approach to tech governance requires speaking up and engaging with the entire life-cycle of technologies.
- **Data:** Data is the fuel of digital technologies, yet data collection is frequently invasive, excessive and lacking transparency, accountability and meaningful consent. Data is also being used to surveil, target and manipulate. A feminist approach to data requires a deeper understanding of how data-driven technologies and systems function and impact people in the Majority World, especially women in all their diversity and marginalised groups.
- **Decolonisation:** Digital transformation and the development sector share a common feature: they are both pervaded by imbalances and unfairness. Today's main technological developments are steeped in a capitalist (neo)colonial male-centred system, entailing that it is a focus on profit which also drives digital development policies. Hence, decolonisation is an alternative to this system and also stands as an imperative. To go further then, decolonising technology means centring the needs and rights of individuals and communities without repeating historical power dynamics.
- **Climate justice:** Technology-based solutions are regarded as crucial to addressing climate change. Yet, technological solutions do not address the root causes and, in particular, the economic model which insists on limitless growth and requires perpetual extraction of profit from humans and nature. A feminist digital future aspiring to be climate-just thus needs to build on community knowledge and infrastructures.
- **Movement-building:** Today's feminist movements increasingly use digital technologies and spaces to organise, connect and push for social change. But a growing resistance to tech power has accompanied the use of technologies to address the exacerbation of inequalities through digital transformation. The role of feminist tech infrastructures is hence to point out important alternatives.

INTRODUCTION

Digital transformation is affecting our world in a series of profound ways. From internet-enabled phones, smart devices and software applications to artificial intelligence (AI), digital platforms and blockchain, digital technologies have an impact across almost every aspect of socio-political and economic life – or change the game completely. Whether the new opportunities provided by digital technology address the way that people communicate, relate to each other and organise, or how governments work to deliver public services or even how the economy itself is organised, these opportunities appear almost limitless with the internet as its enabler and connector.

Against this background, internet and digital technologies have been celebrated as **forces for change and greater equality** for a very long time. The belief has been that connecting to the Web would spark social, political and economic empowerment for women and girls in all their diversity, breaking down barriers for all the historically marginalised groups and transforming unequal power relations. Certainly, there is truth in this narrative when worldwide we witness women and girls in all their diversity and marginalised groups gaining access to information and education opportunities through digital tools. Online platforms have opened up new forms of economic participation. Social networks offer spaces for expression, resistance, mobilisation and collective action. Yet, the optimist view of a more equal world through digital technologies has collided with reality, and the **digital promise of empowerment and global justice has long been disavowed**. Today, it is becoming accepted that:

- Digital technology is not an autonomous or neutral ‘silver bullet’ as there are no direct technical answers to questions of social change.
- The physical world is replicated in the digital space across all interconnected systems of

marginalisation and oppression, such as patriarchy, racism and colonialism (offline-online continuum).

- A small number of Big Tech companies currently lead the main technological developments. However, their business model relies on the extractivism of the environment, labour and data, so replicating the architecture of colonialism.
- The divides that present themselves in terms of access, use and the shaping of digital technologies – most notably the gender digital divide – are rooted in the unequal distribution of power and the presence of discriminatory structures.
- But digital technologies encompass both the capacity to transform and reinforce structural power relations.

German development cooperation has long committed to bridging the (gender) digital divide and harnessing the potential of digital technologies despite the inequalities ingrained in them. Under the heading ‘Digital transformation for inclusive and equal participation’, several projects and initiatives have focused in particular on questions of access to technologies and fostering skills for better employment and education opportunities for women and girls.

Germany’s new feminist development policy builds upon this past engagement while simultaneously breaking new ground. The strategy of the Federal Ministry for Economic Cooperation and Development (BMZ) presented in March 2023 sets out new parameters and the following clear vision: “The equal participation by all people in social, political and economic life, regardless of gender identity, sexual orientation, age, disabilities, migration status, ethnic origin, religion or worldview or other categories.”¹ While gender equality lies at the heart of Germany’s feminist development policy, the approach of this

1 BMZ (2023): *Feminist Development Policy. For Just and Strong Societies Worldwide*, 21.

policy goes further in seeking to eliminate the structural and systemic causes of inequality in all forms as they are deeply ingrained in today's global society. Hence, to achieve systemic change toward global justice, the feminist development policy adopts the 'three Rs' approach.

What is the 'three Rs' approach?

The 'three Rs' stand for rights, resources and representation. Established by the Government of Sweden, the 'three Rs' form the backbone of feminist foreign and development policies across the globe. Their function is, in the words of the BMZ: "Strengthening rights, eliminating discriminatory laws and norms, equal access to resources, equal representation and increased opportunities to exert influence are key factors for just, resilient, sustainable and peaceful societies which leave no one behind."²

Germany's feminist development policy commits to **gender-equitable digital transformation** seeking **digital inclusion** for all. To achieve these goals, the BMZ strategy highlights the following needs: to close the existing gender digital divide, to advocate for a universally accessible, safe and inclusive digital space, and to promote the representation and role of women in the use and development of digital technologies, among others.³ However, such questions are yet to be fully answered even though the strategy touches upon various aspects to set out a clear vision for global justice, and the 'three Rs' approach provides a useful framework for action.

Such questions encompass the following challenges: How exactly can digital technologies enable the realisation of rights, resources and representation for all? What constitutes effective means of bridging the gender digital divide? What other digital issues require an essential (and already existing) feminist approach? What approaches and organisations should be involved in engaging with these challenges, and what existing groundwork should be built upon when making progress towards meeting these targets?

Why inclusion and transformation?

Digital inclusion means that everyone has access to and the ability to use digital technologies, for whatever purpose. It is about closing the gender digital divide, as well as other divides, and letting everyone participate fully in the digital transformation and its benefits. In other words, digital inclusion primarily means making the status quo accessible to all.

Yet, what if the status quo is not fully desirable? Is inclusion into a system pervaded by various forms of oppression, exploitation and discrimination then a good way to go?

Feminist trends and movements are united by their opposition to patriarchy and their commitment to gender-equitable power relations. A feminist approach to digital technology goes beyond mere inclusion by seeking to transform power relations.

Therefore, closing digital divides is not enough. It is a crucial step, but still only one. When systemic change lies at the heart of a feminist development policy, an approach is required that fundamentally questions the status quo of today's digital transformation. A feminist development policy needs to adhere to an intersectional approach, tackling all forms of discrimination against women, girls and marginalised groups including classism, sexism, racism, ageism and ableism. A feminist development policy should thus seek ways to shape and transform the digital present into a more equitable future for all.

With these questions in mind, this study is a first attempt to link the cross-cutting issues of digital transformation and gender equality on the basis of Germany's feminist development policy. It seeks to provide an overview of existing areas of discussion while bringing to the surface emerging issues, trends and gaps in debate. In short, this study refers to areas that are of particular relevance for the BMZ's endeavour towards a **feminist development policy in the digital space**.

² BMZ (2023): *Feminist Development Policy. For Just and Strong Societies Worldwide*, 22.

³ BMZ (2023): *Feminist Development Policy. For Just and Strong Societies Worldwide*.

In approaching these objectives, this study is divided into two chapters. The first chapter focuses on the gender digital divide in its different levels. It draws upon the concept of inclusion which seeks to bridge the persistent gender differences in the access, use, and design and development of digital technologies. The second chapter provides a contrast with the first in moving beyond questions of inclusion towards a wider framework, applying a more power-critical lens to cover further fields related to gender equality and digital transformation. It consists of a series of

contributions by experts that are dedicated to a set of key themes. In doing so, they present a spectrum of perspectives. Ideas and recommendations for a feminist development policy in the digital space are highlighted throughout the contributions (see [→ recommendations from page 27 onwards](#)). Moreover, the study showcases different organisations and initiatives that are working towards a gender-equitable digital transformation and, through their work, provide a glimpse into a feminist digital future.

About the study: context, approach and limitations

It is a complex endeavour to bring together gender equality and digital transformation under the umbrella of a feminist development policy. First and foremost, this study seeks to provide an **overview of relevant fields, trends and emerging issues**. In doing so it does not start from square one, but relies on the **groundbreaking work of activists, experts, organisations and initiatives** that have been active in feminist movements, digital technology and international cooperation for decades, particularly members of the network Association for Progressive Communications (APC) and the Feminist Principles of the Internet (FPI).

The rich and existing body of expertise and literature has also informed the methodological approach of this study. This study is based on a **literature review** complemented by a series of **expert interviews and inputs** (see Acknowledgments).

Moreover, more collaborative elements have formed an important part of the writing process. Firstly, an **expert roundtable** was held online in June 2023 with 15 activists, academics and representatives from civil society organisations to discuss the prospects for a feminist development policy in the digital space. Secondly, the study was opened for **co-authors** to cover a broader range of topics and shed critical light on issues such as climate justice and decolonial approaches.

However, combining two cross-cutting issues – gender equality and digital transformation – on the

basis of a still-to-be-implemented policy comes with theoretical and methodological limitations. First and foremost, while the study covers a broad range of topics it does **not claim to be exhaustive**. Digital transformation is an ever-evolving phenomenon, complicating stocktaking and spot-on recommendations. On the other hand, the study primarily draws upon a certain body of knowledge, which are mainly English language written sources. Although the study refers to different sources, from academic pieces to publications from civil society and grassroots movements, multiperspectivity and the question of what perspectives are missing still constitute a crucial and limiting factor.

Ultimately, **gaps in available data** present another constraint, especially when it comes to intersectionality and intersectional experiences. For the moment, the lack of adequate representation in data collection persists across many topics, from access to digital skills to the prevalence of violence in online spaces. Furthermore, the data available today mostly provides a comparison between men and women in a gender binary sense, or uses the category of sex to establish statistical values, thus missing the fluidity of gender as a social concept.

Against this backdrop, this study may best be considered a starting point towards the wider endeavour of realising a development policy that is both feminist and digital.

TOWARDS INCLUSION: BRIDGING THE GENDER DIGITAL DIVIDE

The gender digital divide is one of the clearest examples of how digital transformation replicates the same power structures existing in society. Inequalities persist between genders as well as marginalised groups right across meaningful access to digital technologies and the internet, their beneficial use, as well as their design and development. Understanding this divide in its complexity is the first step towards bridging it, while getting closer to a gender-equitable digital transformation also means getting closer to systemic change and to just and strong societies worldwide.

This chapter takes stock of the gender digital divide as it stands today. It also provides some ideas and suggestions of what this divide means for a feminist development policy by applying the ‘three Rs’ approach.

Connecting to the internet: Necessary but far from enough

It is the gap in access where the gender digital divide starts. Today, it is widely recognised that access to the internet and digital tools is critical for individual and global development, serving as a key condition for a more diverse and inclusive future.⁴ In recognising this demand, there has been a qualitative shift in how questions of access are addressed. While ‘access’ used to be understood as involving more computers or devices and diffusing the internet across every region, it is well-known that access is more than merely having the opportunity to get online.⁵

The notion of **basic access** has now been expanded to concepts such as **meaningful access**, taking into

account the quality of internet use and “the potential to transform individuals’ activities, opportunities, and outcomes”⁶. To raise the bar for basic internet access, the *World Wide Web Foundation* has introduced the concept of **meaningful connectivity** whose objective is to set minimum thresholds across the following four dimensions of internet access: regular internet use, appropriate devices, sufficient data and a fast internet connection.⁷ Without this being the bottom line, access to the internet will not translate into empowerment and structural change.

WHERE DO WE STAND?

While there is a trend of understanding access more broadly, the achievement of “universal, acceptable, affordable, unconditional, open, meaningful and equal access”⁸ is far from being a reality for women and girls in all their diversity. Globally, **internet access remains heavily unequal**, with women and girls in all their diversity and marginalised groups losing out. Although the general data gap on tech and gender makes it difficult to draw a comprehensive picture, it is certainly the case that data on basic access is available and explicit.

According to the *International Telecommunication Union* (ITU), 69 per cent of men used the internet in 2022 compared with 63 per cent of women – a difference of over 250 million users overall. On a regional level, this gap is even greater on the African continent, which has the largest gender divide in internet access. Here 45 per cent of men used the internet but only 34 per cent of women.⁹ The *World Wide Web Foundation* found that on a global scale men are 21 per cent more likely to be online than

4 World Wide Web Foundation (2020): *Women's Rights Online: Closing the digital gender gap for a more equal world*, 10.

5 Van der Spuy, A. and Aavriti, N. (2017): *Mapping Research in Gender and Digital Technology*. Association for Progressive Communications, 28.

