IDB Invest

NTT DATA

Digital Transformation for Financial Inclusion in Latin America and the Caribbean

AUTHORS

David Brogeras, Head of Digital Transformation, IDB Invest; **Terence Gallagher**, Head of Financial Inclusion, IDB Invest; **Luis Olmedo**, Partner, Strategic Value, NTT DATA; **Sungnam Choi**, Digital Transformation Consultant, IDB Invest; **Cristina Nolasco**, Digital Transformation Consultant, IDB Invest; **Mónica Muriel**, Associate, Digital Strategy, NTT DATA and **Daniela Bautista**, Senior Consultant, Digital Strategy, NTT DATA.

ACKNOWLEDGEMENTS

We would like to thank **IDB Invest**, **NTT DATA**, and **GSMA** for their support in the development of this work. In particular, **Silvia Dangond** from IDB Invest, **Lina Pinzón**, **Pablo Valerio** and **Octavio Nava** from NTT DATA, **Rishi Raithatha**, **Bart-Jan Pors** and **Ashley Olson** from GSMA. In addition to those from whom we received insightful feedback: **Marisela Alvarenga de Jacoby, Milagros Rivas Saiz**, **Cristina Parilli Lozada**, **Cesar Felipe Carcelén Romero** from IDB Invest. Brand and design support was provided by **Cindy Franco** at IDB Invest, **Xóchitl Rosas**, **Karina Barajas**, **Sandra Tavera** and the **NTT DATA Talent Hub** staff.

ABOUT IDB INVEST

As a member of the IDB Group, IDB Invest is a multilateral development bank committed to furthering the economic development of its member countries in Latin America and the Caribbean through the private sector. IDB Invest finances sustainable companies and projects, aiming for financial results while contributing to the region's economic, social, and environmental development. With a portfolio of USD 16.33 billion in assets under management and 394 clients in 25 countries, IDB Invest provides innovative financial solutions and advisory services that respond to the needs of its clients across various industries.

ABOUT NTT DATA

As a member of the NTT Group, NTT DATA is an innovative global IT and business services company headquartered in Tokyo. The company assists clients in their transformation process through consulting, industrial solutions, business process services, digital and IT streamlining, and managed services. NTT DATA enables them, as well as the society at large, to move confidently into the digital future. The company proves its allegiance to the long-term success of its clients, combining global reach with local care while working alongside them in more than 50 countries across the world through a network of more than 140,000 professionals. To learn more, please visit nttdata.com.

TABLE OF CONTENTS

ACRONYMS

2FA - Two-Factor Authentication

AI – Artificial Intelligence

Agritech – Agriculture with Technology

API - Application Programming Interface

B2B - Business to Business

BNPL - Buy-now-pay-later

CAGR - Compound Annual Growth Rate

CEO - Chief Executive Officer

CFO - Chief Financial Officer

CIO - Chief Information Officer

CINO - Chief Innovation Officer

COO - Chief Operating Officer

CRM - Customer Relationship Management

Crowdfunding

CTO - Chief Technology Officer

DMA – Digital Maturity Assessment

DT - Digital Transformation

ECLAC - Economic Commission for Latin America and the Caribbean

EBITDA - Earnings Before Interest, Taxes, Depreciation, and Amortization

ERP - Enterprise Resource Planning

ACRONYMS

Fintech – Technological Financial Services Entities

GDP - Gross Domestic Product

GSMA - Global System for Mobile Communications Association

Insurtech – Technology-led Insurance Companies

IoT – Internet of Things

KPIs - Key Business Indicators

LAC – Latin America and the Caribbean

MSMEs – Micro, Small, and Medium Enterprises

MVP - Minimum Viable Products

NLP - Natural Language Processing

OCR - Optical Character Recognition

OPEX – Operating Expenses

P2P – Peer-to-peer

PFM - Personal Financial Manager

Regtech – Regulatory Technology

ROI - Return on Investment

RPA - Robotic Process Automation

SDG - Sustainable Development Goals

SPI - Instant Payment System

XaaS - Everything as a service

EXECUTIVE SUMMARY

1

EXECUTIVE SUMMARY

Financial inclusion is more than just access to financial services; it is the key to empowering people and businesses, giving them the tools needed to improve their living standards and reach their financial goals.

Financial inclusion involves providing access to a variety of financial products and services that are useful, affordable, and socially and economically responsible. It is an ongoing search for solutions that not only grant individuals and businesses access to financial services but also facilitate their effective use, ensure their quality, and ultimately improve their financial well-being.[1]

In this report, we will look into the state of Digital Transformation in the setting of financial inclusion. We will search into how the entities specializing in this sector are using digital technologies and innovative strategies, and what are the benefits, risks, and challenges underlying this transformation process. With the advent of the digital era, there is a rise in opportunities for financial inclusion. This report highlights the significant role entities can play in this endeavor to mitigate risks and overcome barriers.

[1] Inclusión financiera: Panorama general. (2022, 29 marzo). Banco Mundial. https://www.bancomundial.org/es/topic/financialinclusion/overview

Analyzing trends and showcasing successful cases effectively highlights the impact of Digital Transformation on financial inclusion. For instance, entities that have implemented advanced analytics models with a focus on strengthening the financial and social development of customers at the base of the pyramid or the creation of digital tools that optimize credit approval and disbursement process in remote communities. These instances are highlighted throughout this report, underscoring the importance of digitizing the value chain[2] from start to finish.

Banks, cooperatives, microfinance institutions, and fintechs have variedly emphasized the vision of implementing digital solutions with an inclusive approach to advance the development of individuals and companies. This report underscores the relevance of Digital Transformation within the scope of financial inclusion, especially for micro-entrepreneurs and low- income individuals, including vulnerable populations such as indigenous people, migrants, and senior citizens. These groups face unique challenges in accessing financial services and require innovative solutions that enhance their inclusion in the financial system.

Often, micro-entrepreneurs managing small-scale businesses, such as local stores, street vendors, or micro-enterprise owners, are often faced with difficulties accessing traditional financial services owing to a lack of credit history, income instability, and the absence of substantial assets. Specific solutions are proposed for this population, focused on the supply of credits for working capital through digital channels.
Unconventional analysis variables, such as utility bill payments, are considered to broaden their access to financial services.

On the other hand, indigenous populations, ethnic groups with distinctive traditions and cultures residing in urban, rural, or remote areas, face economic challenges and lack of access to appropriate financial services owing to their location, language, and lack of documentation. To address these needs, credit solutions based on prescriptive analyses are proposed. These solutions not only enable the identification of potential customer behaviors but also establish the optimal route to maximize the probability of success for a given action. For instance, considering the daily life in rural areas for the indigenous population, factors such as weather stations are taken into account in formulating these strategies. Furthermore, the creation of financial products designed to foster communities is recommended, promoting benefits through savings or investments. Such products can feature voice authentication solutions and educational resources in the form of videos, strategically addressing challenges associated with illiteracy.

Similarly, migrants seeking improved economic opportunities encounter financial challenges due to the necessity of sending remittances to their countries of origin, lack of documentation and credit history, and limited access to banking services at their destinations. Solutions are recommended to address the different stages of migration, with a focus on remittance products enabled by digital and cross-border channels, including a customization of features tailored to the nature of their needs.

[2]The value chain is a systematic representation of the key activities that entities perform to create, deliver, and support their products or services. The value chain defined for this report includes the stages of: Customer Understanding, Product Design, Onboarding, Acquisition and Placement, Transactionality, Support and Service.

Figure 1: Financial Inclusion Dimensions

Source: Own production based on the concept of Financial Inclusion for the World Bank

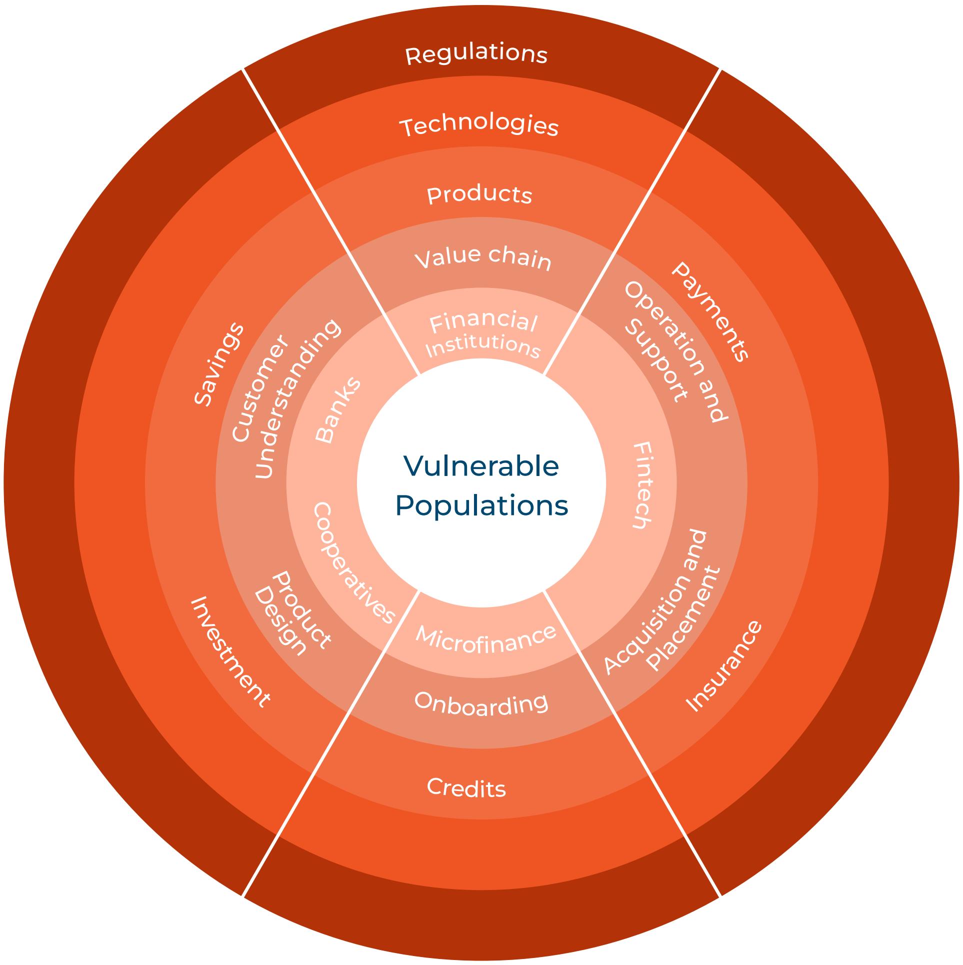
Lastly, those involved in the silver economy, that is, senior citizens or retirees actively contributing to the economy through part-time jobs, ventures, or consumer activities, frequently face challenges in adopting financial and digital technologies. This is often attributed to their unfamiliarity with these systems and the age- related risks, such as non-payment. Several digital solutions are recommended to support the adoption and access to digital financial products. These include innovative investment options through crowdfunding and savings products designed to complement their pension plans. Ensuring a user-friendly experience in digital channels is deemed essential, with a focus on providing support and education, primarily through digital means.

In the context of financial inclusion, the ecosystem is a continually evolving environment where three pivotal actors engage: financial institutions, regulators, and vulnerable populations.

In this report, we will explore the strategies entities should employ to optimize and transform the value chain, resulting in a direct influence on the creation of financial products and services tailored to the specific needs of vulnerable populations. Furthermore, we will delve into the shared responsibility in the adoption of technologies by these populations, identifying obstacles on both the supply and demand sides affecting the growth of the digital footprint.

This implies not just providing affordable and accessible financial solutions but also ensuring that the target populations possess the skills and knowledge required to maximize these offerings. Additionally, it is crucial for regulators to take a proactive role in this ecosystem, establishing a regulatory environment that promotes innovation while safeguarding the rights of vulnerable populations. Collaboration and effective coordination among these actors are imperative for achieving a robust and dynamic financial inclusion ecosystem.

Figure 2: Financial Inclusion Sector Ecosystem



Source: Own production

Such new scenario of financial ecosystem advancement has marked the rise of new actors and products that broaden financial inclusion. For instance, according to a study conducted by NTT DATA[3] in Mexico, fintechs claim that about 42% of their customers did not have access to financial products before using their services. PIX exemplifies this statement, initially intended for simplifying digitalization and establishing a standardized payments infrastructure in Brazil. However, it ultimately emerged as one of the largest success cases in the region when it comes to financial inclusion by digital means, as it achieved its greatest success by attracting a significant number of people with limited or no access to banking services.[4]

Through this report, we will explore how digitalization facilitates the development of financial services, contributing to a remarkable expansion of the sector's customer base. This growth necessitates a transformation in financial business models, moving away from the previous emphasis on profitability per product to a model centered on profitability per customer. In this paradigm, the customer becomes the primary unit of productivity, envisioning value across the entire life cycle. Even customers who may not yield significant profits today can become highly profitable throughout their life cycle. The pivotal process of financial graduation is essential for accomplishing this conversion, with financial institutions playing a central role.

Description of the Study's Methodological Approach

The main purpose of this study's methodological approach is to characterize the level of digital maturity among financial institutions with a focus on financial inclusion in the region. To achieve this purpose, several stages of research were conducted.

A sample of 35 financial institutions in the region, committed to financial inclusion, was chosen, representing a noteworthy selection from 16 countries in Latin America and the Caribbean (LAC). Additionally, three fintech companies from the region were intentionally included to contrast their trajectories and digital evolution with that of traditional financial institutions.

[3] NTTDATA, Asociación Fintech México, & Nader, Hayaux & Goebel. (2023). Reporte anual fintech México 2023. https://mexico.nttdata.com/insights/fintechmx

[4]Pix is a mandatory digital instant payment system for all financial institutions, facilitating money transfers and payments through a unique code. According to IDB Invest, over 40 million individuals conducted their inaugural bank transfer using PIX between November 2020 and March 2022.

[5]refers to the process by which individuals, especially those with limited access to financial services, progressively advance and expand their participation in and use of financial products. This approach involves overcoming early obstacles such as a lack of credit history, variable income, or the absence of traditional financial services, allowing people to access a wider range of services and improve their economic well-being.

During the initial phase, the 35 entities carried out a self-assessment diagnosis of their digital maturity. The second phase involved conducting a total of 54 interviews with officers and executives of such entities, providing a comprehensive understanding of the main challenges and opportunities they face in their pursuit of Digital Transformation. In the third phase, three focus groups were organized, allowing the entities to share experiences, delve deeper into the challenges, and devise regional solutions.

By employing a combination of qualitative and quantitative methods, the work approach offered a comprehensive view of digital maturity in the region's financial sector. This methodology facilitated the identification of major advancements, barriers, and challenges faced by these entities. In addition, it brought to light the opportunities within the context of Digital Transformation in the Latin America and Caribbean (LAC) financial sector.

Digital Maturity Status of the Financial Inclusion Sector

This study provides an overview of the state of digital maturity in financial institutions. The findings indicate that the participating entities are typically at an intermediate level, with a score of 2.8 on a scale of 5. This suggests significant progress but also points to opportunities for improvement.

The study indicates a shared characteristic among financial institutions that have attained higher levels of digital maturity: Digital Transformation is rooted at the core of their strategy. These institutions not only recognize the importance of digitalization but also allocate substantial funds to digital initiatives and have established a strong transformational governance that drives them effectively.

In order to assess the digital maturity of the entities, we will explore different stages of the value chain, examining customer knowledge, product creation, onboarding, placement, engagement, and, ultimately, the support and service capabilities offered by the entity.

Regarding the customer knowledge stage, it was noted that, even though 14% still heavily rely on traditional methods for data collection, entities are initiating the expansion of their capabilities and defining new analysis variables to enhance and deepen their understanding.

In terms of customer segmentation, this stands as a key factor for the personalization of products and services. The findings indicate that although 34% of entities have moved towards more dynamic segmentations, there is still a great opportunity to improve the quality and analysis models of data repositories.

In contrast, methodologies for product development have advanced significantly. For instance, the voice of the customer is actively employed to design products aligned with their needs. Nevertheless, there is still room for growth and improvement. The adoption of a user- centered design is crucial, demanding an in-depth understanding of the nuances within each segment. This underscores the ongoing necessity for a focus on innovation and the identification of opportunities in an ever-evolving landscape. Moreover, product design processes should center around personalization and elevating the customer experience.

