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# The Opportunities and Risks of New Technologies for Women's Economic Empowerment

**WOW Helpdesk Query 49**

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**Query Question:** To understand how gender and inclusion (G&I) and women's economic empowerment (WEE) are being integrated into digital/tech programming at the Prosperity Fund (PF), and to understand the opportunities to increase the level of ambition on G&I/WEE.

1. What is international best practice for digital & tech-related economic development interventions with respect to G&I/WEE, paying attention to both middle-income and low-income countries?

2. How is international practice changing because of COVID-19?

3. In the three selected programmes, what are the key opportunities and the risks/barriers for meeting minimum standards on the G&I Framework and for increasing the level of ambition of G&I/WEE, with particular attention to digital/tech elements of interventions?

   How can the risks/barriers be mitigated/overcome?

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# Acronyms

| | |
|---|---|
| DCMS | Department for Digital, Culture, Media and Sport |
| DFID | Department for International Development |
| FCDO | Foreign Commonwealth and Development Office |
| G&I | Gender and inclusion |
| G2P | Government-to-person |
| HMG | Her Majesty's Government |
| ICT | Information and Communications Technology |
| IFC | International Finance Corporation |
| LIC | Low income country |
| MIC | Middle income country |
| MSME | Micro small and medium enterprise |
| ODA | Official Development Assistance |
| PF | Prosperity Fund |
| WEE | Women's economic empowerment |
| | |

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# 1. Executive Summary

## 1.1 Introduction

The overall objective of this query is to provide guidance and entry points for Prosperity Fund (PF) programmes to take advantage of the opportunities and manage the risks of new technologies for gender and inclusion and women's economic empowerment (G&I/WEE). This summary provides headline findings and recommendations.

## 1.2 International best practice

The digital gender gap is growing in the developing world. The most significant barriers to connectivity that women face are the **high cost of data and internet-enabled devices, limited digital skills, and a lack of relevant online content**. In addition, one of the biggest challenges in emerging economies is the low level of literacy among women. Despite this, there are encouraging examples of good practice. However, it is important to note that the evidence base is still emerging, particularly with regard to recent technologies.

- **Top-down policy from central to local government that works closely with the telecommunications industry can increase rural connectivity in a comprehensive way.** For example, China has brought internet connections to 69,000 villages via a coordinated effort.
- **Low-cost tech alternatives can reduce the digital gender gap due to the link between gender and poverty.** For example, in India, smart feature phones, as an affordable alternative to smartphones, have helped reduce the mobile internet gender gap.
- **Financial support can remove bottlenecks.** In Costa Rica, a government scheme that provides a subsidy to low-income households to purchase a fixed internet service and a computer has promoted internet access for women and low-income groups.
- **Access to mobile savings facilitates financial management of micro-businesses.** A project in Tanzania showed that when women entrepreneurs have access to mobile savings accounts, they save more money, an effect which increases when combined with business skills training.
- **Digital ride-hailing apps with low entry barriers for drivers** make it easier for women to enter an occupation that few have traditionally pursued.
- **Digital identification systems have the potential to drive progress in WEE.** In Pakistan, the use of a Computerized National Identity Card ensures that money is paid directly to women, giving them greater decision-making power and ability to spend on household needs.

In **Table 1** we present **Digital/Tech Entry Points on WEE** across women's different market roles (product consumers, entrepreneurs, service users, and employees in the digital/tech sector) for each level of ambition of the Prosperity Fund Gender and Inclusion Framework. These entry points should be read alongside the Prosperity Fund's overall G&I Framework (Annex 1) to understand how the specific digital/tech interventions complement the more wide-ranging measures of the Framework.

At the **minimum compliance** level, entry points include supporting partner governments with the creation/expansion of digital ID schemes that enable direct cash transfers to women and providing targeted cyber hygiene training to new digital users to address online risks. Entry points at the **empowerment level** comprise designing online content that is tailored to be relevant to women's business needs and providing smart/feature phones to women. At the **transformative level,** involving women in the development of the digital regulatory environment and developing digital tools to ensure that women working in trade are kept informed about market information are suggested entry points.

## 1.3 COVID-19

**The COVID-19 pandemic has the potential to create opportunities for G&I/WEE as well as to exacerbate existing inequalities.**

- The huge growth in the digital/tech sector arising from the COVID-19 response is likely to disproportionately benefit men since they are already over-represented in the sector. However, this growth may also lead to **potential employment opportunities for women and more flexible working arrangements.** A reduction in funding may disproportionately affect women-led start-ups which already struggle to attract investment from male investors.
- Systems have facilitated remote cash payments to vulnerable populations such as women and informal workers. However, the urgency of the response risks side-lining gender concerns. Most countries are not reporting sex-disaggregated data on the recipients of digital transfers.

## 1.4 Programme reviews

Three programmes were reviewed, with evidence of interventions around gender and inclusion at both minimum compliance and empowerment level already being implemented. This report suggests how these could be enhanced, as summarised below.

**Mexico Bilateral Programme**

The programme team has made significant effort to mainstream gender considerations, although more could be done on social inclusion. It meets at least minimum requirements on four out of five aspects of the PF Scorecard Stocktake analytical framework.

The Financial Services strand should support the development of affordable **smart feature phones** for marginalised groups, especially indigenous and rural populations. There is an exciting opportunity to learn more about the **profile of Mexico's large informal sector** via the mining of pension data. The programme should ensure disaggregation of data by sex and other characteristics, such as ethnicity.

**Digital Access Programme**

This is PF's flagship programme on digital for development. It meets at least minimum requirements on four out of five aspects of the PF Scorecard Stocktake analytical framework. The Kenya strand has adapted an online education programme so that students with disabilities can keep up to date with their studies, whilst the South Africa strand has conducted cyber hygiene skills training.

The Kenya strand is currently working with underserved women to **co-create locally relevant digital content**. This is an important initiative that can increase women's use of digital services and potentially improve their business opportunities. The programme should assess this intervention and, if it is effective, scale it up in the other four countries. Across its five focus countries, the programme should design targeted digital interventions for **marginalised ethnic/racial groups**.

**Global Finance Programme**

This programme only meets minimum requirements on one out of five aspects of the PF Scorecard Stocktake analytical framework. Our review focuses on the Catalyst Fund (CF), which is an inclusive FinTech accelerator that assists start-ups lacking capital and networks to help them build solutions for underserved communities in five key markets: India, Kenya, Mexico, Nigeria, and South Africa.

The CF should **make the business case to male investors to encourage them to invest in female-led start-ups**, although we note that this is challenging. It should also consider supporting organisations that include **social norms training** that challenges men's and women's beliefs about women's entitlement to use digital services.

## 1.5 Recommendations

**Minimum level:**

1. Integrate cyber hygiene[1] training into all programmes that include digital features.
2. Explore digital solutions that can reach all groups to disseminate information about COVID or any other emergency.
3. In line with the PF G&I Framework's minimum compliance requirement, ensure that all PF programmes include digital in their risk assessments, paying attention to both the potential harm to beneficiaries of digital/tech and the barriers to accessing digital/tech.

**Empowerment level**:

4. Ensure digital products and services are simple, locally relevant, use icons where possible and make use of assisted technology for people with disabilities.
5. Promote wider internet connectivity, particularly for women and low-income people, by supporting affordable solutions such as smart feature phones and financing plans to make data more affordable. At policy level, promote wider connectivity by supporting policies that discourage monopolies between service providers and which increase the amount of internet spectrum[2] available.
6. Promote girls' education programming that includes quality teaching in science, technology, engineering and mathematics (STEM) as well as computing.

**Transformative level**:

7. Focus on regulatory reform. Support the involvement of women and other excluded groups in this process to ensure their concerns are addressed.

[1] In this query we define cyber hygiene as "the cyber security practices that online consumers should engage in to protect the safety and integrity of their personal information on their Internet enabled devices from being compromised in a cyber-attack" (Vishwanath et a, 2020: 2). We expand this to include practices to prevent online exploitation, misinformation and other harms. This recommendation is largely drawn from the programme review (section 6).

[2] Internet spectrum refers to the electromagnetic radiation used to transport information wirelessly.

# 2. Objectives and Methodology

### 2.1 Objectives

The overall objective of this query is to provide guidance and entry points for Prosperity Fund (PF) programmes to take advantage of the opportunities and manage the risks of new technologies for gender and inclusion and women's economic empowerment (G&I/WEE). This overarching objective will be achieved through several interrelated strands of enquiry:

- A rapid overview of best practice in middle-income and low-income countries in digital/tech economic development interventions that positively influence G&I/WEE.
- How COVID-19 has led to both positive and negative changes in the impact of digital/tech interventions on women and other disadvantaged groups.
- Identify entry points related to digital/tech that can be added to the Prosperity Fund Gender and Inclusion (G&I) Framework to inform the design and review of digital/tech interventions from a G&I/WEE perspective.
- Review three PF programmes to assess how G&I/WEE are being integrated into them and to explore the opportunities and risks of increasing ambition in this area, using the adapted G&I Framework as a guide.

