
PART 2

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SECTION 2.1

EMPOWERING CLIENTS TO EMBRACE INCLUSIVE DIGITAL ECONOMIES

By Maria Perdomo



HIGHLIGHTS

- Finance and digital literacy are critical if consumers are to embrace the range of services driving inclusive growth.
- Through the Skills workstream, UNCDF empowers individuals, through literacy, to embrace the digital economy.
- To realize the full potential of digital and financial literacy, critical complementary elements must be in place: robust innovative use cases; a digital infrastructure for use cases to run on and be accessible; and policies and regulation that protect individuals and their information, engendering trust in the digital economy.

Aissatou, a young woman, lives in a small city in Senegal and runs a vegetable stand. She faces constant challenges in managing her finances. She is, however, able to save some of her daily proceeds in a small box under her bed. Aissatou has heard about savings accounts accessible through mobile phones from her friends, who are members of a nearby microfinance institution (MFI). While Aissatou

sees their benefit, she knows little about such services and in her mind these unanswered questions translate into risk. Recently, she has received literacy training through an application on her phone, which has empowered her to open and begin using a mobile savings account. Now, rather than putting her earnings under her bed, she keeps them safe in an MFI, where they are easily accessible.

INCREASING FINANCIAL LITERACY TO PROPEL INCLUSIVE DIGITAL ECONOMIES

People like Aissatou would like to save for an emergency and have funds available for opportunities, such as sending their children to school. But they are challenged by their lack of knowledge regarding formal solutions. They do not feel empowered to access these services and doubt their ability to use them effectively.

To increase participation in the digital economy, we must recognize that many people do not possess the capability to access and use either financial or digital services. Literacy in this regard – and its ongoing development – is therefore critical if consumers are to embrace the range of services driving inclusive growth. It is this development challenge of addressing illiteracy – both financial and digital – that UNCDF focuses on in the Skills workstream.

Financial literacy is an understanding by individuals of basic financial instruments and how they can be used to meet one's financial needs and goals. It encompasses the functional knowledge about using a product. In the case of a savings account, for example, it involves knowing how to save and best use these savings. How long will it take for a deposit to be posted and what if there is an error? Literacy instils the trust required for individuals to constructively engage with the financial system.

Digital literacy is an understanding of the tools related to digital networks, such as communications and the Internet. It encompasses the ability to use a mobile phone, understand how to use Unstructured Supplementary Service Data technology, and overcome the challenges of using low-quality devices, patchy network coverage, and resetting personal identification numbers (PINs). Smartphone users require additional skills to navigate applications and operating systems, set up accounts, manage privacy and security settings, and monitor data usage and costs, among others. These are all critical skills and knowledge, if citizens are to embrace the digital economy.

Lack of literacy may result in the increased self-exclusion of certain groups, who may already be at greater risk, such as women and rural residents; it may also lead to increased customer vulnerability to fraud and misuse of personal data. Among those who are aware of mobile Internet services, but do not use them, lack of literacy and skills is listed as the biggest perceived barrier by 34 percent and 35 percent of people in Africa and Asia, respectively.⁴³

UNLOCKING THE BENEFITS OF THE INCLUSIVE DIGITAL ECONOMY

There are a number of barriers that hinder the adoption of digital services, including constraints related to energy, point of sale and gender.⁴⁴ Efforts in the Skills workstream focus on empowering individuals through literacy, seeking to address four progressive barriers to enable them to fully embrace the digital economy. As they progress, learners advance along a journey culminating in the ability to actively use these services with confidence, capturing the benefits of digital innovation – both financial and non-financial. These four steps include: (i) the knowledge needed to use a solution; (ii) the skills required to functionally use a service; (iii) confidence and self-assurance to overcome doubt; and (iv) the assurance that you are able to realize the full potential of a solution.⁴⁵

Barriers to the adoption of digital services exist across society, but are more challenging for some segments. Excluded groups may fall even further behind, a risk that is compounded when we consider that the adoption of digital services is often socially motivated – with skills frequently learned through social contacts and peers. That is why explicit segment-based interventions for rural residents, the poor and women are needed to build digital skills. Literacy propels individuals along a journey of financial health, making them increasingly able to better manage their situation, access necessary services, be resilient in unexpected situations, and plan their future.

⁴³ Global System for Mobile Communications Association (GSMA), *The State of Mobile Internet Connectivity 2019*, www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/07/GSMA-State-of-Mobile-Internet-Connectivity-Report-2019.pdf.

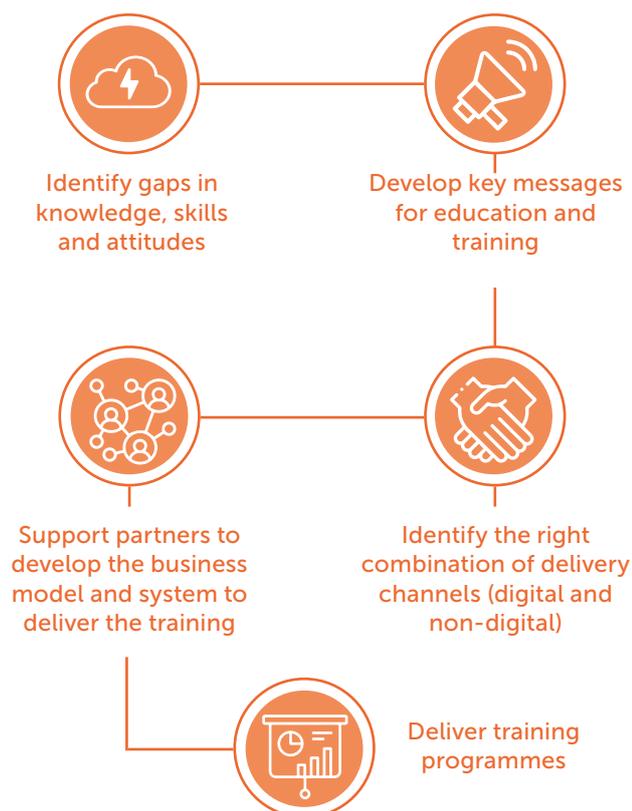
⁴⁴ This article focuses specifically on literacy. A number of other issues are addressed in this paper, including infrastructure (Section 2.2); innovative solutions (Section 2.3); enabling policy (Section 2.4); and gender (Section 3.1).

⁴⁵ UNCDF, "Empowered customers: leaving no one behind in the digital era", (September 2019). www.uncdf.org/article/4935/empowered-customers-leaving-no-one-behind-in-the-digital-era.

EFFORTS TO ADDRESS THE CHALLENGES OF LITERACY

UNCDF works with a range of partners, including providers and non-governmental organizations (NGOs) engaged in a wide spectrum of initiatives to improve literacy.

FIGURE 6.
The pathway to financial and digital literacy



The UNCDF pathway to financial and digital literacy involves the following steps:

Identify gaps that hinder the development of trust. Gaps may vary by segment and country. Some representative examples include: lack of knowledge about formal financial arrangements; absence of skills necessary to use financial products; and lack of confidence to engage with a financial institution.

Develop messages – We examine the customer journey to identify ‘moments of truth’ to intervene in the customer experience with messages that resonate. We advise our partners on these opportunities to educate customers, including initial literacy training for acquisition targets and teaching individuals about savings planning at account opening.

Identify channels – Our work integrates digital innovations into our partner’s literacy efforts, improving efficiency and effectiveness through appropriate channels and low-cost models, increasing learning opportunities at the ‘last mile.’ Channels include classroom learning, digital applications and individual coaching. Use of digital approaches, such as smartphones, is showing tremendous impact and an entertainment approach could further boost this.

Support partners – We support partners through several models. Training can be provided directly by a financial institution, a specialist such as an NGO, or by a combination of both. We help partners to build their monitoring capabilities, so as to understand impact and inform adjustments.

Deliver training programmes – All these efforts enable us to provide effective training programmes, with impactful messaging through appropriate channels and sustainable delivery models.

The UNCDF digital application CommCare is currently running in several West African nations: the Gambia, Guinea, Niger and Senegal. The application contains four literacy modules, which users can access as needed. It is being delivered directly by service providers to clients and several NGOs focused on delivering more effective financial literacy training to beneficiaries. This application has helped individuals like Aissatou to gain the skills and confidence to use digital financial services effectively.

Another initiative targets small businesses in the Gambia and Ghana with UNCDF partner InSIST. An application focused on transaction tracking is helping small businesses to improve their cash management, and providing information needed by lenders to help inform lending decisions.

A JOURNEY OF PERSONAL DEVELOPMENT

Developing literacy – both financial and digital – not only enables people to access and use services, it can help them to make decisions because they understand and trust the systems that they are using. As economies and financial markets become increasingly digital, there are growing opportunities for individuals to develop agency, which itself becomes more important.