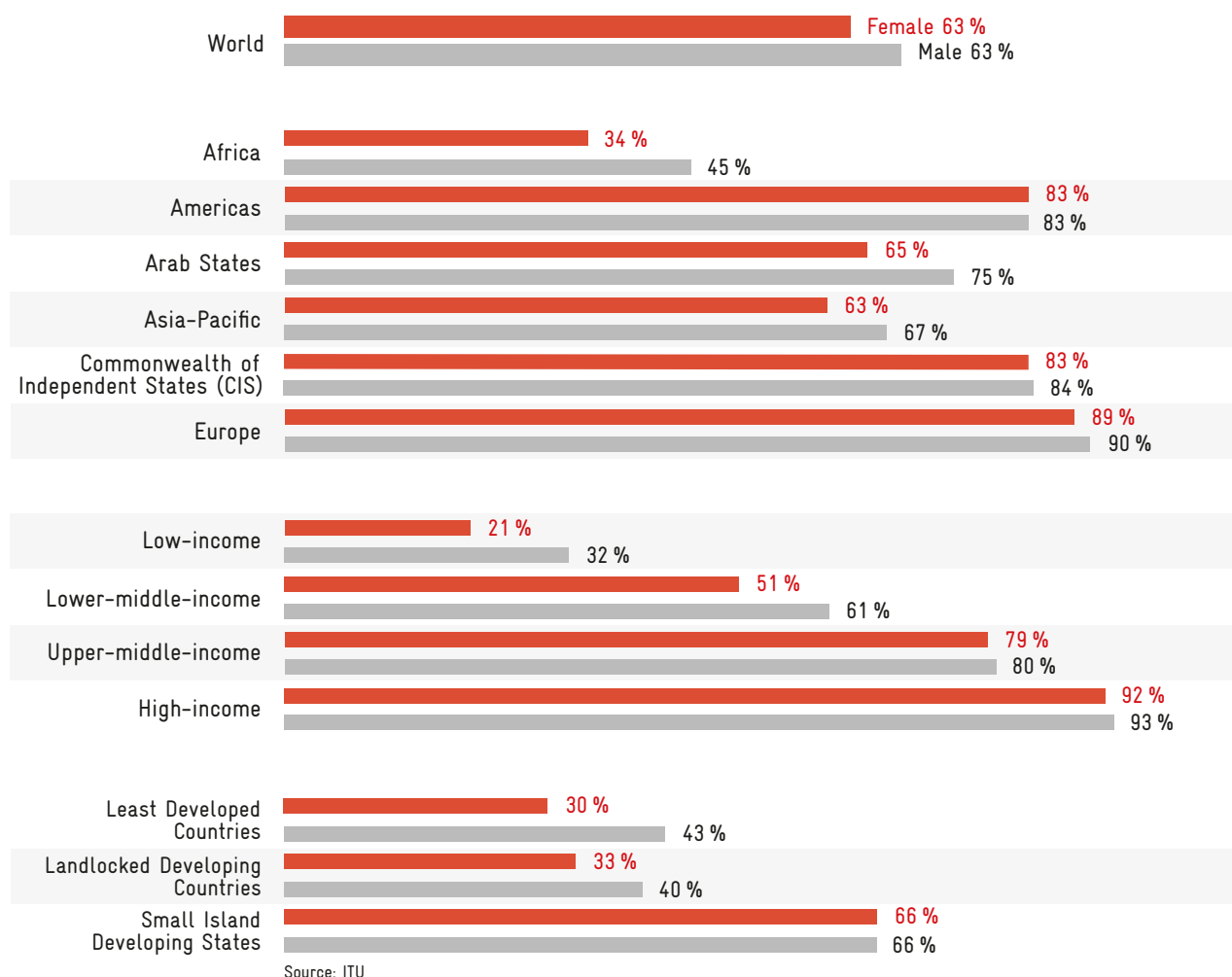
6 Sey, A. and Hafkin, N. (eds). (2019). *Taking Stock: Data and Evidence on Gender Equality in Digital Access, Skills, and Leadership*. United Nations University Institute on Computing and Society and ITU, 33.

7 World Wide Web Foundation (2020): *Women's Rights Online: Closing the digital gender gap for a more equal world*. Web Foundation, 11.

8 *Feminist Principles of the Internet 'Access'*.

9 ITU (2023): *Measuring digital development. Facts and Figures 2022*, 3.

Percentage of female and male population using the internet, 2022



women – a difference that rises to 52 per cent in the world’s so-called ‘least developed countries’.¹⁰

Further indicators of basic internet access are figures for mobile device ownership and mobile internet use.¹¹ Even though the proliferation of mobile phones has increased over the years, making mobile phones the most common gateway to the digital space,¹² a gender gap in device ownership and mobile internet use persists. According to ITU, women are 12 per cent less likely to own mobile phones than men and among those not owning mobile phones, women outnumbered men by 39 per cent in 2022.¹³

The latest figures from Global System for Mobile Technology Association (GSMA) show that in low- and middle-income countries, 61 per cent of women use mobile internet compared to 75 per cent of men. Moreover, 900 million women in low- and middle-income countries, almost two-thirds of whom live in South Asia and Sub-Saharan Africa, are still unconnected.¹⁴

The global data available has clarified the gender gap in access, but the figures are not yet conclusive as great differences exist on a regional level. For instance, the gender gap in mobile ownership is

10 World Wide Web Foundation (2020): *Women’s Rights Online: Closing the digital gender gap for a more equal world*, 10.

11 Sey, A. and Hafkin, N. (eds). (2019). *Taking Stock: Data and Evidence on Gender Equality in Digital Access, Skills, and Leadership*. United Nations University Institute on Computing and Society and ITU, 26.

12 ITU (2023): *Measuring digital development. Facts and Figures 2022*, 16.

13 ITU (2023): *Measuring digital development. Facts and Figures 2022*, 17.

14 GSMA (2023): *The Mobile Gender Gap Report 2023*, 31.

2 per cent in East Asia and the Pacific compared to 15 per cent in South Asia.¹⁵

Again, **intersectionality and global structures do matter**. The access gap intersects with other inequalities that women and girls in all their diversity and marginalised groups face in social, economic and political spheres. These disparities become clearer when we consider the various barriers that keep women from accessing the internet. While some limitations affect all genders, it is patriarchal structures and discrimination that make women and girls experience these barriers more acutely.¹⁶

WHAT IS BEHIND THE GAP?

Apart from gender, further divides, such as the differences between rural and urban areas play a key role. In its study on access and connectivity, the *World Wide Web Foundation* found that across Colombia, Ghana and Uganda, 33 per cent of women living in rural areas listed affordability as a main barrier, compared with 26 per cent of women in urban areas.¹⁷

A first and major barrier to getting online is the **lack of relevant infrastructures**, a factor which is partly included in the *World Wide Web Foundation's* concept of meaningful connectivity. Where there is a lack of network roll-out, quality and availability, there are significant obstacles to women's access to the internet.¹⁸ In particular, the afore-mentioned rural-urban divide of connectivity "continues to be a deep source of inequality with internet access far more scarce in rural areas".¹⁹ However, the lack of relevant

infrastructures also goes beyond technical questions and addresses the lack of availability of women-friendly public access facilities, as places where women can access digital technologies, meaningfully connect to the internet and benefit from its usage.

One of the most significant barriers highlighted across different studies is the **high cost of devices and data bundles**.²⁰ While this limitation may affect all genders, structurally speaking it is women that have less disposable income and control over finances. The gender pay gap – globally, women are paid around 20 per cent less than men²¹ – is thus a material issue that keeps women unconnected.

Another barrier to getting online is the **lack of literacy and basic digital skills**. Again, it is the general gender literacy gap that is replicated in the digital world. Basic digital skills refer to "effective use of technology including (for example) web search, online communication, use of professional platforms, and digital financial services"²². In particular, it is women with a low income and weak formal education who are more likely than men to report a lack of know-how as a limitation to using the internet.²³

As mentioned above, even if women and girls have access to availability, affordability and the necessary skills they still face **discriminatory social norms** that further limit their access to the internet and its use in a meaningful and self-determined way. GSMA's latest Mobile Gender Gap Report found that one of these discriminatory norms is, for instance, reflected in the family's disapproval of women owning and using a mobile phone in some countries such as Pakistan and Bangladesh.²⁴

15 GSMA (2023): *The Mobile Gender Gap Report 2023*, 21.

16 Van der Spuy, A. and Aavriti, N. (2017): *Mapping Research in Gender and Digital Technology*. Association for Progressive Communications, 30.

17 World Wide Web Foundation (2020): *Women's Rights Online: Closing the digital gender gap for a more equal world*, 13.

18 Van der Spuy, A. and Aavriti, N. (2017): *Mapping Research in Gender and Digital Technology*. Association for Progressive Communications, 31.

19 World Wide Web Foundation (2020): *Women's Rights Online: Closing the digital gender gap for a more equal world*, 13.

20 World Wide Web Foundation (2020): *Women's Rights Online: Closing the digital gender gap for a more equal world* and van der Spuy, A. and Aavriti, N. (2017): *Mapping Research in Gender and Digital Technology*. Association for Progressive Communications, 28.

21 UN (2022): *Equal pay for work of equal value*.

22 Sey, A. and Hafkin, N. (eds). (2019). *Taking Stock: Data and Evidence on Gender Equality in Digital Access, Skills, and Leadership*. United Nations University Institute on Computing and Society and International Telecommunications Union, 49.

23 World Wide Web Foundation (2015): *Women's Rights Online. Translating Access into Empowerment*, 14.

24 GSMA (2023): *The Mobile Gender Gap Report 2023*, 23.

CONNECTING TO WHAT?

The concept of meaningful access is a reaction to the long-held assumption that having access to sufficient data, basic skills and an internet-enabled device will automatically lead to women and girls enjoying a degree of empowerment. However, as Anri van der Spuy and Namita Aavriti explain, “[...] women are often not using the internet because they struggle to find content in a language they understand or that is relevant to their contexts and specific circumstances”²⁵. On the subject of language, for instance, the internet is far from being a multilingual and inclusive space. A massive **language discrepancy** persists on the web with over 55 per cent of internet domains being in English. Many non-European languages, including Chinese and Hindi as second and third most-spoken languages in the world, remain at the margins of the languages on the web.²⁶

The same applies to widely-used digital platforms and applications. Text-based language support remains highly unequally distributed, covering only a fraction of the 7,000 languages spoken around the globe and not surprisingly favouring European colonial languages.²⁷ This language inequality reinforces the reality that many women and girls as well as marginalised groups across the world access the internet primarily as consumers and not as self-determined and empowered users and creators of content. Furthermore, it is the content itself that is critical to encouraging women and girls in all their diversity to use the internet as a source of information relevant to their lives, including information on sexual health and reproductive rights.

A good example



Built to girls' digital realities: How the *Oky App* enables girls to maintain and exercise their sexual and reproductive health and rights.

The *Oky App* is a first-of-its-kind education and period tracker digital solution, co-created with and for girls in low- and middle-income countries. By using *Oky*, adolescent girls learn about their body, puberty and sexual and reproductive health and rights in positive and empowering ways, while practising and improving their digital literacy. It also tackles taboos and misconceptions, offering high-quality, evidence-based information about menstruation and sexual and reproductive health and rights. *Oky* is available in local age-appropriate languages that meet girls' needs and answer their questions. It operates entirely offline, is designed to work on lower-end devices and with older software and uses minimal storage space on mobile devices. The app is open-source and is currently being deployed in 14+ countries around the world, using a social franchise business model for scaling. *Oky* is adapted to local contexts in each new country both by partners and by the girls themselves. Thereby, *Oky* places female users at the centre of the design process, which ensures relevance and effectiveness. The app's dedication to privacy and data protection, safeguarding and inclusivity therefore sets a high standard for creating safe and empowering tech solutions for girls by girls.



25 Van der Spuy, A. and Aavriti, N. (2017): Mapping Research in Gender and Digital Technology. Association for Progressive Communications, 32.

26 Brandom, R. (2023): What languages dominate the internet? Rest of World.

27 Whose Knowledge?, Oxford Internet Institute and The Centre for Internet & Society (2022): State of the Internet's Languages.

Using digital technologies and being present in the digital space

As the previous section explained, around 63 per cent of women worldwide use the internet in comparison to 69 per cent of men but pointing out these statistics only provides an overview and not the whole story of this substantial divide. Such figures provide no information on the quality of the usage of digital technologies and the internet, nor the extent to which existing gender inequalities are being reproduced. Moreover, they do not say anything about the different experiences of women and girls in all their diversity and of marginalised groups. This section addresses the question of what remains in the way of an **active and self-determined use of digital technologies** and the internet.

By having access to digital technologies and the internet, women and girls in all their diversity use the digital space for various purposes. For instance, they connect, communicate and sustain networks through messenger applications. By connecting to the internet, they expand their access to education, information and knowledge, or they use social media to let their voices be heard and participate in public debates. Women and marginalised groups find new livelihood opportunities on online platforms enabling them to become more independent. For people affected by multiple and intersecting forms of discrimination, in particular, such as women and queer people with disabilities, online spaces can be avenues for self-expression and the exploration of identities.²⁸

Yet, active and self-determined use of digital technologies for all is far from being a reality today. Instead, several barriers stand in the way of women and girls in all their diversity and marginalised groups. As covered in the next section, these phenomena represent fields of action for a feminist development policy.

DIGITAL SKILLS: A CROSS-CUTTING ISSUE IN THE GENDER DIGITAL DIVIDE

Before drawing attention to some of the main barriers to equal and meaningful participation in the digital space, one overarching aspect of the gender digital divide should be touched upon. This is the question of digital literacy or digital skills.

Digital skills are essential to navigate online environments. As noted in the previous section, a lack of digital skills keeps women and girls in all their diversity and marginalised groups from getting online. Yet, this barrier persists beyond access, making an active and self-determined use of digital technologies a question of ability and competency. The reality stands that the higher the level of digital skill, the higher the chance of participating in today's increasingly digital world.

There is no conclusive definition of what digital skills constitute, and rapid technological change makes it even harder to define the term. However, digital skills can broadly be defined as a “range of different abilities, many of which are not only ‘skills’ per se, but a combination of behaviours, expertise, know-how, work habits, character traits, dispositions and critical understandings”.²⁹ The ITU differentiates between three levels of skills: basic, intermediate and advanced (**digital skills continuum**). Basic skills, for instance, include being able to perform tasks such as turning on a computer, moving a file or installing a software application. On the opposite pole of the skills continuum, advanced skills refer to writing computer programmes or network management, i.e. skills to create technologies and participate in the tech industry.³⁰

28 Kayastha, S. and Pokharel, M. (2020): *Beyond access: Women and queer persons with disabilities expressing self and exploring sexuality online*. Body & Data.

29 Broadband Commission (2017): *Working Group on Education: Digital skills for life and work*, 4.

30 ITU (2021): *Digital Skills Insights 2021*.

Even though major gaps in the data prevent a full characterisation of the phenomena, gender inequality persists across the skills continuum. On average, women and girls in all their diversity possess fewer digital skills than men and boys in all their diversity, especially when it comes to advanced skills.³¹ Yet, gender is only one dimension. As Vanessa Ceia and colleagues conclude, there are other forms of discrimination based on race, social or national origin or disabilities that “might affect people’s ability to obtain, maintain, and develop these skills”³².

PERSISTING DISCRIMINATION

The lack of skills may be a fairly clear barrier to address and overcome. However, skilling initiatives for women and girls in all their diversity are only one piece of the puzzle in working towards an active and self-determined use. What stands in the way first and foremost are **discriminatory social norms**. Such norms come in many forms, such as limiting the ownership of devices, restricting access to (digital) education, or controlling women’s online behaviour. Moreover, what is happening in the digital space mirrors **offline patterns and inequalities**: patriarchy, structural inequalities and unequal power relations do not disappear with and in the digital space.

