

TECHNICAL ASSISTANCE TO SUPPORT THE DESIGN OF
AN INNOVATIVE ACCESS AND FINANCING SCHEME FOR
AFFORDABLE SMART DEVICES



REPORT

Smart Devices Financing Scheme



Smart device financing scheme

The final version will include INCM's logos and references to the World Bank and the Consultant in the

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Acknowledgments

We would like to express our deep appreciation to all those who contributed to the implementation of this project and the preparation of this report:

- **The National Communications Institute of Mozambique (INCM)**, whose guidance was essential for the design of the Financing Scheme and the Implementation Manual, as well as for its ongoing supervision of the telecommunications sector in Mozambique;
- **The World Bank team**, for its strategic and operational support within the *Mozambique Digital Acceleration Project*, as well as for the resources mobilized to promote digital inclusion throughout the country;
- The **institutional stakeholders** – including the Tax Authority, the Department of Technical Verification and Approval (Radiocommunications and Technologies Directorate), as well as the Ministries of Education, Agriculture and State Administration – for the information provided on how to better integrate this initiative with educational, infrastructure and community policies;
- To **the implementing partners**, namely operators and distributors, academic institutions, NGOs specializing in digital inclusion, people with disabilities, and displaced community associations, whose practical contribution was crucial to the design of the recommended solutions;
- Finally, to **the researchers involved** in the study of appetite and barriers to the use of smart devices in Mozambique, whose dedication and active participation rewarded the project with important field information.

To all, we extend our gratitude and commitment to continue contributing to building an increasingly connected, inclusive, and digitally empowered Mozambique.

The LBC – Leadership Business Consulting project team.

Abbreviations and Acronyms

GNI	<i>Gross National Income</i>
GSMA	<i>Global System for Mobile Communications Association</i>
GVA	Gross Value Added
ICT	Information and Communication Technologies
INCM	<i>National Institute of Communications of Mozambique - Communications Regulatory Authority</i>
INE	<i>National Institute of Statistics</i>
ITU	<i>International Telecommunication Union</i>
LBC	Leadership Business Consulting
MCTD	<i>Ministry of Communications and Digital Transformation</i>
MVNOs	<i>Mobile Virtual Network Operators</i>
NBFI	Non-banking Financial Institution
OPD	Organization of Persons with Disabilities
PADIM/MDAP	<i>Mozambique Digital Acceleration Project</i>
IDP	<i>Internally Displaced Persons</i>
SADC	<i>Southern African Development Community</i>
TCO	Total Cost of Ownership

Executive Summary

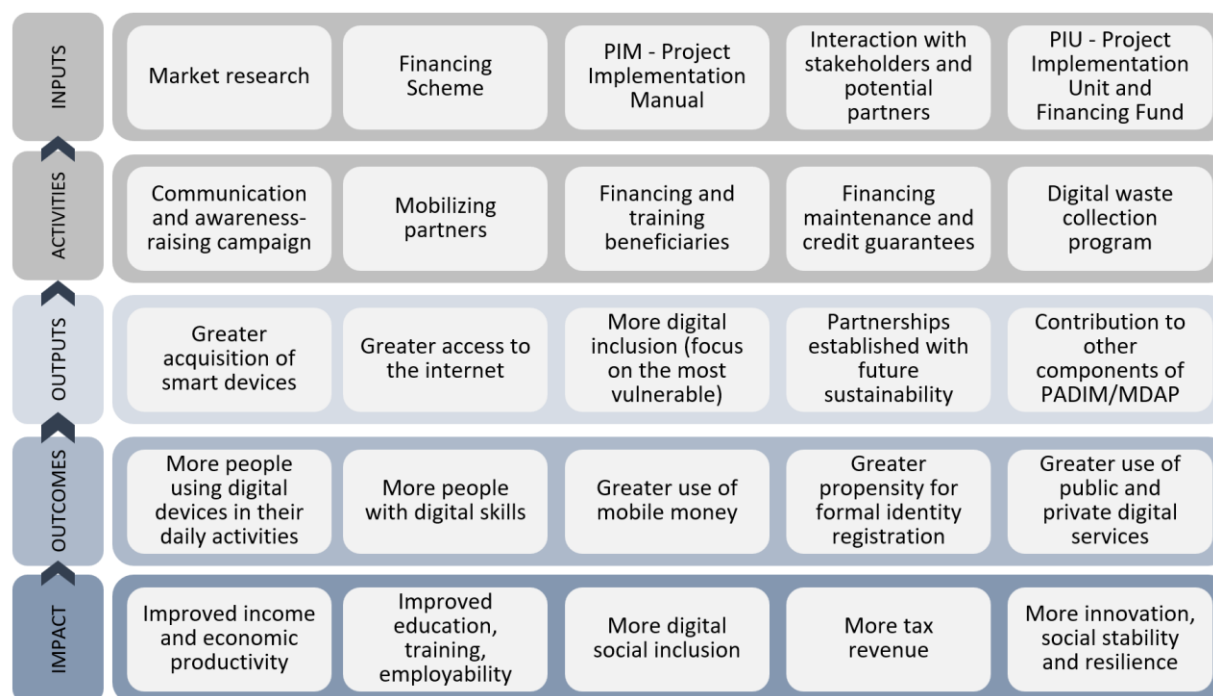
This project is part of PADIM - *Mozambique Digital Acceleration Project* (PADIM or MDAP), whose main objective is to promote the expansion of digital access and inclusion, enabling a growing number of Mozambicans to benefit from the opportunities provided by the digital revolution and thus be socially and economically included through access to digital technologies.

Project objectives

This project plans to provide US\$25 million for the creation and implementation of a Smart Device Access and Financing Scheme (mainly smartphones and laptops), with the aim of facilitating the acquisition of these devices and greater internet access for low-income and socially vulnerable families.

The **operational objective** of this project is to facilitate and finance the acquisition of smart devices (smartphones and laptops) and internet access for 330,000 beneficiaries between 2025 and 2028, with at least 50% being women and 40% young people.

The project objectives are summarized in the following infographic.



Smart device financing scheme**Beneficiary Groups**

The main focus of the project is to have a socio-economic impact on the most vulnerable, including considerations for mitigating gender, age, and geographical inequalities, followed by an investment in medium-term sustainable growth impacts through support for key actors in the education sector, teachers, and students, with special consideration for two groups of high socio-economic vulnerability, displaced persons, and people with special needs.

The financing program aims to reach 330,000 beneficiaries between 2026 and 2028, ensuring that at least 50% are women and 40% are young people. This plan proposes to use up to US\$2.6 million to train target groups and encourage the sustained adoption of the devices.

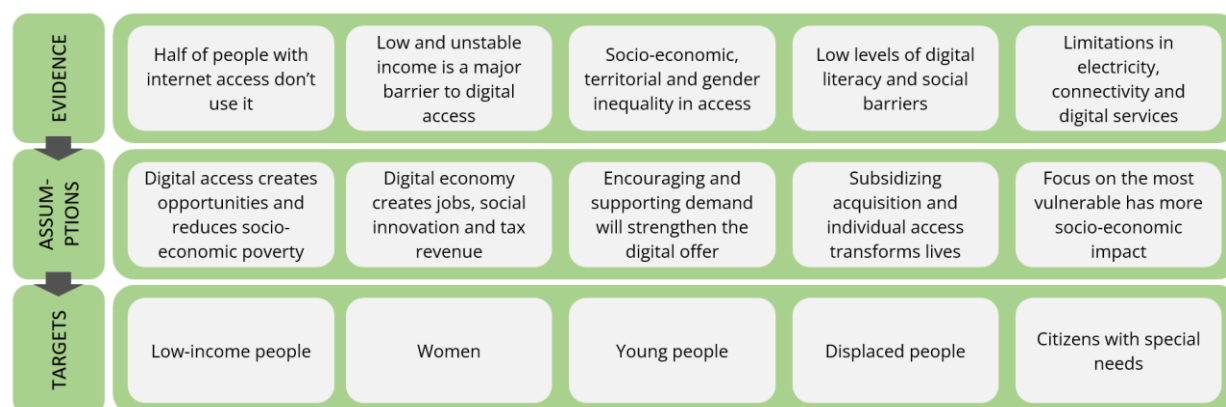
Segment	Beneficiary groups	No. of beneficiaries	
Low Income / Economic Activation	Farmers	160,000	270,000
	Low-income self-employed workers	80,000	
	Digital self-employed workers	30,000	
Education / Socioeconomic Development	Teachers (technical and higher education)	10,000	40,000
	Students (technical and higher education)	30,000	
High Vulnerability / Social Development	Internally displaced persons	10,000	20,000
	People with special needs	10,000	
Total		330,000	330,000

With the use of a revolving fund, the project can reach 444,600 beneficiaries. If, in addition, the financing of the project training is assumed by another budget component of PADIM, the subsidy for equipment and internet access can reach 488,600 beneficiaries.

Motivation

Smart device financing scheme

The motivation for the project is summarized in the following infographic.



A Challenge of Economic Accessibility

Among respondents who do not own or have never owned a device, the most frequently cited reason was **inability to pay, followed by lack of access to credit**.

In all stakeholder interviews, **the cost of devices was identified as the main barrier** to the adoption of smart devices. For this reason, the second-hand market is very active, driven by more affordable prices and weak regulatory enforcement.

The costs of a smartphone, tablet, or laptop represent 93%, 405%, and 1,293% of the average monthly income per capita, respectively.

For the first two quintiles, corresponding to 40% of the population with the lowest incomes, the purchase of any smart device is, in practice, financially inaccessible. This barrier is even more pronounced in the case of tablets and laptops, whose prices place them completely out of reach of the majority of the population.

Of those surveyed who were interested in purchasing a mobile phone, 17% could only afford to pay up to MZN 2,000 and 22% between MZN 2,000 and MZN 5,000. 70% of all respondents would be willing to pay in installments but indicated relatively low monthly amounts: 36% could pay less than 250 MZN per month, 28% could pay between 250 and 500 MZN, and 19% could pay between 500 and 1,000 MZN.

Smart device financing scheme**Added to the challenge of low digital skills (and illiteracy)**

The digital skills gap is significant. Around 18% of respondents do not know how to search for information online, and many are unaware of basic device functions. This limitation suggests the inclusion of a mandatory digital training component for receiving the device under the financing scheme.

More advanced skills are more prevalent among men than women, although the discrepancy is not significant.

Financial capacity of beneficiary groups

The table below presents the main assumptions about the financial capacity of the beneficiary groups considered in the financing model.

These inputs were defined based on the results of population surveys conducted by technical assistance.

Group No.	Beneficiary groups	Monthly payment capacity (USD)	Expected <i>default</i> rate (USD)
Group 1	Farmers	\$3.90	30%
Group 2	Self-employed workers with low income	\$11.70	20%
Group 3	Digital self-employed workers	\$19.50	20%
Group 4	Teachers (technical and higher education)	\$23.40	25%
Group 5	Students (technical and higher education)	\$7.80	20%
Group 6	Internally displaced persons	\$0.00*	N/A
Group 7	People with special needs	\$0.00*	N/A

Smart device financing scheme

Financing model

Mixed financing model that combines microcredit solutions with targeted subsidies, whose conditions are tailored to the target beneficiary groups.

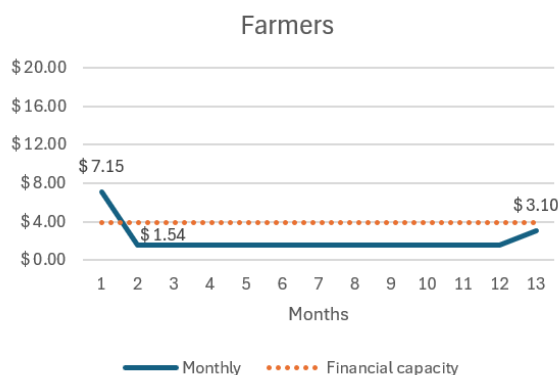
In order to overcome economic accessibility limitations, the scheme is based on a mixed financing model for devices and data access that combines microcredit solutions with targeted subsidies, whose conditions are adjusted to the various target beneficiary groups. This access and financing will be provided through implementation partners such as mobile operators and digital equipment distributors and will be based on the principle of results-based funding.

Funding for devices and data access will be complemented by parallel initiatives, including maintenance and warranty for distributed devices, an e-waste program, and training and activation of beneficiaries.

Financing scheme

# Group	Groups of beneficiaries	Device to be allocated	Financing mechanism	Device subsidy (%)	Cost covered by the beneficiary (%)	No. of installments	Own contribution (%)	Loan (%)
1.A	Farmers	Smartphone	PayGo / Interest-free loan with partial subsidy	65%	35%	12	14%	21%
1.B	Farmers with geographical bonus	Smartphone	PayGo / Interest-free loan with partial subsidy	85%	15%	12	6%	9%
2	Self-employed workers with low income	Smartphone	PayGo / Interest-free loan	0%	100%	12	30%	70%
3	Digital self-employed workers	Smartphone	PayGo / Interest-free loan	0%	100%	12	30%	70%
4	Teachers (technical and higher education)	Laptop	PayGo / Interest-free loan with partial subsidy	40%	60%	24	3%	57%
5	Students (technical and higher education)	Laptop	PayGo / Interest-free loan with partial subsidy	70%	25%	24	3%	23%
6	Internally displaced persons	Smartphone	Total subsidy	100%	0%	12	0%	0%
7	People with special needs	Smartphone	Total subsidy	100%	0%	12	0%	0%

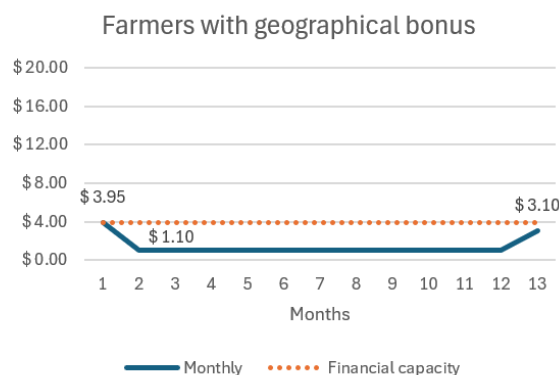
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In the case of farmers, during the 12-month support period, they always pay a constant amount lower than the \$3.90 monthly preparation fee.

The initial purchase corresponds to less than two months of savings in preparation for payment.

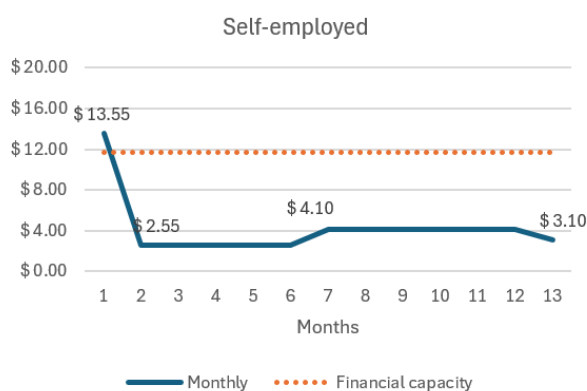
At the end of the 12 months, payments rise to the normal internet access rate, which is below the value of the pay-as-you-go amount.



In the case of farmers with a geographical bonus, during the 12-month support period, they always pay a constant amount that is much lower than the \$3.90 per month they are preparing to pay.

The initial purchase corresponds to less than two months of savings in the prepayment.

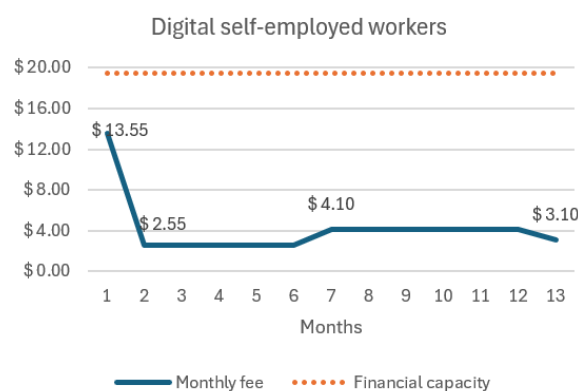
At the end of the 12 months, payments rise to the normal internet access rate, below the prepayment amount.



In the case of self-employed workers, during the 12-month support period, they always pay less than the \$11.70 monthly preparation fee.

The initial purchase corresponds to just over one month of savings in preparation for paying.

At the end of the 12 months, payments rise to the normal internet access rate, well below the cost of getting ready to pay.

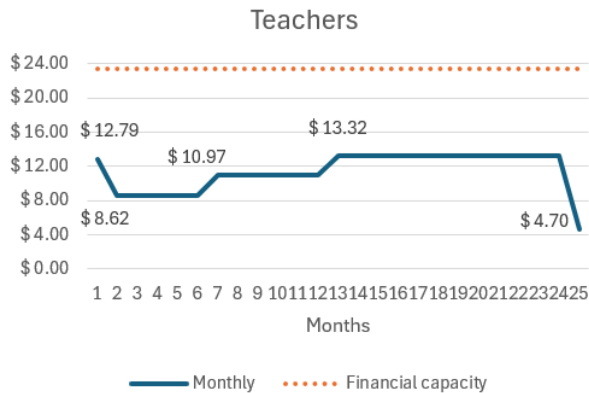


In the case of digital self-employed workers, during the 12 months of support, they always pay much less than the \$19.50 monthly preparation fee.

The initial purchase corresponds to less than one month of savings in preparation for paying.

At the end of the 12 months, payments rise to the normal internet access rate, well below the pay-as-you-go amount.

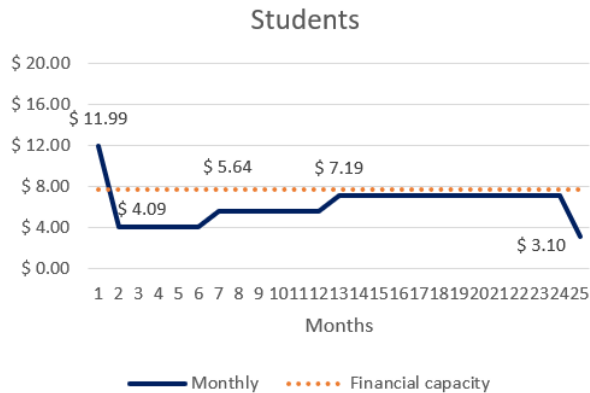
Smart device financing scheme



In the case of teachers, during the 24 months of support, they always pay less than the \$23.40 monthly preparation fee.

The initial purchase corresponds to less than one month's savings in preparation for payment.

At the end of the 24 months, payments rise to the normal internet access rate, well below the pay-as-you-go rate. At the end of the 24 months, payments drop to the normal internet access rate, well below the pay-as-you-go rate.

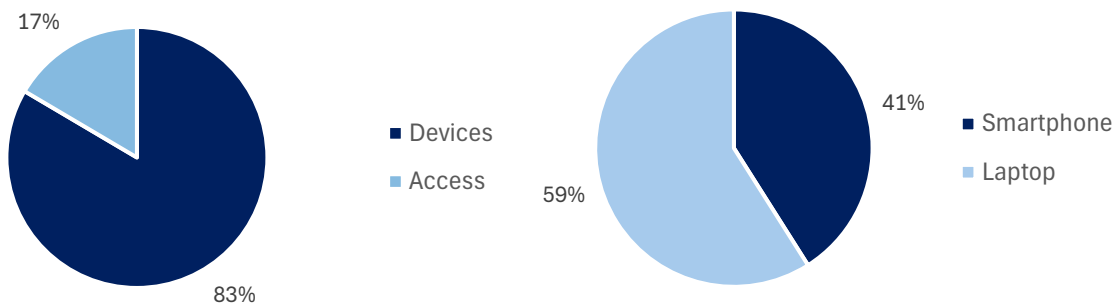


For students, during the 24-month support period, they always pay less than the \$7.80 monthly prepayment amount. For students, during the 24-month support period, they always pay less than the \$7.80 monthly prepayment amount.

The initial purchase corresponds to just over one month's savings in the payment plan.

At the end of the 24 months, payments drop to the normal internet access rate, well below the prepayment amount.

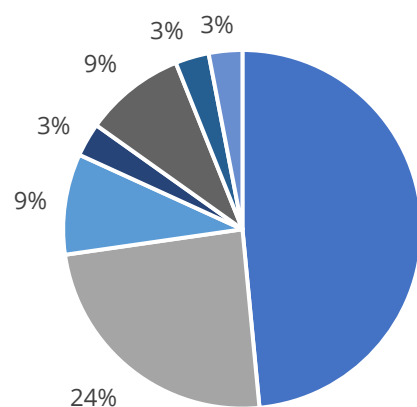
Relative distribution of funding for devices and access: Device vs. Access (right) and Smartphones vs. Laptops (left).



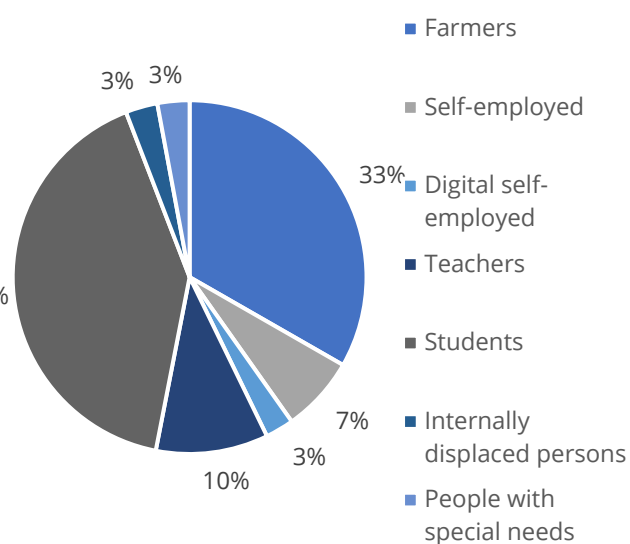
Smart device financing scheme

# Group	Beneficiary groups	No. of beneficiaries	Total device cost (USD)	Cost borne by beneficiaries assuming <i>default</i> rates (USD)	Total subsidies and defaults (USD)
1	Farmers	160,000	\$6,400,000	\$1,232,000.00	\$6,656,000.00
2	Low-income self-employed workers	80,000	\$3,200,000	\$1,920,000.00	\$1,384,000.00
3	Digital self-employed workers	30,000	\$1,200,000.00	\$2,560,000.00	\$519,000.00
4	Teachers (technical and higher education)	10,000	\$3,480,000	\$1,566,000	\$2,055,000.00
5	Students (technical and higher education)	30,000	\$10,440,000.00	\$2,505,600.00	\$8,213,400.00
6	Internally displaced persons	10,000	\$400,000.00	\$0.00	\$586,000.00
7	People with special needs	10,000	\$400,000	\$0.00	\$586,000.00
Total		330,000	\$25,520,000.00	\$8,823,600.00	\$19,999,400.00

Distribution of beneficiaries by number of people



Distribution of beneficiaries by budget



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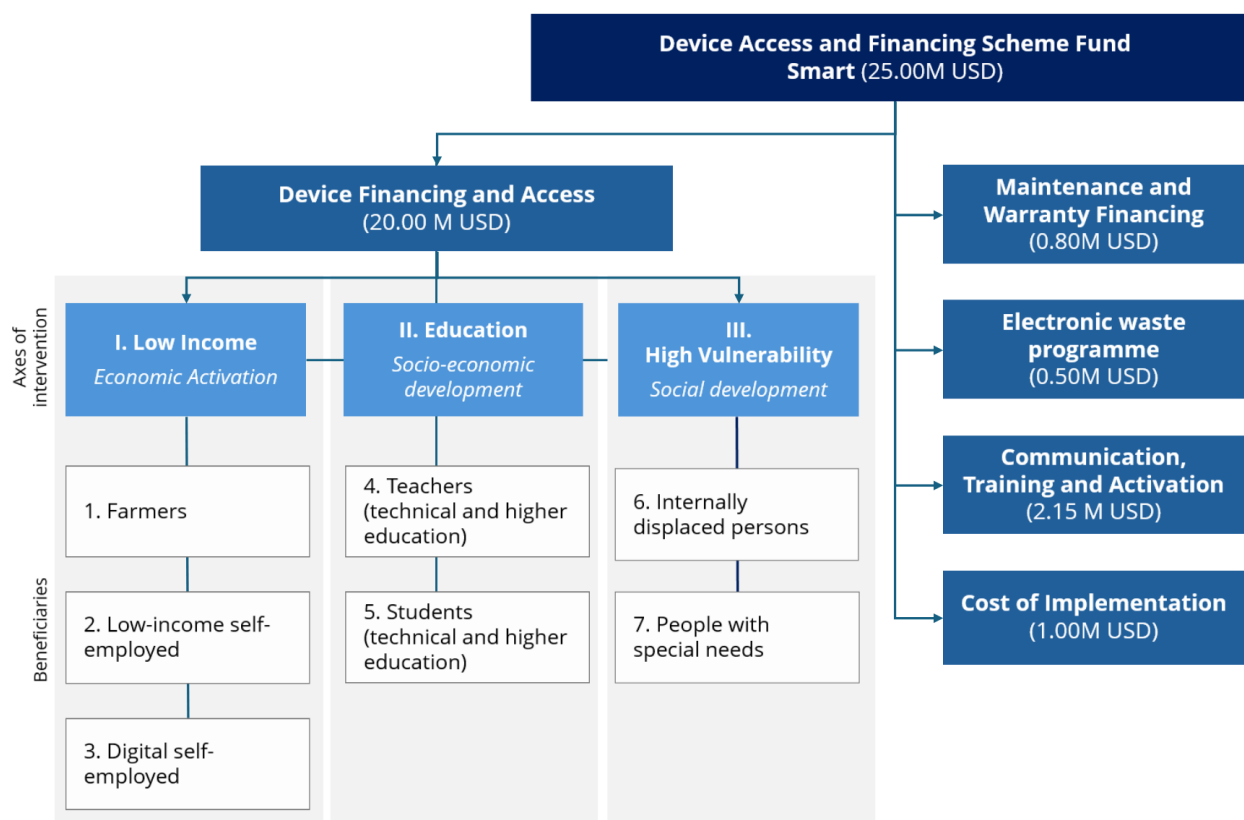
This difference arises due to pre-established financing conditions where different groups of beneficiaries receive different devices with different associated costs. For example, in the education intervention axis covering teachers and students, the preferred devices are laptops, which, because they represent a higher cost, will make their financial component higher than more economical devices.

Distribution of the Overall Budget

Component	Amount (USD)	Percentage
Total financing	\$24,449,400.00	100%
Devices and access	\$19,999,400.00	81.8%
Maintenance and warranties	\$800,000.00	3.3%
E-waste program	\$500,000.00	2.0%
Communication, training, and activation	\$2,150,000.00	8.8%
Operating costs	\$1,000,000.00	4.1%

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Funding distribution scheme for devices and access by component.



General objectives of training and activation

The main objectives of training and activation are as follows.

Main objectives of training and activation

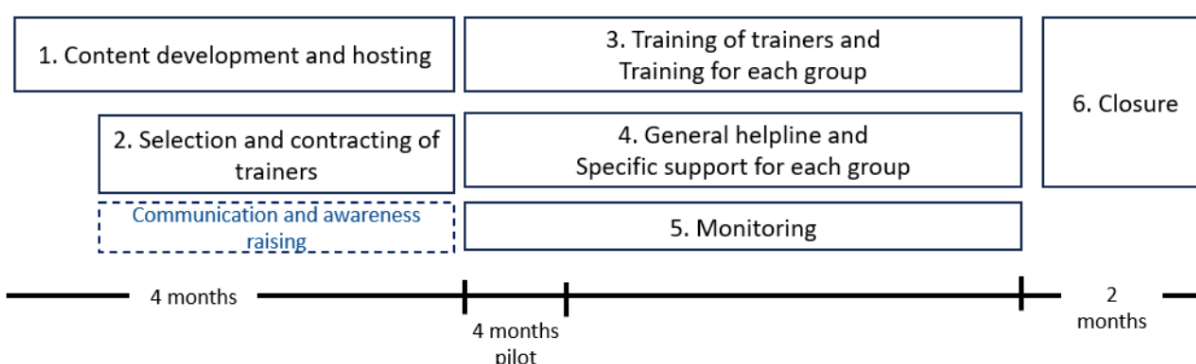


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- Basic ICT training: Ensure that all beneficiaries develop basic digital skills to use smartphones and laptops, including turning on/setting up the device, navigating menus/apps, connecting to the internet, and safe usage measures.
- Use of mobile money: Train beneficiaries in the use of mobile money services (mobile wallets) to make payments, transfers, and balance management, increasing digital financial inclusion in the communities served.
- Relevant digital applications: Introduce useful digital applications and practices tailored to each group (e.g., agricultural apps for farmers, social networks and business tools for digital workers, educational platforms for students and teachers, assistive technologies for people with disabilities, etc.).
- Activation and ongoing engagement: Ensure that device delivery is accompanied by practical training sessions at the time of distribution, followed by post-training support (questions, content refresher) to encourage continued use and prevent device abandonment or resale.

The training will follow the steps illustrated in the figure below.

Training structure and schedule



Summary of the budget for training and activation

Component	Amount (USD)	% of total
Training program	\$2,850,000*	100%
1. Content development and hosting	300,000	11%
2. Training of trainers/digital ambassadors	450,000	16%

Smart device financing scheme

Component	Amount (USD)	% of total
3. Trainers' salaries	560,000	20%
4. Session logistics	700,000	25%
5. Helpline	240,000	8%
6. Monitoring and reporting	180,000	6%
7. Other services	420,000	14%

*Amount corresponds to \$1,850,000 from the base budget + \$1,000,000 from the revolving fund.

Implementation Schedule

The overall implementation schedule covers a period of approximately three years, between October 2025 and October 2028.

Overall implementation schedule.

Phase	Implementation Period	Estimated Duration	Main Activities
Set-up	2025 October	6 months	- Contracting service providers and implementation partners - Validation and/or restructuring of the various components of the Project Implementation Manual - Development of communication and training content
Pilot	2026 April	6 months	Implementation of pilot projects in selected areas: including dissemination, training, and distribution of devices
Operational	2026 October–2028 July	21 months	National expansion of all components
Completion	2028 October	3	Closure, final evaluations, and recommendations

1. INTRODUCTION



1. Introduction

1.1. Project context

Mozambique has made significant progress in the telecommunications sector, notably improving the regulatory framework and increasing broadband coverage and penetration in the country. However, the Mozambican digital economy remains at an early stage of development. In this context, it represents a strategic opportunity to drive more inclusive and accelerated economic growth, with the potential to expand access to essential digital services and generate new employment opportunities, especially among the young population.

The Government of Mozambique, with funding from the World Bank, is implementing the *Mozambique Digital Acceleration Project* (MDAP). The main objective of this initiative is to promote the expansion of digital access and inclusion, enabling a growing number of Mozambicans to benefit from the opportunities provided by the digital revolution and thus be socially and economically included through access to digital technologies. At the same time, the project aims to strengthen the essential foundations for an accelerated and inclusive digital transformation.

PADIM plans to provide US\$25 million for the creation and implementation of a Smart Device Access and Financing Scheme (mainly smartphones and laptops), with the aim of facilitating the acquisition of these devices and greater internet access for low-income and socially vulnerable families.

The project will target users who currently lack the financial means to purchase a smart device and make regular use of the internet or access credit for this purpose, thereby promoting access to technology among young people, women, vulnerable groups, and marginalized communities.

This initiative is in line with the National Development Strategy (2015–2035), which recognizes digitization as a central element for social inclusion and poverty reduction.

The approval and supervision of this innovative scheme is the responsibility of the National Communications Institute of Mozambique (INCM), the communications regulatory authority in Mozambique under the Ministry of Communications and Digital Transformation (MCTD), with

Smart device financing scheme

guidance from the World Bank and specialized technical assistance from Leadership Business Consulting (LBC), which is responsible for designing the Access and Financing Scheme for Smart Devices.

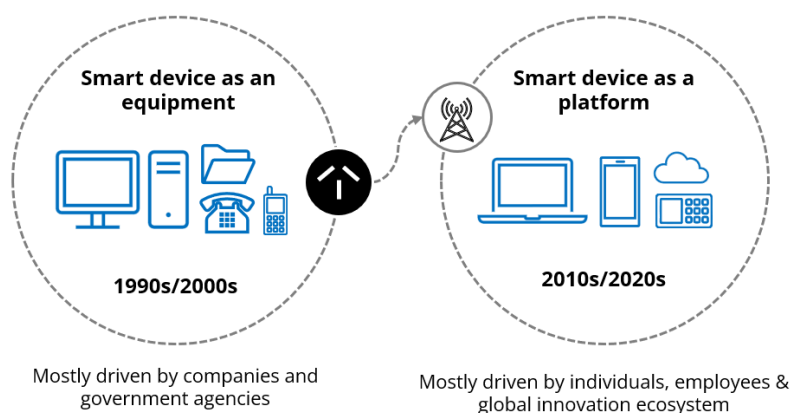
1.2. The new centrality of smart devices

A platform driven by individuals

The definition adopted for smart devices, as well as a description of the various devices considered, can be found in Annex E. Technologically, smart devices have evolved from simple (not so smart) local equipment to a platform with access to huge amounts of data and services in the cloud. A key feature of this change and the latest wave of innovation in smart devices is that it is being driven by a very open ecosystem with increasing participation by individuals—as producers of information, developers of applications from start-ups, and consumers of information at the personal and work levels—rather than by governments or even corporate IT departments.

The shift to data-enabled devices has opened up a new world of possibilities for individuals, empowering them socially and economically.

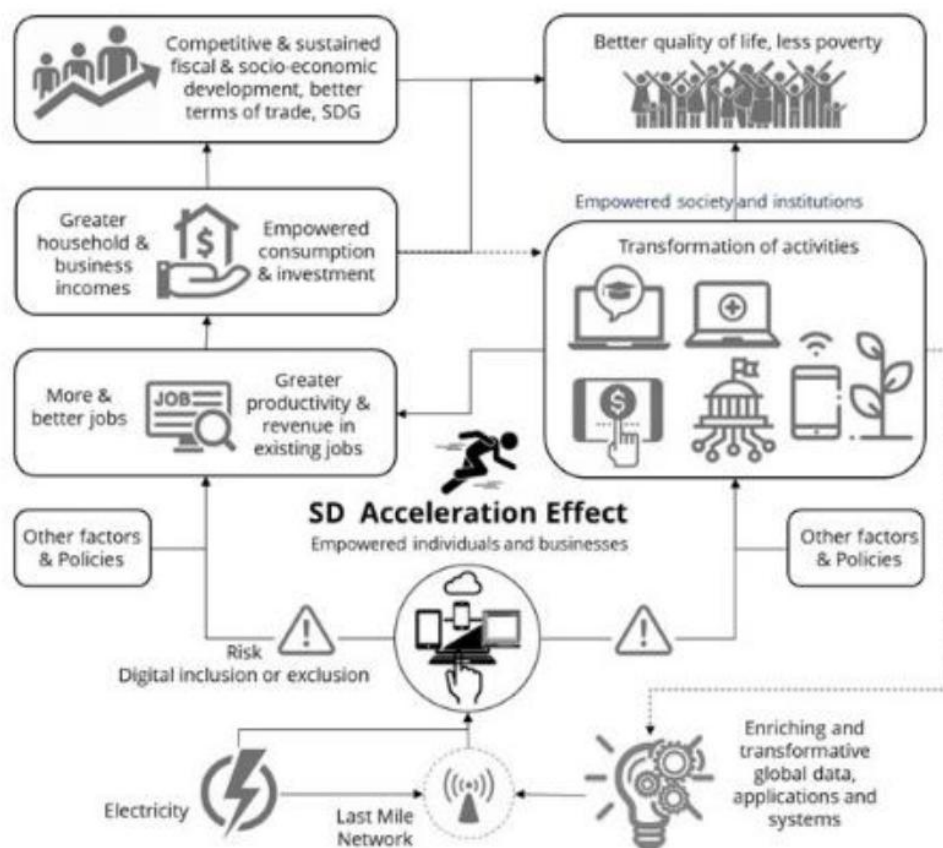
Figure1. Smart devices as equipment vs. platforms.



Smart device financing scheme

Socially, it allows for much richer information – videos, games, photos, music, location-based services, multiple applications in all spheres of life, such as education. Economically, it enables the creation of new businesses for freelancers and entrepreneurs and makes it easier for employees to work from home, without being tied to their office desks. In this way, smart devices are becoming a necessary and even central part of individual quality of life, business activity, and the socioeconomic development of a society. In the new digital world of massive data, rich content, and personalized services at everyone's fingertips through smart devices, it is individuals and businesses, rather than governments and research institutions, that will drive innovation in all spheres of life.

Figure2. The power of smart devices to accelerate and calibrate digital progress.



Source: "Blueprint for Inclusive Adoption of Smart Devices in Africa," LBC (2021).

Smart device financing scheme

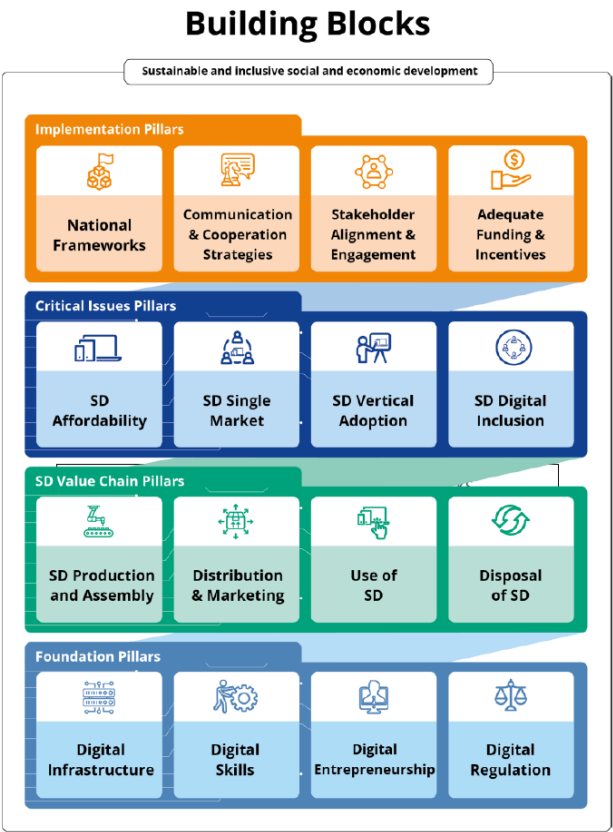
Therefore, the goal of making smart device ownership more widespread in Mozambique is critical to the social and economic empowerment of individuals and to the digital transformation of Mozambique as a whole. In this context, the issue of affordability of the total cost of ownership of smart devices becomes central to effective digital transformation in Mozambique.

An integrated approach

The successful promotion of the adoption of smart devices requires an integrated approach covering multiple areas of action that address the critical dimensions and axes of action, namely: i) the foundational dimension that provides the minimum necessary basis, encompassing axes of action such as digital infrastructure, digital skills, entrepreneurship, and regulation; ii) action on the value chain of smart devices, encompassing areas such as production, distribution and marketing, use and waste treatment, iii) the dimension of critical aspects, encompassing areas such as economic accessibility, the single market, vertical adoption in areas such as health, education, agriculture, among others, and digital inclusion, iv) implementation dimension, encompassing implementation strategies, communication and engagement strategies, stakeholder mobilization, and adequate financing.

In this context, this project will consider not only the financing scheme, but also the main complementary measures necessary for the successful adoption and use of smart devices.

Figure 3 Dimensions for Promoting the Adoption of Smart Devices.



Source: LBC, in "Blueprint for Inclusive Adoption of Smart Devices in Africa", 2023.

1.3. Project Objectives and Scope

Objective

This phase of the project aims to study the vulnerabilities and barriers to accessing and using smart devices and, consequently, taking into account international benchmarking, to define a financing scheme that enables the acquisition of smart devices and internet access for 330,000 Mozambicans from various economically and socially vulnerable beneficiary segments, through the implementation of an accessible, replicable, and sustainable financing scheme.

Digital Activation

The program's ambition goes beyond the adoption of devices: it aims to promote digital activation, that is, the effective and continuous use of technologies in order to maximize the social and economic value generated.

The success of this initiative will be measured not only by the number of devices distributed, but also by their use as tools for digital inclusion, access to services, learning opportunities, productivity, and participation in the digital economy.

Strategic Objectives

The project has a number of strategic objectives, which are listed below:

1. Promote access to smart devices with internet connection, mainly smartphones and laptops, with a special focus on vulnerable populations, women, young people, and residents in rural and peri-urban areas;
2. Ensure the quality of the equipment distributed, ensuring compliance with national and international standards, as well as the existence of guarantees and after-sales services throughout the country;
3. Contribute to the promotion of digital literacy and the reduction of digital exclusion, with a focus on the inclusion of women, young people, and historically marginalized groups;
4. Promote digital financial inclusion by raising awareness of the use of solutions such as *mobile money* and other digital platforms, as well as facilitating access to educational platforms, essential information, and digital public services;

Smart device financing scheme

5. Develop PAYGO-based financing mechanisms beyond the life of this project and/or in a complementary manner, offering flexible payments to beneficiaries, supplemented by subsidies for the cost of devices and mobile data, in order to ensure accessibility and sustainable adoption;
6. Establish ongoing strategic partnerships with mobile operators, encouraging them to create and make available affordable mobile data packages tailored to the needs of program beneficiaries;
7. Create a revolving fund of contributions, extended over time and beyond the project's time frame, to ensure the scalability and financial sustainability of financial support in the medium and long term.

In terms of volume, the **numerical objectives** of the project are as follows:

- Funding for the purchase of 330,000 smart devices with internet access, of which 50% will be distributed to women and 40% to young people.

The smart devices to be supplied are as follows:

Table1. Project smart device distribution targets

Device	Total
Smartphones	290,000
Laptops	40,000

1.4. Report Structure

Prior to this report, the following inception reports were produced: "Report on the appetite and barriers to the acquisition and use of digital devices in Mozambique," "Report on the supply of digital devices and barriers to their use in Mozambique," and "Report on the appetite and barriers to the acquisition and use of digital devices by citizens with special needs in Mozambique."

Following the completion of this report, a Project Implementation Manual (PIM) will be produced.

This report is structured into six main components which, together, support the proposal for a cohesive financing scheme aligned with the reality of Mozambique, with a view to promoting access to affordable smart devices.

Chapter 2: Political and Regulatory Framework

This chapter provides a brief analysis of the political and regulatory framework for the telecommunications sector in Mozambique. Potential obstacles, risks, and opportunities for reform that may influence the accessibility and adoption of smart devices are identified and should be considered in the development of an effective financing mechanism.

Chapter 3: Market Study

This section characterizes the market and ecosystem for access to smart devices in Mozambique. The analysis covers both the demand and supply sides and includes the identification of the main barriers to access. This assessment was based on *desk research* from secondary sources, surveys of the target population (primary research), and interviews with *key stakeholders* in the country's telecommunications sector.

Chapter 4: Comparative analysis of financing models

This chapter presents a comparative analysis (*benchmarking*) of international financing models for smart devices, with a particular focus on initiatives implemented in African countries and other developing economies. Complementary measures are also discussed which, although not direct mechanisms to support the acquisition of devices, significantly influence affordability, connectivity, and digital literacy.

Smart device financing scheme

Chapter 5: Financing scheme for smart devices

Based on the conclusions drawn in the previous chapters, a detailed proposal for a financing scheme for smart devices is presented. This proposal describes the design of the mechanism, its target beneficiaries, and the expected impact of its implementation.

Chapter 6: Complementary Measures

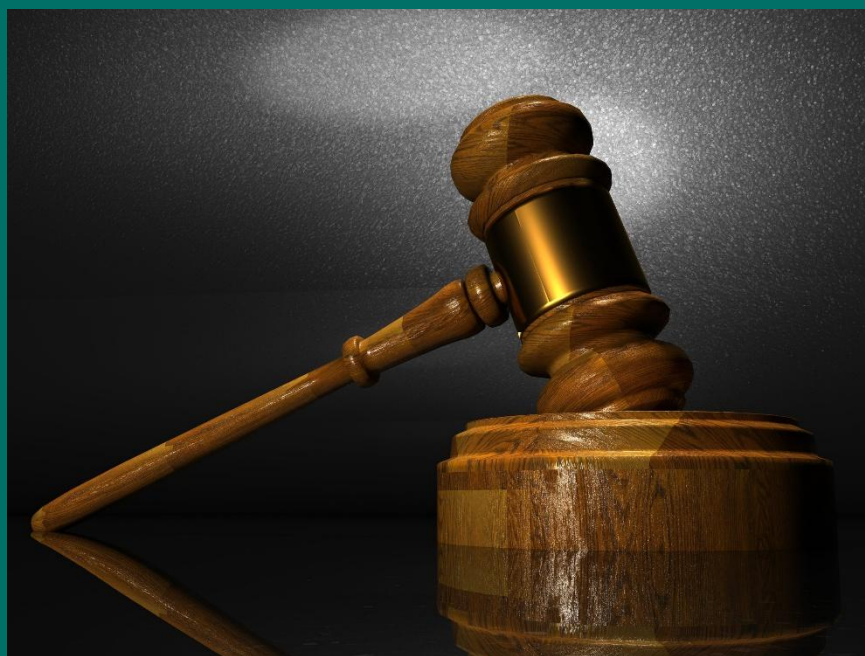
This chapter presents the complementary measures to the financing scheme necessary to achieve the broader objectives of the project, namely digital activation, i.e., the effective and continuous use of technologies in order to maximize the social and economic value generated. Special emphasis is placed on communication and awareness, training and activation, how to ensure maintenance and guarantees for the devices, and the contribution to reducing environmental impact.

Chapter 7: Implementation Timetable

Finally, a recommended implementation timetable is presented, highlighting the set-up, pilot, operational, and completion phases.



2. POLITICAL AND REGULATORY FRAMEWORK



2. Political and Regulatory Framework

2.1. The Telecommunications Law

The National Communications Institute of Mozambique (INCM) is the Regulatory Authority for the Postal and Telecommunications Sectors, responsible for regulating, supervising, and sanctioning these sectors, playing a central role in their regulatory framework. Its role is crucial in implementing and supervising the Telecommunications Law and its complementary regulations, contributing to transparency and knowledge about the market.

The Telecommunications Law, Law No. 4/2016, establishes the general framework for the legal regime for telecommunications in Mozambique. Its main purpose is to define this framework, seeking to keep the market free of bureaucracy in an environment of competition and convergence of networks and services. This law establishes the framework for the licensing, management, and operation of telecommunications networks and services, as well as consumer rights and operator obligations (see Annex A).

The Telecommunications Law allows for the introduction of specific regulations without the need for a complete revision of the legislation, facilitating adaptation to technological changes and market dynamics. In this context, INCM acts as a proactive regulator, capable of reviewing and introducing regulatory instruments in response to market developments.

2.2. Complementary Regulations

In addition to the Telecommunications Law, several other pieces of legislation and regulations complement the legal framework for the sector in Mozambique:

- **Licensing and Scarce Resources:** Decree No. 26/2017 defines the procedures for telecommunications licensing and the management of scarce resources, such as the frequency spectrum. It is a fundamental instrument for determining who can operate in the market and under what conditions, ensuring organization and efficiency in the use of resources.
- **Telecommunications Tariff Setting:** Decree No. 62/2019 establishes criteria for setting tariffs, with a view to ensuring accessibility and competitiveness in the market.

- **Operators with Significant Market Power:** Decree No. 46/2019 defines the criteria for identifying dominant operators and establishes specific obligations to prevent abuse of dominant position.
- **Sharing of Telecommunications Infrastructure:** Decree No. 65/2018 regulates access to and sharing of telecommunications infrastructure and other network resources, promoting efficiency and expansion of network coverage.
- **Universal Access Service Fund (FSAU):** Created by Law No. 8/2004, the FSAU finances projects that guarantee access to telecommunications services in remote areas and vulnerable populations. This fund is essential for digital inclusion and for reducing access disparities in Mozambique. In April 2025, the Council of Ministers of Mozambique approved **the new FSAU Regulation (Decree No. 11/2025)**, replacing the previous Decree No. 62/2017. These regulations allow new service providers to enter the market without having to build their own network and establish mechanisms for the efficient management of FSAU resources, promoting financial sustainability and transparency in the application of funds.

2.3. User Access and Identification Regime

The regime for identifying users of telecommunications services in Mozambique was significantly changed with the introduction of Decree No. 18/2015, which made it mandatory to present valid identification documents for the purchase and registration of SIM cards. This measure aimed to combat fraud and improve security in the sector, but it had a negative impact on the number of mobile subscriptions and mobile broadband subscriptions. Between 2015 and 2017, the number of mobile subscriptions fell by half (see 3.4.6. *Regulation*).

Due to the relevance of this measure and its impact, a more in-depth analysis of this issue is presented below.

2.3.1. Main Changes and Provisions

In 2015, Decree No. 18/2015 required users to provide identification documents and register their phone numbers with biometric data. This change, together with the introduction of the Single Telecommunications Number (NUTEL), aims to promote responsible use, security, and transparency.

Smart device financing scheme

Decree No. 13/2023 of April 11 reinforced the regime introduced in 2015 and introduced new provisions, such as the creation of the Integrated Public Numbering Database (B-PIN) and the Risk Center, which aim to centralize subscriber registration data and identify fraud.

In addition, Decree No. 13/2023 imposed new rules for SIM card registration, requiring data validation prior to activation, biometric data, and proof of residence. A limit of five SIM card registrations per subscriber was also set, requiring each registration to be linked to a single valid identification document.

2.3.2. Impact on the Number of Mobile Subscriptions

A significant portion of the Mozambican population (66%) does not have valid identification documents, such as identity cards, passports, or driver's licenses, which prevents them from registering SIM cards in accordance with legal requirements.

Decree No. 13/2023 has led to the deactivation of many non-compliant SIM cards as part of efforts to ensure the regularization of registrations. This lack of documentation, often associated with difficulties in accessing civil registration services, has been a significant barrier for many citizens, particularly in rural areas or among the most vulnerable populations. As a result, a large part of the population is excluded from the registration process, which may exacerbate the situation of digital inclusion in the country.

The drop in the number of active SIM cards in Mozambique can also be attributed to several other factors, namely:

- **Database Cleanup:** Biometric registration and mandatory validation at the B-PIN and Risk Center resulted in the deactivation of irregular, duplicate, or fraudulent SIM cards, including those without proper identification or registered by third parties.
- **Access Barriers:** New requirements for valid documents and biometric data, along with a limit of five registrations per subscriber, have made access difficult for some users, especially in rural areas or those without updated documents.
- **Awareness and Accountability:** Greater accountability in the use of services may have led to the voluntary deactivation of secondary or rarely used SIM cards as users adapt to a more regulated environment.

2.4. Implications for the Project

2.4.1. Satisfactory Legislative Framework

The existence of specific regulations for licensing, tariffs, significant market position, infrastructure sharing, and universal access demonstrates a multifaceted regulatory approach in Mozambique. This granularity allows INCM to implement targeted interventions and reflects a sufficiently mature regulatory environment capable of understanding and responding to the complexities of the sector.

The smart device financing project thus benefits from a regulatory framework that allows for adequate engagement with relevant stakeholders and implementation that is secure and protected by existing legislation.

2.4.2. Requirement for Valid Identification Documents

The 2015 legislation requires telecommunications users to present valid identification documents for SIM card registration. This represents a significant barrier for many marginalized populations in Mozambique, especially in rural areas, where a large part of the population is not registered and does not have access to formal identification documents.

The solution lies in collaborating with the Government of Mozambique to integrate the smart device access and financing project with government efforts to register the population, and vice versa.

By supporting the issuance of identification documents and facilitating the civil registration process, it will be possible to ensure that the most vulnerable populations can access both telecommunications and public services.

The financing of smart devices can be linked to population registration projects as a bonus factor and also integrated into development projects where identification is initially done informally. These provisions will be included in the Implementation Plan report.