Technology is providing new means and channels for building financial literacy. For example, SMS and other messaging services, which can replicate the functionality of chatbots, have been deployed to farmers at scale in Kenya and the United Republic



of Tanzania – increasing engagement on financial literacy topics, such as usage, interest rates on financial products and fees.⁴⁶

Attaining digital and financial literacy is a journey. As individuals progress along this pathway, new opportunities emerge to benefit from more advanced digital and financial services, or to earn income in the digital economy. For those who are digitally included, opportunities may emerge to build their financial literacy and capabilities in tandem with their vocational skills through digital work platforms. When paired with business training, financial literacy prepares entrepreneurs to acquire productive assets and expand their business. Lynk, a company in Kenya, connects artisans and tradespeople, such as carpenters, to work opportunities through its digital platform. Training is provided to market their services effectively and improve their financial management skills. Supporting clients, for example by saving for equipment, drives increased billing across Lynk’s platform.⁴⁷

As micro, small and medium enterprises earn more revenue online through digital channels and platforms, they struggle with new challenges. For example, traders on the African e-commerce platform Jumia need to improve their bookkeeping and to be able to accept payment in multiple forms. Such digital platforms now offer tailored in-person training, available online and on-demand to improve the skills of micro and small entrepreneurs registered with them.⁴⁸

To empower clients such as Aissatou, UNCDF partners with private and public stakeholders, to enhance the financial and digital literacy that people need if they are to embrace the digital economy, its tools, devices and networks. However, to realize the full potential of literacy, critical complementary elements must be in place: robust innovative use cases providing access to broader sectors of the economy; a digital infrastructure for use cases to run on and be accessible by digitally literate clients; and policies and regulation that protect individuals and their information, engendering trust in the digital economy. Together these efforts help to support the digital empowerment of individuals.

⁴⁶ Consultative Group to Assist the Poor, “Interactive SMS drives digital savings and borrowing in Tanzania” (August 2016). www.cgap.org/blog/interactive-sms-drives-digital-savings-and-borrowing-tanzania.

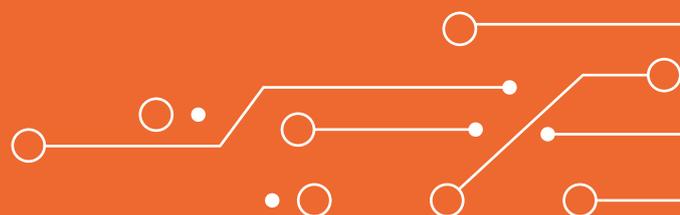
⁴⁷ Mercy Corps, *Towards a Digital Workforce: Understanding the Building Blocks of Kenya’s Gig Economy* (2019). www.mercycorps.org/sites/default/files/2020-01/Youth_Impact_Labs_Kenya_Gig_Economy_Report_2019_0_0.pdf.

⁴⁸ Mastercard Foundation and Caribou Digital, “Platform-led upskilling: how marketplace platforms can transform emerging markets by investing in skills development” (London, 2019). www.cariboudigital.net/wp-content/uploads/2020/04/PLTU-FINAL-WEB-v2.1.pdf.

FROM FINANCIAL INCLUSION TO INCLUSIVE DIGITAL ECONOMIES: THE CASE FOR THE PACIFIC ISLANDS

By **Bram Peters**, UNCDF Regional Digital Lead for the Pacific and **Riad Meddeb**, UNDP Senior Principal Advisor for SIDS

Small Island Development States (SIDS) are considered to be the most vulnerable countries in the world and the COVID-19 pandemic has seriously disrupted their economies and livelihoods. SIDS are recognized as a distinct group as they tend to share similar sustainable development challenges (UN-OHRLS). They are dispersed around the globe, but are mainly located in three geographic regions: the Caribbean, the Pacific, and the Atlantic, Indian Ocean, Mediterranean and South China Sea. Many of these island states depend heavily on tourism to drive their development, and while individually distinct, they share a set of common geographical, socio-economic and environmental characteristics. These include poverty, remoteness, dispersed communities and the threat of natural disasters, such as cyclones, drought and volcanic eruptions. Given the requirements of minimizing personal contact imposed by the COVID-19 virus, the absence of good quality, low-cost digital communication leaves many people living on these islands in a particularly difficult position, in terms of facing the pandemic and its ripple effects on socio-economic welfare. Significant numbers of people whose homes are on the Pacific islands are at risk of being excluded from the rapidly developing digital economy that has already reached their shores and the opportunities this brings when linked to the ‘real’ economy.



Riding the waves of the digitization trend, Pacific mobile penetration currently stands at around 38 percent⁴⁹ and is seeing modest growth in the mobile subscriber base. Among the Least Developed Countries, the average is 44 percent, while in Pacific Island countries the figure ranges from 84 percent (for larger island nations such as Fiji) to 11 percent (for smaller islands such as Marshall Islands) (see Table 1 below). However, mobile subscription across the Pacific Islands is poised to undergo a rapid rise to 60 percent, due to a fall in smartphone prices and the emergence of new vendors.

According to a global study conducted by the Global System for Mobile Communications Association (GSMA), the cost of sending international remittances through mobile money is, on average, more than 50 percent lower than using global money transfer operators (MTOs). In addition, where people are able to send remittances from a mobile money account, the average cost of sending US\$200 is 2.7 percent, compared with 6 percent when using global MTOs.⁵⁰ Ensuring a reduction in transaction costs of international remittances from 9 percent to 3 percent to Pacific corridors will lead to additional savings of more than US\$15 million for end users. It was for this reason that the Pacific Islands Forum Secretariat (PIFS) joined the global call to action to keep remittances flowing during the COVID-19 crisis⁵¹ and that the Pacific Financial Inclusion Programme (PFIP) supported Vodafone Fiji in offering fee-free remittances via its M-PAiSA mobile money solution. This initiative led to a drastic change in the sending behaviour of family and friends supporting their loved ones back in Fiji. International money transfers to the M-PAiSA platform saw growth from FJ\$2 million (US\$943,000) per month pre-COVID-19 to FJ\$10.5 million (US\$4.9 million)⁵² in October 2020, representing an increase of 425 percent in a matter of a few months.⁵³

This trend demonstrates that digital solutions are already showing transformative impact in the Pacific financial sector, enabling parents in Solomon Islands to pay for their children's school fees through their ANZ GoMoney account, transforming payments in public transport in Fiji using the latest NFC contactless technologies, and converting paper-based savings accounts to digital accounts with the National Bank in Vanuatu.

New technological innovations can play a pivotal role in the digital transformation of the Pacific Islands and provide a pathway for recovery from the impact of COVID-19, enabling access to life-enhancing services in areas such as health and education, while proving a catalyst for innovation and economic growth, with the promise of new jobs and increased tax revenues. Initiatives such as Pacific Trade and Invest are already showing the way in that respect, for instance by encouraging Pacific tourism operators to acquire new digital skills in preparation for the reopening of borders.⁵⁴

The potential for digital services to impact many more lives in the Pacific is strong; significant investments have been made in core digital infrastructure, including various undersea fibre optic cables, and national governments are giving priority to leveraging these investments for their economy. In line with the aspirations of the Framework for Pacific Regionalism and the Samoa Pathway, by 2019, a majority of Pacific Island countries will have completed their ambitious submarine cable projects and improved connectivity in the capital cities.

Solomon Islands is one such country in the region. In December 2019, this island state was finally connected via undersea cable to the global Internet backbone. The completion of this project has included international connectivity between Honiara, Sydney and Port Moresby, managed by the Coral Sea Cable Company, as well as crucial domestic connectivity between Western Province (Taro), Malaita Province (Auki) and Choiseul Province (Taro). To deliver the maximum benefit of this potentially transformational infrastructure and to further enhance the economic impact for its citizens, in early 2020 the Solomon Islands Government, with technical support from UNCDF, decided to kick-start the process of developing its first National Digital Economy Strategy (NDES).

As a prerequisite for Solomon Islands to develop its NDES, the Government decided to use a new policy tool, becoming one of four countries – together with Burkina Faso, Nepal and Uganda – involved in piloting the Inclusive Digital Economy Scorecard (IDES). This new tool has been developed by UNCDF with support from the United Nations Development Programme (UNDP), the United Nations Department of Economic and Social Affairs, GSMA, the United Nations Conference on Trade and Development (UNCTAD) and the European Union to help governments set priorities for their country's digital transformation. It identifies the key market constraints hindering the development

⁴⁹ Global System for Mobile Communications Association (GSMA), *The Mobile Economy - Pacific Islands* (London, 2019).

⁵⁰ Global System for Mobile Communications Association (GSMA), *GSMA research shows mobile money is significantly reducing the cost of sending international remittances* (London, 2 November 2016).

⁵¹ See www.uncdf.org/article/5787/the-pacific-island-forum-secretariat-joins-global-call-to-action-to-keep-remittances-flowing-during-the-COVID-19-crisis.

⁵² Conversion rate: US\$1=FJ\$2.12. Source: <https://treasury.un.org/operationalrates/OperationalRates.php> (accessed October 2020).

⁵³ See www.fijitimes.com/10-5m-international-remittances-in-october/.

⁵⁴ See <https://pacifictradeinvest.com/explore-our-work/insights/tourism-operators-acquire-new-digital-skills-to-prepare-for-borders-reopening>.

of an inclusive digital economy and helps, together with public and private stakeholders, to pinpoint the right priorities for fostering a digital economy that leaves no one behind. For the Government of Solomon Islands, the IDES has proved to be a valuable policy tool, enabling it to take stock of the current state of digitization in the nation. Through interactive and collaborative workshops with principal stakeholders, the IDES has helped to survey existing policies and initiatives, while highlighting market constraints to be prioritized and addressed within the NDES.