### 2.2 Methodology and search terms

This query is desk based. For questions 1 and 2, we review relevant literature in English that is available online, including in academic journals. Although this is not an academic paper and therefore does not take a comprehensive review standard, we have prioritised existing evidence reviews and mixed-methods studies with a balance of qualitative and quantitative evidence which cover both middle-income and low-income contexts. We include reflections on the robustness of the evidence available. Since COVID-19 is a new phenomenon, we include grey literature in the form of reputable press reports. Question 3 entails a review of programme documents shared by PF as well as annual reviews available on DevTracker. We also draw on remote interviews conducted with the three selected programmes.

Search terms: *digital, tech/technology, barriers, best practice, infrastructure, transport, gender, social inclusion, women's economic empowerment/development, entrepreneurship, jobs, COVID-19/coronavirus, macro, policy*

# 3. Background on digital/tech in Prosperity Fund programmes

Digital/tech is anticipated to become increasingly important in ODA programming, especially with regard to HMG's engagement with middle income countries (MICs). In particular, the priority themes arising from the upcoming HMG Spending Review are expected to include an emphasis on digital/tech. The Integrated Review Policy Framework summary includes an outcome on "Strengthened capabilities in science, technology and data". The increased focus on digital/tech was echoed in a recent PF G&I Champions meeting that highlighted the critical role of digital technology across all sectors for upholding basic standards on participation and community engagement, notwithstanding challenges to access.

The PF already has a range of programmes that focus on digital/tech either in their entirety or via specific strands within the programme, spanning the areas of digital access, accessibility, governance,

and new technology. The total PF budget for digital/tech-related interventions is estimated to be almost £250m across multiple targeted countries and sectors. 68% of this is allocated to programmes funding digital platforms, services and skills, 18% to smart emerging tech, 9% to cyber-strengthening and 4% to analytics (Prosperity Fund, 2020a). The number of women beneficiaries in these programmes that could benefit from a greater level of G&I/WEE ambition is substantial.

The **PF Gender and Inclusion Policy**[3] notes that all PF programmes must comply with the UK Gender Equality Act requirement to do no harm as a ***minimum expectation***. However, it states that the Fund should go beyond this, and encourages programmes to be ambitious, by ***empowering*** women via the promotion of economic opportunities and positive outcomes for them, or at the highest level of ambition, by aspiring to be ***transformative*** by seeking to address systemic institutional and societal changes that contribute to persistent gaps in women's economic opportunities. The policy further stresses that exclusion based on other social characteristics (such as disability, age, class, caste, religion, ethnicity, etc) often overlap with gender and must also be addressed in PF programming, noting that "it is not possible to address gender without also addressing inclusion" (Prosperity Fund, 2020b).

The **PF Gender and Inclusion Scorecard** is based on the levels of ambition laid out in the G&I Framework. All PF programmes are subject to G&I Scorecard review, which explores whether they are performing at minimum standard. However, the reviews do not look in detail at best practice on G&I/WEE in digital/tech programming. In 2019 a stocktake of 23 out of 28 PF programmes found that less than 50% of programmes met the minimum standard of compliance (Prosperity Fund, 2019).

In addition to the PF's primary purpose of promoting inclusive economic growth, its programmes are also expected to produce **secondary benefits** in the form of economic opportunities for international, including UK, business, and non-economic benefits such as increased UK soft power in partner countries (Prosperity Fund: Secondary Benefits Guidance Note). UK businesses with expertise in digital/tech solutions may derive benefit, through open competition, from PF programmes that promote G&I/WEE as part of digital/tech programming. For example, Mexico's ground-breaking 2018 FinTech law, the design of which was supported by the PF (Ibid.), is likely to drive financial inclusion in a country where 54% of women remain unbanked (Women's World Banking, 2020). This may create opportunities for UK and international service providers offering products that facilitate electronic payments or online savings. It should be highlighted, however, that secondary benefits cannot be pursued without a demonstration of benefits to inclusive growth.

In the last six months **COVID-19 has emerged as a new challenge for PF programmes**. The use of digital/tech in response to the pandemic risks exacerbating existing inequalities but also has the potential to create opportunities in terms of G&I/WEE. There is also an emerging focus amongst donor – including HMG – thinking on **Building Back Better post-COVID**. From a WEE perspective, this may include an increased focus on ensuring decent work and social protection, and on improving the quality of care services (Euractiv, 2020). More broadly, it involves donors thinking more deeply about the connection between healthy lives, healthy societies and a healthy environment (DFID News, 2020).

[3] Building on the G&I Policy, the PF **Gender and Inclusion Framework** sets out three levels of ambition for gender and social inclusion in PF programmes, ranging from **Minimum Standard** through **Empowerment** to **Transformative Change**. This framework is a key tool for helping PF staff think through a programme's level of ambition on gender and inclusion and how to apply this in practice.

# 4. International emerging best practice

**What is international best practice for digital & tech-related economic development interventions with respect to G&I/WEE, paying attention to both middle-income and low-income countries?**

## 4.1 Key challenges in responding to this query

**The digital/tech sector offers potential for G&I/WEE both within tech-related companies and through women/marginalised people's use of digital/tech devices.** It should be remembered that the digital/tech sector is vast, with tools and methods that range from the most basic to complex esoteric facilities. Furthermore, digital/tech is a fast-evolving area with new opportunities and risks constantly emerging. We have attempted to capture current good practices in the sector, but readers should be aware that examples may quickly become outdated. There are also recognised risks to digital technology around the potential abuse of personal information, although this is not the focus of this report. Another important area that is outside the scope of this report is assistive technology to enable people with disabilities to work remotely.

We are concerned mainly with how the use of digital technology can promote G&I/WEE. The query highlights how macro-level reforms and the use of digital technology impact on opportunities for enhanced G&I/WEE. We frame this discussion by identifying good practice and **entry points in WEE across different market roles** in which women may be classified at various moments in their lives: **product consumers, service users, entrepreneurs, and employees in the digital/tech sector**. We begin by reviewing the digital gender gap and the barriers to internet access that women face in both middle-income and low-income countries. Any digital/tech initiatives to promote WEE will need to consider women's relative lack of access to online products and services in comparison to men.

## 4.2 Key findings from international best practice

### 4.2.1 Digital gender gap: access, usage and barriers

**The global digital gender gap is growing in the developing world.** Between 2013 and 2019, this gap increased from 15.8% to 22.8% in developing countries, and from 29.9% to 42.8% in least developed countries (ITU, 2020). A 2015 study of digital access in cities across nine middle-income and low-income countries found that women were 50% less likely to be connected to the internet than men in the same age group with similar levels of education and household income (World Wide Web Foundation, 2015). Furthermore, when controlling for age, education, employment status and income, women were 25% less likely to **use** the internet to search for employment than men (Ibid.).

Whilst barriers to connectivity for women vary across countries and regions, the **most significant barriers are the high cost of data and internet-enabled devices, limited digital skills, and a lack of relevant online content**, meaning the use of resources to connect is not considered worthwhile (Thakur and Potter, 2018). Removing barriers to connectivity is only the first step in improving access; to get women using the internet, we must also consider how digital offerings can best serve women's needs as **product consumers, entrepreneurs, service users, and employees in the digital/tech sector**. This includes women's concerns about **online privacy and harassment** (World Wide Web Foundation, 2015) and their need for basic cyber hygiene skills (HMG, 2020).

There is no widely used academic definition or measure of cyber hygiene. This paper uses the **definition of cyber hygiene** from a recent paper which describes it as: "the cyber security practices that online consumers should engage in to protect the safety and integrity of their personal information on their Internet enabled devices from being compromised in a cyber-attack" (Vishwanath et a, 2020: 2). We expand this to include practices to prevent online exploitation, misinformation and other harms, as reflected in the current practices of the programmes reviewed in section 6.