2.4.3. Warranty and Maintenance Services for Devices

Consumer protection legislation in Mozambique requires that all devices sold be accompanied by a minimum warranty, as well as repair and maintenance services during the warranty period.

Smart device financing scheme

The need to ensure that the devices provided are covered by warranties and that maintenance services are accessible can increase operating costs, making them an additional obstacle to the effective implementation of the project in areas with logistical constraints.

The solution to this challenge lies in forming strategic partnerships with device manufacturers and suppliers, as well as with telecommunications operators, in order to create tailored warranty models that meet legal requirements but are financially accessible to the project's target populations.

In addition, consideration should be given to implementing local repair structures or mobile maintenance services to ensure that isolated communities can easily access repair services without high costs or expensive travel.

2.4.4. Device validation and technical approval

In Mozambique, telecommunications devices intended for sale or use in the country must meet technical criteria established by the regulatory authority, INCM. Technical validation of equipment is carried out through a mandatory approval process, which ensures compliance with technical and safety standards and compatibility with national networks.

The entry of devices into the market depends on their prior approval, after the necessary documentation has been submitted by manufacturers, importers, or operators. Only approved devices can be legally imported and marketed.

The financing scheme provides for the acquisition of devices that have been previously approved by the INCM. This requirement implies close coordination with suppliers to ensure that the proposed equipment complies with legal requirements prior to import or distribution. In addition, it is recommended that the procurement notice explicitly stipulate the mandatory approval requirement and that the technical validation process be scheduled as an integral part of the preparatory phase of project implementation.

2.4.5. Guarantees, Maintenance, and Consumer Protection

Consumer protection legislation in Mozambique requires that all equipment sold be covered by a minimum legal warranty, as stipulated in Law No. 22/2009 (Consumer Protection Law) and subsequent legislation. The main provisions include:

- Mandatory 12-month warranty for new products, covering manufacturing defects;
- Right to free repair, replacement, or refund in the event of a breakdown within the warranty period, subject to technical assessment;

Smart device financing scheme

- Mandatory provision of after-sales services and spare parts by suppliers or authorized distributors;
- Transparency in sales conditions, including user manuals and information on technical assistance.

These rights also apply to devices purchased under public programs or subsidized schemes, such as the financing scheme proposed here. The legislation also requires entities operating with technological goods to maintain adequate technical support structures, including repair centers and customer support lines.

To ensure practical implementation, this draft proposes the inclusion of contractual clauses with suppliers and operators that reinforce compliance with legal requirements and the provision of technical assistance at district level or through mobile maintenance units.

This legal framework is essential to protect beneficiaries of the financing scheme, reduce the risk of devices being abandoned due to unrepaired faults, and contribute to the sustainability and trust in the initiative.

3. MARKET STUDY



3. Market Study

The market study aimed to provide a solid empirical basis for the design of an effective and sustainable scheme. The analysis focused on characterizing demand and supply.

The main methods of information gathering are presented below.

Secondly, a macro description of demand and supply is provided.

Thirdly, barriers to adoption are presented following a consensus-based conceptual approach to barrier analysis applied to the case of Mozambique, taking into account relevant quantitative details. This section contains most of the quantitative information and financial accessibility data for the target segments of this project.

Finally, a summary of the implications for the financing scheme is provided.

3.1. Information Collection Methods

The methodology adopted combined a qualitative and quantitative approach, integrating:

- Desk research,
- surveys of the target population,
- interviews with *stakeholders*, particularly on the supply side,
- *focus groups* with key actors (women and people with disabilities)
- and international *benchmarking*.

3.1.1. Desk research

Desk research served as the basis for preparing the survey, structuring the diagnosis, and defining financing options. *Desk research* focused on understanding digital vulnerabilities in Mozambique and identifying tailored solutions, drawing on relevant literature and international experiences.

The Mozambique Digital Acceleration Project (MADP/PADIM; <https://ola.padim.gov.mz/>) was analyzed, as well as international studies highlighted in the Terms of Reference of the tender, including, among many others:

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- Affordable Devices for All: Innovative Financing Solutions and Policy Options to Bridge Global Digital Divides (World Bank)
- Mozambique – Energy for All (ProEnergia+) (World Bank)
- Renewable Energy Fund Project (World Bank)
- Accelerating affordable smartphone ownership in emerging markets (GSMA)
- Barriers to smartphone adoption in Kenya (GSMA)
- The mobile economy of sub-Saharan Africa 2024 (GSMA)
- From Luxury to Lifeline: Reducing the Cost of Mobile Devices to Reach Universal Internet Access (A4AI)
- Preliminary market analysis report and determination of operator with significant market power (INCM)
- Blueprint: Inclusive adoption of smart devices in Africa (Smart Africa Secretariat)
- 2023 Household Budget Survey (INE)

Statistical data from INE, ITU, and other international sources were also reviewed, allowing for a characterization of the current state of digital inclusion in the country, with a focus on device ownership, access to mobile networks, territorial coverage, and the economic capacity of households.

3.1.2. Population Survey

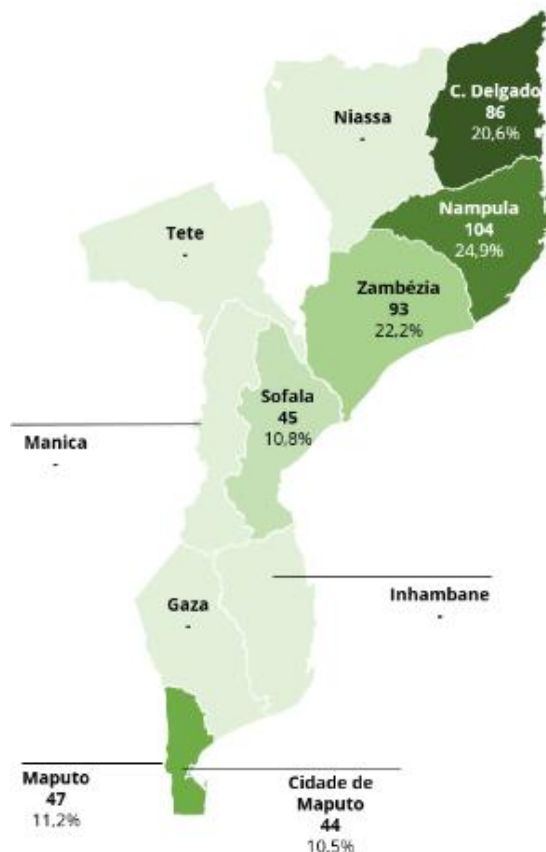
The fieldwork, carried out through a population survey – hereinafter referred to as *the Survey on the appetite and barriers to the use of smart devices in Mozambique* – had as its main objective to analyze the existing demand among the target population of this project for smart devices and to assess the main barriers to their adoption, particularly financial barriers, with special attention to the economic, social, and technological dynamics that influence access.

In addition, the survey sought to measure the level of interest among the population in a scheme for accessing and financing devices, exploring the feasibility and acceptance of solutions that promote digital inclusion among low-income populations and highly vulnerable groups.

Smart device financing scheme

In order to obtain a representative sample, 419 interviews were conducted (above the base number of 365 required for statistical representativeness of the universe analyzed), strategically applied in different areas of the country: Maputo – City, Maputo (Province), Cabo Delgado, Nampula, Zambézia, and Sofala.

The survey focused on different pre-selected population groups: Group 1 - young self-employed workers without digital skills, Group 2 - farmers (rural/agricultural workers), Group 3 - teachers, Group 4 - health professionals (this group was later removed from the funding scheme to reduce implementation complexity), vocational and higher education students, Group 5 - internally displaced persons, Group 6 - members of host communities (this segment was also later removed from the funding scheme to reduce implementation complexity).



Group 1
Vulnerable youth in urban areas



Group 2
Workers in rural areas / agricultural sector



Group 3
Teachers and Students
(Higher education and TVET)



Group 4
Health workers in rural areas



Group 5
Internally displaced persons/
refugees



Group 6
Host communities

This selection aimed to cover the geographical and demographic diversity of Mozambique, reflecting the complexity and heterogeneity of the territory.

Smart device financing scheme

The distribution of surveys by region was planned to reflect the representation of each region in the survey's target population, estimated at 21.687 million inhabitants (total population of the provinces selected for the survey). The distribution of the sample by gender and age was also aligned with the project's inclusion objectives.

Table2. Distribution of survey implementation

	Maputo - City	Maputo - Province	Cabo Delgado	Nampula	Zambézia	Sofala	Total
No. of surveys conducted	44	47	86	104	93	45	419
% of surveys out of total	10.5%	11.2%	20.6%	24.9%	22.2%	10.8%	100%
<i>Provincial representation in the target population</i>	6.0%	10.6%	12.2%	31.0%	27.8%	12.2%	100%

	Men	Women	Total	Under 25	Over 25 years	Total
No. of surveys conducted	189	229	418	256	162	418

The questionnaire, presented in Annex B, was divided into five sections, namely:

- i) characterization of the sample,
- ii) ownership of smart devices and barriers to adoption,
- iii) demand and accessibility of smart devices,
- iv) mobile Internet access and telecommunications expenditure, and
- v) digital literacy.

3.1.3. Interviews

The main stakeholders in the sector were consulted in order to provide information on the current situation regarding supply and to draw up preliminary recommendations for the design of solutions tailored to the needs of the project's target groups.

Table3. List of stakeholders consulted

Type of stakeholder	Stakeholder
Mobile network operators	Vodacom
	Tmcel
	Movitel
Mobile wallets	E-mola
	mKesh
	M-Pesa
Banks and financial institutions	BCI
	Socrema
Suppliers and retailers	Tivane Game Studio
	Triana Business Solutions
Ministries and government agencies	Ministry of Communications and Digital Transformation (MCTD)
	Communications Regulatory Authority - INCM
	National Institute for Electronic Government (INAGE)

Smart device financing scheme

Stakeholders from civil society and academia were also contacted, as well as other organizations of the types presented in the previous table, which were not interviewed due to unavailability.

The conclusions of the interviews and the resulting recommendations for the project can be found in detail in *the Report on the Supply of Smart Devices and Barriers to Their Use in Mozambique*.

3.1.4. Focus Groups

A working group was set up with associations representing people with disabilities to identify barriers and opportunities for the digital inclusion of this population group in the access and use of smart devices. In this context, a Focus Group focused on these beneficiaries was held. The results are included in section 3.5 below.

Stakeholder typology	Stakeholder
Associations of People with Disabilities	FAMOD – Forum of Mozambican Associations of People with Disabilities
	ACAMO - Association of the Blind and Visually Impaired of Mozambique
	CINFORTÉCNICA

3.1.5. Benchmarking

As part of this study, an international *benchmarking* exercise was carried out with the aim of supporting the design of the financing scheme and the formulation of practical recommendations. The analysis focused on relevant experiences from developing countries with challenges similar to those of Mozambique, namely in terms of digital access, the population's ability to pay, and infrastructure coverage. Several approaches were identified, such as direct subsidies, PAYGO models, assisted credit, and partnerships with mobile operators and non-bank financial institutions.

Of particular note is the program in Madagascar, through the DECIM Fund (Digital and Energy Connectivity for Inclusion in Madagascar), supported by the World Bank. DECIM is a large-scale e program that combines results-based grants, catalytic grants, and a credit line to support the acquisition and distribution of 664,000 digital devices, including smartphones, tablets, and laptops, with a focus on rural areas and women and girls. The model includes PAYGO mechanisms, consumer

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financing via microfinance, and incentives for quality and after-sales service, operating in close coordination with off-grid electrification programs.

This experience was analyzed in greater detail, given its relevance to the Mozambican context, particularly due to the combination of digital inclusion and access to energy, the structured involvement of the private sector, and integration with digital literacy and gender equality policies.

It was decided not to include an extensive description of the cases analyzed in this report, to avoid making the document too dense. However, the main results of this analysis have been included in Chapter 4, which analyzes financing models, and in Annex C, which summarizes the most relevant international experiences.

3.2. Demand Analysis

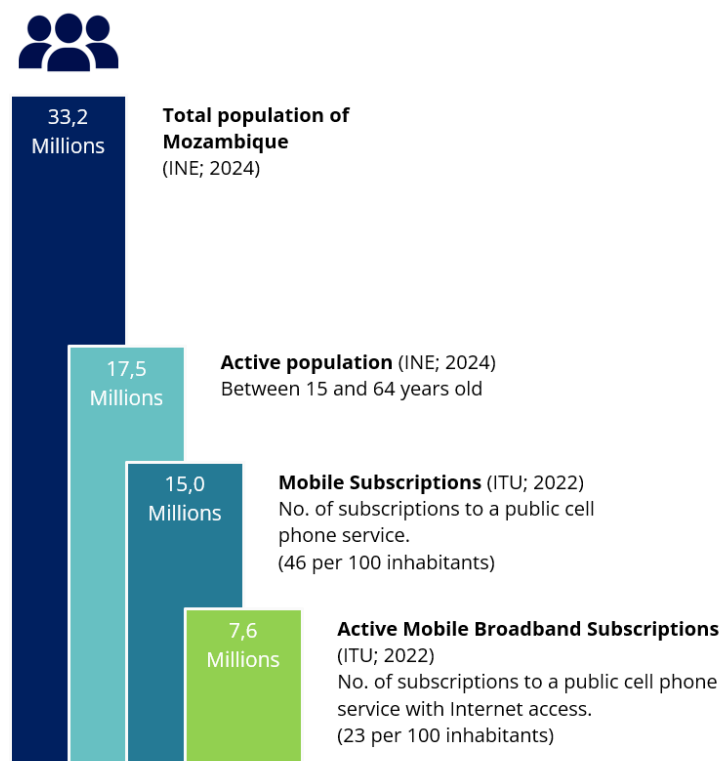
3.2.1. Mobile broadband subscriptions

The telecommunications market in Mozambique is characterized by limited access to mobile subscriptions. According to data from the International Telecommunication Union (ITU), in 2022, there were 15 million mobile subscriptions registered, representing **46 mobile subscriptions per 100 inhabitants**. In the case of mobile subscriptions with internet access, access is even more limited, with 23 subscriptions per 100 inhabitants.

The figures show that only about half (51%) of mobile subscriptions in Mozambique are broadband.

Smart device financing scheme

Figure4. Number of mobile subscriptions compared to population



Source: INE; ITU

In terms of mobile subscription penetration, it is important to note that each user typically has two subscriptions, given the common practice of using multiple SIM cards in Africa.

Taking this into account, it is estimated that only 23% of Mozambique's population has a mobile subscription and that only 12% has an active mobile broadband subscription.

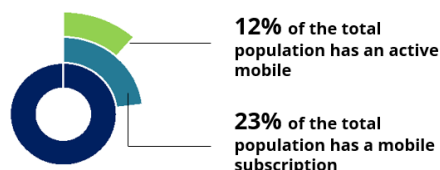
If we consider only the working-age population of Mozambique, i.e., people aged 15 to 64 (corresponding to 17.5 million people), the penetration rate increases to 43% for mobile subscriptions and 22% for active mobile broadband subscriptions.

This shows that more than 9.9 million people of working age (57% of the working population) do not have a mobile subscription, which represents a significant limitation to digital access and technological inclusion in the country.

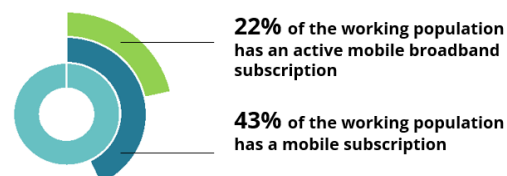
Smart device financing scheme

Figure5. Mobile subscription penetration rate (2022) in the total population (left) and in the working-age population (right)

Penetration Rate: **Total Population**
(Assuming 2 subscriptions per person)



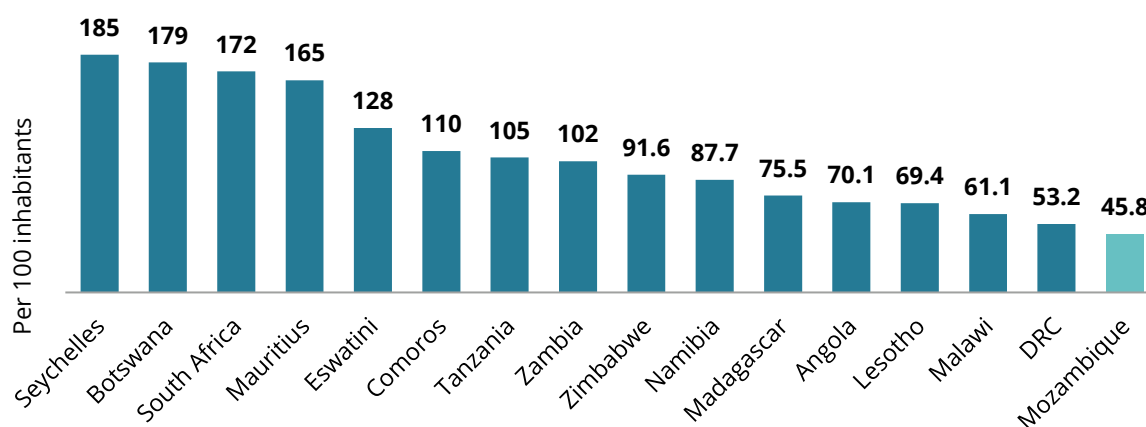
Penetration Rate: **Working Population**
(Assuming 2 subscriptions per person)



Source: INE; ITU

Comparing Mozambique with other countries in the Southern African Development Community (SADC), we see that Mozambique has the lowest mobile subscription penetration rate in the region, according to the most recent data for each country. This figure (46 subscriptions per 100 inhabitants) is also well below the African average, estimated at around 98 subscriptions per 100 inhabitants.

Figure6. Number of mobile subscriptions per 100 inhabitants in SADC countries



Source: ITU, 2022 - 2023

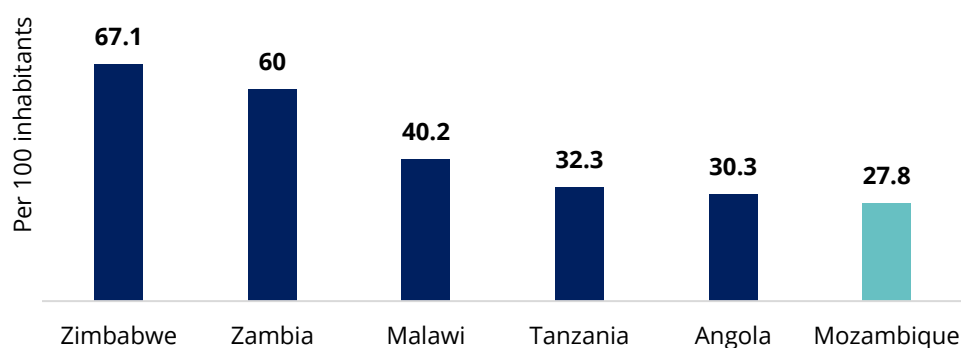
Note: A rate of more than 100 subscriptions per 100 inhabitants indicates that, on average, each person has more than one mobile subscription.

When considering only mobile broadband subscriptions, the discrepancy between Mozambique and other SADC countries with similar geographical and demographic dimensions tends to decrease.

Smart device financing scheme

However, even in this segment, Mozambique continues to have the lowest number of mobile broadband subscriptions per inhabitant.

Figure7. Mobile broadband subscriptions in SADC countries similar to Mozambique



Source: ITU, 2022 - 2023

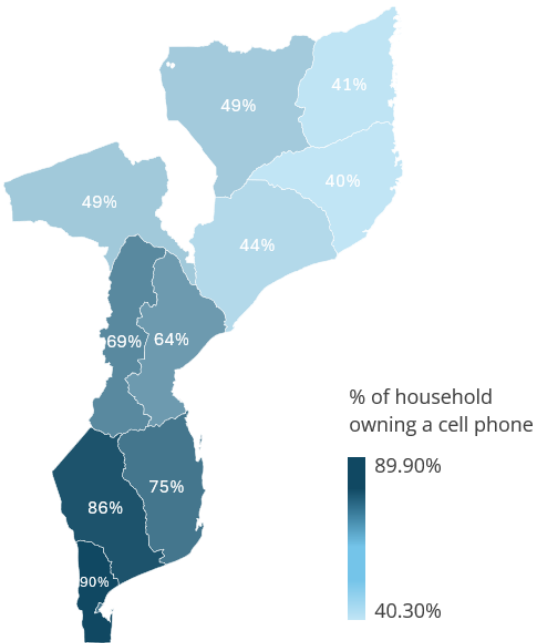
3.2.2. Device ownership

According to the National Statistics Institute (INE), 53% of households in Mozambique have (at least) one mobile phone. The distribution of mobile phone ownership by province reveals regional disparities, with a higher concentration in the south of the country, which contrasts with the population distribution.

According to the *Survey on the appetite and barriers to the use of smart devices in Mozambique*, the province with the lowest ownership of smart devices is Nampula.

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Figure8. Distribution of households with mobile phones by province



Source: INE, 2023

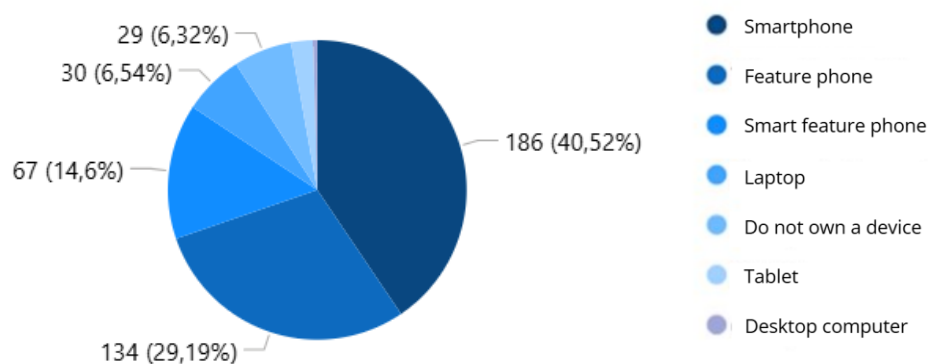
Around 47% of households still do not have access to any mobile phone, and approximately 97% do not have a computer, which represents a significant barrier to digital inclusion and access to online services.

In turn, data from the International Telecommunication Union (ITU) indicate that, in 2023, 78% of the population will have a mobile phone, exceeding both the mobile subscription penetration rate in 2022 (46 per 100 inhabitants) and the percentage of households with access to a mobile phone (53%) in 2022, according to INE data. This discrepancy may result from methodological differences, for example, sampling that is more focused on urban areas, or indicate that a high proportion of people own a mobile phone but do not have an active mobile service subscription, reflecting a pattern of underutilization of available digital capabilities.

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The population survey conducted by the project team reveals that in May 2025, 89% of respondents already own some type of smart device, with smartphones being the most prevalent (40.5% of the surveyed population). These data are more in line with ITU than with official sources.

Figure9. Distribution of device type owned



Source: LBC, Survey on the appetite and barriers to the use of smart devices in Mozambique, 2025

A comparison of ownership rates between specific interest groups (students, self-employed and salaried workers, and unemployed) with the general sample allows for the identification of distinctive patterns. This includes differences between workers who make social security contributions (with discounts) and workers who do not make social security contributions (without discounts) – typically informal workers.

Table4. Device ownership by population segments (% of total segment)

Group	Feature phone	Smart feature phone	Smartphone	Tablet	Laptop	No device
Students	5.1%	8.5%	57.9%	5.1%	18.6%	0%
Self-employed (without deductions)	14.6%	37.1%	39.4%	0.9%	1.4%	6.6%

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Group	Feature phone	Smart feature phone	Smartphone	Tablet	Laptop	No device
Self-employed (with deductions)	20.0%	30.0%	46.7%	0%	0%	3.4%
Unemployed	44.1%	8.8%	23.5%	0%	0%	23.5%
Employee with employment contract (without deductions)	47.6%	9.5%	28.6%	0%	0%	14.3%
Employed without an employment contract (with deductions)	47.6%	9.5%	28.6%	0%	0%	14.3%

Source: LBC, Survey on appetite and barriers to the use of smart devices in Mozambique, 2025

Students and self-employed workers (without discounts) have relatively higher levels of smartphone and laptop ownership, suggesting a prioritization of digital access despite limited incomes.

- **Students:** Among those who reported owning devices, 57.9% own smartphones and 18.6% own laptops. Although 58% are not employed, half of those who know their household income report a monthly income between 5,000 and 10,000 meticaís, indicating some purchasing power for investment in technology.
- **Self-employed workers (without deductions):** 39.4% own smartphones and 14.6% own basic phones. Access to devices appears to be a priority, possibly due to the need for communication for informal economic activities, access to financial services, or consumption of information.
- **Employees without contracts and self-employed workers (with deductions)** have significantly lower levels of device ownership. Although they are in a more formal situation, they are likely to prioritize other essential expenses, and the need for mobile devices for work is likely to be lower.

It is also important to note that none of the groups reported owning desktop computers, which reinforces the reality of Mozambique as a *mobile-first* economy, where mobile phones, whether basic

Smart device financing scheme

or smart, are the main means of access to the internet and digital services, especially among informal workers.

3.2.3. Gender disparities

Gender disparities are a sociocultural barrier to access to smart devices in Mozambique. Survey data shows that 84.7% of women own a device, compared to 93.7% of men. This reveals a gender gap of 9.6%.

The reasons given for not owning a device were mainly inability to pay, lack of information about available models and prices, and lack of access to credit or financing options. Reasons such as "my partner won't let me," "my parents won't let me," or "religious reasons" were not significant.

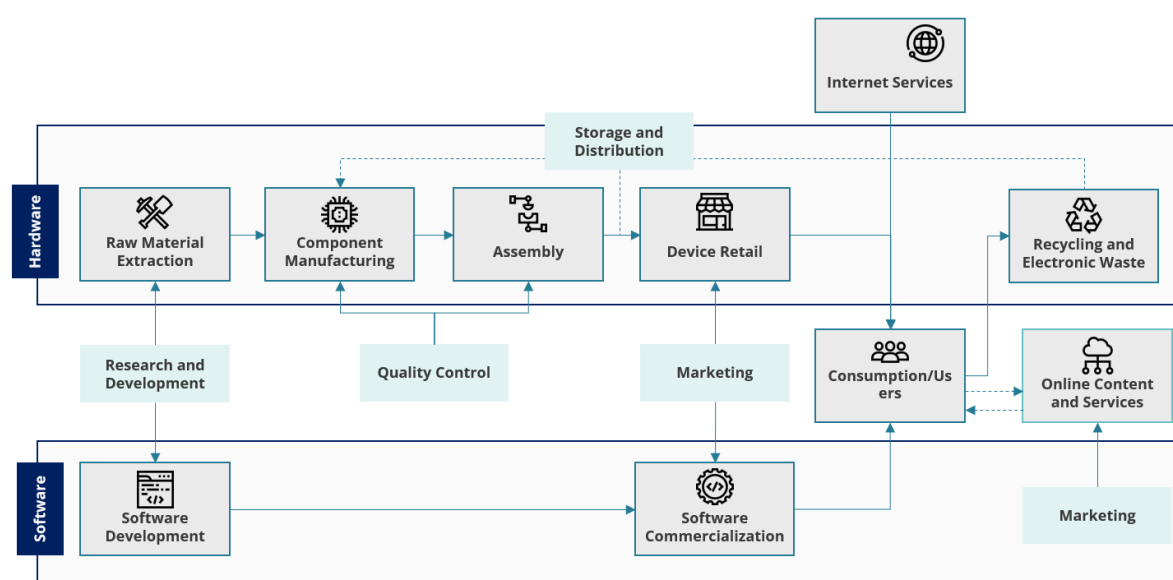
A summary of the overall barriers on the demand side, as well as on the supply side, is detailed below in section "3.4. Barriers to Adoption."

3.3. Supply Analysis

3.3.1. Smart device value chain

The value chain for smart devices is made up of a complex network of *stakeholders* and is part of an international landscape of producers, manufacturers, and service providers. In general, the value chain for smart devices is currently underdeveloped in Mozambique, with different levels of development in its various components.

Figure10. Value chain of smart devices



Raw material extraction is underdeveloped, despite Mozambique having significant reserves of minerals such as graphite, ruby, and potentially lithium. However, the extraction of specific minerals for mobile phone and computer components, such as cobalt and tantalum, is limited in the country.

Component manufacturers are yet to develop, as local manufacturing of specific components for smart devices is not yet established.

Assembly is also underdeveloped. Local assembly of smart devices is limited. For example, Edutech, Lda. assembles electronic devices (mainly desktop computers) for the education sector, but there is no information on the assembly of mobile phones or laptops in the country.

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Software development and marketing is quite small but growing. The information technology sector is growing in the country, with several companies focused on software development and marketing emerging at the national level.

The **distribution** and **retail of devices** is already well developed, although there is room for expansion, especially outside major urban centers. The distribution sector includes the import and transport of equipment such as computers, tablets, and smartphones, and is dominated by companies such as MozComputers, Laptec, TechZone, ProComputers, and Megabyte, which act as intermediaries between international manufacturers and the end consumer. The retail market for mobile phones and laptops is served by several physical and online stores, as well as the second-hand market. The major operators have their own stores for the sale of mobile devices. The main electronics retailers have physical stores in Maputo only. In addition, there are independent resellers and e-commerce platforms that sell mobile phones.

Consumption/users is underdeveloped. Mobile phone and computer penetration has increased, however, as shown in the previous chapter, the country continues to have low consumption levels compared to its potential.

Repair and technical support services are developed but have room for growth. The sector is made up of small and medium-sized companies, many of which focus on both one-off repairs and complete IT solutions for the corporate sector. The vast majority are concentrated in Maputo, although there is also supply in the north of the country through partnerships and remote services. The main brands are Técnica PC, PCClinic, and TCS.

In terms of **internet services**, Mozambique has a robust market of telecommunications operators and internet service providers with three prominent operators at the national level: Vodacom, Movitel, and Tmcel.

Online content and services are limited but developing. Local production of digital content and online services is growing, with content creators, influencers, and *media* companies developing content for digital platforms and various service providers digitizing their operations. There is a gradual growth in the provision of digital services by public services, including the scheduling of ID card issuance or renewal, the Registry and Notary Service portal, the ATM portal, etc.

Finally, **electronic waste management** remains a considerable challenge. The e-waste recycling and treatment market is underdeveloped, although there are emerging initiatives led by organizations such as AMOR, Topack, and Moz Environmental.

Strengthening the value chain also opens up opportunities for the development of support activities such as logistics, marketing, quality control, research, and development, which could play a key role in the maturation of the national smart device ecosystem.

Smart device financing scheme*Table5. Main operators identified in key sectors.*

Sector	Operators identified
Assembly	Edutech, Lda.
Distribution	MozComputers, Laptec, TechZone, ProComputers, Megabyte
Retail	Physical stores in Maputo, major operators with their own stores (Vodacom, Movitel, and Tmcel), independent resellers, e-commerce platforms (Bazara).
Repair and Technical Support	Técnica PC, PCClinic, TCS
Internet Services	Vodacom, Movitel, and Tmcel
Electronic Waste Management	AMOR, Topack, Moz Environmental

3.3.1.1. Assembly

For an ecosystem that's good for local assembly of cell phones and laptops, it's super important to have a solid industrial and logistics infrastructure, with steady access to electricity, the internet, and transportation. It's also necessary to invest in technical training for people through partnerships with educational institutions, making sure there are skilled workers to operate and maintain the assembly lines. A clear and attractive regulatory environment, with tax incentives, customs facilitation for the import of components, and encouragement for local production, is also crucial to attracting investment.

In addition, growing domestic and regional demand for electronic devices—especially in the education sector—should be encouraged by public policies for digital inclusion. The presence of technical assistance centers and, ideally, local *software* or *hardware* innovation and development units would help create added value and strengthen the sector's sustainability. Finally, access to financing, whether public or private, is critical to enabling the establishment and expansion of domestic factories.

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Mozambique has several strengths that could favor the establishment of device assembly factories, namely its strategic location in the SADC region and a young population seeking technical employment, which is an opportunity to train local labor. Edutech's recent experience serves as an initial example of the feasibility of assembly in the country. Edutech Lda, a company of the IAPED Holdings group, opened a computer and tablet assembly plant in Mozambique in 2024, located in the Maluana Technology Park, in the district of Manhica. The plant focuses on the education sector, providing affordable equipment to schools and educational institutions, with technical assistance and complete solutions. The assembly line is based on imported components, which reduces customs costs compared to importing complete equipment. This project represents an important milestone in the country's digital industrialization, with the potential to generate skilled employment, promote technology transfer, and boost the local ICT market.

However, there are also significant weaknesses. Low digital literacy and limited use of laptops, especially outside urban centers, limit the size and sustainability of domestic demand, which significantly compromises the scale of production. The shortage of skilled technicians and infrastructure limitations, such as unstable power supply in some regions, are also significant obstacles. Mozambique has previous experience in computer assembly, most notably the "Dzowo" project, launched in 2009 in a partnership between the government and the South African company Sahara Computers. This initiative planned to assemble computers in Maputo for the domestic market, especially for the public sector and education, with a production line of up to 80 units per day, at a price of 14,000 meticaís. However, before production could begin, the South African partners Sahara Computers withdrew from the partnership and, despite the government's search for international replacements, the factory never became operational.

Even so, there are important opportunities. Despite the closure of previous projects, there are signs of renewed interest from international companies. Huawei has shown an intention to set a mobile phone assembly plant in Mozambique, which is still in the exploratory feasibility phase. Although there are no confirmed details regarding its location or start dates, this initiative, if realized, could represent an important diversification beyond the educational segment, integrating the telecommunications and consumer sectors.

3.3.1.2. Mobile device retail

The supply of smartphones and other devices in Mozambique is marked by the presence of affordable Asian brands and Movitel's leadership among mobile operators. Consumer behavior reveals a clear preference for *entry-level* models, driven simultaneously by the need for affordable prices and confidence in the origin and reliability of the products. The combination of affordability and warranty

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makes purchasing in physical stores, especially in the operators' own stores, the preferred option for most consumers.

In addition, the retail market for electronic devices is diverse and composed of multiple channels:

- Physical stores: Lower-end mobile phones are mostly purchased in physical stores, mainly in operator stores.
- Online stores: Online platforms and independent retailers are used to purchase higher-end smartphones, mainly when there are exclusive promotions or in cases where models are not available in physical stores.
- Second-hand market: The second-hand market, centered on digital platforms and social media groups, is very active, driven by more affordable prices and weak enforcement. There are numerous Facebook groups—for example, “Buy & Sell Used Mobile Phones” with around 16,000 members and others dedicated to used laptops with over 50,000 participants—as well as portals such as “Mais Vendas Moçambique” where individuals and small traders advertise refurbished or used devices at negotiable prices. Many consumers, especially young people and informal workers with limited incomes, turn to this market to purchase lower-end devices at reduced costs. However, there are concerns about the origin of the products (many are stolen or smuggled), lack of warranty, and the possibility of damage or counterfeiting. This scenario presents an opportunity to strengthen the supply of formally certified or refurbished used devices, as there is strong demand and scope to differentiate through quality and reliability.

Among the **best-selling mobile device brands in the country** are Samsung (21.23% market share), Oppo (12.26%), and Itel (10.64%), reflecting a balance between established brands and low-cost alternatives. This trend is reinforced by the widespread presence of Asian brands, reflecting the demand for affordable devices.

3.3.1.3. Internet services

With regard to **mobile operators**, the market is composed of three main players: Movitel, Vodacom Mozambique, and Tmcel (Mozambique Telecom). Movitel leads with a 52% market share in terms of subscriber numbers and accounts for 74% of online traffic, currently making it the dominant operator. Vodacom, formerly the leader, now ranks second with 45% of subscribers. Tmcel, although with only

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a 3% market share, stood out in the last quarter of 2023 for having the highest average mobile download speed in the country¹.

With regard to fixed internet access, the market is served by a combination of mobile operators and specialized providers. The main providers include: TVCABO; Vodacom, Movitel, Tmcel, YES Internet, Paratus, Conecte Internet.

3.3.1.4. Computer retail

The **laptop retail** market in Mozambique is predominantly geared towards higher income segments of the population and the business sector, reflecting structural inequalities in digital access. Laptops are mainly purchased through three main channels:

- Specialized brick-and-mortar stores, such as Mozcomputers, Laptec, and Tech4U, which offer warranty and technical support, are the preferred option for consumers purchasing *entry-level* devices.
- Online stores and independent resellers are used to purchase higher-end laptops, mainly models that are not available in physical stores.
- The second-hand market for computers and laptops is used to access devices (both high-end and *entry-level*) at a lower cost. However, the lack of warranty is a concern for consumers.

The **laptop brands most present** in the country's main stores include HP, Dell, Lenovo, Asus, Acer, and, to a lesser extent, Apple, reflecting the dominance of international manufacturers with a strong global reputation.

3.3.1.5. Taxation of smart devices

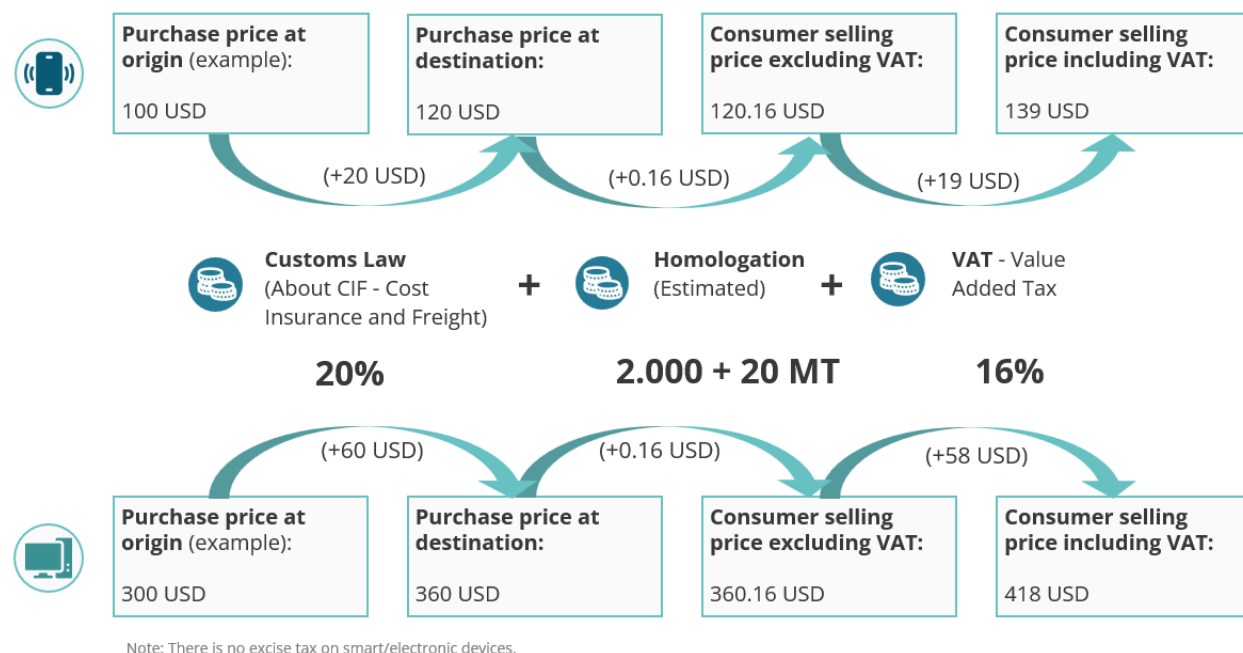
The cost structure of smart devices in Mozambique is heavily impacted by the tax burden and additional charges associated with their import and use. This reality represents a direct obstacle to digital inclusion, particularly for low-income populations. Taxes levied on devices include customs duties, approval fees, and Value Added Tax (VAT). These charges increase the retail price of devices by around 39% compared to the entry price (excluding the retailer's margin), as shown in the figures

¹ Preliminary Market Analysis Report and Determination of Operator with Significant Market Power, INCM, 2022.

Smart device financing scheme

below. This substantial cost increase has direct implications for the affordability of devices and the ability of the majority of the population to purchase them.

Figure 11. Illustrative diagram of taxation on smart devices in Mozambique



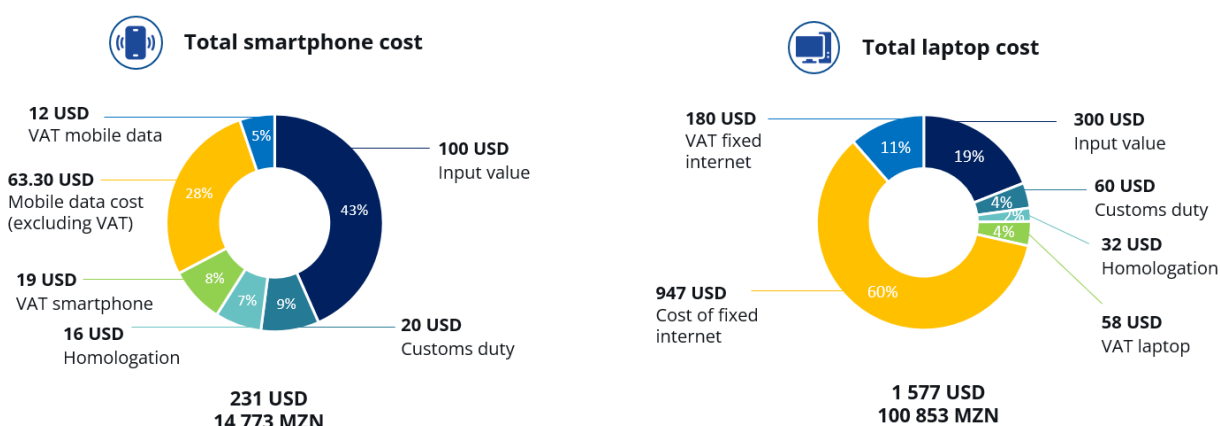
In addition to the initial purchase price, it is necessary to consider the total cost *of ownership* for the individual, which includes additional charges such as mobile data and VAT, representing more than double the entry price of the equipment.

For a smartphone, additional charges represent 57% of the final cost, of which 28% corresponds to the cost of mobile data (Figure 12).

For laptops, this proportion is even higher, with 81% of the final cost corresponding to additional charges, 60% of which comes from the cost of fixed internet.

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Figure 12. Total cost of a smartphone and laptop over 4 years



Source: Compilation of information gathered during interviews with stakeholders.

Note: It was assumed that the useful life of the device is 4 years.

3.3.1.6. Import of smart devices

The choice of import method for devices has a direct impact on the project's deadlines, costs, and logistical requirements. The two main routes for importing electronic devices into Mozambique are by air and by sea.

Air freight is faster, ideal for shorter deadlines, but it is more expensive, as it has high import costs, and is therefore recommended for small to medium volumes (Figure 11).

Sea freight is slower, transit times are longer, there are additional container costs and the need for additional logistics, but customs duties are lower. It is therefore recommended for large volumes with flexible delivery times (Figure 11).

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Figure13. Device import costs: air and sea

Air freight		Sea freight	
7 - 14 days	13,50 \$ for smartphone ¹ 50,15 \$ for laptop ¹	40 - 60 days	8,90 \$ for smartphone ¹ 27,85 \$ for laptop ¹

- Faster: ideal for shorter lead times
- More expensive: high import costs
- Recommended for small to medium volumes

- More time-consuming: longer transit times
- Lower customs fees
- Container and logistics costs
- Recommended for large volumes

1. Includes cost of transport, insurance, customs duties (20%) and customs service fee (0.5%)

In addition, all imported telecommunications and radio communications equipment is subject to a mandatory approval process conducted by the Regulatory Authority. This procedure aims to ensure a minimum standard of quality and protect consumers from equipment that is incompatible with Mozambique's telecommunications networks.

This process takes a maximum of 15 days and results in the issuance of a certification of approval and the application of an identification seal on the device. Fees are defined according to the category of equipment. For laptops, the fee is 2,000 meticaïs for approval and 20 meticaïs for the seal/device. For smartphones, the fee is 1,000 meticaïs for approval and 10 meticaïs for the seal/device.

3.4. Barriers to Adoption

The smart device market in Mozambique faces significant structural challenges despite its growth potential. With around 63%² of the population living below the poverty line and a gross national income per capita of less than \$540 per year³, households' ability to purchase digital devices, even the most basic ones, remains limited.

The purchase of an entry-level smartphone (approximately \$28), for example, represents a considerable fraction of the monthly income of a large part of the population, equivalent to almost one month's salary.

Despite increased mobile coverage and the spread of digital services such as mobile money, large segments of the population remain excluded from full access to digital technologies. Digital inclusion continues to be constrained by a set of structural and socioeconomic barriers that go beyond simple physical access to equipment.

The adoption of smart devices in Mozambique is limited by six main barriers. *Desk research* allowed these barriers to be identified systematically, and the results of the survey and *stakeholder* interviews confirmed their relevance, not only in terms of prevalence but also in how they interact with variables such as gender, geographical location, income, education, and professional activity.

Understanding the availability or willingness of a target population to adopt smart devices can thus be obtained by analyzing metrics that reflect the prevalence of these barriers in their daily lives.

Table6. Description of barriers and their implications for the financing scheme.

Barrier	Description	Implications for the scheme
DIGITAL ACCESSIBILITY <i>I do not have access</i>	The first barrier is digital accessibility, understood as the lack of basic conditions—energy and connectivity—for the use of smart devices. This barrier was assessed using metrics such as:	The scheme ensures, through the application of eligibility criteria, that access will be targeted at areas with coverage and where coverage will be ly added through other components of the PADIM.

² World Bank Group, Mozambique Overview April 2025. Data referring to 2020.

³ World Bank Group, GNI per capita, Atlas method (current UDS). Data for 2023.

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	• Access to electricity • Mobile network coverage • Internet usage • Number of mobile network connections • Connectivity index	
INTEREST <i>I have access, but I don't recognize the value</i>	The second barrier is interest, which arises when the practical or utility value of the digital device is not clearly recognized by users. In this case, relevant metrics include: • Survey of target segments • Features used on devices • Adoption of digital wallets	The financing scheme provides for investment in awareness-raising activities on the practical value of smart devices (e.g., mobile money, information on agriculture, health, education) and the definition of software to be included in the devices, particularly in integrated projects, mobile projects, and projects for citizens with special needs.
FINANCIAL ACCESSIBILITY <i>I am interested, but I cannot afford it</i>	Next comes financial accessibility, which occurs when there is interest in adoption, but the costs associated with purchasing and using the devices are restrictive or prohibitive. Indicative metrics for this barrier include the purchase cost of devices and mobile data costs, which culminate in the total cost of ownership, as well as surveys of target segments.	The scheme considers subsidies and loans scaled by beneficiary segments, taking into account different socioeconomic profiles, in order to reduce entry costs. In addition, it provides for direct subsidization of mobile data during the first few months and considers partnerships with operators to provide zero-rated domains, reducing usage costs.
LITERACY AND EDUCATION <i>I can pay, but I don't know how to use it</i>	The fourth barrier is literacy and education, which limits adoption even when there is interest and financial capacity. This barrier relates to the lack of skills to use devices effectively and is assessed by indicators such as: • Literacy rate	Most of the funding for the purchase of devices will be accompanied by a mandatory training component.

Smart device financing scheme

	Enrollment levels in secondary and higher education	
SOCIO-CULTURAL <i>I can afford it and use it, but my family or religion won't let me</i>	The sociocultural barrier represents situations in which the individual has all the technical and economic conditions to adopt the technology but encounters resistance for cultural, religious, or social reasons, such as opposition from family or the community. The most representative metric of this barrier is gender disparity. The survey provided several inputs.	The distribution of devices will be done according to quotas. The Implementation Plan will include mechanisms to monitor usage, in order to prevent the device from being transferred from women and young people to other users.
REGULATION <i>I have all the conditions, but there are regulatory barriers</i>	The regulatory barrier occurs when, even though all conditions are met on the user's side, there are legal or administrative obstacles that hinder access to digital services. This barrier can be observed through metrics such as the mobile subscription registration rate.	The design of the scheme was coordinated with the regulatory framework.

3.4.1. Digital Accessibility

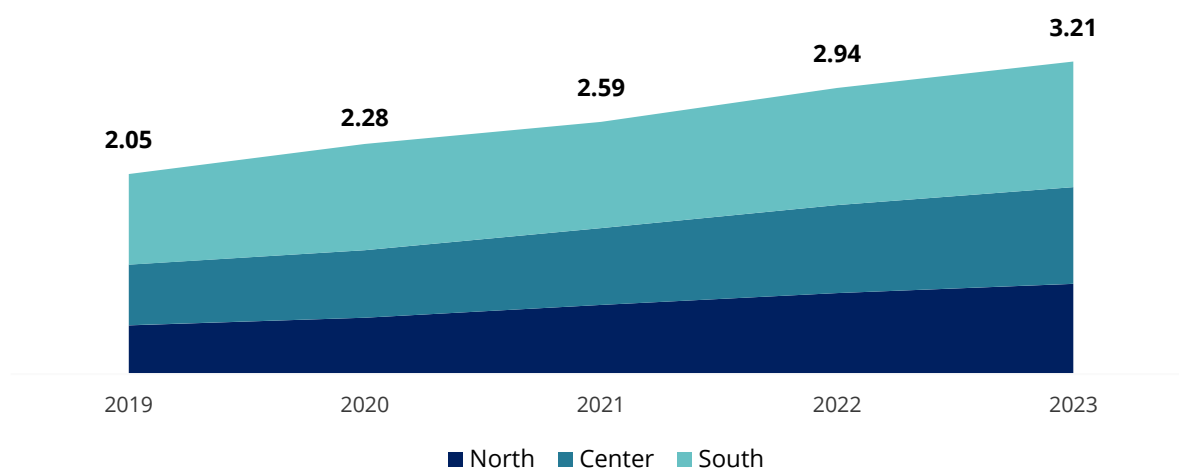
Access to electricity

In 2022, only 40% of the Mozambican population had access to electricity. Assuming that this percentage remained unchanged until 2024, it is estimated that approximately 19.9 million Mozambicans will continue to lack access to electricity.

Between 2019 and 2022, the number of electricity consumers increased by around 1.16 million, representing growth of 56%. In 2023, low-voltage consumption predominated, especially in the domestic segment, suggesting greater penetration of the service among households.

The southern region of the country stands out as the area with the highest number of consumers, showing a geographical concentration in access to electricity.

Figure14. Evolution of the number of electricity consumers between 2019 and 2023, in millions



Sources: IEA and INE

Smart device financing scheme*Table 7. Percentage of electricity consumers by category, 2023*

	Domestic tariff (Low voltage)	General tariff (Low voltage)	Agricultural (Low voltage)	Large consumers (Low voltage)	Medium and high voltage
South	90.311%	9.370%	0.005%	0.107%	0.207%
Center	92.924%	6.882%	0.002%	0.054%	0.138%
North	93.923%	5.945%	0.001%	0.034%	0.097%
Mozambique	92.162%	7.611%	0.003%	0.070%	0.137%

*Sources: IEA and INE***Mobile network coverage**

In terms of population coverage by type of mobile network, **around 60% of the Mozambican population has access to 4G or higher networks**. However, 13% of the population, equivalent to approximately 4.3 million people, has no access to mobile internet.

Despite the growing presence of new generation mobile networks, significant regional disparities in coverage persist, with less favored areas outside the reach of the most advanced infrastructure. In terms of market share among mobile operators, 2021 data indicate that Vodacom held 54% of broadband subscribers, followed by Movitel with 29% and Tmcel with 17%⁴.

This distribution shows a concentration in the sector, with Vodacom assuming a dominant position, which may have implications for the quality and equity of the service offered in different regions of the country (see Figures).

⁴ Preliminary Market Analysis Report and Determination of Operators with Significant Market Power, INCM, 2022.