Platform work is a good example of how gender-based discrimination and further inequalities replicate. This core element of the digital economy has long been hailed as a panacea for women’s economic empowerment and independence, particularly in the countries of the Majority World. Indeed, digital platforms that enable both online and localised work³³ may provide

flexibility, offer new or alternative employment, and generate decent incomes. However, work on platforms still replicates offline structural inequalities and gendered work patterns. Firstly, the **gender segregation of tasks** continues with the lowest segments of the platform economy being carried out by women.³⁴ Secondly, even if the experiences of labour between men and women appear identical, the difference in income only decreases minimally, as shown by Diego Aguilar et al.³⁵ In short, **gender pay gaps** persist in the platform economy. Thirdly, the flexibility of platform work, especially online work that can be carried out from home, often translates into a **double shift** where paid work adds up to unpaid care work. Consequently, instead of overcoming gender inequalities, platform work may even reinforce gender stereotypes and women’s roles in social reproduction.³⁶ Lastly, and this refers to both a major barrier and to other issues cutting across the digital space, the use of online platforms is accompanied by higher risks of **online harassment and other forms of gender-based violence**.³⁷

TECHNOLOGY-FACILITATED GENDER-BASED VIOLENCE

While the internet has never been a space free of gender-based violence, digital technologies and spaces are increasingly misused against women and girls in all their diversity.³⁸ According to a survey by *The Economist Intelligence Unit* in 2021, 38 per cent of women using the internet reported personal experiences with online violence, while 85 per cent stated that they had witnessed online violence against other women.³⁹ A Plan International report interviewed over 14,000 girls across 22 countries to reveal that

31 Sey, A. and Hafkin, N. (eds). (2019). *Taking Stock: Data and Evidence on Gender Equality in Digital Access, Skills, and Leadership*. United Nations University Institute on Computing and Society and ITU, 58.

32 Ceia, V. et al. (2021): *Gender and technology. A rights-based and intersectional analysis of key trends*. Oxfam, 18.

33 Online work means that the product of work is digital information, e.g. text or code. Localised work means that products or services are provided locally, e.g. delivery services or home care.

34 Gurumurthy, A. (2020): *A feminist future of work in the post-pandemic moment. A new social contract as if women matter*, 2.

35 Aguilar, D. et al. (2020): *Future of work in the global south: Digital labor, new opportunities and challenges*, 3.

36 Rani, U. et al. (2022): Experiences of women on online platforms: insights from global survey. In: Digital Future Society (ed.): *Global perspectives on women, work, and digital labour platforms. A collection of articles from around the world on women’s experiences of digital labour platforms*, 16.

37 Bailur, S. (2022): The experience of women platform workers in Kenya. In: Digital Future Society (ed.): *Global perspectives on women, work, and digital labour platforms. A collection of articles from around the world on women’s experiences of digital labour platforms*, 34.

38 Despite the increase of studies, there are still significant data gaps about the prevalence of technology-facilitated gender-based violence (TFGBV), especially as most abuse and harm remain under-reported.

39 Economist Intelligence Unit (2021): *Measuring the prevalence of online violence against women*.

over 50 per cent of girls surveyed had been harassed and abused online.⁴⁰

In the absence of a comprehensive and universally accepted definition of what constitutes gender-based violence and abuse online and through other technologies, the term **technology-facilitated gender-based violence (TFGBV)** has been proposed as the most broad and inclusive definition of these actions.⁴¹ This term takes into account the constant changes in technology – and thus the emerging ways of how violence is being perpetrated – while grasping the wide range of harmful acts. Speaking of TFGBV means speaking of online gender-based violence and sexual harassment, cyberstalking, image-based abuse (including AI-generated deepfakes), hacking, hate speech, and limiting or controlling the use of technology, to name only a few.⁴²

Using digital technologies and the internet, women and girls in all their diversity and marginalised groups run the risk of being exposed to TFGBV. Yet, **women who are more visible online and speak up** – as human rights defenders, feminist activists, journalists, politicians, and leaders – are particularly targeted:

- A study from *Womankind Worldwide* with women's activists and feminists from five countries in Africa and Asia showed that 50 per cent of the participants had experienced online violence and abuse.⁴³
- In a study about the 2022 Kenya General Election, *Pollicy* reported that 27 of 29 interviewed women politicians experienced digital violence throughout the election.⁴⁴
- Another study with a focus on female journalists showed that of the more than 600 women surveyed, 73 per cent reported being targeted in relation to their field of work.⁴⁵

A good example



Take Back the Tech:

Taking control of technology as an exercise in ending tech-facilitated gender-based violence.

Take Back the Tech! (TBTT) is an initiative leading issue campaigns to engage women, girls and non-binary people to take creative, strategic action against TFGBV, thus developing resources and networks to support survivors, explore solutions, and imagine a feminist internet. TBTT aims to create safe(r) digital spaces that protect everyone's right to participate freely, without harassment or threat to safety, and to support realising women's rights to shape, define, participate, use and share knowledge, information and technology. TBTT campaigners range from individual activists in Fiji and feminist collectives in Mexico to survivor support services in Pakistan and media-driven organisations in Bosnia-Herzegovina. The initiative emphasises local contexts and encourages activists to adapt the campaign aims and content to the specific problems and opportunities in their communities. TBTT's approach prioritises experience as a form of knowledge, puts forward historically silenced and ignored voices, and frames survivors as leaders.

40 Plan International (2023): *Free to be online? Girls' and young women's experiences of online harassment*, 7.

41 TFGBV is defined as an "act of violence perpetrated by one or more individuals that is committed, assisted, aggravated and amplified in part or fully by the use of information and communication technologies or digital media, against a person on the basis of their gender."; see UNFPA (2021): *Technology-facilitated Gender-based Violence. Making All Spaces Safe*, 10.

42 UNFPA (2021): *Technology-facilitated Gender-based Violence. Making All Spaces Safe*.

43 Vlahakis, M. (2018): *Breaking the Silence. Ending online violence and abuse against women's rights activists*. Womankind Worldwide, 7.

44 Kakande, A. et al. (2023): *Byte Bullies. A Report on Online Violence Against Women in the 2022 Kenya General Election*. Pollicy.

45 Posetti, J. et al., (2020): *Online violence against women journalists: a global snapshot of incidence and impacts*. UNESCO, 5.

While the list could go on, it is the **political nature of TFGBV** that appears blatantly behind these figures, entailing that such acts are targeted at individuals who do not conform to their supposed subordinate gender roles seeking to uphold patriarchy as well as other systems of oppression.⁴⁶ Therefore, TFGBV should also be seen in the context of today's phenomenon of **anti-feminist backlash taking place on a global level**. Anti-gender actors – ranging from religious institutions, political parties and non-governmental organisations to informal hate groups – employ TFGBV as a deliberate strategy to push back women's rights and global progress on gender equality.⁴⁷ TFGBV goes beyond discrimination on the grounds of gender identity and is also based on racism, ableism and heteronormativity indicating the **intersectional nature of TFGBV**. The upshot is that women as well as girls with disabilities, BIPoC or LGBTIQ+ persons disproportionately often face TFGBV.⁴⁸

It is crucial to highlight the **serious impact of TFGBV on women and girls' lives**. Experiencing as well as witnessing TFGBV can cause severe emotional and psychological distress, constant fear and insecurity, depression and, in extreme cases, suicide attempts. Moreover, being targeted may go along with a silencing effect. Those women and girls who have previously raised their voices may withdraw from being present online and taking part in public debates.⁴⁹ In this sense, the impact of TFGBV is not only personal but presents systemic and structural implications. The less frequently that women participate in digital spaces, the further away gender equality and the dismantling of patriarchy and other systems of oppression become.

BIASED TOOLS

Besides discriminatory patterns and TFGBV, further impediments to active and self-determined use come from biased tools and a lack of technology to match women's and girls' realities. The rise of artificial intelligence (AI) has demonstrated in particular the dire consequences that **research biases** and a **lack of gender-disaggregated data** have for technology development. Algorithms trained with limited datasets fail to provide equal representation of different populations and groups and so provide biased machine-learning and AI applications that are often sexist and racist. One blatant example of the above are facial recognition algorithms that (still) fail to identify the faces of BIPoC, especially when they are women.⁵⁰

Another example of how technology fails gender equality is the *Unified Cash Transfer Programme of Jordan*, better known as Takaful. Rolled out with support from the *World Bank*, this programme targets poverty by providing direct financial support to individuals and families. Yet, according to *Human Rights Watch*, the programme has not only relied on flawed measures of vulnerability but reinforced gender-based discrimination by awarding payments to heads of households rather than individual adult members, depriving many women of their right to social security.⁵¹

When designing new digital tools, **inclusivity often remains an afterthought**, along with the neglect of any understanding of the diverse realities of women and girls and marginalised groups. But in the case of biased tools, they could scarcely be said to facilitate an active and self-determined use for whatever purpose.

46 A second particular risk group alongside women in public and professional life are adolescent girls; see UNFPA (2021): *Technology-facilitated Gender-based Violence. Making All Spaces Safe*, 22.

47 Denkovski, D. et al. (2021): *Power over Rights. Understanding and countering the transnational anti-gender movement. Volume I*. Centre for Feminist Foreign Policy, 52.

48 Dunn, S. (2020): *Technology-facilitated Gender-Based Violence. An Overview*. Centre for International Governance Innovation, 17.

49 UNFPA (2021): *Technology-facilitated Gender-based Violence. Making All Spaces Safe*, 25.

50 Amnesty International (2023): *Racial bias in facial recognition algorithms*.

51 Human Rights Watch (2023): *Automated Neglect. How The World Bank's Push to Allocate Cash Assistance Using Algorithms Threatens Rights*.

Shaping digital technologies

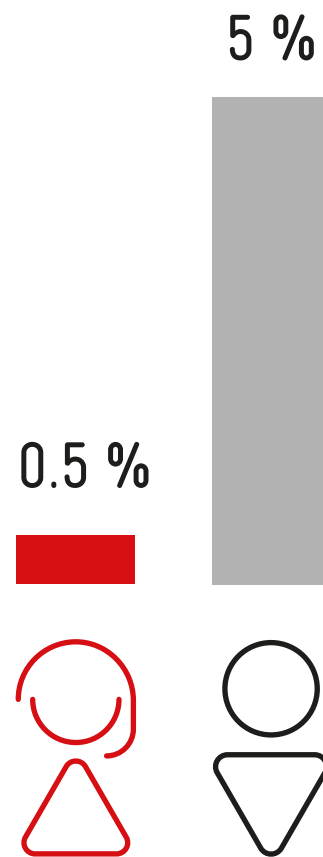
Moving past the issues of access and use, this section turns to the design and development of digital technologies and within this context, the position and experiences of women and girls in all their diversity and marginalised groups. As addressed in the previous sections, it is vitally important to enable digital access for all and to ensure that women and girls have basic skills and knowledge of how to use digital technologies in a self-determined manner, and for their benefit. Nonetheless, it is equally important to address the great role that women play in all their diversity and that marginalised groups have in shaping digital technologies through education, research and practical work, as well as engaging with the challenges and structural discrimination they face when trying to do so.

This section provides a closer look into the position of women in STEM fields, their educational and professional journeys in this context, and how this affects the shaping of digital technologies today.

WOMEN AND GIRLS IN STEM EDUCATION

To begin with, women compose around 30 per cent of all scientific researchers,⁵² but are least represented in the engineering sciences which contributes to a **massive gender gap when it comes to highly-educated STEM**⁵³ **professionals**. This reality is shaped from very early in life by social norms and early education, whereby girls are directly and repeatedly told that STEM would be something ‘for the boys’ and not for them. Alternatively, they may receive the same message in more indirect ways by experiencing a **lack of support and encouragement to study STEM fields**, encountering a **lack of meaningful role models** and experiencing the **gender stereotypes** found in the mainstream media. The reproduction of normative values can lead to girls being less confident in their skills and abilities within STEM fields, due to environmental influences such as parental guidance and societal expectations. Discriminatory stereotypes that

are maintained about girls continue to influence their interest and aspiration to shape technological developments.⁵⁴ Yet, research shows that when it comes to STEM education, girls and boys almost perform equally well. At the age of 15, however, only 0.5 per cent of girls report wanting a career in STEM whereas 5 per cent of boys do so in comparison.⁵⁵



At the age of 15, however, only 0.5 per cent of girls report wanting a career in STEM whereas 5 per cent of boys do so in comparison.

52 UNESCO (2019): *Women in Science*.

53 In this section, the term STEM is used for the purpose of statistical reporting on the position of women and girls in STEM education and professions. The statistics encompass data from all four fields (science, technology, engineering, mathematics), unless specified otherwise.

54 AAUW (2010): *Why so few? Women in Science, Technology, Engineering, and Mathematics*.

55 OECD (2018): *Bridging the gender digital divide: include, upskill, innovate*.

Depending on the country, some girls do end up choosing and **completing higher education in STEM fields**. In fact, a considerable number of countries in the Majority World are **leaders in terms of the percentage of female STEM graduates**, significantly higher than the same percentage in the Global North. For example, in 2018 Myanmar and Algeria had 61 per cent and 58 per cent female STEM graduates respectively, North Macedonia and Albania reported 47 per cent, while Germany recorded 28 per cent of graduates being female, according to statistics from 2017.⁵⁶ It is thus important to note that, statistically speaking, countries in the Global North contribute more to the gender gap in female STEM graduates. In terms of advanced digital skills such as computer program-writing skills, research shows that on average only 3.5 per cent of women fall into this category compared to 7.8 per cent of men. A key question then arises: What happens to female graduates once they enter the labour market and continue to develop their careers?

It is well worth considering the **‘leaky pipeline’ phenomenon** within this context. This is a metaphor that seeks to explain the **gradual loss of women and girls in STEM fields and leadership positions** as they climb the professional ladder, leaving them underrepresented across fields and positions. Nonetheless, the ‘leaky pipeline’ is a complex phenomenon because women drop out of the professional journey at different stages. Some dropouts occur early on owing to gender roles and stereotypes or individuals losing interest at a young age, while others occur due to the hardship of entering the job market, the experience of an unsuitable work environment (including the dominance of male culture), insufficient child-care support, or again due to shifts towards non-technical roles despite initially being hired for STEM roles.⁵⁷ Therefore, understanding the stages and context of the ‘leaky pipeline’ phenomenon is essential for coming to terms with the reality of why so few

women enter and stay in tech fields. It can also be considered as a way to determine how best to work on supporting women in all their diversity to have an equal opportunity to participate in the design and development of digital technologies.