#### 4.2.2 Good practice to increase WEE for women product consumers

**Smart *feature* phones can help get women online.** They are an emergent category of device that offer internet connectivity and a much faster and superior browsing experience than traditional feature phones. Critically, they are much more affordable than smartphones. The JioPhone in India is a smart feature phone that costs less than USD $10, making it an affordable entry point for many first-time users in India. Over 100 million have been sold in the first two years since its launch. Whilst not targeted specifically at women, the JioPhone's low cost helps address the affordability barrier that keeps many women offline. **Evidence suggests that smart feature phones have *directly* helped reduce the gender mobile internet gap in India,** which decreased from 68% in 2017 to 50% in 2019. The gender gap in smartphone ownership has remained at approximately 60% over the same time period (GSMA, 2020).

**An example of good practice to increase women's broadband access is Costa Rica's Connected Homes (Hogares Conectados) programme,** where the government provides a subsidy to low-income households to purchase a fixed internet service and a computer. Approximately 95% of households eligible for the scheme are headed by women (Thakur and Potter, 2018). This initiative has been recognised internationally as a way to promote internet access for women and low-income groups (ITU, 2016).

At **policy level**, governments can help reduce the rural digital gap by supporting the provision of last-mile connectivity (i.e. reaching the end user) by permitting competition between facilities, especially for different kinds of connections (between cable, wireless and digital). Governments should also discourage monopolies in the internet market by requiring service providers to make local access lines available to competitors at wholesale prices (referred to technically as *local loop unbundling*) and encouraging providers to share essential facilities, such as radio masts. Policies should also seek to increase the amount of spectrum[4] available and liberalise the market for spectrum resale (Shenglin et al, 2017). **China has been successful in bringing connectivity to 69,000 villages**. Via a top-down policy from central to local government and in concert with the telecommunications industry, all villages now have some form of broadband access, whether fixed, mobile of satellite (Ibid.).

#### 4.2.3 Good practice to increase WEE for women entrepreneurs

There is evidence from a 2016-18 randomised control trial (RCT) in Tanzania that **access to a mobile savings account (M-Pawa) increases the amount of money that women microentrepreneurs save**, and that this effect is **increased when combined with business skills training**. Women were divided into three groups, the first of which was trained in how to use the online savings platform, with the option to set weekly reminders on their savings goals. The second group received in-person business skills training in addition to the online savings platform (with access to an interactive mobile training platform which reinforced the training messages). Both groups saved more than the control group, and the impacts were significantly higher in the second group when mobile savings were

[4] Internet spectrum refers to the electromagnetic radiation used to transport information wirelessly. See https://www.iotacommunications.com/blog/what-is-wireless-spectrum/.

complemented with the business skills training. Access to the mobile savings platform also increased the probability of receiving a loan by 14%. However, findings were not statistically significant (Bastian et al, 2018).

Whilst the RCT found no evidence of these short-term impacts translating into significantly greater business investment, sales and profits, there is some evidence that the intervention led to business expansion through the creation of lucrative secondary businesses, as well as improvements in women's empowerment and subjective well-being (Ibid.).

A further example of good practice is the **Digital2Equal programme**, an IFC-led initiative launched in 2018 in partnership with the European Commission that brings together 17 leading technology companies operating across the online marketplace to boost opportunities for women in emerging markets**.** This initiative involved global companies such as Google, Uber and Salesforce as well as regional companies such as the Kenyan work platform Lynk, Latin American e-commerce site Mercado Libre and South African home cleaning service app Sweepsouth. Examples of successful initiatives include supporting '*Mompreneurs*' in the Philippines by offering financial and nonfinancial support to help mothers start and grow their businesses online, and providing training sessions to women in India to help them better market their homes for rent via Airbnb (IFC, 2020a).

At **policy level** a study of the global ride hailing app, Uber, explored opportunities and barriers for women in ride-hailing and found that **ride-hailing apps reduced barriers for women to work as drivers because of the ease of entry to become a driver via the app**, but that other barriers prevented more women from participating, including regulatory requirements for a commercial license and low rates of financial and digital inclusion. However, **women who overcome these barriers report a higher income boost than men**. Many women drivers are also involved in other entrepreneurial activities and use ride-hailing as way to augment income and smooth cash flows (IFC, 2018).

**Social norms are an underlying barrier to women taxi drivers, but these vary widely between different emerging economies.** More than half of current male drivers surveyed in Egypt and Indonesia stated that they would not be happy for a woman in their family to sign up as an Uber driver; in contrast more than half of men surveyed in India and Mexico reported that they would be happy with this. **Recruiting more women drivers could increase the number of women riders** as 17% of women riders surveyed identified the lack of women drivers as a reason not to use the Uber app, and more than 40% would prefer a woman driver when travelling alone at night. Thus there is a strong business case for Uber and similar transport tech companies to attract female workers (Ibid.).

#### 4.2.4 Good practice to increase WEE for women service users

**Trusted and inclusive digital identification (ID) systems[5] can be a powerful tool for development, with the potential to drive progress in women's economic empowerment, gender equality, financial inclusion and health**. Digital IDs can also be important for accessing government subsidies (World Bank Group, n.d.). A 2017 survey in 97 countries found that more than a third of adults in low-income countries lack a digital ID; in contrast, over three-quarters of middle-income countries surveyed had achieved at least 90% coverage. There is also a gender gap in low-income countries, with 44% of women lacking an ID compared to 28% of men (Ibid.).

**At policy level, a good example of the potential of digital IDs to empower women comes from Pakistan, where the use of biometric IDs – a Computerized National Identity Card (CNIC) – is a precondition for accessing cash transfers to ensure that money is paid directly to women rather than to their husbands or brothers,** as sometimes happened before digital IDs were used. An

[5] Good digital ID is identification that is verified and authenticated to a high degree of assurance over digital channels. It can unlock access to banking, government benefit schemes, education and various other critical services (McKinsey, 2019).

independent impact evaluation of the Benazir Income Support Program found that women who received cash directly had more decision-making power, whilst their households spent significantly more on things that women value, including nutrition and girls' education. These women made greater use of reproductive health services. In addition, beneficiaries reported greater empowerment: 58% said they could spend money as they wanted, 75% felt their importance in the family had increased, 62% reported making more family decisions, and 72% felt more confident (Dahan and Hamner, 2015).

**Mobile phone apps focusing on urban safety can empower women by increasing their safety, with positive knock-on effects for WEE.** Safetipin is a technology platform that uses mobile phone apps, My **Safetipin** and **Safetipin Nite**, to collect data to make cities and public spaces safer and more inclusive for women. The app is based on a Safety Audit, which is a participatory tool to collect and assess information about users' perceptions of safety in public spaces against nine variables: lighting, openness, visibility, crowd, security, footpaths, availability of public transport, gender diversity and feeling. Safetipin uses this data to create reports, maps, and recommendations to urban planners, as well as dashboards which allow city governments to track the impact of interventions to improve urban safety (Safetipin, 2020a).

In 2019, Safetipin partnered with New Delhi Television Limited (NDTV) and Uber in the **Roshan Dilli** campaign to improve urban safety in Delhi. NDTV's involvement helped generate strong public interest, which encouraged Delhi residents to contribute data via the Safetipin apps. The Safetipin team analysed the city-wide dataset and identified poorly lit areas in the city. NDTV then approached the Delhi government, which responded by providing street lighting in several areas identified. In consequence, more women and girls are now able to access public spaces. This intervention demonstrates **how the partnership between digital companies and media outlets can provide the right incentive for governments to take action on issues that disproportionately affect women** (Safetipin, 2020b). In addition to addressing safety concerns, interventions of this kind can positively impact WEE, since well-lit public spaces will encourage more women to travel for work purposes early in the morning and late at night.

#### 4.2.5 Women working in digital/tech

**As one of the fastest growing sectors in the world economy, digital/tech companies will be increasingly important as a source of employment for both women and men**. Between 2010 and 2015, global employment in the information and communications technology (ICT) sector grew by 16%, rising from 34 million to 39.3 million employees. Employment in computer services grew particularly fast (27%) during the same period (UNCTAD, 2019). Whilst data on the gender gap is thin, particularly in non-OECD countries, it is well recognised that the digital/tech sector is strongly male dominated across the world, including in developed countries, meaning that growth in this sector is likely to disproportionately benefit men. In 2016, women accounted for an average of 18% of telecommunications industry employees in Africa (down from 36% in 2010), 28% for Oceania and 35% in Asia. The figures for Europe (31%) and the Americas (33%) were lower than that of Asia (EQUALS Global Partnership, 2019).

Education and training are critical to increasing the number of women working in digital/tech. Evidence suggests that *early* exposure to science, technology, engineering, and mathematics (STEM) subjects is critical for a student's decision to specialise in STEM at degree level (Ibid.). This highlights the importance of traditional girls' education programming that include science and maths, as well as computing. However, there is also evidence that girls in secondary education tend to have lower self-efficacy and interests in studying STEM subjects, as well as lower aspirations for STEM careers, which may influence their decision when choosing a degree subject (Ibid.). Globally, the percentage of female STEM graduates remains at 36% (in 2016), which is a rise of only three percentage points since 2000.