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Figure15. Population coverage in Mozambique by type of mobile network (2022)



Source: nPerf

Internet access

As previously mentioned, around 85% of the Mozambican population is covered by mobile networks with at least 3G technology. However, only 20% of the population actually uses the Internet, revealing a discrepancy between the availability of infrastructure and levels of Internet adoption. This means that **around 65% of the Mozambican population has access to the internet but does not use this service.**

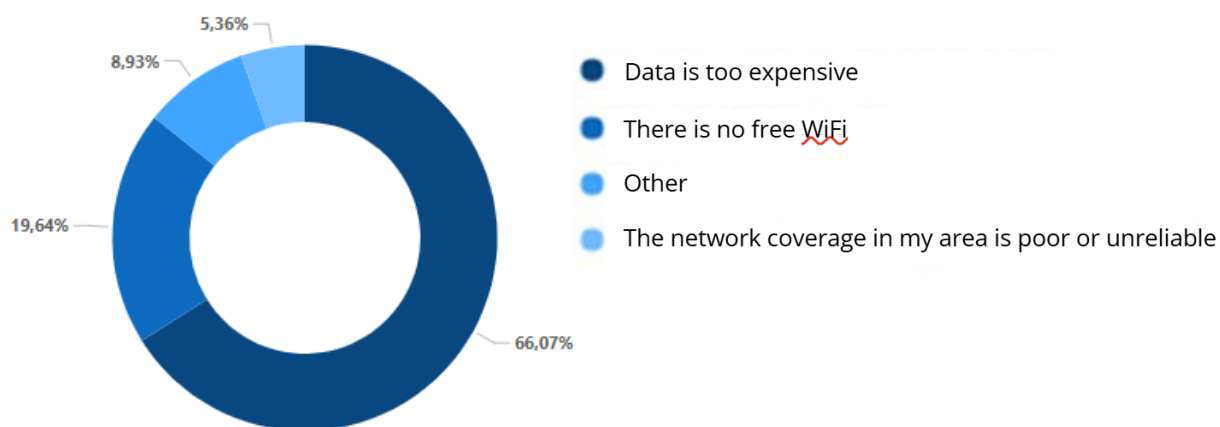


About 63% of respondents access the internet daily. Among those who access it only a few times a week or rarely, the **main reason given for not using the internet frequently was that the cost of mobile data was too high** for their financial capacity.

Lack of or poor network coverage was cited by only about 5% of respondents as a reason for not using the internet daily.

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Figure 16. Reasons for not using the internet daily identified in the survey



Source: LBC, Survey on the appetite and barriers to the use of smart devices in Mozambique, 2025

In addition, the mobile telecommunications ecosystem in Mozambique has structural limitations. There are no Mobile Virtual Network Operators (MVNOs), i.e., operators that provide mobile services without their own network infrastructure, operating through capacity leased from operators with an installed network. The absence of this model limits competition and diversity of offerings in the market.

Similarly, there is still no national roaming service in Mozambique, a mechanism that allows users to access other operators' networks within the same country in locations where their usual operator does not provide coverage. This is despite the fact that the regulation on national roaming was approved this year by **Decree No. 12/2025 of March 19**.



In **interviews**, mobile operators reported that the high cost of infrastructure maintenance and the increase in theft and vandalism in rural areas do not allow for financial returns.

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Types of mobile network connections

According to GSMA data, in 2025 around **88% of mobile connections in Mozambique were mobile broadband, i.e., using 3G or higher technology**. This figure puts the country in line with the SADC regional average, where 86% of mobile connections also use third-generation or higher technologies. This alignment suggests that, from the point of view of technological modernization of the network, specifically in the relationship between broadband and 2G technology, Mozambique is not at a comparative disadvantage in the region.

With regard to the SADC specifically, in 2023, 41% of mobile connections corresponded to 4G or 5G technologies. GSMA projections indicate that by 2030 this proportion is expected to increase significantly, with 71% of mobile connections in the region expected to be made via 4G or 5G networks.

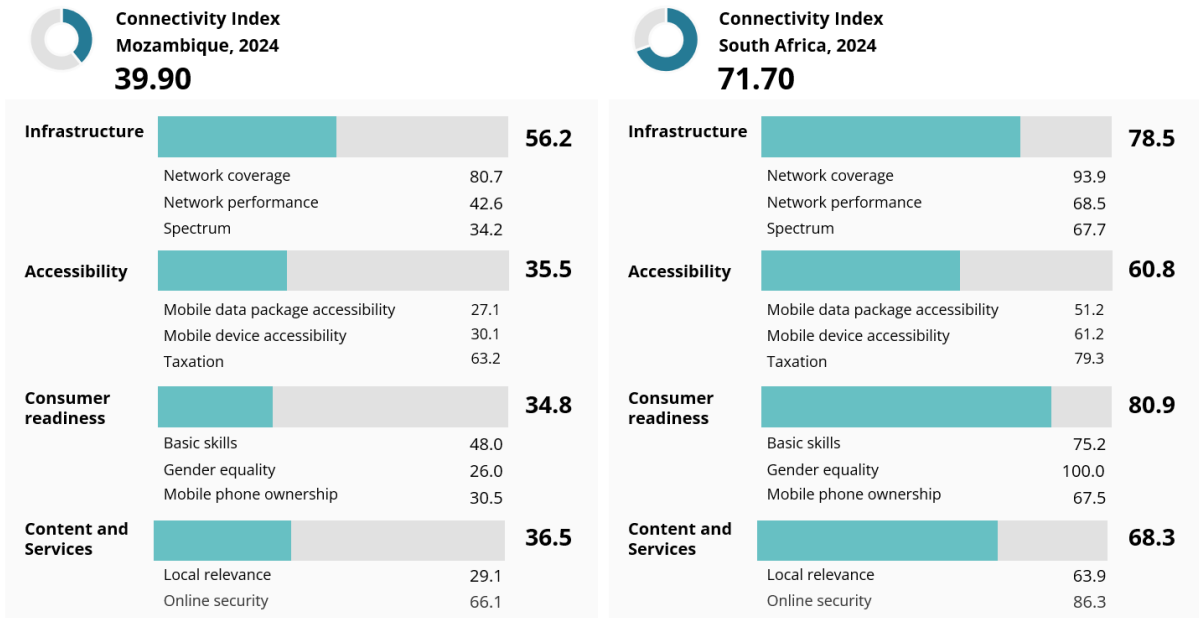
Connectivity index

In 2024, Mozambique recorded **a Connectivity Index of 39.90, below the Sub-Saharan African average of 42.26 for the same year**.

Compared to South Africa, which has the highest Connectivity Index on the African continent (71.70), Mozambique faces particularly acute challenges in preparing consumers and producing local digital content (Figure 17).

Smart device financing scheme

Figure17. Connectivity index for Mozambique and South Africa



Source: GSMA Mobile Connectivity Index, 2025

3.4.2. Interest

Features used and mobile wallet adoption

The survey revealed that more than **70% of respondents expressed an intention to purchase a smart device**. Of these, about 67% were interested in purchasing a mobile phone and 33% in purchasing a tablet or computer.



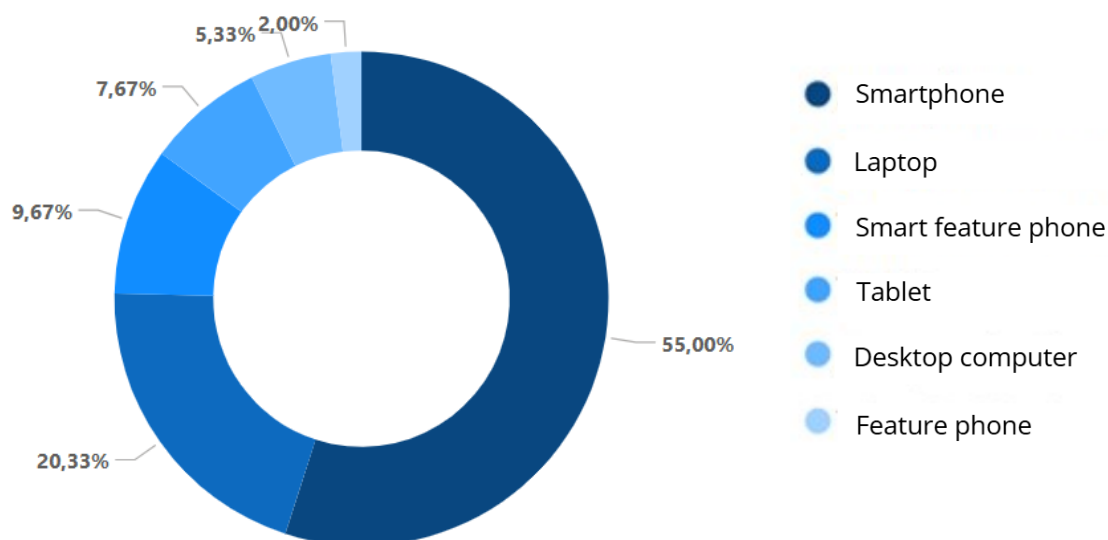
Ownership among respondents is currently concentrated in **smartphones, which are mainly used for basic communications and entertainment**. Use for educational or professional purposes is less frequent.

After smartphones, the device that attracts the most interest is the laptop.

Respondents expressed **interest in participating in training programs** on digital skills and the use of smart devices.

Smart device financing scheme

Figure 18. Type of device respondents would like to purchase (percentage of total respondents)



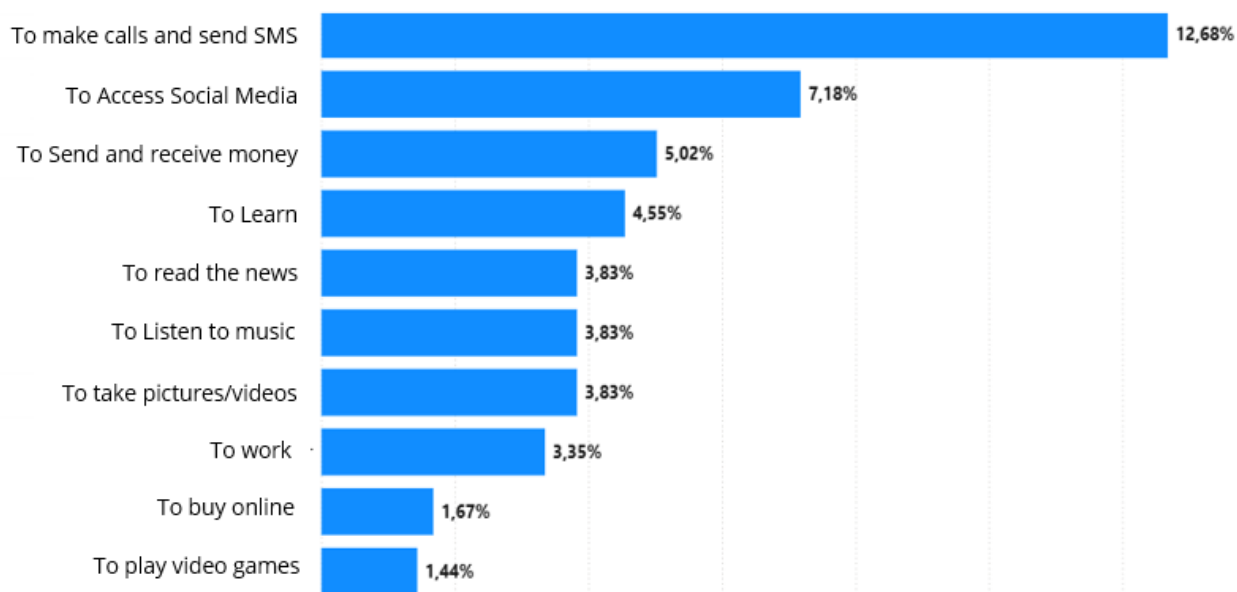
Source: LBC, Survey on the appetite and barriers to the use of smart devices in Mozambique, 2025

When asked about the features they would use if they had access to a mobile phone, the reasons for purchasing their last device and, additionally, what uses they would prioritize if the cost of access were reduced by half, in the case of respondents who already own a mobile phone, the responses revealed a consistent trend.

In all three situations, respondents highlighted making calls and sending SMS messages as their main purposes, as well as using social networks, showing that interpersonal communication and access to basic digital platforms remain the central motivations for adopting mobile devices.

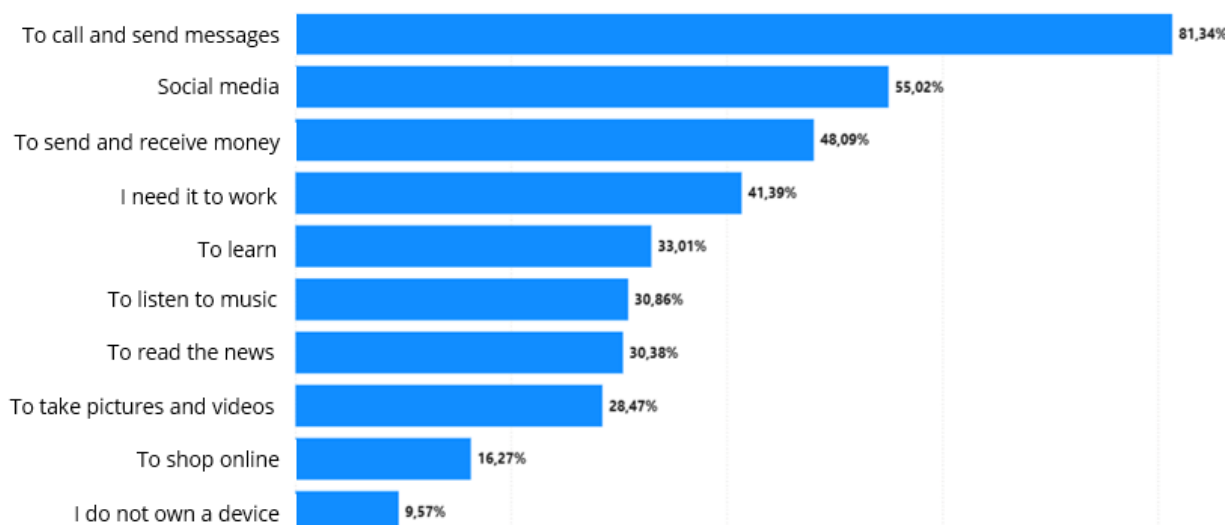
Smart device financing scheme

Figure19. Main features that respondents would use if they had a mobile phone, as a percentage of total respondents



Source: LBC, Survey on appetite and barriers to the use of smart devices in Mozambique, 2025

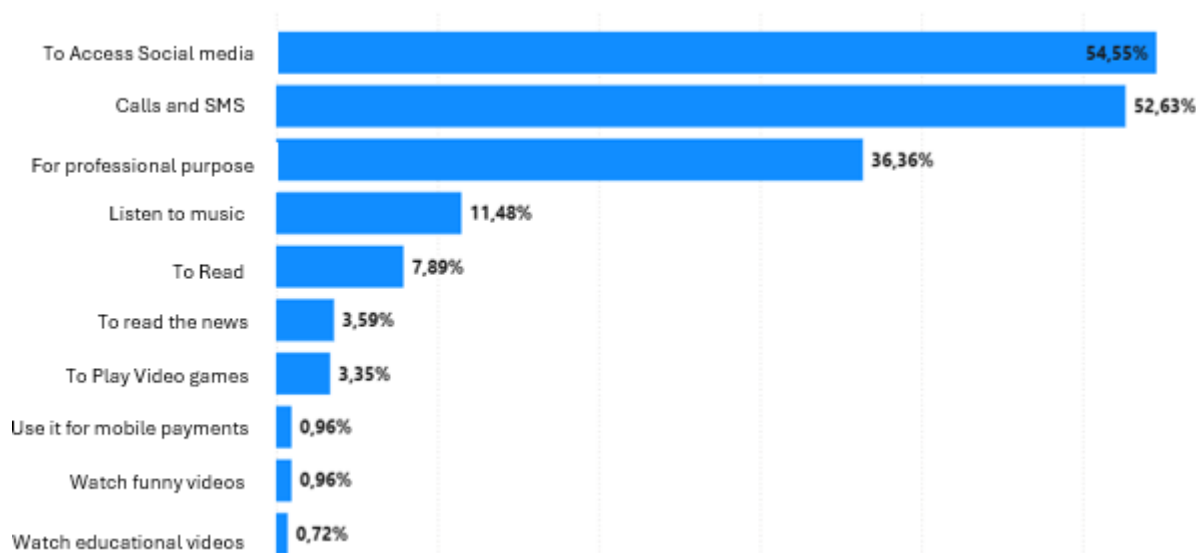
Figure20. Main features that led to the purchase of the last smart device, as a percentage of total respondents



Smart device financing scheme

Source: LBC, Survey on the appetite and barriers to the use of smart devices in Mozambique, 2025

Figure 21. Main features that would be used most frequently if mobile service were half the price, as a percentage of total respondents



Source: LBC, Survey on the appetite and barriers to the use of smart devices in Mozambique, 2025

These results are in line with data from *the National Survey and Segmentation of Smallholder Farm Households in Mozambique (2016)*, in which two-thirds of producers recognize the importance of mobile phones, with the ability to communicate with friends and family identified as the main benefit.

The trend observed in Mozambique also fits the broader pattern across the African continent, where text messaging is, on average, the most commonly used feature. Social media use ranks fourth in this case. The use of mobile phones to take photos and videos was relatively little mentioned in Mozambique, although it is among the top three most commonly used features in Africa. The use of social networks ranks fourth in the continental landscape.

Among respondents who do not own a mobile phone, interest in using the device to send and receive money stood out as the third most valued feature, suggesting latent potential for the use of mobile financial services. This demand is in line with usage observed in the region.

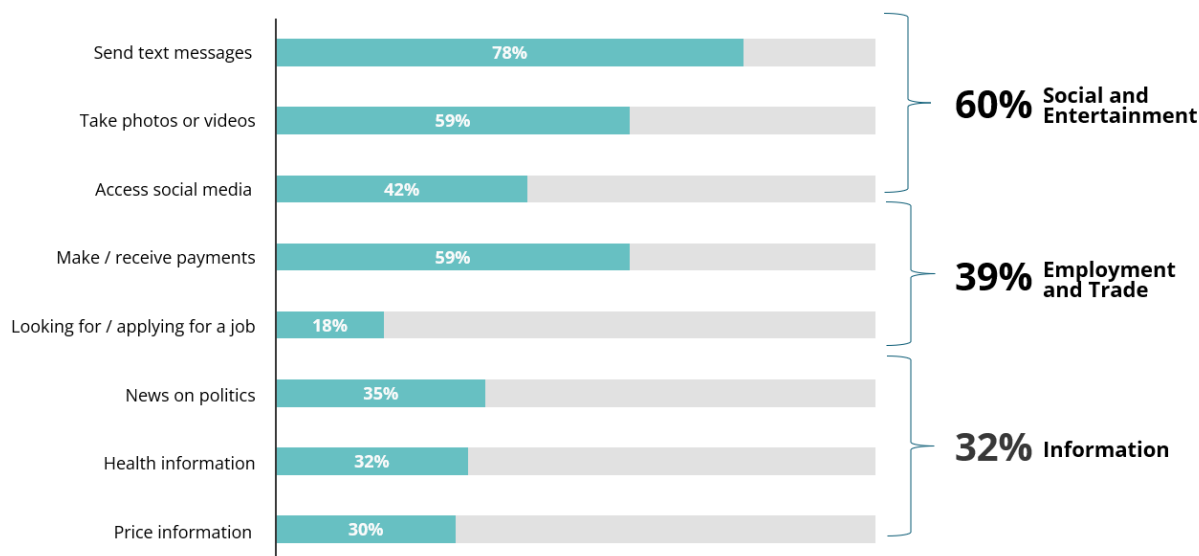
In this context, the growth in the adoption of digital wallets in Sub-Saharan Africa is noteworthy, highlighting the dynamism of the sector and the growing interest in digital solutions with immediate practical application. In 2024, the number of registered accounts in the region reached 1.1 billion, an

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increase of 19% over the previous year. Of these, 283 million were monthly active accounts, representing a 12% increase over the previous year. The volume of transactions amounted to 80 billion, while the total value transacted reached US\$257 billion, with growth of 21% and 15%, respectively.

In Mozambique, the growth of digital wallets clearly confirms this potential. According to a Statistical Report from the Bank of Mozambique, in 2024, the number of active electronic money accounts exceeded 19.8 million, an increase of 18.5% over the previous year. In the same period, the network of agents exceeded 350,000, ensuring coverage in all 154 districts of the country and reaching a density of 1,817 agents per 100,000 adults. These figures demonstrate that the mobile payment ecosystem is widely disseminated and functional, providing a solid foundation for the expansion of digital services through mobile devices.

Figure22. Percentage of adults who used their mobile phone to perform each activity (median for African countries, 2017)



Source: Pew Research Center (2017). Majorities in sub-Saharan Africa own mobile phones, but smartphone adoption is modest.

Although these uses reflect the predominant interests of users, it is important to note that the use of devices to access relevant information, especially in areas such as health and employment, remains low. This may indicate not only a lack of interest, but also the low availability of digital content or

Smart device financing scheme

services tailored to these needs, representing a significant barrier to the more diverse and transformative adoption of smart devices.

3.4.3. Financial Accessibility

Total cost of ownership

The total cost of ownership (TCO) of a device considers both the purchase price of the device and the costs associated with its use, such as voice and data packages and maintenance.



Among respondents who do not own or have never owned a device, the most frequently cited reason was **inability to pay, followed by lack of access to credit**.



In all stakeholder interviews, **the cost of devices was identified as the main barrier** to the adoption of smart devices. For this reason, the second-hand market is quite active, driven by more affordable prices and weak enforcement.

The analysis of mobile device purchase costs was based on a survey of the prices of lower-end equipment from three different types of sellers: i) online stores with their own websites (own consultation), ii) online stores based on social networks (secondary consultation), and iii) traditional retail, namely physical stores (data validation)⁵.

In the survey of **basic**, low-end **mobile phones**, the brands Morep, Alcatel, and Itel stood out as the main suppliers. It was found that the lowest-cost models available on the market are sold for between \$12.45 and \$18.85 (792 and 1,200 meticaïs, respectively).

⁵ The survey did not allow for the identification of *feature phone* values.

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Figure23. Example of the cost of basic mobile phones in an online store



Source: Bazara, 2025

In the **smartphone** survey, the Itel and Morep brands stood out again, as in basic mobile phones, but Hisense and ZTE also emerged as the main low-cost suppliers. The most affordable smartphone models on the market start at between \$27.88 and \$77.50 (1,774 and 4,933 meticaís, respectively). Entry-level models from the Itel brand were highlighted by operators as best-selling models during the interviews.

Figure24. Example of smartphone prices in online stores

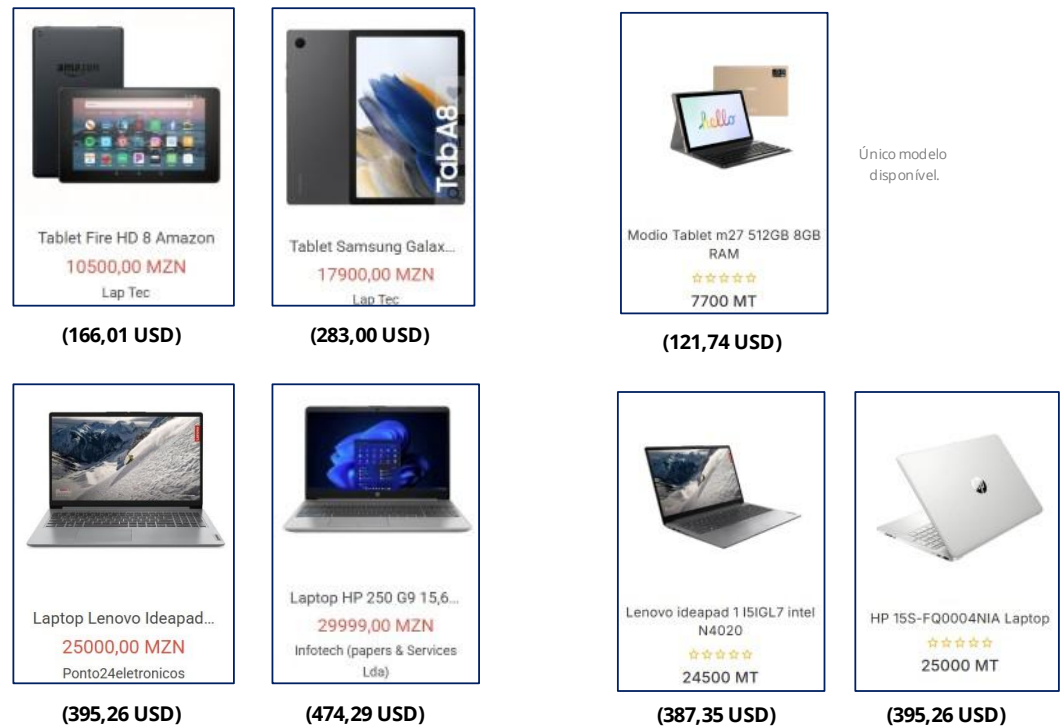


Source: Bazara and Ninzure, 2025

As for **tablets and laptops**, it was concluded that the lowest-cost models on the market are sold for between \$121.74 and \$283.00 in the case of tablets, and between \$387.35 and \$474.29 in the case of laptops. There is also a player in the market that sells tablets designed for educational purposes at prices starting at \$70 (Tivane Game Studio).

Smart device financing scheme

Figure25. Example of the cost of tablets and laptops in online stores



Source: Bazara and Ninzure, 2025

According to the survey, **the cost of a basic mobile phone represents about 43% of the average monthly per capita income.** If we use gross national income per capita as a reference value instead of average monthly income per capita, a basic mobile phone represents 29%—a figure above the affordability target set by the GSMA, which recommends that the cost of purchasing an entry-level device should not exceed 15% to 20% of monthly GNI per capita.

In turn, the costs of a smartphone, tablet, or laptop represent 93%, 405%, and 1,293% of average monthly income per capita, respectively.

Smart device financing scheme

Table8. Financial accessibility of purchase costs compared to different economic indicators

Affordability of the purchase cost in relation to different economic indicators in Mozambique			Basic mobile phones (13 USD)	Smartphones (28 USD)	Tablet (121 USD)	Laptop (387 USD)
Source: INE	MZN	USD	%	%	%	%
 Average monthly income per capita (2019/2020)	1 946	30,16	43%	93%	405%	1283%
 Average monthly income per household (2019/2020)	8 916	138,20	9%	20%	88%	280%
 Average monthly expenditure per capita (2022)	1 893	29,34	44%	95%	416%	1319%
 Average monthly expenditure per household (2022)	8 661	134,25	10%	21%	91%	288%
 National minimum wage (2021 – 2023)	8 758	135,75	10%	21%	90%	285%
 Gross national income per capita per month (GNI per capita per month; 2023)	3 279	45	29%	62%	271%	860%

Sources: INE, World Bank, and data collected by LBC (2025).

An analysis by income quintiles, where the first quintile represents the poorest 20% of the population and the fifth quintile the richest 20%, reinforces this structural limitation. For the first two quintiles, corresponding to 40% of the population with the lowest incomes, the purchase of any smart device is, in practice, financially inaccessible.

This barrier is even more pronounced in the case of tablets and laptops, whose prices place them completely out of reach for the majority of the population.

Smart device financing scheme*Table9. Financial accessibility of the purchase cost compared to average monthly expenditure by quintile*

Affordability of the purchase cost in relation to average monthly expenditure by quintile			Basic mobile phones (13 USD)	Smartphones (28 USD)
Source: INE	MZN	USD	%	%
Average monthly expenditure per capita (2022)	1 893	29,34	44%	95%
Quintil 1	260	4.03	323%	695%
Quintil 2	639	9.90	131%	283%
Quintil 3	1139	17.65	74%	159%
Quintil 4	2001	31.02	42%	90%
Quintil 5	5426	84.10	15%	33%

Source: INE (2022)

In addition, accessibility to mobile services (data and voice) was also analyzed based on the same GNI per capita metric, in line with the recommendations of the International Telecommunication Union (ITU). Basic mobile data packages continue to represent a disproportionate share of national average incomes.

Smart device financing scheme

Table 10. Financial accessibility of usage costs compared to different economic indicators⁶

	Affordability of the purchase cost in relation to different economic indicators in Mozambique			Low consumption package (3,13 USD/month)	Mobile data package (1,57 USD/month)	Fixed Internet package (23,5 USD/month)
	Source: INE	MZN	USD	%	%	%
 Average monthly income per capita (2019/2020)		1 946	30,16	10.4%	5.2%	77.9%
 Average monthly income per household (2019/2020)		8 916	138,20	2.3%	1.4%	17.0%
 Average monthly expenditure per capita (2022)		1 893	29,34	10.7%	5.4%	80.1%
 Average monthly expenditure per household (2022)		8 661	134,25	2.3%	2.5%	17.5%
 National Minimum Wage (2021 – 2023)		8 758	135,75	2.3%	1.2%	17.3%
 Gross national income per capita per month (GNI per capita per month; 2023)		3 279	45	7.0% ¹	3.5% ¹	52.2% ¹

Source: INE, World Bank, and data collected by LBC (2025).

Based on these data, the total cost of ownership was calculated for two typical profiles: a basic mobile phone user and a smartphone user.

Total cost of ownership of a basic mobile phone

An acquisition price of \$13 (approximately 799 meticaïs) was considered. Adding a basic monthly data and voice package worth \$3.13 (200 meticaïs), the initial cost in the first month amounts to \$16.13 (999 meticaïs). Assuming a useful life of three years, the total cost of services during this period is \$112.68 (7,200 meticaïs), resulting in **a total cost of ownership of \$125.68 (7,999 meticaïs)** at the end of three years.

Total cost of smartphone ownership

⁶ The relative cost of data packages compared to GNI per capita takes into account a 12-month subscription. The figures are slightly different from the previous ones due to the difference between the World Bank's GNI per capita figure (=540) and the figure used by the ITU (not shown).

Smart device financing scheme

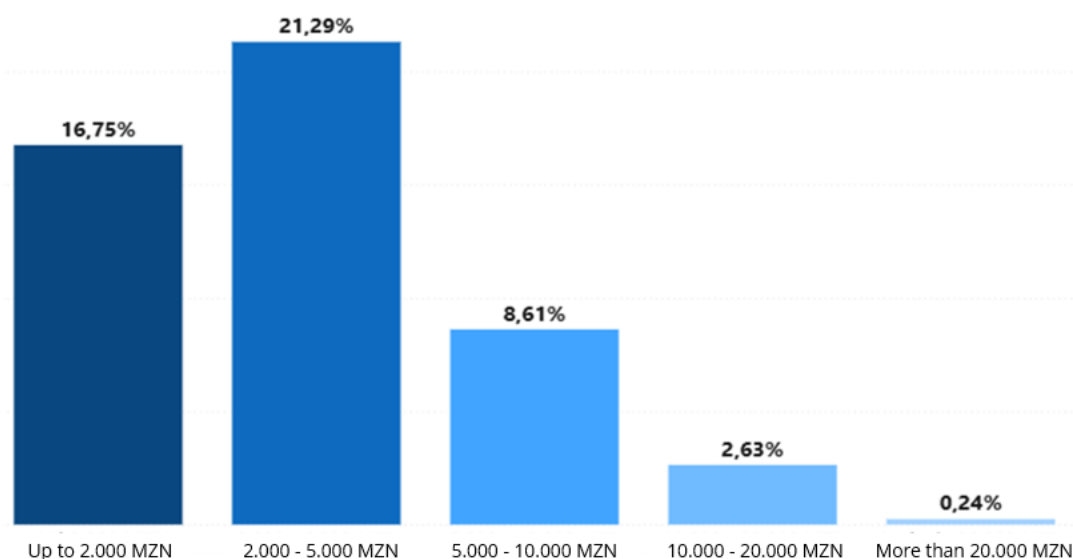
The purchase price was set at \$28 (1,799 meticaïs). With the basic monthly data and voice package costing \$3.13 (200 meticaïs), the cost in the first month rises to \$31.13 (1,999 meticaïs). The **total cost of ownership after three years is \$140.68 (8,999 meticaïs)**.



Of those surveyed who were interested in purchasing a mobile phone, **17% could only afford to pay up to 2,000 MZN for a mobile phone and 22% between 2,000 and 5,000 MZN.**

70% of all respondents would be willing to pay in installments, but indicated relatively low monthly amounts: **36% could pay less than 250 MZN per month, 28% could pay between 250 and 500 MZN, and 19% could pay between 500 and 1,000 MZN.**

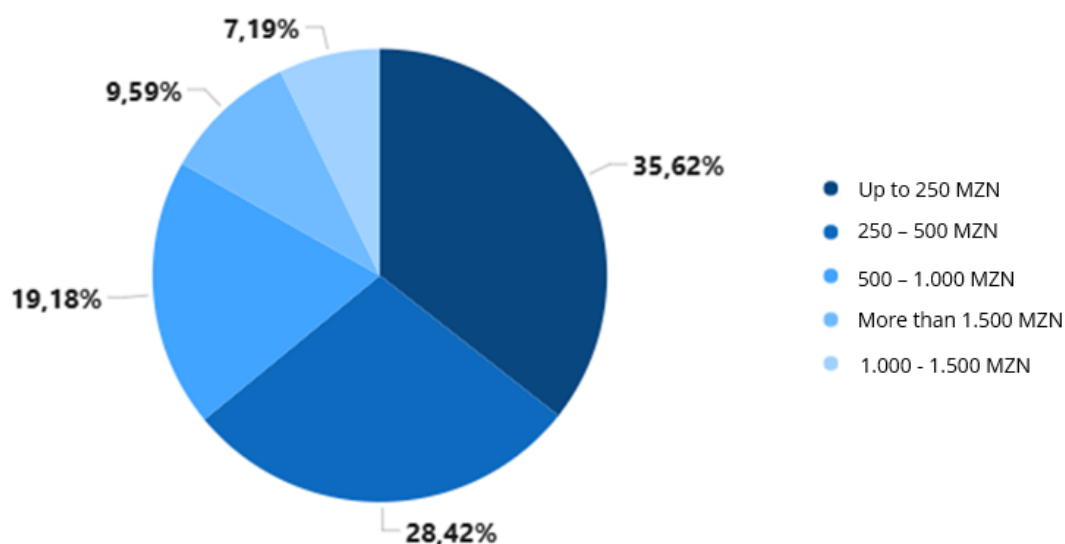
Figure26. Distribution of respondents interested in purchasing a mobile phone by the amounts they would be willing to pay



Source: LBC, Survey on appetite and barriers to the use of smart devices in Mozambique, 2025

Smart device financing scheme

Figure 27. Distribution of monthly installment payment capacity, as a percentage of total respondents willing to pay in installments



Source: LBC, Survey on the appetite and barriers to the use of smart devices in Mozambique, 2025

These figures show that, even in the entry segments, the cumulative cost of ownership represents a substantial economic barrier, especially for households with lower incomes.

3.4.4. Literacy and education

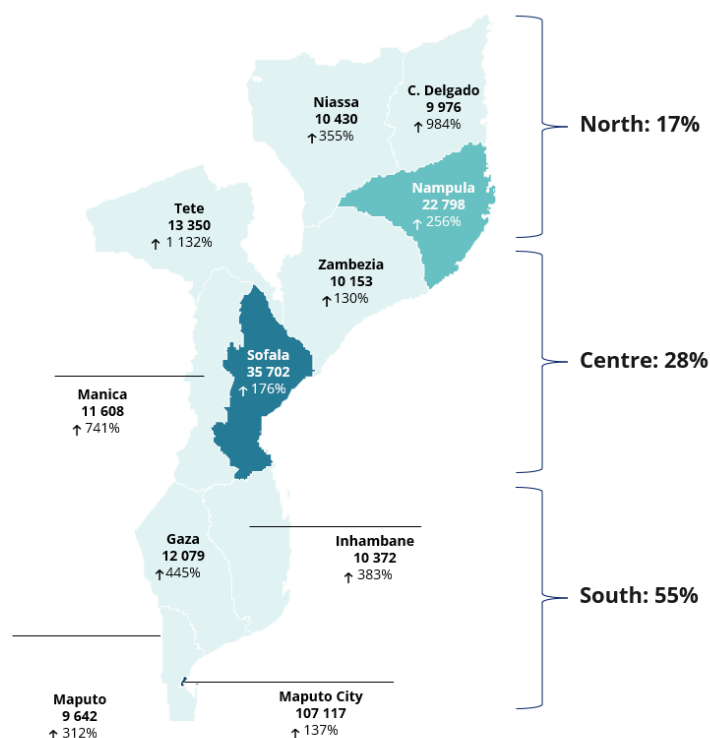
Literacy

According to INE, the literacy rate of the population was only 61.7% in 2022, with significant gender disparities: 76.1% of men are literate, compared to only 50.8% of women.

The available data also point to major inequalities in access to higher education, with a strong concentration of students in the southern provinces of the country. In 2022, the city of Maputo had more than 107,000 students enrolled in higher education, followed by Sofala (35,702) and Nampula (22,798), while several other provinces recorded significantly lower numbers. This regional imbalance is directly reflected in the inequality of opportunities for advanced digital training, reducing the ability of a considerable part of the population to keep pace with the benefits of digitalization.

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Figure28. Distribution of the higher education student population by province



Source: INE

These territorial asymmetries in access to education tend to overlap with similar patterns observed in the ownership of digital devices, which is significantly more concentrated in the southern urban regions. This overlap between educational deficits and lack of technological access contributes to a cumulative cycle of digital exclusion: **regions with less access to formal education are also those where there are fewer conditions for the appropriation and meaningful use of technology.**

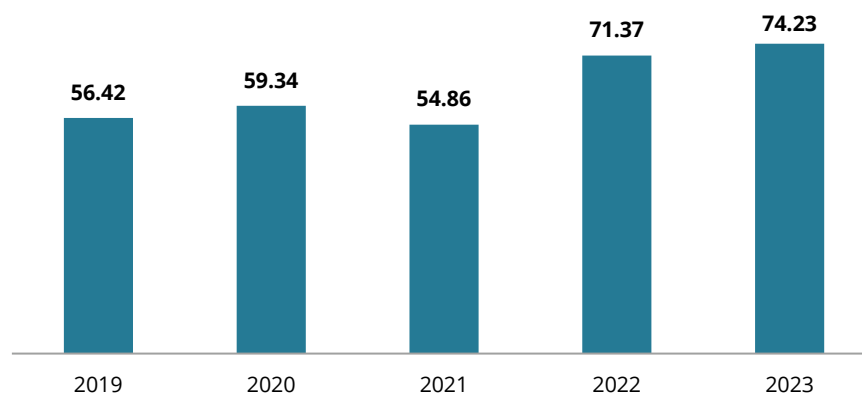
Enrollment in higher education

Despite some growth in the number of enrollments in higher education—about 29% of students in 2023 were newly enrolled, according to INE—the access rate remains limited. These new enrollments

Smart device financing scheme

represent only 2% of the youth population between the ages of 20 and 24, signaling that higher education remains out of reach for the majority of Mozambican youth.

Figure29. Number of enrollments in higher education, in thousands



Source: INE. 2023

This low rate of access to tertiary education has direct implications for the adoption and significant use of smart devices. Higher education is, in most cases, the main place for systematic contact with digital tools and more advanced technologies. Its limitation prevents a large part of the young population from developing applied digital skills, such as the use of online educational platforms, productivity programs, or access to digital public and economic services.

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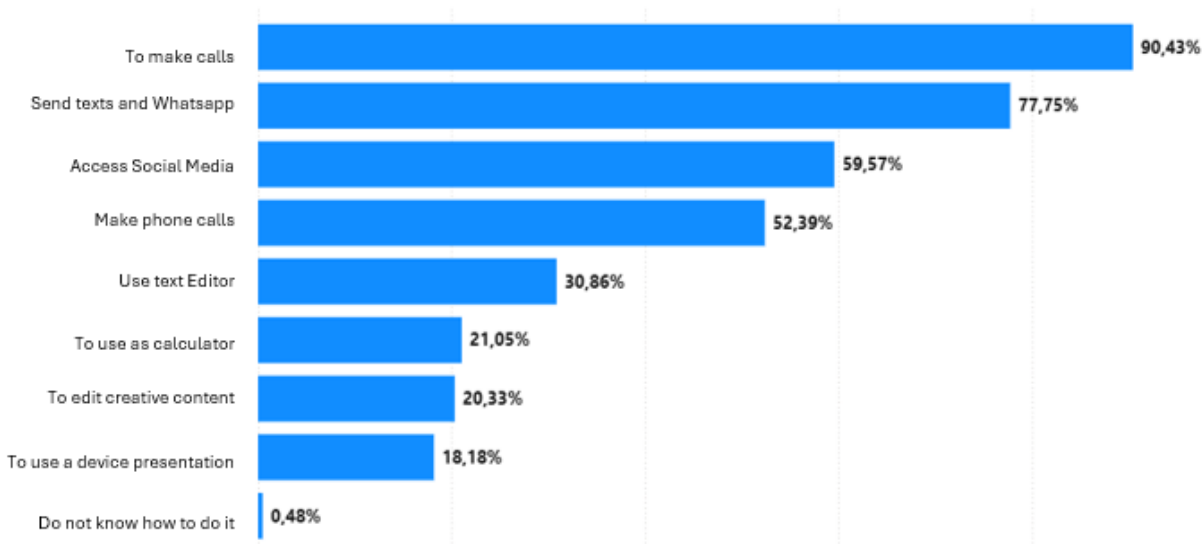


According to the survey, **less than half of respondents know how to use tools that require more advanced digital skills**, such as word processors (only 31% of respondents know how to use them), spreadsheets (21%), or presentations (18%). These data suggest not only low levels of functional digital literacy, but also a lack of familiarity with tools that are essential for the full use of smart devices.

More advanced skills are more prevalent among men than women, although the discrepancy is not significant.

54% of respondents have never attended formal digital training, although they express interest.

Figure30. Distribution of digital skills among respondents



Source: LBC, Survey on the appetite and barriers to the use of smart devices in Mozambique, 2025

3.4.5. Socio-cultural barriers

Gender disparities are a sociocultural barrier to access to smart devices in Mozambique. Official data from 2020 indicated that only 18% of Mozambican women owned a cell phone, compared to 22% of men. In addition, women were less likely than men to purchase their own device (58% of women compared to 81% of men)⁷. The disparity in mobile phone ownership in Mozambique reveals an 18% gender gap, which is accentuated in mobile internet use: 37%⁸.

These data are not current, but we can assume that the differences remain, albeit attenuated, based on survey data showing that 84.7% of women own a device, compared to 93.7% of men. This reveals a gender gap of 9.6%.

Recent GSMA data for Sub-Saharan Africa obtained in 2023 show that 36% of women use mobile internet, compared to 53% of men, reflecting a gender gap of 32% in effective internet use. Although these data refer to the region in general, the patterns observed in Mozambique are consistent with this trend, and the survey confirms that women continue to face additional barriers to digital access that go beyond cost or network coverage.

The survey revealed that of those respondents who **do not own a smart device, the majority are women (80%)**. Most of these women are from Nampula, also highlighting a regional disparity. In addition, **of the 18% who do not know how to search for information online, the majority (70%)** are also female.



The reasons given for not owning a device were mainly inability to pay, lack of information about available models and prices, and lack of access to credit or financing options. **Reasons such as "my partner won't let me," "my parents won't let me," or "religious reasons" were not significant.**

⁷ *Gender Equality Profile of Mozambique*, Ministry of Gender, Children and Social Action; *The Mobile Gender Gap Report 2020*, GSMA.

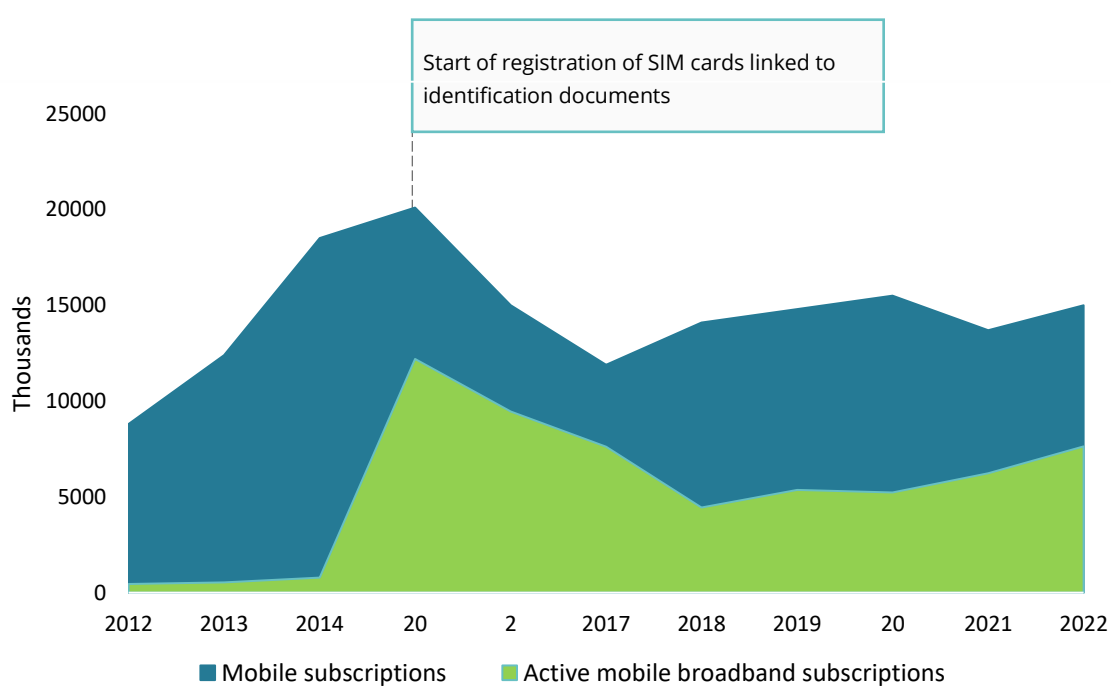
⁸ Idem.

3.4.6. Regulation

In 2015, Mozambican regulations made it mandatory to present a valid ID document for the purchase and registration of SIM cards. This measure was aimed at combating crime and fraud and improving the organization and control of the telecommunications sector.

However, this measure had a negative impact on the number of mobile and broadband subscriptions, as shown in the figure below, since a significant part of the Mozambican population does not have an identification document. In 2024, around 66% of the population still did not have any personal identification document (according to the Mozambique Information Agency).

Figure31. Evolution of mobile subscriptions by type, in thousands



Source: GSMA

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To combat this barrier, mobile operators **have expanded the list of valid identification documents**, namely **by accepting voter registration cards and war returnee cards**. For some time, they also accepted witnesses. **However, they stopped accepting these alternatives because these documents are easily forged.**

The operators interviewed also mentioned that even with the presentation of an identification document, it is not possible to verify its authenticity.

3.5. Main conclusions of the focus group

The *focus group* was held with three Mozambican organizations representing persons with disabilities:

- FAMOD is the Forum of Mozambican Associations of Persons with Disabilities, with more than 30 affiliated organizations throughout the country. It works to defend the rights of persons with disabilities, advocate for them, and monitor the implementation of inclusive public policies.
- CINFORTÉCNICA is a national association of young technicians with disabilities that promotes technical education, training in assistive technologies, and the professional integration of young people with disabilities.
- ACAMO is the Association of Blind and Visually Impaired People of Mozambique, focused on educational inclusion, economic empowerment, and rehabilitation of people with visual disabilities.

The objective of this *focus group* was to understand the barriers faced by people with special needs in accessing and using mobile technologies and to identify solutions to promote their digital inclusion. The full report of the *focus group* was sent in advance.

Based on consultations with associations representing people with disabilities, important conclusions were drawn for the design of the access and financing scheme for smart devices, particularly for people with special needs.

The selected devices must have the technical capacity to support assistive technologies such as TalkBack, screen readers, voice synthesis, and applications compatible with digital Braille.

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This is essential to ensure that devices are effectively used by people with different types of disabilities, particularly visual and hearing impairments. Without these integrated and operational features, even if physical access to the device is guaranteed, its practical and inclusive usefulness remains highly limited. The presence of these assistive technologies allows users to access digital interfaces, read content, communicate, and access digital services independently, significantly reducing dependence on third parties. This requires the definition of minimum technical specifications and accessibility testing prior to the mass procurement of devices.

Digital training must be carefully tailored to meet the specific needs of different types of disabilities.

People with disabilities face distinct barriers in accessing and using technologies—for example, a blind person needs practical training on screen readers and voice commands, while a deaf person may benefit from videos with sign language interpretation or captions. A one-size-fits-all approach to digital training tends to exclude those who need differentiated support the most. It is therefore crucial that training content, methodologies, and materials are designed to be accessible, disability-sensitive, and culturally appropriate to the local context.

This training should be face-to-face, conducted by experienced trainers and preferably recruited from within the communities themselves with the support of Organizations of Persons with Disabilities (OPDs). Curricula should incorporate basic digital literacy content, operation of assistive technologies, use of useful everyday applications, as well as guidance on digital security.

Ensure that all marketing and communication materials are accessible and adapted to people with special needs.

The way information is disseminated can determine whether a person with a disability learns about an opportunity, understands its benefits, and decides to participate. It is therefore essential that promotional content includes accessible formats, such as videos with subtitles and audio description, printed materials in Braille, simple language, and sign language interpretation. These adaptations allow people with different types of disabilities—visual, hearing, and intellectual—to access information independently and on an equal footing.

OPDs should be involved in the implementation of the project, particularly in identifying and registering beneficiaries, validating eligibility conditions, and monitoring implementation.

Smart device financing scheme

The involvement of OPDs in the implementation of the project was unanimously identified as a critical success factor. These organizations have direct contact with communities, know the local realities, and have members with experience in digital technologies. Three key areas where OPDs can act have been identified: (i) identifying and registering beneficiaries, ensuring the selection of genuinely eligible profiles; (ii) adapting and delivering digital training, with inclusive curricula tailored to different types of disability; and (iii) monitoring implementation, contributing to continuous, sensitive, and participatory evaluation.

Prioritize the most vulnerable groups in the implementation of the project, with special attention to blind, deaf, albino, and motor-impaired people.

These groups not only have greater difficulties in accessing digital technologies, but also face social stigma, mobility barriers, educational exclusion, and institutionalized discrimination. Prioritizing these beneficiaries ensures that project resources are directed to those most in need, maximizing social impact and promoting distributive justice.

3.6. Key Findings of the Market Study

The market study reveals a scenario marked by significant structural barriers, but also by promising potential for digital inclusion, provided that well-designed and integrated interventions are implemented.

- Despite the progressive improvement in mobile network coverage, especially in urban and peri-urban areas, a significant portion of the Mozambican population remains without functional internet access. It is estimated that only 23% of the adult population has an active mobile broadband subscription. This discrepancy between coverage and usage is mainly due to economic factors and not just a lack of infrastructure.
- Nevertheless, the limitations of energy and digital coverage in certain regions of the country are clear, and it is therefore essential to coordinate this project with other structural interventions, such as ProEnergia+, the expansion of the 4G network, and the provision of public internet access points, in order to ensure its success in the most isolated regions.
- Ownership of smart devices is still limited, with around 47% of households without access to any mobile phone and 97% without access to a laptop or desktop computer. Although a mobile-first pattern predominates, smartphones are financially inaccessible to a large part of

Smart device financing scheme

the population, concentrated in the strata with greater purchasing power or among groups with more immediate connectivity needs, such as students and self-employed workers. Laptops, due to their high cost, are virtually inaccessible to the majority of the population.