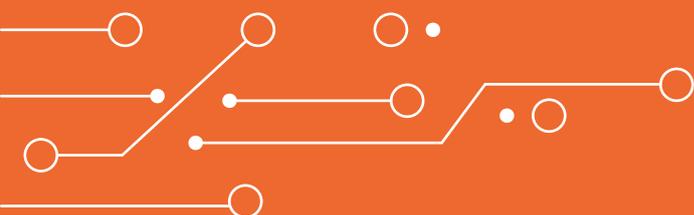
Efforts to achieve digital financial inclusion made by UNCDF and UNDP, through the Pacific Financial Inclusion Programme, are directly contributing to the emergence of digital economies in the region, and vice versa. Digital technologies are connecting financial services to 'real-economy'-related services and solutions that can transform the lives of Pacific Islanders. The wider

application of digital solutions to solve the daily constraints and needs of vulnerable islanders strengthens use cases for the adoption of digital financial services. One such example is SolaPayGo, a small fintech start-up company from Papua New Guinea that is paving the way for the adoption of pay-as-you-go solar energy for households in the country's rural highlands, and is now looking to expand its services to Solomon Islands.⁵⁵ Another example is the approach taken by the Solomon Islands National Provident Fund, which has worked together with the Central Bank, the tax authorities and the country's two competing mobile network operators to develop the use of mobile airtime top-ups as a currency, thereby tapping into the large network of more than 8,000 airtime resellers. This innovative approach and collaboration of committed public and private sector partners has enabled the Fund to scale up its highly successful micropension services for the informal sector, in a country that has no mobile money service providers.⁵⁶

TABLE 1.
Mobile subscriber numbers and penetration in the Pacific Islands

2018	Population (000)	Unique subscribers (000)	Connections (000)	Subscriber penetration
American Samoa	56	30	40	55%
Cocos (Keeling) Islands	0.6	0.2	0.3	38%
Cook Islands	17	5.6	6	32%
Fiji	915	770	1,192	84%
French Polynesia	287	163	294	56%
Guam	166	109	179	65%
Kiribati	119	22	56	19%
Marshall Islands	53	6	6	11%
Micronesia (Federated States)	107	18	24	17%
Nauru	11	7	11	61%
New Caledonia	282	186	276	66%
Niue	1.6	1	1.5	58%
Norfolk Island	2	1	1.6	47%
Northern Mariana Islands	55	23	35	41%
Palau	22	15	26	67%
Papua New Guinea	8,502	2,525	2,734	30%
Samoa	198	93	142	47%
Solomon Islands	629	310	459	49%
Tokelau	1.3	1	1	52%
Tonga	109	68	110	62%
Tuvalu	11	3	4	24%
Vanuatu	285	163	330	57%
Wallis and Futuna Islands	11	6	8	50%

Source: GSMA, The Mobile Economy - Pacific Islands (2019).



⁵⁵ See www.uncdf.org/article/5809/how-solar-pay-as-you-go-energy-is-helping-papua-new-guineans-access-financial-services.

⁵⁶ Ibid.

Today, digital financial services and the ubiquitous use of mobile phones have opened up a range of solutions for low-income households, ranging from energy access to education, health care and agricultural services. Improved Internet connections and the rapid uptake of smartphones in the region will allow UNCDF and UNDP to leverage the opportunities that these new technologies and digital platforms present for low-income consumers, while building on a decade of in-depth experience working with key stakeholders within the Pacific financial inclusion and digital ecosystem. As a result, the need for a new initiative focusing on building inclusive digital economies in the Pacific could not be more critical, since the starting point is now vastly different from that in 2008, when the first phase of PFIP was launched.

UNCDF and UNDP recognize that digital technology will be at the forefront of development efforts, especially in the Pacific region where the challenges of remoteness and territorial dispersion call for innovative digital solutions. Research demonstrates that through the adoption of digital services by individuals, businesses and governments, the digital economy has emerged in recent years as a global key economic driver.⁵⁷ The Digital Pacific Conference held in Samoa in June 2018 highlighted the importance of advancing the use of digital technologies in the Pacific. It noted the critical role of governments in creating a conducive regulatory

environment for digital innovations and promoting digital technology in the public sector as a stepping stone to the creation of a more inclusive digital economy. It was also recognized that investments in upgrading education and workers' skills will be crucial if the potential benefits of digital technology are to be reaped for sustainable development. This will require a commitment to supporting training in information and communications technology, as well as education in science, technology, engineering and mathematics, fostering stronger partnerships between the public and private sector and regional leadership on policy initiatives that promote mutual learning, knowledge and data exchange.⁵⁸

It is against this background that UNCDF and UNDP have sought collaboration with UNCTAD and PIFS, two important organizations that in recent years have been instrumental in driving the agenda for e-commerce and the digital economy at large in the Pacific region. Together, these partners have joined hands to launch a new regional initiative, the Pacific Digital Economy Programme, to support the development of inclusive digital economies in the Pacific. The vision is that these economies will enable rural communities, women and micro, small, and medium-sized enterprises, as well as seasonal workers, to enhance market participation, resulting in poverty reduction, improved livelihoods, and inclusive economic growth in the Pacific.

⁵⁷ Strategy&, Digitization for economic growth and job creation: regional and industry perspectives (PwC, 2013).

⁵⁸ United Nations Development Programme, Digital Pacific Conference Report (2018), p.7-9.

SECTION 2.2

ENABLING INFRASTRUCTURE FOR INCLUSIVE DIGITAL ECONOMIES

By Sabine Mensah



HIGHLIGHTS

- The UNCDF Infrastructure workstream seeks to catalyse investments and build coalitions to ensure that key components of digital infrastructure are in place, such as mobile phones and connectivity, in order to provide universal access to the systems and networks necessary for the next level of functionality.
- Accessible infrastructure alone is not sufficient; it must be supported by other key factors (skills, innovation, and policy and regulation) to ensure transformative impact.

Fatoumata is a grandmother and small businesswoman from rural Matam in Senegal, near the border with Mauritania. She lives with her daughters and daughter-in-law, helping to care for their children. The *de facto* head of household, Fatoumata frequently needs to collect cash transfers from her sons, who work in far-off cities. The journey to the agent – to receive her funds in cash – is one hour each way on foot, taking up valuable time that Fatoumata could be using to manage her business. When she returns home, she puts the money in a cash box that she keeps under her bed. Fatoumata needs to make decisions about how to use the funds, given the many needs of her extended family – deciding what household expenses to prioritize, which of the grandchildren will go to school, which investments she should make for her vegetable business, and what to set aside for emergencies.

BARRIERS TO ACCESSING AN ENABLING INFRASTRUCTURE

A critical problem for Fatoumata and the millions like her is lack of access to the infrastructure necessary to enable financial inclusion. Several barriers constrain access to crucial infrastructure, which in turn impede access to digital payments and basic services – services which can be enabled by payments in health, education, agriculture, etc. Barriers to accessing enabling infrastructure disproportionately impact the poor and the vulnerable, and the presence of these obstacles creates a new form of exclusion – a digital divide separating those who have access to the digital economy from those who do not.

Our efforts at UNCDF focus on addressing these barriers to narrow the digital divide. In particular, we focus on four core areas, with country priorities differing based on unique market circumstances:

- possession of identity documents critical for gaining access to government and financial services, as well as other systems and services
- ensuring mobile and digital connectivity for target populations through mobile network coverage where they live, study and work
- access to a phone, together with a secure source of energy, either one's own or one that can be accessed, as well as the ability to easily keep it charged
- ability to secure one's money in a digital account and access open payment services grounded in interoperability and open application programming interface (API).

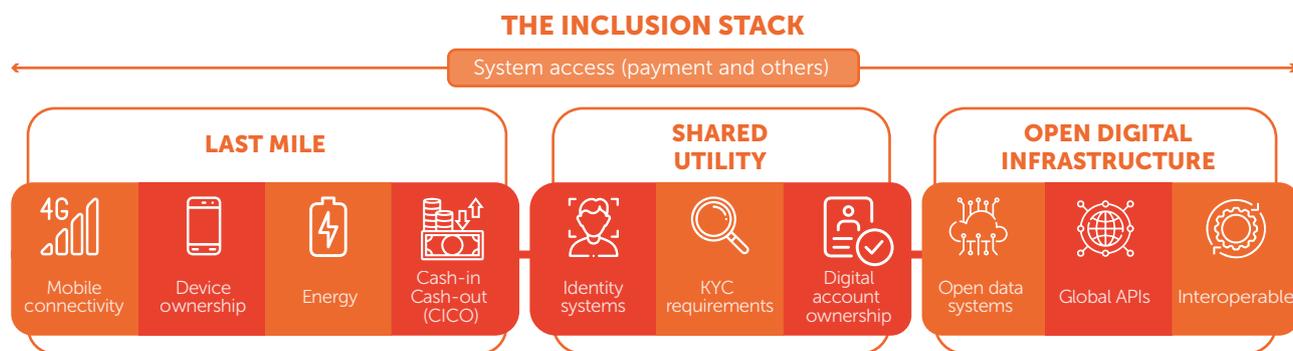
THE CRITICAL NEED FOR UNIVERSAL ACCESS TO DIGITAL INFRASTRUCTURE

Fatoumata and those like her lack access to digital services that could be enabled by appropriate infrastructure configured for the market. These include systems and networks that would enable vulnerable populations – such as rural residents, women and the poor – to have access to basic services and greater opportunities. For Fatoumata, this might be the ability to easily access remitted funds or to make small incremental fee payments for the education of her grandchildren.