Paradoxically, the gender gap in STEM higher level degrees tends to be larger in countries with higher levels of gender equality,[6] so a country's economic development cannot be relied on to increase opportunities for women in the sector and may lead to increases in the STEM employment gender gap (Ibid.).

Good practice in promoting digital skills, education and employment for women and girls in developing countries is the German government's **#eSkills4Girls scheme**. This operates in a range of countries and includes activities such as identifying female role models in digital/tech, creating networks to foster learning among grassroots programmes, integrating digital technologies into vocational trainings and non-formal education settings, and raising girls' awareness about tech careers (Ibid.).

## 4.3 Digital/Tech and Entry Points

We have identified specific entry points for digital/tech at each level of ambition of the **PF G&I** Framework, laid out in Table 1 below. This draws on the evidence review and interviews with programmes. This should be used in tandem with the Prosperity Fund's overall G&I Framework.

The suggested entry points are arranged according to the categories explored in section 4: the digital gender gap, women as product consumers, women as entrepreneurs/workers, and women as service users. Some of the entry points straddle more than one level of ambition.

**Table 1: Digital/Tech Entry Points on WEE under the PF's G&I Framework**

| **Minimum Standard**<br><br>**Basic needs and do no harm** | **Empowerment**<br><br>**Practical needs** | **Transformative Change**<br><br>**Practical and Strategic needs** |
|---|---|---|
| **Programmes address due diligence, risks, basic needs and vulnerabilities of women and excluded groups** | **Programmes build assets, capabilities and opportunities for women and excluded groups** | **Programmes address unequal power relations and seek systemic institutional, legal and societal changes** |
| G&I analysis and assessment should provide a gendered description of the significance of technology within the programme. Is digital technology an output (e.g. as in manufacturing)? Is it used to facilitate access to a product such as financial services or clean energy? Have the needs of women and other excluded groups been considered in action plans?<br><br>**Digital gender gap**<br><br>**Entry point**: Provide digital services that use images/icons or voice technology rather than text. Ensure icons are meaningful to the local context.<br><br>**Entry point:** Provide targeted basic cyber hygiene training to new digital users to address risks of digital | **Digital gender gap**<br><br>**Entry point**: Keep technology simple to increase women's lack of confidence in using digital services.<br><br>**Entry point**: Provide advanced cyber hygiene training to help mitigate women's nervousness about online privacy.<br><br>**Product consumers**<br><br>**Entry point**: Provide smart/feature phones to women beneficiaries. Include data plans/pre-paid sim cards to increase device usage.<br><br>**Entry point:** Support schemes offering discounted broadband connectivity for women and vulnerable groups. | **Summary statement on Digital/Tech (to add to overall G&I Framework):**<br><br>Focus on government awareness and regulatory reform. Raise awareness of government officials on women's digital needs as consumers, entrepreneurs /workers and service users as well as barriers to women's access. Involve women in development of regulatory environment that addresses their concerns regarding digital/tech risks and develops opportunities for them to be more engaged in the potential use of digital technology (e.g. to keep women informed about issues such as health and safety in the workplace and equal pay).<br><br>Other entry points are detailed below:<br><br>**Digital gender gap** |

[6] For further details, see Stoet, G., & Geary, D. C. (2018). *The gender-equality paradox in science, technology, engineering, and mathematics education. Psychological science*, 29(4), 581-593https://journals.sagepub.com/doi/10.1177/0956797617741719

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| technology (e.g. online sexual exploitation, online fraud/phishing, manipulative advertising and online security).<br><br>**<u>Service users</u>**<br><br>**Entry point**: Support partner govts with the creation/expansion of digital ID schemes that enable direct cash transfers to women.<br><br>**Entry point:** Provide digital devices to women and use them to communicate health/safety information, e.g. on COVID sanitary practices (whilst acknowledging the lack of access women might have to digital technology devices).<br><br>**Entry point:** Create digital platforms that enable women to report GBV/harassment. | **Entry point**: Support schemes offering digital savings/banking services for women.<br><br>**Entry point**: Demonstrate the business case for companies selling digital/tech devices to women.<br><br>**Entry point**: Demonstrate to digital/tech businesses the value of understanding female clients' needs so that women can use their products more effectively, e.g. intermittently available energy should be planned with awareness of times of women's high energy need.<br><br>**<u>Entrepreneurs / workers</u>**<br><br>**Entry point**: Provide bursaries for female entrepreneurs in digital/tech<br><br>**Entry point**: Target tech products at market segments relevant to women's economic activities (rather than to all women) to increase uptake.<br><br>**Entry point**: Provide online content that is locally relevant and tailored to topics relevant to women's businesses to encourage usage and to help women use digital assets to increase profits.<br><br>**Entry point**: Adopt a consultative approach with different groups of women to identify ways that digital technology could improve their lives at home and work, and to highlight the possibility for women to get involved in economic opportunities along the digital/tech supply chain.<br><br>**Entry point:** Promote girls' education programming that includes quality teaching science, technology, engineering and mathematics (STEM) as well as computing. | **Entry point:** Support policies that facilitate connectivity across geographic locations and socio-economic groups, e.g. by promoting competition between different internet facilities (cable, wireless and digital) and increasing the amount of internet spectrum (electromagnetic radiation) available<br><br>**Entry point:** Development of policies which consider connectivity as a key service requirement on par with access to energy and safe water.<br><br>**Entry point:** Include behaviour change component in programme design so that the benefits of female digital usage are understood by both male and female participants (to avoid women passing digital devices to male relatives).<br><br>**<u>Entrepreneurs / workers</u>**<br><br>**Entry point:** Development of digital tools that help women manage household and caring responsibilities alongside paid work.<br><br>**Entry point**: Development of digital tools that assist women involved in trade/business to be kept informed about market information.<br><br>**Entry point**: Encourage the use of free online communication tools (e.g. WhatsApp) to facilitate collective action for workers of all literacy levels where meeting in public at work is not possible.<br><br>**Entry point**: Encourage the use of apps to inform women who cannot physically attend negotiation and planning meetings and to seek their input.<br><br>**<u>Service users</u>**<br><br>**Entry point**: Development/roll-out of apps that identify women's safety concerns in the urban environment. |

In addition to exploring entry points for G&I in digital/tech programmes, it is critical to analyse and mitigate against specific risks and barriers.

**Potential risks include:**

- A rise in online sexual exploitation as digital access increases;
- Financial loss from phishing and online fraud, as well as manipulative advertising targeted at new internet users;
- Digital technology adoption may reflect and exacerbate existing unequal gender roles (e.g. women may feel intimidated when dealing with male digital money transfer agents and may reveal their login details, thereby risking financial exploitation).

**Potential barriers include:**

- Lower literacy levels amongst women and other disadvantaged groups mean they lack the skills to use personal digital devices, thereby reducing their adoption of digital technology even when it is available;
- Digital and technology companies' lack of knowledge (and sometimes prejudice) about the business case for women as potential customers.

# 5. COVID-19

**How is international practice changing because of COVID-19, paying attention to both middle-income and low-income countries?**

**The use of digital/tech in response to the COVID-19 pandemic risks exacerbating existing inequalities and increasing uncertainty but also has the potential to create opportunities in terms of G&I/WEE.** As a recent phenomenon, the evidence base is not extensive, but some trends are beginning to emerge.

## 5.1 Digital gender gap

**The COVID-19 crisis highlights the critical role of digital connectivity and digital services in supporting societal resilience and business continuity.** A robust and well-functioning digital infrastructure – the system of cables, data centres and satellites, the invisible spectrum for WiFi, and related equipment – is crucial to enabling businesses to continue functioning during societal lockdowns (IFC, 2020b). This dependence on digital infrastructure presents both risks and opportunities for G&I/WEE in emerging markets.

**The COVID-19 pandemic could widen the gender and rural connectivity gaps in some countries** (Ibid.). As noted earlier, specialised companies and smaller but fast-growing broadband network operators may face survival challenges during the economic contraction related to COVID-19. This may lead to larger companies offering more expensive broadband services, as well as there being a reduction in the availability of open access broadband infrastructure and other technological innovations. The surge in internet demand related to COVID-19 could also lead to a decline in broadband quality, particularly in rural areas. Connectivity issues could particularly affect remote independent contractors in the informal economy who are overwhelmingly women.