- Population surveys have confirmed that demand exists but is strongly suppressed by economic constraints: 73% of respondents expressed interest in purchasing a device, with smartphones being the most desired. However, 50% of households live on less than MZN 10,000 per month and 23% on less than MZN 5,000. Only 1% of respondents resorted to credit for their last device purchase, with the vast majority relying exclusively on savings.
- The willingness to join installment payment schemes is relatively high, with more than half of respondents indicating that they would be willing to take out installments, but 25% would only be able to pay up to MZN 250/month. This evidence, complemented by documentary analysis and benchmarking, suggests the creation of a financing model with PAYGO mechanisms and hybrid schemes, with partial subsidies and payments adjusted to each group's ability to pay.
- Mobile network operators are well prepared to offer PAYGO systems, which are already being implemented on the ground (e.g., Vodacom's Pouko pouko mechanism). In turn, the availability of microcredit from banks and non-bank financial institutions is a possibility, with the necessary structure in place among the stakeholders approached, although robust customer verification mechanisms are required.
- The digital skills gap is significant. Around 18% of respondents do not know how to search for information online, and many are unaware of basic device features. This limitation suggests the inclusion of a mandatory digital training component for receiving the device in the financing scheme.
- The provision of pre-installed content tailored to the needs of beneficiary groups should be considered as a measure to ensure the perceived usefulness of the devices and encourage continued use.
- The structure of supply also conditions access. The value chain for smart devices in Mozambique is unevenly developed: local assembly is in its infancy, distribution and retail are concentrated in Maputo, and repair services lack greater coverage. High taxation, which can increase the final cost of the device by up to 39%, and the logistical costs associated with import further exacerbate the challenge of affordability.

Smart device financing scheme

Financial accessibility and digital literacy stand out as the most decisive of the six main barriers to the adoption and use of digital devices identified, namely: digital accessibility (infrastructure), interest (low perception of value), financial accessibility, digital literacy, sociocultural (especially gender) and regulatory barriers. The total cost of owning a device far exceeds the average financial capacity of the population: the cost of a smartphone represents 93% of the average monthly per capita income, equivalent to almost one salary, and the cost of a laptop represents 1,293%, equivalent to more than 12 salaries.

Interviews with stakeholders in the sector reinforce these challenges and point to critical aspects to be considered in the scheme, such as the consideration of a semi-automatic approval model based on compliance with eligibility criteria, without individual financial analysis, and the remote blocking of devices in the event of continued non-compliance, with the possibility of reactivation after the debt has been settled.

These findings formed the basis for the technical decisions set out in Chapter 5.

4. Comparative Analysis of Financing Models



4. Comparative Analysis of Financing Models

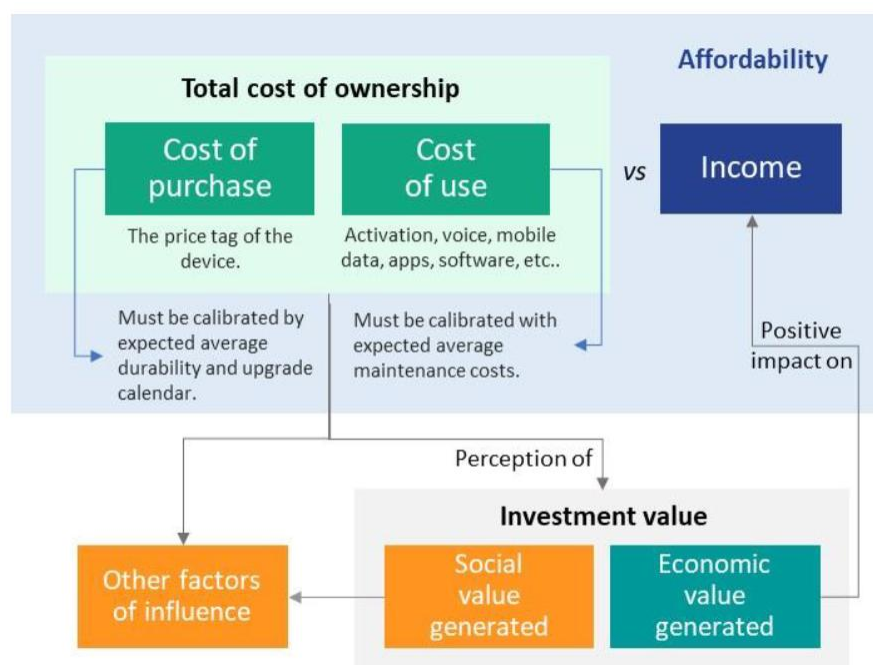
This chapter presents an analysis of the various financing models and complementary mechanisms that have been implemented globally to facilitate access to smart devices, with a particular focus on their applicability to low-income and marginalized populations.

In this chapter, we systematize the main models identified, integrating the information gathered with practical examples from the Mozambican context and providing a reference basis for the design of the financing scheme presented in Chapter 5 of this report. Annex C contains a complete overview of the case studies analyzed.

4.1. Concept of Economic Accessibility

Economic accessibility refers to the ability of people to purchase a smart device and is measured by the ratio between the total cost of the smart device—purchase cost plus cost of use during the device's life cycle—and the person's income.

The price of a device cannot be analyzed separately from a person's income.

Smart device financing scheme*Figure32 . Concept of Economic Accessibility*

Source: "Blueprint for the Inclusive Adoption of Smart Devices in Africa, LBC (2023).

Two other factors that influence the decision to adopt and use smart devices are the perception of the social value generated and the perception of the economic value generated, which depend on awareness of the benefits or perception of the relevance of owning a smart device ("Why should I buy the device? What will it do for me?"). This investment analysis belongs to the domain of each individual.

The social value generated has to do with the satisfaction of social needs and aspirations and is mainly related to the communication features of smart devices. For example, agricultural workers who live far from their families and friends may want to buy a smartphone to communicate with them. As for the economic value generated, farm owners can check local market prices before deciding to go to the market or find customers online, saving on transportation costs. They can make and receive payments without having to own a bank account.

Considering supply and demand together, our research shows that devices and connectivity are no more expensive in Mozambique than in other parts of Africa or the world. It is just more difficult for most people to pay for these devices since incomes are very low for most Mozambicans and in many cases non-existent or intermittent. Suppliers' and operators' margins are low.

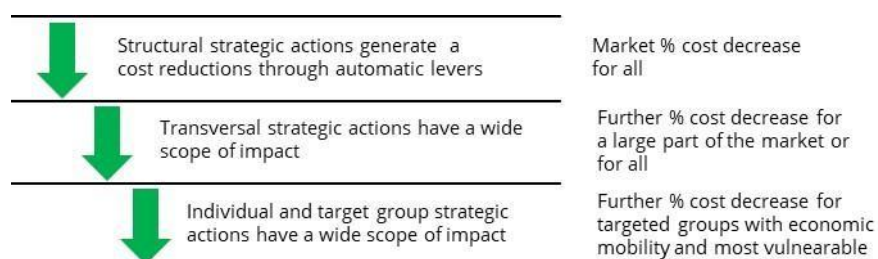
4.2. A Methodological Approach

This project focuses on promoting economic accessibility and, by definition, the Terms of Reference for promoting the acquisition and use of smart devices among the most vulnerable groups of citizens.

Following the conceptual approach already defined in the paper "Blueprint for Inclusive Adoption of Smart Devices in Africa," strategies to address the problem of affordability must be well thought out so as not to be counterproductive. They should be comprehensive, through measures that are sensitive to the different factors and user groups in society:

- structural actions, such as promoting competitive market structures for smart devices, improving the supply chain, and combating informality;
- cross-cutting actions, such as tax restructuring, tax incentives, aggregate procurement/acquisitions, and public Internet access points; and
- a massive program of direct individual financial support through measures such as device and data financing, especially focused on the most vulnerable, involving third-party payment, credit, or innovative self-financing solutions.

Figure33. Compound Effect of Relevant Strategies



Source: "Blueprint for the Inclusive Adoption of Smart Devices in Africa, LBC (2023).

The proposed strategic actions may have a compound effect. A country may choose whether or not to adopt structural actions, introducing a first lever for a general price decrease of % in the smart device market. Similarly, cross-cutting actions may or may not be implemented, with greater or lesser impetus, before individual and target group strategic actions are

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implemented. A composite approach is preferable, whose implementation does not require starting at a single level.

4.3. Individual financing models for devices and data

The acquisition of mobile devices by low-income populations can be facilitated through different payment and/or financing modalities. Based on global studies, three main approaches stand out:

- payment by the user
- third-party payment
- and credit.

The strategic combination of these models is essential to ensure sustainable and comprehensive digital inclusion.

The following table summarizes the main characteristics of each model.

Table 11. Characteristics of device acquisition financing models

Direct Payment			
Description	Advantages	Disadvantages	Applicability
This model relies on individuals' ability to use their income or savings to purchase smart devices, whether new or used. In Mozambique, saving is a common strategy for purchasing durable goods, often through community mechanisms such as Xitique .	User autonomy No debt.	Presents significant challenges, especially for very low-income populations, as it requires prior savings. High prices encourage recourse to the second-hand market and the purchase of counterfeit products.	This model is therefore more applicable to groups with some savings capacity. The possibility of co-financing by the State or other entities can reduce the cost of acquisition (see Payment by third parties), making this model more accessible without resorting to debt or additional interest charges.

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Third-party payment			
Description	Advantages	Disadvantages	Applicability
The cost of the devices is partially or fully covered by external entities, such as governments, non-governmental organizations (NGOs), or companies, through subsidies, donations, or financing programs. This approach is especially relevant for extremely vulnerable populations who do not have the financial capacity to purchase equipment on their own.	Elimination of the initial financial barrier. Possibility of large-scale implementation. Quickly reaches priority groups. It also allows for rapid responses in emergency or crisis situations.	Continued dependence on external funding and low long-term sustainability. Risks associated with misuse, damage, or theft of devices. Potential misalignment between the interests of funding entities and the real needs of beneficiary communities.	To maximize the effectiveness of this approach, it is essential to define monitoring, maintenance, and accountability mechanisms, as well as to adapt distribution models to the local context. The use of full or partial subsidies should be carefully assessed, according to the socioeconomic profile of the beneficiaries and the program's objectives.
Credit			
Description	Advantages	Disadvantages	Applicability
Consumers resort to financing to purchase devices through banks, non-bank financial institutions (NBFI) or, in some cases, public entities.	It allows access to digital technologies to be extended to populations with limited incomes but who are able to make payments in installments over time.	Its viability depends on the existence of favorable credit conditions, such as affordable interest rates, adequate repayment terms, and guarantees compatible with the socioeconomic profile of the beneficiaries. Risk of indebtedness for economically vulnerable households, Need for formal eligibility, which is difficult to meet in contexts with low banking penetration. Logistical complexity associated with contract management and risk assessment.	This solution is more applicable to individuals with some income stability and the ability to make regular financial commitments.

Additional information on each of these models is provided below.

4.3.1. Direct Payment

In the following case, an affordable price was set that allowed a large percentage of the population to purchase a device on their own. This case demonstrates the potential of public-private and cross-sector partnerships in overcoming economic and technological barriers, reinforcing the importance of integrated solutions that combine affordable devices with connectivity and relevant content.

Strategic partnership between Google and Orange⁹

The strategic partnership between Google and Orange, launched in 2016, covers 14 African countries and Jordan, with the aim of facilitating access to high-quality smartphones at affordable prices (around \$40), with full functionality (voice, SMS, and data). Aimed at the general population, especially low-income groups, this initiative combines Orange's mobile networks with Google applications, under the Pamoja program, to promote digital inclusion and improve the online experience.

Among the main advantages of this model are a significant reduction in the cost of entry into the digital market and the expansion of mobile Internet access among the most vulnerable groups.

4.3.2. Third-party payment

The third-party payment model can have variants that apply to different situations.

4.3.2.1. Partial Subsidy

Partial subsidy means that the devices are partially financed by the state or other entities in order to reduce the final cost to the consumer.

This approach allows low-income population groups, who would otherwise be unable to afford the market price, to access smart devices by using their savings or disposable income.

⁹ GSMA. Accelerating affordable smartphone ownership in emerging markets, 2017.

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This model is more financially viable in the medium term, although it requires clear eligibility and distribution mechanisms.

4.3.2.2. Total subsidy

The devices are fully subsidized or donated by a third party, which may be the State, a private entity, or a civil society organization.

This type of intervention is generally geared towards social or strategic goals, such as promoting digital, educational, and economic inclusion, combating inequalities, or responding to crisis situations. Its implementation allows for a rapid and targeted response, especially in emergency contexts, and can reach a significant number of beneficiaries in a short period of time.

However, the sustainability of this model is limited, as it involves high and recurring costs for the funding entity. In addition, it presents increased risks of misuse, such as theft, resale, or use by ineligible persons.

The following case illustrates the importance of integrated and scalable solutions, as well as the essential role of collaboration between humanitarian actors, private entities, and public authorities. However, the program's continuity depends on external funding, which may limit its long-term sustainability.

Instant Network Schools¹⁰

The Instant Network Schools program, active since 2013, is an initiative of UNHCR in partnership with the Vodafone Foundation, implemented in countries such as Mozambique, Egypt, Kenya, DRC, South Sudan, and Tanzania. The focus is on providing digital education kits to schools in refugee-hosting contexts, including laptops for teachers, tablets for students, projectors, and routers per classroom. Currently, the network already has 130 schools.

This initiative stands out for its ability to provide equitable access to digital education in highly vulnerable contexts, promoting the inclusion of displaced and host communities. Key lessons learned include the importance of integrated and scalable solutions, as well as the essential role of collaboration between humanitarian actors, private entities, and public authorities. However, the program's continuity depends on external funding, which may limit its long-term sustainability.

¹⁰ Vodafone Foundation website: www.vodafone.com/vodafone-foundation/focus-areas/instant-network-schools

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The successful implementation of this type of initiative requires the accurate identification of vulnerable groups, a task that must be carried out by specialized organizations with in-depth knowledge of local dynamics and structural inequalities.

4.3.3. Credit

The credit model may have variants that apply to different situations.

4.3.3.1. Bank or NBFIs loans

Loans granted by banks or NBFIs are characterized by initial payments and installments indexed to variable interest rates. Credit assessment is carried out formally, which helps reduce the risk of default but also limits access to those without a banking history or fixed income. Payment periods may be adjustable, but even so, accessibility is severely limited for those living in economic instability.

4.3.3.2. Government loans

The government, for its part, can create specific credit funds. One example is the creation of support funds for higher education students, where loan repayment only begins when the beneficiary enters the labor market. However, this type of initiative carries a high risk of default, especially in contexts where youth unemployment is significant and the transition to the labor market is not guaranteed.

The following case demonstrates how focusing on specific segments of beneficiaries makes this model easier to implement, but does not reduce the associated risks of default.

Student Loan Trust Fund (Ghana)¹¹ , and Education Loan Scheme (Rwanda)¹²

Both Ghana and Rwanda have implemented public student loan programs to support access to higher education, including the purchase of electronic devices. In Ghana, the Student Loan Trust Fund grants loans without the need for a guarantor, with automatic repayment after the start of professional activity. In Rwanda, the Education Loan Scheme, managed by the Development Bank, covers a wide

¹¹ <https://www.slrf.gov.gh/>

¹² <https://minuza.brd.rw/>

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range of academic and personal expenses, with payment deferred until entry into the labor market. Although both models promote inclusion and equity in access to education, their effectiveness depends heavily on the formalization of employment.

In contexts such as Mozambique, where the informal market is predominant, monitoring when beneficiaries actually start working is a difficult task. This limitation compromises the ability to trigger the start of repayments, affecting the sustainability and efficient management of public funds.

4.3.3.3. Asset-based loans

There is also the asset-based loan model, which is mainly used by IFNBs. In this case, the assets acquired serve as collateral and are blocked or subject to collection in the event of default. This model has high interest rates but a lower default risk for the financial institution, given the existence of collateral. Installments may be fixed or variable, depending on the contract established.

4.3.3.4. Customer Loyalty with Subsidized Sales

This option is often offered by telecommunications operators and is based on the requirement of a loyalty contract. This model involves the payment of an initial amount followed by fixed monthly installments (postpaid subscriptions), usually over a period of 12 to 24 months. Credit assessment is based on the user's credit history or previous use of services such as mobile communications or mobile money transactions. In the event of default, the device can be remotely blocked, serving as a risk mitigation mechanism.

In Mozambique, this model is used by Vodacom, which offers mid-range smartphones with loyalty schemes. Customers are subject to a credit assessment (scoring), and after an initial deposit, the remaining amount is paid in monthly installments over 12, 24, or 36 months.

4.3.3.5. Operational Leasing

Operational leasing allows devices to be acquired through fixed monthly payments, with an option to purchase at the end of the contract. This model is generally associated with high interest rates and payment terms ranging from 12 to 36 months. As with the previous models, the device may be blocked in the event of default, with credit assessment being simpler or carried out using alternative criteria. It is more commonly used in the business world.

4.3.3.6. BNPL (Buy Now Pay Later)

In this model, devices are made available by operators or retailers for an initial payment, followed by fixed installments over a period ranging from 6 to 12 months. In the event of non-payment, the device can also be blocked. Credit assessment is based on usage history—such as transactions made through the mobile wallet—which makes this option unsuitable for individuals with no previous experience with mobile phones or who have never had a bank account or digital wallet.

The following case study demonstrates the potential of partnerships between telecommunications and fintech companies to expand access to technology in emerging markets.

MTN Pick and Pay Later¹³

The MTN Pick and Pay Later program, implemented since 2022 in Ghana, Nigeria, and Uganda, is an initiative by the operator MTN aimed at low-income customers. Based on the Buy Now Pay Later model, it allows smartphones to be purchased with an initial payment followed by monthly installments, with some plans including free mobile data packages. This model facilitates access to mobile devices for populations with little immediate liquidity, promoting digital inclusion.

Among the advantages are flexible payment terms and the use of digital financial solutions such as MTN Mobile Money (MoMo), which simplify transactions. However, dependence on regular payments may pose a default risk for users with unstable incomes, and it is essential to ensure support measures and financial education to mitigate this risk.

Although a Buy Now Pay Later model could be replicated in Mozambique, its implementation requires significant adaptations, including the inclusion of financial education programs and a careful analysis of the model's suitability for groups with unstable, variable, or seasonal incomes, which may face higher default risks.

4.3.3.7. PAYGO (Pay-As-You-Go)

PAYGO is an innovative and inclusive financing mechanism that allows affordable products to be paid for in small, frequent installments—daily, weekly, or monthly, over an average period of 6 to 12 months—using remote blocking technology and mobile money monitoring. It is very effective in contexts of financial fragility, as it reduces the barrier to entry and subsidizes risk for suppliers.

¹³ <https://mtn.com.gh/pick-and-pay-later/>

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However, it requires a strong customer care component, integrated payment systems, and consumer education to maximize its effectiveness and minimize exclusion.

This model, used by more than 250,000 people in Mozambique through Vodacom's "Pouko Pouko" service¹⁴, is particularly suited to consumers with low incomes and informal earnings.

Key benefits:

- **Flexibility:** The scheme fits in with irregular incomes (e.g., seasonal agriculture or informal work). The great advantage of PAYGO lies in the flexibility it offers, allowing users to adjust the amount of their installments according to their financial capacity, which is essential for those who do not have a fixed monthly salary.
- **Accessibility:** With no formal credit requirements, low-income individuals can purchase high-value goods. In addition, credit assessment is eliminated or based on usage patterns, making it suitable for those without bank accounts or formal financial histories.
- **No interest rates:** Interest rates are generally non-existent or very low.
- **Risk management:** Technological blocking ensures that providers maintain control over assets at risk.
- **Alternative credit:** Payment history can build financial reputation for future loans or services.

Orange & M-KOPA

The Orange & M-KOPA program¹⁵, operating since 2013 in countries such as South Africa, Ghana, Nigeria, Kenya, and Uganda, aims to facilitate access to Internet-enabled mobile phones for low-income customers of the Orange operator. Through the PAYGO model, loans are granted with flexible installments, tailored to the user's profile, based on an analysis of their Orange service usage history.

The main advantage of this model is that it adapts to users' actual financial conditions, allowing for greater digital inclusion without the need for formal guarantees. The use of consumption data as a credit assessment criterion represents a significant innovation in contexts with low inclusion of the population in the formal financial system. However, the effectiveness of the model depends on

¹⁴ <https://www.vm.co.mz/artigo/leva-agora-e-paga-pouko-pouko>

¹⁵ <https://www.m-kopa.com/>

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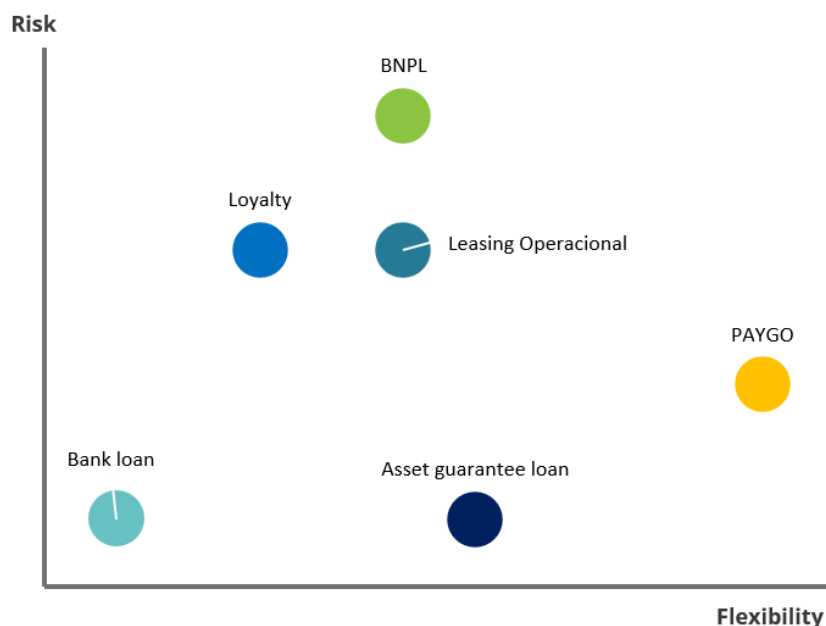
rigorous risk management and the technological capacity to carry out continuous and accurate assessments, and it is essential to ensure responsible lending practices to avoid over-indebtedness.

The implementation of a PAYGO model in Mozambique could use consumption data from operators to offer flexible financing for *smart devices* to users excluded from the traditional banking system. However, its effectiveness would depend on the adoption of responsible lending practices, such as debt limits tailored to the user's estimated income, grace periods in cases of financial instability, clear communication of contractual terms and conditions, and warning and support mechanisms prior to device blocking in case of default.

4.3.4. Analysis of credit models

Of the credit options analyzed, not all are suitable for low-income populations without bank accounts and, possibly, without a history of using smart devices or mobile wallets.

Figure34. Credit models



Source: LBC, based on the report *Affordable Devices For All* (2023)

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In this context, the PAYGO model stands out as a flexible, low-risk solution that is ideal for informal or seasonal workers. This model does not require physical collateral, offers low operational costs, and allows both operators and non-bank financial institutions (NBFIs) to offer financing without relying on traditional banks.

4.3.5. Hybrid Model: Subsidy and Credit

Another approach identified consists of a combination of the two previous models, in which the partial subsidy covers part of the cost of the device, thus reducing the amount to be financed through credit.

This solution has the advantage of reducing the financial burden on beneficiaries, as it reduces the total amount of the loan and, consequently, the interest rates and associated monthly installments. Financing can be provided by public, private, or mixed entities, and credit terms can be tailored to the institution involved.

This model makes devices more accessible, even for individuals who would not normally meet the criteria for obtaining credit. It therefore represents a balanced solution between social inclusion and financial sustainability, and is particularly relevant in contexts of economic vulnerability.

4.4. Complementary digital activation measures

Overcoming barriers to the adoption of smart devices requires a holistic approach that goes beyond individual financing models. The coordinated mobilization of various complementary mechanisms and policies is essential to ensure not only effective and sustainable digital inclusion, but also digital activation, where users have the tools they need to explore all available technological features and maximize their value in their daily lives.

Some of these complementary measures include user training/capacity building, the creation of public internet access points, tax policies, device blocking technology, and zero rating.

4.4.1. Public internet access points for collective use

Providing public internet access points and promoting the collective use of devices can mitigate accessibility and cost barriers for those who cannot afford a personal device or internet access at home. This allows more people to benefit from the same resources, increasing the scale and reach of the investment.

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The creation of public internet access points and technology allows for greater scale and reach, and access to technological resources and innovation that would not otherwise be available. On the other hand, the management and maintenance of devices and infrastructure is a constant challenge in resource-constrained contexts.

Cities such as Kigali have implemented free Wi-Fi networks on buses, bus stops, markets, and other public spaces. This initiative aims to increase connectivity and allow citizens to access the internet on the move or in crowded places.

In Mozambique, the **"Internet for All"** project aims to provide broadband internet access throughout the country, especially in public spaces such as digital squares and public secondary schools. The project is already underway until 2030 and aims to cover 95% of the national territory, expand fiber optic infrastructure, promote digital literacy initiatives, and foster technological innovation.

In Mozambique, **Community Multimedia Centers (CMCs)** are public spaces created with the aim of promoting access to information, communication, and digital technologies in communities, especially in rural and peri-urban areas. CMCs provide computers with internet access, printing services, and training in basic digital skills, playing an important role in reducing digital exclusion, strengthening citizenship, and local development. CMCs are promoted by the Government of Mozambique, in particular by INCM, with support from partners. However, they face challenges in terms of financial sustainability, equipment maintenance, and technological upgrading.

PADIM already includes a component for the implementation of public internet access spaces. This component for financing devices and access will not include the implementation of public internet access spaces.

Updated mapping of digital squares and CMCs in Mozambique is essential to identify geographical synergies and ensure optimized access to connectivity and digital training, thereby maximizing the impact of the project and contributing to sustainable digital inclusion, especially in rural and peri-urban areas.

4.4.2. Tax restructuring and incentives

Taxation of smart devices is an important factor in their entry cost, varying from country to country according to national tax policies. In total, customs duties and other taxes such as VAT can account for up to 30-40% of the total cost of the device to the consumer. Tax policies can play a significant role in reducing the cost of devices and connectivity, making them more accessible to low-income populations.

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Taxation can have different government objectives, such as generating revenue or supporting local industry by penalizing imported devices. In some countries, smart devices are considered luxury goods and taxed as such, which can encourage smuggling and counterfeiting.

Reducing the tax burden on devices by lowering the cost of the device may be particularly relevant for entry-level devices such as feature phones or basic smartphones, targeted at low-income populations, in order to promote digitization.

Several countries have implemented tax restructuring over the years that has impacted device prices and digital inclusion efforts.

Figure35. Examples of tax measures implemented by several African countries with the aim of increasing digital inclusion

Import tax / customs duties	Reduction of import tax on mobile devices from 20% to 10% Gana 2016-Present	Exemption from import tax on smartphones, computers and tablets Chade 2022-2027	Exemption from import tax on telecommunications equipment Zambia 2023-Present	Reduction of import tax on mobile devices from 10% to 2% Angola 2024-Present
Value Added Tax (VAT)	VAT exemption on mobile phones Quenia 2009-2021	VAT exemption on mobile phones Ruanda 2010-2025	VAT exemption on mobile phones Gana 2018-Present	VAT exemption on telecoms equipment Zambia 2023-Present
Operator taxes	Reduction of mobile operators' revenue tax from 13 to 10 per cent Ruanda 2019-Present	Reduction of operators' licence fee from 4.5 to 3 per cent on gross revenue Quenia 2019-Present	Reduction of import tax on telecommunications equipment from 25 to 10 per cent Uganda 2020-Present	Reduction of mobile operators' revenue tax from 17.5 to 10 per cent Gana 2020-Present
Other taxes	Elimination of the 9 per cent luxury (ad valorem) tax on smartphones priced below 2,500 rand South Africa 2025			

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Figure 36. Examples of tax measures implemented by several African countries that have resulted in higher prices for mobile devices and services.

Import tax / customs duties	Increase in import tax on smartphones and laptops to 20 per cent Nigeria 2019-Present	Increase in import tax on smartphones and other electronic devices from 10 to 15 per cent Egypt 2020-Present	Increase in import tax on smartphones and other electronic devices Uganda 2021-Present	Increase in import tax on smartphones and other electronic devices to 30 per cent Angola 2021-Present
Special Consumption Tax (IEC)	Introduction of a daily tax on the use of more than 60 social media platforms Uganda 2018-2021	Introduction of a daily tax on calls made via internet applications Zambia Announced in 2018 but not implemented	Introduction of a tax on mobile money transfer and withdrawal transactions Tanzania 2021-Present	Introduction of a 12 per cent tax on mobile data Uganda 2021-Present
Value Added Tax (VAT)	Introduction of 16% VAT on telecoms (calls, SMS, internet access, etc.) Kenya 2013-Present	Introduction of 15% VAT on telecoms (calls, SMS, internet access, etc.) South Africa 2018-Present	Introduction of 14% VAT on telecoms (calls, SMS, internet access, etc.) Botswana 2019-Present	Reintroduction of VAT on mobile phones Kenya 2021-Present
Operator taxes	Introduction of a 1% tax on mobile operator revenues Mozambique 2019-Present	Introduction of a 1% tax on mobile operator revenues Nigeria 2020-2023	Introduction of a 10% tax on mobile data revenues Zambia 2020-Present	

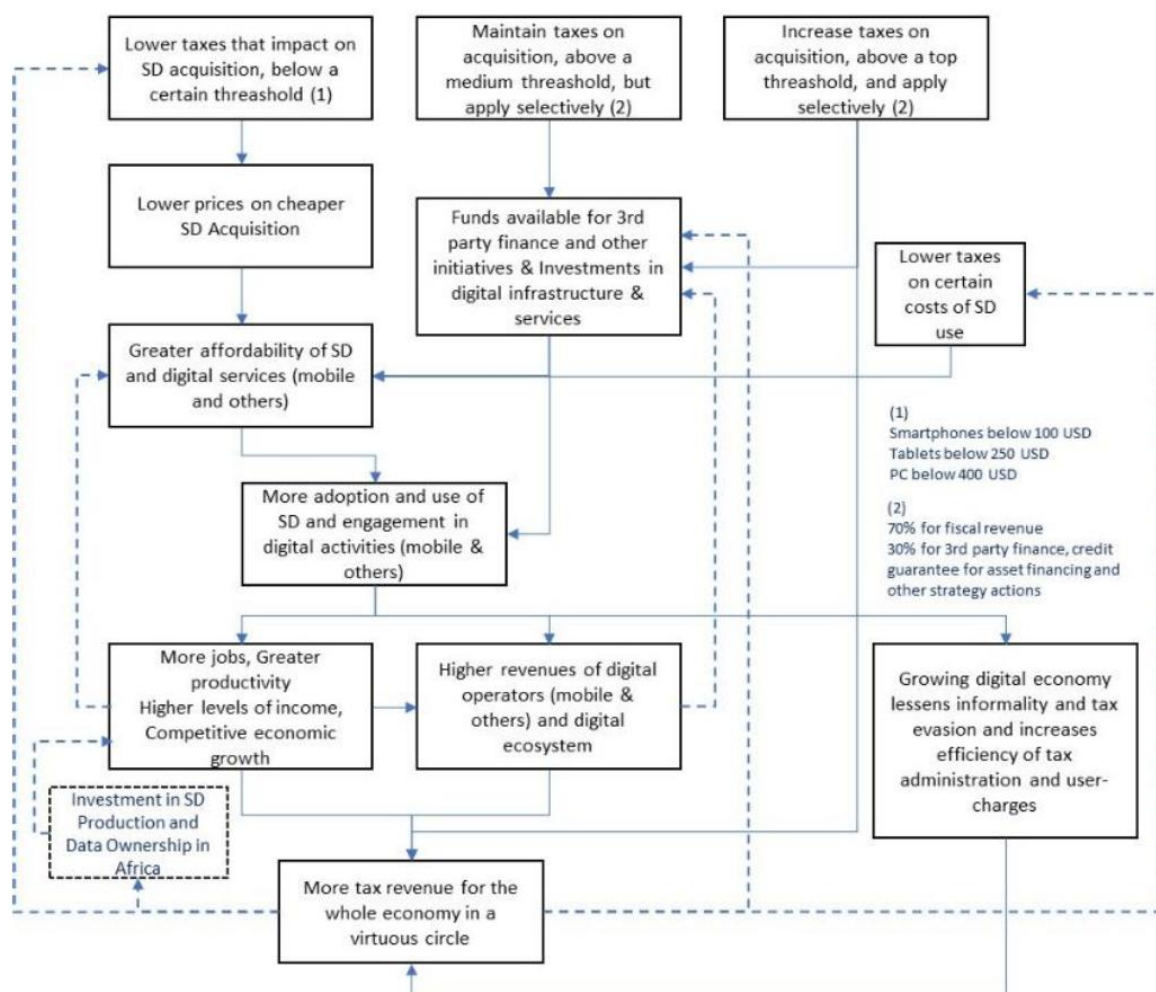
Positive medium-term fiscal measures

Maximizing taxes in the digital sector in the short term can be detrimental to economic growth. On the other hand, reductions in some specific sectoral taxes can increase the affordability of smart services and boost demand, which adds value to the economy through increased productivity, higher employment, higher incomes, and higher tax revenues.

In addition, further digitization of the economy will help combat informality and tax evasion.

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Figure37. Positive fiscal dynamics in the medium term



Source: "Blueprint for the Inclusive Adoption of Smart Devices in Africa, LBC (2023).

The application of an exemption or reduction of customs duties on devices purchased under this project, as well as VAT exemption, could significantly reduce implementation costs, allowing resources to be redirected to reach a larger number of beneficiaries and amplify the impact of digital inclusion in the country.

In the medium term, the State would collect more revenue in a more sustainable manner from an expanded digital economy and the economic activity it generates.

4.4.3. Digital and access infrastructure

Zero Rating

The digital inclusion strategy must go beyond the provision of devices, also addressing access to connectivity and reducing barriers to use. In this context, the practice of zero rating, adopted by mobile operators, has proven to be an effective tool. This practice allows users to access specific content or applications without this traffic consuming their data package, promoting access to essential digital services, especially among lower-income populations.

Among the main advantages of zero rating are easier access to essential content (education, health, and public services) and the stimulation of initial adoption of the internet and smart devices, particularly in remote areas. However, this model also has disadvantages, such as favoring certain platforms over others, creating an unequal digital ecosystem. In addition, it can limit the user experience by restricting it to what is included in the zero-rated offer.

Two cases illustrate the potential of zero rating:

- The Internet of Good Things program, promoted by UNICEF in Ghana since 2015, provides informational and educational content to rural communities and health professionals. They can access localized and updated content free of charge directly on their mobile phones.
- The mAgri project, coordinated by GSMA since 2014, is present in several African and Asian countries. It supports mobile operators in offering free digital agricultural services, providing information on climate, prices, and best practices to small farmers.

Making educational content apps and websites, sustainable agricultural practices, and essential public services—including those related to civil registration—zero-rated would significantly expand the project's impact by ensuring that device beneficiaries have continuous, free, and relevant access to tools that promote education, productivity, and active citizenship.

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Blocking technology

Another relevant component for managing device financing programs is blocking technology, which allows the operation of equipment to be restricted in the event of theft, loss, or breach of contract. This mechanism is especially useful in credit-based or leasing models, reducing the risk of default and misuse.

The CUCo (Central Unit Control) system, developed by the Portuguese company Inforlândia, is a notable example in this field. Integrated into laptops, tablets, and smartphones provided under the Digital School Program in Portugal, CUCo allows remote locking of devices, their location, and control of compliance with terms of use. One of its advantages is that the technology is embedded in the equipment's ROM, remaining active even after the operating system is reinstalled.

The implementation of this technology requires a robust technological infrastructure and involves additional costs for licensing, technical support, and maintenance. To ensure fairness and transparency, it is essential that there are prior warnings before blocking and that a support or mediation channel is available.

The implementation of device blocking technology was highlighted by *the stakeholders* interviewed as an essential measure to mitigate the risks of misuse, illegal resale, and fraud, reinforcing the need for effective control mechanisms to safeguard the integrity and sustainability of the project.

4.4.4. Training and digital inclusion

Simply providing devices is not enough to promote digital inclusion. It is also necessary for users to understand the benefits of technology and know how to use it productively.

A case in point is the Sonata Microfinance project, implemented in India since 2013. This program, developed by Sonata in partnership with Samsung and Savex, targeted women in rural and peri-urban communities. In addition to facilitating access to smartphones through microcredit, the initiative included awareness-raising and training activities. These addressed topics such as the benefits of using mobile devices and taught basic digital skills.

The strategy combined community education, beneficiary training, partnerships with manufacturers, and accessible financing models, resulting in more effective adoption of devices by women in rural areas. This experience reinforces the idea that digital education is an indispensable pillar of any technological inclusion strategy.

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Given the focus on beneficiaries with high levels of economic and social vulnerability and low literacy levels, it is essential that device financing be accompanied by training at the beginning of the process.

Actions should be different for each group of beneficiaries, tailored to their realities and needs, otherwise they will have little uptake and impact.

4.4.5. Security and financial sustainability

Universal Service Funds (USFs) are a valuable tool for ensuring the sustainability of digital inclusion initiatives, with the primary objective of expanding telecommunications infrastructure in remote areas that are economically unviable for operators.

Despite this focus on infrastructure, USFs have also been used to finance non-infrastructure projects that play a complementary role in promoting digital inclusion. These include initiatives such as connectivity in schools and hospitals, digital literacy programs, subsidies for devices and, to a lesser extent, subsidies for service plans¹⁶. In the case of Morocco, for example, the Universal Service Fund has been used to *make* access to priority services and content, such as SMS messages for vaccine appointments and access to educational websites, zero-rated¹⁷. Other examples include smart agriculture projects, community radio, telemedicine, teacher training, ICT training for girls, and digital content development. This broadening of the scope of USFs reflects the recognition that connectivity is only fully effective when accompanied by training, affordable equipment, and relevant content.

¹⁶ *Universal service funds in Africa: Policy reforms to enhance effectiveness (2023)*, GSMA.

¹⁷ Ibid.

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Figure38. Infrastructure projects funded by USFs



Source: Universal service funds in Africa: Policy reforms to enhance effectiveness (2023), GSMA.

Figure39. Non-infrastructure projects funded by USFs



Source: Universal service funds in Africa: Policy reforms to enhance effectiveness (2023), GSMA.

Two concrete examples demonstrate how USFs can be effectively mobilized to finance devices and promote digital inclusion among vulnerable populations.

In Costa Rica, the *Hogares Conectados* program, in operation since 2015, uses resources from FONATEL (National Telecommunications Fund) to provide internet access and laptops to vulnerable families, including indigenous populations, people with disabilities, and the elderly. The subsidies cover up to 80% of the cost of connectivity and up to 100% of the value of the devices, depending on the profile of the beneficiaries.

In Rwanda, the Universal Service Fund has been used to subsidize the purchase of smartphones by low-income rural populations. A study showed that the subsidized devices were effectively used by

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beneficiaries, with usage levels comparable to purchased mobile phones, reinforcing the positive impact of this measure¹⁸.

However, the growing diversification of non-infrastructure projects poses significant challenges. First, the lack of systematic data and monitoring mechanisms makes it difficult to assess the impact and effectiveness of these initiatives. There is also a risk of misuse of funds, as demonstrated in a recent study in Rwanda, where some subsidized devices in rural areas ended up being resold in urban centers¹⁹.

The use of Universal Service Funds as a tool to reduce the cost of devices is strategic. These examples show that, when integrated with a robust and sustainable financing model and an effective monitoring system, USFs can go beyond infrastructure and contribute to reducing economic barriers to access to technology.

In Mozambique, in accordance with the rules of the Universal Access Fund, it would be important to scale up this project through additional funding from the Universal Access Fund in order to achieve a more significant socioeconomic impact.

This support could focus on financing:

- geographical and gender mainstreaming within the objective of promoting more universal access, reducing context and digital access inequalities.
- Contributing to access to zero-rated content in order to strengthen access to public and educational services, as well as to content in agriculture, where the socioeconomic vulnerability of farmers is high, and to citizens with special needs and displaced persons.

¹⁸ *Network adoption subsidies: A digital evaluation of a rural mobile phone program in Rwanda (2022)*, Björkegren and Karaca; *Spurring rural development with USAF investment (2021)*, Alliance for Affordable Internet (A4AI); *The Effect of Network Adoption Subsidies: Evidence from Digital Traces in Rwanda (2020)*, Björkegren and Karaca.

¹⁹ Ibid.

4.5. Summary of lessons learned

The sustainable adoption of smart devices by vulnerable populations requires a holistic and coordinated approach that integrates measures on several fronts.

Experience shows that simply making equipment available is not enough.

It is necessary to coordinate public policies, financing mechanisms, educational interventions, and digital inclusion strategies tailored to the local context. Overcoming economic, sociocultural, technical, and educational barriers requires a multisectoral, coherent, and simultaneous response.

Financial accessibility remains one of the main barriers

It is therefore necessary to resort to inclusive financing models, with affordable monthly payments (e.g., less than MZN 250/month) and the possibility of daily or weekly installments, adjusted to the reality of irregular incomes. Total or partial subsidies should be reserved for beneficiaries without the ability to pay, based on clear eligibility criteria.

Alternative *scoring* methodologies need to be adopted.

In this context, both operators and mobile wallets have shown complete openness to collaborating with the project, offering not only their infrastructure but also tried and tested financing and distribution models. The high penetration of USSD in mobile wallets provides a solid basis for **the implementation of digital payment solutions**. Although microcredit is not, at first glance, a particularly attractive model for banks, the interviews conducted showed that financial institutions—including banks—are interested in participating in the project, provided that there is a robust guarantee structure or coverage fund to help mitigate the associated credit risks.

To reduce the final cost to consumers, it is important to temporarily waive customs duties and negotiate reduced-price mobile data packages.

Ideally, 50% below market value during the first year. Only operators that submit competitive bids should be eligible to join the program. In addition, it is advisable to apply zero rating to public utility applications.

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From a risk management perspective, all devices should incorporate native remote blocking features from the outset

in order to prevent non-compliance or fraud. Their operation should be clearly explained to beneficiaries, as the subsequent application of this technology has proven to be ineffective and operationally difficult.

Eligibility for the program should include positive discrimination clauses

The sociocultural and educational dimension is also decisive. Eligibility for the program will include positive discrimination clauses, with minimum quotas of 50% female beneficiaries and 40% young people. In addition, access to the program should be linked to the provision of basic training sessions, in coordination with existing initiatives such as "VaMoz Digital," "Girls Can Code," or Community Multimedia Centers. For beneficiaries who complete the training and obtain digital literacy certification, an additional incentive may be offered, such as a bonus of 1 GB/month for 12 months.

The creation of free public Internet access points is beneficial

At the technical and infrastructure level, the creation of free public Internet access points is beneficial, such as digital libraries or community centers, as well as the installation of Wi-Fi hotspots in public spaces.

Synergies with the civil registration process should be promoted

In addition, it is essential to prioritize support for population groups that are not yet officially registered, promoting civil registration as a condition for access to the program, which strengthens formal inclusion and secure access to digital services.

Relevant content and services are critical for sustainable use

Finally, it is important that the digital content made available is relevant, localized, and culturally appropriate. Public service, education, health, and e-commerce platforms should be prioritized, promoting the involvement of the population and encouraging the appropriation of technology as a tool of economic and social value. Coordination with other ongoing government initiatives reinforces the program's coherence and sustainability in the medium and long term.

5. Access and financing scheme for **smart** devices



5. Access and financing scheme for smart devices

5.1. Objective and approach

The objective of the Access and Financing Scheme for Smart Devices is to facilitate the acquisition of smart devices and internet access for 330,000 beneficiaries between 2025 and 2028, with at least 50% being women and 40% young people.

In order to overcome economic accessibility limitations, the scheme is based on a mixed financing model for devices and data access that combines microcredit solutions with targeted subsidies, whose conditions are adjusted to the various target beneficiary groups. This financing will be based on the principle of "*results-based* funding."

Funding for devices and data access will be complemented by parallel initiatives, including maintenance and warranty for the devices distributed and training and activation of beneficiaries.

5.2. Intervention segments

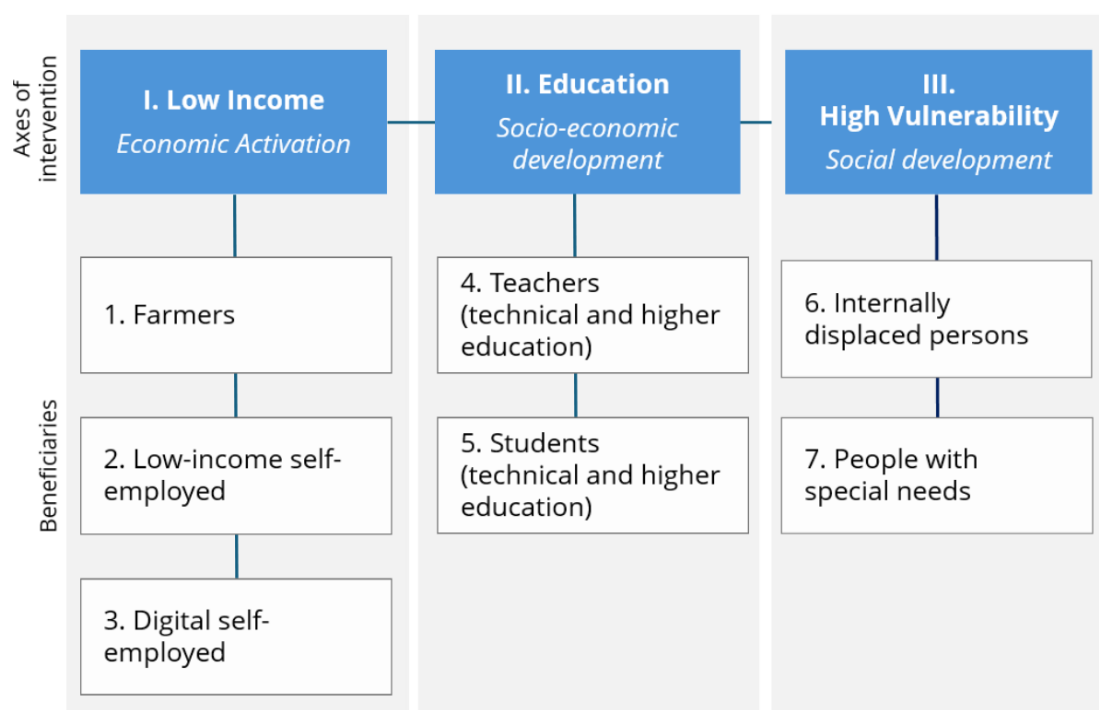
With a view to improving the economic accessibility of vulnerable groups and maximizing the social, economic, and institutional impact, the selected beneficiary groups have been organized according to three main intervention segments of the project.

- I. **Low Income: Economic Activation:** The first axis represents low-income groups where the strategy consists of their immediate economic activation.
- II. **Education: Socioeconomic Development:** The second axis is based on the education sector, where the strategy is based on long-term socioeconomic development and the implementation of systemic change.
- III. **High Vulnerability: Social Development:** The third axis consists of the most vulnerable groups, where the strategy is to provide a social support mechanism for those most in need.

Smart device financing scheme

This organization was based on the current situation faced by these groups in terms of digital exclusion, economic and social barriers, and the potential impact of their digital inclusion, considering the direct and indirect effects of adopting smart devices.

Figure40. Identification of segments and beneficiary groups



Smart device financing scheme**i) Distribution of beneficiaries***Table12. Quantitative distribution by segments and beneficiary groups.*

Segment	Beneficiary groups	No. of beneficiaries	
Low Income / Economic Activation	Farmers	160,000	270,000
	Low-income self-employed workers	80,000	
	Digital self-employed workers	30,000	
Education / Socioeconomic Development	Teachers (technical and higher education)	10,000	40,000
	Students (technical and higher education)	30,000	
High Vulnerability / Social Development	Internally displaced persons	10,000	20,000
	People with special needs	10,000	
Total		330,000	330,000

The main focus of the project is to have a socio-economic impact on the most vulnerable, including considerations for mitigating gender, age, and geographical inequalities, followed by an investment in medium-term sustainable growth impacts through support to key actors in the education sector, teachers, and students, with special consideration for two groups of high socio-economic vulnerability, displaced persons, and people with special needs.

ii) Option 1 - Number of beneficiaries based on reinvestment of the revolving fund

The operational sustainability of the project will be ensured through a revolving fund, the mechanics of which are detailed in Chapter 5.11. This fund will be fed by repayments made by beneficiaries who will benefit from microcredit initiatives and will allow the number of beneficiaries throughout the project to increase from 330,000 (290,000 smartphones and 40,000 laptops) to a total of 444,600 (390,800 smartphones and 53,800 laptops).

Smart device financing scheme

The potential release of an additional \$4.8 million in smartphone repayments (assuming default rates) at the end of the first year of implementation will support an additional 44,300 smartphone beneficiaries and 6,100 laptop beneficiaries.

Added to this amount is an additional \$0.7 million in smartphone repayments and \$4.1 million in laptop repayments (assuming default rates) at the end of the second year of implementation, which will support an additional 56,500 smartphone beneficiaries and 7,700 laptop beneficiaries.

The distribution of new smartphones and laptops benefits all groups proportionally, so the result would be as shown in the following table.

Table13. Number of beneficiaries based on reinvestment of the revolving fund.

Group of beneficiaries	No. of initial beneficiaries	No. of additional beneficiaries - year 2	Number of additional beneficiaries – year 3	Cumulative number of beneficiaries
Farmers	160,000	24,500	31,300	215,800
Self-employed	80,000	12,200	15,600	107,800
Digital self-employed workers	30,000	4,600	5,800	40,400
Teachers	10,000	1,500	1,900	13,400
Students	30,000	4,600	5,800	40,400
Internally displaced persons	10,000	1,500	1,900	13,400
People with special needs	10,000	1,500	1,900	13,400
Total	330,000	50,400	64,200	444,600

Smart device financing scheme**iii) Option 2 – Financing training through another PADIM component**

Similarly, if the \$2,150,000 currently allocated to the implementation of training and activation initiatives are taken over by another PADIM component specifically dedicated to this dimension, this amount would be reallocated to additional financing for devices and internet access.

In this case, the recommended distribution of this amount would be as indicated in the table below, with an additional 40,000 smartphones and 4,000 laptops made available.

Table 14. Number of beneficiaries based on reinvestment of the budget for training and activation

Segment	Beneficiary groups	No. of initial beneficiaries	No. of additional beneficiaries	No. of cumulative beneficiaries
Low Income / Economic Activation	Farmers	160,000	20,000	180,000
	Low-income self-employed workers	80,000	20,000	100,000
	Digital self-employed workers	30,000	-	30,000
Education / Socioeconomic Development	Teachers (technical and higher education)	10,000	2,000	12,000
	Students (technical and higher education)	30,000	2,000	32,000
High Vulnerability / Social Development	Internally displaced persons	10,000	-	10,000
	People with special needs	10,000	-	10,000
Total		330,000	44,000	374,000

Smart device financing scheme**iv) Combination of the revolving fund and training and activation financing by another PADIM component**

Adding the impact of the two variants presented above, the potential number of beneficiaries would be as indicated in the table below.

Table15. Number of beneficiaries based on reinvestment of the revolving fund and budget for training and activation

Segment	Groups of beneficiaries	No. of initial beneficiaries	No. of additional beneficiaries from the revolving fund	No. of additional beneficiaries of training and activation	No. of cumulative beneficiaries
Low income / Economic activation	Farmers	160,000	55,800	20,000	235,800
	Low-income self-employed workers	80,000	27,800	20,000	127,800
	Digital self-employed workers	30,000	10,400	-	40,400
Education / Socioeconomic Development	Teachers (technical and higher education)	10,000	3,400	2,000	15,400
	Students (technical and higher education)	30,000	10,400	2,000	42,400
High Vulnerability / Social Development	Internally displaced persons	10,000	3,400	-	13,400
	People with special needs	10,000	3,400	-	13,400
Total		330,000	114,600	44,000	488,600

v) The Impact of Partners

The implementation model will allow potential partners to join, which could further increase the number of beneficiaries. All calculations presented below are based on the baseline model of beneficiaries.