The study also draws attention to significant progress in facilitating digital channels, highlighting the increasing use of mobile applications and web platforms for information checking, especially by entities that have integrated digital onboarding through assisted or mixed processes. However, there remains a strategic opportunity to streamline, personalize, and enhance the security of this process, aiming to deliver an exceptional customer experience.

Additionally, our findings reveal that 92% of the entities already possess some level or type of digital channel. However, the primary challenge lies in enhancing the adaptability and effective use of these channels. Among these entities, 60% utilize channels such as mobile apps, push notifications, and email for customer communication and product promotion. This marks a considerable progress in deploying digital technologies for interaction, creating new opportunities to attract and serve customers, and driving product placement. The next step is to focus even more on digital marketing and improve the personalization of supplies.

Likewise, the study examined the adoption rates of technologies at different maturity levels, with Cloud (86%), Robotics (72%), Artificial Intelligence (40%), and Big Data, the least utilized technology among entities (31%). These technologies are employed to enhance operational efficiency, facilitate data-driven decision-making, and automate administrative tasks.

Advancing Digital Transformation requires overcoming multiple challenges. On the supply side, one such challenge is the absence of a strong digital culture and resistance to change. Moreover, entities deal with high implementation costs and limited financial capacity to invest in innovation.

In turn, on the demand side, some of the changes include lack of access to connectivity, distrust in digital solutions, concerns about costs, and the absence of digital education.

Overcoming these barriers is crucial for the financial sector, as it has the potential to speed up its transformation process. This, in turn, will pave the way for gaining a competitive edge in the market, fostering enhanced collaboration within the ecosystem, and generating increased cost and benefit for customers.

In this report, solutions capable of driving Digital Transformation across diverse aspects of the financial sector's value chain are outlined. The report emphasizes the benefits that come with the implementation of these solutions in the industry.

Key Challenges of the Financial Inclusion Sector

The study revealed that financial institutions encounter challenges during their Digital Transformation process when aiming to promote financial inclusion. These cover several aspects:

- **Personalization:** Tailoring financial products efficiently to suit the specific needs of each population. Effective personalization is critical to ensuring that financial services are relevant and useful to each individual.

- **Adoption:** The mere presence of technology does not guarantee the adoption or use by customers, so entities should concentrate on promoting, educating, and enhancing accessibility for these channels.

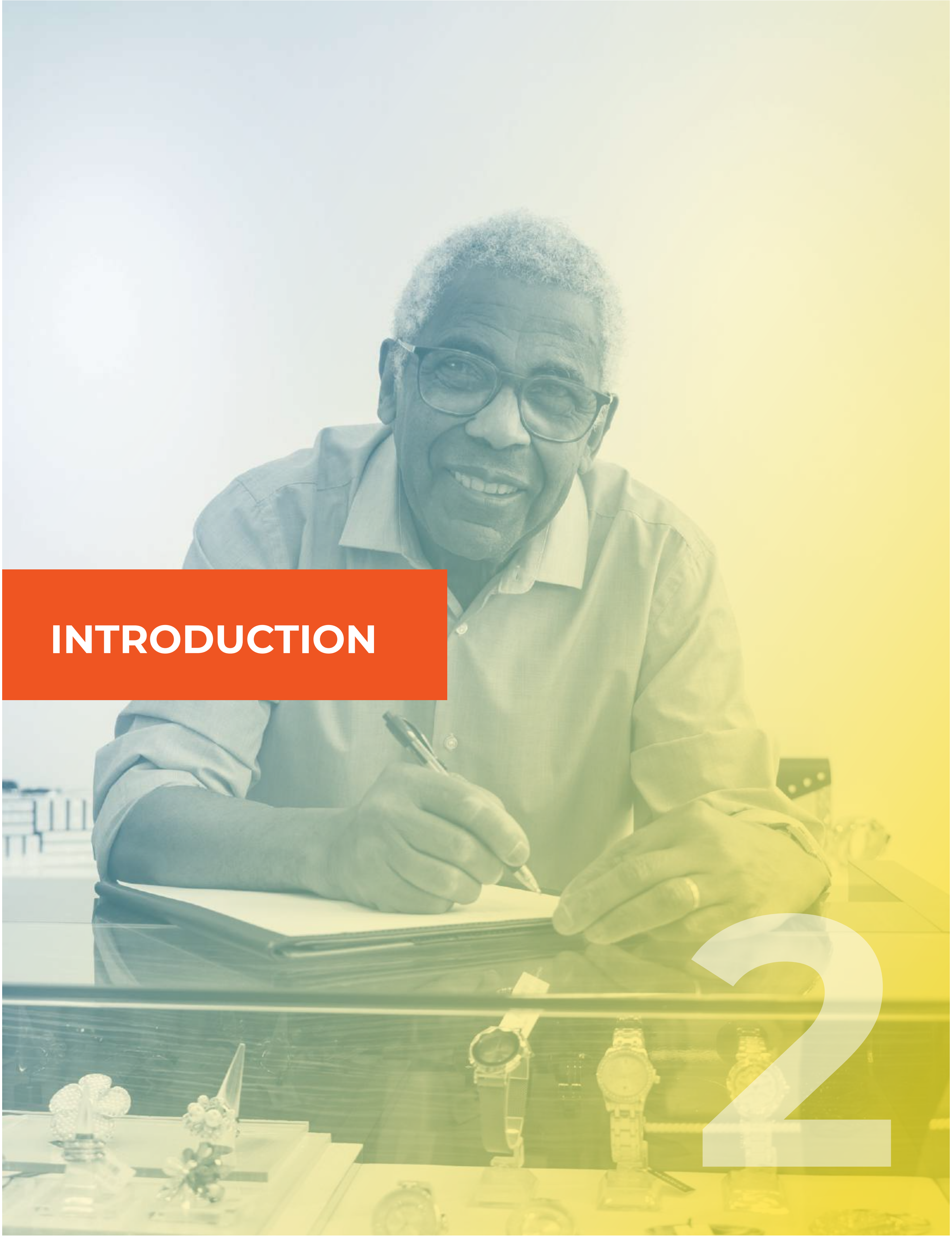
- **Education:** Financial education plays a capital role in inclusion. It is, therefore, crucial to ensure that customers have the knowledge required to make informed financial decisions, enabling people to understand and effectively benefit from the services available.

- **Coverage:** It is challenging to reach geographically remote areas. Entities should find ways to bring digital financial services to these communities.

- **Data:** Providing access to financial services becomes more challenging due to the lack of credit history or fluctuating income in the population being served. This situation, characterized by information gaps, poses additional risks for financial institutions, as they are unable to rely on conventional risk assessment methods.

- **Protection:** Financial institutions ought to deploy strong measures to safeguard customers against fraud and cyber risks, emerging as significant concerns in the digital environment.

Tackling these challenges requires a comprehensive approach and a robust strategy in Digital Transformation, with a view to delivering inclusive, secure, and effective financial services to a diverse audience.



INTRODUCTION

2

2.1 Study Objectives

The primary objective of this study is to share findings, insights, and recommendations aimed at propelling the Digital Transformation of the financial sector, thus fostering financial inclusion and economic development in LAC.

By placing emphasis on the benefits that Digital Transformation brings to financial organizations, our objective is to promote the adoption of digital technologies to ensure that high-quality financial services are accessible to all individuals, regardless of their segment.

To ascertain the current state of digitalization and explore the trajectory of transformation for entities, we provided an updated assessment of the digital maturity level within the financial inclusion sector in LAC. The objective was to analyze the value chain, comprehending the challenges, trends, and opportunities associated with Digital Transformation in this sector.

As a secondary objective, we anticipate that the findings of this study will stimulate a regional dialogue on the significance of Digital Transformation for financial inclusion, while emphasizing the crucial need to bolster competitiveness and technological innovation in the financial sector for the advancement of the region's economic and social development.

The findings and solutions pointed up can serve as a basis for fostering collaboration between financial institutions, regulators, technology companies, and other relevant actors. The objective is to collectively enhance efforts aimed at boosting financial inclusion.

Lastly, we developed a roadmap that will guide financial institutions in their process of innovation and adoption of new digital solutions, setting the stages and key areas of action to overcome the challenges of Digital Transformation and strengthen their digital capabilities.

2.2 Study Structure

This study consists of four main sections: (1) Introduction, (2) Current State of Digital Transformation in Inclusive Financial Services Entities in LAC, (3) Digital Solutions to Address Identified Needs, and (4) Recommendations and Conclusions.

The Introduction lays out the objectives and methodology of this study. It provides a description of the digital maturity assessment model, the methods employed for data collection, the criteria for selecting participating financial institutions (banks, microfinance institutions, cooperatives, associations, savings banks, and fintechs), and the geographical distribution of these institutions across the region.

The chapter dedicated to the Current State of Digital Transformation in Inclusive Financial Services Entities in LAC provides a thorough examination of the study findings. Within this chapter, the digital maturity level of the sector is evaluated, and the primary barriers, needs, and challenges encountered by microfinance institutions, cooperatives, banks, and fintechs in the region are highlighted.

The chapter dedicated to Digital Solutions to Address Identified Needs brings to light the most significant global digital solutions spanning the entire value chain. Additionally, it elaborates on new solutions emerging through collaboration with financial ecosystem actors, emphasizing the benefits that Digital Transformation can bring to the sector.

Lastly, the chapter dedicated to Recommendations and Conclusions introduces an initial framework suggesting concrete steps and recommendations for organizations in the sector to optimize their Digital Transformation initiatives. These recommendations are based on the conclusions drawn from the research and aim to drive progress towards a more inclusive and digital financial sector in LAC.

2.3 Methodology

This report is based on a methodology that combines various techniques to provide a complete overview of Digital Transformation in the financial inclusion sector. To this end, field research was carried out involving a total of 35 financial institutions representing diverse actors in the ecosystem, such as banks, microfinance institutions, cooperatives, associations, savings banks, and fintechs focused on financial inclusion.

The initial step involved the use of a digital questionnaire named Digital Maturity Assessment (DMA), specifically designed for this study, to assess the digital maturity level of each participating entity. Consisting of 60 questions distributed across 8 dimensions, this questionnaire facilitated the analysis of technology adoption, strategy, digital culture, integration of digital channels, customer experience, and other relevant topics.

In addition to the questionnaire, interviews were conducted with high-level executives, encompassing Chief Executive Officers (CEO), Chief Technology Officers (CTO), and Chief Innovation Officers (CINO). These interviews allowed us to look into the results obtained through DMA, review the strengths and weaknesses spotted, and understand the specific challenges and opportunities of each entity.

In the final step, focus groups were organized, providing a platform for entities to share their visions and collectively devise regional solutions and strategies to accelerate Digital Transformation in the sector. C-level[6] representatives and sector experts actively engaged in this discussion forum, sharing insights, experiences, and perspectives on best practices and potential collaboration opportunities.

This comprehensive research methodology facilitated the acquisition of a comprehensive and insightful view of Digital Transformation in the financial inclusion sector. The results obtained from DMA, interviews, and focus groups provided information to understand the current digital maturity level of financial institutions, identify areas for improvement, and develop specific recommendations to accelerate Digital Transformation and promote financial inclusion in the region.

[6] The roles interviewed include Chief Operations Officer, Chief Technology Officer, Innovation and Digital Transformation Officer, and Human Resources Officer.

2.3.1 Sample of Entities by Country

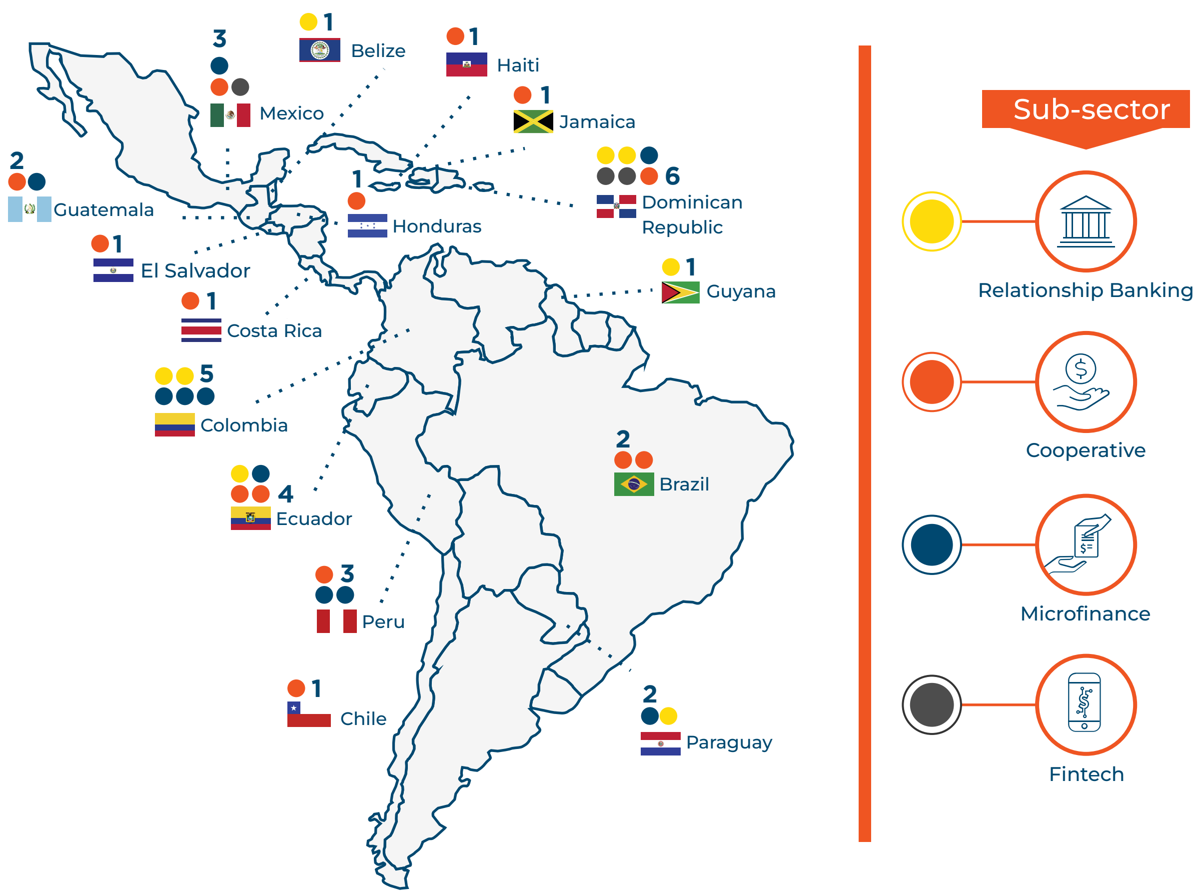
The sample used in this research was drawn from 16 LAC countries.

Table 1: List of Countries Considered

Haiti	Brazil	Mexico	Ecuador
Belize	Honduras	El Salvador	Paraguay
Guyana	Colombia	Costa Rica	Dominican Republic
Jamaica	Guatemala	Peru	Chile

In each of these countries, a varied array of entities, such as banks, microfinance institutions, cooperatives, associations, savings banks, and fintechs focused on financial inclusion, were carefully chosen to subsidize a holistic, assertive vision of the current state of Digital Transformation in LAC. The goal is to offer recommendations and solutions aligned with the reality of each country and entity. The selected entities pertain to diverse segments such as banks, microfinance institutions, cooperatives, associations, savings banks, and fintechs focused on financial inclusion.

Figure 3: Geographical Distribution of Study Companies



2.3.2 Structure of Digital Maturity Assessment

The digital maturity model used in this study offers a structured framework to understand the current state of Digital Transformation within the participating entities. It is based on a self-assessment questionnaire completed by each entity.

The purpose of this digital maturity assessment is to review the Digital Transformation capabilities of organizations and ascertain to what degree they seize digitalization opportunities. Eight key dimensions encompassing different aspects of Digital Transformation are considered: A) Digital Strategy and Culture, B) Customer Experience, C) Organization, Communication, and Talent, D) Products and Services, E) Infrastructure and Technology, F) Data Analysis, G) Processes, and H) Disruptive Trends. (See Annex 2 for further information).