WOMEN IN ICT PROFESSIONS, LEADERSHIP AND ENTREPRENEURSHIP

If they are to have a say in the shaping of digital technologies, women need to be proportionally represented and take active roles in all the phases and levels of digital transformation work. Globally, women with advanced skills take up about 40 per cent of jobs in all industries (including the ICT sector⁵⁸). However, in African and Asian contexts the percentages are lower – respectively, 30 and 35 per cent of women are employed in jobs that require advanced skills.

Importantly, most of the positions occupied by women with advanced skills **are not in the ICT sector**. Research shows that on average, women make up less than 35 per cent of the total ICT and related professional positions, but this number largely varies depending on the country’s context. In the European Union (EU), women comprise an average of 18.5 per cent of specialist workers in the ICT industry,⁵⁹ while statistics on ICT specialists are scarce for Majority World countries which includes gender-disaggregated data.⁶⁰ A recent report shows that some of the lowest levels of gender-disaggregated information on ICT data is among African countries.⁶¹ This is highly problematic in establishing the real picture on numbers and experiences of female ICT professionals in the Majority World.

Moreover, women more commonly work in junior positions, but also tend to leave the ICT sector more commonly and are less likely to become

56 The World Bank (2023): [Gender Data Portal](#).

57 Sey, A. and Hafkin, N. (eds). (2019). [Taking Stock: Data and Evidence on Gender Equality in Digital Access, Skills, and Leadership](#). United Nations University Institute on Computing and Society and ITU.

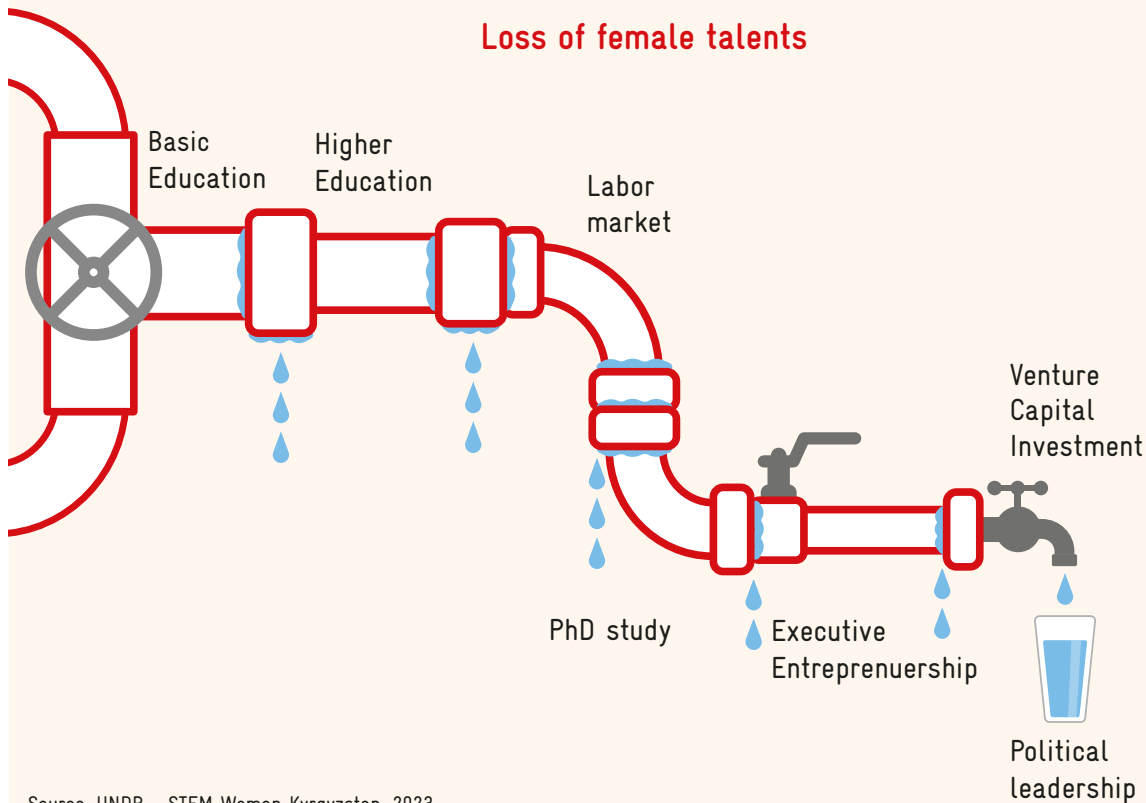
58 In this section, the term ICT is used for the purpose of easier statistical reporting on the role of women and girls in developing tools and resources used to transmit, store, create, share or exchange information. When available, specific statistics on the role of women and girls in shaping digital technologies and relevant industries per se is provided. ICT is hereby considered as one of the STEM disciplines.

59 Statista (2023): [Female ICT specialists](#).

60 Hafkin, N. and Huyer, S.: (2007). [Women and Gender in ICT Statistics and Indicators for Development](#). Information Technologies & International Development 4 (2), 25.

61 EQUALS Research Coalition (2022): [Sex-disaggregated ICT data in Africa](#).

Leaky Pipeline: Bringing more girls and women into STEM is not effective, unless we start tackling the systemic problems along the “pipeline”



entrepreneurs in this sector. Finally, they are largely underrepresented in the policy-making spheres.⁶² More qualitative research on the experiences of women is therefore required to tackle the exact **intersectional causes of their barriers in the ICT sector** and engage with the dominance of masculine social culture, gender stereotypes and discriminatory practices.

Moreover, women also tend to occupy less paid roles in the ICT industry despite their educational expertise in technical spheres.⁶³ The implication here is that although a number of highly qualified women will enter the ICT labour market, they will be disadvantaged in terms of professional career advancement. Meanwhile, only a small percentage of them will end up in leadership positions that enable them to participate actively in shaping digital technologies.

In terms of **patented innovations**, the number of patents invented by women in the G20 economies has been growing in the past decades from 5.6 per cent in 1994 to 8.4 per cent in 2014.⁶⁴ With regard to shaping digital technologies, data shows that female innovators have been more active in the field of electrical engineering with a total of 31 per cent of patents recorded in this field, and regional proportions being highest in China (66 per cent) and South Korea (59 per cent) respectively. In comparison to the percentage of all patented innovations in G20 economies, India, the US and Mexico have the highest number of female ICT patent contributors (over 10 per cent) while South Korea and China hold similar, estimated statistics.⁶⁵ When it comes to **software development**, research shows that a large majority of R-based software – one of the most

62 Sey, A. and Hafkin, N. (eds). (2019). *Taking Stock: Data and Evidence on Gender Equality in Digital Access, Skills, and Leadership*. United Nations University Institute on Computing and Society and ITU.

63 ILO (2018): *Global Wage Report 2018/19 What lies behind gender pay gaps*.

64 OECD (2018): *Bridging the gender digital divide: include, upskill, innovate*, 85.

65 OECD (2018): *Bridging the gender digital divide: include, upskill, innovate*, 88-90.

commonly used programming languages – is developed by teams consisting only of men, while women-only teams account for about 6 per cent of software developments, and 2 per cent of the total downloaded software.

When it comes to **innovative entrepreneurship**, the gender gap is even wider because women are far less likely to be self-employed or to own a business. This is especially important in the start-up scene where venture capital is a crucial factor in financing businesses. Only 11 per cent of start-ups are women-led and their businesses have less chance of receiving venture capital and when they do, they tend to receive far less investment than men-led businesses. Moreover, the probability of acquisition of women-led businesses is far lower than the male-led ones. The percentage of female start-up founders differs between countries with, for example, Mexico standing at around 13 per cent and Germany, in comparison, at about 8 per cent. The share of women-led start-ups also differs by sector – with the highest numbers in consumer goods businesses at 27 per cent, and the lowest in software and IT businesses at around 8 per cent.⁶⁶

Understandably, these numbers point to the severe underrepresentation of women in ICT innovation and software development fields, given their relatively small role in shaping the technological developments of today, and the significant amount of bias and prejudice they face in these fields.⁶⁷

What does this mean for a feminist development policy?

Inequalities persist across all levels of the gender digital divide. Multiple barriers obstruct the path to digital inclusion and a gender-equitable digital transformation, and eventually to systemic change. Being the backbone of Germany's feminist development policy, the 'three Rs' approach provides a useful framework, gives orientation amidst complexity, and opens up **critical points for concrete action**.

RIGHTS

While there is no global consensus that under international law **access to the internet** is a human right per se, it is undeniable that the internet can be both **a medium and a catalyst for human rights**.⁶⁸ In going online, women and girls worldwide exercise rights such as their right to access information, especially when it comes to information about sexual and reproductive health and rights, freedom of opinion and expression, including the free expression of personality, including the exploration of sexuality, to name just a few. Restricting access to the internet – whether through state-controlled internet shut-downs, material deprivation, or patriarchal norms – is a fundamental violation of human rights.

The same goes for the **use of digital technologies and the internet**. More than ten years ago, the *United Nations Human Rights Council* affirmed that “the same rights that people have offline must also be protected online”⁶⁹. As human rights apply in the digital space, **digital rights are human rights**. This is an important principle as it overcomes the increasingly outdated distinction between offline and online. A human rights-based approach, for instance, allows one to name TFGBV for what it is: a human rights violation. Therefore, thinking of the usage of digital technologies and the internet in terms of rights also allows one to think holistically about corrective and preventive actions against barriers and harms. Indeed, concern has been growing for a long time that governments are using legislative action not to address TFGBV, but rather to silence critical voices and restrict freedom of expression.

With its rights-based approach, a feminist development policy means seeking an inclusive and public-good understanding of **technology development**. Digital technologies should be designed and developed to expand the exercise of human rights rather than functioning as a revenue stream for Big Tech companies. Tech development is one of the fastest-growing fields, yet the opportunities for women and girls to study and excel across STEM fields remain

66 OECD (2018): *Bridging the gender digital divide: include, upskill, innovate*, 97–99.

67 Wang, Z. et al. (2018): *Competence-Confidence Gap: A Threat to Female Developers' Contribution on GitHub*, IEEE Transactions on Software Engineering 49 (2), 81–90; Dias Canedo, E. et al. (2019): *Barriers Faced by Women in Software Development Projects*, Information 10(10).

68 Borg Psaila, S. (2011): *'UN declares Internet access a human right' – did it really?*

69 Human Rights Council (2012): *Report of the Human Rights Council on its twentieth session*, A/HRC/20/2, 23.

difficult due to the reasons outlined above. Therefore, creating equal access to education, fair and non-discriminatory conditions at the workplace and in the educational institutions for women and girls in all their diversity are essential to applying a rights-based approach to the design and development of digital technologies.

To put it in concrete terms, in the ‘three Rs’ approach **rights** means:

- Understanding and advocating for **meaningful access to digital technologies and the internet as a human right** under international law, and raising awareness of the barriers that women and girls in all their diversity face to get online;
- Adopting a **holistic and intersectional understanding of human rights**, including advocacy for rights less talked about, such as the right to anonymity;
- Ensuring and supporting access to **information without censorship**, particularly with regard to sexual and reproductive health and rights, and the free expression of sexuality;
- Affirming the severe impact of digital rights violations on women and girls in all their diversity and marginalised groups, while ensuring the recognition of the **continuum between offline and online**;
- Engaging in the dismantling of **all discriminatory laws and social norms** that restrict an active and self-determined use of digital technologies and the internet;
- Promoting **access to justice for survivors of TFGBV** and other human rights violations;
- Advocating for and supporting governments with policy reviews, reform and the application of laws grounded in international human rights standards and norms, particularly putting **women’s rights at the centre**;

- Ensuring that developing and applying technology is aligned with the **common good** and the rights of women and girls in all their diversity and marginalised groups (this also includes supporting frameworks for accountability on online platforms);
- Ensuring and supporting the rights of women and girls in the context of **access to education throughout their lives**, including in STEM fields;
- Promoting **equal opportunities, freedom and safety** in choosing and pursuing education and professional careers in STEM;
- Addressing and bridging the **gender pay gap** in STEM fields and especially in ICT sectors where the gap is most prominent;

RESOURCES

Similar to the question of rights, the question of sufficient resources cuts across all levels of the gender digital divide. First and foremost, it is the **access** gap where a strong material dimension becomes visible on both a collective and a more individual level. In fact, where there is no relevant functional infrastructure available, going online may be a distant reality. Moreover, even if there is a network already in place, the lack of financial resources for devices and data may restrict women and girls in all their diversity from connecting to the digital space. Applying the ‘R’ for resources to questions of **active and self-determined use** means dismantling barriers, in particular by providing necessary funds as well as acknowledging and strengthening women’s and girls’ resilience and resistance, e.g. as survivors of TFGBV.

The level of resources available also deeply influences the **design and development of digital technologies** and determines what role women and girls in all their diversity and marginalised groups play in it. For example, girls need sufficient resources to access education, receive opportunities to learn digital skills in school, and ideally access resources to practise those skills at home. Moreover, women need to be given equal opportunities to pursue higher education in STEM fields and receive financial support through funding schemes.

Overall, the ‘leaky pipeline’ described above needs to be sealed at the professional level in terms of fair wages and equal pay to compare favourably with men and workers in the Global North. It is through thoughtful and adequate support of female STEM professionals that more female entrepreneurs will have equal access to venture capital for starting and developing tech businesses.⁷⁰

Therefore, **resources** in the ‘three Rs’ approach means:

- Ensuring that policies, regulations and subsidy programmes exist to **lower the costs of devices and data**, supporting women and girls in all their diversity in their **financial capabilities**;
- Funding digital infrastructure **owned by communities** to successfully bridge divides in accessing digital technologies, and drawing on what already exists and is in use in communities (this also includes considering analogue alongside digital solutions);
- Shifting towards sufficient **flexible and long-term funding** and supporting programmes, collaborations and initiatives led by women and marginalised groups that address the gender digital divide (this also includes community networks, open-source solutions, open and participatory online and offline spaces as well as community centres)
- **De-bureaucratisation** of existing funding procedures to enable smaller, less formalised organisations and initiatives;
- Developing funding schemes for supporting **women-led digital enterprises**, including the support of network-building structures;
- Providing resources to **intersectional and feminist-led initiatives** across all levels of the gender digital divide and ensuring an intersectional approach in all activities;

- Providing resources to address **TFGBV**, including allocating funds for training, civil society advocacy and support for survivors;
- Providing resources for digital skills-building programmes with diverse target groups and across the digital skills continuum;
- Ensuring fair, **substantial and long-term resources** for the educational and professional development of women and girls in all their diversity, especially those in precarious socio-economic environments.