5.2.1. Axis I – Low Income: Economic Activation

Farmers and self-employed workers make up the majority of the informal workforce in Mozambique, facing digital exclusion or making very limited use of technology, mainly due to economic barriers.

Access to a smart device can unlock significant opportunities for income generation, access to markets and essential services, contributing to increased productivity and economic resilience.

In this context, smart devices act as a digital productive asset, capable of mobilizing latent capacities and promoting economic autonomy. Their impact is direct and immediate, generating multiplier effects on productive inclusion and social cohesion.

For farmers, digital access is particularly important, given the combination of geographical isolation, low incomes, intermittent income, and high potential for transformation through agricultural information, market access, and digital services.

In the case of low-income self-employed workers, this is an economically active population, but limited to face-to-face work, with high potential gains from integrating into the digital economy.

Digital self-employed workers, although they have some access to technology, face constraints in terms of equipment and training, limiting the expansion of their businesses.

Conditions for Impact

Simply handing out smartphones or laptops will not solve anything if the potential beneficiaries do not have a certain level of literacy, digital skills, interest, and ability to integrate the device into their daily social and economic lives, as well as some financial capacity, even if limited.

The available budget and the large size of the population do not allow for full subsidy financing solutions by third parties. The solutions found will always have to be partial subsidies and credit, so people for whom a device will always be beyond their means should be avoided. The focus is on people with low income levels, classified as "Low income level" in the table below.

Smart device financing scheme*Table 16. Segments in terms of income level*

Groups characteristics	Beyond their means	Low income level	Medium-low income level	Medium income level
Income level depends on gender, age, rural-urban dimension; province; family size; and other factors.	No reliable sources of income. Smartphones and PCs are not accessible.	Reliable income source, but difficulty saving. Can pay for smartphones in installments. Great difficulty in buying PCs.	Reliable source of income, with ability to save. Can pay for smartphones through savings. Limited ability to buy PCs.	Reliable source of income. Can pay a fixed amount for smartphones. Can purchase PCs in a lump sum or in installments.
Impact on the adoption of smart devices	They will not buy or use any DI unless it is paid for by other entities or smart devices become a means of income. They will more easily purchase a basic mobile phone or a feature phone, second-hand. PCs are out of reach and much less relevant to everyday activities.	They will purchase a smartphone if it is paid for in installments or if it becomes a means of income, with regular use. They will buy and use PCs if they are paid for by other entities. They will use them if they are owned by others and if the costs of use are paid by others.	High price elasticity: they will buy more smartphones and use them more if prices are low, responding very well to discounts, installments, and packages. They will consider buying a PC if they have more skills and if it has a strong impact on their immediate income or a very direct impact on their own or their children's life prospects, and if there are discounts and installments.	They will buy more or less all smart devices, depending on price levels. They will use them more or less intensively depending on price levels, discounts, and packages.

In the case of farmers, in order to achieve greater socio-economic impact and sustainability, priority will be given to beneficiaries who are involved in ongoing rural or agricultural development programs/projects run by public or private entities.

Smart device financing scheme

In the case of employees, a major effort will be made to focus and objectify the eligibility criteria during the implementation phase.

5.2.2. Axis II – Education: Socioeconomic Development

Technical and higher education students and teachers are key players in public and private education systems, with higher levels of institutional integration and some, albeit limited, access to digital resources. Although economic barriers are less severe than in the groups mentioned above, digital exclusion remains significant, especially in rural areas and urban peripheries.

Access to a smart device has a systemic and multiplier impact here: students benefit in terms of academic performance, access to opportunities, and preparation for the labor market; teachers gain in terms of teaching quality, diversification of teaching practices, and learning effectiveness.

The device acts as a professional training tool and a lever for strengthening human capital systems, with indirect, medium-term, and far-reaching effects on the general population.

Conditions for Impact

The target group is students and teachers in their final year of higher education and technical and vocational education in order to accelerate the impact on the economy, as they are closer to completing their education and finding employment or paid work.

For students, the target beneficiaries in terms of income level classification is the "lowest income" group, taking into account family income. For teachers, it is the same "lowest income" group but taking into account individual income.

5.2.3. Axis III – High Vulnerability: Social Development

Internally displaced persons and people with special needs face multiple and profound exclusion, with extremely limited access to essential services, rights, information, and social and economic participation opportunities. They are often marginalized in public policies and social protection systems, living in conditions of extreme precariousness.

Smart device financing scheme

Despite their smaller numbers compared to the previous group, digital access in this group has a highly transformative potential, both individually and socially.

A smart device can function, in this area of intervention, as a gateway to rebuilding identity, autonomy, and the exercise of digital citizenship, especially in the case of internally displaced persons, who are often deprived of documentation and support networks.

For people with special needs, access to adapted technology allows them to overcome barriers to communication, education, and integration into the labor market, making the device a tool for universal accessibility and equal opportunities.

The device acts as a catalyst for social inclusion and institutional recognition, generating positive impacts in terms of dignity, protection, access to public services, and community integration. Although the immediate economic return may be limited, the structural impact in terms of social justice and equity is profound and long-lasting.

Conditions for Impact

Isolated individual support will have less impact. The implementation of this support must be coordinated with official bodies and specialized civil society associations and with active socio-economic development programs for these groups.

People whose economic situation is "beyond their means" and those with "lowest income" taking into account family income are eligible.

5.3. Characterization of beneficiary groups and added value

The table below provides an overview of the selected beneficiary groups. It summarizes the key characteristics of each group and indicates the benefits to be achieved.

The impact of the program on specific beneficiary groups is detailed in Annex D.

Smart device financing scheme**5.3.1. Farmers***Table 17. Characterization and added value for farmers*

Profile	Limitations	Added value of access to a smart device (such as a smartphone)
Small subsistence farmers or small-scale producers for local sale. They live in rural areas and cannot afford smart devices or access credit. This group: • Cultivates small plots of land (usually < 2 hectares). • Does not have a bank account. • Their main source of income is the sale of agricultural surpluses at the local market or their exchange for other goods (income below 3,000 MZN/month). • Their livelihoods are highly dependent on seasonal crops and vulnerable to pests, droughts, floods, and natural disasters. • Includes women in informal agricultural associations. • Includes heads of households (who also depend on income from agricultural activities). • In some cases, they have a feature phone to make calls, send SMS messages, and access mobile wallets.	• Income dependent on climatic and seasonal factors. • Despite mobile network coverage, access to smartphones and the internet is very limited (or non-existent), restricting access to information on good agricultural practices. • Low level of digital literacy. • No access to credit and lack of knowledge of rural financial services and agricultural insurance. • Limited access to markets to sell their products and increased difficulty in selling surpluses beyond the local market. • Isolation from public services and support. • Low or no mechanization of agriculture.	• Obtaining information from conversations with third parties, reducing the effects of isolation and the need to travel, saving mobility costs and production hours. • Simple but valuable information on the prices charged on that day/week for their products, motivating or avoiding costly trips on days that are more or less interesting from a commercial point of view. • Improved productivity through access to agricultural information, including weather forecasts, good agricultural practices, and information on pest control. • Access to agricultural e-commerce platforms, links to suppliers and resources (e.g., tractor rental or resource sharing between farmers). • Access to information and the possibility of participating in online groups of agricultural producers and cooperatives. • Greater financial inclusion. Ability to pay and receive payments online. • Climate resilience. • Access to subsidies, state support, and public services. • Easier civil registration.

Smart device financing scheme**5.3.2. Low-income self-employed workers***Table 18. Characteristics and added value for low-income self-employed workers*

Profile	Limitations	Added value of access to a smart device (such as a smartphone)
People in urban and peri-urban areas who have their own businesses (microentrepreneurs) but cannot afford smart devices or access credit. Examples include: • Street vendors or informal market vendors (fruit, second-hand clothes). • Casual or odd-job workers (porters, painters, construction workers, motorcycle drivers). • Informal seamstresses or tailors without digital advertising. • Personal service providers without a fixed client base (hairdressers, barbers, repair technicians). • Women involved in artisanal food production (cookies, juices, cassava, etc.) sold on the street or door-to-door.	• Inability to promote their services or products online. • Difficulty accessing useful information for work (tutorials, market prices, suppliers). • Total dependence on face-to-face customers or word-of-mouth referrals. • Inability to access social support, grants, training, or credit opportunities. • Exclusion from digital work networks (e.g., Biscate, OLX, WhatsApp Business, online courses).	• Facilitated direct contact with customers and partners, reducing costs and obtaining information of economic importance for their business decisions. • Promote your services or products on local digital platforms. • Create customer groups or lists for loyalty via WhatsApp Business. • Learn new techniques and trends on YouTube. • Improve basic financial literacy - Control income and expenses with simple personal finance apps or spreadsheets. • Access micro opportunities for employment, training, competitions, or subsidies. • Greater financial inclusion. Ability to pay and receive payments online. • Climate resilience. • Access to subsidies, government support, and public services. • Easier civil registration.

Smart device financing scheme**5.3.3. Digital self-employed workers***Table 19. Characteristics and added value for digital self-employed workers*

Profile	Limitations	Added value of access to a smart device (such as a smartphone)
Young adults in urban, peri-urban, and rural areas, active in the digital informal sector, with low and unstable incomes through: • Selling mobile top-ups and packages (on the street or in stalls, using simple phones). • Distribution of multimedia content via Bluetooth or WhatsApp (music, videos, games). • Resale of mobile phone accessories (covers, chargers, etc.). • Basic technical assistance for smartphones (reset, updates, unlocking). • Mobile typing or printing services in internet cafés (filling out online forms, CVs, registrations). • Mobile transfer agents (M-Pesa, e-Mola, mKesh). • Online work (coding, design, virtual assistance). • Promotion of their products on social networks with low reach or no segmentation.	• Unstable and low income, below 5,000 MZN/month. • Financial difficulty in acquiring mobile devices and data. • Overly dependent on nearby customers. • Limited digital skills.	• Facilitated direct contact with customers and partners, reducing costs and obtaining economically important information for commercial decisions. • Manage social media for small local businesses to attract more customers through Facebook, WhatsApp Business, and Instagram. • Basic e-commerce: offering products and services through Facebook Marketplace or Instagram. • Create digital materials (flyers, short videos, and logos for informal traders and small local services). • Remote freelancing (basic level) such as data entry or transcription. • Greater financial inclusion. Ability to pay and receive payments online. • Climate resilience. • Access to subsidies, government support, and public services. • Easier civil registration. • May be involved in the recycling collection program.

Smart device financing scheme**5.3.4. Teachers (technical and higher education)***Table20. Characteristics and added value for teachers (technical and higher education)*

Profile	Limitations	Added value of access to a smart device (such as a smartphone)
Technical and higher education teachers with a lack of digital resources, compromising the quality of teaching. This group: • Has technical diplomas or bachelor's degrees. • Has a fixed monthly income with the possibility of saving (20,000-40,000 MZN/month). • Has limited access to up-to-date teaching resources. • Many have access to smartphones (mostly for personal use). • Few own a computer: the high cost is a barrier and many depend on equipment from educational institutions (when available).	• Limited access to digital resources and devices. • Difficulty in preparing lessons and monitoring pedagogical progress. • Lack of access to learning and productivity tools (Word, Excel, PowerPoint, YouTube). • Variable digital literacy.	• Access to continuing education programs and up-to-date materials. • Access to educational platforms and open resources. • Access to online teaching platforms (Moodle, Google Classroom, Zoom). • Preparation of teaching materials for students. • Enables academic research. • Greater financial inclusion. • Climate resilience. • Better access to subsidies, government support, and public services.

Smart device financing scheme**5.3.4. Students (technical and higher education)***Table21. Characteristics and added value for students (technical and higher education)*

Profile	Limitations	Added value of access to a smart device (such as a smartphone)
Young people in technical education with limited and irregular access to the technology necessary for modern learning. This group: • Is composed of young adults (aged 18-30) enrolled in polytechnic schools, mainly in urban centers. • Has low income (below MOP 2,000/month), with most income coming from odd jobs, casual work, or family allowances. Some receive subsidies or scholarships. • Is prepared to enter the labor market but lacks access to the necessary services and resources. • They have basic digital literacy but often lack advanced skills or consistent access to the technology required by the modern economy.	• Unequal access to the internet and devices. • Lack of advanced digital skills. • Lack of access to learning and productivity tools (Word, Excel, YouTube). • Difficulty keeping up with market demands. • Exclusion from extracurricular opportunities (competitions, scholarships, online events).	• Improved academic performance. • Increased employability through access to training programs and online courses. • Access to online learning tools. • Access to job search platforms/portals. • Promotion of entrepreneurship.

Smart device financing scheme**5.3.5. Internally Displaced Persons***Table22. Characteristics and added value for internally displaced persons*

Profile	Limitations	Added value of access to a smart device (such as a smartphone)
People and families forcibly displaced by conflict (Cabo Delgado) and natural disasters, often losing all their possessions and savings. Characteristics: • Extreme vulnerability, dependence on aid, and profound uncertainty. • Many have lost their identification documents, school certificates, and other documents. • They live in refugee camps or host communities. • Unemployed or engaged in informal odd jobs. • High dependence on humanitarian aid for food and essential goods. • They have no access to digital tools, which hinders communication, job search, access to humanitarian aid, and their integration into host communities.	• Highly vulnerable, with no income of their own or dependent on humanitarian assistance. • Lack of legal documents and exclusion from public services. • Difficulty communicating with family members or support networks. • Lack of digital means of communication and integration. • Lack of access to education, work, or relevant information. • Isolation from assistance, health, or training programs.	• Access to humanitarian support and information about social services and support. • Communication with family members and communities of origin. • Access to non-formal education and training programs. • Access to employment opportunities and economic empowerment. • Digital registration for access to documents, services, or benefits. • Inclusion in digital transfer programs (cash transfer). • Easier civil registration.

Smart device financing scheme**5.3.6. People with special needs***Table23. Characteristics and added value for people with special needs*

Profile	Limitations	Added value of access to a smart device (such as a smartphone)
People with physical (amputation, paralysis), sensory (blindness, deafness), intellectual, or psychosocial disabilities, especially in rural or peri-urban areas. They face profound social exclusion, discrimination, and extreme poverty due to limited access to education, employment, and essential services. This group: • Has a very low level of education—most have not attended school or dropped out early, often due to lack of accessibility or stigma. • Their income is extremely low (below MOP 2,000/month), many live on family support, begging, agriculture, or odd jobs. • They do not have access to smart devices or basic devices (feature phones). Their digital literacy is extremely low and they face significant barriers to accessing technology.	• Difficulty communicating and accessing information (visual, auditory). • Excluded from the labor market and education. • High unemployment rate. • Technological accessibility barriers due to lack of adapted or accessible equipment. • Low digital literacy. • Social stigma and invisibility in public policies.	• Greater independence and social inclusion. • Access to education and employment with adapted technology (narrator, virtual keyboard, subtitles) • Access to public services, including health and social support services. • Access to adapted educational or training content. • Communication via text or voice with family members and institutions. • Inclusion in remote employment or digital economy initiatives. • Participation in support networks and mobilization for rights. • Easier civil registration.

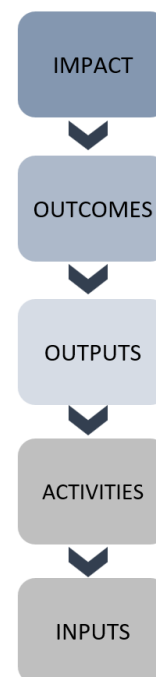
5.4. Beneficiary theory of change – how objectives are achieved

The Theory of Change as a planning tool explicitly articulates the causal path that will lead to the final objective, as it identifies strategic interventions that will result in the desired change, the added value of the interventions, and indicators of progress.

Establishing a Theory of Change is like drawing up a roadmap that describes the steps you plan to take to achieve your goal. This helps you define whether the project can contribute to achieving the desired impact and whether there is another way you also need to consider.

The theory of change model seeks to map how and why certain desired changes occur in a given scenario. Unlike other approaches, the Theory of Change seeks to explore the "missing middle" — the gap between the main activities designed to promote change and the final outcomes (the results of the change).

To obtain this information, this theory of change proposes using a top-down approach. First, the desired long-term outcomes are formalized. Then, working backwards, the activities, drivers, and triggers that must be implemented to achieve the objectives are determined. Finally, all impacts, inputs, and activities are positioned in the Results Framework.



For ease of sequential reading, in the following presentation we start from the bottom up.

5.4.1. Farmers



Intervention Objective

Promote the economic activation of farmers through digital and financial inclusion, enabled by the provision of low-cost smartphones and access to training, agricultural resources, and digital platforms, with a special focus on the inclusion of women farmers.



Theory of Change

Resources

- Robust smartphones for consulting agricultural and meteorological information;

Smart device financing scheme

- Devices will have built-in blocking technology to ensure responsibility for recurring payments;
- Training program in basic digital and financial literacy;
- Local technical support infrastructure.

Activities

- Awareness campaigns on the importance of digital inclusion and dissemination of the credit model;
- Implementation of a credit model for smartphone purchases: PayGo / Interest-free loan and partial subsidy
 - 65% subsidy for all farmers
 - 85% subsidy for farmers in areas where the program is expected to have the greatest impact (e.g., Nampula, Zambézia, and Manica).
- Training in basic digital and financial literacy;
- Collaboration with agricultural cooperatives and local community leaders to disseminate the program and training initiatives
- Technical support, device maintenance, and user monitoring;

3. Outputs (Immediate Results)

- 160,000 farmers with smartphones and internet access;
 - At least 50% of beneficiaries are women;
- Participation in training on digital use and benefits for agricultural activity;
- Increased access to information on best agricultural practices;
- Increased use of digital public services.
- Increased use of mobile wallets and other digital financial services.

4. Outcomes (Medium-Term Results)

- Increased agricultural productivity through the use of good practices;
- Increased household incomes and reduced poverty;
- Greater access to markets, subsidies, and public support;
- Digital and financial inclusion of rural populations;
- Greater propensity for civil registration.

Smart device financing scheme

5. Long-term impact

- Reduction of social, economic, and digital exclusion in rural areas;
- Strengthening of food security and livelihoods;
- Digital and economic autonomy for women farmers;
- More equitable, resilient, and technologically integrated rural development;

6. Assumptions

- Existence of minimum mobile network coverage and electricity in the target areas;
- Focus on the provinces of Nampula, Zambézia, and Manica, where agricultural production is high, incomes are low, and other initiatives are already underway to generate synergies;
- Allocation of gender-based funding quotas to address disparities;
- Sufficient political and climatic stability to allow implementation;
- Commitment from operators and partners to participate in the project and maintain accessible services;
- Creation of a revolving fund to ensure the financial sustainability of the financing model in the medium term.



Potential partnerships

TechnoServe Mozambique

TechnoServe Mozambique, active since 1998, supports rural development by strengthening agricultural value chains and sustainable market solutions. With a presence in several provinces, it has already implemented notable projects such as MozaCajú, which benefited 30,000 cashew producers, and programs in poultry farming and strengthening agricultural markets in the Nacala Corridor. It currently leads the Mangwana program, which promotes resilient and inclusive food systems in the Beira Corridor, with a strong focus on the inclusion of women and young people throughout the production chain.

One of TechnoServe's strategic priorities is women's economic empowerment, ensuring that women farmers have access to training, technologies, and markets. With its extensive experience in technical training, use of digital solutions, and promotion of gender equality in the agricultural sector, TechnoServe is a potential partner

Smart device financing scheme

for a digital inclusion project focused on women farmers, helping to reduce barriers to access to information, innovation, and income.

JFS Group

The JFS Group is one of Mozambique's largest agro-industrial organizations, with a strong presence in the agricultural production and cotton processing sectors, operating in several provinces of the country. With decades of experience in direct relationships with smallholder farmers, the group plays a key role in organizing agricultural value chains, providing technical assistance in the field, and guaranteeing the purchase of production. Its consolidated logistics structure and communication channels with rural communities place the JFS Group in a strategic position to support the implementation of this project.

As a partner, the JFS Group could facilitate the distribution of smart devices through its existing networks, support farmer mobilization, integrate the technology into its rural extension system, and potentially use the devices as a tool to improve the productivity and traceability of its agricultural value chains, with mutual gains for producers and the group.

5.4.2. Low-income self-employed workers



Intervention objective

To promote the economic activation and digital inclusion of low-income self-employed workers in urban and peri-urban areas through the provision of partially funded smart devices and basic digital and financial training.



Theory of Change

Resources

- Affordable smartphones adapted to local conditions;
 - Devices will have built-in blocking technology to ensure responsibility for recurring payments;
 - The devices will provide digital platforms for microentrepreneurs (WhatsApp Business, OLX, Biscate);
- Training program in basic digital and financial literacy, including a training strategy focused on women entrepreneurs;
- Local technical support infrastructure.

Activities

Smart device financing scheme

- Implementation of a credit model for smartphone acquisition: PayGo / Interest-free loan and partial subsidy
- Training in basic digital and financial literacy, including support for creating online promotional profiles (WhatsApp Business, social media);
- Technical support, device maintenance, and user follow-up;
- Establishment of a network of local Digital Ambassadors for technical support.

Outputs (Immediate Results)

- 80,000 self-employed workers receive smartphones and internet access;
- Participation in basic training in digital technologies and digital marketing;
- Creation of profiles and digital presence for local products and services;
- Involvement of women entrepreneurs;
- Establishment of a community digital support network.

Outcomes (Medium-Term Results)

- Increased income and economic stability for micro-entrepreneurs;
- Increased visibility and customer acquisition through digital marketing;
- Increased household income and reduced poverty;
- Greater access to markets, subsidies, and public support;
- Greater digital and financial inclusion;
- Reduction of digital exclusion among women and young people;
- Easier access to training, microcredit, and employment opportunities;
- Progressive formalization of informal activities and connection to essential services.
- Greater propensity for civil registration.

Long-term impact

- Productive and digital inclusion of informal workers in the urban economic fabric;
- Greater economic autonomy for women entrepreneurs;
- Stimulation of innovation and productivity in micro-businesses;
- Contribution to social cohesion and reduction of digital inequalities.

Smart device financing scheme

Assumptions

- Availability of mobile networks and access to affordable data packages in the target areas;
- Interest and adherence of beneficiaries to co-payment mechanisms and available devices;
- Ability of training to be adapted to different literacy profiles;
- Involvement of local associations and community leaders in the process;
- Sustainability of digital platforms and post-distribution technical support;
- Availability of relevant content in local languages and accessible formats.

5.4.3. Digital self-employed workers



Intervention objective

Promote productive digital inclusion and economic empowerment of self-employed workers in the informal digital sector through the provision of affordable smartphones, training focused on the productive use of technology, and access to digital promotion and marketing tools.



Theory of Change

Resources

- Affordable smartphones adapted to local conditions;
 - Devices will have built-in blocking technology to ensure responsibility for recurring payments;
 - The devices will provide digital platforms for microentrepreneurs (WhatsApp Business, OLX, Biscate);
- Training program in basic digital and financial literacy, including a training strategy focused on women entrepreneurs;
- Local technical support infrastructure.

Activities

- Implementation of a credit model for smartphone acquisition: PayGo / Interest-free loan and partial subsidy
- Training in basic digital and financial literacy, including:
 - Support for the creation of online promotional profiles (WhatsApp Business, social media);
 - Content creation (design, videos, logos);
 - Use of social media (Facebook, WhatsApp Business, Instagram);

Smart device financing scheme

- E-commerce and online sales.
- Technical support, device maintenance, and user monitoring;
- Creation of a Digital Ambassadors program, young people with additional training to support other beneficiaries.

Outputs (Immediate Results)

- 30,000 young digital workers receive smartphones and internet access;
- Participation in digital training with a practical component;
- Creation of digital profiles and structured online presence (social networks, portfolios);
- Effective inclusion of women in digital training and productive activities;
- Establishment of a community digital support network.

Outcomes (Medium-Term Results)

- Increased income through market expansion and the provision of online services;
- Improved digital and communication skills among young workers;
- Reduction of digital exclusion among women and young people in vulnerable areas;
- Consolidation of more stable and sustainable digital micro-businesses;
- Progressive entry into e-commerce networks, freelancing, and local digital platforms.

Long-term impact

- Inclusion of a new generation of digital workers in the economy;
- Economic and creative autonomy for young people and women in informal settings;
- An inclusive digital ecosystem that boosts the urban and peri-urban economy;
- Contribution to social cohesion and reduction of technological inequalities.

Assumptions

- Availability of mobile networks and access to affordable data packages in the target areas;
- Interest and adherence of beneficiaries to co-payment mechanisms and available devices;
- Capacity of training to be adapted to different literacy profiles;
- Involvement of local associations and community leaders in the process;
- Sustainability of digital platforms and post-distribution technical support;
- Availability of relevant content in local languages and accessible formats;

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- Availability of mobile networks and access to affordable data packages in target areas.

5.4.4. Students (Technical and Higher Education)



Intervention objective

Encourage digital literacy, facilitate access to educational resources, and unlock new sustainable avenues for income generation and entrepreneurship among students.



Theory of Change

Resources

- Acquisition and distribution of appropriate, affordable, and durable devices (laptops) that are specifically selected to be suitable for both educational purposes and various monetization activities.
- A dedicated project management team, qualified digital literacy trainers (for both students and teachers), technical support staff for device and connectivity issues, and community facilitators for local engagement.
- Strategic collaborations with key stakeholders, including telecommunications providers (e.g., Vodacom, Starlink), educational institutions (universities, vocational schools, secondary schools), relevant government ministries (e.g., Ministry of Education, Ministry of Communication and Digital Transformation), local non-governmental organizations (e.g., MUVA), and private sector companies for the delivery of training, connectivity solutions, and job connections.
- Development or adaptation of comprehensive digital literacy curricula, specialized training modules on vocational digital skills, and practical entrepreneurship training materials. These resources will be designed to be culturally relevant and accessible.

Activities

- Develop and implement transparent and equitable criteria and processes to identify and select vulnerable and low-income students. This will include proactive outreach strategies that specifically target girls, students with special needs, and those residing in remote rural areas to ensure inclusive access.
- Establish a robust and efficient supply chain to procure and distribute devices. The funding model will be designed to ensure long-term affordability and accessibility for beneficiaries.
- Implement comprehensive digital literacy programs covering fundamental aspects such as basic device usage, safe internet browsing, and online safety. These programs will then progress to

Smart device financing scheme

specialized vocational digital skills directly relevant to monetization. Training methodologies will be tailored to different literacy levels and learning styles, including specific accommodations for students with special needs.

- Provide targeted training for educators on modern pedagogies and the proficient use of learning management systems. This is crucial to ensure that devices are used effectively in the teaching-learning process.
- Implement solutions to address connectivity and energy challenges, such as the provision of subsidized data packages.
- Support the development of locally relevant digital content and platforms for education and economic opportunities.
- Establish robust monitoring and evaluation frameworks to track device usage, skills acquisition, educational outcomes, and income generation, ensuring data-driven adjustments.

Outputs (Immediate Results)

- Number of devices purchased and distributed to beneficiary students.
- Number of students and teachers who have completed training in digital literacy and/or vocational digital skills.
- Number of training modules, e-learning materials, and digital platforms developed or adapted and made available.
- Number of students involved in mentoring programs.
- Number of community charging centers or connectivity access points established.
- Number of partnerships established with the private sector and educational institutions.

Outcomes (Medium-Term Results)

- Increased digital literacy and confidence in the use of technology among beneficiary students.
- Improved access to online educational resources and e-learning platforms for students.
- Increased academic engagement and, where measurable, improved school performance of students using the devices.
- Increased participation of students in digital income-generating activities.
- Improved financial literacy and management skills among beneficiaries.
- Reduction of digital and financial exclusion among target groups, especially girls and students with special needs.
- Greater capacity of teachers to integrate digital devices and pedagogies into the teaching process.~

Smart device financing scheme

Long-term impact

- Improved educational attainment and human capital development among young people, resulting in a more skilled workforce.
- Reduction of socioeconomic and digital inequalities, especially among vulnerable groups.
- Increased employment and self-employment opportunities for young people.
- Contribution to the broader digital transformation of Mozambique and the diversification of its economy, moving away from dependence on traditional sectors.

Assumptions

- Continued political stability and government commitment to digital transformation and inclusive education, including supportive policy and regulatory frameworks that promote investment and innovation in the digital sector.
- Incremental construction of public internet access points in school buildings and campuses.
- Gradual improvement of national digital infrastructure (electricity, broadband) or successful implementation of alternative connectivity solutions (e.g., satellite internet, community centers) that ensure reliable and affordable access.
- Continued growth of the digital economy in Mozambique and sustained demand for digital skills and services, providing viable monetization opportunities for students.
- High uptake and sustained engagement by students and teachers with devices and training programs, demonstrating motivation to integrate technology into learning and income generation.
- Long-term funding and institutional support for maintenance, updates, and ongoing training are ensured beyond the initial phase of the project, guaranteeing the continuity of benefits.

5.4.5. Teachers (Technical and Higher Education)



Intervention Objective

Provision of smart devices to teachers in Mozambique, with the aim of promoting their digital skills and fostering opportunities to improve their teaching performance and monetization through the use of these devices.



Theory of Change

Resources

- Laptops purchased in bulk;

Smart device financing scheme

- Platforms and training materials on digital literacy and monetization skills;
- Connectivity (subsidized data packages);
- Human resources (trainers, technical consultants, project management team);
- Strategic partnerships (telecommunications providers, financial institutions, business development organizations).

Activities

- Efficient procurement and distribution of devices to beneficiary teachers;
- Development and implementation of comprehensive training programs in basic and advanced digital literacy (use of applications, online safety) and monetization skills (e.g., content creation, digital small business management, digital marketing, use of e-commerce platforms, and mobile payments);
- Establishment of a technical support and device maintenance system;
- Facilitation of access to affordable and reliable connectivity (e.g., negotiation of special rates, data vouchers);
- Creation of or connection to digital platforms and markets for monetization opportunities;
- Awareness-raising and promotion of digital entrepreneurship among teachers;
- Continuous monitoring and evaluation of device use.

Outputs (Immediate Results)

- Number of teachers receiving smart devices;
- Number of teachers completing digital literacy training programs;
- Number of teachers with access to subsidized/facilitated connectivity;
- Number of digital platforms/markets accessible to teachers for monetization;
- Progress reports on distribution, training, and initial use.

Outcomes (Medium-Term Results)

- Increased digital literacy among teachers (greater proficiency in the use of digital devices and applications);
- Increased Use of Devices for Educational Purposes (teachers integrate digital devices and resources into their teaching practices);
- Teachers Use Devices to Generate Income (teachers initiate and sustain monetization activities through devices);
- Improved Teaching Quality (students demonstrate greater engagement and learning outcomes due to teachers' use of technology).

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Long-Term Impact

- Sustainable Improvement in Education Quality (contribution to a more modern, inclusive, and effective education system);
- Reduction of Digital Exclusion (narrowing the digital gap for teachers and, by extension, for the communities they serve);
- Strengthening Digital Human Capital (creating a more skilled workforce that is better adapted to the demands of the digital economy).

Assumptions

- Political and economic stability (a stable macroeconomic and political environment in Mozambique that allows for the implementation of the project and the sustainability of monetization activities);
- Reliable and Accessible Network Infrastructure (continuous availability and accessibility of internet connectivity, especially in rural areas, to support the use and monetization of devices);
- Incremental construction of public internet access points in school buildings and campuses.
- Social and Cultural Acceptance of Technology (the community and teachers are open to adopting new technologies and exploring new ways of working and generating income);
- Existence of Viable Markets for Monetization (there is sufficient demand for digital services or products that teachers can offer);
- Continued Support from Government and Partners (the Ministry of Education and Culture and other government institutions, such as the MCTD, continue to support the initiative and integrate digitization into education);
- Availability of Technical Support (effective mechanisms for device repair and maintenance are accessible and reasonably priced);
- Cybersecurity and Adequate Regulation (a secure and regulated digital environment that protects users and their financial transactions).

5.4.6. Internally Displaced Persons



Intervention Objective

Promote economic activation and monetization through digitization, enabling beneficiaries not only to access devices but also to generate income through them.

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Theory of Change

Resources

- Provision of affordable/subsidized smart devices: smartphones.
- Access to reliable and affordable internet connectivity: data plans or community Wi-Fi.
- Digital literacy and skills training: tailored programs covering basic to advanced and entrepreneurial skills.
- Mentoring and support: assistance in accessing digital work platforms and monetization opportunities.
- Integration with financial services: simplified access to mobile money and digital banking services.
- Safe and formative digital environment: cybersecurity measures and data protection.

Activities

- Ensure the availability of subsidized devices.
- Conduct practical and tailored training programs on mobile phone use, focusing on mobile money transactions, SMS for communication, and access to basic information.
- Facilitate access to mobile money through partnerships with mobile network operators (e.g., Vodacom M-Pesa) to simplify the registration of SIM cards and mobile money accounts, potentially advocating for flexible identification requirements for PDIs. Ensure that agent networks are accessible.
- Develop or facilitate access to relevant and localized information via SMS/USSD, such as market prices for agricultural products, job offers, weather alerts, and information on humanitarian services.

Outputs (Immediate Results)

- Increased mobile phone ownership among IDPs.
- Improved digital literacy and confidence in using devices.
- Higher rates of registration and active use of mobile money accounts.
- Increased access to relevant and essential market information.
- Training/strengthening of digitally supported microenterprises.

Outcomes

- Better access to essential services such as health (teleconsultations), education (online learning resources), and humanitarian assistance.
- Improved livelihood and income generation opportunities through access to markets, agricultural

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information, and employment opportunities.

- Greater social inclusion and civic participation, reducing isolation and strengthening social and family networks.
- Increased autonomy and independence for displaced persons.
- Greater propensity for civil registration.

Long-term impacts

- Sustainable economic activation and self-sufficiency for internally displaced persons.
- Reduced dependence on humanitarian aid.
- Improved general well-being and integration into host communities.
- Contribution to broader digital acceleration goals in Mozambique.

Assumptions

- A reasonable level of security and stability is maintained in areas hosting internally displaced persons, allowing for project implementation, training, and economic activities.
- Basic mobile network coverage (2G/3G) is consistently available and reliable in the target areas.
- Continued support and cooperation from Mozambican government institutions (e.g., Ministry of Communications and Digital Transformation, INAR) for policy reforms (e.g., identification for SIM/Mobile Money) and program implementation.
- Mobile network operators and other private sector entities are willing to partner, expand services, and potentially offer favorable tariffs for vulnerable populations.
- Funding and capacity for ongoing digital literacy training, technical support, and content development are sustained beyond the initial device distribution phase.

5.4.7. People with Special Needs



Intervention Objective

Increase the social inclusion and economic activation of people with physical disabilities through the strategic use of smart devices.



Theory of Change

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Resources

- Funding itself is the financial capital essential for the acquisition and distribution of assistive devices and technologies, as well as for the development and implementation of training programs.
- Devices such as smartphones and laptops, together with assistive technologies adapted to the specific needs of each beneficiary. Examples of technologies mentioned include adapted keyboards and mice, voice recognition software, screen readers (such as JAWS and NVDA), accessibility applications (such as Hand Talk), and devices such as "Guided Hands®" and "functionalhand®."
- Connectivity is crucial. This involves leveraging and supporting the expansion of broadband and internet access, especially in rural areas, in line with the objectives of projects such as the MDAP and the VaMoz Digital (). Making data plans affordable is also an important resource for the sustainability of access.
- Teams with professional expertise are essential. This includes project managers, trainers specializing in digital literacy and inclusive entrepreneurship, and assistive technology technicians.
- Collaboration with various entities is vital for the scope and sustainability of the intervention. This includes civil society organizations (such as the Forum of Mozambican Associations of Persons with Disabilities - FAMOD), the private sector (telecommunications providers, software developers, flexible economy platforms), academia, and relevant government agencies.

Activity

- Development of clear and inclusive criteria to identify and select vulnerable people with physical disabilities who have the potential for monetization, in partnership with local organizations of persons with disabilities. This ensures that resources reach those who need and can benefit from them most.
- Conducting personalized assessments to determine the most appropriate assistive devices and technologies for each beneficiary. This step is crucial to ensure the relevance and usability of the equipment.
- Purchase and delivery of adapted devices and technologies, ensuring their initial configuration and functionality.
- Modular and adapted training on the basic use of devices, safe internet browsing, use of essential applications, and accessibility features. These programs should be designed to overcome pre-existing educational disadvantages.
- Practical and personalized training in digital entrepreneurship, remote work (e.g., transcription, translation, virtual assistance, social media management), and the gig economy, with a focus on the most in-demand and accessible skills. This training aims to empower beneficiaries to generate income independently.
- Training on the use of mobile banking services and digital payment platforms, and advice on financial management. This ensures that the income generated can be managed effectively and securely.
- Establishment of a technical support system for device maintenance, troubleshooting connectivity

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issues, and using assistive technologies, as well as mentoring programs for digital entrepreneurs. Ongoing support is vital for the sustainability of business use and in .

- Launch awareness campaigns to combat social stigma and promote digital accessibility, influencing policies and regulations. This activity addresses attitudinal barriers and seeks to create a more inclusive environment in the long term.
- Collaborate with digital service providers and websites (governmental and private) to audit and improve their accessibility based on international standards. This ensures that beneficiaries can effectively interact with the digital environment.

Outputs (Immediate Results)

- Number of people with physical disabilities with access to adapted assistive devices and technologies.
- Number of beneficiaries who have completed digital literacy and monetization training programs.
- Number of partnerships established with digital service providers to improve accessibility.
- Development and implementation of accessible and adapted training materials.
- Increased public awareness of digital inclusion for people with special needs.

Outcomes (Medium-Term Results)

- Increased number of people with physical disabilities using smart devices and assistive technologies regularly and effectively.
- Increased digital skills and confidence in the use of technology among beneficiaries.
- Greater involvement of beneficiaries in remote working platforms and digital entrepreneurship.
- Increased number of websites and digital platforms in Mozambique that comply with accessibility standards.
- Positive change in community attitudes and perceptions regarding the ability of people with special needs to participate in the digital economy.
- Greater propensity for civil registration.

Long-term impacts

- Significant increase in income and financial security for people with physical disabilities, resulting in less dependence and greater purchasing power.
- Greater ability of people with physical disabilities to manage their lives, access services, and participate in society without significant barriers.
- Greater participation of people with physical disabilities in all spheres of social, economic, and cultural life in Mozambique, with recognition of their contributions.

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- Contribution to the reduction of socioeconomic disparities, in line with the Sustainable Development Goals.
- A digital environment in Mozambique that is more accessible and equitable for all people.

Assumptions

- It is assumed that the Mozambican government and regulatory authorities will maintain and strengthen their commitment to digital inclusion and accessibility by implementing and enforcing the necessary policies and regulations to create a digital environment that is favorable to people with special needs.
- It is assumed that the internet infrastructure in Mozambique, especially in rural areas, will continue to expand and become more accessible and affordable for the general population, including people with special needs, enabling the continued use of devices.
- It is essential that social attitudes towards people with special needs in Mozambique evolve positively, resulting in reduced stigma and discrimination in the digital labor market and society in general, so that monetization opportunities are fully exploited.
- It is assumed that smart devices and assistive technologies will continue to be effective tools and evolve to meet the changing needs of people with physical disabilities and the demands of the digital market, ensuring their long-term usefulness.
- It is assumed that there will be a continuing and growing demand for services and products that can be offered by people with special needs through digital platforms (such as the project economy and digital entrepreneurship), ensuring monetization opportunities.
- It is assumed that people with physical disabilities will have the ability and motivation to acquire and apply the digital and entrepreneurial skills necessary to monetize through devices , overcoming pre-existing educational challenges.
- It is assumed that technical support mechanisms, mentoring, and access to microcredit will continue to be available and accessible to beneficiaries after the initial phase of the project, ensuring the sustainability of their economic activities.

5.5. Inputs from the financing model

The financing model designed under the program, which allows the financial solution values to be determined, is based on a set of assumptions about the financial capacity of the different beneficiary groups and the costs associated with the various devices. These assumptions are presented below.

5.5.1. Characterization of beneficiaries' financial capacity

The table below presents the main assumptions regarding the financial capacity of the beneficiary groups considered in the financing model.

These inputs were defined based on the results of population surveys conducted by technical assistance.

Table 24. Assumptions about the financial capacity of beneficiary groups

Group No.	Beneficiary groups	Monthly payment capacity (USD)	Expected <i>default</i> rate (USD)
Group	Farmers	\$3.90	30%
Group 2	Low-income self-employed workers	\$11.70	20%
Group	Digital self-employed workers	\$19.50	20%
Group 4	Teachers (technical and higher education)	\$23.40	25%
Group	Students (technical and higher education)	\$7.80	20%
Group	Internally displaced persons	\$0.00*	N/A
Group 7	Persons with special needs	\$0.00*	N/A

The figures marked () are assumptions that do not come from the surveys.*

It is important to note that these assumptions are based on a study with a limited number of respondents and, as such, are not intended to reflect the entire population covered by these beneficiary groups, but rather to characterize, in general terms, a significant part of the populations in question.

Smart device financing scheme**5.5.2. Cost of devices and access**

The tables below show the costs of devices and monthly data and voice packages considered in the financial model.

25 Table. Assumptions for the costs of smart devices

Type of device provided	Purchase cost of the device (USD)	VAT (%)	Device cost (USD)
Smartphone	\$34.48	16	\$40
Laptop	\$300	16	\$348

26 Table. Assumptions for data package costs

Type of package available	Annual data and voice cost (USD)	Monthly data and voice cost (USD)	Description of data and voice plan
No data and voice plan	\$0.00	\$0.00	–
Data and voice plan - Minimum	\$37.20	\$3.10	2.7GB 200 voice minutes 200 SMS
Data and voice plan - Intermediate	\$56.40	\$4.70	6.7GB 250 voice minutes 300 SMS

5.5.3. Device financing conditions

The following chapter defines the type of device that beneficiaries will receive and the financing conditions for the different beneficiary groups, based on their financial capacity and the costs associated with the devices allocated.

The percentage of the device cost that will be subsidized, as well as the percentage of the loan and number of installments, directly influence the monthly payment that will be covered by the beneficiary. As such, these amounts are set so as not to exceed the beneficiaries' capacity as determined by the survey.

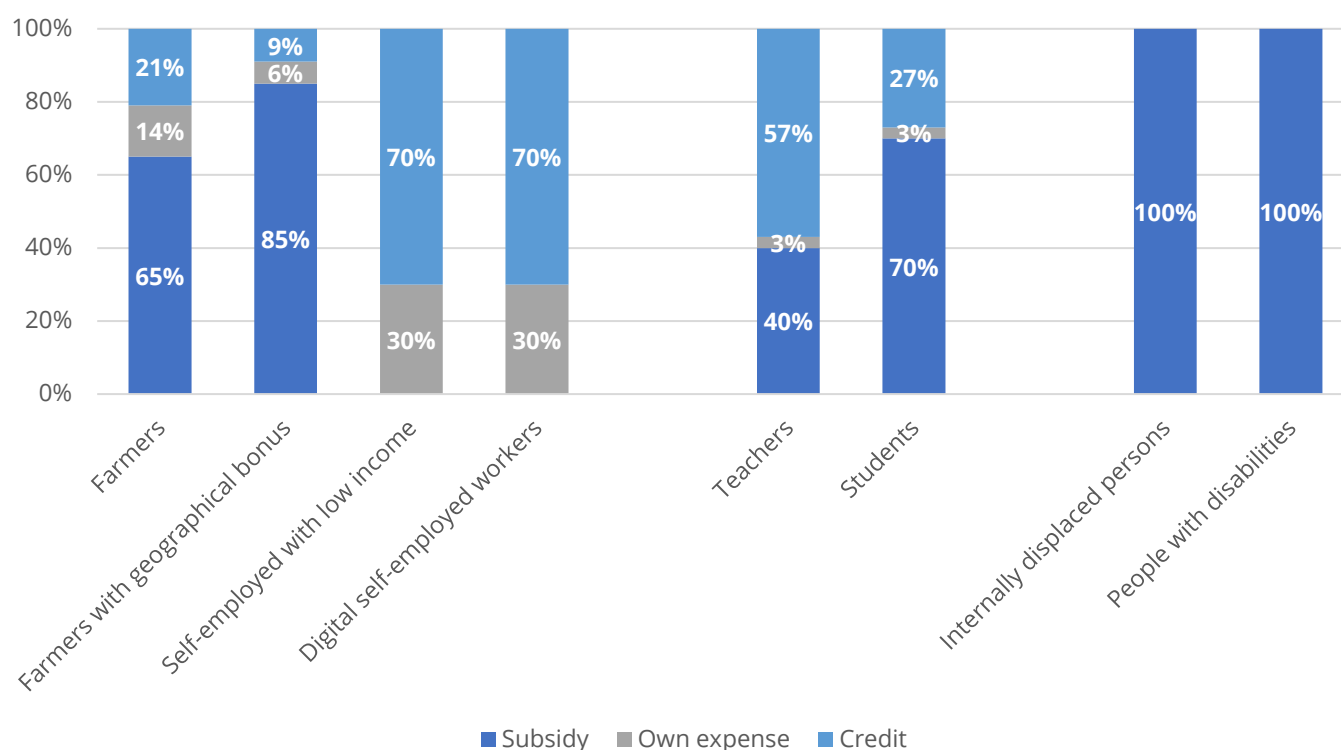
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27 Table. Financing conditions for devices defined for different beneficiary groups

# Group	Groups of beneficiaries	Device to be allocated	Financing mechanism	Device subsidy (%)	Cost covered by the beneficiary (%)	No. of installments	Own contribution (%)	Loan (%)
1.A	Farmers	Smartphone	PayGo / Interest-free loan with partial subsidy	65%	35%	12	14%	21%
1.B	Farmers with geographical bonus	Smartphone	PayGo / Interest-free loan with partial subsidy	85%	15%	12	6%	9%
2	Self-employed workers with low income	Smartphone	PayGo / Interest-free loan	0%	100%	12	30%	70%
3	Digital self-employed workers	Smartphone	PayGo / Interest-free loan	0%	100%	12	30%	70%
4	Teachers (technical and higher education)	Laptop	PayGo / Interest-free loan with partial subsidy	40%	60%	24	3%	57%
5	Students (technical and higher education)	Laptop	PayGo / Interest-free loan with partial subsidy	70%	25%	24	3%	23%
6	Internally displaced persons	Smartphone	Total subsidy	100%	0%	12	0%	0%
7	People with special needs	Smartphone	Total subsidy	100%	0%	12	0%	0%

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Figure 41. Financing conditions for devices defined for different beneficiary groups

**5.5.4. Financing conditions for access**

Below are two options for payment terms for beneficiaries. In the first option, payments increase in stages, rising over the microloan repayment period. In the second option, the aim was to keep the payment amount as constant as possible, which is more stable for the beneficiary.

Monthly payment method: Option 1 – The first 6 months of access are offered by the operator

With regard to access financing, it is assumed that one of the conditions inherent to the model will be that private suppliers responsible for distributing the devices must offer at least 6 months of free data and voice packages. This factor may be one of the classification criteria in *the procurement* phase.

In addition to the 6 months free of charge offered by the private provider, there is also a subsidy (from the fund) for 6 months, during which the monthly fee for the beneficiary is only 50% of the amount charged by the operator. This process aims to extend the period during which the cost of internet access is more affordable for the beneficiary, which is one of the main barriers to adoption. In

Smart device financing scheme

addition, this mechanism will allow for a gradual transition from beneficiary to regular customer of the operator.

Furthermore, zero-rating options for public service platforms and websites to be defined in the project implementation manual may be incorporated into the program, such as:

- “Aprender a Qualquer Hora” (Learn Anytime) platform (Ministry of Education and Culture)
National distance learning platform that provides curriculum content for primary and secondary education. Zero rating would allow students without resources to access lessons, videos, and educational materials free of charge.
- Mozambique Government Portal (www.portaldogoverno.gov.mz)
Free access to information on public services, civil registries, social programs, and official documentation. Essential for people in remote areas who need access to government information at no additional cost.
- National Civil Identification Service (SNIC) Platform
Digital system associated with the registration and issuance of identity cards. Zero-rating access to this platform would facilitate the civil registration process, especially in areas with low coverage of in-person services.
- DINAS (National Directorate for Agriculture and Food Security) services
Content related to good agricultural practices, climate alerts, market prices, and technical advice. Zero rating could benefit small farmers with direct access to practical and localized information.

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28 Table. Financing conditions for the data and voice plan defined for the different beneficiary groups

# Group	Beneficiary groups	Device to be allocated	Cost of data and voice plan	Data and voice subsidy (%)	Duration of data and voice subsidy (months)
1.A	Farmers	Smartphone	\$3.10	50%	6
1.B	Farmers with geographic bonus	Smartphone	\$3.10	50%	6
2	Self-employed workers with low income	Smartphone	\$3.10	50%	6
3	Digital self-employed workers	Smartphone	\$3.10	50%	6
4	Teachers (technical and higher education)	Laptop	\$4.70	50%	6
5	Students (technical and higher education)	Laptop	\$3.10	50%	6
6	Internally displaced persons	Smartphone	\$3.10	100%	6
7	People with special needs	Smartphone	\$3.10	100%	6

Smart device financing scheme**5.5.5. Cost to the beneficiary***29 Table.* Financing conditions for data and voice plans defined for different beneficiary groups

# Group	Beneficiary groups	Device to be allocated	Cost/1st installment (USD)	Monthly cost of the device only (USD)	Monthly cost with data and voice subsidy (USD)	Monthly cost without data and voice subsidy (USD)	Maximum monthly payment (USD)
1.A	Farmers	Smartphone	\$5.12	\$0.76	\$2.31	\$3.86	\$3.90
1.B	Farmers with geographic bonus	Smartphone	\$3.08	\$0.33	\$1.87	\$3.42	\$3.90
2	Low-income self-employed workers	Smartphone	\$13.55	\$2.55	\$4.10	\$5.65	\$11.70
3	Digital self-employed workers	Smartphone	\$13.55	\$2.55	\$4.10	\$5.65	\$19.50
4	Teachers (technical and higher education)	Laptop	\$12.79	\$8.62	\$10.97	\$13.32	\$23.40
5	Students (technical and higher education)	Laptop	\$11.99	\$4.09	\$5.64	\$7.19	\$7.80
6	Internally displaced persons	Smartphone	\$0.00	\$0.00	\$0.00	\$3.10	\$0.00
7	People with special needs	Smartphone	\$0.00	\$0.00	\$0.00	\$3.10	\$0.00

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Summary of Option 1 - The first 6 months of access are offered by the operator

The financing model presented here provides for a phased payment method with the following cost distribution:

Device costs:

- In **the first month**, the user will pay the down payment for the device at their own expense.
- In **the remaining months**, they will pay the installment for the device.