2.3.3 DMA Maturity Levels

The maturity level of the participating organizations was assessed using a five-level scale, providing a thorough view of their progress in terms of Digital Transformation. There is a specific weighting associated with each level concerning the key aspects of each dimension, facilitating the understanding of the maturity level of each organization against its performance in these aspects. The outcomes of DMA allowed companies to be ranked into five categories according to their current state of digital maturity:

- **Observer:** The organization shows resistance to change and has implemented minimal measures for Digital Transformation. Digital initiatives emerge in response to the market and competition, yet crucial elements such as omnichannel capabilities, customer orientation, and data intelligence remain unaddressed both strategically and operationally. Management has an elementary digital culture and is skeptical about the value that Digital Transformation can add.

- **Initiator:** The current structure lacks a dedicated strategic plan for Digital Transformation and does not formally allocate the necessary resources to address it. Digitalization is viewed as a supplementary task for existing teams, lacking a clear focus. Operationally, heavy reliance on manual processes persists, with technology supporting only select stages of the workflow. Additionally, there is an absence of a culture promoting analysis-based decision-making, and descriptive analyses are primarily used at the level of specific areas.

- **Follower:** The organization has a strategic Digital Transformation plan supported by indicators. Custom roles and a tailored governance model have been introduced to drive and manage Digital Transformation, fostering a digital culture that is progressively disseminating throughout the organization. At the operational level, the plan has been successfully implemented and processes are widely digitalized throughout the value stream. Data analytics are used for decision-making, combining basic analysis for routine activities and resources focused on more advanced analysis to generate complex reports.

- **Advanced:** With a relevant and distinctive value proposition for its customers, supported by a robust economic model, the organization's strategy is aligned with digitalization. It adopts an agile work model and possesses a governance structure that leads the Digital across the board. Operational processes are supported by the use of prescriptive analytics, resulting in a highly automated environment subject to continuous improvement. The organization nurtures a culture centered around customer-driven innovation, fostering multiple transformative initiatives and maintaining constant adaptability to market challenges.

- **Innovative:** The organization has an adapted strategic plan and diligently monitors digital initiatives through KPIs (key performance indicators) to measure both operational outcomes and the resultant business value. The technology and business divisions transition to digital environments and collaborate seamlessly within an integrated organization governed by Digital Transformation, encompassing all company activities. They are leaders in changing the rules of the game and their organizational culture is digital and agile. Thanks to the incorporation of advanced analytics, they are able to anticipate customer needs and market changes.

2.3.4 Interview Process and Methodology

The study methodology included semi-structured interviews with C-Level executives from the participating companies. These interviews aimed to complement the information collected through digital maturity assessment (DMA) and identify the underlying causes of the results, looking into the reasons behind the current state. They provided key insights and unique perspectives from the leaders regarding different dimensions, challenges, and their future vision.

During the interviews, topics such as the regulatory framework, current challenges, best practices, implemented strategies, and expectations regarding the future of Digital Transformation in the financial inclusion sector were explored. This qualitative approach delivered a thorough and insightful perspective on executives' experiences, knowledge, and viewpoints. The interviews were conducted semi-structurally, affording the necessary open-endedness to cover a variety of topics and focus on the most pertinent ones.

The qualitative analysis served as a valuable complement to the quantitative data and, in some cases, prompted a reassessment and refinement of the initial DMA results. This process enriched the overall understanding of the situation and contributed to the formulation of recommendations to propel Digital Transformation in the sector.

CURRENT STATE OF DIGITAL TRANSFORMATION IN FINANCIAL SERVICES ENTITIES FOCUSED ON VULNERABLE SEGMENTS IN LATIN AMERICA AND THE CARIBBEAN

3

3.1 Digitalization of Financial Products as an Enabler of Financial Inclusion in LAC

The technological revolution and the swift evolution of financial solutions, combined with the need for reduced physical contact owing to the COVID-19 pandemic, have transformed financial inclusion globally. Regions such as LAC have experienced substantial growth in the adoption of digital financial services. Nevertheless, there are opportunities for improvement.

Before the pandemic, LAC had already experienced a significant increase in the adoption[7] of digital financial services, accompanied by consistent growth in access to bank accounts and mobile payment solutions. Mobile banking adoption demonstrated a substantial increase, rising from 2.3% in 2014 to 6.9% in 2019 among vulnerable populations.

According to ECLAC data, by 2020, Internet connectivity in LAC reached around 66%. In addition, GSMA – Global System for Mobile Communications Association reported over 442 million individual mobile connections in the same year, accounting for a 71% penetration rate across the region.

The health crisis and confinement measures expedited the demand and usage of these services. People sought safe and convenient alternatives for transactions and accessing financial services from their homes, elevating digital systems and platforms to essential tools. In order to mitigate the economic impacts of the pandemic, governments promoted the renegotiation and restructuring of debts, as well as the adoption of simple accounts with digital accessibility to deliver economic incentives and benefits, availing of the digital financial infrastructure already established in the region.[8]

[7] Refers to the extent to which people begin to use and accept mobile banking technology and services in their daily lives.
[8] Economic Commission for Latin America and the Caribbean (ECLAC), Estudio Económico de América Latina y
el Caribe, 2022 (LC/PUB.2022/9-P/Rev.1), Santiago, 2022. https://repositorio.cepal.org/bitstream/handle/11362/48077/4/S2201058_es.pdf

By 2021, according to the World Bank's Global Findex study, 71% of the population in LAC were using one type of financial service, marking a rise of nearly 30 percentage points compared to 2011. It was during this period that Latin America initiated the development of domestic financial inclusion strategies, primarily in Mexico, Brazil, and Colombia. Nonetheless, many of the accounts that were opened were used primarily to receive government benefits, demonstrating that having an account is considered a step toward access, but does not ensure true financial inclusion.

During the pandemic, there has been a growth of more than 50% in the population utilizing accounts in financial institutions or relying on mobile9 [9] money providers compared to a decade ago (see Figure 4).

Additionally, in Latin America, 40% of adults have used their accounts to make payments to merchants, both in physical stores and online. Notably, 14% of adults initiated payments to retailers for the first time during the COVID-19 pandemic. This trend reflects a significant increase in financial inclusion in the region, driven mainly by access to digital financial services such as mobile accounts or digital payments.[10]

In contrast, financial inclusion in LAC has experienced uneven growth over the years, attributed to cultural disparities and internal regulations. Nonetheless, this growth highlights the region's potential to embrace a variety of financial services in the future (see Figure 5).

Concrete improvements in the microfinance environment are seen in countries such as Colombia, Brazil, and Peru. For instance, in response to the pandemic, Colombia has adopted inclusive digital solutions through electronic payments within existing fund transfer programs, such as "Familias en Acción," "Jóvenes en Acción," and "Colombia Mayor."[11]. In Brazil, with regulators taking an active role, PIX facilitated automatic and free access to digital payments for the population, functioning as a tool for financial and digital inclusion and accelerating e-commerce.[12]

Similarly, Peru addressed the needs of low-income individuals during the COVID-19 crisis by facilitating access to financial inclusion services, such as basic accounts and e-money[13]. In summary, over the last decade, countries such as Argentina, Bolivia, Brazil, Colombia, Paraguay, Peru, and Venezuela have experienced a remarkable growth in financial inclusion of more than 28%, considering the specific conditions in each country (see Figure 5).

[9] Companies or financial institutions that offer financial services through mobile devices, such as smartphones and devices with access to the internet.
[10] Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, and Saniya Ansar. 2022. The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. Washington, DC: World Bank. doi:10.1596/978-1-4648-1897-4. License: Creative Commons Attribution CC BY 3.0 IGO
[11] EIU (Economist Intelligence Unit), 2020; Microscopio Global de 2020: El papel de la inclusión financiera en la respuesta frente al COVID-19; Nueva York, NY
[12] Pompeo, C. (2022). PIX eleva el nivel de la inclusión financiera y digital en Brasil, muestra estudio de Beyond Borders. LABS Español. https://labsnews.com/es/articulos/negocios/pix-eleva-el-nivel-de-la-inclusion-financiera-y-digital-en-brasil-muestra-estudio-de-beyond-borders
[13] EIU (Economist Intelligence Unit), 2020; Microscopio Global de 2020: El papel de la inclusión financiera en la respuesta frente al COVID-19; Nueva York, NY

Figure 4: Percentage of Growth of the LAC Population with Financial Services

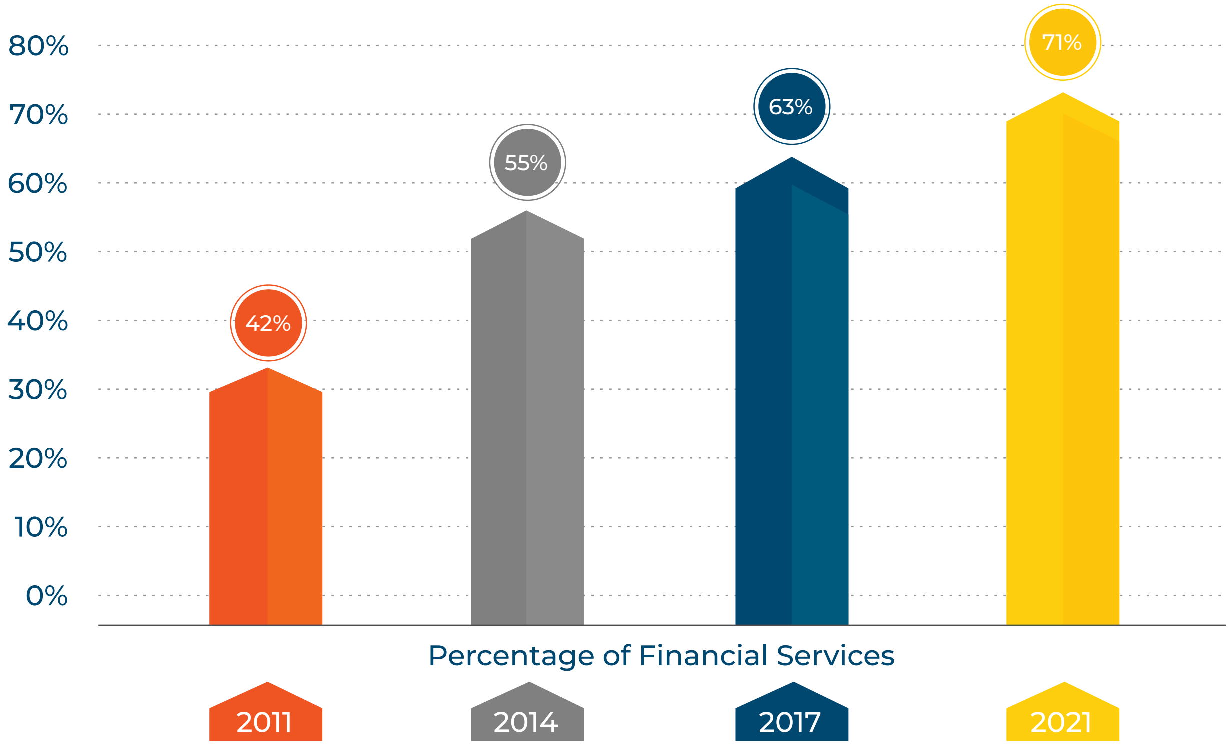
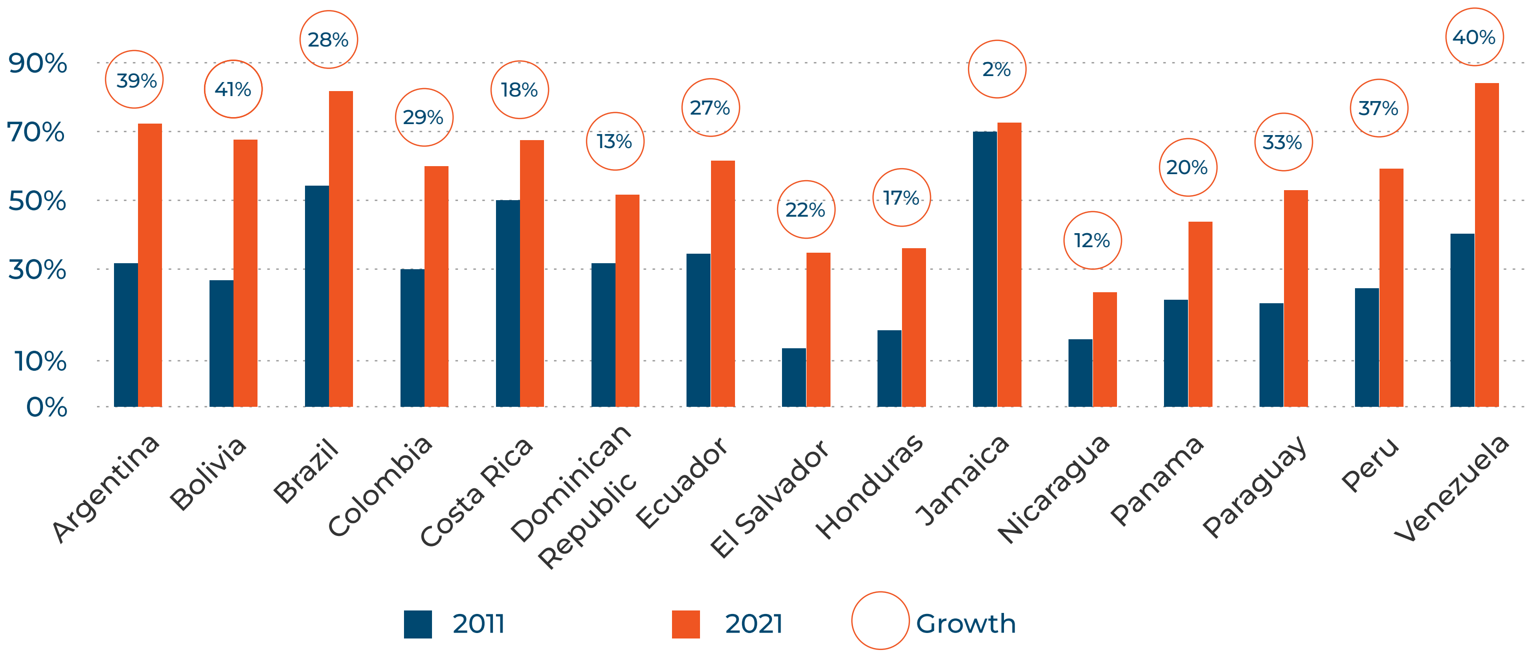


Figure 5: Percentage of Financial Inclusion Growth in Some LAC Countries[14]



Source: Own production based on Global Findex data

Prioritizing the expansion of financial services has played a key role in transforming the management of payments, access to loans, and savings[15] for individuals. It has also facilitated access for previously excluded segments of the population to financial systems and opportunities that were once inaccessible.

3.1.1 New Players and Business Models in the Ecosystem

The rise of digital solutions has fostered innovation and entrepreneurship in Latin America, resulting in the emergence of numerous fintech startups providing a diverse range of services. This trend is predominantly observed in countries like Brazil, Colombia, and Mexico, encompassing mobile payments, digital remittances, investment platforms, and crowdfunding. According to Finnovista 2022, the fintech ecosystem in LAC has grown by 112% from 2018 to 2021, increasing the number of platforms from 1,166 to 2,482.

Brazil leads the way, constituting 31% of the total, followed by Mexico at 21%, Colombia at 11%, Argentina at 11%, and Chile at 7%.[16] While the Payments segment still holds the greatest presence with 25% of the total, driven by recent regulatory changes in Brazil and Mexico, the Digital Loans (19%) and Business Technologies for Financial Institutions (15%) sectors are gaining traction in the region. Out of the 2,482 platforms, 36% are focused on segments at the base of the Pyramid.[17]

Other relevant players in this transformation include non-financial entities, such as technology companies (e.g., Rappi in Colombia and Mercado Libre in Argentina), telecommunications providers (e.g., Tigo Money in Paraguay and Claro Money in the Dominican Republic), e-commerce companies (e.g., Amazon), fintech startups (e.g., Konfío in Mexico), utility companies (e.g., EPM in Colombia), and remittance companies (e.g., PayPal, Mercado Pago).

[14]Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, and Saniya Ansar. 2022. The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. Washington, DC: World Bank. doi:10.1596/978-1-4648-1897-4. License: Creative Commons Attribution CC BY 3.0 IGO

[15]World Bank. (June 29, 2022). . La COVID-19 incrementa el uso de los pagos digitales a nivel mundial. https://www.bancomundial.org/es/news/press-release/2022/06/29/covid-19-drives-global-surge-in-use-of-digital-payments

[16] & [17]Finnovista. BID. BID Invest (2022). Fintech en America Latina y el Caribe: Un ecosistema consolidado para la recuperación. licencia Creative Commons IGO 3.0. https://publications.iadb.org/publications/spanish/viewer/Fintech-en-America-Latina-y-el-Caribe-un-ecosistema-consolidado-para-la-recuperacion.pdf

The Gig Economy[18], represented by companies such as Uber and Cabify, has reshaped the nature of independent work. These platforms use electronic payment systems to streamline and simplify transactions between drivers and passengers.