However, heightened reliance on digital infrastructure may **increase people's perception of digital connectivity as a necessity or even a right**, especially for the underserved, including women. This may lead governments to take action to align connectivity with the supply of electricity or water utilities (Ibid.). This could help **reduce the existing digital gender gap and increase women's ability to use digital services for entrepreneurship and employment**. However, this benefit is unlikely to reach the most vulnerable populations in slum and rural communities whose settlements still lack basic utilities.

## 5.2 Women as entrepreneurs and workers

One of the clearest opportunities will be the huge growth in the digital/tech sector arising from the COVID-19 response. This presents a risk in terms of the disproportionate amount of men working in digital/tech, as discussed in section 4. However, simultaneously this could also present huge **potential employment opportunities for women and other disadvantaged groups**. The remote working required by the pandemic may make it easier for women with caring responsibilities to work flexibly. Remote working also creates the environment for younger/inexperienced women workers to gain experience via remote internships/entry level opportunities with employers based in cities which were previously too expensive to live in for people on low incomes.

However, the pandemic has already led to **job losses** around the world in a range of sectors. Within the digital/tech sector, specialised companies and smaller broadband network operators may face survival challenges in the aftermath of the pandemic, with direct consequences for jobs (IFC, 2020b). Furthermore, COVID-19 has had a **negative effect on local innovation ecosystems, social enterprises and innovation hubs** in many developing countries due to challenges in securing new rounds of funding. This is particularly significant for start-ups since they risk bankruptcy without policy interventions wherever they operate in the world (HMG, 2020).

A survey of South African female entrepreneurs in the Future Females programme found that 59% of respondents reported a negative financial impact on their business during the first month of lockdown, whilst 'fear of the unknown/instability' rose from 6% to 18% (Future Females, 2020). In addition, whilst pre-pandemic the primary concern for female entrepreneurs was funding, it has now become business survival (Ibid.).

However, the crisis also presents female entrepreneurs with opportunities for **innovation, creativity, skills development and growth**. The same survey revealed a clear shift towards women starting and growing online businesses, whilst **46% have started using new digital tools since the onset of COVID-19**. Furthermore, only 11% of female entrepreneurs surveyed operate their business *solely* in physical locations, in comparison to 70% who do so either primarily or partially online (Ibid.). This means that **digital services will be useful to most female entrepreneurs surveyed, helping to keep their businesses going and potentially to grow**.

### 5.3 Women as service users

Governments and multilateral agencies around the world are rapidly expanding social protection systems to reach more people more efficiently during the COVID-19 crisis. As of 10 July 2020, 200 countries had expanded or introduced such measures to reach 915 million new beneficiaries (a four-fold increase since March) (World Bank, 2020). Many of these initiatives make use of digital Government-to-person (G2P) payments to avoid the need for people to collect payments in person, thereby reducing the risk of COVID transmission.

The World Bank's G2Px initiative was launched in early 2020 with the objective of improving G2P payments at scale to promote inclusion and empowerment in a comprehensive, cross-sectoral and responsible way. It is now quickly adapting to COVID-19 to help social protection programmes respond to the pandemic (World Bank Blogs, 2020). FCDO's Digital Identity as an Enabler for Development programme, in partnership with the World Bank, is providing guidance to partner governments on employing digital ID systems in innovative ways to distribute finance and other essential services safely during social distancing. **Rwanda and Uganda have both established ID systems that can be authenticated digitally, thereby removing the need for physical presence** (HMG, 2020).

Togo has launched the Novissi programme, which is a mobile unconditional cash transfer scheme to support all Togolese informal workers living in areas where health emergency measures are enforced and whose incomes have been disrupted by the COVID-19 response. **Women receive more money than men** – 12,250 West African CFA Francs (USD 20) compared to 10,500 West African CFA Francs (USD 17) per month, payable in bi-monthly instalments. At the time of writing, 374,073 women had enrolled in comparison to 202,975 men (World Bank, 2020).

Whilst these government interventions are rightly using digital technology to respond to an urgent need, **similar experience during the Ebola crisis showed that the 'tyranny of the urgent' often sidelined gender in its response.** Most countries are not yet reporting publicly sex-disaggregated

information about beneficiaries, except for specific interventions directed, for example, to widows or single mothers (World Bank, 2020).[7]

# 6. Programme reviews

**In the three selected programmes, what are the key opportunities and the risks/barriers for meeting minimum standards on the G&I Framework and for increasing the level of ambition of G&I/WEE, with particular attention to digital/tech elements of interventions? How can the risks/barriers be mitigated/overcome?**

## 6.1 Mexico Bilateral programme

### 6.1.1. Programme description and scope of review

The Mexico Bilateral programme is a £60m programme to strengthen the economy and expand markets in Mexico across four strategic strands of activity: Future Cities, Financial Services, Anti-corruption and Rule of Law, and Energy. Following PF advice, we have limited the scope of our review to the **Financial Services** and **Future Cities** strands. The Inception Phase began in February 2019, with implementation beginning in September 2019.

We reviewed the following documents: Business Case, Annual Review 2019, and the programme's section in the PF G&I Gender Scorecard Stocktake Review 2019. We also conducted a remote interview with staff working on Financial Services. Our analysis draws largely from this interview and therefore emphasises opportunities for the Financial Services strand.

Overall, we found that the Financial Services and Future Cities strands have already designed and are now starting to implement empowering interventions for women. The programme team has made a significant effort to ensure gender considerations are mainstreamed, although more could be done on social inclusion. The PF G&I Scorecard Stocktake finds that the programme meets at least minimum requirements on four out of five aspects of its analytical framework

Below we list our findings as well as some suggestions for how the programme could increase its ambition to be transformative. However, given the programme's early stage, we recommend that it proceeds with caution and builds in time to test whether digital/tech innovations are having the intended outcome. It should also remain mindful of the risk of exploitation associated with new technologies.

### 6.1.2 Opportunities to increase G&I/WEE mapped against the PF G&I Framework levels of ambition

| Programme strand | Finding | Suggestion |
|---|---|---|
| **Minimum standards** | | |
| **Whole programme** | There is an opportunity to replicate the work of the Colombia and Brazil Prosperity Fund programmes by contracting in a local gender expert at Post to support in developing the programme strategy. | Consider expanding this role to incorporate inclusion so that the needs of marginalised groups beyond women are also considered. |
| **Future Cities** | While this strand has developed good quality G&I strategies, particularly on gender, more could be done on social inclusion. | Interventions should be designed in consultation with marginalised groups, such as people with disabilities, to |

[7] See UNICEF's recently published *Gender-Responsive Age-Sensitive Social Protection: A conceptual framework* for more discussion of gender and social protection https://www.unicef-irc.org/publications/1116-gender-responsive-age-sensitive-social-protection-a-conceptual-framework.html

| | | |
|---|---|---|
| | | mainstream their views into the design of pilot interventions. |
| **Financial Services** | There is an opportunity to learn more about the profile and behaviour of Mexico's large informal sector by conducting data mining of the country's pensions database, which shows when people move in and out of the formal sector. This could also link to promoting savings behaviour through pension funds for people who move between the formal and informal sectors. | Ensure that research disaggregates data by sex and other characteristics such as ethnicity, if possible. |
| **Financial Services** | Many MSMEs are disappearing due to COVID-19 so micro-entrepreneurs are becoming vulnerable. There is an opportunity to work with local chambers of commerce to collect financial data from MSMEs. The strand will then work with the Centre for Alternative Finance in Cambridge to generate insights that will be fed back to the government of Mexico to help it understand the MSME sector better. | Ensure that research disaggregates data by sex and other characteristics such as ethnicity, if possible. |
| **Empowerment level** | | |
| **Financial Services** | Whilst there are hundreds of FinTechs in Mexico, the majority do not operate at the lower end of the market. This may be due to lower-end potential customers not owning mobile devices to allow connection to FinTech services. | Explore how to support the development of affordable smart feature phones for this market segment, especially in indigenous and rural populations. |
| **Financial Services** | The programme is considering outreach to financial service providers that serve indigenous groups to provide training of trainers on financial education. These service providers will then provide this training in person to their own clients. | Ensure content is locally relevant to encourage usage. Tailor content to topics relevant to (indigenous) women's business/financial needs. |
| **Transformation level** | | |
| **Financial Services** | The annual review notes that when Intervention 1 (*Increasing financial inclusion for female beneficiaries of Mexico's largest social development programmes*) is redesigned to ensure buy-in at senior levels of the Government, this should be done in a way which maintains as much as possible the 'gender transformative' aspirations of this strand. | Consider supporting the development of digital tools that assist women involved in trade and other business activities to be kept informed about market information. |
| **Financial Services** | There is an opportunity for Intervention 2 (*Implementation of the new Financial Technology (Fintech) law in Mexico*) to work with regulators to explore how they can foster financial inclusion for women. The programme is also hoping to push for G&I to be included in regulations. | Include other marginalised groups, especially indigenous people and women with disabilities, in financial inclusion initiatives. |