The goal of the UNCDF **Infrastructure workstream** is to address the inadequate deployment of necessary and appropriate infrastructure, which stems from a number of reasons, including the inability to cost-effectively meet latent demand, lack of cost-effective business models, and the absence of standards. This workstream seeks to catalyse investments and build coalitions to ensure that key components of digital infrastructure are in place, such as mobile phones and connectivity, in order to provide universal access to the systems and networks necessary for the next level of functionality.



FIGURE 7.
Infrastructure supporting inclusive digital economies



LACK OF DISTRIBUTION AT THE LAST MILE

A critical gap that we address is last-mile distribution infrastructure, such as mobile connectivity, device ownership, and cash-in cash-out (CICO) distribution networks. Our efforts seek to develop this infrastructure by catalysing investments and building coalitions with market players, facilitating access to digital systems and networks by vulnerable populations.

This infrastructure is important for enabling a number of services, including network access, account onboarding, and the ability of households to effectively manage their liquidity and finances. Due to the failure of infrastructure to reach the last mile, there is no easily accessible on-ramp for excluded and vulnerable populations.

One reason for the infrastructure gap at the last mile is insufficient demand. An opportunity for addressing this lies in combining complementary features in propositions for customers. Working with providers in Uganda, UNCDF

undertook such an initiative, with good results. In order to promote device ownership in underserved communities, a bundle was created that included access to electricity, mobile money and a phone rechargeable through a solar panel. A low monthly fee made the bundle more accessible to consumers.

Failure to establish robust infrastructure can also stem from an inability to deploy it in a cost-effective manner. This may occur – especially in rural areas with low population density – when there is no commercially viable business model to support network deployment. The answer can lie in testing new models, for example, a trust-based high-touch approach, to help realize the promise of digital technology such as CICO networks.

Together with partners, services were distributed through the UNCDF Digital Community Entrepreneur Model in Uganda. The model is built around recruiting trusted youths with good business acumen within a community, to help them become entrepreneurs.⁵⁹ The position of these agents in their communities and the trust that they engender has helped to drive higher volumes than would otherwise be the case, improving business viability in the process.

Digital product sales for early 2020 show that 68 percent of the phone purchases and 53 percent of solar energy purchases were made by women. By March 2019, 373 agents had been deployed, exceeding the project's objective. Youth mobilization was particularly effective, with more than 50 percent of the active agents under 35 years of age.⁶⁰

SHARED MARKET INFRASTRUCTURE AND OPEN DIGITAL INFRASTRUCTURE

The lack of shared market infrastructure such as identity systems, digital account ownership and the digitization of bulk payment is another infrastructure gap that UNCDF seeks to address. Shared market infrastructure is foundational, enabling the broader reach of core infrastructure and a critical mass of payment flows. Since this infrastructure is similar to a public good in that it benefits all members of a society, our efforts have focused on identifying issues and

developing broader stakeholder coalitions to address gaps. Combining elements (such as identity, bulk transfer) is more cost-effective and can be addressed by digital technology, while engaging key actors such as government can help to achieve the viable economics and the distribution necessary to address latent demand.

The third infrastructure gap that we target is the absence of open digital infrastructure, such as interoperable payments and open information, which is critical for realizing the network effects inherent in a digital economy. The development of this infrastructure often requires coordination among key stakeholders to draw up appropriate rules and standards. Addressing these shortcomings helps to realize the full potential of network infrastructure. The critical elements of open infrastructure include open data and the adoption of global API standards. UNCDF efforts in Uganda to support stakeholder understanding of their value has proved an important first step towards creating the standards required as a basis for this infrastructure.

Other interventions have focused on developing interoperable payment systems. The absence of network interoperability prevents mobile payment networks from realizing the benefits of network economics, impeding their ability to expand beyond digital finance to support the growth of inclusive digital economies.

THE TRANSFORMATIVE IMPACT OF A ROBUST DIGITAL INFRASTRUCTURE

UNCDF is careful to address the need for digital infrastructure with the foundational characteristics required to ensure universal access to digital systems and networks. Our efforts focus on critical investments, technical assistance and stakeholder engagement, to ensure that the appropriate digital infrastructure is in place to overcome critical constraints to market development. It is important that this infrastructure enables distribution to the last mile; comprises features to ensure the proper functioning of markets; and is open in design to help realize the full potential of the digital economy through network effects and unlocking the power of data.

⁵⁹ UNCDF, "Reaching the last mile: the foundation for growth of Uganda's digital economy" (June 2020). www.uncdf.org/article/5797/reaching-the-last-mile-the-foundation-for-growth-of-ugandas-digital-economy.

⁶⁰ UNCDF, "Is the agent aggregator model the solution for rural areas?" (October 2019). www.uncdf.org/article/5084/is-the-agent-aggregator-model-the-solution-for-rural-areas.

Accessible infrastructure alone is not sufficient; it must be supported by other key factors to ensure transformative impact. Clients must be empowered through literacy to effectively access digital tools and infrastructure (see Section 2.1, **Empowering clients to embrace inclusive digital economies**). They must be able to use innovative products riding on top of this infrastructure, underpinned by use cases addressing their needs (see Section 2.3, **Inclusive innovation drives inclusive digital economies**). Policies and regulations must be in place to protect clients, engendering the trust that propels them to embrace digital services (see Section 2.4, **Enabling policy and regulation**). These elements, put in place in a coordinated manner, will address critical gaps to help create network effects and further market development, putting us on a path to attaining the Sustainable Development Goals.



OPEN APIS AND FINANCIAL INCLUSION

By Greta Bull, CEO, CGAP

APIs are the technology innovation most people have never heard of, but they are powerful drivers of the digital economy. APIs, or Application Programming Interfaces, have been around for two decades, but they have only recently begun to change the way financial services are delivered. They have the potential to transform it.

An API is essentially an interface that enables one software programme to talk to another. It allows businesses from start-ups to established companies to share data and services. This happens behind the scenes in many familiar services and works so seamlessly consumers aren't even aware they are there. APIs are what allow you to buy an airline ticket on Expedia, post a photo or news article to Facebook, buy an app on the App Store or take a ride with Uber (and much more!). They are the glue that holds the digital economy together.

APIs can be used to connect different IT systems, both inside and between companies, and they are deployed on a spectrum from internal to open:

- **Internal APIs** are reserved for use by developers working within or on behalf of an organization. They can help improve efficiency and lower time to market for innovations – making providers more agile.
- **Partner APIs** allow data to flow between two different organizations according to an agreed set of parameters. In other words, they enable collaboration.
- **Open APIs** are made more broadly available. Selected organizational assets (for example, payments functionality or data) are made available on a self-service basis to developers who meet minimum criteria, register for access and are willing to operate to a defined set of parameters for participation. Open APIs are used to promote innovation.

From an innovation perspective, Open APIs are key enablers as they allow different players to harness and leverage the assets and capabilities of each other – combining, for example, payments capabilities with geolocation and communications services in the case of Uber. Together, these services deliver enhanced customer value, in this case, getting from point A to point B. With any one of those capabilities on its own, the rider would likely not be able to make the journey.

Large digital financial services providers are often not best placed to develop a full range of services themselves to meet the needs of their many customers. Take the case of a Mobile Network Operator (MNO) running a payment platform in Africa: they are too busy managing core operations – registering customers, managing a huge distribution network, and dealing with regulations. They have neither the time, the skills nor the inclination to develop financial or other consumer products. They just want to attract as many people to their platforms as they can and keep them in their payment ecosystem. One of the best ways to do this is to bring third party services into the platform. And one of the best ways to do that is through Open APIs.

There are many small and nimble companies with creative ideas that range from leasing tractors to PAYGO solar to financial health apps to social networks and e-commerce. They need a way to get their product out to customers and to get paid for their services. Large DFS players offer that channel. Problem is, normal methods of integration are complicated, expensive and time-consuming, and small companies have neither the resources nor the bargaining power to deal with the MNOs. Without an Open API scheme, large DFS providers prioritize integration with a handful of larger partners with a clear business case where profits outweigh the high cost of one-off integrations. These tend to be companies like utility providers who integrate for bill payments. Sometimes they offer an innovative solution, but often as not, we are looking at established, volume-based businesses. That makes life easier for consumers at the margins – being able to pay a bill remotely is certainly a convenience - but it does not open up many new services for consumers.

By making a platform available to third parties on an open basis, platform providers enable developers with good business ideas to onboard themselves to the platform, using processes, rules and technologies published in the platform provider's developer portal. If the small company is able to meet the platform's standards, then it can start selling its services over the platform, making its service visible, communicating with customers and collecting payments from them. It's a win-win.