Uber and Cabify, among other companies, have embraced the digitalization of products to integrate financial services into a new approach to collaborative partnerships. This allows them to address needs that traditional financial institutions were not fulfilling.

Cabify is a notable example of this transformation, having integrated digital payment options into its application to streamline transactions. Similarly, Movistar has ventured into financial services and digital wallets to elevate user experiences. Even Chedraui, a supermarket chain in Mexico, has embraced financial services within its stores, offering services like card issuance and utility payments. These companies are reshaping the financial landscape in the region, paving the way for new economic opportunities. This transformation has propelled financial inclusion, spurred innovation, and set the stage for an increasingly digital and accessible future in the region's financial scenario.

3.1.2 Banking in Figures: the Impact of Digitalization

Globally, the percentage of people without access to banking services has seen a remarkable decline. In 2011, almost half of the population lacked access to banking services. However, by 2021, this figure dropped significantly to 19%, with about 1.4 billion adults still excluded from the banking system[19]. While this number remains substantial, it marks a 30% reduction over the past decade. Similarly, in LAC, the unbanked rate decreased from 54% in 2011 to 26% in 2021, representing around 170 million people without access to financial services (see Figure 6).

Digital payments have played a pivotal role in this transformation, becoming the infrastructure of the new digital economy. In fact, there has been an increase in the percentage of adults making or receiving digital payments in developing economies, going from 35% in 2014 to 57% in 2021.

[18] Generation of income through a specific task with independent billing
[19] World Bank. (July 21, 2022). La COVID-19 impulsó la adopción de los servicios financieros digitales. https://www.bancomundial.org/es/news/feature/2022/07/21/covid-19-boosted-the-adoption-of-digital-financial-services

Despite the increasing adoption of digital financial solutions, providing more individuals in Latin America with swift and secure access to services like savings accounts, bill payments, and transfers, a quarter of the population in the region remains excluded from financial services. This indicates that Latin America has a relatively higher banking penetration compared to regions like Sub-Saharan Africa and developing economies in Asia.[20]

Conversely, in the case of MSMEs, the credit access gap makes up 35% of the regional Gross Domestic Product (GDP)[21]. This percentage is primarily a result of ongoing factors that impact the low demand for digital financial services, such as limited access to traditional financial services due to stringent requirements, bureaucratic obstacles, and, especially, their informal nature.

However, based on data from Finnovista, in spite of only 5% of digital platforms in the region targeting the MSME segment, a significant 85% of the financing in 2020 was specifically designated for this sector. Several of the most innovative companies concentrating on this sector have engaged in investment rounds, underscoring a growing dynamism aiming to address the requirements of MSMEs and recognizing this segment as a lucrative business opportunity.[22]

3.1.3 The Digitalization of Payments

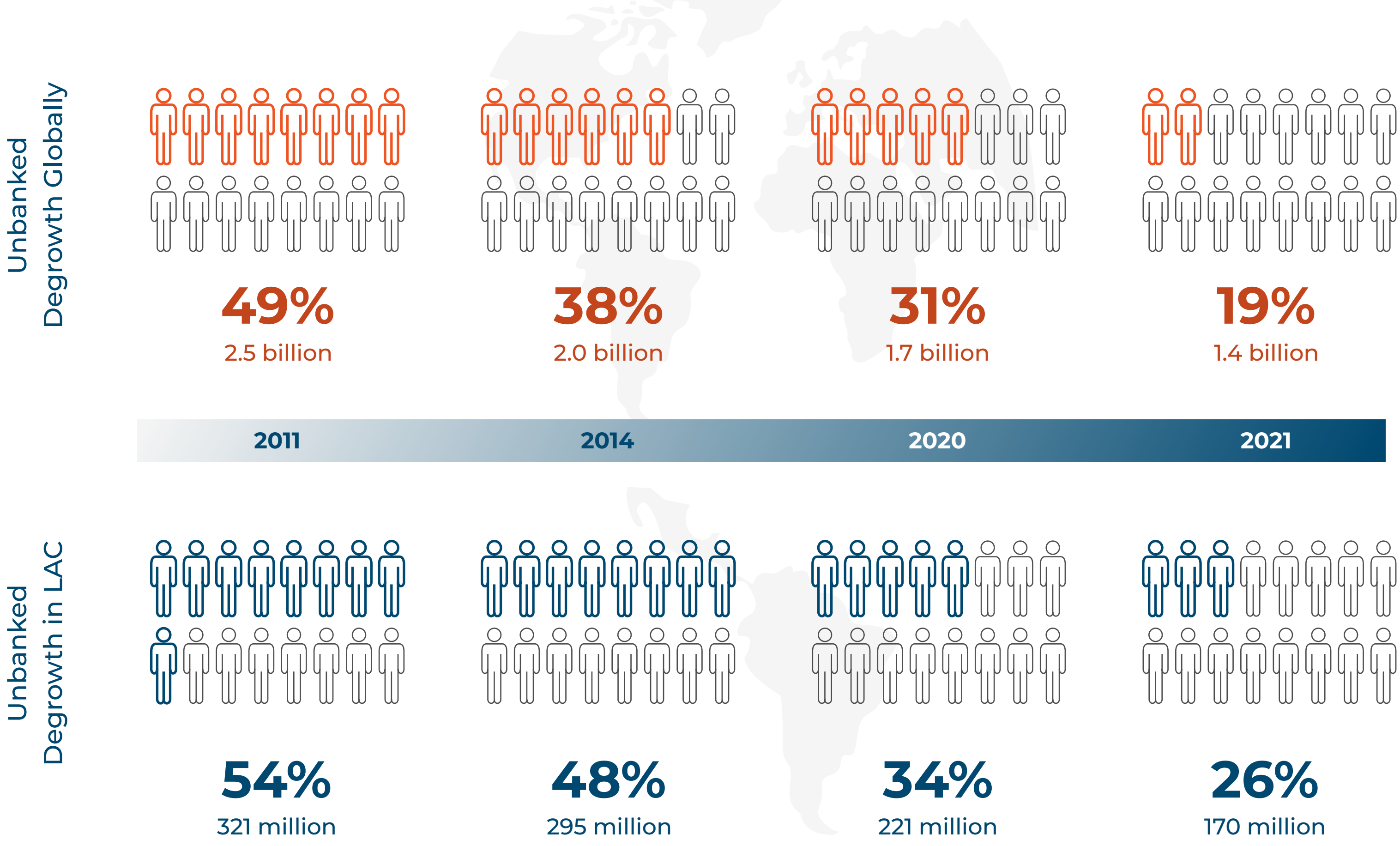
The use of cash, once the prevailing method for transactions in LAC (making up about 70% in 2021)[23], has seen a substantial reduction in recent years, primarily due to the constraints imposed by the pandemic.

[20]Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, and Saniya Ansar. 2022. The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. Washington, DC: World Bank. doi:10.1596/978-1-4648-1897-4. License: Creative Commons Attribution CC BY 3.0 IGO

[21] & [22]Finnovista. IDB. IDB Invest (2022). Fintech en América Latina y el Caribe: Un ecosistema consolidado para la recuperación. licencia Creative Commons IGO 3.0. https://publications.iadb.org/publications/spanish/viewer/Fintech-en-America-Latina-y-el-Caribe-un-ecosistema-consolidado-para-la-recuperacion.pdf

[23]World Bank. (February 04, 2022). Del dinero en efectivo al pago digital en pandemia. https://www.bancomundial.org/es/news/feature/2022/07/21/covid-19-boosted-the-adoption-of-digital-financial-services

Figure 6: Percentage of Unbanked People Globally and in LAC



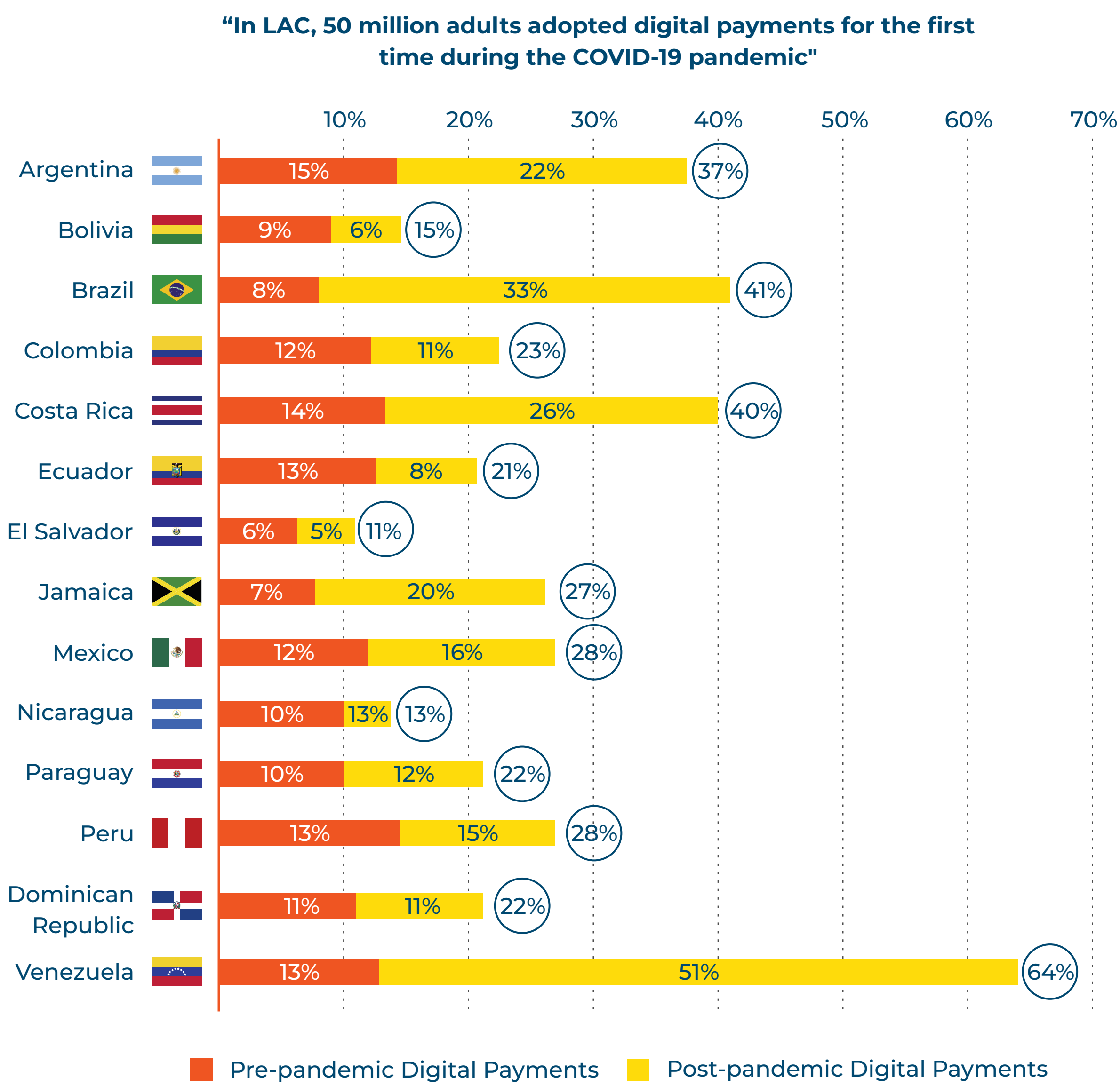
Source: Own production based on Global Findex data

Almost 50 million individuals in the region[24] have adopted digital payment methods, using mobile phones, internet services, and cards for e-commerce transactions, moving away from cash. Nevertheless, the extension of this transition varies among countries, influenced by differences in technological infrastructure, income levels, trust in technology, and government regulations. This has resulted in a varied landscape in the adoption of digital payments across the region.

Countries like Argentina, Brazil, Chile, Colombia, Peru, and Venezuela stand out for their progress in the digitalization of payments. Peru, for instance, exemplifies this trend as the Central Reserve Bank (BCR) allows electronic wallets to interconnect and accept transfers from their competitors (Yape, Plin). This interoperability among e-wallets contributes to the effectiveness of the digital payments market in the country.

[24] World Bank. (February 04, 2022). Del dinero en efectivo al pago digital en pandemia. https://www.bancomundial.org/es/news/feature/2022/07/21/covid-19-boosted-the-adoption-of-digital-financial-services

Figure 7: Percentage of adults who used a card, mobile phone, or internet to shop in a store for the first time



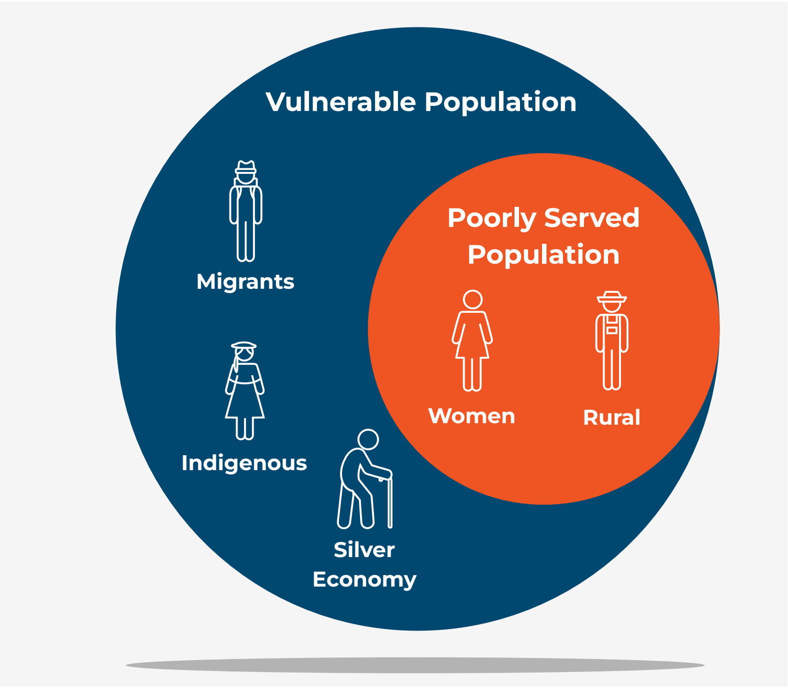
Source: Own production based on Global Findex data

These countries have witnessed a significant increase in the use of digital wallets, mobile applications, and online payments, both in commercial dealings and peer-to-peer (P2P) transactions. In Brazil, regulatory initiatives aimed at diminishing cash usage include mandating all financial institutions to integrate with the PIX platform (a payment and transfer platform) and prioritize it in their applications to facilitate transaction operability nationwide. Consequently, PIX transactions settled by the Instant Payment System (SPI) have experienced a 177% increase since 2021, reaching a total of 733,385 transactions in 2023.[25]

3.1.4 The Challenge of Digitalization as a Means of Financial Inclusion of Vulnerable Populations

Advancing financial inclusion for vulnerable populations in LAC involves navigating a landscape marked by progress and challenges, showcasing the diverse nature of these communities. Despite initiatives aimed at fostering integration, these populations face distinctive barriers that hinder their access to financial services and their engagement in the formal economy. Banking these communities is pivotal for propelling development and fostering social equity in the region. It is essential to assess their current state, identify progress and obstacles, and explore technology and digitalization as avenues to enhance their financial inclusion.

Figure 8: Key Segments, Vulnerable Populations



Digitalizing services for populations like migrants, indigenous groups, and senior citizens presents challenges such as the digital divide, a lack of digital literacy, and resistance to change. Addressing these challenges requires a tailored design considering the unique characteristics of each population, educational initiatives, accessible technological solutions, and collaborative efforts involving various players. This approach is crucial to genuinely achieve financial inclusion through digitalization for these specific populations.

3.1.4.1 Migrants: Economic Integration of Displaced Populations

LAC has a high level of regional migration, with a substantial number of individuals relocating within the region to seek improved economic opportunities and living standards. ECLAC data from 2020 suggests that approximately 27 million people are regional migrants.