REPRESENTATION

Representation implies the “full, equal and meaningful participation of women and marginalised groups and their role as decision-makers in key social, political and economic decision-making processes at all levels”⁷¹ and thus, the different levels of the gender digital divide. Whether it is the planning and rollout of digital infrastructure, the design of funding programmes or the implementation of upskilling training, or again taking up roles in STEM fields and businesses, women and girls need to be represented in all their diversity – not as beneficiaries but as agents. However, representation goes beyond ‘being present’ and ‘participating in decision-making’. As for **access**, representation also refers to questions of content, language and, more broadly, the (de)valuation of knowledge in the digital space. Therefore, representation in terms of access means that women and marginalised groups must be able to find online content in their language relevant to their lives and based on their systems of knowledge.

Moreover, women and marginalised groups need to be in a position to **use** the internet as **content creators** and **self-determined agents of change**. As shown above, silencing through TFBGV is an issue of representation as it undermines women’s and girls’ online expression and reinforces patriarchal roles and structures. Furthermore, ongoing discrimination as well as the existence of biased tools is a strong indication that women and girls in all their diversity need

70 OECD (2018): *Bridging the gender digital divide: include, upskill, innovate*.

71 BMZ (2023): *Feminist Development Policy. For Just and Strong Societies Worldwide*, 27.

to be meaningfully engaged, but especially all genders, when it comes to dismantling power structures. This should occur at all stages and across all levels, be that socially, politically, or economically, from the ideation of new digital tools to their application in particular contexts.

As for the **development of digital technologies**, globally women remain underrepresented in most STEM professional fields. Yet, building fair and inclusive digital technology requires an equitable representation of women and marginalised groups, literally in the space where the shaping of innovations takes place.

Translating **representation** of the ‘three Rs’ approach into practice means:

- Making ‘**nothing about us without us**’ a reality and ensuring full, equal and meaningful participation of women and marginalised groups in the access, use and the development of digital technologies. This includes building capacities for female legislators to engage in digital policy processes, supporting women-led organising on labour platforms or professional networks, and mentorship initiatives in STEM fields, to name only a few;
- Looking beyond hegemonic languages and systems of knowledge and supporting **local languages, content and knowledge production** to make the internet a multilanguage space;
- Being mindful of languages to ensure that there is **no replication of oppressive and colonial narratives** while being sensitive to particular contexts;
- Co-creating each project and initiative **with local experts**; namely, feminist digital experts from the Majority World alongside women and girls in all their diversity representing community voices, and marginalised communities such as racialised and queer communities, working together to close the gender digital divide;
- Supporting programmes and campaigns that address stereotypes towards women and girls, especially regarding their **capacities and creativity in STEM fields**;
- Fostering structural change in organisations and institutions **towards radical diversity and inclusivity**, rather than placing further pressure on women and girls to ‘do the work’;
- Addressing the **issue of masculine social culture** in STEM education and professional spaces, while ensuring that men are actively involved in the structural change needed to ensure equal rights of women and girls in these fields.
- Creating **spaces for polyphonic conversations**, including regional exchange, exchange between Majority World countries as well as between governments, civil society, academia, the private sector, marginalised communities and actors who currently hold less influence;
- Advocating for **representative and gender-disaggregated** data for inclusive technology development, policymaking and all other measures and initiatives relating to the realities of women and marginalised groups.



TOWARDS TRANSFORMATION: UNPACKING POWER, DISMANTLING UNEQUAL STRUCTURES

The previous chapter has dealt with the complex issue of the gender digital divide, providing insights into the principal obstacles currently preventing a more gender-just digital transformation. This chapter now presents six key themes addressing feminism and digital transformation to stress the urgency of systemic and structural change as the necessary step towards a just digital transformation that is **truly feminist**. The themes were identified in expert interviews with civil society organisations, researchers and international organisations. Within these themes, experts elaborate on the most pressing issues and outline **recommendations and ideas** for successful approaches to achieve a **desirable feminist digital future** (see [→ recommendations from page 27 onwards](#)).

This chapter is to be read as a polyphonic and diverse collection of perspectives, structured as follows: **Anita Gurumurthy and Nandini Chami** from *IT for Change* write about digital economics and argue that simply adding more women into a system that is deeply flawed will only entrench the status quo and its neo-colonial impulses. **Rutendo Chabikwa** then offers a critical view on governance of digital technologies and the most important steps for a holistic interrogation of the system, while **Sara Baker** explores the importance of feminist approaches to data in the development context. Feminist movements are increasingly concerned with questions of climate justice and land rights, extractivism and decolonisation in the context of digital transformation. In this vein,

Nakeema Stefflbauer demonstrates the need for decolonial perspectives on digital technology and development, while **Madhuri Karak** writes about the inter-relationship between technology and extractivism and how exploiting newer forms of nature also exacerbates harm towards women and marginalised groups. Finally, a contribution from the **editorial team** outlines the growing importance of technology and digital spaces in feminist movement-building and the efforts being made to push for structural change.

A gender-transformative digital new deal

Anita Gurumurthy and Nandini Chami, *IT for Change*

Despite the marvels of internet-mediated life, there is overwhelming evidence that the digital economy is **no level playing field**. The intersecting axes of gender, geography, race, caste and class continue to shape social hierarchies and human destinies in the digital age, decisively impacting who gains and who loses.⁷² The transnational platform firm and its *raison d'être* in data extractivism has deepened unequal geographies of wealth⁷³, with labour exploitation reaching an all time high in the digital economy.⁷⁴ Factors driving extreme intra-country inequality⁷⁵ (market fundamentalism and political capture) are compounding gender equality⁷⁶ – as the digital epoch has only served to reinforce women's unpaid work⁷⁷ –

72 Rani, U. et al. (2022): *Women, work, and the digital economy*. Gender & Development, 30 (3), 421–435.

73 Gurumurthy, A. and Chami, N. (2022): *Taming the Intelligent Corporation*. IT for Change.

74 Guellec, D., and Paunov, C. (2017): *Digital Innovation and the Distribution of Income*. National Bureau of Economic Research.

75 UN (2020) *Inequality – Bridging the Divide*.

76 Oxfam (2016): *Women and the 1%: How extreme economic inequality and gender inequality must be tackled together*.

77 Gurumurthy, A., and Chami, N. (2022): *The Deal We Always Wanted. A Feminist Action Framework for the Digital Economy*. Friedrich-Ebert-Stiftung.

the feminisation of poverty⁷⁸ and the exploitation of ecological systems⁷⁹ in sustaining women's life-worlds.

The journey towards a **new digital horizon** requires an **urgent reality check**. Current techno-development trajectories undercut gender equality and are antithetical to a vision centring people and the planet. Yet, the trope of digital innovation carries enormous sway over the domain of gender and development policy. It is widely assumed that giving women a share of the digital economy pie is the critical agenda. However, adding women into a system that is deeply flawed will only entrench the status quo and its neo-colonial impulses.⁸⁰ For digitisation to be a force of positive disruption, the foundational building blocks of feminist policy – resources, rights and representation, or the 'three Rs' – need a new starting point, making development a feminist endeavour from the get-go. We discuss the contours of this deep change below.

RIGHTS: TACKLING UNACCOUNTABLE CORPORATE POWER

To make the internet "universally accessible, safe and inclusive"⁸¹, as the BMZ's feminist development policy underscores, is to ensure that the integrated and indivisible agenda of women's human rights is protected in all domains of our hybrid digital existence. This means in particular that:

- **Guarantees of equality and non-discrimination** at the workplace need a category of rights pertaining to digital surveillance in the workplace.
- The universal **right to social protection** can only be realised if there is an effective strategy to tax transnational digital corporations.
- The **right to traditional knowledge for Indigenous people** and peasants will only be plausible when data can be reclaimed from privatised control.

As the imperatives for women's human rights expand, it is clear that a strategy focused solely on enhancing state accountability is not going to take us very far. In a digital paradigm where transnational platform companies are more powerful than many states in the Majority World, injustices arise because of the absolute impunity that such corporations enjoy in the pan-global data and AI value chains that they control. Human rights in the digital paradigm cannot be imagined merely as individual freedoms, as they must pave **the way for elimination of the problems that cause injustice**. Therefore:

- BMZ's strategy for feminist development policy must focus on creating **the evidence base, dialogic space and legitimacy of civil society** to question runaway corporate power within the multilateral system and political blocs, such as the EU and the *Organisation for Economic Co-operation and Development* (OECD).
- Digital corporations with their headquarters in the member countries of the OECD bloc need to be held liable for their failure to meet human rights due to **diligence standards in their transnational value chains**.
- Development cooperation should be founded on the proposition that the **same level of protection from harm and rights-violations** guaranteed to citizens of the Global North can also be accessed by the people of the Majority World.⁸² A rights regime exclusively available to a privileged few in a neo-colonial digital order is de facto unjust.

78 Natile, S. (2019): *Regulating exclusions? Gender, development and the limits of inclusionary financial platforms*. International Journal of Law in Context, 15(4).

79 Hall, R. (2023): *Ditching techno-patriarchy and the 'permacrisis'*. ETC Group.

80 Third World Network, Public Services International (Asia & Pacific) and IT for Change (2022): *The IPEF Upskilling Initiative for Women and Girls – A Backgrounder about Critical Feminist Concerns*.

81 BMZ (2023): *Feminist Development Policy. For Just and Strong Societies Worldwide*, 24.

82 Human Rights Watch (2023): *EU: Artificial Intelligence Regulation Should Protect People's Rights*.

Those digital trade policy stances calling for a ‘data-free flows with trust’ regime tend to instrumentalise the right to privacy, reducing it to a technical and depoliticised agenda which serves only the unrestrained growth of ill-governed digital services markets. The current policies ignore the erosion of individual and collective sovereignty in the Big Tech-controlled digital economy. They do not acknowledge the intellectual property regimes that impede governments of developing countries from scrutinising algorithms, regulating the digital economy and governing data as a people’s resource. They are inimical to the progressive realisation of economic, social and cultural rights and the right to development that are integral to achieving gender equality. Therefore:

- Governments must ensure that **their foreign policy stances vis-a-vis global digital cooperation** are coherent, providing a vision of rights that attack the roots of global injustice so that feminist development in its truest sense can be advanced.

RESOURCES: A WORK PROGRAMME FOR DIGITAL COMMONING⁸³

We are in the throes of what is often called the AI revolution. Today it is the intelligence capital generated from the wealth of societal data which is at the base of market power. As digital platforms and their proprietary algorithms take control of production systems, a historically unprecedented **cannibalisation of our knowledge and ecological commons** is underway.⁸⁴ The all-powerful algorithm orchestrates socio-economic behaviour, eroding intimate knowledge of local markets, specialised local skills and institutional systems of market governance. All of this constitutes an *en masse* hollowing-out of the productive capacity of people and places.⁸⁵ The past few decades of neo-liberal globalisation have seen integration into global value chains become the norm, even when the terms are adverse for local workers, marginal farmers, fishers, artisans and small producers.⁸⁶ Yet, **pluralist visions of the economy** have been harder to sustain.

The ‘big bang’ AI model and its propensity towards centralisation have only intensified this crisis. By disproportionately impacting upon the most

**What is instead required
is the restorative community
that stands for solidarity
and sustenance.**

83 The term commoning (from lat. communis; from Latin cum and munus; English to common; meaning joint action, joint creation) describes self-organized and needs-oriented joint production, administration, maintenance and / or use. In the digital space, the term is often used to describe cooperative and collaborative architectures and platforms as well as open source models.

84 ETC Group (2022): Food Barons 2022.

85 Iazzolino, G. and Mann, L. (2019): See, Nudge, Control and Profit: Digital Platforms as Privatized Epistemic Infrastructures. IT For Change and Platform Politik.

86 Fair, Green and Global Alliance (2013): Balancing Trade & Aid.

marginalised women in the Majority World,⁸⁷ this economic paradigm also comes with punishingly **high environmental costs**.⁸⁸ Its narrative power erases the possibility of harnessing data, AI and platform technologies for decentralised and regenerative innovation. It is an urgent task to challenge self-interest-based economic thinking rooted for centuries in the ‘homo economicus’. The digital marketplace valorises the hyper-rational male who ‘goes quickly and breaks things’ to achieve grandiose goals. What is instead required is the **restorative community** that stands for **solidarity** and **sustainability**. Consequently, this means that:

- The BMZ’s strategy for feminist development policy can make a significant difference by investing in a **work programme for digital commoning** and enabling **collaboration** to implement a **solidarity-based digital economy**. In focusing on so called ‘low and middle income countries’ and ‘least developed countries’, these programmes for work can catalyse local visions and actions for digital innovation towards gender-transformative change, prioritising local livelihoods, economic autonomy and social wellbeing.
- Incentivising collaboration through complementary mechanisms in public goods, the programme must build **long-term digital capabilities** for a humane and just society.⁸⁹
- Public investments will be needed in both technological and institutional frameworks to develop **next-generation social and economic infrastructure**.
- A feminist, commons-centred, collaborative dynamic will require reorienting the local digital ecosystem towards **distributive and redistributive justice**.
- This new orientation would entail on the one hand, strengthening **public services delivery, care infrastructure** and **institutional capacities** to rein in elite power; on the other hand, exploring governance models for data and AI resources to pro-

mote **food sovereignty, biodiversity, health for all** and **epistemic freedoms** (the rights to access, use, and manage information, knowledge, data and digital intelligence for individual and collective wellbeing).