Open APIs are not only good for giving consumers more choice, they are also good for businesses. Open APIs expand the ways people can use digital money and therefore help drive usage of digital accounts. Because consumers have more options, they buy more, increasing revenues. The integration costs for large providers come down due to economies of scale, and the universe of partner services that can be onboarded in a short period of time expands. And smaller start-ups have lower integration costs and can bring their products to the market more quickly, testing customer demand and improving the product incrementally.

APIs are at the core of transformations taking place in the financial sector, like Open Data and Open Banking, which are leading to the 'disaggregation' of banking. As these services are gradually integrated into the digital platforms that are transforming the ways people earn incomes and buy goods and services, they open up new possibilities to improve the lives of the poor by bringing them into the wider digital economy.



SECTION 2.3

INCLUSIVE INNOVATION DRIVES INCLUSIVE DIGITAL ECONOMIES

By Jaspreet Singh



HIGHLIGHTS

- Facilitating access to services that people want will drive adoption and usage, creating desirable network effects. However, these benefits must be tempered by an understanding of some of the potentially negative impacts of innovation, some of which can be addressed by education.
- The UNCDF Innovation workstream aims to build robust use cases, providing access to broader sectors of the economy. Innovation, when supported by policy & regulation, infrastructure, and skills helps to enable the development and usage of solutions that can help us to move towards inclusive digital economies.

Bibhaker, a small-scale farmer in rural Nepal, grows enough food to feed his family, but there is seldom money for other things. He is eager to diversify what he grows on his 3-hectare plot. He is considering crops such as corn or jute, which he could sell at market for extra income. This revenue would enable him to meet some of his needs, as well as his aspirations for the family, such as educating his children and saving for difficult times. Bibhaker is hesitant, because these crops require an upfront investment in seed and fertilizer, and are also more prone to bad weather. There is the added challenge of getting his harvest to market, which is several hours away, but where prices are higher than local ones.

Farmers like Bibhaker, with the drive and ability to build a better life for their families, often have no access to markets or critical services such as credit and insurance. The lack of relevant, convenient and affordable services that effectively meet the needs of excluded populations is a relatively common development challenge for farmers such as Bibhaker, and the millions of other people who, like him, live at the last mile. Services leveraging digital technology can overcome constraints to market development, addressing the needs of clients in a commercially viable manner, underpinned by innovative business models. Providing Bibhaker with access to critical services would be a game changer,

enabling him to diversify his crops, while protecting him – for a small fee – from risks, and equipping him with the tools to build a better life for his family.

Unleashing innovation focused on the development of relevant services can address the needs of small-scale farmers like Bibhaker, as well as entrepreneurs and micro, small and medium enterprises. It can also enable local providers, such as mobile network operators and fintech companies, to innovate in markets, providing sustainable services and creating marketplaces for services, both digital and non-digital. For example, Africa's fintech companies have raised more than US\$320 million in funding since January 2015.⁶¹ Facilitating access to services that people want will drive adoption and usage, creating desirable network effects. However, these benefits must be tempered by an understanding of some of the potentially negative impacts of innovation, some of which can be addressed by education (see Section 2.1, **Empowering clients to embrace inclusive digital economies**) and others by policy (see Section 2.4, **Enabling policy and regulation**).

DEVELOPING SERVICES REQUIRES BARRIERS TO BE ADDRESSED

Several barriers need to be overcome to address the lack of use cases. Providers must possess the necessary capabilities, have access to open platforms, and be committed to meeting customer needs. Hurdles must be removed so that financial and digital service providers can deliver the services that excluded populations require to participate in the digital economy. Customer-centric solutions can leverage finance as an enabler, helping to overcome the high fixed costs of basic needs, in turn driving usage and improving economics for both customers and service providers. A case in point is Kenya-based M-KOPA,⁶² a digital asset financing platform that offers customers access to pay-as-you-go products and services, including solar energy, smartphones, financial services and home upgrades.

ORGANIZATIONAL CAPABILITY AND COMMITMENT

Providers need to possess capabilities in several areas to ensure that they can develop relevant use cases. This includes the ability to map out the customer journey, leverage research and data to deepen their understanding of customers, and use human-centred design in product development. They must be able to apply the lens of customer-centricity, lean innovation and agile design to craft solutions that address these unmet needs – a lens that helps to identify broader, more robust valuable propositions. These should be grounded in digital technology, combining complementary solution components, which are often held together by data, and distributed through commercially viable business models.

An organization must resist the urge to tweak existing products. It is not sufficient to use recycled product constructs on target customer segments. Providers must embrace the capabilities identified above and be truly committed to customer-centricity, without succumbing to the temptation to take shortcuts.

OPEN PLATFORM

Innovation in the digital world requires access to open platforms, which should have three important characteristics. First is the ability to access and analyse open data. Second is that platforms can integrate with each other effectively, through technological infrastructure and commercial arrangements known as open application programme interfaces (APIs), to enable the efficient use of an expanding array of data. Open APIs greatly improve the ability of digital platforms, such as agricultural e-commerce companies, to integrate and embed financial services provided within their broader offering to customers. Third, innovation is accelerated when solutions can connect to an interoperable payments network, which provides users with a strong incentive for use because they can reach more people and businesses. A platform so configured can support providers to develop new solutions on top of the enabling digital rails, in turn fostering an innovative ecosystem. Achieving open platforms requires regulatory and policy engagement and support to overcome the perceived concerns that hold back data sharing and interoperability – a role played by UNCDF through policy (see Section 2.4, **Enabling policy and regulation**) and its advocacy for open platforms (see Section 2.2, **Enabling infrastructure for inclusive digital economies**).

⁶¹ Forbes, 'Africa's fintech investment quadrupled to US\$357m in 2018', www.forbes.com/sites/tobyshapshak/2019/07/30/africas-fintech-investment-quadrupled-to-357m-in-2018/?sh=1ed4b35162db.

⁶² See www.m-kopa.com.

CLIENT-CENTRED INNOVATION DRIVES DIGITAL INCLUSIVITY

At UNCDF, we support different approaches to innovation, each with its respective focus, so that multiple paths for business innovation and sustainability can be developed. Accelerators enable start-ups to gain access to the tools required to achieve rapid growth in a short period of time. To support large numbers of start-ups seeking to develop sustainable business models, we work with incubators. And finally, we work with innovation labs to support business growth that is strategic and goal focused.

In developing supporting ecosystems for entrepreneurs and nascent fintechs, our work involves more than financial technology. It is focused on connecting with the broader technology enabled ecosystem, creating linkages with critical sectors in the real economy to build products grounded in deep sectoral understanding (such as agriculture, health and education).

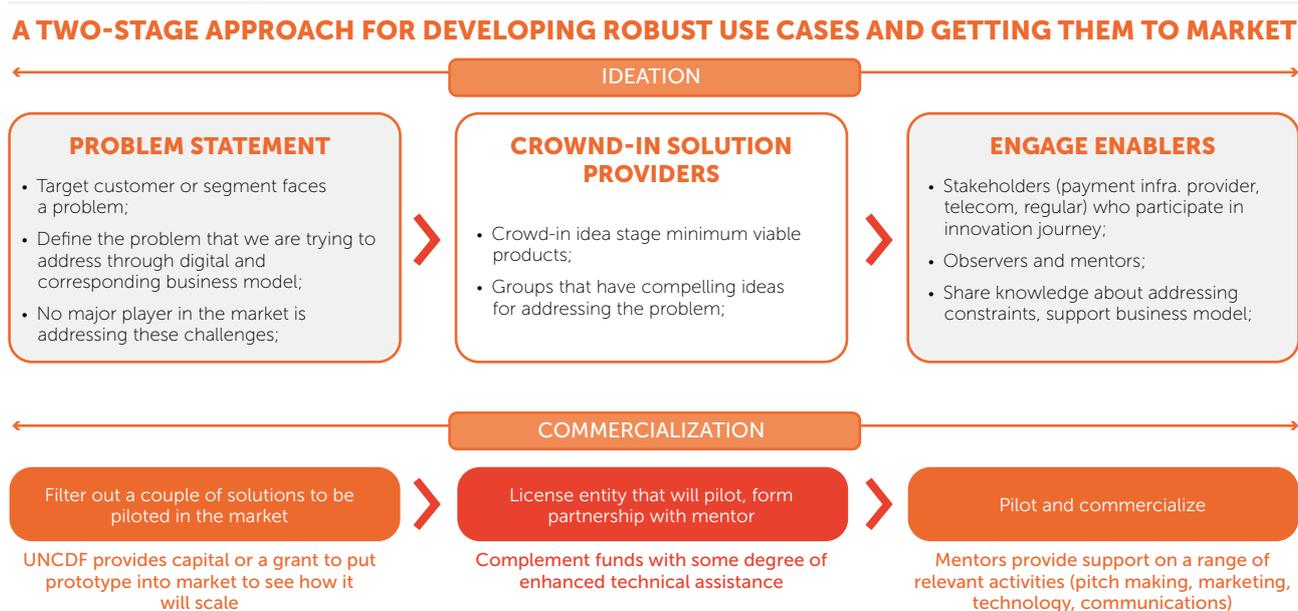
Our Nepal Agritech for Fintech Challenge is an example of an innovation lab initiative. The challenge focused on general problems faced by small-scale farmers in Nepal: the need to increase predictability and reduce

wastage, improve productivity, and enhance market access. By bringing together key buyers, suppliers and agricultural ecosystem participants, UNCDF was able to broker relationships and raise awareness of potential solutions. The challenge resulted in the development of an app-based loan appraisal platform, which accelerates loan appraisal, optimizes bank risk profiling, and forges an economic identity for the previously unbanked.