Migrants often encounter obstacles in accessing financial services in their destination country owing to a lack of documentation, including official identification, proof of address, and credit history. Additionally, they face specific challenges related to financial inclusion, as their financial needs are twofold. On one hand, they require access to financial services in the country of migration to sustain and thrive in their new environment. On the other hand, they need to send remittances to their countries of origin to support their families and communities.

To address these needs, it is crucial for migrants to have access to fundamental financial services, including savings and checking accounts, allowing them to manage their income securely, complemented by financial education. Financial services must be designed to streamline international transactions efficiently and affordably.

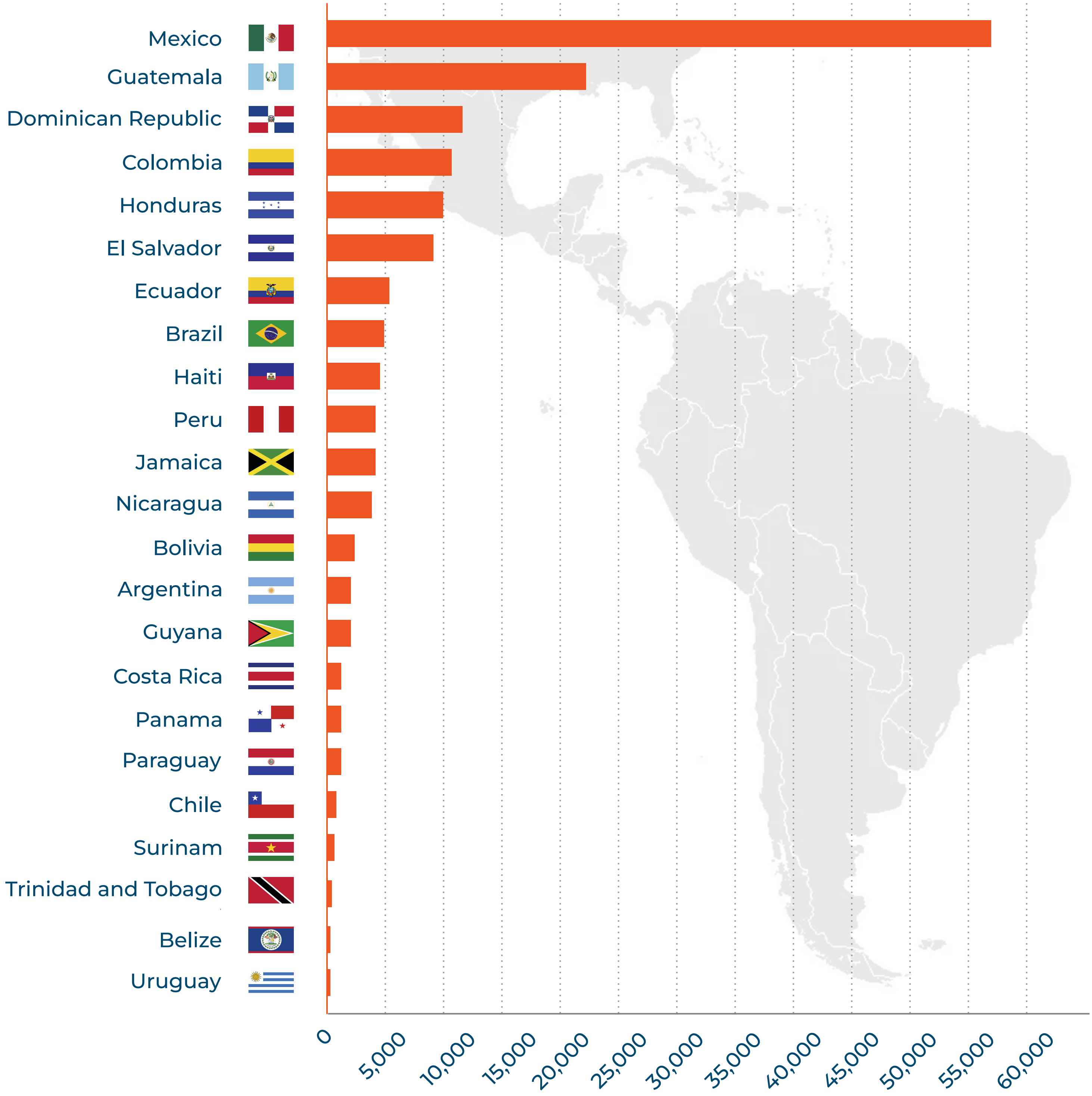
When it comes to sending remittances, having secure, efficient, and accessible channels is crucial. While there are remittance options catering to this specific need, digital technologies have significantly improved services, enabling quicker transfers at reduced costs.

Remittances are vital to the Latin American economy, yet their impact is hampered by elevated costs and challenges in accessing remittance services. The primary lies in the fees imposed by intermediary banks between the country of origin and destination, potentially resulting in the exclusion of migrants from this financial system.

[25]Central Bank of Brazil. Pix Statistics [Database]. Retrieved from https://www.bcb.gov.br/en/financialstability/pixstatistics

This segment's importance is underscored by the fact that countries like Colombia, Guatemala, Honduras, Mexico, and the Dominican Republic contribute up to 28% of their GDP, as the case of Honduras. Notably, Argentina and Honduras experienced growth rates of 32%, reaching up to 50% in the annual influx of funds to the country due to this factor.[26]

Figure 9: Remittances Received by Country in Million Dollars[27]



[26] & [27] Harrys, J. y Maldonado, R. 2023, March 27 Remesas hacia América Latina y el Caribe en 2022: ¿el crecimiento llegó a su techo? La maleta abierta. http://url-del-blog.com. https://blogs.iadb.org/migracion/es/remesas-hacia-america-latina-y-el-caribe-en-2022-el-crecimiento-llego-a-su-techo/#:~:text=Las%20remesas%20que%20recibieron%20en,anual%20de%2012%2C5%25.

There is a significant opportunity to expand transnational economic mobility through the adoption of digital solutions like mobile banking apps and online money transfer platforms. Such solutions enable migrants to swiftly and cost-effectively send and receive remittances, bypassing the need for costly intermediaries. Additionally, the integration of bank accounts and e-wallets provides access to essential financial services like savings and loans, thereby dismantling barriers associated with geography, cost, and identity.

3.1.4.2 Indigenous Population: Revitalization through Inclusion

Indigenous populations in Latin America face significant barriers when it comes to accessing financial services and economic opportunities. Despite comprising approximately 8% of the total population, the indigenous populations grapple with disproportionately elevated rates of poverty and extreme poverty, ranging from 14% to 17%.[28]. The root causes lie in their marginalization and the lack of access to basic services such as education, health care, and economic opportunities.

Lack of connectivity in rural areas, as well as language and cultural barriers pose challenges to the financial inclusion of these populations. Digitalization, specifically through mobile apps and platforms, is a key solution to enable access to financial services, transactions, and localized financial education. The importance of adopting inclusive and tailored approaches becomes evident in securing equitable access to financial services and capitalizing on economic opportunities. Satellite internet services, including initiatives like Starlink, play a role in diminishing these barriers by offering affordable internet services.

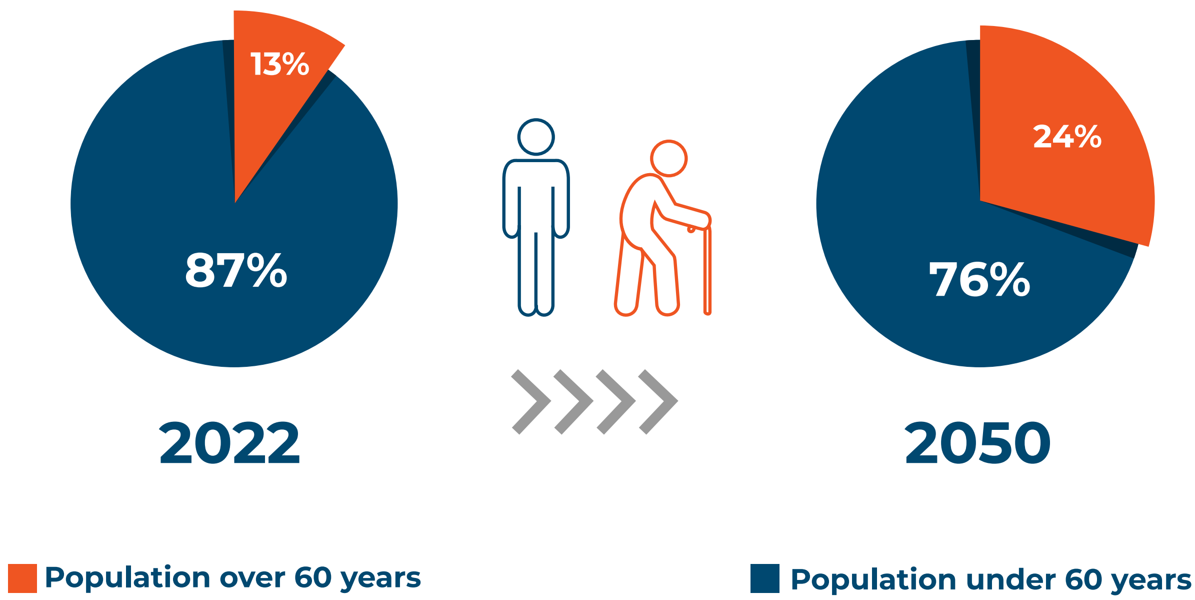
3.1.4.3 Silver Economy: New Focus of Interest in LAC

Unlike some other regions, Latin America and the Caribbean (LAC) exhibit a youth-centric population structure, where individuals over 60 make up roughly 13% of the total. Nevertheless, estimates suggest a notable transformation is underway, with expectations of a 24% increase in this age group by 2050.[29]

[28] World Bank. (2023). Indigenous Latin America. In World Bank. https://www.bancomundial.org/es/region/lac/brief/indigenous-latin-america-in-the-twenty-first-century-brief-report-page
[29] Okumura, M; Stampini, M; Buenadicha, C; Castillo, A; Vivanco, F; Sanchez, M; Ibarrarán, P; Castillo, P. (2020). La Economía plateada en América Latina y el Caribe: El envejecimiento como oportunidad para la innovación, el emprendimiento y la inclusión. Grupo BID. URL https://publications.iadb.org/publications/spanish/viewer/La-economia-plateada-en-America-Latina-y-el-Caribe-El-envejecimiento-como-oportunidad-para-la-innovacion-el-emprendimiento-y-la-inclusion.pdf

The projected aging of populations, currently observable in countries like Uruguay and Chile, opens up diverse business opportunities, that span across sectors, including pensions, housing, tourism, health, and investments in the education of future generations.

Figure 10: Forecasted Percentage of Adults Older by 2050



Source: Own production based on data from the IDB Group, the silver economy in LAC

Within the context of the silver economy, addressing barriers to financial inclusion is crucial. Primarily, senior citizens might face challenges due to limited familiarity with technology and digital solutions, hindering their access to online financial services. Furthermore, age discrimination may exacerbate the issue, with some institutions hesitating to provide financial services to senior citizens based on stereotypes or misperceptions. Another impediment lies in the absence of financial products tailored to their needs, as conventional solutions may not be adequate.[30]

Achieving financial services tailored to senior citizens requires careful consideration of aspects such as digital literacy, physical and digital accessibility, the development of appropriate products and services, specific financial education initiatives, and the protection of their consumer rights. Recognizing that this age group tends to have a greater aversion to change underscores the importance of addressing these elements.

Addressing the needs of this population requires offering products and services that align with the pension system's function. This encompasses a broad range of services, including savings and fund spending. Creating long-term savings products, such as retirement accounts or investment plans, becomes integral to ensuring the financial security and stability of this population.

Digitalization offers various opportunities to financially include segments of the silver economy and facilitate their financial planning for retirement. For instance, the use of predictive models based on algorithms and data analysis, or retirement savings calculators, which allow senior citizens to easily visualize the impact of their savings over time. These models can assess an individual's current financial situation and predict how much they need to save for retirement, considering factors such as age, income, expenses, and financial goals.

[30] Global Report on Ageism. Washington DC: Pan American Health Organization; 2021 License: CC BY-NC-SA 3.0 IGO https://doi.org/10.37774/9789275324455.

Conversely, digitalization also paves the way for the development of mobile applications and user-friendly online platforms. These applications may include features such as checking savings accounts, setting up payment schedules and maturity reminders, retrieving details about pension and insurance plans, and facilitating secure transactions.

A success case for the financial inclusion of senior citizens is Barclays' "Age-Friendly Banking" program in the UK. Alongside other specialized services for this segment, Barclays developed a simplified and user-friendly mobile application, with an intuitive interface, offering features tailored to their needs. The application allows to carry out banking transactions, balance checks, and access financial services from any location.[31]

3.1.4.4 Underserved Populations: Women

While strides have been made in lessening the gap in financial services consumption, a difference persists between men and women. Data from Global Findex indicates that 32% of women still lack access to financial services, while the figure stands at 26% for men. The gender gap in account ownership has also reduced from nine to six percentage points in developing countries.

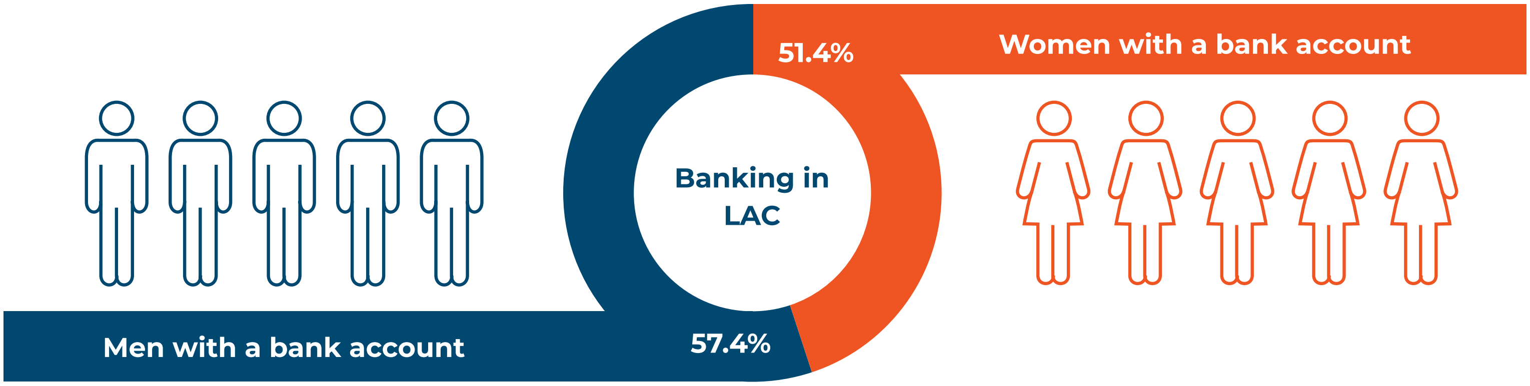
Women's financial inclusion faces multiple challenges that hinder their equitable access to financial services. Initially, the absence of a tailored value proposition catering to their specific needs hampers women from effectively accessing and using financial products. This includes challenges such as inadequate documentation, restricted mobility, and labor barriers stemming from gender inequality.

Furthermore, it has been shown that women experience higher rejection rates in credit applications, which hinders their ability to invest in ventures or personal projects. This imbalance is exacerbated by the typically lower credit amounts approved for women compared to men, hindering their potential for economic advancement and financial autonomy. Notably, these disparities are even more pronounced among women in rural areas and indigenous populations.

While the gender gap in financial services in LAC has seen a decrease for the first time since 2017, there are cases where this difference remains significant, reaching as high as 85% in countries like Nicaragua and Honduras. A similar situation is observed, with a 68% banking divide between adult men and women. Notably, there are countries such as Argentina and Paraguay where a higher percentage of women have bank accounts, and the difference is minimal.

The challenge of digitalization in achieving women's financial inclusion requires addressing barriers such as the gender gap in device access and digital literacy. Furthermore, there is a need to create financial solutions adapted to the specific needs and preferences of women, enabling them to initiate businesses and invest in their own education as well as that of their families.

Figure 11: Percentage of LAC Women's Banking



Source: Own production based on Global Findex data

[31] https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/money-matters/rb_april16_age_friendly_banking.pdf

Digitalization can help address these challenges by providing more accessible and flexible financial services, promoting financial literacy, and empowering women in managing their finances. It is imperative, nonetheless, to ensure that these solutions are inclusive and secure, fostering the active participation of women in the digital economy.