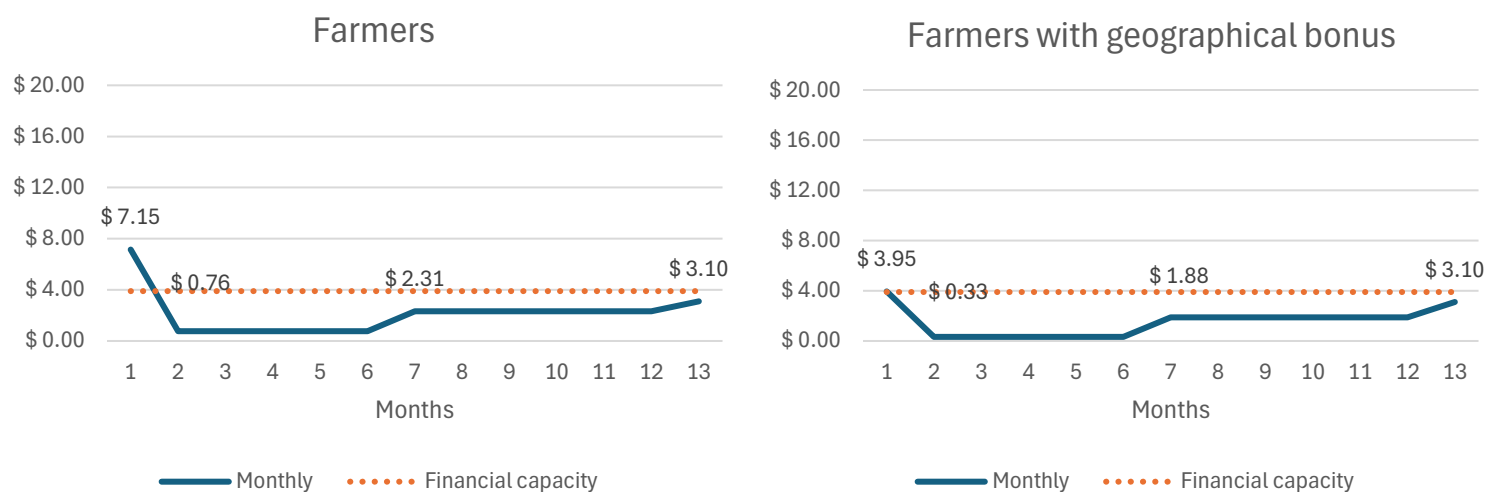
Access costs:

- In **the first six months**, the beneficiary does not pay data and voice costs, which are offered by the operators.
- In **the second six months**, the beneficiary pays half of the data and voice costs, with the remainder subsidized by the fund.
- At the end of the financing period, the beneficiary will only pay for the minimum data package (last month of the chart).

As illustrated in the graphs below, except at the initial point of purchase, in all groups, monthly payments are lower than the willingness to pay/financial capacity reported in the surveys.

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Figure42. Monthly payment amounts throughout the financing model by type of beneficiary.



In the case of farmers, during the 12-month support period, they always pay less than the \$3.90 monthly preparation fee.

The initial purchase corresponds to less than two months of savings in preparation for payment.

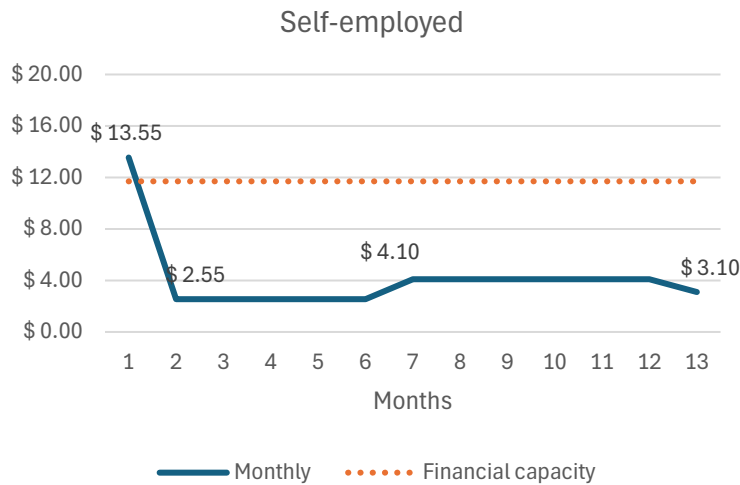
At the end of the 12 months, payments rise to the normal internet access rate, which is below the value of the preparation to pay.

In the case of farmers with a geographical bonus, during the 12-month support period, they always pay much less than the \$3.90 per month in preparation to pay.

The initial purchase corresponds to less than two months of savings in the willingness to pay.

At the end of the 12 months, payments rise to the normal internet access rate, below the value of the preparation to pay.

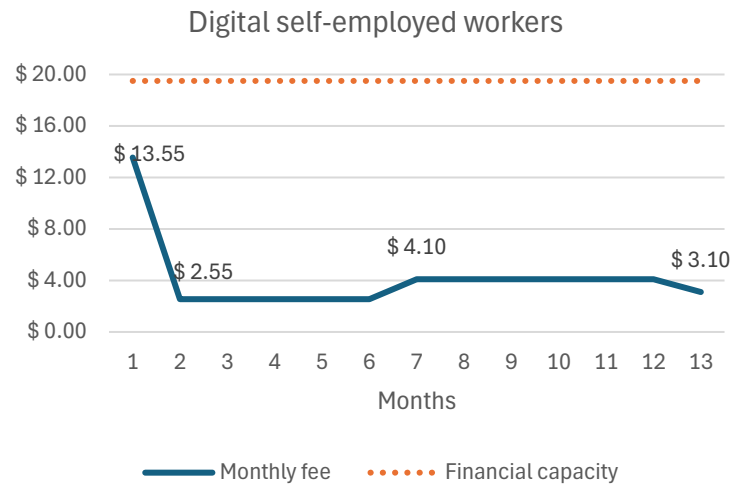
Smart device financing scheme



In the case of self-employed workers, during the 12-month support period, they always pay less than the \$11.70 monthly preparation fee.

The initial purchase corresponds to just over one month of savings in preparation for paying.

At the end of the 12 months, payments rise to the normal internet access rate, well below the cost of getting ready to pay.

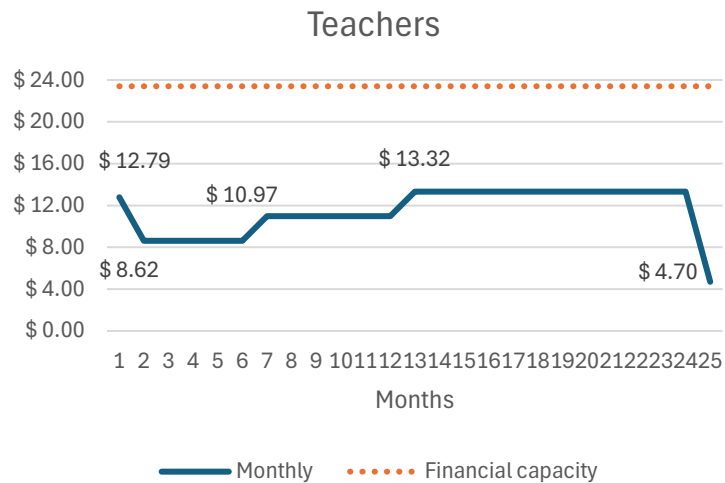


In the case of digital self-employed workers, during the 12 months of support, they always pay much less than the \$19.50 monthly preparation fee.

The initial purchase corresponds to less than one month of savings in preparation for paying.

At the end of the 12 months, payments rise to the normal internet access rate, well below the pay-as-you-go amount.

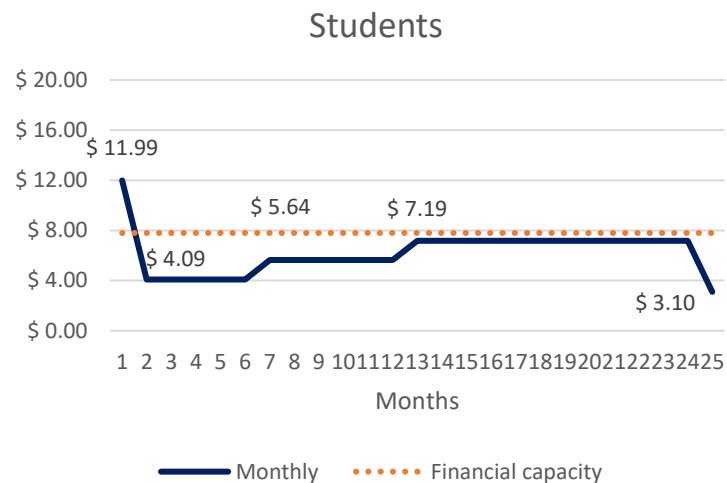
Smart device financing scheme



In the case of teachers, during the 24 months of support, they always pay less than the \$23.40 monthly preparation fee.

The initial purchase corresponds to less than one month's savings in preparation for payment.

At the end of the 24 months, payments rise to the normal internet access rate, well below the pay-as-you-go rate. At the end of the 24 months, payments drop to the normal internet access rate, well below the pay-as-you-go rate.



For students, during the 24-month support period, they always pay less than the \$7.80 monthly prepayment amount. For students, during the 24-month support period, they always pay less than the \$7.80 monthly prepayment amount.

The initial purchase corresponds to just over one month's savings in the payment plan.

At the end of the 24 months, payments drop to the normal internet access rate, well below the prepayment amount.

Smart device financing scheme

Monthly payment options: Option 2 – Fixed monthly payments

As an alternative to the previous model, it will be possible to agree with operators on an alternative payment model where the installment does not vary during the first year of financing – without impacting the project budget and the operators' contribution. This will only be possible subject to the limitations imposed by the project implementation manual.

Changes compared to option 1:

- The operator offers 50% of access in the first 12 months, instead of 100% of access in the first 6 months.
- The project fund finances 25% of access for the first 12 months, instead of 50% of access for the first 6 months.

Device costs (remain unchanged):

- In **the first month**, the user will pay the down payment for the device at their own expense.
- In **the remaining months**, they pay the installment for the device.

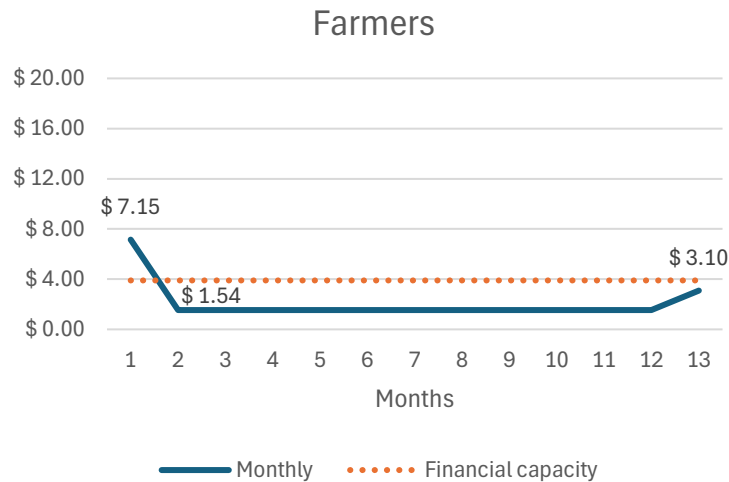
Access costs:

- In **the first twelve months**, the beneficiary always pays 25% of the monthly cost of the data and voice package. (In other words, the operator covers 50% of the monthly cost and the fund covers 25%.)
- At the end of the financing period, the beneficiary will only pay for the minimum data package (last month of the chart).

Advantages of this option:

- The beneficiary has a stable payment over 12 months, facilitating financial management.
- The fund is less likely to experience defaults because there is no increase at the end of the first six months.
- The operator takes less financial risk, as it covers 50% of the access fee every month, instead of risking offering six months and then having the user withdraw.
- User continuity tends to be higher at the end of the program.

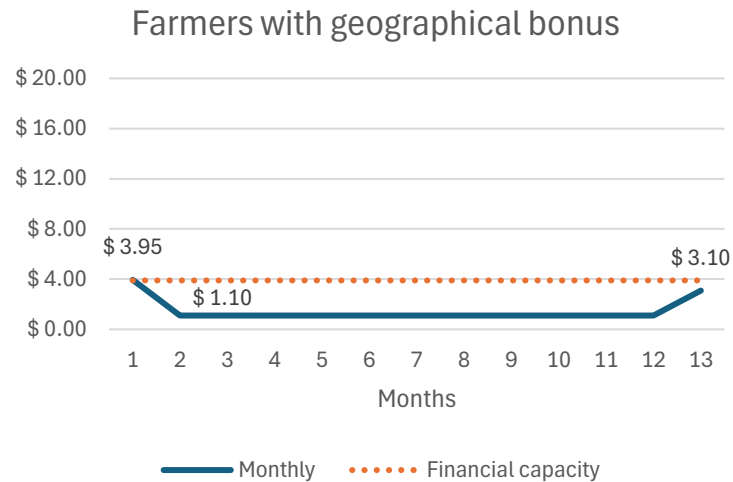
Smart device financing scheme



In the case of farmers, during the 12-month support period, they always pay a constant amount lower than the \$3.90 monthly preparation fee.

The initial purchase corresponds to less than two months of savings in preparation for payment.

At the end of the 12 months, payments rise to the normal internet access rate, which is below the value of the pay-as-you-go amount.

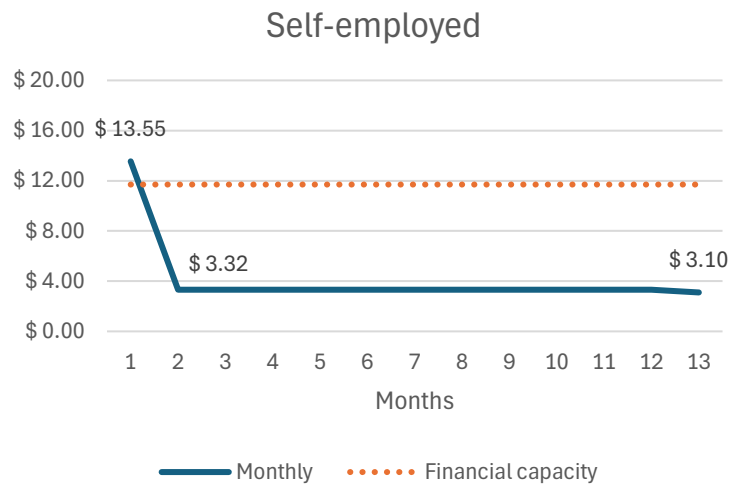


In the case of farmers with a geographical bonus, during the 12-month support period, they always pay a constant amount that is much lower than the \$3.90 per month they are preparing to pay.

The initial purchase corresponds to less than two months of savings in the prepayment.

At the end of the 12 months, payments rise to the normal internet access rate, below the prepayment amount.

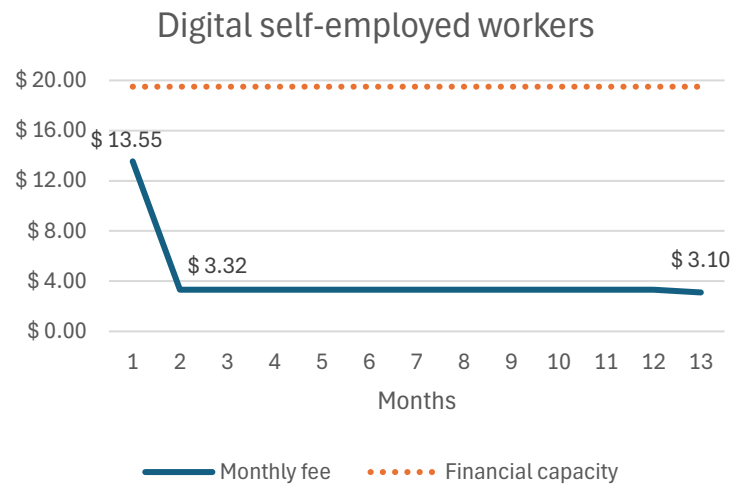
Smart device financing scheme



In the case of self-employed workers, during the 12-month support period, they always pay a constant amount less than the \$11.70 monthly preparation fee.

The initial purchase corresponds to just over one month of savings in preparation for payment.

At the end of the 12 months, payments rise to the normal internet access rate, slightly below the amount of the payment preparation.

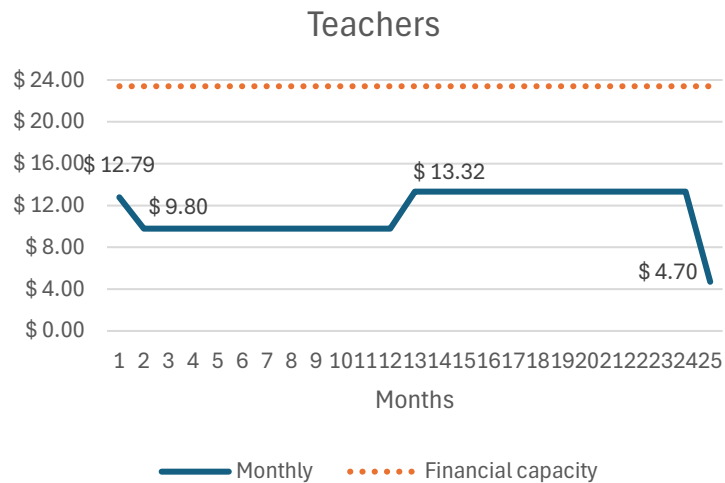


In the case of digital self-employed workers, during the 12-month support period, they always pay a much lower amount than the \$19.50 monthly preparation fee.

The initial purchase corresponds to less than one month of savings in preparation for payment.

At the end of the 12 months, payments rise to the normal internet access rate, slightly below the amount of the payment preparation.

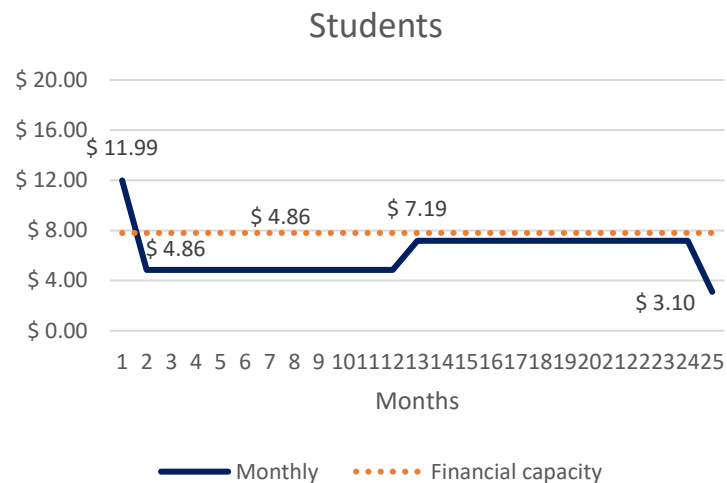
Smart device financing scheme



In the case of teachers, during the 24 months of support, they always pay less than the \$23.40 monthly prepayment.

The initial purchase corresponds to less than one month of savings in preparation for payment.

At the end of the 24 months, payments drop to the normal internet access rate, well below the pay-as-you-go rate.



In the case of students, during the 24-month support period, they always pay less than the \$7.80 monthly preparation fee.

The initial purchase corresponds to just over two months of savings in preparation for payment.

At the end of the 24 months, payments drop to the normal internet access rate, well below the pay-as-you-go rate.

5.6. Budget by heading

The following sub-chapter describes the financing solution designed in terms of distribution by project component, equipment, and beneficiary.

5.6.1. Overall distribution of funding

The financing of devices and access will be the central focus of the scheme designed and will represent 83.2% of the program, constituting a maximum ceiling of approximately \$20.8 million and based on the principle of "*results-based funding*."

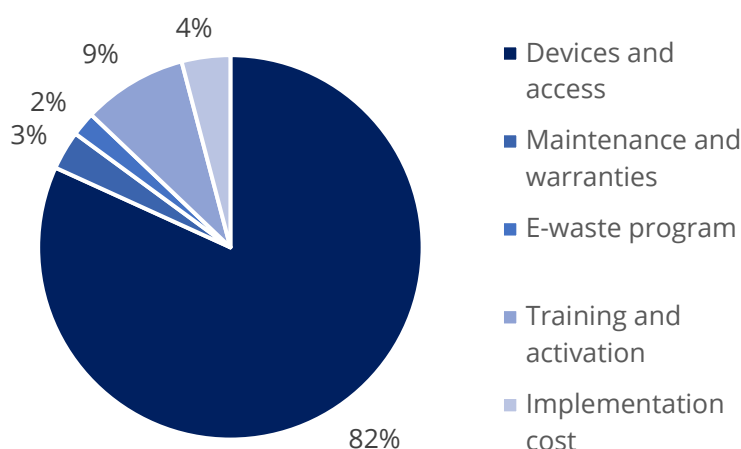
The remaining budget will be distributed among complementary initiatives, namely maintenance and warranty costs for the devices distributed (3.2%), an e-waste collection program (2.0%), and training and activation of beneficiaries (7.6%). Finally, 4% of the program budget will be allocated as implementation costs.

Table30. Distribution of the program budget by component

Component	Amount (USD)	Percentage
Total funding	\$24,449,400.00	100.0%
Devices and access	\$19,999,400.00	81.8%
Maintenance and warranties	\$800,000.00	3.3%
E-waste program	\$500,000.00	2.0%
Training and activation	\$2,150,000.00	8.8%
Implementation cost	\$1,000,000.00	4.1%

Affordable device financing scheme

Figure43. Relative distribution of the program budget by component



With regard to **financing for devices and access** (approximately \$20.0 million), 87% of the amount is expected to cover subsidies for devices and access (\$17.4 million), while \$2.6 million (13%) is expected to cover expected defaults on microloans for devices.

On the other hand, 84% of the funding for devices and access is expected to be directed towards financing devices (approximately \$16.7 million) through subsidies and coverage of loan defaults, while 16% will be directed towards subsidizing internet access (approximately \$3.3 million). Of the device financing, 41% will be directed towards smartphones and 59% towards subsidizing laptops (portable computers).

Access subsidies are a cost that will be negotiated later with private sector entities that may eventually participate in the program.

Affordable device financing scheme

Figure44. Distribution of funding for devices and access by component

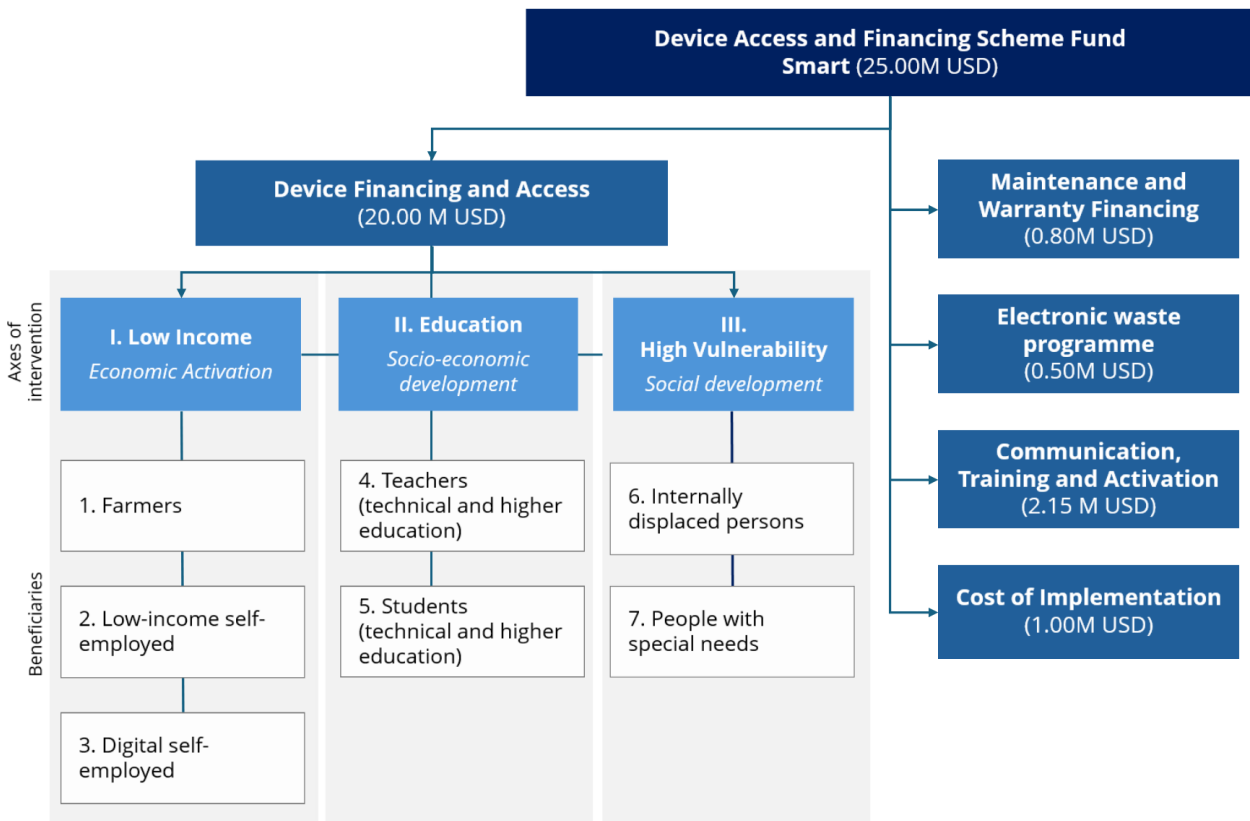
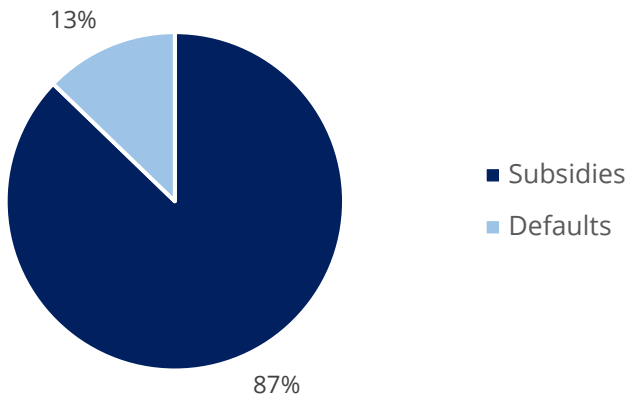


Figure45. Relative distribution of financing for devices and access – subsidy component vs. defaults



Affordable device financing scheme

Figure 46 . Relative distribution of funding for devices and access – devices vs. access

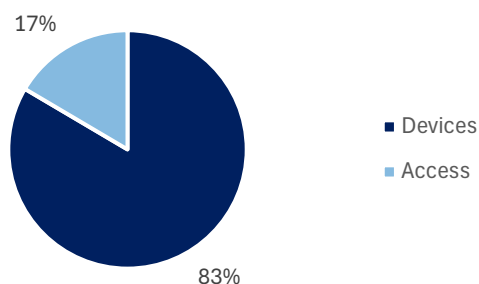
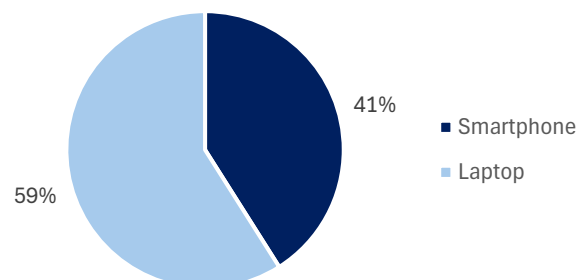


Figure47 . Relative distribution of funding by type of device



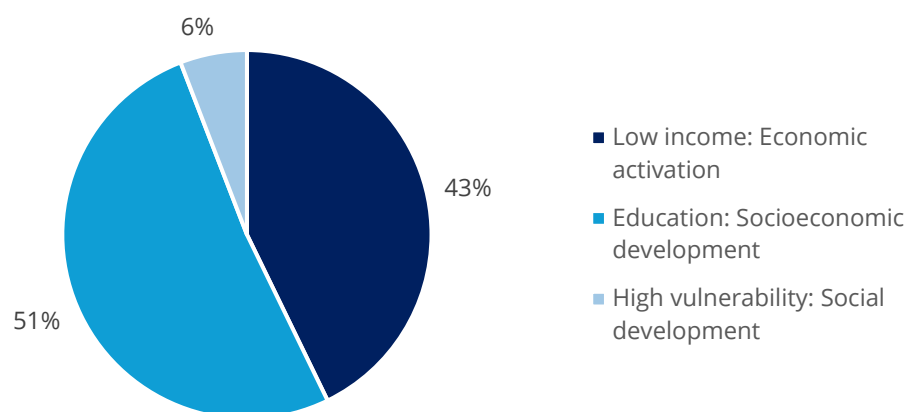
In turn, funding for devices and access will be divided among the three intervention segments as follows.

Table31 . Distribution of funding for devices and access by macro group of beneficiaries

Macro-group of beneficiaries	Amount (USD)	Percentage
Funding: Devices and access	\$19,999,400.00	100.0%
Low income: Economic activation	\$8,559,000.00	42.8%
Education: Socioeconomic development	\$10,268,400.00	51.3%
Vulnerable groups: Social development	\$1,172,000.00	5.9%

Affordable device financing scheme

Figure48. Relative distribution of funding for devices and access by macro beneficiary group

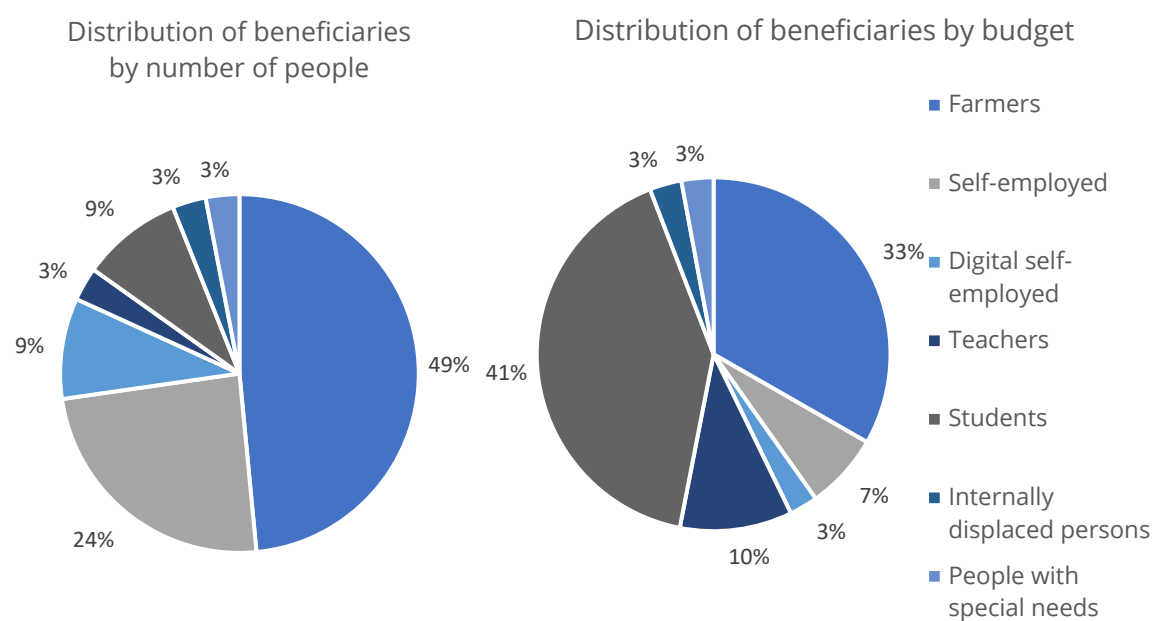


5.6.2. Distribution of funding by beneficiaries

The distribution of the budget by intervention axis can be further developed based on individual beneficiary groups. However, it is important to highlight that there is a significant difference between the distribution of beneficiaries by number of people covered and the distribution of beneficiaries based on the budget.

Affordable device financing scheme

Figure49. Comparison of funding distribution by beneficiary groups in terms of number of people and budget



This difference arises due to pre-established financing conditions where different beneficiary groups receive different devices with different associated costs. For example, in the education intervention axis covering teachers and students, the preferred devices are laptops, which, because they represent a higher cost, will make their financial component higher than more economical devices.

Affordable device financing scheme*Table32 . Distribution of funding by beneficiary groups*

# Group	Beneficiary groups	No. of beneficiaries	Total cost of device (USD)	Cost that would be borne by the beneficiary (USD)	Cost borne by beneficiaries assuming <i>default</i> rates (USD)	Device subsidies and defaults (USD)	Data and voice subsidies (USD)	Total subsidies and defaults (USD)
1	Farmers	160,000	\$6,400,000.00	\$1,760,000.00	\$1,232,000.00	\$5,168,000.00	\$1,488,000.00	\$6,656,000.00
2	Low-income self-employed workers	80,000	\$3,200,000.00	\$3,200,000.00	\$1,920,000.00	\$640,000.00	\$744,000.00	\$1,384,000.00
3	Digital self-employed workers	30,000	\$1,200,000.00	\$1,200,000.00	\$2,560,000.00	\$240,000.00	\$279,000.00	\$519,000.00
4	Teachers (technical and higher education)	10,000	\$3,480,000.00	\$2,088,000.00	\$1,566,000.00	\$1,914,000.00	\$141,000.00	\$2,055,000.00
5	Students (technical and higher education)	30,000	\$10,440,000.00	\$3,132,000.00	\$2,505,600.00	\$7,934,400.00	\$279,000.00	\$8,213,400.00
6	Internally displaced persons	10,000	\$400,000.00	\$0.00	\$0.00	\$400,000.00	\$186,000.00	\$586,000.00
7	People with special needs	10,000	\$400,000.00	\$0.00	\$0.00	\$400,000.00	\$186,000.00	\$586,000.00
Total		330,000	\$25,520,000.00	\$11,380,000.00	\$8,823,600.00	\$16,696,400.00	\$3,303,000.00	\$19,999,400.00

5.7. Financial sensitivity analysis

To develop the financial sensitivity analysis, two different scenarios were considered in relation to the current base financing scenario:

- I. 10% increase in the cost of devices
- II. Reduction in the number of students purchasing computers

5.7.1. 10% increase in device costs

In the first scenario, a 10% increase in device costs was considered, which could occur due to a possible change in the country's macroeconomic situation (e.g., inflation, exchange rate fluctuations, etc.).

33 Table. Assumptions for smart device costs based on a 10% increase in device costs

Type of device provided	Purchase cost of the device (USD)	VAT (%)	Device cost (USD)
Smartphone	\$37.93 (Previously \$34.48)	16	\$44.00 (Previously \$40.00)
Laptop	\$330.00 (Previously \$300.00)	16	\$382.80 (Previously \$348.00)

This change in the financial model assumptions results in a 6.8% increase in the total cost of financing, equivalent to \$1,669,640.00. This increase stems from an 8.3% increase in financing for devices and access. The remaining components of the program are not affected.

Affordable device financing scheme*Table34. Comparison of the program budget distribution by component between the baseline scenario and a scenario with a 10% increase in device costs*

Component	Amount: Base (USD)	Amount: +10% Cost of devices (USD)	Difference
Total funding	\$24,449,400.00	\$26,119,040.00	6.8%
Devices and access	\$19,999,400.00	\$21,669,040.00	8.3%
Maintenance and warranties	\$800,000.00	\$800,000.00	0.0%
E-waste program	\$500,000.00	\$500,000.00	0.0%
Training and activation	\$2,150,000.00	\$2,150,000.00	0.0%
Implementation rate	\$1,000,000.00	\$1,000,000.00	0.0%

5.7.2. Reduction in the number of students purchasing computers

One of the program subcomponents that imposes the highest costs on the budget is the 75% subsidy for portable computers/laptops for 30,000 students, which is the most expensive device considered by the financial model.

This subsidy amount is particularly high given the students' limited ability to make monthly payments. Models with lower subsidy rates can reduce project costs but tend to make it impossible for students to meet their long-term payments.

In this second scenario, the possible need to reduce costs by reducing the number of students purchasing subsidized computers by 5,000, to a total of 25,000, was considered.

This change in the financial model assumptions results in a 5.6% reduction in the total financing cost, equivalent to \$1,368,900.00. This decrease stems from a 6.8% difference in the financing of devices and access. The remaining components of the program are not affected.

Affordable device financing scheme*Table35. Comparison of the distribution of the program budget by component between the baseline scenario and a scenario where the program does not subsidize access costs for beneficiaries receiving devices*

Component	Amount: Base (USD)	Amount: +10% Cost of devices (USD)	Difference
Total funding	\$24,449,400.00	\$23,080,500.00	-5.6%
Devices and access	\$19,999,400.00	\$18,630,500.00	-6.8%
Maintenance and warranties	\$800,000.00	\$800,000.00	0.0%
E-waste program	\$500,000.00	\$500,000.00	0.0%
Training and activation	\$2,150,000.00	\$2,150,000.00	0.0%
Implementation rate	\$1,000,000.00	\$1,000,000.00	0.0%

5.8. Synergies with other PADIM initiatives

The Mozambique Digital Acceleration Project (MDAP) is designed to increase digital adoption and inclusion and accelerate digital transformation across the country, focusing on essential digital foundations and enablers. The project is built around three mutually reinforcing components and a contingency emergency response component.

Figure 50. PADIM Components and Budget Weight.

Components	US\$ million
Component 1: Digital Access and Inclusion	90.0
Subcomponent 1.1: Enabling environment for digital investment, inclusion, and resilience	7.7
Subcomponent 1.2: Digital connectivity and access in rural areas	42.5
Subcomponent 1.3: Digital inclusion initiatives	40.0
Component 2: Foundations for Accelerated Digital Transformation	102.0
Sub-component 2.1: Digital infrastructure for government and the private sector	65.0
Subcomponent 2.2: Data management, data protection, and cybersecurity	15.0
Sub-component 2.3: Digital technology adoption and skills development in the education sector	22.0
Component 3: Project Management and Institutional Coordination	8.0
Component 4: Emergency response	0.0
Total	200.0

The financing scheme complements and strategically depends on other initiatives, namely, and as defined in the PADIM, it will benefit from initiatives that include the review of taxation on digital devices, as well as the financing of domestic solar systems and appliance packages under **ProEnergia+**, basic digital literacy training, and possibly other use cases (e.g., cash transfer programs), to ensure that critical complements (ability to charge and use devices, and recognition of the intrinsic value of the device) maximize impact and sustainability, and reduce the risk of resale of devices by beneficiaries in local secondary markets.

Affordable device financing scheme

According to the Terms of Reference and project documents, PADIM aims to expand digital access and inclusion so that more Mozambicans can benefit from the digital revolution and be socially and economically included through access to digital technologies, and to support crucial foundations for an accelerated and inclusive digital transformation. One of its elements aims to strengthen Mozambique's legal, regulatory, and policy frameworks for the telecommunications sector. It aims to stimulate competition, innovation, and private sector investment to develop network infrastructure coverage, improve Internet speed and reliability, while reducing costs for consumers. It will also strengthen data protection and cybersecurity laws, regulations, and capacities to build consumer confidence in online communications and transactions. Where private sector policies and investment alone are not sufficient, the project will provide financing for the expansion or modernization of mobile networks in rural areas, free public Wi-Fi hotspots, and programs to reduce the purchase price of smartphones in underserved communities and for disadvantaged groups. This will be coupled with digital skills programs to increase capabilities, comfort, and awareness among new users. Finally, the program will invest in basic infrastructure for the delivery of digital services, as well as in digital technologies to prepare students for future employment by improving connectivity in schools, access to digital devices and internet services, and integrating digital skills into curricula.

Table 36. Initiatives and Synergies

Initiative with potential for synergy	Rationale
Initiative: Tax review on devices (1.1.2) <i>Subcomponent 1.1: Creating an environment conducive to digital investment, inclusion, and resilience</i>	This subcomponent includes the review of the tax policy applied to digital devices, which could significantly reduce the cost of acquisition and, consequently, the amount of financing required per beneficiary, allowing a greater number of beneficiaries to be reached. This reform—although not yet announced by the current government—would complement the scheme by making devices more accessible and affordable for low-income groups.
Initiatives: Expansion of broadband connectivity network coverage to selected rural areas characterized by market failures () and Expansion of public access in disadvantaged areas and communities (1.2.2) <i>Subcomponent 1.2: Rural connectivity and digital access</i>	Connectivity is essential for devices to be truly useful. This subcomponent expands network coverage (particularly in rural areas), making the use of devices possible and valuable. It also creates incentives for beneficiaries t , reducing the risk of resale.
Initiative: Promoting digital awareness, literacy, and skills development (1.3.2)	Initiative 1.3.2 provides training in basic digital literacy, which is essential for beneficiaries to know how to use the devices

Affordable device financing scheme

<i>Subcomponent 1.3: Digital inclusion initiatives</i>	distributed and is a key enabler of the financing scheme's success. The training reinforces the value of the equipment and contributes to its retention and productive use, maximizing the impact of the investment in devices. In addition, the financing scheme itself provides for a share of the budget for mandatory training components.
Initiatives: Support for digital connectivity in the education sector (2.3.1) and Support for the integration of ICT in the teaching and learning process and the development of digital skills (2.3.2)	The financing scheme covers groups such as students and teachers. This subcomponent ensures that, when they receive the devices, these groups also have access to educational content, e-learning platforms, and digital training programs, thereby broadening the educational impact of the scheme.
<i>Subcomponent 2.3: Adoption of digital technology and skills development in the education sector</i>	

In addition to the PADIM subcomponents, the success of the smart device financing scheme requires that the devices can be used on an ongoing basis. The ProEnergia+ program (Energy for All Project), led by the Government of Mozambique with support from the World Bank, creates the practical conditions for devices to be charged and used regularly by expanding access to electricity, both through the National Electricity Grid (in suburban and rural areas, via Electricidade de Moçambique) and through off-grid domestic solar systems (via the Energy Fund).

In 2024, ProEnergia+ made significant progress, with more than 895,000 people gaining access to electricity outside the conventional grid through the expansion of mini-grids and domestic solar systems. The recent balance sheet shows concrete results: 169,684 new connections were made, involving infrastructure in educational facilities, health centers, public and religious institutions, as well as residential dwellings with solar energy.

Coordination between the two initiatives should be operationalized through the geographical overlap of investments and the alignment of eligibility criteria, ensuring that beneficiaries of the financing scheme also have access to appropriate energy solutions. The coordination between the two projects will thus overcome one of the main technical barriers to the adoption and use of the devices: accessibility.

5.9. Key stakeholders

The successful implementation of the smart device financing scheme in Mozambique will depend on the coordinated involvement of several key stakeholders, whose capacity, readiness, and strategic role are essential to the program's reach and sustainability.

5.9.1. Readiness and capacity of key stakeholders

Telecommunications operators

Three main operators make up the telecommunications sector in Mozambique: Vodacom, Movitel, and Tmcel.

Vodacom is currently the most ready to participate in the implementation of the scheme. It has a robust distribution and coverage infrastructure, as well as relevant experience through initiatives such as the "Pouko Pouko" program, which aims to facilitate progressive access to smartphones through installment payments.

Movitel stands out for its geographical reach in rural areas, making it a potential strategic partner for the digital inclusion of farmers and isolated populations. Its local presence and logistics in these areas reinforce its capacity to participate in targeted financing schemes.

Tmcel, although a national operator with significant coverage, faces operational challenges that reduce its current implementation capacity. However, it may be viable in initiatives focused on specific smaller target groups.

Banking and Financial Institutions

Banking and financial institutions in Mozambique generally have the infrastructure and experience to support the operationalization of financial instruments such as microcredit. However, they typically require more bureaucracy to integrate high-risk financing programs, which can delay the program. The start-up time will depend on the degree of integration with mobile operators and the availability of credit lines tailored to higher risk profiles.

Distributors

Electronic equipment distribution companies, including local reseller and retail networks, represent a critical link in the delivery chain. However, many are geographically concentrated in urban centers.

Support Associations for Vulnerable Groups

Organizations working with people with special needs, women, and marginalized communities offer effective channels for identifying and supporting beneficiaries. These associations are highly motivated and already play an important role in raising awareness and mobilizing communities but may need additional technical capacity to support the distribution process, monitoring, and basic digital support.

5.9.2. Opportunities for Private Sector Mobilization

The scheme presents several opportunities to attract and integrate the private sector, including:

- Telecommunications operators and mobile money providers could offer distribution channels, affordable connectivity packages, and embedded financing solutions.
- Microfinance institutions and commercial banks could develop credit products tailored for device acquisition, with risk mitigation through guarantees or co-financing.
- Manufacturers and distributors can collaborate on the logistical aspects of the project as device suppliers.

The creation of joint initiatives between these actors, with public or development partner support, could increase the scalability and sustainability of the program.

5.10. Risk assessment and mitigation measures

The implementation of a Smart Device Access and Financing Scheme, despite its high transformative potential for digital inclusion in a country such as Mozambique, entails a number of risks that must be assessed and mitigated. These risks could compromise the program's effectiveness, sustainability, and reach if not properly addressed.

Below we present the project risk matrix, a detailed characterization of the risks, and mitigation measures.

Figure 51. Risk Matrix

		Severity				
		Negligible	Tolerable	Moderate	Severe	Severe
Probability	Very likely					
	Likely					
	Possible		Difficulties in Identifying and Verifying Beneficiaries & Non-payment by Beneficiaries and Fraud	Delays in Device Delivery		
	Unlikely		Challenges in Training and Activating Beneficiaries	Challenges in Integrating Technological Platforms and Payment Systems	Administrative and Regulatory Impediments	
	Very unlikely					
Risk Scale		Very low	Low	Medium	High	Very high

5.10.1. Risk of Delays in Device Deliveries

Risk Description:

The acquisition and import of 310,000 devices may be subject to logistical challenges, customs and transportation delays (sea/air), as well as quality control issues at origin or destination. In addition, suppliers' ability to meet the volumes and deadlines defined in the contracts may be affected by unforeseen factors.

Impact on the Project:

- Delays in the distribution phase to beneficiaries.
- Interruption or suspension of activation and training campaigns.
- Potential additional costs for storage or urgent transport.

Mitigation Measures:

- The project implementation manual will include time buffers in the schedule to absorb unexpected delays in device delivery.
- Contracts with suppliers will include penalties for delays. It will also be crucial to conduct thorough *due diligence* on suppliers. This includes verifying production capacity, delivery history, financial health, and quality certifications. Diversification of suppliers, if feasible, can reduce dependence on a single point of failure.
- The hiring of suppliers and management of import logistics should be the responsibility of the service providers contracted to implement the distribution initiatives. This will allow for thorough *due diligence* and minimize the exposure of the financing fund to costs associated with delays in the delivery of goods.
- Service providers for the implementation of distribution initiatives will be required to submit a logistics plan covering all stages from the factory to the final point of distribution in Mozambique. This should include the selection of efficient transport routes, temporary storage planning (if necessary), and coordination with customs agents to streamline import processes.
- A real-time tracking system for shipments should be implemented to proactively identify any deviations or delays. Maintain constant communication with suppliers on the status of production and shipment.

5.10.2. Risk of Administrative and Regulatory Impediments

Risk Description:

This is a comprehensive risk that can manifest itself on several fronts:

- The device approval process by the competent authority (INCM) may be slower than expected.
- The finalization of agreements with service providers for PAYGO payment methods, whether they are Mobile Network Operators (MNOs), manufacturers, banks/fintechs, or other entities, may be delayed due to complex negotiations, internal legal approvals, or administrative red tape.
- Any tax exemptions or other facilitating policies that may be adopted require government approval, which can be time-consuming.
- New laws or regulations that arise during project implementation may impact project implementation.

Impact on the Project:

- Delays in the import and distribution of devices.
- Delays/inability to start or scale PAYGO operations.
- Compromise of overall project schedule and loss of windows of opportunity.

Mitigation Measures:

- The project implementation manual will provide for the creation of an accelerated process or dedicated windows for the approval of devices included in the scheme. This may involve the pre-submission of documentation.
- The project implementation manual will provide for the creation of a permanent inter-institutional working group involving importers, the regulatory authority (INCM), the Ministry of Communications and Digital Transformation, and local distributors. This group will be tasked with proactively resolving any regulatory or bureaucratic issues that arise.

5.10.3. Risk of Difficulties in Identifying and Verifying Beneficiaries

Risk Description:

The process of selecting, registering, and verifying the eligibility of beneficiaries can be time-consuming and complex, especially in rural areas or for vulnerable groups with low literacy levels. Challenges include the lack of valid identification documents (a risk already identified), difficulties in collecting and validating data on a large scale, and the need for coordination with multiple local entities.

Impact on the Project:

- Demobilization of target beneficiaries because the eligibility verification process is too complex or time-consuming.
- Inability to reach certain defined target groups.
- Potential for operational inefficiencies and increased administrative costs per beneficiary.
- Delays in the delivery of devices due to queues and congestion at registration/distribution points.

Mitigation Measures:

- The implementation manual will provide for the phased implementation of financing mechanisms (in pilot projects), allowing for the adaptation of approaches if difficulties are encountered in the field in reaching or identifying target beneficiaries.
- The implementation manual will provide for the implementation (in partnership with private operators) of technological solutions for the registration and verification of beneficiaries, such as mobile applications that enable data collection and remote validation (where connectivity allows).
- The program aims to collaborate with local authorities, community leaders, and civil society organizations to facilitate the identification and mobilization of beneficiaries, especially in rural and hard-to-reach areas.
- Prior campaigns will be carried out to inform the population about the requirements and the registration process, minimizing the need for corrections and returns.

5.10.4. Risk of Challenges in Beneficiary Training and Activation

Risk Description:

The digital literacy and effective use of devices component is crucial for "digital activation." Delays may occur in the preparation of training materials, the training of "Digital Ambassadors" or local trainers, the mobilization of beneficiaries for training sessions, or due to external factors such as weather conditions that prevent access to remote locations.

Impact on the Project:

- Delays in training beneficiaries or inability to train beneficiaries. The usefulness of the devices and the expected economic development decrease in this context.
- Prolonged waiting for training and, consequently, for the device, can lead to frustration among beneficiaries, reducing their enthusiasm and interest in the program.

Mitigation measures:

- The training and activation program will provide for the design of culturally relevant training materials in local languages and using accessible teaching methodologies (e.g., short videos, practical demonstrations, interactive sessions).
- The training and activation program will also provide for the mobilization of "Digital Ambassadors" or local trainers who have received ongoing training and support, not only in digital literacy, but also in effective facilitation and communication techniques.
- Mechanisms will be put in place to encourage participation in training sessions, such as linking the full activation of the device to the completion of basic digital literacy modules.

5.10.5. Risk of Non-Payment by Beneficiaries and Fraud

Risk Description:

The implementation of the PAYGO model entails the risk of non-payment by beneficiaries, leading to their *default* and the total or partial loss of the investment per beneficiary. This is an inherent risk in any microcredit financing project and as such cannot be completely avoided, but it can be mitigated. The same applies to the most common types of fraud, such as beneficiaries reselling the devices they are given. In the case of women, there is also the risk that the device will be taken away by their father or husband, as head of the household, for his own use.

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Impact on the project:

- High *default* rate and losses for the project.
- Inability to reach the target beneficiaries due to diversion of devices to unintended population sectors.

Mitigation Measures:

- In order to increase the benefit of the devices for beneficiaries, the implementation manual provides for the purchase of entry-level devices of reasonable quality and price (rather than purchasing the cheapest device on the market). This mitigation measure was suggested by stakeholders during interviews, as they observed a reduction in the *default* rate when the quality of the device increased.
- In addition, a period is planned during which access costs will also be reduced in order to increase the benefit of the device for low-income users.
- In order to ensure that payments are made, devices will be remotely blocked when the user fails to pay their installment. The block will be removed when the user makes the missing payment, without additional financial penalties.
- The value of the phased payments was designed taking into account the financial capacity of the target groups, as assessed through the population survey.
- For certain interest groups (e.g., women), the implementation manual will provide for additional monitoring mechanisms to confirm the use of the device by the beneficiary in question.

5.10.6. Risk of Challenges Integration of Technology Platforms and Payment Systems

Risk Description:

The implementation of the PAYGO model requires seamless integration between project management systems (for payment monitoring), ORM platforms (payment receipt, device blocking/unblocking), and mobile money services (M-Pesa, E-mola, mKesh). Technical challenges, interoperability failures, or slow collaboration between parties can cause delays.

Impact on the project:

- Difficulty in managing and monitoring beneficiary payments.

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- Problems with remote device blocking/unblocking, increasing the risk of non-compliance.
- Additional costs to resolve integration issues.

Mitigation Measures:

- Conduct small-scale testing of integrations between project management systems, ORMs, and *mobile money* platforms before large-scale implementation.
- Allocate dedicated technical teams from each partner to work together on integration, with clear communication channels and well-defined interoperability objectives.
- Establish clear SLAs with ORMs and *mobile money* providers that define response times for resolving integration issues and system availability.