### 6.1.3 Risks/barriers for meeting minimum standards on the G&I Framework and raising ambition. How can the risks/barriers be mitigated/overcome?

| Programme strand | Risk | Mitigation |
|---|---|---|
| **Financial Services** | Reaching the very poorest and most marginalised populations, such as those that lack the hardware to access financial and COVID trainings or who may have very poor literacy levels. | Explore local radio to communicate financial and COVID educational material. Also support the development of affordable smart feature phones. |
| **Financial Services** | Digitalisation of financial services was one of the main strategies of the previous administration, but the new government has not prioritised this. | PF/HMG should consider highlighting to the government the importance |

| | | |
|---|---|---|
| | | of digitalisation for economic growth as well as for G&I, noting that these are interlinked. |
| **Financial Services** | Some parts of the programme have been put on hold due to COVID – for example, the G2P programme on financial education. | Use the pause in activities to track the success of other interventions and to decrease the risk of online exploitation of beneficiaries. |
| **Financial Services** | Domestic violence is a significant issue in Mexico and this has increased due to COVID. A lot of the programme's financial services are provided to women without their husbands' knowledge, thereby increasing the risk of domestic violence. | Ask beneficiaries for feedback on whether the intervention can be adapted to reduce the risk of domestic violence whilst still getting financial education to women. Consider developing modules targeted at men and their financial interests so that beneficiaries' male family members feel less threatened by the intervention. |
| **Financial Services** | Loss/exposure of customer data via FinTechs. | Provide guidance to FinTechs on data protection standards and best practice. |

## 6.2 Global Digital Access programme

### 6.2.1 Programme description and scope of review

The Digital Access programme is the Prosperity Fund's flagship programme on digital for development. It is an £82.5m, multi-country programme operating in Kenya, Nigeria, South Africa, Brazil and Indonesia that is wholly dedicated to digital as a cross-cutting enabler of development. It catalyses inclusive, affordable, safe and secure digital access for excluded or underserved populations whilst also supporting local digital ecosystems that create skilled jobs and encourage innovations to solve local development challenges. Its planned duration is 2019-2022.

We reviewed the following documents related to this programme: Business Case and Annex, Annual review 2019, the Digital Access programme section in the PF G&I Gender Scorecard Stocktake Review 2019. We also conducted a remote interview with programme staff.

Similarly to the Mexico Bilateral programme, we find that the Digital Access programme is already implementing empowering interventions for women. The PF G&I Scorecard Stocktake finds that it meets at least minimum requirements on four out of five aspects of its analytical framework. Below we list our findings as well as some suggestions for how the programme could increase its ambition to be transformative.

### 6.2.2 Opportunities to increase G&I/WEE mapped against the PF G&I Framework levels of ambition

| Finding | Suggestion |
|---|---|
| **Minimum standards** | |
| The Business Case Annex lists various excluded groups that the programme plans to reach via targeted interventions. These comprise low-income groups, low-income women and girls and low-income/marginalised people with disabilities. A fourth group - 'Other excluded low-income groups' – does not have any targeted interventions and should be addressed on a 'needs- | Whilst we recognise that the programme needs to limit its activities, it is concerning that ethnicity in particular does not have a targeted intervention. The Digital Access programme focus countries, particularly South Africa and Brazil, have significant racial/ethnic disparities in terms of wealth and |

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|---|---|
| specific basis (e.g. where facing ethnic, gendered, or other exclusion/discrimination)'. | access to assets. We recommend that programmes in all five countries consider how they could specifically design interventions for marginalised racial/ethnic groups, including indigenous people. |
| The Tech Hub in South Africa has conducted training that included cyber hygiene skills for beneficiaries. | Track participants' experience post-training to see whether there has been any change in cyber hygiene practices to assist in future training programmes. |
| **Empowerment level** | |
| Some target beneficiaries lack access to internet-connected devices and struggle to pay the cost of data. | Explore how to support the development of affordable smart feature phones for these populations. Also consider funding data/SIM plans for beneficiaries. This may help mitigate the impact of luxury taxes on data in some settings. |
| The programme has worked with underserved communities in Kenya to co-create locally relevant digital content/news so that it is valuable to women, including to entrepreneurs. This information can also be used to advocate with local governments to improve urban infrastructure, such as roads. | The programme should assess this initiative to see if it leads to increased WEE and, if so, scale up the intervention in the other countries and across various settings (urban, rural). Efforts should be made to ensure that a range of women (including those from marginalised ethnic groups) are canvassed. |

### 6.2.3 Risks/barriers for meeting minimum standards on the G&I Scorecard and raising ambition. How can the risks/barriers be mitigated/overcome?

| Risk | Mitigation |
|---|---|
| There is an increased risk of child online exploitation (as well as adult exploitation) as internet connectivity increases. The programme has conducted cyber hygiene training with beneficiaries to address this. (Please note that we were not able to speak to the Pillar 2 team to get more information about this initiative). | The programme should ensure it is connected to host country efforts to prevent (especially child) exploitation, since abusers target countries with weak regulatory frameworks. It will be also be important to track the effectiveness of these trainings to test whether beneficiaries are applying cyber hygiene skills. The programme should update the cyber hygiene training on a regular basis to include new threats as they emerge. |
| There is a risk of online companies failing to safeguard consumer data as well as targeting (often low income) consumers with manipulative adverts. The Brazil strand has a 'responsible digital' initiative encouraging companies to improve data privacy and protection and to avoid using manipulative adverts. | The programme should aim to assess over time whether online companies are responsive to the training with regards to advertising. If these adverts are not illegal, it may be difficult to disincentivise companies from using them. |

## 6.3 Global Finance programme

### 6.3.1 Programme description and scope of review

The Global Finance Programme aims to improve access to finance for firms and individuals by addressing financing constraints, developing deeper and more stable financial systems, and building strategic partnerships. This programme is in its first year, which has largely been an inception period. The PF G&I Scorecard Stocktake finds that it only meets minimum requirements on one out of five aspects of its analytical framework.

Our review focuses on the Catalyst Fund (CF), which is an inclusive FinTech accelerator that assists start-ups lacking capital, networks and investment to help them build solutions for underserved communities. The CF supports 30 start-ups operating in five key markets: India, Kenya, Mexico, Nigeria, and South Africa, covering areas such as financial services for domestic workers and informal traders, and access to pay-as-you-go cooking gas and smart metering for poor households.

We reviewed the following documents related to this programme: Business Case, Annual Review 2019, the Global Finance programme section in the PF G&I Gender Scorecard Stocktake Review 2019 and CF documentation. We also conducted a remote interview with CF programme staff. Most of our analysis is drawn from this interview, so the focus of this section is on the CF.

### 6.3.2 Opportunities to increase G&I/WEE mapped against the PF G&I Framework levels of ambition

| Finding | Suggestion |
|---|---|
| **Minimum standards** | |
| The annual review notes that "as the programme develops its work which seeks to forward financial inclusion, particularly amongst individuals, it should make clear the links to how it considers or addresses gender". | One way to do this could be via Pillar 4: (*Expansion of Banking Services: strategically engaging with financial institutions and regulators to enhance cross-border banking, as well as supporting the development of appropriate products)*. The programme could support the development of digital financial products targeted at women, such as mobile savings and banking services. |
| **Empowerment level** | |
| The CF has partnered with an organisation in South Africa that tailors its products for women, especially female traders. They have kept their tech requirements to a minimum to help women take part since research suggests that technology can be particularly constraining for women. | Since focusing too much on 'tech' can be a barrier to getting disadvantaged groups to use digital technology, the CF could invest in other organisations that focus on keeping tech simple. This could also have benefits for people with disabilities or literacy limitations. The CF could also consider funding organisations that promote women's digital skills. |
| CF works with early-stage start-ups so the evidence pool of what solutions have worked for women is small. Uptake of tech does not necessarily reflect usage. | CF or the wider Global Finance programme could consider commissioning research to better understand the barriers to women using tech even if they have access to it, particularly in terms of risk aversion, and how the barriers could be overcome. |
| The CF notes that male investors are reluctant to invest in female-led start-ups since men tend to invest in men. This makes the "valley of death" stage for female-led start-ups particularly difficult (this refers to the difficulty of covering negative cash-flow in the early stages of a start-up). The CF has made efforts to work with female investors to encourage them to invest in female-led start-ups. | Since the pool of female investors is small (and even smaller in tech), the CF could arrange opportunities for male investors to meet especially promising female entrepreneurs to encourage investment in them. |
| The reduced investment capital pool resulting from COVID-19 is likely to make it even harder for female entrepreneurs to attract funding | CF should monitor this situation and continue to lobby male investors to invest in women, as discussed above. |