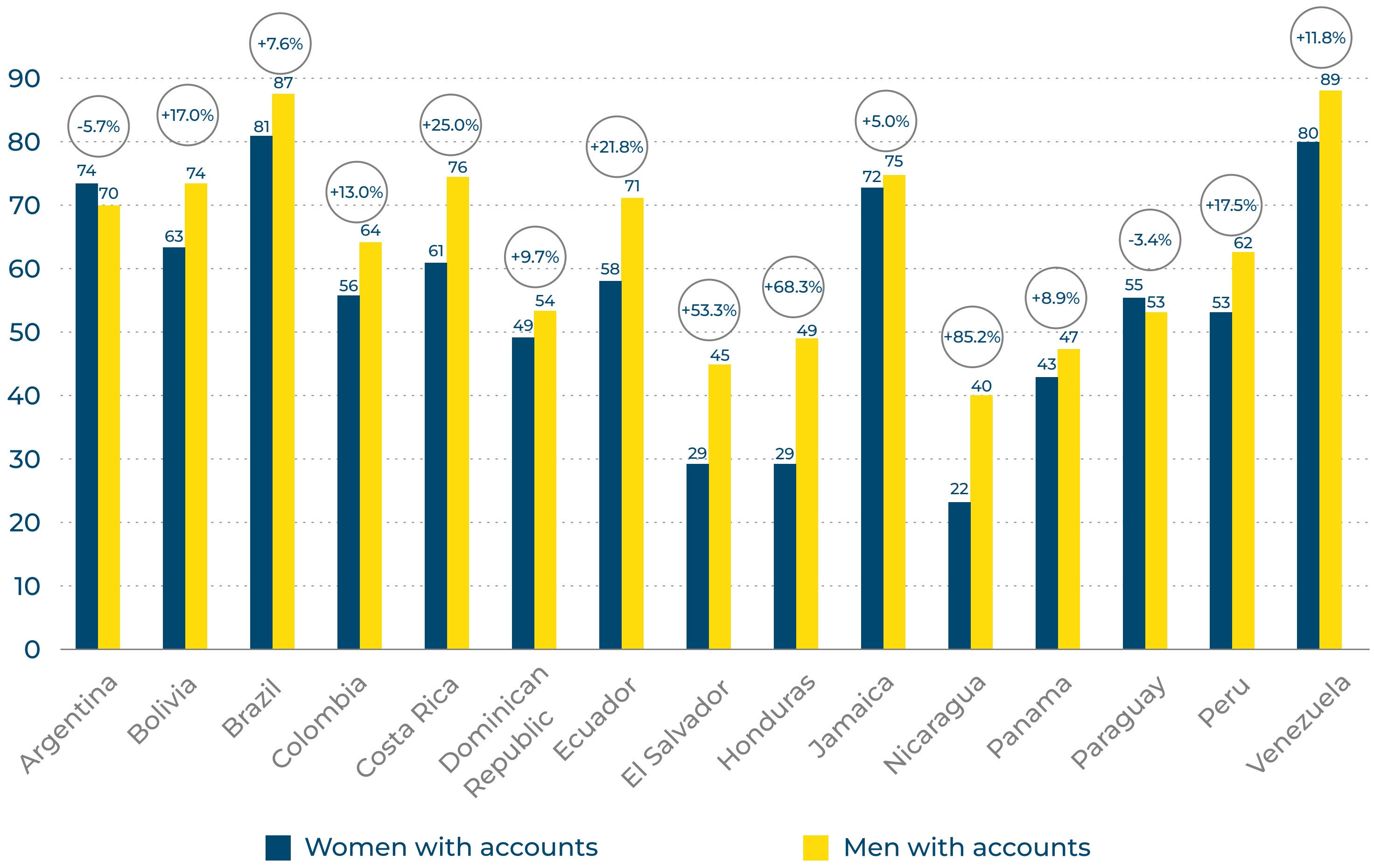
3.1.4.5 Underserved Populations: Rurality

In LAC, over 123 million people live in rural areas, and of these, with 50 million actively engaged in the workforce. This underscores the crucial role of rural employment, supporting one in every five individuals employed within the region. Moreover, poverty rates (45.7%) and extreme poverty rates (21.7%) in rural areas surpass those in urban areas by two and three times, respectively[32]. These rural communities face multiple challenges, including limited access to bank branches due to low population density and inadequate infrastructure.

In addition, rural areas are perceived to carry increased credit risk, attributed to the absence of credit history and the fluctuating nature of agricultural income, discouraging traditional financial institutions from offering their services. Moreover, limited financial literacy in these areas hampers the understanding of financial products. Additionally, the lack of infrastructure and connectivity restricts access to digital financial services. Nevertheless, rural banking presents a noteworthy economic opportunity.

The focal point of the digitalization challenge within this population is addressing connectivity barriers and the lack of digital infrastructure in remote areas. Digitalization can tackle this challenge by delivering accessible financial services through mobile devices, extending the coverage network, and promoting digital education within these communities.

Figure 12: Percentage of Women's Banking Compared to Men's



Source: Own production based on Global Findex data

[32]Sector rural y desarrollo local en América Latina y el Caribe (América Latina y el Caribe). (n.d.). https://www.ilo.org/americas/temas/sector-rural-y-desarrollo-local/lang--es/index.htm#:~:text=En%20las%20zonas%20rurales%20de,que%20trabajan%20en%20la%20regi%C3%B3n.

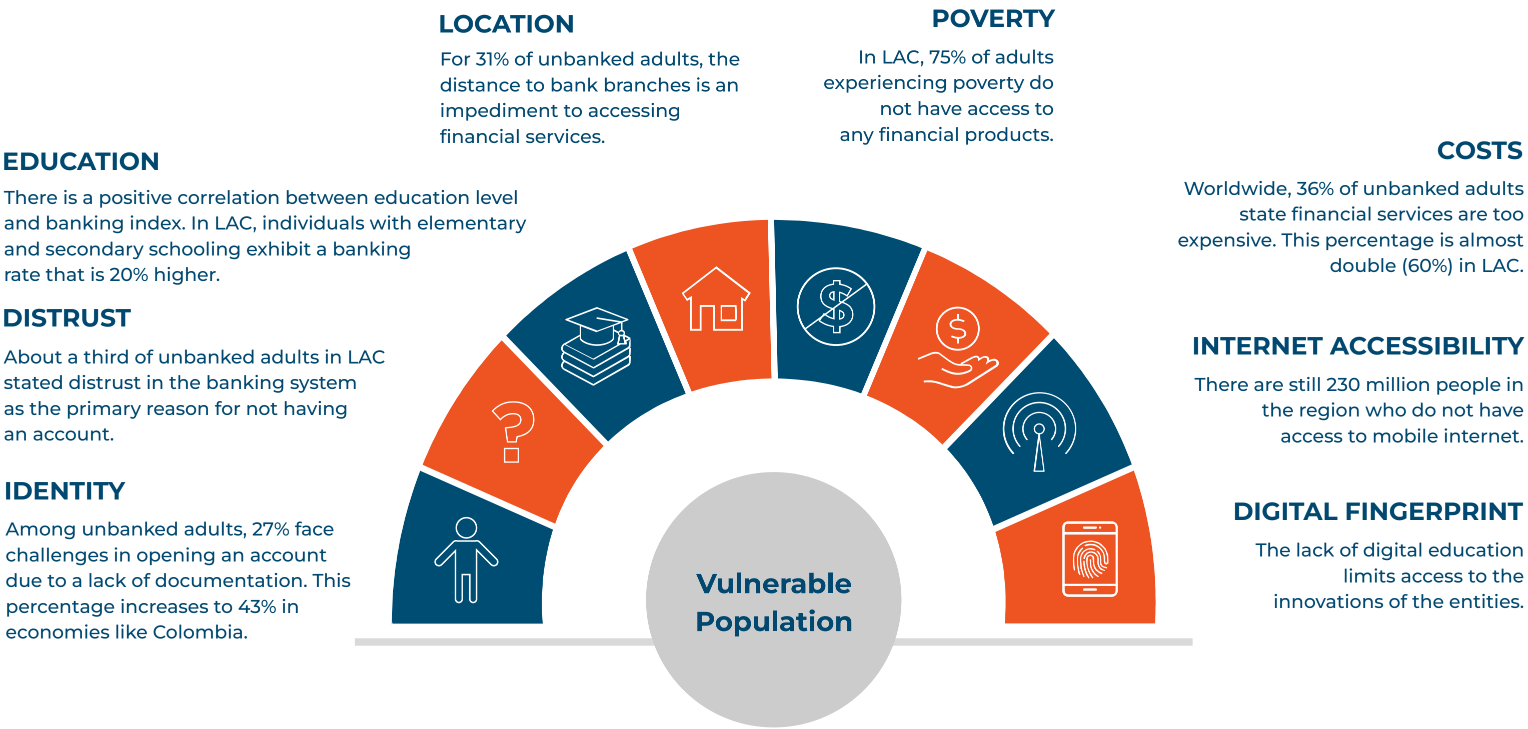
Designing financial products tailored to these communities holds strategic significance, especially those easily accessible and usable via mobile devices. The democratization of financial service access in rural areas is facilitated by banking agents and technologies such as mobile phones and biometric smart cards. Furthermore, the Agritech trend is improving agricultural productivity and incomes in these regions, serving as a catalyst to design financial products that enable the development of analysis models deeply rooted in their reality and facilitate greater access to productive credit products.

3.2 Financial Inclusion Challenges: Demand Perspective

Despite the progress in financial digitalization and its evolution during the pandemic, the challenge of financial inclusion persists, particularly for vulnerable populations and disadvantaged regions. This challenge is more pronounced in countries dealing with difficult conditions, like Nicaragua and Haiti, and among historically neglected groups, including rural populations and women.

According to the Global Findex data for LAC, there has been a rise in access to accounts and financial products, primarily attributed to the use of mobile money accounts during the COVID-19 pandemic. However, the utilization of these services still lags behind that of developed economies. The predominant challenges in the journey to banking include:

Figure 13: Main Barriers to Accessing Financial Services – Demand Perspective



Source: Own elaboration based on Global Findex data

Accessing financial services in the physical world encounters various barriers, including distance from bank branches, poverty, absence of documentation, informal practices, and a deficiency in financial education. Moreover, the digital world presents new challenges, including the demand for digital education, internet connectivity, and access to technological devices. Overcoming these obstacles is crucial for achieving comprehensive financial inclusion in the digital era. Fundamental prerequisites for all individuals include digital literacy, internet accessibility, and device availability, facilitating participation in the digital economy and securing access to crucial financial services.

- **Identity:** The lack of proper authentication elements, such as official identification and proof of address, acts as a barrier to accessing financial services, especially for vulnerable populations like migrants, indigenous people, and the homeless. However, digitalization and technology play a crucial role in overcoming this barrier. Digital ID technology, including biometrics and online verification, enables people without traditional means of authentication to access financial services remotely and securely. An exemplary case is the "Aadhaar" program in India, which, by assigning a unique number to each resident, has facilitated access to financial and government services without the need for physical documents, benefiting millions of people.

- **Distrust:** A significant impediment to accessing financial services in LAC is the lack of trust in the financial system, as approximately one-third of adults without bank accounts cite such distrust as their primary reason[33]. This lack of trust stems from past negative experiences or a perceived lack of transparency in the system.

  Overcoming distrust requires establishing consistent and effective communication with customers, offering clear and transparent information about the services and their advantages. Building trust over time involves demonstrating good performance and fulfilling financial commitments. Key aspects include transparency in financial operations, responsiveness to complaints or questions, and providing customers with the ability to track their banking activities easily.

  In addition, financial education assumes a crucial role in empowering clients to make informed decisions and grasp a thorough understanding of the financial services they access, thereby reinforcing trust in the financial system. It is imperative to consider the specific needs and skills of the population when designing products for each segment. Moreover, ensuring user protection, especially in the digital landscape, and actively working to restore confidence in the financial system are paramount.

[33] Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, and Saniya Ansar. 2022. The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. Washington, DC: World Bank. doi:10.1596/978-1-4648-1897-4. License: Creative Commons Attribution CC BY 3.0 IGO

- **Education:** According to the Global Findex, adults with elementary education or less are 14% less likely to own a bank account compared to those with secondary or higher education[34]. This disparity is often linked to lower incomes among individuals with limited educational backgrounds. Furthermore, the absence of financial literacy serves as an additional obstacle, with many people lacking knowledge of essential financial concepts, such as savings, responsible credit use, and retirement planning.

- **Location:** Across various regions of Latin America, the distance to bank branches represents a major impediment to financial inclusion, especially in rural or low-income areas. This hampers their usage, causing financial products to become inactive. However, digitalization and technological advancements have provided viable solutions to address this challenge.

  Digitalization and advancing technologies have provided effective solutions to mitigate this barrier. Within this process, banking correspondents play a crucial role in facilitating access and building trust, paving the way towards the adoption of digital financial services, such as mobile banking and financial applications. These innovations enable transactions from any location, eliminating the need to visit physical bank branches.

  M-Pesa in Kenya stands as a successful example, showcasing a mobile money transfer service that has revolutionized financial inclusion and boosted economic development, especially in rural areas.

- **Poverty:** Adults with lower incomes are less inclined to own bank accounts, resulting in a financial divide. "Within the top 60% of affluent adult households, 79% maintain an account, while only 72% within the bottom 40% of households own one, indicating a seven- percentage-point income gap".[35]

  Nonetheless, the advent of digitalization and technology has been instrumental in lessening this barrier. Digital solutions, including mobile apps and online platforms, provide accessible and cost-effective financial services like savings accounts and money transfers, empowering low-income individuals to enhance their financial management.

  This gap has seen a 50% reduction since 2011: In developing economies, the income gap now stands at eight percentage points, down from the 20 percentage points recorded in 2011. However, it remains a persistent obstacle to financial inclusion in the region, leaving a substantial portion of the vulnerable population marginalized.

[34 & 35] Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, and Saniya Ansar. 2022. The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. Washington, DC: World Bank. doi:10.1596/978-1-4648-1897-4. License: Creative Commons Attribution CC BY 3.0 IGO

- **Costs:** Low-income communities are particularly affected by this barrier, as it is associated with several costs linked to the usage of financial services. These costs can render it expensive or unappealing for people to access such services.

  Fees represent one of the most evident costs. Many institutions impose charges for opening and maintaining bank accounts, executing transactions, or utilizing online services. These fees can accumulate over time and pose a substantial financial burden, particularly for individuals with limited resources.

  Technology, such as mobile banking and financial applications, can significantly contribute to cost reduction by facilitating affordable and accessible transactions. PIX in Brazil serves as an example with features such as free and uncomplicated accessibility.

- **Internet Access:** Digitalization poses notable challenges for LAC, with a pressing need to expand digital infrastructure and networks to facilitate connectivity between businesses and consumers during transactions.

  This barrier mainly impacts populations in rural or remote areas, where limited technological infrastructure makes it challenging to access digital financial services. Although there have been advances in internet connectivity in LAC in recent years, significant challenges remain. About 230 million people in the region still lack access to mobile internet, despite a notable growth in adoption rates.

  The past few years have indeed witnessed a substantial improvement in internet connectivity in Latin America. "From 2014 to 2021, the number of individuals in the region accessing mobile internet nearly doubled. Nevertheless, and despite this remarkable growth, 230 million people in the region still lack access to mobile internet."[36] Despite the ongoing efforts by governments to expand coverage in their territories, the market in some countries is on the verge of reaching its connectivity limit, which could pose challenges to sustaining the progress achieved in recent years.

- **Digital Footprint:** Vulnerable populations facing a deficit in digital literacy frequently encounter barriers to embracing digital solutions offered by financial institutions. This leads to a lack of documented data generated during internet use, complicating the tracking of activities for these individuals.

  Data gathered on remote computing devices, used to identify, isolate, and monitor user activity for the purpose of profiling and service improvement, becomes inaccessible to those unable to fully engage in the digital environment. This underscores the importance of addressing the digital divide and ensuring that digital financial solutions are accessible and beneficial to all segments of the population.