UNCDF runs a two-stage programme with innovative fintech companies to support them in developing robust solutions and getting these to market. At the ideation stage, we work with high-potential solution providers with promising business concepts and established enablers operating in the market. The work is focused on defining the problem, identifying relevant digital tools, and developing a business model. Solution providers are crowd-in to identify minimum viable products, while a number of enablers participate as mentors, sharing their insights to address constraints. Next, several high-potential prototypes are identified to receive additional support in the commercialization stage. Mentors partner with solution providers, providing assistance to take solutions to market. High-potential solutions receive funding, including loans and guarantees, to de-risk business plans, as well as enhanced technical assistance from UNCDF. One such company is SafePay Zambia, which is helping to improve access to health care in that country.

FIGURE 8.

The innovation delivery model



These structured approaches to problem-solving drive innovation and bring new solutions to market, which address the needs of the excluded, such as small-scale farmers like Bibhaker, helping clients to improve productivity and market access and protect against risks. In supporting the evolution of innovation ecosystems, we accelerate the development of digital tools and use cases that enable clients to build better lives.

THE IMPACT OF INNOVATION ON THE MARKET

The ability of digital innovation to create effective solutions to the challenges faced by marginalized communities is anchored in customer-centricity. Solutions crafted through this lens have greater potential to reach vulnerable segments and new sectors in a viable manner. Grounded in customer need, these solutions drive more meaningful usage, enhancing their viability, and in turn the viability of the enabling infrastructure.

In pursuit of the Sustainable Development Goals, our efforts focus on improving the lives of the vulnerable and the poor by increasing their access to and use of other sectors. Mobile money, for example, has played a central role in facilitating new energy markets. Other solutions have forged new ride and delivery infrastructure via transport companies like Bolt and Gojek.^{63,64}

This **Innovation workstream** aims at building robust use cases, providing access to broader sectors of the economy: for agriculture (see Section 3.6); clean energy (see Section 3.7); education (see Section 3.8); and health (see Section 3.9). To realize the full potential of the digital economy, however, other critical complementary elements must be in place. These include a digital infrastructure for use cases to run on, and clients with the skills to eagerly embrace the tools, devices and networks that underpin the digital economy. Policies and regulation that promote innovation must be balanced, addressing the risks that this creates (see Section 2.4, **Enabling policy and regulation**). Innovation, when supported by the complementary elements of these other workstreams, helps to enable the development and usage of solutions that can help us to move towards inclusive digital economies.

⁶³ See <https://bolt.eu>.

⁶⁴ See www.go-jek.com.



ENSURING NO ONE IS LEFT BEHIND, THROUGH DIGITALIZATION

By Surina Shukri, MDEC CEO

The Malaysia Digital Economy Corporation (MDEC) has become a force to be reckoned with since its inception 25 years ago. Established in 1996 as the primary agency to lead the MSC Malaysia initiative⁶⁵, it evolved in the last decade to become a critical mover for the digital economy. Operating under the oversight of the Ministry of Communications and Multimedia Malaysia (KKMM), it continues to manage its track-record of successfully driving forward the nation's digital economic agenda.

MDEC has been spurring the country's digital economy through three key thrusts – empowering digitally skilled Malaysians, enabling digitally-powered businesses and driving digital sector investments. These initiatives have created multiple positive impacts on the nation's economy.

There is no doubt that the growth of the digital economy plays an important part in society's betterment. As is, the digitalization of the economy is at the forefront of societal change today as it serves as a social equalizer to drive shared prosperity for all. This is especially so for countries that are now emerging from the debilitating COVID-19 pandemic.

The chaos of 2020 has underscored the urgency and relevancy of digital transformation for geopolitical segments; businesses and services sectors; and all socio-economic facets. This includes acknowledging and embracing the digital new norms and gaining access to the right tools as well as support services that can help all Malaysians make that digital leap.

⁶⁵ Established by the Malaysian government to accelerate the growth of the nation's Digital Economy, the MSC Malaysia status provides eligible ICT-related businesses, both local and foreign, with a wide range of incentives, rights and privileges to promote continued growth. <https://mdec.my/what-we-offer/msc-malaysia/>

Ensuring Digital Literacy for All

To ensure that no one is left behind in this shift to a digital economy, it is critical that Malaysians of all economic levels have some basic level of digital skills. That is the main fundamental for MDEC's #SayaDigital Movement, an initiative that aims to empower and embolden Malaysians with the right capabilities so they can quickly embrace living in the digital era faster.

Done in collaboration with the Malaysian Ministry of Communications and Multimedia (KKMM), it will feature several MDEC-led capacity-building programmes that will provide not only businesses with various means to go digital but more importantly, enable Malaysians to be digitally skilled with speed and at scale.

With this Movement, we hope to accomplish four primary goals, namely 'digital making life convenient'; 'digital boosting income'; 'digital empowering careers'; and "digital accelerating business expansion".

Part of the movement includes MDEC's eBerkat programme that aims to help Malaysians gain knowledge on digital financial services. Specifically targeting the B40⁶⁶ community and micro-, small- and medium-sized enterprises (MSMEs), the platform gives them access to Savings, Lending, Investment, Payment (SLIP) capabilities and access to digital financial services and instruments.

Digital Literacy Leading to More Opportunities

Increased digital literacy among Malaysians will eventually lead to more opportunities for them as well. This is especially true with revenue generation, which is a core concern for Bottom 40 percent (B40) and Middle 40 percent (M40) communities in the country. With the chaos caused by COVID-19, it has become crucial that affected communities have as many avenues for revenue and income generation as possible.

MDEC initiatives, like the Global Online Workforce (GLOW) programme, provides a digital platform where Malaysians are able to generate income through work found via crowdsourcing.

There is also eRezeki, another programme designed to open-up revenue opportunities for Malaysians, especially those with low incomes. This is done by allowing them to do digital assignments matched with their respective skills via an online crowdsourcing platform.

Launched in June 2015, over 300,000 participants (until end 2019) have since benefited from this initiative and have reported earning additional incomes.

Digitalizing MSMEs

Aside from ensuring digital literacy among Malaysians and opening up income opportunities for them, it is also important that businesses, especially the MSMEs, digitalize so they can readily leverage on and access the digital economy.

In our effort to accelerate digitalization among MSMEs, MDEC introduced our eUsahawan programme in November 2015 to help onboard MSMEs into various e-commerce platforms. With the challenges that many MSMEs, who are mostly traditional brick and mortar business, face, the programme ensures that we help prepare them with an alternative avenue to access customers and income.

Accessing a bank of knowledge is also key for MSMEs that want to digitalize, which is where our Go-eCommerce learning platform comes into play. Launched in July 2017, this platform features an internationally recognized curriculum for beginners, intermediate learners and advanced entrepreneurs with the goal to provide participants with the knowledge they need to successfully transition from a traditional brick-and-mortar business to e-commerce.

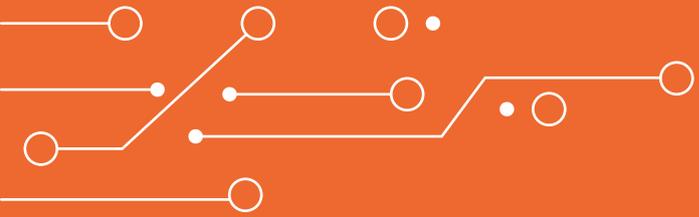
Towards Malaysia 5.0

Even with MDEC developing and introducing many initiatives that encourage digital literacy and digitalization to bridge the digital gap, we also understand the importance of including private enterprises as well. This is why MDEC has also partnered with the United Nations Capital Development Fund (UNCDF) and Malaysia's Central Bank, Bank Negara Malaysia (BNM) to organize the Financial Innovation Lab in Malaysia.

By harnessing the innovativeness of these local private enterprises, businesses and startups through the challenge, we can develop and find solutions that help to promote an inclusive and connected digital economy.

This is especially important as while MDEC is focused on growing and developing the country's digital economy, we are also driven by the vision of Malaysia 5.0 – a human-first society in a tech-age.

⁶⁶ Malaysians are categorized into three different income groups: Top 20 percent (T20), Middle 40 percent (M40), and Bottom 40 percent (B40).



This will see digital innovations capably resolve societal problems while building a sustainable and inclusive economy where Malaysians of all walks of life will enjoy shared prosperity.

So, while we are making efforts to march forward towards the Fourth Industrial Revolution (4IR), we are also mindful that we have to put society at the centre of technology rather than the other way round.

After all, technology should work for the betterment of all, or else, what is the point.