5.11. Financial sustainability measures

5.11.1. Stakeholder engagement

Universal Access Service Fund (FSAU)

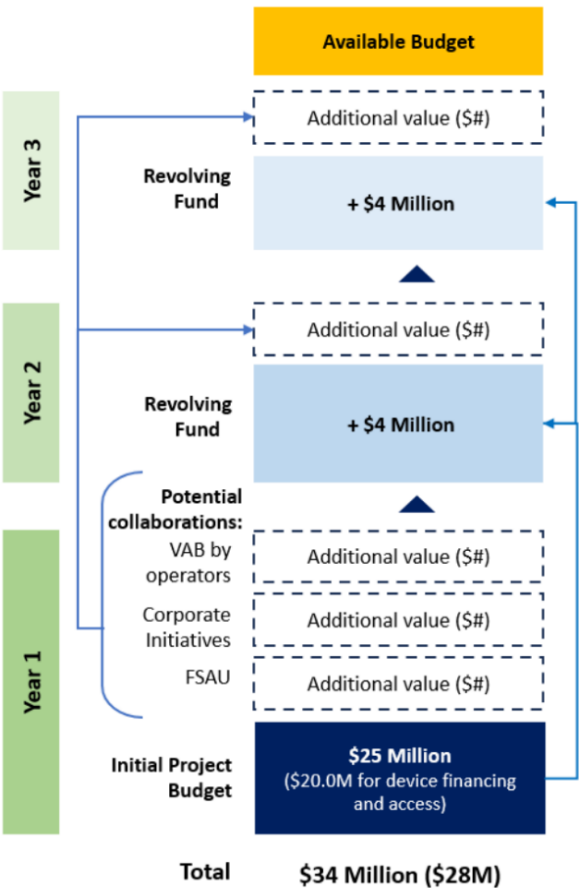
In order to reach as many beneficiaries as possible, prior to the start of the project, the potential financing of project components eligible for support from the Universal Access Service Fund (FSAU) will be defined. This financing will allow an amount equal to the amount made available by the World Bank to be released for the entire project or to reinforce a component thereof.

Stakeholders

The PMU – Project Management Unit, in coordination with INCM, should encourage the involvement of private sector stakeholders in financing various components of the project as corporate initiatives of mutual interest, thereby bringing more financial capacity to the project. These stakeholders may come from various sectors, including agriculture, education, and ICTs – Information and Communication Technologies.

Operators

The gross value added (GVA) provided by operators in terms of reductions in the costs of data and voice packages to be included in the program should also be recorded in the project accounts.



5.11.2. Revolving Fund

The operational sustainability of the project will be ensured through a *revolving* fund. This fund will be fed by repayments made by beneficiaries who will benefit from microcredit initiatives. For example, in the case of a farmer who benefits from a 65% subsidy on the cost of the device, he will pay 35% of the cost of the device on credit. This 35% will be returned to the investment fund for use in a second phase of the program.

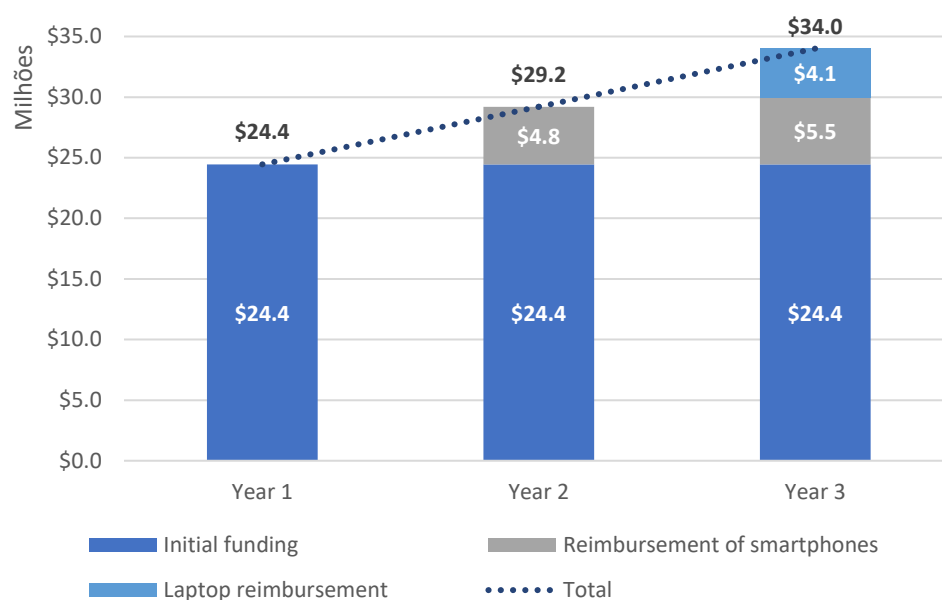
Taking into account the financial model applied, the total amount to be repaid by beneficiaries is \$11,380,000. However, the model also takes into account the expected default rates for each specific group of beneficiaries. In the case of the farmer in the example, the assumed default rate is 30%. Taking into account the default rates for each group, the total amount expected to be repaid by all beneficiaries is \$8,823,600.

This amount should be used to continue the program and increase the cumulative number of beneficiaries.

It is important to note, however, that the repayment schedule varies depending on the device to which the beneficiary had access. In other words, in the case of smartphones, this amount will be repaid in full after one year and corresponds to \$4.8 million. In the case of laptops, it will only be reimbursed in full after two years, corresponding to \$4.1 million. As such, the management and reinvestment of the revolving fund should take this periodicity into account.

Table37. Financial flow of the revolving fund over three years of implementation

(\$ million)	1st Year	2nd Year	3rd Year
Initial Budget	\$25.0	\$0.0	\$0.0
Refunds	\$0.0	\$4.8	\$4.8
<i>Source: Smartphones</i>	\$0.0	\$4.8	\$0.7
<i>Source: Laptops</i>	\$0.0	\$0.0	\$4.1
Total	\$25.0	\$4.8	\$4.8
<i>Amount allocated to financing devices and access</i>	\$20.0	\$2.6	\$3.5

Affordable device financing scheme*Figure52. Cumulative financing from the revolving fund over three years of implementation**Second year of implementation:*

Thus, at the beginning of the second year of implementation, the amount available in the revolving fund for reinvestment is approximately \$4.8 million. From this available base amount, the financing scheme presented here provides for the allocation of \$1 million to reinforce the complementary training and activation component as provided for in Chapter 6.2, leaving \$3.8 million for reinvestment.

Assuming that the amount will be reinvested in accordance with the initial budget distribution previously defined in Chapter 5.6, of the \$3.8 million, 82% (**\$ 3.1 million**) will be redirected to new device and access purchases, while the remaining 18% (\$0.7 million) will be directed to complementary activities (i.e., maintenance and warranties, e-waste program, training and activation, implementation costs).

Taking into account the new allocation of \$3.1 million for the acquisition of devices and access, the project could additionally benefit **50,400 people** in a second phase, according to the table below – assuming that reinvestment will be redistributed in the same proportion as the initial financial model.

Third year of implementation:

At the beginning of the third year of implementation, the amount reimbursed by beneficiaries and available for reinvestment totals \$4.8 million and consists of the following components:

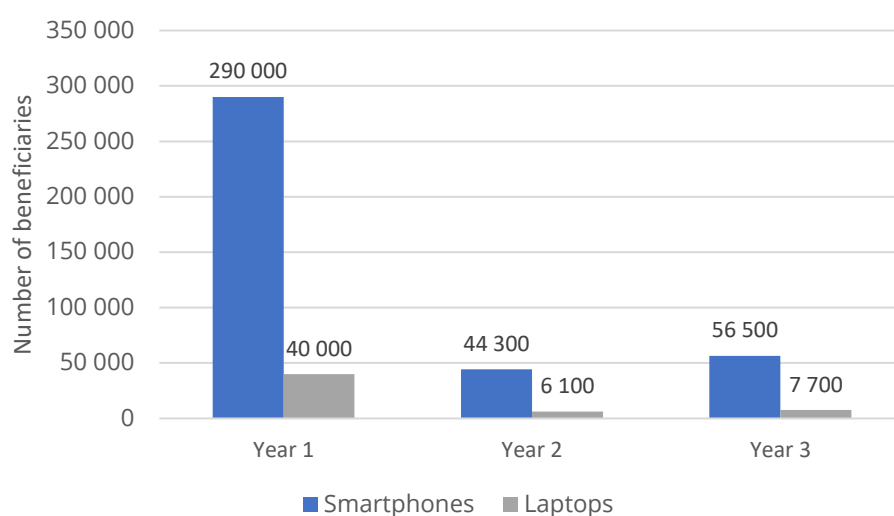
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- \$4.1 million in repayments corresponds to laptops allocated in the first year
- \$0.7 million in repayments corresponds to smartphones allocated in the second year

Of the \$4.8 million available, \$3.9 million (82%) will be redirected to finance devices and access, while \$0.7 million (18%) will be redirected to finance complementary activities.

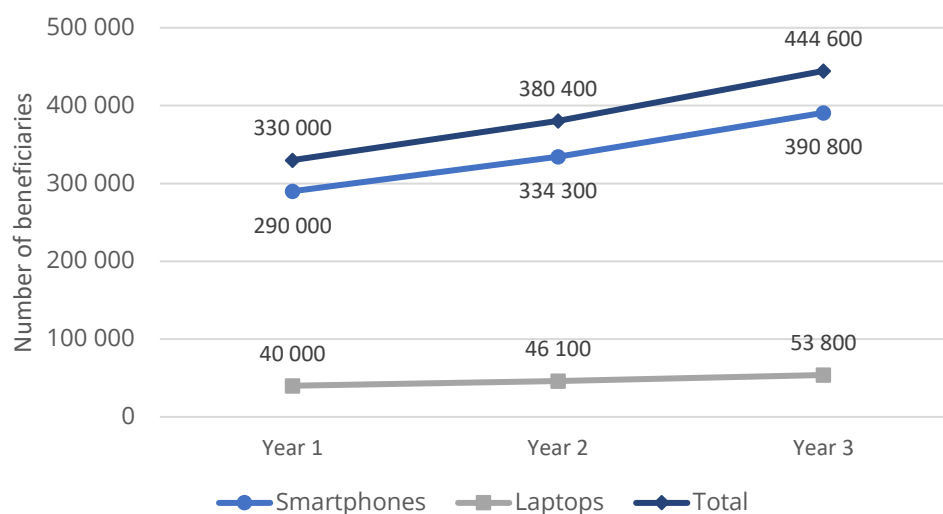
Taking into account the new allocation for the purchase of devices and access, the project could additionally benefit **64,200 people** in a third phase.

Figure53. Number of beneficiaries per device allocated or access funding over 3 years of implementation.



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Figure54. Cumulative number of beneficiaries per device allocated or access funding over 3 years of implementation



Affordable device financing scheme*Table38. Amount reinvested and number of beneficiaries based on reinvestment of the revolving fund.*

Group of beneficiaries	1st Year		2nd		3rd Year		Cumulative number of beneficiaries
	Initial amount invested (USD)	Number of initial beneficiaries	Reinvested amount (USD)*	Number of additional beneficiaries	Amount reinvested (USD)*	Number of additional beneficiaries	
Farmers	\$6,656,000	160,000	\$1,021,428.42	24,554	\$1,306,127.09	31,300	215,800
Self-employed	\$1,384,000	80,000	\$212,388.36	12,277	\$271,586.52	15,600	107,800
Digital self-employed workers	\$519,000	30,000	\$79,645.64	4,604	\$101,844.95	5,800	40,400
Teachers	\$2,055,000	10,000	\$315,359.89	1,535	\$403,258.89	1,900	13,400
Students	\$8,213,400	30,000	\$1,260,426.71	4,604	\$1,611,740.42	5,800	40,400
Internally displaced persons	\$586,000	10,000	\$89,927.44	1,535	\$114,992.56	1,900	13,400
People with special needs	\$586,000	10,000	\$89,927.44	1,535	\$114,992.56	1,900	13,400
Total	\$19,999,400	330,000	3,069,104	50,642	3,924,543	64,200	444,600

* Amount reinvested exclusively in financing devices and access.

6. Complementary Measures



6. Design of complementary measures

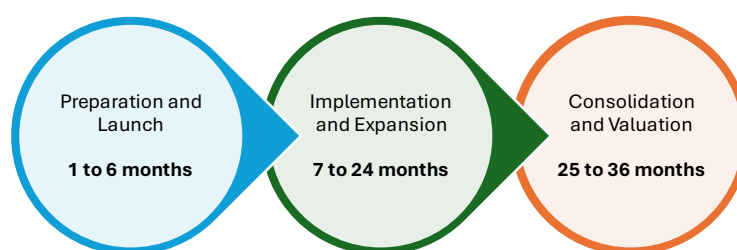
6.1. Communication and awareness

6.1.1. General Strategy and Timetable

The communication campaign will last for three years, with **a total budget of \$300,000**, included in the 8.1% (\$2.15 million) of the program allocated to training and activation of beneficiaries. The main objective is **to raise awareness and inform** beneficiaries about the importance of digital and financial inclusion, as well as to publicize the financing scheme for affordable smart devices.

The strategy adopts a multi-channel approach (radio, community theater, and door-to-door) to maximize reach, even in remote areas and communities with low literacy levels. There will be a special focus on the launch (to generate initial momentum) and a robust first phase, followed by gradual expansion and consolidation of the message over the three years.

Figure55. Phases of the communication and awareness campaign



Affordable device financing scheme*Table39. Description of the phases of the communication and awareness campaign*

Phase / Duration	Description	KPIs
1. Preparation and Launch Months 1 to 6	During this initial phase, a detailed communication plan should be drawn up and materials adapted to the local context should be developed, including radio spots, leaflets, posters, and short videos in Portuguese and local languages. Teams and strategic partners, such as radio broadcasters, community theater groups, and local volunteers, should be trained. It is also recommended to formalize partnerships with local radio stations, NGOs, and community leaders. This phase will culminate in the official launch of the project through public events and media campaigns, with a special focus on promoting digital inclusion and presenting the new subsidized credit model for the purchase of devices.	• Launch campaign carried out in all provinces covered by the project • Minimum of 1 local radio station per province to broadcast advertising spots • Minimum of 1 community leader + 2 local mobilizers/digital ambassadors per municipality covered by the project
2. Implementation and Expansion Months 7 to 24	This phase will mark the start of intensive implementation of activities on the ground. Communication should be continuous and diversified, with an emphasis on radio, where regular programs and advertisements are planned, including interactive content At the same time, door-to-door work should be activated by local mobilizers (e.g., "digital ambassadors"), who will visit communities to explain the program and assist with registration. These efforts should be accompanied by the distribution of simple and visually appealing support materials, such as illustrated leaflets and stickers with key messages. Community theater can be used as an active mobilization tool, with traveling plays performed in markets, fairs, and schools, dramatizing real stories of digital inclusion.	• Over 70% of the target population reached • 50,000 families contacted door-to-door
3. Consolidation and Evaluation Months 25 to 36	In the final phase, communication should be adjusted based on lessons learned and focused on areas with the lowest uptake.	• More than 85% of target beneficiaries aware of the

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Phase / Duration	Description	KPIs
	Reinforcement campaigns should be organized in the media, highlighting the results already achieved and sharing inspiring stories of beneficiaries, with the aim of encouraging new participants in the final stage of the project. Partners should remain actively involved: continue broadcasting content on local radio stations, continue door-to-door activities by NGOs and community groups, including mentoring and information sessions. Direct feedback from beneficiaries should be integrated to refine messages. The phase should culminate in an assessment of the campaign's impact, through surveys and analysis of indicators, and the definition of a transition plan for communication activities for local actors, ensuring post-project continuity.	program at the end of the project • Evaluation report published • Transition plan for post-project communication to local actors established

6.1.2. Specific Actions by Beneficiary Group

The campaign will be segmented to meet the needs and characteristics of each target group, adjusting messages, channels, and appropriate partnerships.

Table40. Specific communication actions by beneficiary group

Target audience	Key message	Channels	Approach
Farmers	The value of connectivity for improving agricultural practices, accessing weather forecasts and market, and the benefits of subsidized credit for purchasing smartphones.	• Rural radio in local languages (Emakhuwa, Sena, Changanana). • Community theater at agricultural fairs.	• Simple audiovisual materials (radio dramas, educational songs). • Involvement of agricultural cooperatives and farmers' associations. • Ensure that at least 50% of the target audience are

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Target audience	Key message	Channels	Approach
		Door-to-door campaign using agricultural extension workers and community leaders.	women farmers (exclusive sessions for women's groups).
Low-income self-employed workers	How a smartphone can boost small businesses (sale of products/services), access to customers via WhatsApp/Facebook, and improve financial management (use of mobile money).	- Local/peri-urban radio (information boards and spots). - Social media (Facebook, WhatsApp groups). - Partnerships with market vendors' associations and microcredit cooperatives.	- Flash training in municipal markets and transport terminals (demonstrating useful apps and creating business pages on social media). - Focus on low-income women entrepreneurs (success stories, local mentors). - Step-by-step visual content. - Local network of "digital ambassadors."
Digital Self-Employed Workers	Opportunities in the digital world for young freelancers and informal entrepreneurs – using smartphones to access job platforms, e-commerce, and monetize digital skills.	- Social media (Facebook, Instagram, TikTok). - Influencers or inspiring figures from the Mozambican digital sector. - Urban radio (segments in Portuguese) and podcasts on the digital economy.	- Digital workshops in innovation centers and universities (in partnership with incubators/co-working spaces). - Training content on creating professional profiles, using platforms (Biscate, Upwork), and online safety. - Ensure the inclusion of vulnerable women and young people (grants for young mothers, dedicated training for girls in ICT). - Create an online community.
TVET and higher	Importance of devices in improving teaching quality and access to modern teaching resources.	Educational radio stations and programs on national radio	Partnership with the Ministry of Education and TVET institute directors.

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Target audience	Key message	Channels	Approach
education teachers	Emphasize how the initiative contributes to more interactive classes and efficient academic management.	(Rádio Moçambique). • Institutional networks (ministries, universities). Webinars and live streams on social media.	• Specific information materials for teachers (quick guides on using e-learning platforms, class management). • Promote teacher ambassadors. Written communication (detailed brochures, PDF via email).
TVET and higher education students	Smart devices as a tool for academic success and entry into the labor market. Promote the program as an opportunity to acquire low-cost laptops/mobile phones, allowing access to e-books, online courses, and even income generation (freelancing, digital businesses).	• University social networks and student groups (infographics and short videos). • University radio stations and youth podcasts. Activation on academic campuses (information stands, flyers).	• Campaign aligned with the academic calendar. Online contests or challenges (hackathon). • Proactive and inclusive outreach (girls, students with special needs, residents in rural areas). • Partnerships with telecoms (Vodacom, etc.) for promotional mobile data offers.
Internally Displaced Persons	Even those displaced by conflict or disasters can rebuild their lives through connectivity—access to vital information, contact with support networks, and income opportunities via mobile phones. Emphasize that the project relaxes requirements (e.g., documentation) for the inclusion of these vulnerable groups.	• Community radio close to resettlement centers/ ly displaced camps (local languages: Macua, Maconde). • Traveling community theater in centers for displaced persons. • Door-to-door communication through partner humanitarian	• Demonstration sessions in displaced persons centers (basic mobile phone use, financial education). Simple audiovisual materials (pictograms). • Ensure translation into native languages and assistance from cultural mediators. • Work with displaced persons' leaders and local authorities.

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Target audience	Key message	Channels	Approach
		NGOs (UNHCR, Red Cross, CARITAS).	
People with Special Needs	Right to digital inclusion and autonomy: highlight stories of people with special needs who have improved their quality of life with assistive technology. Combat stigma by showing that people with special needs can be digitally and economically active.	• Radio (programs and testimonials focused on disability and technology). • Videos with subtitles and sign language on social media and local TV. • In-person workshops in collaboration with associations for people with disabilities.	• Launch public awareness campaigns to combat social stigma and promote digital accessibility. • Materials in accessible formats (Braille, audio guides, tutorials with narration). • Partnerships with NGOs and specialized associations (ADPP, FAMOD, ADEMO). • Specific KPIs to measure reach and attitude change.

6.1.3. Main Communication Channels

To ensure broad and effective coverage, the campaign will use the following core channels in a coordinated manner.

Table41. Communication channels

Main Channel	Detailed Description	Success Indicator
Radio	• The medium with the widest national reach, crucial for rural areas and audiences with low literacy levels. • Production of 30-60 second spots in Portuguese and key local languages, broadcast at peak listening times (early morning and late afternoon). • Fortnightly interactive radio programs on community radio stations to answer questions (e.g., panels with guests).	Number of stations involved and frequency of content broadcast.

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Main Channel	Detailed Description	Success Indicator
	Themed songs and short dramas to reinforce the message.	
Social Media and Digital Media	- Use of Facebook (most widely used), WhatsApp (viral messages and groups), Instagram, and TikTok for young people and urban audiences. - Content adapted to each platform: short video testimonials, simple infographics on financing, hashtags (#InclusãoDigitalMZ, #MeuPrimeiroSmartphone). - Collaboration with local digital influencers. Constant monitoring of feedback for quick response.	Monthly reach (impressions, views) and engagement rate on posts.
Community/Local Theater	- Training and support for community theater groups in target provinces to stage traveling educational plays. - Use of traditional theater (humor and music) to illustrate everyday stories where mobile technology solves practical problems. - Performances at fairs, squares, markets, and schools, followed by discussion sessions. - Help to overcome literacy barriers in a visually and emotionally engaging way.	Number of performances held and total estimated audience.
Door-to-door campaigns	- A team of community mobilizers (local leaders, NGO volunteers, young "digital ambassadors") will make regular visits to the most isolated communities with illustrated leaflets and live demonstrations, explaining the program's operation to families individually. - Personalized approach for people with little information or who are reluctant, building trust. - Emphasis on mobilizers who speak the local language and female mobilizers to contact female beneficiaries.	Number of households visited and conversion rate of these visits into program enrollments.

6.1.4. Materials and linguistic adaptation

A variety of educational and promotional materials will be developed, taking into account the linguistic diversity and literacy levels of the beneficiaries.

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Table 42. Communication materials

Category of Material	Description and Main Features	Examples and Implementation Details	Target Audience and Accessibility
Simple Printed Materials	• Clear and concise language, short sentences. • Translations into the predominant local languages by region (Emakhuwa, Xichangana, Elomwe, Sena, Nhungue, etc.). • Design with a focus on visual elements.	• Brochures, posters, and flyers. • Example content: visual step-by-step guide, from registration to obtaining the device.	• Wide audience, including people with reading difficulties. • Icons, illustrations, and infographics to convey the message.
Audio and Audiovisual Materials	Audio recordings and short videos.	• Audio: Messages in local languages for community radio and loudspeakers (sound cars, megaphones in markets). • Videos: Short videos with Portuguese subtitles for social media and community sessions (mobile projectors). • Example content: use cases and basic tutorials (e.g., mobile wallet, online classes).	• Illiterate: Covered by audio messages. • Low vision/visually impaired: Audio-descriptive content. • Deaf: Inclusion of sign language or easy-to-read subtitles.
Accessibility and Inclusion in Materials	• Good universal accessibility practices applied to all materials. • Development of adapted training materials.	• Color contrasts suitable for color blind people. • Large, legible fonts. • Braille versions of key brochures. • Videos with sign language interpreters. • Step-by-step tutorials for different levels of digital literacy.	• People with special needs (equal access to information). • Diverse digital literacy profiles.
Cultural Context	• Messages and examples that reflect the local context.	• Use of proverbs or popular expressions in translations.	• Local audience for better resonance and understanding.

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Category of Material	Description and Main Features	Examples and Implementation Details	Target Audience and Accessibility
	Validation of materials in situ with pilot groups.	References to everyday situations (going to the farm, sending money via mobile wallets).	Ensuring that language and images are appropriate and effective.

6.1.5. Strategic Partnerships

The success of the campaign depends on strong partnerships with local and national actors. Collaborations should be formalized in the following areas.

- Local and Community Radio Stations:** Active collaboration should be established with radio stations in the target provinces to ensure regular broadcast of campaign content. Formal agreements should include preferential conditions, such as social tariffs or free airtime for educational programs. Community radio stations, many of which are run by local associations or religious institutions, should be integrated as central vehicles of the strategy and involved as multipliers of communication, given their proximity and credibility with communities. It will be essential to promote the production of content in local languages, adapted to regional contexts. A concrete example could be a community radio station in Nampula that produces a weekly program in Emakhuwa, entitled "Technology in the Machamba," supported and sponsored by the project.
- Telecommunications operators:** The direct involvement of operators such as Vodacom, Movitel, and Tmcel as strategic partners in the campaign is recommended. These entities could contribute by sending mass SMS messages targeting specific segments of the population that match the profiles of beneficiaries. Special data package offers for new users of the program or logistical support in remote areas could also be negotiated. Given their interest in expanding their user base and digital services, these partnerships should be framed within a logic of mutual benefit. For example, Vodacom could collaborate by offering M-Pesa training to farmers or internally displaced persons, while promoting financial inclusion and its own service network.
- Non-governmental organizations (NGOs) and community groups:** It is highly recommended to leverage the territorial presence and experience of local and international NGOs already active in the implementation areas. TechnoServe and other organizations linked

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to rural development could facilitate access to farming communities; initiatives such as MUVA could support links with young female entrepreneurs and students; humanitarian NGOs such as the Red Cross, IOM, or CARE could work with displaced populations; and associations representing people with disabilities could ensure the inclusion of this specific group. The campaign should provide tailored materials and training to these organizations so that they can incorporate the key messages into their regular activities. For example, an NGO that conducts training sessions for farmers could include a specific module on the digital program; an association of persons with disabilities could publicize the scheme at its member meetings. This integrated approach will broaden the campaign's reach and strengthen its credibility by leveraging existing and trusted networks.

- **Government and educational institutions:** It will be essential to coordinate efforts with local authorities, including district administrators, traditional leaders, and others, ensuring institutional legitimacy and facilitating community mobilization. The Ministry of Education, as well as secondary schools, technical and vocational institutes, and universities, should be actively involved in disseminating the campaign to teachers and students through formal channels and joint activities. Public training centers, such as INCM, should also be mobilized to integrate digital and financial literacy content into their programs, promoting the continuity of the campaign's actions within the framework of continuing education promoted by the State.
- **Private Sector and Public Figures:** The involvement of companies and public figures with a social commitment to digital inclusion is recommended. Commercial establishments, banks, and technology providers could sponsor local events, such as traveling technology fairs, by offering gifts, discounts, or logistical support, encouraging the participation of the population. At the same time, religious or community leaders with significant social influence should be invited to act as ambassadors for the campaign, disseminating the main messages in formal and informal contexts, adapting them to the values and references of their communities.

In all these partnerships, it is recommended that commitments be formalized through memoranda of understanding, defining roles, expected contributions, and monitoring mechanisms. Quarterly coordination meetings should be organized between partners to align strategies, share best practices, and resolve any constraints. This collaboration network will be essential not only for the effectiveness and immediate reach of the campaign, but also to ensure its sustainability in the medium term, promoting digital inclusion on an ongoing basis, even after the project has ended.

6.1.6. Gender Equality and Youth Inclusion

The campaign will mainstream gender equality and youth inclusion principles, both in the content and implementation of activities, to ensure that women and young people are not only beneficiaries but also protagonists of the process.

- **Focus on Women:** Clear quantitative targets should be set to ensure this representation, such as ensuring that at least 50% of the farmers benefiting from the program are women. In terms of communication, it will be necessary to develop specific messages aimed at women, highlighting how access to a smartphone can facilitate income-generating activities or support their children's education. Cultural barriers should be addressed directly, particularly through awareness-raising activities on community radio and theater, targeting husbands, local leaders, and the community at large, with the aim of demystifying gender stereotypes and reinforcing the legitimacy of women's access to technology. In addition, it is recommended that women be mobilized as communicators and role models (radio broadcasters, community mobilizers, innovative farmers, or successful micro-entrepreneurs) who can inspire other women and promote positive identification. Training content should also be adapted to address the limitations of female literacy observed in some regions, favoring practical, visual, and participatory methodologies.
- **Inclusion of young people:** Youth participation should be ensured both as a direct target group and as a mobilizing force for the campaign. Many of the expected beneficiaries (students, informal workers, and users of digital services) will be young people, so it is recommended to use appropriate channels and formats, such as social media, informal language, and elements of digital culture (e.g., memes, short videos), which facilitate the engagement and involvement of this audience. At the same time, it will be essential to involve young people as local facilitators, through the creation of volunteer programs or temporary contracts for university students or young people from the community. They could, for example, carry out door-to-door digital training or support older people in using smartphones. This approach will make the campaign more dynamic and strengthen its ability to communicate with young people, using their own language and references. Messages should also highlight topics of interest to young people, such as technology training opportunities, online employment, or digital entrepreneurship. When designing the campaign, it is also recommended to create spaces for direct participation, such as innovation contests, youth forums, or active listening sessions, allowing young people to contribute ideas and feel represented.
- **Specific actions:** Complementary measures should be planned to ensure that women and young people in the most vulnerable situations are effectively reached. These include the need to proactively publicize the program among female students and young people with disabilities in remote areas; organize information sessions exclusively for women in rural

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areas, providing a comfortable and safe environment for asking questions; and adjust the schedules of community activities so that they do not conflict with domestic responsibilities traditionally assigned to women. In terms of visual communication, it is recommended to produce content that depicts couples or families in which men support women in using technology, promoting positive models of sharing and collaboration. For young people, it is advisable to use gamification strategies—such as online challenges or quizzes with prizes (e.g., mobile data, technological accessories)—to increase engagement and reach. In summary, the campaign should be designed and implemented in an inclusive manner, actively contributing to reducing gender and age disparities and promoting the equitable and transformative participation of women and young people.

6.1.7. KPIs and Expected Results

Monitoring and evaluation will be ongoing, with Key Performance Indicators (KPIs) defined for each phase of the campaign, ensuring that objectives are met and allowing for tactical adjustments. The main KPIs and expected results per phase are defined below.

Table43. KPIs and expected results of communication campaigns

Program Phase	Key Performance Indicators (KPIs)	Expected results
Launch (1–6 months)	• Number of materials produced (at least 5 formats in 2 languages) • Number of launch events held (at least 1 national/provincial event) • Number of mentions in the national media about the campaign (at least one) • Feedback channels with at least 500 interactions	•30% of the target population aware of the project • Partnership agreements with radio stations/NGOs signed and operational • Communication bandwidth created
Expansion (7–24 months)	• Geographic coverage achieved (more than 50% of priority municipalities by month 24)	• 30% of the target population aware of the project • High female participation rate (>40% of registrants among farmers, >30% among other groups)

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Program Phase	Key Performance Indicators (KPIs)	Expected results
	• Frequency of message dissemination (more than 2 radio spots)	• Increase in the use of mobile wallets in target regions
Consolidation (25–36 months)	• Final awareness level (85% of potential beneficiaries are aware of the program by month 36) • Beneficiary satisfaction with information received (70% consider communication "useful and clear") • Number of beneficiaries effectively reached . vs. target (reach at least 85% of the overall beneficiary target)	• Sustainability and legacy: Campaign catalyzes program uptake, resulting in thousands of digitally included citizens • Qualitative change: Reduction of stigma against technology, creation of support networks (user groups, digital ambassadors) • Documentation of lessons learned and best practices for future campaigns
Cross-cutting	• 50% of beneficiaries in training activities are women • 40% of beneficiaries in training activities are young people	• Ensure gender equality and inclusion and youth participation

6.1.8. Detailed Campaign Budget

The following is a breakdown of the budget by the main areas of action of the campaign, ensuring **efficient use of the \$300,000** available.

Table44. Detailed budget for communication campaigns

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Axis of Action	Amount (USD)	%	Justification
Production of content and educational materials	50,000	16%	- Essential for having quality materials tailored to the audience, in line with the assumption of relevant content in local languages and accessible formats. - Includes graphic design, translations, printing, audio/video production (radio spots, short subtitled videos), and accessible materials (Braille, audio description).
Radio Campaign (National and Community)	80,000	27%	- Radio is the main medium for reaching rural and multilingual audiences and requires consistent investment. - Covers the purchase of advertising space, production of special programs, and negotiation of monthly packages with local radio stations in all target provinces.
Social and Digital Media	30,000	10%	- Expand presence on social media and ensure professionalism in engaging urban youth, at a relatively low cost compared to traditional media. - Funding for sponsored campaigns, hiring a part-time social media manager/content creator, and developing digital pieces.
Community Theater and Local Mobilization	50,000	16%	- An effective method for direct community engagement and messaging in local languages, requiring resources to cover multiple provinces with regular repetitions. - Includes training and fees for theater groups, production of stage kits, and touring logistics.
Door-to-Door Activities	40,000	13%	- Intensive staff work, crucial to reach those who do not have access to other means; the budget ensures presence in hundreds of locations over time. - Payment of daily allowances/incentives to mobilizers and "digital ambassadors," demonstration materials, and travel expenses for the coordination team.
Partnerships and Local Events	30,000	10%	Leveraging partners' resources with modest project counterpart increases impact and creates a sense of local ownership.

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Axis of Action	Amount (USD)	%	Justification
			Funds to support joint events, sound rental, tents, branded promotional materials, and small safes for community NGOs.
Monitoring, Evaluation, and Contingency	20,000	7%	- Ensure that the campaign is data-driven and that results are measured for learning. - Includes baseline, mid-term, and final surveys, data analysis (with possible external consultant), performance reports, and a contingency reserve (approx. \$5,000) for adjustments or unforeseen needs.
Total	300,000	100%	

6.2. Training and activation

6.2.1. Overview and Objectives

This plan details the training and activation strategies for beneficiaries of the smart device financing scheme, ensuring that everyone knows how to use the equipment (smartphones and laptops) they will receive effectively.

The financing program aims to reach 330,000 beneficiaries between 2026 and 2028, ensuring that at least 50% are women and 40% are young people. This plan proposes to use up to \$2.85 million to train the target groups and encourage the sustained adoption of the devices.

6.2.1.1. General objectives of training and activation

The main objectives of training and activation are as follows.

Figure56. Main objectives of training and activation



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- **Basic ICT training:** Ensure that all beneficiaries develop basic digital skills to use smartphones and laptops, including turning on/setting up the device, navigating menus/apps, internet connectivity, and safe use measures.
- **Use of mobile money:** Train beneficiaries in the use of mobile money services (e-wallets) to make payments, transfers, and balance management, increasing digital financial inclusion in the communities served.
- **Relevant digital applications:** Introduce useful digital applications and practices tailored to each group (e.g., agricultural apps for farmers, social networks and business tools for digital workers, educational platforms for students and teachers, assistive technologies for people with special needs, etc.).
- **Activation and continuous engagement:** Ensure that the delivery of the device is accompanied by practical training sessions at the time of distribution, followed by post-training support (questions, content refreshers) in order to encourage continued use and prevent abandonment or resale of the devices.

6.2.1.2. Training and activation objectives by beneficiary group*Table45. Training and activation objectives by beneficiary group*

Beneficiary group	Training objectives
FARMERS	The main objective is to enable farmers to use a smartphone in a useful way in their daily lives. They are expected to learn how to: • Communicate (make calls, send messages, save contacts); • Use mobile money to sell products, receive payments, send money to family, or pay for agricultural inputs; • Access useful information for agriculture, such as weather forecasts, market prices, pest alerts, and advice on good practices; • Participate in knowledge-sharing networks, such as WhatsApp groups for farmers or other rural extension platforms. Ultimately, each farmer is expected to be able to carry out digital transactions and consult relevant information online, which will help reduce unnecessary travel and increase productivity and income.

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Beneficiary group	Training objectives
LOW-INCOME SELF-EMPLOYED WORKERS	The aim is to empower this group to use smartphones as a tool for work and financial inclusion. They are expected to acquire basic skills to: • Communicate with customers and suppliers through calls, messages, or WhatsApp; • Use mobile money to receive and make payments, manage their balance and, where possible, access savings or microcredit services; • Promote their products on social media by taking photos and running small digital campaigns; • Better organize their work using simple cell phone functions such as calendar, notes, calculator, and—for the more advanced—sales or expense tracking apps. After training, these micro-entrepreneurs are expected to be able to integrate the use of mobile phones into their daily activities, increasing sales, reducing costs, and improving access to services.
DIGITAL SELF-EMPLOYED WORKERS	The main objective is to enable this group to generate income through digital channels, whether as freelancers, content creators, or digital micro-entrepreneurs. Specifically, the training will seek to: • Improve relevant digital skills, including the use of productivity tools, digital marketing, e-commerce, cybersecurity, and online time management; • Provide guidance on digital work opportunities, such as creating profiles on freelance platforms, applying for remote jobs, or monetizing content on social media; • Encourage networking and engagement with digital innovation communities, such as technology hubs, freelancer groups, or local incubators; • Promote the use of online payments and appropriate digital financial services, especially for those who intend to provide international services. At the end of the process, beneficiaries are expected to be able to start paid activities in the digital environment, either independently or integrated into online platforms.
TEACHERS	Although no budget allocation is foreseen for teacher training under the current funding scheme, coordination with other PADIM initiatives is being considered so that this group can also receive training.

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Beneficiary group	Training objectives
	The aim is for teachers not only to master basic digital tools, but also to be able to use them in a pedagogical, innovative, and contextualized manner in their areas of teaching. The skills to be developed include: • Mastery of basic digital productivity and communication tools (word processing, presentations, spreadsheets, email, and online academic research); • Use of digital educational platforms and resources, such as virtual libraries, e-learning platforms, and open content; • Application of technology-based teaching methodologies, including interactive presentations, educational videos, simulations, and specialized software, depending on the subject area; • Participation in collaborative networks and online continuing education, such as teacher forums and educational communities; • Use of digital tools for organization and assessment, such as grade recording, lesson planning, and online testing.
STUDENTS	Although no budget allocation is foreseen for student training in the current funding scheme, coordination with other PADIM initiatives is being considered so that this group can also receive training. Student training aims to develop academic and professional digital literacy skills, promoting the effective use of digital devices in the learning context and in preparation for the labor market. The skills to be developed include: • Basic laptop operation, including file organization and the use of text editors and presentations; • Research and critical evaluation of digital information, using search engines, digital libraries, and academic databases, including concepts of cyber literacy and academic integrity; • Digital collaboration and time management, using academic email, calendars, and shared tools; • Preparation for the digital professional world, including the creation of a digital resume, profile on professional networks, and contact with technological tools used in the market.

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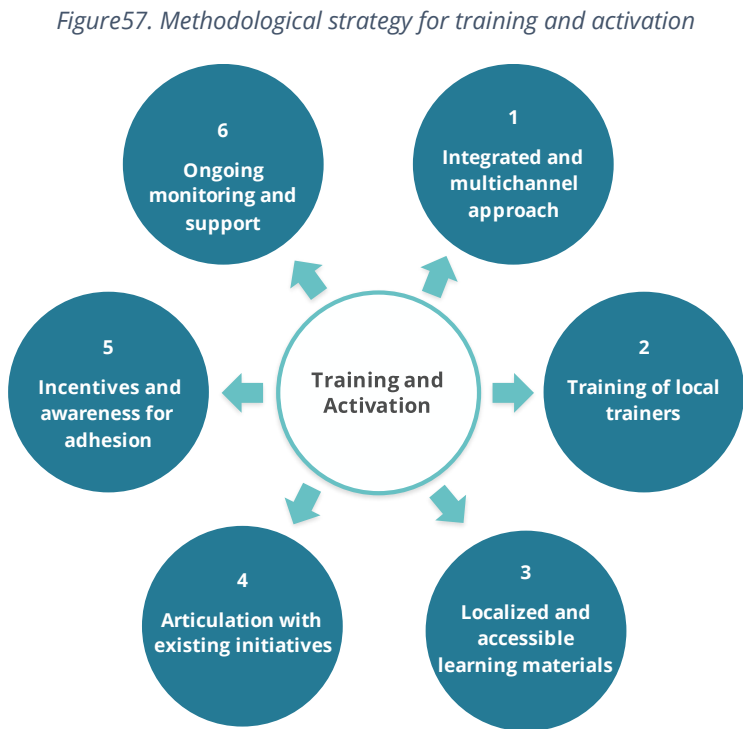
Beneficiary group	Training objectives
INTERNALLY DISPLACED PERSONS	• Personal data protection, online security, and responsible use of social media. Training for internally displaced persons aims to digitally empower this vulnerable population, enabling them to use mobile devices as a tool to rebuild their lives, reestablish social ties, and access their basic rights. The training will seek to develop: • Basic communication and information access skills, such as making calls, sending messages, and using WhatsApp to contact displaced family members or neighbors; • Abilities to access essential services and official channels, including NGO information lines, security alerts, and public services (such as resettlement and civil documentation); • Basic financial inclusion knowledge, including registering for and using mobile money to receive humanitarian support, family remittances, or make small payments; Ultimately, displaced people are expected to see the device as a gateway to identity, information, and autonomy, reinforcing their dignity and inclusion.
PEOPLE WITH SPECIAL NEEDS	The aim of the training is to enable each beneficiary with a disability to use a smartphone in a way that is adapted to their specific needs, promoting autonomy, social inclusion, and access to fundamental rights. The skills to be developed include: • Knowledge and use of the device's accessibility features, such as TalkBack for blind people, sound amplifiers and automatic subtitles for people with hearing impairments, alternative keyboards or voice commands for people with motor impairments, and contrast and font size adjustments for low vision; • Familiarization with specific assistive applications, such as voice-to-text apps, sign language, money note reading, or environment description; • Performing basic tasks in an adapted way, such as calls, messages, and Internet browsing, using appropriate alternative methods; • Use of the device as a tool for safety, inclusion, and participation, including emergency calls, access to support services, and participation in inclusive social networks. Whenever necessary, the training process will also include

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Beneficiary group	Training objectives
	caregivers or family members, ensuring support without creating dependency. Ultimately, it is hoped that each person with special needs will be able to use their smartphone independently and in a way that is adapted to their abilities, strengthening their participation in community life, access to information and essential services, and their independence in everyday life. It is also intended that they feel greater security and social belonging, and that the device becomes an ally in overcoming barriers and asserting their rights.

6.2.2. Methodological Strategy for Training and Activation

The methodological strategy is summarized in the figure below.



1. Integrated and multichannel approach

Given the diversity of the target groups, the plan combines face-to-face, digital, and hybrid methodologies according to the profile of each audience:

- Groups with low literacy or limited access (farmers, low-income and digital self-employed workers, internally displaced persons, people with special needs) will receive face-to-face training upon delivery of the device, in practical community sessions, taught in Portuguese and local languages. *Offline* demonstrations and visual materials will be used to overcome literacy barriers. Self-employed workers, both digital and non-digital, will also receive face-to-face training upon delivery.
- Groups more familiar with formal education or technology (students and teachers) will benefit from e-learning or assisted self-learning through the distributed device itself.

2. Training of local trainers (multiplier effect)

To reach many people in a cost-effective manner, the plan should adopt a "*train the trainers*" strategy. Local monitors should be selected and trained in each community or institution (e.g., agricultural extension workers, community leaders, qualified teachers, young volunteers with basic ICT skills).

These monitors, similar to Rwanda's Digital Ambassadors program, which involved 5,000 young people (50% women) to bring digital literacy to 5 million rural citizens, will act as Digital Ambassadors for the project. They will receive initial training in digital content and teaching methodologies, as well as standardized teaching kits. Each local trainer will then replicate training sessions in their community, ensuring broad reach and adaptation to the local context.

3. Localized and accessible teaching materials

Training content should be developed in formats appropriate to each group:

- **Illustrated manuals and quick guides** (physical and PDF) in Portuguese and translated into relevant local languages (such as Makua, Xichangana, etc.), covering basic steps (with images) on how to use digital devices and services. Very concise (A4 double-sided and maximum 2 pages – how to connect, safety precautions, how to access information sent, how to access online training and technical support).
- **Short videos and audio tutorials** in simple language, demonstrating, for example, how to send money via M-Pesa, how to access weather information online, or how to use accessibility features. This multimedia content could be preloaded on devices or disseminated via community radio stations and WhatsApp groups.

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- **Adaptation of proven international resources**, such as the GSMA's Mobile Internet Skills Training Toolkit (MISTT) (a modular set of free materials for teaching basic mobile skills).
- **Contextualized content by group**, for example, for farmers include agricultural examples (checking market prices via app, use of WhatsApp for cooperatives), for teachers include demonstrations of educational platforms, for people with disabilities emphasize inclusion apps (such as screen readers, sound amplifiers, etc.).

4. Coordination with existing initiatives

Where possible, the plan will integrate with existing programs and infrastructure in Mozambique to maximize impact and avoid duplication. For example, it is recommended to use multi-purpose centers, community telecenters, public libraries, schools, and the physical facilities of distributors and operators as venues for in-person training, taking advantage of spaces with power and, if available, internet access. Telecenters, in particular, have a recognized role in digital inclusion, being essential for communities without their own access, expanding digital skills, and promoting citizen ownership of technology. Integration with ongoing development projects is also recommended.

5. Incentives and awareness for uptake

It is recognized that training will only have an impact if beneficiaries join and see value in using the device. So, there will be awareness campaigns before delivery, explaining in simple terms how the device can improve the life of each group. Targets and certificates will also be established: beneficiaries will receive: i) a Basic Digital Literacy Certificate, boosting self-esteem and which can be used in professional contexts, ii) and the subsidized device.

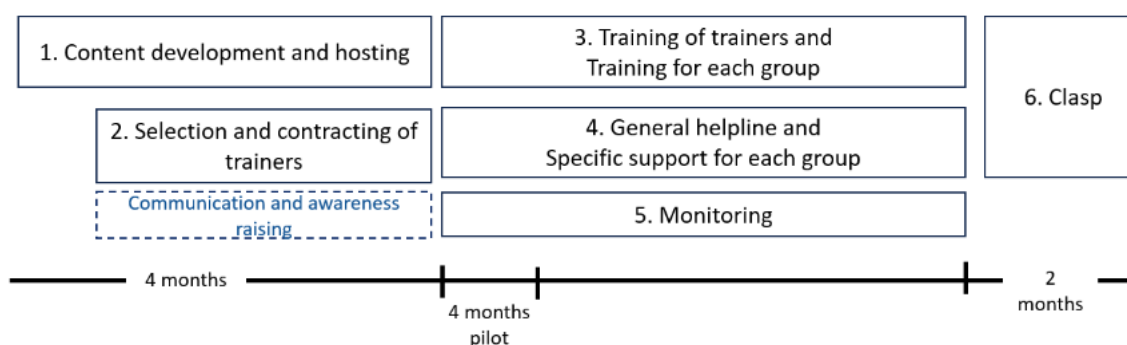
6. Monitoring and ongoing support

To ensure sustained activation, the plan includes monitoring mechanisms, such as the creation of a technical support line, where beneficiaries can clarify doubts about the use of digital devices or services, and the involvement of local partners (mobile money agents, associations of persons with disabilities) to act as focal points for day-to-day support. These actions ensure that any difficulties are resolved and that initial enthusiasm is not lost.

6.2.3. Training structure and schedule

The training will follow the steps illustrated in the figure below.

58 Figure. Training structure and schedule



1. Content development and hosting – Months 1 to 4

In the first four months, the training implementation team will be set up, the training program will be designed, and the basic teaching content for all target groups will be developed. This content will include manuals, videos, interactive materials, and translations into local languages, which will then be hosted on a digital platform accessible via the web and mobile devices. During this period, the architecture of the helpline will also be designed.

If there is financial capacity to pay for zero-rating access for users, this helpline should/may be based on Generative Artificial Intelligence in text and voice, which could be very useful for users with low literacy skills.

2. Selection and contracting of trainers – Months 2 to 4

In parallel with the development of content, key trainers will be identified and hired based on criteria such as teaching experience, knowledge of the local context, and fluency in regional languages. The selection will be made in coordination with strategic partners, including telecommunications operators, service providers, and local NGOs specializing in digital inclusion.

3. Training of trainers and training of each group – Months 4 to 34

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Starting in month 4, trainer training will begin, following a phased schedule for each target group. Each group will have its own training plan, tailored to its circumstances and needs. Beneficiary training will also follow a phased model:

- Initial pilot phase per group, with experimental sessions to test and adjust methodologies.
- Review of training content and plans, based on feedback collected.
- Full, large-scale training, ensuring that all groups are trained shortly after the devices are delivered.

Training will include face-to-face sessions, community workshops, workshops in institutions, and online modules, with a strong practical component.

4. General helpline and ad hoc support for each group – Months 4 to 36

From month 4, a general helpline will be activated, with support via telephone and digital channels (chat, online groups), to answer questions and provide ongoing technical support. In addition, ad hoc support will be organized for each group (reinforcement, mentoring, complementary sessions), depending on the difficulties identified. In the initial phase, the helpline will mainly serve trainers, and will then also support beneficiary groups.

5. Monitoring – Months 4 to 36

Monitoring will be continuous, with the collection of product indicators (number of beneficiaries trained, number of sessions held, materials distributed) and outcome indicators (level of effective use of devices, satisfaction with training, impact stories). Quarterly reports will be produced comparing progress and targets, allowing for rescheduling whenever necessary. The monitoring system will also include qualitative instruments, such as satisfaction surveys and interviews with trainees and trainers.

6. Closure – Months 34 to 36

In the last two months of the program, a consolidation and closure phase will be carried out. The impact assessment will be completed, analyzing the adoption and use of the devices by group, the results of the training, and emerging good practices. The helpline will remain active during this period.

This schedule may be adjusted as the program progresses, but it ensures that training goes hand in hand with the delivery of the devices, providing beneficiaries with the necessary support at the exact moment they obtain the technology.

6.2.4. Production of training content and e-learning hosting

Training content should be modular and accessible to all beneficiary groups, integrating adapted formats (plain text, video, audio, sign language, Braille, etc.) and hosted on a digital platform compatible with mobile phones and computers. Where possible, existing national or international programs and materials will be incorporated through partnerships with public institutions, NGOs, or multilateral entities. If financially feasible, Generative Artificial Intelligence will be used.

6.2.4.1. Content production

The content should be adapted according to the group of beneficiaries to whom the training will be provided.

- For **farmers**, visual materials and illustrated guides will be produced in Portuguese and local languages with information on how to make calls, save contacts, send messages, and carry out simple mobile money transactions. In addition, the training content will cover the use of specific digital content, such as weather apps, websites on good agricultural practices, and e-commerce.
- For **low-income self-employed workers**, the content will include sales simulations, sending photos of products via WhatsApp or recording sales on mobile phones, sharing content on social media, creating a professional profile, and carrying out a simple mobile money transaction, with tutorials and illustrated guides.
- For **digital self-employed workers**, the course will include explanatory videos, practical tasks (sharing content on social media, creating a professional profile), and carrying out a simple mobile money transaction, consulting freelance work websites, and materials on e-waste and the importance of device delivery/collection, as these will be key elements of the electronic waste treatment initiative.
- For **internally displaced persons**, visual materials and illustrated guides will be produced in Portuguese and local languages, with information on how to make calls and save contacts, how to use WhatsApp, listen to the radio, receive and send money via mobile phone, and access information lines.
- For **people with special needs**, the materials will cover topics such as making calls, saving contacts, sending messages, and performing simple mobile money transactions, as well as using specific software for these citizens. The adaptation of materials for this group should be coordinated with PADIM initiative 1.3.2, as described below.

6.2.4.2. Synergies with PADIM initiatives

The recommendations below should be financed by other components of PADIM.

No specific content is planned for **teachers and students**, but rather coordination with initiative 2.3.2. Support for the integration of ICT in the teaching and learning process and the development of digital skills under PADIM, part of subcomponent 2.3. Adoption of digital technology and skills development in the education sector.

Specifically, for **teachers**, continuous tutoring and e-learning are recommended, with online courses made available through an e-learning platform (e.g., Moodle), with self-guided modules such as "Active Methodologies with ICT" or "Digital Content Development." These courses will allow flexibility of participation and may be recognized with official certificates, with the possibility of counting towards career progression in teaching.