[36] Castells, P., Corvalan, L., & Rattel, F. (2023). Brechas de conectividad en América Latina: Una hoja de ruta para Argentina, Brasil, Colombia, Costa Rica y Ecuador. En GSMA Latin America. URL: https://www.gsma.com/latinamerica/wp-content/uploads/2023/03/FINAL-Brechas-de-conectividad-en-America-Latina_-LONG-report-SPANISH-DIGITAL-30-03-2023.pdf

3.3 Factors Driving Financial Inclusion through the Use of Technology and Digital Services

The financial ecosystem is undergoing a significant transformation, propelled by the rise and integration of new technologies, increased connectivity, and regulatory initiatives. These regulations and strategies, designed to promote innovation and competition, are also focused on fostering financial inclusion. This transformation has reshaped our customer approach and enabled us to serve segments that were traditionally deemed unattractive to financial institutions.

3.3.1 Trends

The financial sector is in the midst of a significant transformation, driven by the rise and adoption of new technologies, increased connectivity, and regulatory interventions. These regulatory bodies are enacting rules and strategies, aiming not only to promote innovation and competition but also to enhance financial inclusion. This change has resulted in a transformation and the emergence of new trends in the approach to customers and the service of segments that were previously deemed unattractive to financial institutions.

Figure 14: Ecosystem Trends in Financial Inclusion

Source: Own production

Over the past few years, Digital Transformation has been a catalyst for the progress of financial services, prompting traditional entities to undergo change by harnessing advancements in various technologies and ecosystem capabilities. The identified trends hold significant potential to reshape the sector.

Digital Society

In today's society, digitalization is an integral part of our lives, as consumption in the digital world has experienced skyrocketing growth in all social spheres. This change has yielded two important consequences.

As an initial point, transactionality has inevitably shifted towards the digital environment, causing a notable reduction in the volume of cash transactions from 58% in 2018 to 31% in 2022[37]. From online purchases to mobile app payments, an increasing number of transactions are now conducted digitally due to the convenience, immediacy, and security that this digital environment provides.

As a second point, the rise in digital consumption has instilled in customers an expectation for digital interactions with financial services. Today, customers demand the convenience of conducting transactions, checking account details, and managing financial activities through their mobile devices or computers. The digitalization of financial services has become a necessity to meet these demands and deliver a seamless experience with improved accessibility to financial services.

The digitalization of the economy has transformed finance by reducing dependence on physical branches and cutting costs for customers. This enables a broader population to conveniently and securely access financial services through mobile devices.

Mobile money and digital payments are remodeling the way we conduct financial transactions.

[37]FIS, Worldpay. (2021). GPR 2023: THE GLOBAL PAYMENTS REPORT (8th edition). https://www.fisglobal.com/-/media/fisglobal/files/campaigns/global-payments-report/FIS_TheGlobalPaymentsReport2023_May_2023.pdf?mkt_tok=OTc1LUJDVS03MDcAAAGPVXluqstqN3yUx8ikXt0xKnkPb8j81ifQF_Ml-KehGf0iBOfUyM7oxVgUB25pPKGIUdhytNrLLbkqjls2iv6b27ZGdigxxp0HD6pOsXAIBuH3_w

The integration of mobile money technology has greatly extended financial inclusion, offering access to financial services to individuals who were traditionally excluded from the mainstream system.

According to GSMA, "there are presently 1.6 billion registered mobile money accounts, a truly remarkable statistic."[38] This trend has gained even more significance and witnessed substantial growth since the onset of the COVID-19 pandemic, offering millions of individuals in low- and middle-income countries convenient access to digital financial services, especially in regions lacking or devoid of bank branches.

The adoption of digital payments leads to a reduction in the expenses associated with financial transactions, as they are typically more economical than traditional payment methods. According to GSMA, "the practice of using digital payments, driven by the pandemic, persists, resulting in a growth in mobile money activities that outpaced the number of new registrations in many countries."[39]

Additionally, digital payment solutions can provide value-added services, including the capability to make recurring payments, settle utility bills, or integrate with supplementary financial services, broadening the options available to users. In the aftermath of COVID-19 and the digitalization of marginalized populations, "the percentage of adults engaging in digital payments in developing economies increased from 35% in 2014 to 57% in 2021".[40]

Economic Globalization

The globalization of the economy is a phenomenon that has reshaped the way we engage in global interactions and conduct business. With advancements in technology and communication, geographical and trade barriers have diminished, facilitating a more extensive flow of products, services, capital, and people across countries. This interconnectedness on a global scale has forged an interdependent economic network, where economic activities in one part of the world can exert a direct impact on others. Globalization has propelled economic growth, international competition, diversification of income sources, and the transfer of knowledge and technology.

[38] & [39] Raithatha, R., Awanis, A., Lowe, C., Holliday, D., Storchi, G. The state of the industry report on mobile money 2023. 11th edition. GSMA. https://www.gsma.com/sotir/#download
[40] Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, and Saniya Ansar. 2022. The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. Washington, DC: World Bank. doi:10.1596/978-1-4648-1897-4. License: Creative Commons Attribution CC BY 3.0 IGO

Initially, the influence of globalization is evident in the current ability to access products from any part of the world and execute payments through digital solutions. This trend not only broadens the spectrum of consumption options but also exerts a substantial impact on financial inclusion. A rising number of individuals, when conducting online product sales, opt for digital payments, contributing to the diminishing reliance on cash. This transformation underscores the increasing significance of technology in the global economy and its capacity to enhance the accessibility and efficiency of financial services.

Secondly, in LAC, the current migration patterns have given rise to a notable trend: the transfer of remittances. The region has witnessed a consistent increase in migratory movements, with growing numbers of individuals pursuing economic opportunities and an improved quality of life in other countries. These migrants send remittances to their families in their countries of origin, resulting in a capital flow that positively influences the economies of the receiving countries.

This money flow promotes financial inclusion by catalyzing the development and uptake of accessible and suitable financial services. As migrant workers send and receive remittances, opportunities arise for the proliferation of financial services like savings accounts, wire transfers, insurance, and microcredit in host communities. These services not only streamline the management and use of remittances but also promote involvement in the formal financial system, encouraging long-term savings and investment.

Finally, it is noteworthy to recognize that technology assumes a key role in the progression of remittances and their influence on financial inclusion. Fintech solutions, including mobile apps and online platforms, simplify and optimize the process of sending and receiving remittances, cutting down costs and enhancing transparency in transactions. As per the World Bank, the global average cost of sending USD 200 via mobile money is 3.73 percent, almost half of the global average.[41] These technological breakthroughs allow individuals to access remittance services more easily, swiftly, and securely, even in remote areas or with minimal financial infrastructure.

Data-focused Entities

Embracing a data-centric approach has become pivotal in the world of financial inclusion. Increasingly, companies and organizations are acknowledging the value and power of data in making informed and strategic decisions. In the context of financial inclusion, the emphasis on data enables the identification and enhanced comprehension of the financial needs and behaviors of underserved and underrepresented populations.

We can identify three major impacts: The collection and analysis of accurate and relevant financial data can unveil prevailing patterns, trends, and gaps in the delivery of financial services to marginalized communities. This information is essential for formulating inclusive financial products and services that effectively meet the needs of these populations, with the goal of improving the accessibility, affordability, and relevance of their offerings to historically excluded segments of the population.

When it comes to using data for credit risk assessment and decision-making, institutions can improve their ability to evaluate the creditworthiness and repayment capacity of potential customers by scrutinizing both financial and non-financial data. This encompasses a thorough review of factors such as credit history, cash flows, and transactions. This method enables a more precise assessment, particularly in cases where customers lack a conventional credit history.

[41] Raithatha, R., Awanis, A., Lowe, C., Holliday, D., Storchi, G. The state of the industry report on mobile money 2023. 11th edition. GSMA. https://www.gsma.com/sotir/#download

Currently, organizations have the capability to harness information gathered from their customers to identify patterns, preferences, and behaviors. This grants them the capacity to emerge as influential endorsers of potential new customers, establishing an expansive network of connections that exponentially amplifies their outreach and accelerates their growth. The era of hyperconnection in the digital age has ushered in transformative business dynamics, enabling companies to forge networks of networks through their own customer base. In the past, such an accomplishment was inconceivable due to the intricacies and high costs associated with analyzing data in a similar fashion.

XaaS Era

The "everything as a service" trend denotes a shift in the provision of financial services, eliminating the need for significant capital investments (CAPEX) in infrastructure and capabilities. Instead, these can be obtained as one-off services (OPEX) through specialized financial and technological entities. Digitalization has streamlined the interconnection between systems, enabling entities to access services or capabilities provided by others that have already made investments in these tools.

Within the financial sector, this trend includes the concept of "Banking as a Service" (BaaS), signifying the capability of financial institutions to provide their services and capabilities as modular components to other companies, utilizing Application Programming Interfaces (APIs).

This implies that a financial institution can break down its services, like payments, loans, or account management, and provide them to third parties for integration into their own applications or solutions. BaaS fosters enhanced agility and collaboration within the financial ecosystem, making it easier to create customized products and services, thereby expanding the financial supply beyond traditional boundaries.

This evolution has diminished marginal operating costs, indicating that the break-even point for providing financial services has become more attainable. Financial institutions can harness the infrastructures and technological enablers of other providers to offer a diverse range of services without the need to develop them internally from scratch or make substantial initial investments.

This approach yields a particularly positive outcome for financial inclusion, empowering financial institutions to reach a larger segment of the population, regardless of their geographical location or technological resources. Furthermore, it simplifies the adoption of financial services by end users, as the apprehension toward financial institutions diminishes when the products are "delivered" by other entities they trust.

Additionally, it is evident that regulators have recognized the importance and resilience of this trend and have started to enforce regulations that allow financial institutions to market their infrastructures. A case in point is the regulations in Colombia, where regulatory frameworks have been established to promote collaboration and the rendering of financial services through the infrastructure of other entities.

One of the initiatives gaining prominence in the region, particularly in Brazil, Colombia, and Mexico, due to the emergence of innovative regulations and the "everything as a service" trend, is Open Banking. This endeavor aims to unlock access to financial data and services through Application Programming Interfaces (APIs). Within an Open Banking framework, consumers are empowered to securely and selectively share their financial data with third parties, including fintechs or financial management applications.

This promotes increased competition and drives innovation in the financial sector, empowering companies to develop new products and services leveraging banking data. Moreover, consumers can enjoy greater personalization and convenience in managing their finances. Open Banking has gained momentum on a global scale, responding to the expanding digitalization of financial services and the growing consumer demand for heightened transparency and options.

New Actors, New Rules

Within the current financial ecosystem, there is a surge in new players that are transforming the financial services panorama. These entities comprise fintechs, startups, foreign solutions entering the country swiftly under new regulations, and other companies that, while not conventional financial institutions, possess the capability and background to provide innovative financial services.

In a race to offer digital solutions for customers and internal processes, both fintechs and traditional financial institutions have played a part. This competitive scenario has cultivated a highly dynamic environment, fueling the transformation and constant improvement of the financial sector to the benefit of users.

The arrival of these new players has been possible thanks to swift technological advancement, which has allowed the creation of innovative and accessible solutions to offer financial services geared to the needs of underserved populations. For instance, crowdfunding and peer-to-peer lending platforms empower individuals to access financing without depending on traditional financial institutions.

The dynamic and competitive nature of the financial market has contributed to an improvement in service quality and increased efficiency in processes. New players strive to deliver unique value propositions that cater to customers' needs, placing positive pressure on conventional financial institutions to innovate and elevate their offerings.

Such competitive dynamics has fostered market maturity, prompting adjustments in the prices of financial services to provide greater transparency and benefits to consumers. This competition stimulates the pursuit of efficiencies and cost optimization, resulting in savings for users.

Competitive Cooperation

The dynamism of the new ecosystem has transformed cooperative competition into a novel form of collaboration in the business world. Entities, including direct competitors, converge to create synergies and enhance their capabilities. This collaborative approach, termed "coopetition," has gained increasing relevance in a highly competitive and dynamic business environment. Within these ecosystems, financial institutions and fintechs or disruptive companies can unite their strengths and knowledge to forge innovative solutions and provide greater value to their customers. Through cooperative competition, the sharing of resources, technology, and knowledge accelerates the development of new products and services while improving operational efficiency.

In light of this new perspective, regulators have become increasingly vigilant about the need for fresh regulations that foster innovation and collaboration. These may include regulatory sandboxes, regulations related to Open Banking, and data management, among others. Such initiatives are pivotal in advancing collaborative and innovative ecosystems that yield benefits for both service providers and end-users, all while fortifying the financial system and catalyzing economic growth in the region.

Governments and regulators, particularly in countries like Brazil, Colombia, and Mexico, are adopting a progressive approach. They are establishing regulatory frameworks that foster collaborative competition and open doors for new disruptive actors and technologies. These regulations not only drive innovation but also play a pivotal role in promoting financial inclusion. They create an innovation-friendly environment and streamline access to financial services for vulnerable segments.

The impact of this collaborative trend on financial inclusion is clear. Actors within the ecosystem can extend their reach to segments of the population that were previously challenging to access due to dispersion. The development of networks incorporating knowledge, technology, and resources generates substantial synergies, enriching the reach of financial services and enhancing their accessibility, efficiency, and customization.

3.3.2 Enablers of Financial Inclusion through Digitalization

Market trends and the digitalization revolution have presented numerous opportunities to extend service coverage to marginalized users and communities. It is crucial to highlight that advancing financial inclusion involves addressing five key areas of action, categorized into three levels from a customer-centric standpoint.

The first set of catalysts involves aspects related to financial education and digital literacy, providing individuals with the necessary tools and skills to make informed decisions and use technological tools effectively. The second set focuses on access to mobile devices and internet connectivity, critical elements enabling people to access services from any location and at any time. Finally, at a third set, government strategies come into play, shaping financial inclusion through the implementation of regulations and policies that foster equal access and opportunities within the financial system. These levels collectively form a virtuous circle, aligning with the evolving context of the market.

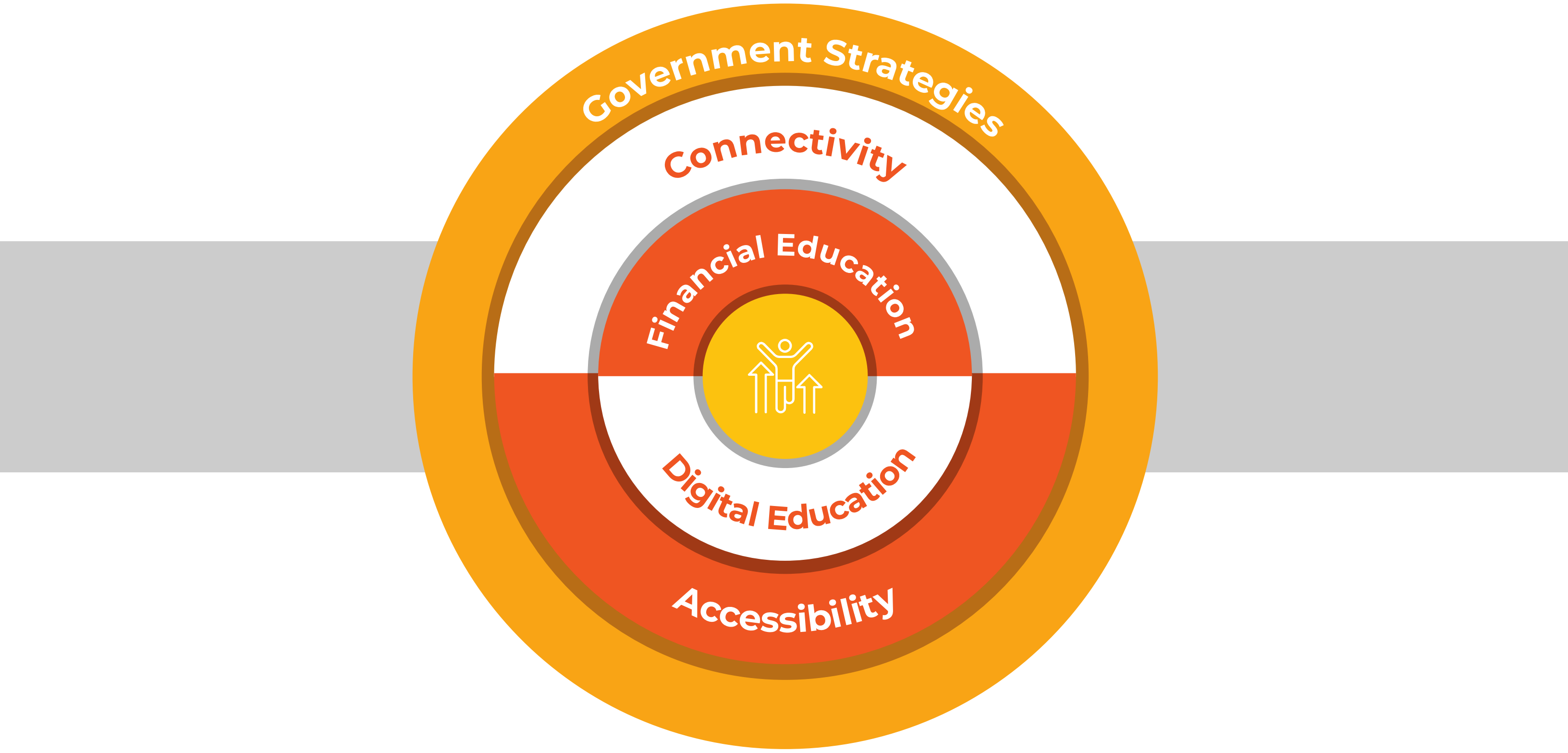
Financial Education and Digital Education

The cornerstone of inclusion lies in the crucial aspects of financial and digital education, serving as catalysts for imparting knowledge and skills to individuals. Financial education, in particular, facilitates the understanding of basic concepts, aids in informed decision-making, and advances access to services, fostering effective financial management. It also instills a culture of savings, challenges negative perceptions about financial institutions, and imparts the principles of responsible credit utilization.