SECTION 2.4

ENABLING POLICY AND REGULATION

By Ahmed Dermish



HIGHLIGHTS

- Laws and regulations are not neutral. They can empower or discriminate, so their intent matters. The objective of inclusive regulation should be to engender trust in the financial system and enable greater choice.
- The UNCDF Policy and Regulation workstream accelerates an enabling environment for large-scale use of trustworthy digital services that contribute to inclusive economic growth.
- UNCDF works with partners to establish a policy environment that enables the deployment of solutions, technologies and enabling infrastructure to meet people's needs. These policies and regulations expand inclusion in a manner that balances the risks presented by new solutions and approaches, thereby engendering the trust necessary to build an inclusive digital economy.

Philip is a senior manager in the banking supervision team at a central bank. He has been charged with leading the process of developing a new consumer protection regulation. He is familiar with the regulations used in neighbouring countries and would like to implement similar approaches at home, to benefit as many people as possible. However, his job is time-consuming, and he only sees the complaints and concerns of higher-income customers who come directly to the central bank offices

in the capital city, or those of banks about increased costs that new regulations will bring. Philip wants a broader perspective of the customer experience with financial services, especially since mobile money services are increasing and more providers are using WhatsApp and Facebook to communicate with customers. He also needs to understand how he can compare his learning with examples from other countries and make them appropriate in his market context.

Meanwhile, Fatmata is the leader of an informal association of women merchants in a large local market. Many of the vendors and their customers are using mobile money for payments and cash management. This is even easier for those who use WhatsApp to share current prices with regular customers. However, she has noticed that many customers have stopped using mobile money because they are surprised by the fees that they are charged. Even merchants are receiving ‘robo-calls’ from unknown numbers after they use social media for sharing information about their goods, leading to concerns about their privacy. Customers and merchants have observed that at least with cash there are no hidden fees, and no need to give anyone your number.

Recently, Fatmata has been asked by a senior manager at the central bank if she can organize her association to participate in a public consultation process for new regulations. These new rules would help to define how financial service providers share information about services, and how they manage customer data and privacy. Her community of merchants is uncertain about the impact that they might have on such a big institution as the central bank, but they are excited about participating, promising to come with all their stories to share.

Growth of an inclusive digital economy requires people to trust digital systems and solutions. The UNCDF **Policy and Regulation workstream** accelerates an enabling environment for large-scale use of trustworthy digital services that contribute to inclusive economic growth. Our efforts help to establish this environment by assisting regulators and policymakers to strike the right balance between the benefits of inclusive growth and the risks presented by digital innovations needed to drive growth. The efforts in this workstream complement and support the three other workstreams discussed in Chapter 2.⁶⁷

Laws and regulations are not neutral. They can empower or discriminate, so their intent matters. The objective of inclusive regulation should be to engender trust in the financial system and enable greater choice. Regulations can drive confidence in the financial sector by ensuring that assets are protected, services are fair, and that institutions treat clients with dignity. Choice can be

enabled by reducing the dominance of a few players, lowering barriers to entry (for customers and innovators), and providing equitable access to essential infrastructure. Interoperability of payment systems⁶⁸ or mobile number portability⁶⁹ are examples of areas where policy and regulations have enabled core infrastructure to be more accessible and available to people.

An effective enabling environment needs a broad and ambitious ‘digital for development’ policy framework to create a shared vision among market actors. The regulatory environment in turn needs to gently ‘lean against this wind’, to ensure that these policies are implemented safely and that large-scale services deliver the expected impact. This is particularly important where people are accustomed to the flexibility and familiarity of informal services, with which digital will always compete. Yet, in this world of rapid innovation and constant change, it is hard to know the best way to address the right combination of policy and regulation to build inclusive digital economies that exceed the benefits of informal services, which have been around for generations.

Least developed countries are not the only ones struggling with these issues; all countries are navigating this challenge – trying to understand how to establish an appropriately balanced policy and regulatory environment. The magnitude of the challenge can be understood by examining two indicators. First is the size of the informal economy, which provides a good cross-cutting metric to gauge the extent of the challenge in building an inclusive digital economy. Second is the scale of digital penetration in high-priority digital sectors, to highlight progress as well as flag potential challenges such as regulatory interaction.

Fortunately, regulators and policymakers are not alone on this journey. The power of peer-to-peer learning has revolutionized how governments model their priorities and design solutions, based on the successes of others. In addition to bilateral peer learning, multilateral learning has emerged as an essential means of South-South cooperation, thanks to partners such as the Alliance for Financial Inclusion, the Consultative Group to Assist the Poor, the Global System for Mobile Communications Association, the Bank for International Settlements, and other global institutions that have prioritized learning as a means of promoting change.

⁶⁷ These workstreams include the focus on Enabling Education in Section 2.1, the development of Infrastructure in Section 2.2 and Inclusive Innovation in Section 2.3.

⁶⁸ The United Republic of Tanzania’s mobile payment infrastructure has seen significant benefits from interoperability. See International Finance Corporation, “Achieving interoperability in mobile financial services” www.ifc.org/wps/wcm/connect/d16cceb-1853-4a2a-89f3-52985f8e5134/IFC+Tanzania+Interoperability+Case+Study.pdf?MOD=AJPERES&CVID=IA4tZDN.

⁶⁹ The European Union’s regulations on mobile number portability are expressly intended to promote customer choice and competition. See <https://ec.europa.eu/digital-single-market/en/number-portability>.

THE NEED TO UNDERSTAND TRADE-OFFS

The development challenge in building inclusive digital economies is understanding the trade-offs among competing policy and regulatory goals. This is made more difficult by the fact that navigating the trade-offs inherent in regulating an *inclusive* digital economy is an emerging practice. Nor is this a unique problem. The microfinance industry provides salient examples of such trade-offs. For example, interest rate caps on microloans are a public policy paradox:⁷⁰ they may reduce the cost of borrowing, but will also increase the cost of lending.⁷¹ An inclusive economy will need to navigate similar trade-offs, in order to promote the safe use of new business models and innovations by low-income and marginalized people.

Contributing to these trade-offs is the presence of multiple well-established regulatory domains and their need to interact together. These domains include regulations encompassing competition, infrastructure and financial services. Multiple trade-offs intersect across these domains in our efforts to build inclusive digital economies. To better understand the nature of such trade-offs, it is useful to highlight relevant examples.

Licensing new types of financial service provider has expanded access to digital financial services. For example, policies have allowed non-bank entities to become licensed issuers of e-money. Yet to offset the perceived risk of introducing non-bank financial providers, regulators have opted to limit funds intermediation, restricting their scope of services and business opportunities. Here we see another trade-off, with the expansion of services and increased competition tempered by efforts to limit perceived operational and liquidity risk.⁷²

In the case of data and privacy, there are efforts to give individuals greater control over their personal information, with attempts to design data protection regulations that put privacy first.⁷³ The European Union's (EU) General Data Protection Regulation is a pioneer in this regard, but for emerging markets that are different from advanced EU markets, it is unclear if these intersections are synergistic, promoting inclusion, or if they are counterproductive. Such fundamental changes in ownership rights create a trade-off between enabling innovation, with its potential for expanding data-driven business models, and limiting access to data with overly stringent data protection rules.

Many countries have adopted policies such as those noted to support innovation and efforts to build an inclusive digital economy, often leveraging inclusive digital finance as an enabler of these efforts. There is an increasing trend to develop specific tools that provide more space for regulators and policymakers to learn about appropriate responses, such as using sandboxes or innovation offices.⁷⁴ However, while we have playbooks for some circumstances, we do not for the intersection of these domains.

UNCDF'S UNIQUE APPROACH TO HELPING GOVERNMENTS ADDRESS BARRIERS

At UNCDF, we make a point of helping our partners, as well as policymakers and regulators, to enable an inclusive digital economy by supporting their efforts to increase trust and drive network effects. People need to have trust that their money is safe on a card or phone, and that their personal data are secure, while positive network effects will unlock benefits of wide-scale use of digital services. Clients need to be convinced that public institutions have the governance and oversight tools to hold themselves accountable to outcomes that serve the public good.

⁷⁰ Appui au Développement Autonome, "The paradoxical case against interest rate caps for microfinance", www.ada-microfinance.org/en/our-resources/media-center?media=185.

⁷¹ Although meant to protect consumers, interest rate ceilings almost always hurt the poor. See FinDev Gateway, "The impact of interest rate ceilings on microfinance industry", (July 2015). www.findevgateway.org/paper/2015/07/impact-interest-rate-ceilings-microfinance-industry.

⁷² Consultative Group to Assist the Poor, "A guide to supervising e-money issuers" (December 2018). www.cgap.org/research/publication/guide-supervising-e-money-issuers.

⁷³ The European Union's General Data Protection Regulation (GDPR) and the embrace of 'privacy by design' as a policy tool is an excellent example of this. GDPR is a model that many regulators would benefit from adapting to their local context. The term 'privacy by design' means nothing more than 'data protection through technology design'. Behind this is the thought that data protection in data processing procedures is best adhered to when it is already integrated in the technology when created. See <https://gdpr-info.eu/issues/privacy-by-design>.

⁷⁴ See www.findevgateway.org/slide-deck/2019/07/cgap-world-bank-regulatory-sandbox-global-survey-2019.