It is also recommended that a peer tutoring system be created, in which more experienced or previously trained teachers act as focal points in their institutions, helping colleagues to resolve technical or pedagogical difficulties. To promote continuous learning and the exchange of experiences, it is proposed that semester webinars be held, where teachers can ask collective questions and share pedagogical practices using ICT.

In addition, it is recommended that the pedagogical use of equipment be monitored throughout the semester. In coordination with school management, usage indicators should be collected (e.g., number of teachers using e-learning platforms, classes with digital resources). Finally, good practices and success stories should be disseminated, and a pedagogical innovation contest with symbolic prizes could be promoted.

Also within the scope of synergy with initiative 2.3.2. of PADIM, it is recommended that a portfolio of extracurricular online courses be developed for **students**, focused on the development of practical skills valued in the labor market (e.g., Excel course, introduction to programming, data analysis, technical English). These courses will be optional but strongly recommended and may lead to official certification. For groups with less autonomy, short face-to-face workshops could be held to teach, for example, Word and Excel functions for the preparation of the final course project.

For the remaining beneficiary groups, there should also be alignment with initiative 1.3.2. Promotion of digital awareness, literacy, and skills development, included in subcomponent 1.3. Digital inclusion initiatives.

In the particular case of **internally displaced persons**, an offline learning kit could be developed and distributed with the devices. This would include a memory card (SD) with short videos in local languages on health, rights, and services, small educational applications, and an illustrated manual with visual instructions on how to use the phone. In parallel, partnerships could be established with

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legal and social inclusion programs to support displaced persons in registering SIM cards and personal documents. Training would include guidance on official information channels, such as free emergency hotlines, reinforcing the fight against misinformation, in line with humanitarian agency practices.

For **people with special needs**, it is recommended that accessible reference material be produced and distributed, including audio tutorials (MP3), sign language videos, illustrated manuals in simple language, and materials in Braille or alternative formats, as necessary.

6.2.5. Training for each group of beneficiaries

6.2.5.1. Training of trainers / Digital ambassadors

To ensure the scale, reach, and sustainability of the training program, a model based on the creation of a national network of local trainers and digital ambassadors will be implemented. This approach aims to ensure that the content reaches all regions, including rural areas and populations with less access, with quality, contextualization, and close monitoring.

In this way, 1,800 local trainers/digital ambassadors will be identified and trained, including young people, teachers, representatives of local associations, among others.

These trainers/ambassadors will receive training in two main areas: i) digital content, which will then be passed on to the trainees, and ii) training methodologies, so that they can adapt the techniques to the groups and ensure active participation.

These trainers/ambassadors will be responsible for:

- i. Organizing and conducting face-to-face training sessions based on program materials and plans
- ii. Support the initial activation of devices as part of the face-to-face training
- iii. Act as a focal point for post-training support, clarifying doubts and encouraging the continued use of digital tools
- iv. Report recurring difficulties and propose improvements, acting as a bridge between beneficiaries and program coordination.

To reinforce the commitment of trainers and ambassadors, in addition to the monetary compensation detailed below, they will receive a digital trainer/ambassador certificate and ongoing access to the e-learning platform.

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To ensure that beneficiaries start using the devices with confidence and adequate guidance, a short face-to-face training model will be implemented at the time of device delivery. These immediate activation sessions will last approximately 4 hours. As already mentioned, the core objectives are to support the initial configuration of the device and teach basic digital skills.

These training sessions will be led by local trainers/digital ambassadors and will take place at the device delivery location²⁰. The implementation of these sessions therefore involves operational costs for logistics, in addition to the costs involved in training the trainers and their remuneration.

Table 46. Operationalization of training at the time of delivery by beneficiary group

Beneficiary group	Implementation of face-to-face training
FARMERS	• Class size: 30 to 50 participants. • Duration: 4 hours. • Number of sessions: 3,200 sessions, covering 160,000 farmers throughout the program. • Typical locations where sessions will be held: rural centers or distributors' premises.
LOW-INCOME SELF-EMPLOYED WORKERS	• Class size: 30 to 50 participants. • Duration: 4 hours. • Number of sessions: 1,600 sessions, covering 80,000 low-income self-employed workers throughout the program. • Typical locations where the sessions will be held: urban and commercial premises of distributors.
DIGITAL SELF-EMPLOYED WORKERS	• Class size: 30 to 50 participants. • Duration: 4 hours. • Number of sessions: 750 sessions, covering 30,000 digital self-employed workers throughout the program.

²⁰ In the case of teachers and students, laptops will be delivered to secondary schools, technical institutes, and universities, although no in-person training is planned at the time of delivery.

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Beneficiary group	Implementation of face-to-face training
INTERNAL DISPLACED PERSONS	• Typical locations where sessions will be held: urban and commercial spaces of distributors. • Class size: 20 to 30 participants. • Duration: 4 hours. • Number of sessions: 400 sessions, covering 10,000 internally displaced persons. • Typical locations where the sessions will be held: resettlement or reception centers.
PEOPLE WITH SPECIAL NEEDS	• Class size: 20 participants. • Duration: 4 hours. • Number of sessions: 500 sessions, covering 10,000 people with special needs. • Typical locations where the sessions will be held: associations or specialized centers with accessibility conditions.

6.2.6. Training Program Budget

The financing model provides for the use of \$1,850,000 for the implementation of the training program (i.e., \$2,150,000 minus the \$300,000 allocated for communication). However, this amount will not be sufficient to ensure the scale, quality, and sustainability of the planned actions.

For this reason, from the second year of implementation, a portion of the Revolving Fund, in the amount of \$1,000,000, should be mobilized to ensure the continuity and completeness of the training of beneficiaries.

Bearing in mind that PADIM allocates funding for digital training, it is recommended that, in conjunction with initiatives 1.3.2 and 2.3.2 of PADIM, PADIM should assume the financing of all training in the amount of \$2,850,000, freeing up funds to finance economic accessibility for beneficiary groups, or at least the amount of \$1,000,000 to reinforce the \$1,850,000 budget for this project.

The complete budget includes the following items.

a) Content development and hosting – \$300,000

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This includes the production of teaching materials (manuals, videos, audio tutorials, and illustrations), translation into local languages, and hosting costs for an e-learning platform accessible via the web and mobile devices.

b) Training of trainers and digital ambassadors – \$450,000

Training of 1,800 community trainers/digital ambassadors, selected throughout the territory. This amount covers the costs of initial training, teaching materials, logistics, and certification of trainers.

Assumptions: 1. Preparation of training for all groups: \$50,000 2. Recruitment of trainers of trainers: \$20,000 3. Online training of trainers of trainers (40 trainers x 1 day of training: 40 x \$160 (\$6,400). 4. Recruitment of trainers: \$20,000. 5. Training of trainers/digital ambassadors: \$120 per day of training (\$216,000), plus \$10 for meals (\$18,000), plus \$10 for transportation in 50% of cases (\$9,000) and \$70 in 50% of cases (\$63,000), plus \$47,600 for contingencies.

c) Salaries for trainers for face-to-face sessions – \$560,000

Direct payment to local trainers/digital ambassadors responsible for approximately 6,450 4-hour face-to-face sessions. Assumption: \$80 per 4 hours of training (\$516,000), plus \$44,000 for contingencies.

d) Session logistics – \$700,000

Covers operating costs associated with conducting face-to-face training (6,450), including transportation, food, venue rental, physical support materials, and support for mobilizing beneficiaries. 1. Venue rental: average of \$50 (\$322,500). 2. Teaching materials: (\$10,000) 3. \$10 per meal (subtotal of \$64,500), 4. 10 \$for transportation in 50% of cases (32,250 USD) and 70 \$in 50% of cases (225,750 USD), plus 45,000 \$for contingencies.

e) Digital helpline – \$240,000

Establishment of a multichannel helpline (telephone, SMS, WhatsApp) operating throughout the program. The helpline will be operated by a specialized team, providing technical and educational assistance to beneficiaries after training. (\$10,000 x 24 months).

f) Monitoring and reporting – \$180,000

Implementation of a continuous monitoring and evaluation system, including the collection of quantitative data (attendance, use of devices, interaction with the platform) and qualitative data

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(interviews, testimonials, satisfaction surveys). Quarterly reports will be produced to enable the training strategy to be adjusted as necessary.

g) Other services – \$420,000

A 15% fund is reserved to cover procurement costs and activities not considered.

Table47. Summary of the budget for training and activation

Component	Amount (USD)	% of total
Training program	2,850,000*	100%
1. Content development and hosting	300,000	11%
2. Training of trainers/digital ambassadors	450,000	16%
3. Trainers' salaries	560,000	20%
4. Session logistics	700,000	25%
5. Helpline	240,000	8%
6. Monitoring and reporting	180,000	6%
7. Other services	420,000	14%

*Amount corresponds to \$1,850,000 from the base budget + \$1,000,000 from the revolving fund.

Table48. Distribution of the budget by beneficiary group

Group	No. of sessions	Training of trainers (USD)	Trainer salaries (USD)	Logistics (USD)	Total (USD)
Farmers	3,200	223,000	278,000	347,000	848,000
Low-income self-employed workers	1,600	112,000	139,000	174,000	424,000
Digital self-employed workers	750	52,000	65,000	81,000	199,000

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Group	No. of sessions	Training of trainers (USD)	Trainer salaries (USD)	Logistics (USD)	Total (USD)
Internally displaced persons	400	28,000	35,000	43,000	106,000
People with special needs	500	35,000	43,000	54,000	133,000
Total	6,350	450,000	560,000	700,000	1,710,000

6.3. Maintenance and warranties

Under the program, 330,000 electronic devices will be distributed, including 290,000 smartphones and 40,000 laptops, with the aim of promoting digital inclusion and access to essential services.

In accordance with Mozambican consumer protection legislation, all mobile devices must have a mandatory minimum warranty of two years, ensuring the right to repair or replacement in the event of a manufacturing defect. Based on this legal requirement, a total of \$800,000 has been set aside to cover the costs associated with warranty management, maintenance, and technical support during this period.

Estimated failure rate within the first year

According to the SquareTrade Smartphone Reliability study, the failure rate for mobile phones in the first year (not related to accidents) varies between 2% and 7%, depending on the equipment, conditions of use, and operating environment. Considering that these devices will often be used in adverse conditions, we have opted for a conservative estimate **of a 6% failure rate in the first year.**

In the case of laptops, the failure rate in the first year can be as high as 15%, opting in this case for an estimate of 10%.

- Damaged smartphones (6% of 290,000): 17,400 units
- Broken laptops (10% of 40,000): 4,000 units

Total estimated number of faulty devices: 20,200 units

Repair or replacement cost

- Smartphone: For smartphones with a unit cost of \$40, we estimate a cost of \$20 per damaged unit (including logistics, diagnostics, and replacement parts).

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- Laptop: For laptops with a unit cost of \$348, the maintenance cost per damaged unit is estimated at \$100, given the higher cost of components and specialized technical services.

Budget required to cover expected breakdowns

- Smartphones: 17,400 units × \$20 = \$348,000
- Laptops: 4,000 units × \$100 = \$400,000

Subtotal: \$748,000

Additional margin for management, logistics, and contingencies

In addition to the repairs themselves, there are operating costs associated with providing warranty service, including:

- Transportation and collection of equipment in remote areas
- Management of technical calls and service centers
- Purchase of spare parts
- Coverage for above-average failures or extreme weather events

To cover these costs, we apply an additional margin of 6.5% on the subtotal, which equates to a total reserve of \$800,000.

6.4. Reducing environmental impact

The lack of mechanisms for collecting, reconditioning, or disposing of devices can result in an accumulation of obsolete equipment, especially in peripheral urban areas and rural areas without formal waste management systems. Currently, Mozambique does not yet have formal certified operators for the complete management of electronic waste, and e-waste is mainly handled informally.

This risk is exacerbated by the composition of electronic devices, which, on the one hand, include materials with commercial value that are scarce in the ecosystem (such as copper, gold, and lithium) and, on the other hand, hazardous substances (such as lead or mercury), which can contaminate resources and affect public health if disposed of improperly.

Therefore, although the financing model focuses on initial access to the device and facilitating its use, maximizing the impact of device distribution, it also includes a **component dedicated to end-of-life**

management of devices, worth \$500,000, ensuring that the equipment distributed is also collected, sorted, and disposed of in an environmentally safe manner.

To operationalize the e-waste management strategy, the following is proposed:

- i. **The establishment of a voluntary device collection system** through the installation of fixed collection points in schools and at the premises of digital self-employed workers supported by the scheme and other small local computer and telecommunications stores.

To encourage voluntary surrender, the model provides for the payment of \$1 per smartphone and \$5 per laptop returned. These amounts are based on benchmark experiences in African markets:

- In Rwanda, Enviroserve's national collection program offers \$0.50 to \$1.00 per unit returned, mainly for smartphones and small equipment.
- In Ghana and Uganda, pilot projects supported by multilateral agencies (such as GEF and UNIDO) have tested incentives ranging from \$0.25 to \$1.00 per unit, depending on the context and intensity of the collection campaigns.
- For laptops, although available benchmarks are scarcer, experiences such as that of AST Recycling (South Africa) suggest that the amount paid to the final consumer can range from \$3 to \$10, depending on the condition, size, and return channel. The \$5 value adopted in this model for laptops is therefore a prudent and feasible average, taking into account budgetary sustainability and the need for sufficient incentive to promote return.

The return rate has been estimated at 45%, taking into account that benchmarks show rates between 40% and 60% (Rwanda) and between 30% and 50% (Ghana and Uganda).

Applied to the universe of 330,000 devices distributed (290,000 smartphones and 40,000 laptops), this rate corresponds to approximately 130,500 smartphones and 18,000 laptops, for an **estimated cost of \$220,500**. This represents approximately 44% of the total budget for e-waste.

- ii. **The promotion of local sorting and refurbishment**, given that some of the devices may be functional for basic refurbishment. Based on regional practices (Enviroserve, City Waste, and Hinckley), it is estimated that around 30% of returned devices can be refurbished.

This refurbishment can be done by local digital stores and self-employed digital workers supported by the scheme. It is suggested that the business model should provide that the profit from the resale of refurbished devices remains with those who carry out the refurbishment, encouraging participation and sustainability of the circuit.

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It is also suggested that in the case of collection in schools, the devices be donated to practical components of related technical and vocational courses.

- iii. **The paid hiring of local operators for the transport and temporary storage of non-refurbishable devices**, such as small businesses, community associations, or cooperatives, contributing to job creation and the development of specialized logistics services in the reverse cycle of devices.

It is assumed that 70% of the returned devices (around 92,610 units) will need to be sent for disposal. The model provides for remuneration of \$0.75 per smartphone and \$1.50 per laptop.

This estimate is based on reference data from similar projects in the region:

- In Ghana (City Waste/GEF) and Nigeria (Hinckley), the operating costs of collection and transport paid to local cooperatives range from \$0.40 to \$0.70 per unit, and can reach \$0.80 to \$1.00 per unit in hard-to-reach areas with low volumes.
- AST Recycling (South Africa) operates on a per-tonne contract basis, but the estimated average costs per small unit (smartphones and tablets) are between \$0.50 and \$0.75, depending on volume.
- In Rwanda, the national e-waste management model coordinated by Enviroserve reports logistics costs per unit (collection + transport + light pre-processing) of between \$0.50 and \$0.75 when subcontracted to local operators with scale.

The estimated cost of this operation is **\$124,875**, or about 25% of the total budget.

- iv. **Mapping and establishing partnerships with certified regional recyclers**, while internal capacity is being consolidated. Potential partners include companies such as Enviroserve (Rwanda), AST Recycling (South Africa), Hinckley (Nigeria), TCH (Zambia), and City Waste (Ghana), which have experience in environmentally safe recycling of electronic devices.
- v. **The coordination of this strategy with funding from the Global Environment Facility (GEF)**, which plans to disburse \$4.8 million in 2025 for e-waste management initiatives. The funds are intended to finance the installation of recycling infrastructure, the implementation of collection programs, the training of technicians, and the promotion of disposal practices.
- vi. **Reinforcing the message of the importance of returning end-of-life equipment in communication campaigns**

The table below summarizes the distribution of the budget for environmental impact reduction initiatives.

Affordable device financing scheme

Component	Amount (USD)
E-waste program	\$500,000.00
Direct incentives for return	\$220,500.00
Hiring local operators for transport and storage	\$124,875.00
Other technical and operational components	\$154,625.00

7. Implementation Plan and Schedule



7. Implementation Plan and Schedule

7.1. Global Timetable

The global implementation schedule covers a period of approximately three years, between October 2025 and October 2028.

Table49. Global implementation schedule.

Phase	Implementation Period	Estimated Duration	Main Activities
Set-up	October 2025	6 months	- Contracting service providers and implementation partners - Validation and/or restructuring of the various components of the Project Implementation Manual - Development of communication and training content
Pilot	2026 April	6 months	Implementation of pilot projects in selected areas: including dissemination, training, and distribution of devices
Operational	2026 October 2028 July	21 months	National expansion of all components
Completion	2028 October	3 months	Closure, final evaluations, and recommendations

Below is a set of detailed implementation timelines, which together constitute a preliminary schedule (2025–2028) structured by components:

- Communication and Awareness
- Training and Activation
- Device Acquisition and Distribution
- Implementation of the Device Financing and Access Mechanism
- Monitoring

7.2. Communication and Awareness

Table50. Timetable for communication and awareness activities.

Activity	Phase	Duration (weeks)	Main responsible parties
Hiring an implementation partner for communication and awareness raising	Set-up	4	INCM, World Bank
Validation of the communication plan with the implementation partner	Set-up	2	INCM, implementation partner for communication
Production of materials in Portuguese and local languages	Pilot	6	INCM, implementation partner for communication
Establishment of partnerships with community media and influencers Selected intervention areas	Pilot	4	INCM, implementation partner for communication, local ambassadors
Implementation of pilot campaigns in the intervention areas	Pilot	12	INCM, implementation partner for communication, local ambassadors
Expansion of the pilot campaign to new intervention areas (including establishment of new partnerships)	Operational	90	INCM, implementation partner for communication, local ambassadors
Strengthening communication and dissemination of success stories	Closure	4	INCM, implementation partner for communication, community leaders, local ambassadors

7.3. Training and Activation

Table 51. Calendar of training and activation activities.

Activity	Phase	Duration (weeks)	Main responsible parties
Hiring of implementation partner for training and activation	Set-up	4	INCM, World Bank, Ministry of Education
Development of training content and teaching materials	Set-up	8	INCM, Ministry of Education, implementation partner
Translation/adaptation of materials into local languages	Set-up	4	INCM, Ministry of Education, implementation partner
Training of lead trainers in selected regions	Pilot	6	INCM, Ministry of Education, implementation partner
Pilot training for selected beneficiaries	Pilot	8	Implementation partner, local trainers,
Large-scale phased national training	Operationalization	104	INCM, implementation partner, local trainers,
Reinforcement sessions and community activation	Operationalization	80	Local trainers, digital ambassadors, NGOs
Final training for groups with difficulties	Closing	4	INCM teaching team, NGOs

7.4. Acquisition and distribution of devices

Table52. Schedule of activities for the acquisition and distribution of devices.

Activity	Phase	Duration (weeks)	Main responsible parties
Public tender and selection of suppliers/distributors	Set-up	6	INCM
Ordering and receiving pilot devices	Set-up	16	INCM, suppliers/distributors
Pilot distribution of devices	Pilot	4	INCM, suppliers/distributors
Phased national distribution (regular deliveries)	Operational	120	INCM, suppliers/distributors, NGOs, and logistics operators

7.5. Implementation of the Device and Access Financing Mechanism

Table53. Schedule of activities related to the device and access financing mechanism.

Activity	Phase	Duration (weeks)	Main responsible parties
Contracting implementation partners (operators, financial institutions, mobile money wallets, and fintech)	Set-up	12	INCM, Ministry of Finance, World Bank, operators, financial institutions, mobile money wallets, and fintech
Restructuring of the financial model and revolving fund in consultation with implementation partners	Set-up	4	INCM, Ministry of Finance, World Bank, operators, financial institutions, mobile money wallets, and fintech
Pilot implementation of the PAYGO system	Pilot	16	INCM, Ministry of Finance, World Bank, operators, financial institutions, mobile money wallets, and fintech
National rollout of the scheme (full operation)	Operationalization	120	INCM, Ministry of Finance, World Bank, operators, financial institutions, mobile money wallets, and fintech
Compliance assessment and adjustments	Closure	4	INCM, financial consultants

7.6. Monitoring

Table54. Schedule of monitoring activities.

Activity	Phase	Duration (weeks)	Main responsible parties
Start of implementation plan defined by the implementation manual	Set-up	4	INCM, INE, World Bank
Establishment of initial baseline	Set-up	2	INCM, INE, World Bank
Pilot monitoring	Pilot	4	INCM, INE, World Bank
Continuous monitoring and regular reports	Operational	120	INCM
Interim evaluation	Operationalization	6	INCM, World Bank
Final assessment and closure of M&A	Closing	6	INCM, External consultant

ANNEXES

A - Political and regulatory framework: Consumer Protection Laws and Operator Obligations

Table55. Survey of consumer rights legislation and operator obligations

Category	Legislation	Description
Consumer Protection	Law No. 22/2009	Establishes the consumer protection system, guaranteeing rights such as quality, safety, clear information, redress, and justice. It applies to all sectors, including telecommunications.
Consumer Protection	Decree No. 27/2016	Defines mechanisms for damage prevention and clear information obligations on products and services. Requires concessionaires to make complaint books available and to guarantee minimum guarantees.
Consumer Protection	Decree No. 44/2019	Regulates the protection of telecommunications consumers, addressing rights such as contractual choice, fair billing, data privacy, and protection against abusive practices.
Operators' Obligations	Decree No. 13/2023	Establishes obligations for operators regarding the registration and validation of subscriber data, including the use of NUTEL, combating fraud, and maintaining secure systems.
Operators' Obligations	Decree No. 65/2018	Regulates the sharing of telecommunications infrastructure and network resources, promoting efficiency and reducing operating costs.
Operators' Obligations	Decree No. 62/2019	Limits operators' freedom to set prices, subjecting them to INCM supervision to ensure fair and affordable tariffs.

B - Survey on the appetite and barriers to the use of smart devices in Mozambique

Survey No.: _____

Name of respondent: _____

1. Profile of the respondent

Demographic background

1.1. How old are you?

- ☐ 19 to 20
- ☐ 21 to 30
- ☐ 31 to 40
- ☐ 41 to 50
- ☐ Over 51

1.2. What is your gender?

- ☐ Male
- ☐ Female

1.3. Where do you live? ¹

What province do you live in?

- ☐ Cabo Delgado
- ☐ Maputo (Province)
- ☐ Maputo (City)
- ☐ Nampula
- ☐ Sofala
- ☐ Zambézia

In which district do you live? (Please specify²) _____

Affordable device financing scheme

Socioeconomic status

1.4. Do you have a regular income?

- ☐ Yes, I receive a salary every month
- ☐ Yes, I receive a salary every week
- ☐ Yes, I receive money a few times a month
- ☐ No

(Answer the following question if you answered "Yes" to the previous question. Otherwise, skip to question 1.6).

1.5. How much money do you earn per month, on average?

- ☐ < 5,000 MZN
- ☐ 5,000 - 10,000 MZN
- ☐ 10,000 - 20,000 MZN
- ☐ >20,000 MZN

1.6. How much money does your family/household earn per month, on average?

- ☐ < 5,000 MZN
- ☐ 5,000 - 10,000 MZN
- ☐ 10,000 - 20,000 MZN
- ☐ >20,000 MZN
- ☐ I don't know

1.7. What is your level of education?

- ☐ No formal education
- ☐ Preschool education (daycare or kindergarten)
- ☐ Basic education - 1st cycle (1st to 5th grade)
- ☐ Basic education - 2nd cycle (6th and 7th grades)
- ☐ Secondary education - 1st cycle (8th to 10th grade)
- ☐ Secondary education - 2nd cycle (11th and 12th grades)
- ☐ Technical and Vocational Education - Basic Level (with 7th grade completed)
- ☐ Technical and Vocational Education - Intermediate Level (with 10th grade completed)
- ☐ Technical and Vocational Education - Intermediate Level (with 12th grade completed)
- ☐ Higher Education - Bachelor's Degree
- ☐ Higher Education - Master's or Doctorate

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- ☐ Youth and Adult Education / Literacy
- ☐ None of the above

1.8. What is your main professional activity at the moment? *You can select more than one option.*

- ☐ Employee (I have an employment contract and pay taxes to the government)
- ☐ Employee (I do not have an employment contract)
- ☐ Self-employed (I pay taxes to the government)
- ☐ Self-employed (I do not pay social security contributions)
- ☐ Student
- ☐ Student worker (formal sector)
- ☐ Working student (informal sector)
- ☐ Unemployed
- ☐ Retired
- ☐ Unable to work

(Answer the following question only if you selected "Employed," "Self-employed," or "Student worker" in the previous question. Otherwise, skip to question 2.1).

1.9. In which sector do you work? *You may select more than one option.*

- ☐ Agriculture, fishing, and forestry
- ☐ Extractive industry (mining, oil and gas)
- ☐ Manufacturing (food, textiles, chemicals, etc.)
- ☐ Construction and infrastructure
- ☐ Education and training/Teacher
- ☐ Financial and banking services
- ☐ Healthcare and social services (e.g., doctors, nurses, etc.)
- ☐ Hospitality, tourism, and catering
- ☐ Trade and retail
- ☐ Technology and telecommunications (e.g., IT, etc.)
- ☐ Transport and logistics (e.g., truck driver, taxi driver, etc.)
- ☐ Public administration and government
- ☐ Security (e.g., police, military, private security, etc.)
- ☐ Other services (e.g., beauty salons, cleaning, domestic work, etc.)

2. Ownership of smart devices and barriers to adoption

2.1. Do you currently own any of the following devices? *(Select all that apply)*

Affordable device financing scheme

- ☐ Basic mobile phone (*can make phone calls and send SMS, but does not have Internet access*)
- ☐ *Feature phone* (has limited Internet access, some apps such as email, a small screen, and a keypad)
- ☐ Smartphone (has Internet access, a touchscreen, an App Store, social media, and more)
- ☐ Tablet
- ☐ A laptop
- ☐ A desktop computer/desktop computer
- ☐ I do not currently own any of these devices

(Answer the following questions if you selected at least one device in question 2.1. Otherwise, skip to question 2.6).

2.2. How did you purchase your last device?

- ☐ With my savings
- ☐ With a loan
- ☐ It was a gift
- ☐ I borrowed it from a friend or family member
- ☐ Through a social support program

2.3. Where did you buy your last device?

- ☐ At a store/mobile operator
- ☐ At a street market/ I bought it from a friend
- ☐ Through a social support program

2.4. How long ago did you buy your last device?

- ☐ Less than 1 year
- ☐ 1-2 years
- ☐ 2-4 years
- ☐ More than 4 years

2.5. Why did you buy your last device? (Select all options that apply)

- ☐ To make phone calls and send text messages
- ☐ To use social media (WhatsApp, Facebook, Instagram)
- ☐ I need it for work
- ☐ To play video games
- ☐ To listen to music
- ☐ To use it as a GPS navigator

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- ☐ To take photos/videos
- ☐ To send and receive money (M-Pesa, eMola, and others)
- ☐ To shop online
- ☐ To learn
- ☐ To read the news
- ☐ For security reasons
- ☐ Other:

(Answer the following questions if you selected "I do not currently own any of these devices" in question 2.1. Otherwise, skip to question 2.7).

2.6. If you do not currently have any devices, have you ever had any of the following devices?

- ☐ Basic mobile phone (can make phone calls and send SMS messages, but does not have Internet access)
- ☐ *Feature phone* (has limited Internet access, some apps such as email, and a small screen with a keypad)
- ☐ Smartphone (has Internet access, a touch screen, an App Store, social media, and much more)
- ☐ Tablet
- ☐ A laptop
- ☐ A desktop computer/desktop computer
- ☐ I have never owned any of these devices

(Answer the following questions if you did not select "Basic phone," "Feature phone," or "Smartphone" in question 2.1 or question 2.6. Otherwise, skip to question 2.8).

2.7. What are the main reasons for not owning or never having owned a mobile phone?

(Select all that apply)

- ☐ I can't read or write
- ☐ I cannot pay
- ☐ I cannot afford the costs of mobile services (phone calls, text messages, mobile data, etc.)
- ☐ I don't have access to credit or financing options
- ☐ There are no stores nearby to buy it
- ☐ Lack of information about available models and prices
- ☐ Lack of electricity in my area
- ☐ No or poor mobile network coverage in my area
- ☐ I have access to someone else's mobile phone and it meets my needs
- ☐ I have never needed a mobile phone/I don't see the need for one
- ☐ I don't know how to use a mobile phone / It seems complicated

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- ☐ I am afraid of mobile phone theft or have security concerns
- ☐ My partner won't let me
- ☐ My parents won't let me
- ☐ Religious reasons

(Answer the following questions if you did not select "Tablet," "Laptop," or "Desktop computer" in question 2.1 or question 2.6. Otherwise, skip to question 3.1).

2.8. What are the main reasons why you do not own, or have never owned, a tablet, laptop, or desktop computer? (Select all that apply)

- ☐ I cannot read or write
- ☐ I cannot afford it
- ☐ I cannot afford the service costs (Internet, etc.)
- ☐ No access to credit or financing options
- ☐ No stores nearby to buy one
- ☐ Lack of information about available models and prices
- ☐ Lack of electricity in my area
- ☐ No or poor mobile network coverage in my area
- ☐ I have access to someone else's computer and it meets my needs
- ☐ I have never needed a computer / I don't see the need
- ☐ I don't know how to use a computer / It seems complicated
- ☐ I am afraid of computer theft or have security concerns
- ☐ My partner does not allow me to
- ☐ My parents won't let me
- ☐ Religious reasons

3. Availability and affordability of smart devices

3.1. Are you interested in purchasing any of the following smart devices in the next 12 months?

- ☐ Yes
- ☐ No
- ☐ Not sure

(Answer the following questions if you selected "Yes" in question 3.1. Otherwise, skip to question 3.8).

3.2. What type of device would you like to purchase?

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- ☐ Basic mobile phone (can make phone calls and send text messages, but does not have Internet access)
- ☐ *Feature phone* (has limited internet access, some apps such as email, and a small screen with a keypad)
- ☐ Smartphone (has Internet access, a touchscreen, an App Store, social media, and much more)
- ☐ Tablet
- ☐ A laptop
- ☐ A desktop computer/desktop PC

(Answer the following questions if you selected "Basic mobile phone," "Feature phone," or "Smartphone" in question 3.2. Otherwise, skip to question 3.4).

3.3. How much would you be willing to pay for a mobile phone?

- ☐ Up to 2,000 MZN
- ☐ 2,000 - 5,000 MZN
- ☐ 5,000 - 10,000 MZN
- ☐ 10,000 - 20,000 MZN
- ☐ 20,000+ MZN

(Answer the following questions if you selected "Tablet," "Laptop," or "Desktop computer" in question 3.2. Otherwise, skip to question 3.5.)

3.4. How much would you be willing to pay for a tablet or laptop?

- ☐ Up to 10,000 MZN
- ☐ 10,000 - 20,000 MZN
- ☐ 20,000 - 30,000 MZN
- ☐ 30,000 - 40,000 MZN
- ☐ More than 40,000 MZN

(Answer the following questions if you selected "Yes" in question 3.1. Otherwise, skip to question 3.8).

3.5. Have you already saved money for this purchase?

- ☐ I have saved the total amount I need
- ☐ I have saved almost all the money I need.
- ☐ I have saved part of the amount I need.
- ☐ I have saved only a little of what I need.
- ☐ I haven't saved for this.

Affordable device financing scheme

(Answer the following questions if you selected "Yes" in question 3.1. Otherwise, skip to question 3.8).

3.6. If you cannot pay the full amount up front, would you be willing to pay in installments?

- ☐ Yes
- ☐ No
- ☐ Depends on the conditions

(Answer the following questions if you selected "Yes" or "Depends on the conditions" in question 3.6. Otherwise, skip to question 3.8).

3.7. How much can you pay each month?

- ☐ Up to 250 MZN
- ☐ 250 - 500 MZN
- ☐ 500 - 1,000 MZN
- ☐ 1,000 MZN – 1,500 MZN
- ☐ More than 1,500 MZN

3.8. Have you tried to obtain credit or financing to purchase a smart device?

- ☐ Yes, I purchased a smart device on credit through a bank or microfinance institution
- ☐ Yes, I purchased a smart device on credit through a mobile payment application (e.g., M-Pesa)
- ☐ Yes, I purchased a smart device on credit through an installment plan from a mobile operator or retailer
- ☐ Yes, I have purchased a smart device on credit through informal loans (e.g., family/friends/xitiki⁽³⁾)
- ☐ No, I have never tried to obtain credit for a smart device
- ☐ No, I have tried to obtain credit for a smart device but was not approved

(Answer the following questions if you selected "No, I have tried to obtain credit for a smart device but was not approved" in question 3.8. Otherwise, skip question 3.11).

3.9. If you tried to obtain credit but were not approved, where did you apply?

- ☐ I applied for credit from a bank or microfinance institution
- ☐ I applied for credit through a mobile payment application (e.g., M-Pesa)
- ☐ I applied for an installment plan from a mobile operator or retailer
- ☐ I asked for an informal loan (e.g., family, friends, xitiki)

Affordable device financing scheme

(Answer the following questions if you selected "No, I tried to get credit for a smart device but was not approved" in question 3.8. Otherwise, skip question 3.11).

3.10. If you tried to obtain credit but were not approved, why were you refused?

- ☐ I did not have the means to make the payments
- ☐ I did not provide all the necessary documentation
- ☐ Other reasons. Please specify _____

*(Answer the following questions if **you did not** select "Basic mobile phone," "Feature phone," or "Smartphone" in question 2.1. Otherwise, skip to question 3.15).*

3.11. If you could have a mobile phone, what would you use it for? (Select all applicable options)

- ☐ To make calls and send text messages
- ☐ To use social media
- ☐ To work
- ☐ To play video games
- ☐ To listen to music
- ☐ To use it as a GPS navigator
- ☐ To take photos/videos
- ☐ To send and receive money (M-Pesa, eMola, and others)
- ☐ To shop online
- ☐ To learn
- ☐ To read the news
- ☐ For security reasons
- ☐ Other:

4. Mobile Internet access and telecommunications expenses

(Answer this question if you selected "Mobile phone," "Feature phone," "Smartphone," or "Tablet" in question 2.1. Otherwise, skip to question 5.1.)

4.1. How often do you access the Internet?

- ☐ Daily
- ☐ Several times a week
- ☐ Rarely
- ☐ Never

(Answer this question if you selected "No" in question 4.1. Otherwise, skip to question 4.3).

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4.2. If you do NOT use the internet daily, what is the main reason?

- ☐ Mobile data is too expensive
- ☐ Mobile network coverage in my area is poor or unreliable
- ☐ I don't know how to use mobile Internet
- ☐ There is no free WiFi
- ☐ Other:

(Answer this question if you selected "Yes" in question 4.1. Otherwise, skip to question 5.1).

4.3. How much do you spend per month on mobile services (calls, SMS, and mobile data)?

- ☐ Less than 200 MZN
- ☐ 200 - 500 MZN
- ☐ 500 - 1,000 MZN
- ☐ More than 1,000 MZN

4.4. What activities would you do more often if your mobile service were half the price?

- ☐ Calls and SMS
- ☐ Use social media (WhatsApp, Facebook, Instagram, etc.)
- ☐ For professional purposes (e.g., you don't have the necessary tools or Internet access)
- ☐ Play video games
- ☐ Listening to music
- ☐ Use mobile payments
- ☐ Reading (blogs, e-books, etc.)
- ☐ Read the news
- ☐ Watching more videos for entertainment
- ☐ Watch more videos for educational purposes

5. Digital literacy

5.1. Do you know how to search for information online (for example, using Google)?

- ☐ Yes, most of the time
- ☐ Yes, but with help
- ☐ I don't know how
- ☐ I don't know what that is

Affordable device financing scheme

5.2. How often do you use the Internet to communicate with other people (via email, Facebook, WhatsApp, other social networks)?

- ☐ Daily
- ☐ Weekly
- ☐ Rarely
- ☐ Never

5.3. Which of the following activities can you do?

- ☐ Make phone calls
- ☐ Send messages (SMS) or use WhatsApp
- ☐ Make video calls
- ☐ Use social media (e.g., Facebook or Instagram)
- ☐ Use a text editor (e.g., Word)
- ☐ Use a spreadsheet (e.g., Excel)
- ☐ Use a slide show (e.g., PowerPoint)
- ☐ Edit photos, make videos, or create music
- ☐ I don't know how to do this (or) I don't know what these activities are

5.4. Have you ever taken a course to learn how to use a mobile phone or computer? Or are you interested in one?

- ☐ Yes, I took a course at school or university
- ☐ Yes, I took a course at work
- ☐ Yes, I enrolled in a course on my own initiative
- ☐ No, but I am interested
- ☐ No, and I'm not interested in taking a course

Support material

1. Respondent profile

Location

Whether the location is urban, peri-urban, or rural will be determined based on the specific district where the person lives.

Definitions:

Affordable device financing scheme

Urban: developed infrastructure (paved roads, electricity, drinking water), high population density and nearby commercial or residential buildings, presence of secondary schools, hospitals and formal public services.

Peri-urban: Located on the outskirts of cities, with mixed urban and rural growth, basic infrastructure present but may be irregular (dirt roads, partial public services), moderate population density, presence of formal and informal housing.

Rural: Located far from urban centers with limited infrastructure, predominantly agricultural, livestock or subsistence activities, low population density, with few schools and health centers.

Cabo Delgado

- Urban area: City of Pemba
- Peri-urban area: Montepuez, Mocimba da Praia
- Rural area: Chiúre, Namuno, Ancuabe, Palma, Meluco, Quissanga, Mecúfi, Mueda, Metuge, Muidumbe, Namuno, Nangade, Balama, Ibo, Macomia

Maputo

- Urban area: Matola
- Peri-urban area: Boane, Marracuene
- Rural areas: Moamba, Magude, Namaacha, Manhiça, Matutuine

Maputo City

- Urban area by default

Nampula

- Urban area: City of Nampula
- Peri-urban area: Nacala-Porto, Monapo
- Rural area: Angoche, Memba, Mecubúri, Malema, Lalaua, Eráti, Larde, Meconta, Mongicual, Mogovolas, Murrupula, Nacala-velha, Nacaroa, Ribaué, Rapale, Mossuril, Muecate, Liupo

Sofala

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- Urban area: Beira City
- Peri-urban area: Dondo
- Rural areas: Nhamatanda, Búzi, Gorongosa, Marromeu, Caia, Maringué, Machanga, Muanza, Chibabava, Chemba, Cheringoma

Zambézia

- Urban area: City of Quelimane
- Peri-urban area: Mocuba, Gurúè
- Rural area: Alto Molócuè, Maganja da Costa, Morrumbala, Namacurra, Chinde, Ile, Inhassunge, Luabo, Lugela, Milange, Mocubela, Molumbo, Mopeia, Mulevala, Pebane, Gilé, Gurué, Derre, Namarroi, Nicuadala

Formal vs. informal sector

Formal workers are those who are employed by legally constituted companies or institutions that comply with the tax and labor obligations established by Mozambican law. This means that their employers register their employment contracts, pay wages in accordance with the minimum wage (or above), and contribute to social security and the National Social Security Institute (INSS). In addition, formal workers are subject to personal income tax (IRPS), which is withheld at source by the employer, and have access to rights such as paid vacation, sick pay, maternity pay, and protection against unfair dismissal, as provided for in the Labor Law.

On the other hand, informal workers operate outside the legal and regulatory framework. This includes street vendors, small farmers, artisans, and service providers who do not have a formal employment contract and are not registered for tax or social security purposes. Although they do not pay income taxes such as IRPS directly, the Mozambican government has sought to integrate part of the informal sector through mechanisms such as the Simplified Tax for Small Taxpayers (ISPC). This tax aims to tax the turnover of small informal operators rather than their net income, seeking to broaden the tax base. However, many informal workers still operate completely outside the tax system, do not contribute to the INSS and, consequently, do not have access to the social security benefits (such as retirement pensions, sickness or maternity benefits) that formal workers enjoy.

C - Benchmarking of Smart Device Financing Programs

Table56. Summary of benchmarking of smart device financing programs

Name of Initiative	Country	Year	Target	Promoting entity	Funding mechanism	Category	Funding
BridgeIT / Text2Teach	Philippines, Tanzania	2003 – 2013	Primary schools	Nokia + private companies + NGOs and foundations + Government	Smartphones with educational content; monitors.	Donation	Public-private partnerships (private companies, NGOs and foundations, and governments)
Phone Loan	Bangladesh	2019-Present	Low-income population	Government + Mobile operators	Smartphones	Asset financing	Digital microcredit
Affordable Connectivity Program (ACP)	US	2021-2024	Low-income households	FCC + ISPs	Tablets, laptops	Hybrid	Partial subsidy
Connected Student	Brazil	2020	Federal students	RNP + MEC	SIM cards + mobile data packages	Donation	Full/partial subsidy
E-School	Portugal	2008-2016	Primary/secondary school students	Government of Portugal (ME)	Laptops	Asset financing	Partial subsidy and operating lease
Lipa Mdogo Mdogo	Kenya	2020-Present	Low-income population	Safaricom, in partnership with Google	4G smartphones	Asset financing	PAYGO
Orange / M-KOPA PAYG	Kenya, Uganda, Nigeria, Ghana, South Africa	2012-Present	Low-income population	Orange + M-KOPA / Payjoy	Smartphones	Asset financing	PAYGO
JioPhone	India	2017-Present	Low-income population	Reliance Jio	Feature phones and smartphones	Asset financing	Hybrid (Cross-subsidy, Microcredit, PAYGO)
One Laptop per Child (OLPC)	Rwanda, Ethiopia, Ghana, etc.	2007	Primary school students	OLPC Foundation + UNDP	Laptops	Donation	Donation
Ceibal Plan	Uruguay	2007 - Present	Public school students and teachers	Government of Uruguay	Laptops	Donation	Donation

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Name of Initiative	Country	Year	Target	Promoting entity	Funding mechanism	Category	Funding
e-Learning Program – Western Cape Government	South Africa	2020-2021	Students from disadvantaged public schools	Western Cape Government	Tablets	Donation	Donation
Talking Books	Ghana, Kenya, Uganda + 12	2008-Present	Illiterate rural population	Literacy Bridge (Amplio Network)	Educational audio device	Third-party payment	Donation (Bill & Melinda Gates Foundation)
Samsung Smart School	South Africa, Senegal, Ghana, Nigeria	2013–present	Public schools	Local departments of education	Tablets, laptops, interactive whiteboards	Third-party payment	Corporate donation (Samsung Electronics)
Instant Network Schools	Kenya, Mozambique, Tanzania, Kenya + 3 African countries	2013–Present	Refugees	United Nations High Commissioner for Refugees + Schools and educational centers	Digital educational kits (tablets, laptops, projectors, routers)	Third-party payment	Donation (Vodafone Foundation)
BLUE Box	Ghana, Kenya, Tanzania + 10 African countries	2010-Present	Disadvantaged populations including refugees	Worldreader + Schools, libraries, NGOs	E-readers	Third-party payment	Donation (Vodafone Foundation and others) + partnerships (Amazon)
Hello Hubs	Uganda, Nepal, Nigeria	2013-Present	Marginalized populations or those with limited digital access	Hello World	Digital learning stations, including solar-powered tablets and PCs, educational software, etc.	Public internet access points & collective use	Donation (foundations and partner institutions, individual philanthropic donations, crowdfunding)
Village Digital Booth	Bangladesh	2023-Present	Rural and marginalized communities with limited access to financial and digital services	Government + Zaytoon Business Solutions	Financial and digital service centers	Public internet access points & collective use	Public-private partnership (government + Zaytoon Business Solutions)
Solar Community Hubs	South Africa, Kenya, Morocco, Colombia, Brazil, and Mexico	2010-Present	Students, teachers, and communities in rural areas with limited internet access	Computer Aid International	Solar-powered computer labs equipped with solar panels, PCs, and internet access	Public internet access points & collective use	Donation (Dell Technologies and other partner foundations and institutions, individual philanthropic donations, crowdfunding)

Affordable device financing scheme**D - Impact of the scheme on the target population***Table 57 . Impact of the number of beneficiaries per group on the target population*

# Group	Beneficiary groups	Project target population) ²	Device to be allocated	People who do not have this device (%) ¹	Target population (No.)	No. of beneficiaries	No. of beneficiaries (% of total) ³	No. of beneficiaries (% of target population) ⁴
1.A	Farmers	4,424,647	Smartphone	59%	2,591,009	100,000	30%	4%
1.B	Farmers with geographical bonus	4,424,647	Smartphone	59%	2,591,009	60,000	18%	2%
2	Self-employed with low income	434,634	Smartphone	57%	249,308	80,000	24%	32%
3	Digital self-employed	164,013	Smartphone	33%	54,671	30,000	9%	55%
Low income: Economic activation		9,447,941			2,894,989	270,000	82%	
4	Teachers (technical and higher education)	14,714	Laptop	70%	10,300	10,000	3%	97%
5.	Students (technical and higher education)	142,819	Laptop	76%	108,667	30,000	9%	28%
Education and Health: Socioeconomic Development		300,352			261,785	40,000	12%	
7	Internally displaced persons	741,381	Smartphone	80%	593,105	10,000	3%	2%

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# Group	Beneficiary groups	Project target population) ²	Device to be allocated	People who do not have this device (%) ¹	Target population (No.)	No. of beneficiaries	No. of beneficiaries (% of total) ³	No. of beneficiaries (% of target population) ⁴
8	People with disabilities	35,086	Smartphone	80%	28,069	10,000	3%	36%
Vulnerable: Social development		776,467			621,174	20,000	6%	
Total		10,524,760			1,824,538	330,000	100%	

Notes:

1. Data obtained from population surveys.
2. Addressable population of the project:
 - a. Farmers: Farmers in Nampula, Zambézia, and Manica (IOF/ INE, 2022)
 - b. Self-employed: Estimate of self-employed workers (excluding farmers) in the same provinces mentioned above (estimate based on IOF/ INE, 2022)
 - c. Digital self-employed: Estimated 3% of the self-employed population (estimate based on IOF/INE, 2022).
 - d. Teachers: All teachers in technical and higher education (School Survey/MEC, 2024)
 - e. Students: All students in technical and higher education (School Survey/MEC, 2024)
 - f. Internally displaced persons: All internally displaced persons (UNCHR, 2025)

People with disabilities: People receiving basic assistance (AE/INE, 2024)
3. Percentage of beneficiaries in that specific group out of the total number of beneficiaries (330,000)
4. Percentage of beneficiaries in that specific group compared to the total number of people in the target population of that same group.

E - Types of Smart Devices

Smart devices are electronic devices with Internet access, capable of performing autonomous computing in a context-related manner²¹.

Characteristics of smart devices

According to this definition, there are three characteristics common to all smart devices:

- *connectivity* - the device is capable of connecting (wired or wireless) to a network of devices for data exchange,
- *context awareness* - the device is capable of collecting data and reacting according to pre-established programs, and
- *autonomous computing* - the device performs automatic data processing.

Other characteristics are also commonly associated with smart devices, such as mobility and user interaction.

Some smart devices are not mobile, such as desktop computers and interactive whiteboards, while devices that only interact with other electronic devices but are part of the network are still covered by the term.

Smart devices in this project

This project will focus on two types of smart devices, which are primarily mobile, widely used, and oriented towards individual user interaction:

- Smartphones and
- Laptops/portable personal computers (PCs).

Laptops and personal computers are referred to as personal computers in this project for ease of communication, since for policy recommendation purposes their basic functionalities are very similar.

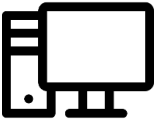
²¹ Adapted from the definition proposed by Silverio-Fernández *et al.* (2018)

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Descriptions of smart devices

	Description	Application
	Basic and feature phones are portable mobile devices with cellular capability, small low-resolution screens, and typically an alphanumeric keypad. The main difference between the two is that basic phones do not have internet access (and are therefore not smart devices), while feature phones have basic internet access and a lightweight operating system that supports pre-installed applications.	Basic phones are used for communication purposes and do not allow users to access digital services. Feature phones have internet access but do not allow users to expand their digital skills beyond a basic level due to their limited capabilities — they typically cannot download apps, and when they do, their memory is very limited.
	Smart-feature phones are a recent upgrade from traditional keypad phones. They support a lightweight operating system (<i>i.e.</i>, KaiOS) with the ability to install mobile apps.	Smart feature phones offer users a wider range of possibilities than feature phones due to their ability to download mobile apps, however, like feature phones, they have very limited memory.
	Smartphones are portable mobile devices with a large touchscreen, mobile phone capability, and an operating system (usually Android or iOS) with processing power for multiple applications, which can be downloaded online. They have Wi-Fi connectivity and mobile network modems (3G and above).	Smartphones are optimized for mobile internet uses such as communication via social media (Facebook, WhatsApp, etc.), access to information (weather forecasts, market research, etc.) and digital money transfers. They enable the adoption of basic digital skills.
	Tablets are portable personal computers similar to smartphones in terms of operating system and capacity, except for their larger screen size (7"–10"). They are designed primarily for Internet use and not to be used as a phone. Although tablets have Wi-Fi connectivity, they may or may not have mobile network modems. In addition, they can be coupled with peripheral devices such as keyboards for a more comfortable typing experience.	Although tablets are mobile, they are primarily for indoor use due to their size. The larger, high-resolution screens are ideal for media consumption, online learning (e-books, visual media, etc.), and simple, structured data entry (surveys, monitoring data, etc.) and simple production work. Larger screens also give them more functionality when compared to smartphones for tasks that require user input (<i>e.g.</i>, clerical and administrative work).

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	Desktops are personal computers designed for use in a single location (e.g., a desk), typically with Windows, MacOS, or Linux operating systems and processing power for multiple programs. They require peripherals (i.e., a screen monitor, keyboard, mouse, microphone, and speakers, etc.) and a power source since they do not have batteries. Their components and peripherals are also customizable to the user's needs.	Desktop computers are the most suitable devices for activities that require extensive user input and advanced processing power (e.g., writing, presentation and graphic design, data management, and technological development). They are most commonly used by businesses, government, and <i>gamers</i>, who generally require high computing power or a device that is not mobile due to the type of work and/or for security reasons. However, their use depends on stable power supplies.
	Laptops and notebooks are portable personal computers with Windows, MacOS, or ChromeOS operating systems and all necessary peripherals built in, i.e., the screen monitor mounted on the inside of the top cover and the keyboard and mouse pad on the inside of the bottom cover. Notebooks were traditionally smaller and lighter than laptops, however, the terms are mostly interchangeable today.	Laptops and notebooks combine the features of tablets and desktops. They are portable and suitable for media consumption, while useful for extended user input and advanced processing power (depending on device specifications). When compared to desktops, portable devices typically have less processing power and customization, however, they do not require a stable power source due to their battery and tend to be less expensive.
	2-in-1s are portable personal computers with operating systems similar to laptops, a touchscreen (unlike traditional laptops), and a keyboard. The device can be convertible or hybrid. <i>Convertible</i> — Has a physical keyboard attached, which can be hidden behind the screen by sliding or rotating it. <i>Hybrid</i> — Has a detachable physical keyboard.	2-in-1 devices combine the features of tablets and laptops.
	Interactive whiteboards (IWB) are touchscreens in the form of a classroom whiteboard, typically 50" to 75" in size. These can be a standalone device with the features of a computer or connected to a personal computer.	IWBs are ideal for communicating with large audiences due to their screen sizes and interactive features. They are useful in an educational context (as a way to expose students and teachers to digital content) and in corporate/government meeting rooms where graphic presentations are important.