REPRESENTATION: ADDRESSING DEMOCRATIC DEFICITS IN DIGITAL GOVERNANCE

The “full, equal and meaningful participation of women and marginalised groups and their role as decision-makers”⁹⁰ in key decision-making processes at all levels is axiomatic in a policy framework striving for gender-equitable digital transformation. However, increased representation will lead to meaningful policy decisions only when it goes **beyond tokenism**. A feminist ethos of diversity demands democratic frameworks and predictable forums that allow for **dissenting voices** and **marginalised groups** to challenge the status quo, seek answerability and deepen public interest. Global digital policy spaces are woefully inadequate in this regard, characterised as they are by huge, democratic deficits. The pursuit of corresponding multi-stakeholder approaches without norms acknowledging power differentials have also seen digital policy dialogues hijacked by Big Tech corporations for their private gain. This means that:

- The BMZ’s strategy for feminist development policy must present a dedicated line of support to bolster **the legitimate role of feminist civil society organisations and activists** in demanding and deliberating appropriate digital rights regimes and policies in their countries.
- **The voices of women and gender minorities from the Majority World** are also vital to give teeth to corporate regulation acting upon transnational digital supply chains.
- Therefore, **making room for the standpoints of those impacted negatively by the current digital order** would be the first principle for a development policy that upholds feminist ethics.

87 Gurumurthy, A. et al. (2018): *Gender Equality in the Digital Economy: Emerging Issues*.

88 Forbrukerradet (2023): *Ghosts in the Machine: Addressing the consumer harms of generative AI*.

89 De Jongh, M. (2021): *Public Goods and the Commons: Opposites or Complements?* *Political Theory*, 49 (5), 774–800.

90 BMZ (2023): *Feminist Development Policy. For Just and Strong Societies Worldwide*, 27.

Tech governance

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Technology has not only become deeply ingrained in our day-to-day lives, but current digital technology infrastructures reflect systems of neoliberal capitalism, imperialism, and other systems of oppression. To understand then that tech governance is a feminist issue is to go beyond simply adding women and gender minorities to the current systems that uphold tech development and deployment today. The requirement is for a holistic interrogation of the system. This contribution is buttressed by two arguments:

1. There is a **socio-political nature of technology**. Therefore, tech governance is not just about technology itself, but rather about other aspects of society within which tech functions and exists.
2. **Technology is prone to replicate and exacerbate socio-political harms** that already exist in society as a result of hetero-patriarchy, racism, ableism and other systems of oppression. Tech governance also needs to consider these systems with due seriousness.

ON THE SOCIO-POLITICAL NATURE OF TECHNOLOGY

Technology does not exist in a vacuum. From development to deployment, technology is underpinned by **socio-political economic structures**. This is perhaps the biggest challenge for tech governance today. The current geopolitical set-up has created a state in which a few Big Tech companies hold hegemonic power in the contemporary configuration of the technology sector. This imbalance has been called the “oligopolistic market with colonial characteristics”.⁹¹ **The geopolitical power imbalance** between the contexts in which tech is developed and the contexts in which it is deployed highlights why tech governance is a feminist concern and should be approached as such in development policy. This requires an

intersectional application of the ‘three Rs’ approach in feminist development policy. The governance challenges that are highlighted by this socio-political trait of technology appear at three main levels: sourcing, development, and deployment of technologies.

Sourcing

The first level of complexity is in the sourcing of materials, including the data used in the development of tech products. The physical infrastructure upon which digital technologies exist results in **exploitative extraction practices**. Many of the minerals used in the making of tech hardware are found in areas of extreme conflict, extracted through multiple human rights abuses.⁹² Thus, the challenge of technology begins before we even have a tech product, where the rights of women in all their diversity and marginalised groups are violated before a tech product exists. This means that:

- A truly feminist understanding of this issue considers **the power imbalance and oppression** that allows for tech products to become possible.
- If it is to be truly authentic in taking a feminist approach, tech development policy would take into consideration **the sourcing of these materials** and above all, other policies such as those focused on the arms trade.

The current situation at company level is that some Big Tech companies have produced internal policies to hold themselves and their supply chains accountable. One example is the *Microsoft Responsible Sourcing of Raw Materials* (RSRM) Policy, which is an extension of the company’s Supplier Code of Conduct. The policy is “in support of human rights; labour, health, safety and environmental protection; and business ethics”.⁹³ At a regional and national level, one example that should be considered is the EU, where *Regulation No 2017/821* notes that, “consumers are indirectly linked to conflicts that have severe impacts on human rights, in particular the rights of women, as armed groups often use mass rape as a deliberate strategy to intimidate and control local

91 Tricontinental (2021): *Big Tech and the Current Challenges Facing the Class Struggle*.

92 Csataji, K. (2022): *Technology and conflict minerals*, Ethical Consumer.

93 Microsoft (2014): *Responsible Sourcing of Raw Materials Policy*.

populations in order to preserve their interests”.⁹⁴ The EU example is commendable insofar as it differs from a corporate effort by highlighting the gendered impact of conflict from a feminist perspective. However, the specification of conflict-related minerals limits this to an understanding of conflict informed by international relations, which is still exclusionary of other contexts in which women in all their diversity and marginalised groups are harmed as a result of **mining practices**.⁹⁵ In order to address this complexity through feminist approaches and improve upon the work that is underway, it is important not to leave it only to corporations to make such decisions.

Development

The second level of complexity that highlights the socio-political nature of technology and, by extension, tech governance is in the development of the technologies. The first and most obvious example of this is in the participation gap in the building and making of contemporary technologies. With 47 per cent of STEM graduates being women in Africa, the continent has the highest proportion of female STEM graduates in the world⁹⁶, but women make up only 30 per cent of professionals in the African tech industry⁹⁷ and only 14 per cent of African tech start-up founders.⁹⁸ The barriers that women and gender minorities face on the continent and in other parts of the Majority World have emerged as a result of these social, political and economic conditions.

- A true feminist approach would be to step outside the tech sector and consider a **holistic approach to addressing representation**.

However, there is another level to the issue of development that goes beyond the participation of women in all their diversity and marginalised groups in the

development of technology and that becomes more visible with emerging technologies: the **data blindness, data blur** and **data practices** upon which new technologies are built. Inaccuracies in the data upon which AI technologies are built then ‘cloud out’ the realities on the ground which tend to be more granular and “can only be captured by the disaggregation of the data”⁹⁹. Beyond the inability to capture some granular details, other challenges have emerged in terms of capturing accurately and respectfully, marginalised communities that exist at the intersection of multiple systems of power, e.g. women and gender-minority informal workers, ethnic minorities and those living with disabilities. The absence of information on marginalised communities entails that the developed technologies not only exclude these communities but can cause harm to them.

- Within the ‘three Rs’ framework, representation should therefore be extended to embrace inclusivity in data practices.

ON THE REPLICATION OF HARMS

Use and deployment

Digital technologies can exacerbate the harms already present in society from TFGBV, to gendered mis- and disinformation. TFGBV is used to silence women in all their diversity and marginalised groups, especially those who are visible in the political arena. For example, in Zimbabwe, female political figures have been cyberbullied by prominent male figures.¹⁰⁰ The *Zimbabwean Data Protection Act* (2021) provided for individual’s data protection, and while it recognised that information concerning one’s gender is sensitive, it did not recognise the gendered nature of harmful data sharing and practices.¹⁰¹

94 The European Parliament and the Council of the European Union (2017): *Regulation (EU) 2017/821 of the European Parliament and of the Council*, Pub. L. No. Regulation (EU) 2017/821.

95 Chabikwa, R. (2021): *Women, Peace and Security in Zimbabwe – The Case of Conflict in Non War Zones*. *Journal of African Conflicts and Peace Studies*, 4(2).

96 Van der Merwe, C. (2022): *Africa Has Highest Proportion of Female STEM Graduates*, Research Professional News.

97 Salako, P. (2021): *Women Challenge Male Domination in African Tech*, African Business.

98 Etike, E. (2023): *Only 14 % of African Tech Startup Founders Are Women; Here Are the Reasons and Possible Remedies*, Technext.

99 Rizk, N. (2020): *Artificial Intelligence and Inequality in the Middle East: The Political Economy of Inclusion*.

100 openDemocracy (2022): *How Gendered Violence Silences Zimbabwe’s Female Politicians*.

101 *Data Protection Act*, [Chapter 11:12], Pub. L. No. Act 5 of 2021, ZWE-2021-L-114001.

- The application of feminist tech governance requires moving beyond the stage of recognising gendered harms in tech-related policies. Instead, it requires an **expansion of the current understanding of gender-based violence** to include its online and digital forms across all the instruments that address violence.

Another way in which technology use and deployment can exacerbate offline harms is in fomenting offline inequality and harm through mis- and disinformation. One example of this is the revelation that the Rohingya genocide in Myanmar was partly incited on Facebook.¹⁰² In this context, mis- and disinformation online created a context in which numerous human rights violations were carried out, posing a threat to women in all their diversity and marginalised groups.

- A feminist approach to tech governance would consider **holistically the protections available through instruments** such as human rights charters to include online forms of violations before they spill offline.

Surveillance provides another means for technology to inflict harm on marginalised communities. Nonetheless, this issue is complex because those enabling the surveillance – be they private or state actors, technology companies or providers – are not always the ones engaging in the act. Therefore:

- A feminist approach to surveillance would thus turn surveillance towards **both the “state and private surveillance** by showing the disparate impact of surveillance and the connection between the technologies of state surveillance and harassment of women”.¹⁰³
- Feminist tech governance will also hold the **providers and makers of the technology** accountable, as well as those that deploy and use it maliciously.

WHERE DO WE GO FROM HERE?

Feminist tech governance is the key to a more equitable digital future. Being that there are many ways that feminist approaches can strengthen governance practices, this contribution has outlined three main ones:

- The first is to cover strategic gaps in policies by including specific industries and sectors to minimise the different gaps through which women in all their diversity and marginalised individuals fall. This requires taking on a **bird’s-eye-view of technology** to investigate the **life-cycle of different technologies** from sourcing all the way through to their use and maintenance. This approach requires the recognition of the geopolitical capacity and responsibility for the imbalance in terms of where the technology is made and where harms are experienced.
- The second is to recognise the **specific gendered harms of technology** which requires highlighting tech-enabled harms and effects in governance instruments that are directed towards preventing TFGBV and other gendered harms.
- The third approach looks at how the practice of tech governance must in itself be approached through feminist practices. The application of such practices means taking into account **who is at the table, who is consulted and centring cross-industry collaborations**. Therefore, tech governance is a feminist issue not just for the global Majority World but everywhere.

102 Mozur, P. (2018): *A Genocide Incited on Facebook, With Posts From Myanmar’s Military*. The New York Times.

103 Khan, S. (2017): *Surveillance as a Feminist Issue*. Privacy International.

Moving from data harms to data rights: A feminist approach to data in development

Sara Baker, *Feminist consultant and researcher*

The collection of personal data has become a key function of digital technologies: From digital identity systems and facial recognition to social media algorithms, a variety of digital tools are collecting data. The collection of personal data is frequently **invasive, excessive, and lacking in transparency, accountability and meaningful consent**. Alongside these issues is the threat of using data collection tools to **surveil, target and manipulate**. While digital tools may provide benefits to people, their systems tend to **reinforce existing power imbalances and inequalities**, causing the most harm to already marginalised communities.

The explosion of AI-enabled systems such as large language models and facial recognition technology has raised concerns among researchers and activists, where prominent female experts have documented and raised awareness of harms related to systemic racism and sexism, as well as colonialism.¹⁰⁴ They have also pointed out that these systems depend not just on data but on the **labour of underpaid workers in the Majority World** who label data and moderate content.¹⁰⁵ Moreover, data-driven technologies are often **tested on vulnerable populations in a humanitarian and development context** and at borders, entailing that datafication is not only a human rights issue but a feminist development issue.¹⁰⁶

DATA SECURITY KNOWLEDGE AND AWARENESS

As elaborated earlier in this study, with the gender digital divide come lower rates of digital literacy among women and girls,¹⁰⁷ which likely means lower rates of **data security knowledge and data rights awareness**.¹⁰⁸ Combined with vague privacy policies from digital tools, this gap means consent for data collection is rarely meaningful and informed. It also implies that too many women and girls do not know how to protect their data or opt out of data collection where possible. They have little power to own or reclaim their data even as governments and corporations harvest it for power and profit.

In Kenya, where mobile lenders are pervasive, a lack of historical data on women can lead to discrimination in financial lending.¹⁰⁹ In Bahrain and Jordan, female human rights defenders live in fear after discovering sophisticated spyware has been collecting data from their devices that could be used to threaten, intimidate and shame them.¹¹⁰ In India, trans people face exclusion from the nation's digital identity system which limits their access to vital services.¹¹¹ More broadly, generative AI can shape worldviews and institutions in harmful ways. In order to create content in response to human prompts, generative AI systems scrape data from the internet – articles, social media posts, forums, pornography sites, and more – which means it **reinforces the biases** that exist in that data. As use of generative AI grows and potentially becomes embedded in human communication and decision-making, it will exacerbate systemic sexism making it harder to address issues like gender gaps and gender-based violence.

104 Bender, E. et al. (2021): *On the Dangers of Stochastic Parrots: Can Large Language Models Be Too Big?*; Buolamwini, J. and Gebru, T. (2018): *Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification*. Proceedings of Machine Learning Research, 81, 1–15; Noble, S. (2018): *Algorithms of Oppression: How Search Engines Reinforce Racism*. NYU Press and Birhane, A. (2020): *Algorithmic Colonisation of Africa*. Scripted, 17 (2), 389–409.

105 Williams, A. et al. (2022): *The Exploited Labor Behind Artificial Intelligence*. Noema.

106 Molnar, P. (2020): *Technological Testing Grounds. Migration Management Experiments and Reflections from the Ground Up*. EDRi.

107 Gattorno, G. et al. (2022): *Bridging the Digital Literacy Gender Gap in Developing Countries*.

108 Sey, A. and Hafkin, N. (eds). (2019): *Taking Stock: Data and Evidence on Gender Equality in Digital Access, Skills, and Leadership*. United Nations University Institute on Computing and Society and ITU.

109 Borokini, F. et al. (2021): *Engendering AI: A Gender and Ethics Perspective on Artificial Intelligence in Africa*. Pollicy.

110 Access Now and Front Line Defenders (2022): *Unsafe Anywhere: Women Human Rights Defenders Speak Out About Pegasus Attacks*.

111 Brindaalakshmi, K. (2020): *Gendering of Development Data in India: Beyond the Binary #4, Digital Services and Data Challenges*. The Centre for Internet & Society.