Our process focuses on prioritization and helping partners to identify options. We engage our partners in a dialogue, beginning by understanding their high-level policy objectives. We then break these down into component parts, interrogating them one at a time. Moving through each step with intention and urgency accelerates the policy and regulatory design process.

In Africa, the Bank of Sierra Leone teamed up with our technical specialists to design an innovative consultation process that involved working directly with customers, particularly women, in various remote parts of the country. This has resulted in regulations that are much more in line with customer needs, while also balancing business sustainability.⁷⁵ In the Pacific, the Reserve Bank of Fiji and other regional regulators collaborated with our regional specialists to design an innovation focused 'regional sandbox' to unlock new business models.⁷⁶ This has resulted in dialogue and approaches that help multiple regulators in the region to balance innovation with stability and safety.

Sustainable solutions are not the only thing that policymakers and regulators ask for. There is clear demand for additional support to enable inclusive markets, and despite the differences among market environments, the 'demand context' often falls into three distinct categories. These are (i) **accelerating the policymaking process**; (ii) **building systems for market oversight and supervision**; and (iii) **developing strategic plans to leverage digital services that promote inclusion and market development**.⁷⁷ Individually, each category improves policymaking and regulatory capacity to manage systemic stability and protect customers. Collectively, they ensure that regulators and policymakers have the tools to keep pace with rapidly changing markets catalysed by technology. UNCDF has organized its support of policymakers and regulators in line with these needs.

Dialogue on high-level policy objectives is a useful starting point for engaging our regulator and policymaker partners. We have worked closely

with regulators and policymakers to design a set of tools and guides that build on their objectives and put them in the driver's seat.⁷⁸ This empowers their decision-making while we work with them to be rigorous in their process, collaborating on multiple pathways to achieve the desired outcomes.

The efforts of this **Policy and Regulation workstream** are transformative. We help our partners to establish a policy environment that enables the deployment of solutions, technologies and enabling infrastructure to meet people's needs. These policies and regulations expand inclusion in a manner that balances the risks presented by new solutions and approaches, thereby engendering the trust necessary to build an inclusive digital economy.

⁷⁵ UNCDF, "Bank of Sierra Leone's consumer protection journey", <https://policyaccelerator.uncdf.org/whats-new/bank-sierra-leones-consumer-protection>.

⁷⁶ AFI, "PIRI publishes Pacific Regional Regulatory Sandbox Guidelines", www.afi-global.org/newsroom/news/piri-publishes-pacific-regional-regulatory-sandbox-guidelines/.

⁷⁷ UNCDF, "Enabling policy and regulation for digital finance ecosystems", www.uncdf.org/article/3687/enabling-policy-and-regulation-for-digital-finance-ecosystems.

⁷⁸ See <https://policyaccelerator.uncdf.org/policy-tools>.

BETTER THAN CASH ALLIANCE MEMBERS ACCELERATE RESPONSIBLE PAYMENT DIGITIZATION IN COVID-19 RESPONSE

By Ruth Goodwin, Managing Director,
Better Than Cash Alliance

The Better than Cash Alliance (the Alliance), with its secretariat hosted by the United Nations Capital Development Fund, is a partnership of governments, companies, and international organizations that accelerates the transition from cash to digital payments. During the past decade, member governments of the Alliance have built effective regional and national coalitions to accelerate responsible digitization of payments to expand financial inclusion and to work towards achieving the Sustainable Development Goals (SDGs), in particular in LDC countries.

The latest Global Findex data revealed that 69 percent of adults – 3.8 billion people – now have a bank account. The significant increase in the use of mobile phones and the internet to conduct financial transactions contributed to a rise in the share of account owners sending or receiving payments digitally from 67 percent to 76 percent globally. In emerging economies, it went up from 57 percent to 70 percent between 2014 and 2017.⁷⁹ When done right, digital payments bring efficiency and transparency, drive women's economic participation, and inclusive growth. The most important takeaway from these numbers is that the biggest gains overall, and the most significant progress in gender equality, are in countries where the Alliance members have made responsible digital payments a top priority. They have adopted the Alliance Responsible Digital Payments Guidelines which identify nine good practices for empowering users who have previously been financially excluded or underserved.

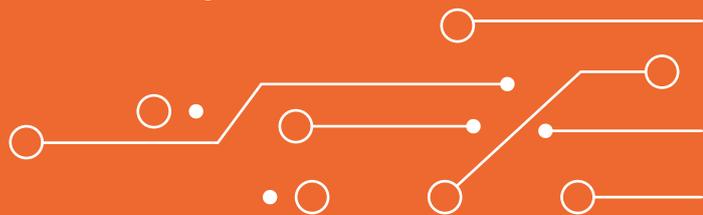
⁷⁹ <https://globalfindex.worldbank.org>

Alliance LDC members such as Ethiopia, Rwanda, and Bangladesh, are leading by example, moving away from cash, and supporting progress towards the achievement of the SDGs. In Ethiopia, the Alliance provided catalytic technical assistance to the Government to develop a widely consulted National Digital Payments Strategy 2020-2023, where key public and private sector stakeholders prioritized and championed to close the gender gap in financial inclusion and boost women's economic participation. Similarly, in Rwanda, the Alliance provided technical expertise including drawing lessons from peer members to catalyse Government of Rwanda's award-winning "EjoHeza" Long-Term Savings Scheme (LTSS). The goal of the scheme is to bridge the existing pension coverage gap, so all Rwandans have an equal right and opportunity to achieve a financially secure and dignified retirement in a safe, affordable, convenient and well-regulated environment.

Highlights of the Alliance's work in Bangladesh include bringing millions of women into the digital economy, and building more transparent, efficient, and inclusive supply chains (B2P). The ready-made garment (RMG) sector represents 15 percent of Bangladesh's GDP, and contributes over 80 percent of the country's exports. The sector employs approximately 4 million workers, 60 percent of whom are women. Yet in 2017 only 25 percent of garment factories were paying workers digitally through bank account or mobile wallet, according to research we conducted with the Sustainable Apparel Coalition.⁸⁰ To move this needle on digital wages in the RMG sector, in November 2019, the Alliance leveraged our convening powers and the Government of Bangladesh's leadership to bring all key public and private sector stakeholders including the Central Bank – the Bangladesh Bank, the Bangladesh Garment Manufacturers and Exporters Association (BGMEA), and global garment brands together for the first time to focus on action at the Digital Wages Summit. This led to several landmark commitments⁸¹ by brands like Gap, M&S, Inditex, H&M (see box) to responsibly digitize wages and create new social and economic opportunities for Bangladesh garment employees in Bangladesh's growing digital economy. The Alliance led knowledge creation,

⁸⁰ <https://www.betterthancash.org/news/blogs-stories/factories-paying-workers-digitally-are-five-times-more-likely-to-provide-good-social-and-labor-practices>

⁸¹ Call to action from 4 leading garment companies: Digitizing workers' payments in the garment sector in Bangladesh



targeted advocacy, and capacity-building, together with proof-of-concept pilots, with strong government, industry body and private sector leadership proved effective. Responsible digital payments is now embedded in and recognized as a sustainable practice for government, companies and their apex bodies working in RMG in Bangladesh, driving inclusive local ecosystems for digital cash.

Landmark commitments at the Digital Wages Summit in November 2019

- [H&M](#) announced that all its supplier factories in Bangladesh would have digital payment systems by the end of 2021
- [Gap Inc.](#) said all its tier-1 suppliers would digitize wages by the end of 2021
- The [BGMEA](#) committed to 90 percent of the garment workers being brought under a digital wage system by 2021
- The International Labour Organization (ILO) announced [its membership to the Alliance and a new commitment to responsible digital payments](#)

The COVID-19 crisis in 2020 meant that millions of people in Bangladesh were under lockdown, including the garment factories. The Bangladesh government's

COVID-19 RMG Wage Relief Fund mandated that all salaries continue to be paid – but paid digitally. This resulted in the opening of 2.5 million new accounts in second quarter of 2020! This massive shift from analog to digital was possible because of the strong [commitment](#) to digitize wages made at the Digital Wages Summit. During the pandemic, the Alliance worked with key stakeholders to build digital payments grievance redressal capacity to support first time users of digital payments to create trust and put in place a recourse mechanism for first time users – important elements of the Alliance's [responsible digital payment guidelines](#).

Following the International Labour Organization (ILO) membership of the Alliance in 2019, a global learning exchange series was hosted between the Alliance, ILO, the International Finance Corporation (IFC), and their [Better Work](#) programme on digital wages during the pandemic. The Alliance catalyzed the launch of the ILO's [Global Centre on Digital Wages for Decent Work](#), which will showcase Bangladesh's key successes and good practices for other emerging markets to transition to digital wage payment through research and evidence-based advocacy.

LDCs now face unprecedented challenges in making progress on towards the SDGs due to COVID-19. Continuing to advance financial inclusion by facilitating access to digital financial services is a vital element in tackling inequality, improving prosperity, and empowering women and men worldwide. The Better Than Cash Alliance will continue to help its members respond better and faster to the ongoing demands brought by COVID-19 and help them drive progress in the transition from cash to digital payments.