**6.3.3 Risks/barriers for meeting minimum standards on the G&I Scorecard and raising ambition. How can the risks/barriers be mitigated/overcome?**

| Risk | Mitigation |
|---|---|
| Women in Andhra Pradesh have given mobile phones (that were distributed via a project) to male family members. Women may feel they have less entitlement to use the phone or may feel pressure to give it to a male relative. | CF could support organisations to conduct social norms training with female and male beneficiaries to challenge beliefs about who should have access to a phone. |
| Women's lack of confidence has meant that some have been intimidated into revealing their PINs to male agents operating digital banking services. | CF could support organisations that provide training to women on cyber hygiene as well as self-confidence when engaging with 'authority figures' in tech. |

# 7. Recommendations

**Overarching recommendations to PF to inform the design and implementation of current and future digital/tech interventions in terms of G&I/WEE**

**Minimum level:**

1. Integrate cyber hygiene training into all programmes that include digital features.
2. Explore digital solutions that can reach all groups to disseminate information about COVID or any other emergency.
3. In line with the PF G&I Framework's minimum compliance requirement, ensure that all PF programmes include digital in their risk assessments, paying attention to both the potential harm to beneficiaries of digital/tech and the barriers to accessing digital/tech.

**Empowerment level**:

4. Ensure digital products and services are simple, locally relevant, use icons where possible and make use of assisted technology for people with disabilities.
5. Promote wider internet connectivity, particularly for women and low-income people, by supporting affordable solutions such as smart feature phones and financing plans to make data more affordable. At policy level, promote wider connectivity by supporting policies that discourage monopolies between service providers and which increase the amount of internet spectrum[8] available.
6. Promote girls' education programming that includes quality teaching in science, technology, engineering and mathematics (STEM) as well as computing.

**Transformative level**:

7. Focus on regulatory reform. Support the involvement of women and other excluded groups in this process to ensure their concerns are addressed.

[8] Internet spectrum refers to the electromagnetic radiation used to transport information wirelessly.

# References


Bastian, G., Bianchi, I., Goldstein, M. and Montalvao, J. (2018) *Short-Term Impacts of Improved Access to Mobile Savings, with and without Business Training: Experimental Evidence from Tanzania,* Center for Global Development, Working Paper 478, March 2018 https://www.cgdev.org/sites/default/files/short-term-impacts-improved-access-mobile-savings-business-training.pdf

Dahan, M. and Hanmer, L. (2015) *The Identification for Development (Id4d) Agenda: Its Potential for Empowering Women and Girls,* Background Paper, World Bank http://documents1.worldbank.org/curated/en/859071468190776482/pdf/99543-WP-P156810-PUBLIC-Box393205B.pdf

EQUALS Global Partnership (2019), *Taking Stock: Data and Evidence on Gender Equality in Digital Access, Skills and Leadership,* https://www.itu.int/en/action/gender-equality/Documents/EQUALS%20Research%20Report%202019.pdf

Future Females (2020) *The Changing Future of Female Entrepreneurship, A White Paper on the Challenges, Trends and Businesses Changing the Landscape for Female Entrepreneurs in South Africa*

GSMA (2020) *Connected Women The Mobile Gender Gap Report 2020* https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/05/GSMA-The-Mobile-Gender-Gap-Report-2020.pdf

HMG (2020) *Human Development and Inclusion Response to Covid-19, Practical Guidance for Country Offices*

IFC (2018) *Driving Toward Equality: Women, Ride-Hailing, and the Sharing Economy, Executive Summary* https://www.ifc.org/wps/wcm/connect/d32aa287-2ca7-4c53-a250-adf48c32249f/00418+IFC+DTE+ExecSumm_Layout+FinalReprint2.pdf?MOD=AJPERES&CVID=m9ksya3

IFC (2020a) *Digital2Equal: Expanding Opportunities for Women* https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/gender+at+ifc/priorities/digital_economy_sa/digital2equal

IFC (2020b) *What COVID-19 Means for Digital Infrastructure in Emerging Markets*, Note 83, May 2020 https://www.ifc.org/wps/wcm/connect/8f9237d2-eceb-433f-a2d0-300907808722/EMCompass_Note_83-for+web.pdf?MOD=AJPERES&CVID=n7M5wS.

ITU (2016) *World Summit on the Information Society 2016 Prize Winners* https://www.itu.int/net/pressoffice/press_releases/2016/17.aspx

ITU (2020) *Measuring digital development Facts and figures 2019* https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2019.pdf

McKinsey (2019) *Digital identification: A key to inclusive growth* https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/McKinsey%20Digital/Our%20Insights/Digital%20identification%20A%20key%20to%20inclusive%20growth/MGI-Digital-identification-Report.pdf

Prosperity Fund (2019) *Phase 1 Gender and Inclusion Scorecard Stocktake Review*

Prosperity Fund (2020a) *Digital Mapping*

Prosperity Fund (2020b) *Gender and Inclusion Policy, 2020 Update*

Prosperity Fund (2020c) *Guidance Note 13, Gender and Inclusion Programme Guidance,* May 2020 update

Prosperity Fund (n.d.) *Secondary Benefits Guidance Note*

Safetipin (2020a) *Women and Mobility, A Case Study of Bhopal, Gwalior & Jodhpur* https://safetipin.com/report/women-and-mobility-report-english/

Safetipin (2020b) *Making Delhi Safer for Women: A partnership with NDTV and Uber* https://safetipin.com/making-delhi-safer-for-women-a-partnership-with-ndtv-and-uber/

Shenglin, B., Simonelli, F., Zhang, R., Bosc, R. and Li, W. (2017) *Digital Infrastructure: Overcoming the digital divide in emerging economies*, G20 Insights https://www.g20-insights.org/wp-content/uploads/2017/05/Digital_Overcoming-Digital-Divide-II.pdf

Thakur, D. and Potter, L. (2018) *REACT with Gender-responsive ICT Policy: The Key to Connecting the Next 4 Billion,* World Wide Web Foundation https://webfoundation.org/docs/2017/09/REACT-with-Gender-Responsive-ICT-Policy.pdf

UNCTAD (2019) *Digital Economy Report2019, Value Creation and Capture: Implications For Developing Countries* https://unctad.org/en/PublicationsLibrary/der2019_en.pdf

Vishwanath, A., Neo, L.S., Goh, P., Lee, S., Khader, M., Ong, G. and Chin, J. (2020) *Cyber hygiene: The concept, its measure, and its initial tests,* Decision Support Systems, Volume 128, January 2020 https://doi.org/10.1016/j.dss.2019.113160

Women's World Banking (2020) *Mexico* https://www.womensworldbanking.org/country-strategies-mexico/#keytrends

World Bank (2020) *Digital Cash Transfers in the Time of COVID 19, Opportunities and Considerations for Women's Inclusion and Empowerment* http://documents1.worldbank.org/curated/en/378931596643390083/pdf/Digital-Cash-Transfers-in-Times-of-COVID-19-Opportunities-and-Considerations-for-Womens-Inclusion-and-Empowerment.pdf

World Bank Blogs (2020) *Responding to crisis with digital payments for social protection: Short-term measures with long-term benefits* https://blogs.worldbank.org/voices/responding-crisis-digital-payments-social-protection-short-term-measures-long-term-benefits

World Bank Group (n.d.) *Global ID Coverage, Barriers, and Use by the Numbers: Insights from the ID4D-Findex Survey* http://documents1.worldbank.org/curated/en/953621531854471275/Global-ID-Coverage-Barriers-and-Use-by-the-Numbers-Insights-from-the-ID4D-Findex-Survey.pdf

World Wide Web Foundation (2015) *Women's Rights Online Translating Access into Empowerment, Global Report – October 2015* http://webfoundation.org/docs/2015/10/womens-rights-online21102015.pdf