COUNTERING HARM WHILE ACTIVELY SHAPING DIGITAL TECHNOLOGY

Fortunately, new actors have been undertaking crucial work to document and address these harms and to construct additional approaches to **just digital technologies and data**. Activist Paz Peña works with *Coding Rights* to examine AI systems in Latin America through a feminist lens,¹¹² while *Pollicy* in Uganda conducts similar work on AI in Africa.¹¹³ Rachel Adams of *Research ICT Africa* explores data protection, gender, and AI in South Africa,¹¹⁴ and researcher Chenai Chair founded *My Data Rights* to deploy a feminist methodology to analyse AI, privacy, and data protection. In India, Radhika Radhakrishnan counters the datafication and surveillance of female, trans and non-binary bodies by imagining a feminist smart city,¹¹⁵ while *Body & Data* in Nepal works on gender and data privacy in addition to other digital rights.¹¹⁶

Indigenous researchers and networks such as *Indigenous Data Lab*¹¹⁷ and the *Global Indigenous Data Alliance*¹¹⁸ support **Indigenous data sovereignty** based on historical methods of holding, sharing knowledge and Indigenous people's rights to control data about their territories, people and ideas. The *CARE Principles for Indigenous Data Governance* lay out expectations for using data related to Indigenous territories, cultures and individuals. Meanwhile, *Tierra Común* is an initiative that aims to **decolonise data** by inviting people to “imagine a future where the terrain of human life does not involve extraction of data that discriminates between us and separates us from our own lives”.¹¹⁹

DATA FEMINISM: AN INTERSECTIONAL FEMINIST PERSPECTIVE

Furthermore, the concept of ‘data feminism’ taken from Catherine D’Ignazio and Lauren Klein explains how to **rethink data from an intersectional feminist perspective**, encouraging people working with data to examine and challenge power, embrace emotion and embodiment as knowledge, rethink binaries and hierarchies, embrace pluralism, consider context, and make labour visible.¹²⁰ These seven principles can promote more just feminist approaches to using data in a range of digital technologies, as well as working with data for research and advocacy. Moreover, a number of initiatives are using data responsibly to work toward gender equality, including projects mapping gender-based violence like *Feminicidio Uruguay*¹²¹ and *Maru*,¹²² a feminist chatbot with an emphasis on privacy that helps people facing online harassment.

THE WAY FORWARD: A FEMINIST APPROACH TO DATA IN DEVELOPMENT

Taking all of the above approaches into account, the following recommendations can be made for a feminist development policy for Germany:

- A feminist framework for data protection in development contexts would prioritise the **experiences and realities of the most marginalised** and develop **robust consent mechanisms** that involve building awareness of data rights.

112 [Coding Rights](#).

113 [Pollicy](#).

114 [Research ICT Africa](#).

115 [Radhika Radhakrishnan](#).

116 [Body & Data](#).

117 [Indigenous Data Lab](#).

118 [Global Indigenous Data Alliance](#).

119 [Tierra Común](#).

120 D'Ignazio, C., and Klein, L. F. (2020): *Data Feminism*. MIT Press.

121 [Feminicidio Uruguay](#).

122 [Maru](#).

- This framework would explore **alternative governance** methods such as data sovereignty and seek to disrupt power imbalances. The use of data for understanding and addressing issues related to gender equality should, as researcher Nicole Shephard points out, “question the power relations behind who gets to collect and compute data about whom, to what ends; the terms of agency, consent, ownership and access; and the resulting human rights implications every step along the way”.¹²³
- A feminist development policy should also enhance **data protection frameworks and protocols** to minimise data collection and prioritise needs of the most harmed; reimagine informed consent processes to address power imbalances; and draw on learnings from the Majority World, especially from women in all their diversity, non-binary people, marginalised groups and feminist practitioners.
- It should increase **opportunities for digital and data literacy in different contexts**; build awareness of data rights; and co-create ways for people to challenge power imbalances, such as improved accountability mechanisms.
- Finally, such a framework for feminist development should develop and strengthen **collaborations with feminist, women-led and data/digital rights groups from the Majority World** to ensure women in all their diversity, non-binary people and marginalised groups can meaningfully contribute to the life cycle of digital policies and tools; and invest in the sustainable development and implementation of feminist alternatives to dominant tech tools from the private sector.

In order to address with due urgency the harms raised by pervasive data collection, feminist development policy should consider the ways in which emerging technologies may create barriers to achieving feminist development goals even as these technologies help to meet other goals. For the harms of using data-driven technologies in development and humanitarian contexts often outweigh the benefits.¹²⁴ Mitigating these harms requires a deeper understanding of how such systems can impact people in the Majority World, especially women in all their diversity and marginalised groups.¹²⁵ As researcher Rajit Singh notes: “The South is a rich empirical site to think through the diffraction in ethics and politics of data-driven technologies, which can also contribute to new and useful framings for allied computational justice efforts in the North.”¹²⁶ However, dominant regulatory frameworks and policy discussions often **impose Western values and ignore contextual nuance** that might strengthen protections that cover all people.

Ultimately, exploring data problems and solutions with the people most affected by them can lead to sustainable change that enhances development goals. Pursuit of these goals means investing in data and digital literacy and rights, developing and promoting feminist and decolonial data approaches, pushing for data worker protections, and working with communities to co-create opportunities for women and girls, non-binary people and marginalised groups to contribute to decision-making, engaging with the design and implementation of data-intensive systems and policies.

123 Shephard, N. (2016): *Algorithmic Discrimination and the Feminist Politics of Being in the Data*, GenderIT.

124 Guzman, L. (2023): *In the Humanitarian Sector's Search for Efficiency, Are We Falling Short?* The Engine Room.

125 Sey, A. and Ahmad, S. (2020): *An African perspective on gender and artificial intelligence needs African data and research*. Research ICT Africa.

126 Singh, R. (2021): *Mapping AI in the Global South*. Medium.

Decolonial perspectives on digital technology

Nakeema Stefflbauer, PhD, *FrauenLoop*

This contribution outlines decolonial perspectives on the current state of digital technology and states the relevant imperatives in the context of international development. The development sector is not exempt from **inherent imbalances and unfairness** in the first place. It is important to mention that the idea of global development itself amplifies the inputs and objectives of some actors over others. For instance, while sponsors' objectives define a target, recipients' objectives may not be incorporated into policy. This dynamic causes many to consider the nature of global development to be extractive. Otherwise, how can "development" be achieved without incorporating the goals and realities of local populations?

Economic development policies usually have a **focus on capital**. The push to decolonise development – as with education, healthcare, financial systems, and now the digital landscape – relies on upending the outsized influence of those with access to capital in favour of **community-based and community-driven solutions**. Decolonial practice involves centring the needs and rights of individuals and communities without repeating historical power dynamics. Yet, exclusion and imbalance continues to define development policies aimed at less economically viable states as well as societies where technological development has reached an apex. A decolonial approach to development is as urgently needed in the Majority World as it is in the so-called Global North.

The digital development policies have created synergistic digital ecosystems around the world that do not support community goals. If anything, they support **the centralisation of capital** in the hands of those individuals and industries that propose to increase the value of their capital the most. Global juggernauts like *Meta*, *Google* and *Microsoft* were not funded with a view to expanding the quality of online contact between communities. It is rather that these companies are financial gambles which have paid off for their investors, thus providing capitalist models for other investors to follow.

The problem with this *capital-led model for development* is that just as communities and individuals without access to capital are excluded from meaningful involvement, so countries and even governments without access to similar levels of capital can be excised from the digital transformation of their own societies. Without policies that tip the scale in their favour, historically less-advantaged individuals, communities and countries lose agency in capital-driven development.

DIGITAL EQUITY FOR ALL?

If there is one thing that most digital transformation, AI and robotics initiatives share, it is that these innovations seem to have been created **by (and for) an audience of men**. The internet is, of course, utilised by a range of different communities worldwide, but most digital activities, products and services reflect a few dominant perspectives. This focus has caused an overabundance of digital apps for English-speakers, for people with excess disposable income, and for people who live alone and/or outside of a larger family unit. With capitalist objectives driving most digital policies, an overabundance of solutions specific to investors' preferences makes sense. Western investors, like those in the Majority World, tend to be white men and their perceptions of the most easily monetised digital solutions are what societies usually get, regardless of what is wanted or needed. This is the type of inequity that the decolonising movement aims to rectify. Along with highlighting the perspectives and objectives of under-represented groups, decolonising means investigating what has already been developed and how historical patterns of injustice have been reproduced.

Who has benefited from digital transformation and who has ended up disadvantaged by its growth? For the former, we have investors and the institutions and governments that function as large-scale investors with a strong profit motivation. But what of the latter? Viewed from almost every angle, women in all their diversity and marginalised groups have been **excluded from the wave of digital transformation** – and when not excluded, they have been relegated to the role of capital-recipients with negligible ability to shape the digital landscape.

Decolonisation seeks to reverse this by rendering the channels of participation in development more accessible. Decolonisation also involves preventing the use of **extractive, two-tiered economic models whereby** (as in colonial times) one group shapes policies to its benefit and other groups must implement those policies, often to their detriment. To be clear, extractive two-tiered development models are thriving. Buoyed by global capitalism and capitalist incentives, a whole generation of digital workers in the Majority World participate in the pruning and maintenance of transformative technologies without having any say in how those technologies are deployed. These are the data-workers in Kenya and Venezuela who keep online portals, chat-bots and image-generators free of profanity, racism, sexism and violence. But this is also the lot of women in a digital ecosystem that has been organised around capital and its growth by those controlling the capital at the expense of all others.

UTOPIA FOR A FEW

The speed of digitisation far outstrips the societal push for more inclusive digital spaces. But as traditional industries have incorporated ‘tech industry’ roles and functions into their ranks, vast data extraction processes have driven a new high of global consumption via digital tools. We live in a world where many lack access to high-speed digital connectivity, but the majority of new tech development is created for an audience that has online access twenty-four hours a day. Today, women excel at every level of public education yet *Wikipedia*, *Google* and the latest algorithmic chat bots struggle to cite even a few examples of world-renowned women in the industry before citing men. These are just two examples of the ways that **constructed digital realities frequently fail to match lived realities**. Historical monopolies of power and the concentration of capital suggests that we cannot develop more representative digital futures unless we look to new structures, new models and new organising principles. This is where **de-growth**, **decolonisation** and **cooperative development** fit into the economic development space.

Degrowth, in the form of non-extractive commercial ventures like *Radically Open Security*¹²⁷ in the Netherlands, is a means to limit growth to a sustainable level that minimises environmental and social harm. Meanwhile, decolonisation (see: *Decolonising Digital Rights Initiative at Digital Freedom Fund*¹²⁸) is intended to ensure that the development of digital products, services and spaces are based on the needs and rights of communities instead of providing profit opportunities for venture capitalists. Cooperative developments like *Zebras Unite*¹²⁹ seek to elevate community-based cooperative businesses that promote social good as well as economic profit.

These initiatives aim to transform the underlying power dynamics of the real world and its digital equivalent. This means creating ways **to shift the ecosystem of digital transformation** away from centring profit-driven, mostly male investors, founders and government actors.

DECOLONISING DATA

We are presently engaged in a wave of algorithmic innovation that is touted as a technological breakthrough for the world. However, these innovations have been introduced in an extractive way, whereby ‘free’ services are offered to the public in exchange for personal data. The high-speed data-harvesting of many digital enterprises has already gone on for so long that it may be difficult to see these enterprises as neo-colonial – that is, until the degree to which they exploit data subjects becomes more broadly understood. Data is not neutral. Just as policies to help develop (and to under-develop) countries and regions also pursued clear geopolitical goals, the manipulation of data troves to train algorithms benefitting government, military and law enforcement agencies is not a natural occurrence.

The automation processes are being applied to almost every area of life, from education, finance and health to social welfare and employment-related decision-making. But the more AI technologies are baked into the design of future digital systems, the less those

127 [Radically Open Security](#).

128 [Digital Freedom Fund](#).

129 [Zebras Unite](#).

historically under-represented groups will be fairly represented. From successive Dutch social benefits disasters to the ongoing US facial-recognition nightmare, we see that the benefits of technology tend to elude those who are not part of the innovation process.

In the light of the disproportionate harms that women face when AI decision-making systems are publicly deployed, the *World Economic Forum* suggests that the total number of AI professionals stood globally at only 30 per cent of women to men in contrast to 70 per cent as of 2022.¹³⁰ Clearly, **societal patterns of exclusion** will persist without incentivising innovation differently. One such form of incentivised change is the adoption of feminist development policies. To effect real change, these policies should move past asking ‘who is not in the room?’ to engaging actively with those who are most likely to be harmed by digital exclusion, thus amplifying their rights.

We already know that a safer, less exploitative and more equal society would include **balanced gender roles, fair wages and more representation within the corridors of power**. What organisations and initiatives like those mentioned above have managed to achieve is to **reward locally-focused, accessible and sustainable digital practices as catalysts for global development**. That is, fostering engagement and social inclusion at a high level instead of simply accelerating the concentration of capital. To alter the extractive state of current-day digital transformation, it is not enough simply to create targets and best practices that dominant actors in the ecosystem can simply ignore. Disrupting the homogeneity of core digital funding mechanisms – through nonprofit and cooperative schemes that centre people and nature instead of profit – may prove to be the only way to foster inclusive, intersectional digital engagement in our social, political and economic future.

A good example



Whose Knowledge:
Decolonising approaches
to technology and know-
ledge in the digital space.

Whose Knowledge is a global campaign for centring knowledge of marginalised communities on the internet. Working with women, BIPOC and LGBTQ+ communities with the aim of radically re-imagining and re-designing the internet, *Whose Knowledge* draws attention to the reproduction of colonial continuities and patriarchy in digital spaces and explores the question of ‘Whose knowledge and languages are prioritised on the internet?’. In practice, the work revolves around various collective practices, such as the *#VisibleWikiWomen Challenge* – a yearly campaign focusing on making notable women’s biographies more visible by gathering and uploading their images to *Wikipedia*. *Whose Knowledge* thus raises awareness about the underlying (often invisible and biased) architecture of the internet which has an impact on how users engage with it as a knowledge resource and also empowers women in all their diversity and marginalised communities to take action and demand change.