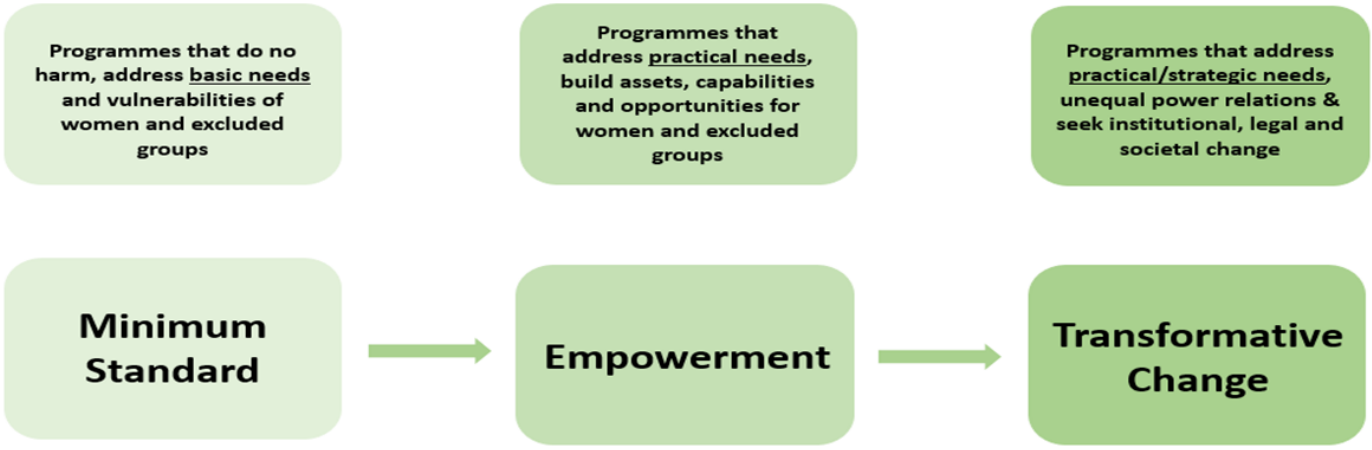
# ANNEX 1 – PF G&I Framework

Purpose: The PF Gender and Inclusion (G&I) Framework is an important tool to help Programmes think through the practical implications of ensuring Gender Equality Act (GEA) compliance and alignment with the PF G&I Policy. It highlights three different levels of ambition and types of entry points to support inclusive growth, gender equality and economic empowerment of women and other excluded groups – essential for achieving the Fund's Primary Purpose. It helps programmes to plan actions and share experience to meet their level of ambition.

Levels of Ambition**:** The Framework summarises three increasing levels of ambition that programmes can adopt and examples of 'what good looks like' at each level. **Minimum Standard** is the starting point (focused on due diligence, do no harm, risk mitigation, and meeting women and excluded groups' basic needs), increasing to a more ambitious **Empowerment approach** (which builds their economic opportunities, capabilities and choices for meeting practical needs), to achieving **Transformative Change** (which seeks institutional change and addresses the systemic barriers to economic empowerment of women and excluded groups). Depending on the sector and/or context, it recognises that the most appropriate and realistic focus may be at Minimum Standard or Empowerment level, whilst Transformative change may be more complex and longer-term (requiring political will), but a more sustainable process for greatest impact. Programmes are required to meet the minimum standard but are encouraged to build on these foundations with greater ambition.

Background: The G&I Framework was conceptualised by Caroline Moser (2016) and developed and adapted for DFID's ICED Programme (Infrastructure and Cities for Economic Development) in 2017. It builds on cutting edge thinking and best practice in development and has also been taken up by other UKAid/multi-donor programmes.

PF Application**:** The Framework has been adapted for the Cross-Whitehall Prosperity Fund to help the Joint Funds Unit, PF Delivery Departments, PF Global/Country Programmes, Delivery Partners and Suppliers think through practical implications of the Gender Equality Act and PF G&I Policy. It has been broadened to consider both gender and wider social inclusion for delivery of the Fund's Primary Purpose in keeping with the Leave No One Behind agenda, as well as good practice on participatory processes and citizen/beneficiary engagement. The table illustrates what 'good' might look like at the three different levels of ambition and possible entry points for each. Actions which are articulated in Programme G&I Action Plans at design phase should specify at which level of ambition they are aiming.




| Minimum Standard<br>Basic needs and do no harm | Empowerment<br>Practical needs | Transformative Change<br>Practical and Strategic needs |
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| **Programmes address due diligence, risks, basic needs and vulnerabilities of women and excluded groups** | **Programmes build assets, capabilities and opportunities for women and excluded groups** | **Programmes address unequal power relations and seek systemic institutional, legal and societal changes** |
| **GEA compliance statement** in Strategic case of the Business Case/proposal summarising how gender equality has been considered and measures integrated throughout the Business case (see Assurance checklist): Key inception actions - for updating at regular intervals throughout programme cycle:<br><br>• G&I Analysis – to understand gender and wider social inclusion issues in relation to the sector/context.<br><br>• G&I Impact Assessment – to understand impact of interventions (benefits & losses) on women & men, relationship between them, poor people and excl groups.<br><br>G&I Action Plan: to identify actions that integrate G&I across programme cycle, incl addressing barriers/opportunities.<br><br>Risk Matrix: to identify G&I risks & unintended negative consequences to avoid, mitigate & monitor.<br><br>Risk mitigation incl implementation of social & environmental sustainability performance standards; social safeguards. | **GEA plus**……in addition to Minimum level:<br><br>Programme approach is more ambitious (goes beyond GEA compliance, risk mitigation and monitoring) to proactively address practical needs and opportunities to:<br><br>• Increase women and excl groups' productive employment opps.<br><br>• Improve size/ profitability of enterprises led by women and excl groups.<br><br>• Increase their access & control over economic assets.<br><br>• Recognise and take women's care and household responsibilities into account as a major constraint to their economic participation.<br>• Increase women and excl groups' individual agency & decision making power (with choices, knowledge, skills & info).<br><br>• Supported by G&I mainstreaming with some institutional change<br>• *Meaningful participation* | In addition to Minimum standard and Empowerment levels:<br><br>Programmes take targeted action and provide strategic support to remove systemic barriers to inclusive growth and challenge power imbalances that prevent women and excl groups' participation, contribution to & benefits from econ growth**.** Programmes address persistent gaps/constraints and:<br><br>• Promote and advocate on protective legal, regulatory & policy frameworks to support female and vulnerable workers (e.g. health & safety, equal pay, tackling sexual harassment, decent work)<br><br>• Challenge social norms around women's and excl groups' economic participation & ability to access resources & employment. Role model workplace change for social norm change at scale.<br><br>• Tackle discriminatory attitudes, behaviours and practices.<br><br>• Amplify women and excl groups' collective voice & |

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| BC owners/SROs/ Implementing partners are confident interventions will do no harm and not worsen discrimination/gender inequality.<br><br>• Addresses women and excl groups' basic needs.<br><br>• Minimal institutional change to support sustained gender equality, women's empowerment and wider social inclusion.<br><br>• Sex, age, geographical location, and income quintile disaggregated data & (KPI) indicators where possible for programmes & logframes (disability data where possible).<br><br>• Information Sharing: Accurate, timely information shared with stakeholders through range of communication methods appropriate for context and target audience.<br><br>• Codes of Conduct: Staff and partners have signed and been trained on the organisation's code of conduct and have child and adult safeguarding policies in place.<br><br>• *Stakeholder and Community engagement Plan: Consultation with women, poor and excluded groups, Civil Society Organisations (incl Disabled People's Organisations and Women's Rights organisations), SMEs* | *and engagement of poor people, women and excl. groups throughout programme cycle - in design, implementation, M&E, decision-making, representation, and beneficiary feedback.* | action around econ ppn & rights (e.g. provide support/ training to build orgs to collectively bargain for improved services/working conditions).<br><br>• Support women, excl groups and local organisations to negotiate and participate in innovative benefit-sharing schemes (e.g. resettlement design, land title for women<br><br>• **Urban:** Representation of women & excluded groups (incl people with disabilities and youth) on city governance & planning decision making bodies<br><br>• **Infrastructure**: Contractual mechanisms in construction, operation & maintenance (e.g. women's participation thro quotas). Accessible design standards for people with disabilities.<br><br>• **Trade Facilitation/Anticorruption:** Raise awareness of govt officials on barriers for female traders and excl groups – integrate into guidelines, regulatory reform, systematic engagement with representative orgns. Safe whistle blowing procedures.<br><br>• **Skills/Business Env**: Affirmative action in skills upgrading, support for women-owned enterprises.<br>• Recognise, redistribute & reduce household & caring responsibilities/ unpaid labour.<br>• G&I mainstreaming with institutional change.<br>• *Social accountability mechanisms for quality service delivery, incl grievance and redress mechanisms (for non-compliance with performance standards, worker exploitation, resettlement.* |

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**Experts consulted,** organisation: Mexico programme staff, Digital Access programme staff, Catalyst Fund programme staff

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