Techsolutionism must go: Undoing our extractivist growth model for climate justice

Madhuri Karak, PhD, Feminist consultant and strategist

We are witnessing a **series of climate emergencies** this year. Global ocean surface temperatures stand at record or near-record levels, creating conditions for an El Niño event in the tropical Pacific Ocean that will destabilise the weather in most parts of the planet.¹³¹ Heat waves have plagued Europe and parts of Asia through the summer, while north central Siberia hit 38°C in early June.¹³² The toll on human livelihoods, cultures and the planet is mounting and disproportionately affecting historically marginalised communities. However, a common thread is discernible in efforts to combat climate change: **solutions fueled by technology**.

Technological solutions to reducing greenhouse gas emissions from burning fossil fuels, deforestation and industrially raised livestock – the main causes of human induced climate change – leave unexamined the predominant reason behind how we got here in the first place.¹³³ Our **economic model insists on limitless growth**, and that requires perpetual extraction of profit from humans and nature alike. Technical solutions to climate change like predictive analytics, green technologies and renewables still rely on our bodies and planetary resources as **sites of extraction**. This is why ‘green extractivism’ is a critical challenge for governments, civil society actors, social movements and multilateral bodies like the UN and the EU – they spotlight the technologies deemed necessary for decarbonising the global economy as neither sustainable nor green.

Exploiting newer forms of nature also exacerbates harms towards women and marginalised groups who

have paid the **heaviest price for the extractive development model**. The ills of green extractivism encompass economic insecurity, loss of safety, limited political participation and the erosion of socio-cultural knowledge systems, impacts not dissimilar to the fallouts from coal- and oil-powered development.

→ In contrast, a feminist development policy should foreground rights, resources and representation as fundamental to our collective futures, extending this approach to technology while the climate crisis demands a **reframing of our relationships with technology and digitisation**.

Developed and published by a coalition of movements in 2016, FPI, mentioned earlier in this study, are a series of 17 statements on internet rights from a gender equality perspective. Between 2019 and 2023, an 18th FPI on environment was formulated as a call for “a non-extractive, decolonial, feminist internet that respects and centres earth justice”.¹³⁴ This framing explicitly connects **planetary health with technologies** that are less about extractivism-reliant innovation and more about care and shared accountability.¹³⁵ So how can we put aside the devices in our pockets and the internet as we know it, both of which materially speaking necessitate extractivism to work?

Digital infrastructures like community-run data centres with decentralised access, control, and management over a community’s ‘digital territories’ offer one answer to that question. In Bahiá, Brazil, the solidarity movement *Rede Mocambos* runs *Baobaxia*, a tool designed to “safeguard, manage and share the memories of communities, without necessarily relying on the internet”.¹³⁶ In India’s southern state of Karnataka, *Design Beku* has co-created repositories of audio and video recordings about local health experiences and knowledge for low-income, non-urban communities.¹³⁷ These archives live on a *Community Owned Wireless Knowledge Infrastructure* (COWKI) deployed over a combination of mesh network and

131 Daniels, J. et al. (2023): *South America braced for economic hit from return of EL Niño*. Financial Times.

132 Paddison, L. (2023): “Siberia swelters in record-breaking temperatures amid its ‘worst heat wave in history’”. CNN.

133 European Commission (n.d.): *Causes and consequences of climate change*.

134 Radloff, J. (2023): *More questions than answers: Collectively shaping a Feminist Principle of the Internet on the environment*. APC.

135 Ciacci, J. (2020): *Imagining a principle for a feminist internet focusing on environmental justice* in Global Information Society Watch (ed.): *Technology, the environment and a sustainable world: Responses from the global South*. APC and SIDA.

136 *Rede Mocambos*.

137 *Design Beku*.

SIM-enabled routers. Initiatives like Baobaxia and COWKI have also grown out of community needs and, like the above approaches, illustrate the following principles relevant for a feminist development policy:

- They enable locals to exercise **their right to data privacy**, while their daily functioning draws on **community resources of labour** and **generational knowledge**.
- This model of ownership and daily management ensures that the community's otherwise marginalised worldviews are represented in the technologies that serve them.
- A feminist digital future that is also climate-just should thus invest in **communities' capacity to exercise autonomy** over where and how they store their data, determine who has access to it, and what data is digitised – something that feminist movements are increasingly addressing.
- In addition to technical expertise, we must also invest in expanding **our vision for localised and sustainably-run digital infrastructures** that are not hostage to monopoly control by Big Tech on the one hand, while creating smaller carbon footprints than their server farm counterparts, on the other.

Feminist movement building in the digital era

Editorial team, *betterplace lab gGmbH*

Today's feminist movements are increasingly utilising digital technologies to grow, raise awareness and pursue their goals. This development is widely known as 'Fourth-wave feminism'. The rapid digital changes that characterise work and life today have not only led to new ways of feminist organising, but have also strengthened existing feminist networks. Digital movements and activism have enabled some of the most significant feminist uprisings in recent history, especially through 'hashtag feminism'. This digital phenomenon has enabled the growth of virtual spaces where marginalised individuals and groups can connect and exchange diverse experiences. Social media platforms are therefore essential spaces to be used by feminist movements and individuals for sharing information, connecting together and protesting.

As political movements have increasingly come to use digital spaces, there is more knowledge and awareness of the inextricable and interchangeable nature of online and offline spaces with regard to political causes. One example is the *Lahu Ka Lagan* (eng. tax on blood) social media campaign initiated by the Indian non-governmental organisation *She Says India* in 2017. The campaign demanded that the government remove the VAT tax on luxury-level items from sanitary products used by people who menstruate. The demand and protest to solve this offline problem, which particularly affects marginalised groups and people in vulnerable situations, were initiated online. The demands of the campaign became widely spread through the help of social media and were repeatedly taken to the streets in protests. In response to these ongoing protests, the Indian government scrapped the tax on sanitary pads in 2018.

This example points to the success and fluidity of contemporary feminist movements as they shift between offline and online spaces, blurring the boundaries between the two. It further demonstrates that it is not only gender-based violence and discrimination but radical political movements that occur simultaneously in both online and offline spaces.¹³⁸

A good example



Breaking new ground: How

Numun Fund supports technological infrastructures for feminist activism, organisations and movements

Numun Fund is the first dedicated fund for feminist tech in, for and led by feminists based in the Majority World. The geographical and community focus challenges the current status quo on the technological resources and decision-making being concentrated in the Global North and, in turn, leaving women in all their diversity and other marginalised groups from the Majority World without much influence on the decisions of mainstreaming digital rights.

After the launch of its first grant call in 2022, the fund now supports 43 groups and initiatives from 30 countries across the Majority World. The fund supports the response, solutions and vision of communities that are specifically impacted by technological developments because of the discrimination, inequality and exclusion they face. *Numun Fund* aims to seed, resource and sustain feminist groups who engage with technology in their activism to support a stronger ecosystem of feminist tech activism, to strengthen the power of human rights movements and to build technology for a more just world.

CHALLENGES PERSIST IN DIGITAL SPACES

Despite digital technologies becoming powerful tools for building feminist movements and action, some organisations have not yet succeeded in making the shift to digital due to a lack of digital skills and limited or no digital access and resources. Even for those who made a successful shift, their work and organising continues to be obstructed. Digital movement-building and mobilisation come with a **high risk of various forms of backlash**, such as social media or internet shutdowns and TFGBV in its different forms.¹³⁹

In many countries, **the rising incidence of digital repression** has serious consequences for fundamental human rights such as the freedom of expression and access to information. Digital repression has a particularly strong effect on women and LGBTIQ+ people by limiting or completely blocking their access to knowledge and spaces where they can learn about sexual and reproductive health and rights, engage in gender equality advocacy and similar.¹⁴⁰ Alongside this rising digital repression, women and girls in all their diversity have been specifically targeted by **worldwide anti-feminist backlashes**. Anti-gender actors, who propagate an anti-liberal and patriarchal agenda hostile to the concept of universal and indivisible human rights,¹⁴¹ increasingly use online strategies to silence feminist activists, politicians and journalists who advocate for the rights of women and girls in all their diversity and marginalised groups.¹⁴² This in turn limits their ability to participate meaningfully in public spaces and influence mainstream discourse, while sometimes driving them from digital spaces altogether.¹⁴³

139 Nadège (2017): *Feminist autonomous infrastructure in the internet battlefield: From Zombies to Ninjas*. GenderIT.

140 CIVICUS (2023): *A Deepening Crisis*.

141 Denkovski, D. et al. (2021): *Power over Rights. Understanding and countering the transnational anti-gender movement. Volume I*. Centre for Feminist Foreign Policy, 9.

142 Posetti, J. et al. (2020): *Online violence against women journalists: A global snapshot of incidence and impacts*. UNESCO.

143 Vlahakis, M. (2018): *Breaking the Silence: Ending online violence and abuse against women's rights activists*. Womankind Worldwide.

THE URGENT NEED FOR AUTONOMOUS FEMINIST TECH INFRASTRUCTURE

Today there is undeniably an urgent need for an autonomous feminist tech infrastructure to enable communities and activists to continue to work actively towards feminist digital futures, simultaneously eradicating violent acts and backlashes against feminist work. Given that powerful Big Tech companies are mainly driven by profit to build new technology, the following objectives should be of major concern for a feminist development policy in the digital space:

- Direct resources to established **grassroot international feminist networks, smaller feminist organisations and individual digital activists**, as well as micro enablers, intersectional feminist initiatives and underrepresented groups including women with disabilities, LGBTIQ+ persons;
- Listening attentively to **the needs of the Majority World spaces** where some of the most important feminist tech knowledge and work is currently being created.

The funding institutions and systems that are currently in place have been essential for the continuation of the important work conducted by feminist organisations and individual activists. However, they often fail to reach those who need support the most as funding systems commonly function within institutional bureaucracies and demand that receiving partners have clear project objectives and outcomes rather than supporting simplicity, accessibility and opportunities to learn, organise and expand.¹⁴⁴ Thus, a feminist development approach in the digital space should:

- Direct **resources towards feminist-led movement infrastructures** that ensure storage and data autonomy, reduce reliance on Big Tech for building feminist movements, and create greater conditions of safety for digital activism;
- Learning from existing good practices built by affected communities, such as Numun Fund.

Towards a feminist digital future

To imagine a truly feminist digital future is to picture a (digital) world free from every form of violence and exploitation, and free of extractivism for the sake of profit through rapid and unsustainable technology development. A feminist digital future is one in which feminist movements are there to observe, celebrate and maintain the successes and well-being of all people, where technology is used for the benefit of human beings while respecting nature and all the living beings that inhabit it.

A feminist development policy in the digital space can contribute to this vision. Building upon the concepts of inclusion and transformation, a feminist development policy in the digital space encompasses a range of digital topics – always upholding equality, freedom, human rights and self-determination. In doing so, a gender-equitable digital transformation and systemic change may turn from a conviction to a lived reality.



144 Batliwala, S. (2012): *Changing their World: Concepts and practices of women's movements*. Association for Women's Rights in Development.

GLOSSARY

This glossary includes the most essential terms of this publication. A more comprehensive glossary can be found in the strategy “Feminist Development Policy. A Just and Strong Societies Worldwide” of the *Federal Ministry for Economic Cooperation and Development* (BMZ).

Data

Generally, data describes pieces of information. Digital data is digitally stored information that is accessible for electronic processing, i.e. it can be read and interpreted by a computer. The term ‘data’ is also used for data bundles provided by internet service providers in order to access the internet.

Digital inclusion

Digital inclusion means that everyone has access to and the ability to use digital technologies for whatever purpose. Inclusion seeks to close not only the digital gender divide but other social divides to allow everyone to participate fully in digital transformation and its benefits.

Digital technologies

Digital technologies are tools, systems, devices and resources that generate, process or store data. They are continually evolving and include, among others, computers, the internet, mobile devices, digital networks, digital content, applications, artificial intelligence (AI) and robotics.

Digital transformation

Digital transformation describes the significant changes occurring in everyday life, the economy and society through the use of digital technologies as well as their impact.

Gender

Gender is a socially constructed category and refers to behaviour and expressions attached to a specific gender identity, i.e. being a girl, boy, man, woman or gender-diverse individual.

Gender digital divide

The gender digital divide primarily refers to the gender divide in access and use of digital technologies and the internet. Yet, it also spills over into areas of digital skills, employment and entrepreneurship in science, technology, engineering and mathematics (STEM) fields.

The need to close the gender digital divide is widely recognised, and an important step towards achieving the 2030 United Nations (UN) Sustainable Development Goals (SDGs).

The gender digital divide is a complex global problem. For example, while part of the Majority World encompasses some of the widest gender digital divides in terms of access to the internet, parts of the Global North experience some of the widest gender digital divides in terms of STEM education.

Gender equality

Gender equality refers to equal rights, duties and opportunities for all genders. Gender equality goes beyond (theoretical) treatment in law, and seeks to eliminate deep-rooted forms of gender discrimination.

Intersectional feminism

There is not just one feminism. Feminism encompasses a range of diverse trends and dynamic movements across the globe. All these feminism(s) share an opposition to discrimination and to oppressive systems and the commitment to gender-equitable power relations. The concept of intersectionality – coined in the 1980s by Kimberlé Crenshaw – then describes how inequalities resulting from different power systems interact and how new forms of discrimination emerge. Intersectional feminism, or an intersectional approach to feminism, thus takes into account the multifaceted nature of oppression and works towards ending all forms of discrimination and violence.

Majority World

Many terms used in development cooperation explicitly and implicitly express hierarchies, exclusion and othering. ‘Majority World’ is an alternative term for spaces formerly referred to as the ‘Developing World’ and the ‘Third World’. The term explicitly challenges Western rhetoric and the development paradigm.

The term ‘Majority World’ defines communities for what they have rather than what they (might) lack. Furthermore, in contrast to ‘Global South’, referring to the Majority World highlights the fact that most of the world’s population lives in countries generally referred to as ‘developing’.

Technology-facilitated gender-based violence (TFGBV)

TFGBV is defined as an “act of violence perpetrated by one or more individuals that is committed, assisted, aggravated and amplified in part or fully by the use of information and communication technologies or digital media, against a person on the basis of their gender”¹⁴⁵

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