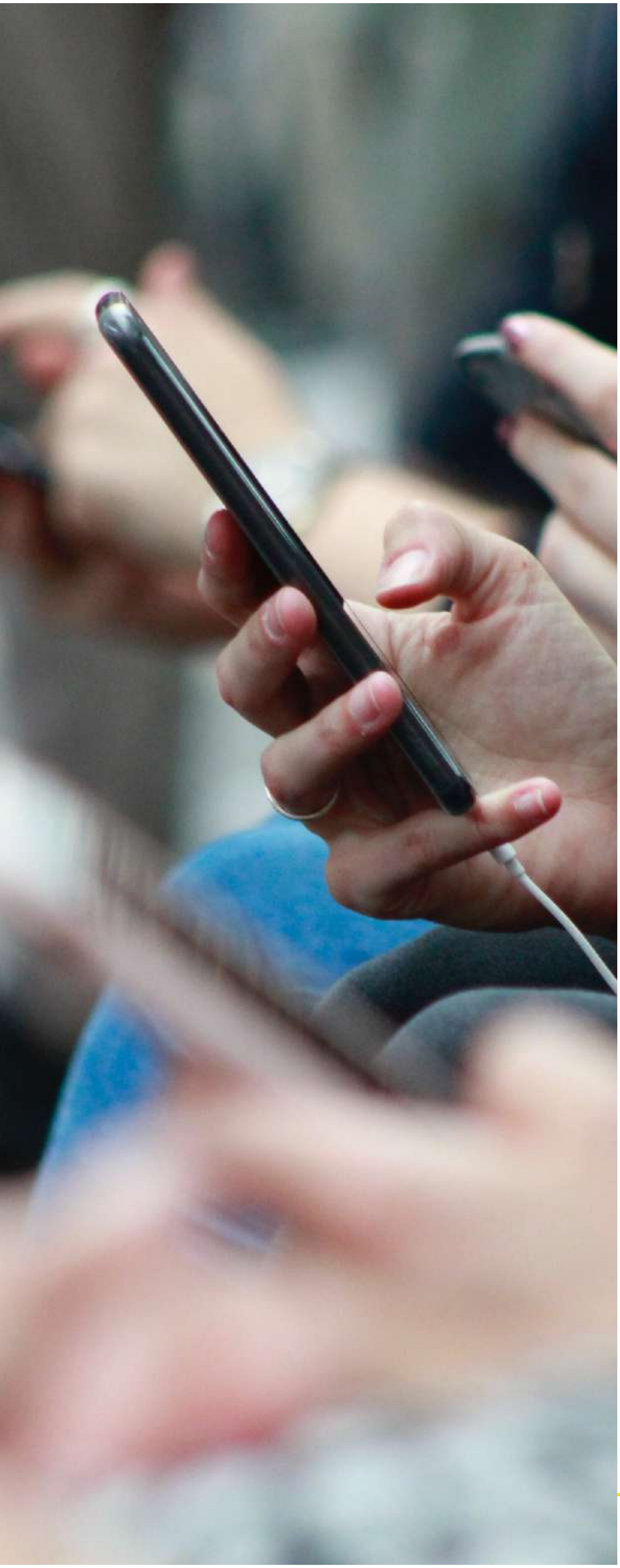
This empowers individuals to exercise increased authority over their finances, enabling them to make choices that align with their objectives. "An average of three out of five individuals in Brazil, Colombia, Ecuador, and Peru, lacks any defined personal financial goal. For those with established goals, homeownership emerges as the most substantial objective. To reach these financial milestones, the surveyed population primarily opts for actions like reducing expenditures, with an average of 73% choosing this approach."[42]

[42]Mejía, D. (2021). ¿Cómo están la inclusión y educación financiera en América Latina? En Visiones - CAF. https://www.caf.com/es/conocimiento/visiones/2021/05/como-estan-la-inclusion-y-educacion-financiera-en-america-latina/

Figure 15: Enablers of Financial Inclusion through Digitalization



Source: Own production



Moreover, mastering digital skills is imperative in today's landscape, allowing individuals to adeptly and securely engage with digital technologies. This becomes indispensable as the use of online financial services continues to surge. Digital education provides individuals with the skills needed to proficiently navigate mobile devices and applications, all while emphasizing the importance of online security. Through the comprehension and implementation of digital security measures, individuals can engage with online financial services confidently, reducing associated risks. This drives enhanced participation in the digital environment and bolsters financial inclusion by ensuring individuals feel secure when conducting transactions and managing finances online.

The significance of both dimensions cannot be overstated in empowering individuals, eliminating access barriers, and enhancing the efficiency of financial service delivery through the reduction of manual processes and the advocacy for automation. The convergence of digitalization and robust literacy initiatives, encompassing both financial and digital spheres, emerges as a critical driver in addressing the skills gap and fostering financial inclusion.

Connectivity and Accessibility

The pandemic-driven surge in digitalization has markedly expanded the accessibility of services and reshaped consumer shopping and payment behaviors through digital and mobile channels. Mobile devices, particularly smartphones, offer a user-friendly platform for conducting financial transactions, making this functionality accessible even to those without traditional service access. Additionally, robust internet connectivity guarantees swift and secure access to online platforms and applications, facilitating rapid transfers and retrieval of vital financial information.

The increasing availability and reach of the Internet have simplified the adoption of payment applications and platforms, providing a quick, secure, and convenient means of conducting transactions. Mobile money, a financial transaction system, permits users to execute payments, money transfers, and diverse transactions using devices such as smartphones or even basic phones.[43] With widespread internet connectivity, an increasing number of people now possess the capability to initiate payments through their mobile devices, diminishing the necessity for cash.

Connectivity in Latin America has improved in recent years, enhancing the accessibility of digital financial services. The expansion of 3G and 4G mobile networks has played a significant role in this advancement. From a base of 200 million registered users in 2010, the number has surged to 498 million individuals in the region with network access by 2021.

[43] Raithatha, R., Awanis, A., Lowe, C., Holliday, D., Storchi, G. The state of the industry report on mobile money 2023. 11th edition. GSMA. https://www.gsma.com/sotir/#download

Regarding the expansion of mobile internet, approximately 57% of the Latin American population possesses at least one active service, and 40% has coverage but does not use it. Notably, 5G technology has also witnessed significant progress. Projections suggest a 15% increase in mobile network accesses in the upcoming years.[44]

Globally, mobile money services are experiencing a rapid growth. The industry took 17 years to acquire the first 800 million customers, but the subsequent 800 million were achieved in just five years. Notably, 400 million accounts were added during the pandemic. Presently, Latin America and the Caribbean boast a total of 57 million mobile money accounts.[45]

Mobile money also contributes to closing gaps, particularly for women and other underserved groups. Access to both mobile phones and money empowers them to enhance economic independence and assume more active roles as financial decision-makers. The global drive for financial inclusion is evident, with mobile money playing a pivotal role. As it expands, there is a significant opportunity to extend its benefits to the 175 million Latin Americans who currently lack access to financial services.[46]

Government Regulation and Strategies

Governments have developed regulatory frameworks that foster financial inclusion and promote the participation of financial institutions in the sector. This encompasses initiatives such as disbursing subsidies and social benefits through mobile accounts, driving the provision of affordable financial services, and implementing comprehensive financial inclusion programs. These governmental efforts aim to eliminate barriers hindering access to these services, fostering an environment conducive to the development of innovative solutions that contribute to society.

To ensure the effectiveness of inclusion policies in the industry, the State must enhance the economic capacities of consumers and promote the provision of suitable and affordable financial services for various segments of the population. Additionally, it should establish regulations that guarantee consumer protection in this area.

[44] https://es.statista.com/temas/9257/el-uso-de-internet-en-america-latina/?kw=&crmtag=adwords&gclid=CjwKCAjw1YCkBhAOEiwA5aN4AVcUaVmDi8su0H-v94i389NYviCI3-MAR4Vb-UhvUWcasiHWurE9mBoCR0oQAvD_BwE#topicOverview
[45] & [46] Raithatha, R., Awanis, A., Lowe, C., Holliday, D., Storchi, G. The state of the industry report on mobile money 2023. 11th edition. GSMA. https://www.gsma.com/sotir/#download

Despite initial efforts in Peru with BIM and in Mexico with CODI to assist those excluded from the financial system, the most successful and impactful case at present is PIX. Developed by the Central Bank of Brazil in 2020, PIX enables users to make swift, secure, and free transfers and electronic payments at any time of the day. Its success is attributed to regulatory mandates, establishing it as an interoperable system for all banks and entities in Brazil. PIX's overarching goal was to expedite digitalization and create a unified payment infrastructure across the country. Significantly, its greatest achievement lies in integrating a substantial number of underbanked and unbanked individuals during the pandemic, with over 40 million people making their first bank transfer through PIX between November 2020 and March 2022."[47]

Another government initiative fostering banking and financial inclusion involves transferring benefits directly to populations historically excluded from the financial system. In Colombia, the adult population's banking rate has reached 60%, propelled by the accelerated digitization triggered by COVID-19. This acceleration was necessitated by the need to distribute economic subsidies to vulnerable populations through various fintech platforms like MOVii, Daviplata, Bancolombia a la Mano, Nequi, Punto Red, and Tpaga. These platforms have enabled over 2.6 million citizens to access payments from the Ingreso Solidario program. "Beyond subsidy receipt, these platforms empower beneficiaries with open accounts offering multiple usage options beyond cash, even fostering financial education."[48]

Another example of the banking strategy through government subsidy payments is observed in Paraguay, where the government distributed the Pytyvõ allowance to benefit over 1.3 million people through the Zimple digital platform. Zimple, serving as a mobile wallet for transactions involving e-money through mobile phones or websites, facilitates various activities, including sending money to other users, ATM withdrawals, online purchases, and payments for public and private services.[49] This strategic approach has not only significantly impacted the penetration and extension of financial inclusion but has also proven advantageous for the government. The digitalization of public payments has effectively minimized administrative costs and addressed issues of money leaks, ensuring payments reach their intended beneficiaries[50]

Conversely, different government strategies have emerged in response to the rapid growth of fintech and innovations in the financial sector. In Latin America, regulatory frameworks have undergone significant changes, leading to the introduction of regulatory “sandboxes”. These sandboxes provide controlled environments where fintech companies can test and develop their products and services in an agile manner, all the while ensuring the protection of consumers and the stability of the financial system.

"Countries in Latin America with mature fintech ecosystems, including Brazil, Chile, Colombia, and Mexico, are currently witnessing a dynamic scenario. The public and private sectors are collaboratively creating spaces for dialogue with the goal of advocating for public policies that support and foster innovation. This concerted effort aims to transition towards a regulatory framework that is conducive to innovative services and products."[51]

[47]BID INVEST: Los pagos digitales como forma de impulsar la inclusión financiera: https://idbinvest.org/es/blog/instituciones-financieras/los-pagos-digitales-como-forma-de-impulsar-la-inclusion-financiera

[48 & 49]Políticas de inclusión financiera y las nuevas tecnologías en América Latina,https://scioteca.caf.com/bitstream/handle/123456789/1755/Pol%c3%adticas%20de%20inclusi%c3%b3n%20financiera%20y%20las%20nuevas%20tecnolog%c3%adas%20en%20Am%c3%a9rica%20Latina.pdf?sequence=4&isAllowed=y

[50]Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, and Saniya Ansar. 2022. The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. Washington, DC: World Bank. doi:10.1596/978-1-4648-1897-4. License: Creative Commons Attribution CC BY 3.0 IGO

[51]BID, Sandbox Regulatorio en América Latina y el Caribe para el ecosistema FinTech y el sistema financiero, 2018

The ongoing regulatory evolution underscores the significance of promoting innovation in the financial sector and enhancing financial inclusion. This is achieved by establishing a more flexible legal framework that aligns with the requirements of new technologies and emerging business models. Regulatory sandboxes play a pivotal role in facilitating fintechs' entry into the market, fostering competition, and enabling a broader array of financial services. These services, tailored to the needs of previously excluded segments of the population, significantly contribute to advancing financial inclusion in the Latin American region.

Additionally, there has been a progression in banking regulations with the adoption of Open Banking, an initiative committed to leveraging the benefits of open banking and technological innovation to enhance inclusion and competition. Open Banking facilitates the secure and controlled exchange of data between various financial institutions, granting users the flexibility to access a broad spectrum of financial services and personalized products.

With the Fintech Law of 2018, Mexico took the lead in the region, becoming the first country to set requirements and regulations for 2,300 entities to share data. Brazil followed suit in this regulatory progress, forwarding government strategies towards innovation through PIX. Finally, in 2022, Colombia published regulations that encourage innovation through open banking models.

This regulatory progress aims to eliminate widespread barriers to accessing financial services, promote competition, and welcome the active participation of new Fintech companies in the ecosystem. By granting users greater control over their financial data and facilitating interoperability among diverse service providers, Open Banking fuels the generation of innovative and affordable solutions. These solutions are tailored to benefit population segments historically excluded from the traditional financial system. Hence, the primary objective of the evolving regulations in Latin America towards Open Banking is to make a positive impact on financial inclusion, advocating for the democratization of access to financial services and encouraging increased integration and participation of citizens in the digital economy.

3.4 Value Chain Structure

The value chain of financial institutions covers several stages: It begins with customer knowledge, where information is collected to understand their needs and preferences. Then, the focus shifts to product design, where financial solutions tailored to these identified needs are crafted. The process advances to onboarding, a phase dedicated to incorporating new customers and gathering pertinent information.

Subsequently, attention turns towards the acquisition and placement of financial products. Ultimately, transactionality, support, and customer service take center stage, playing a pivotal role in maintaining and strengthening relationships. They ensure the provision of efficient services and a satisfactory experience. These stages collectively constitute the value chain, enabling financial institutions to meet customer demands and ensure effective operation. (Further details are elaborated upon in the Annexes section).

With digitalization permeating every facet of our lives, its impact on the financial industry has been fundamental. This transformation has sparked a significant evolution in the banking value chain, fundamentally reshaping how financial institutions engage with their customers and deliver their services.

In the analog era, the financial sector's value chain primarily centered around a transactional vision, where lending and the use of cash were at the core of operations. Customer interaction was confined to a 100% physical, in- person experience at bank branches, with customers prioritizing low fees or transactional costs above all. Over time, this value chain has undergone significant evolution. The initial transactional perspective has broadened to encompass new financial products and aspects related to the digital experience. This evolution is evident in the resilience of banking operations, which has started to embrace digitalization and online channels as foundational elements of its value proposition. It recognizes that customers are now seeking not just a financial product but a digital financial service.

The challenge of digitalization and the automation of operations has led to a heightened level of innovation and agility across all aspects of banks, from internal structures to operational verticals. Furthermore, it has instigated a profound shift in focus towards customers. Utilizing technology-enabled capabilities, financial services have been successful in targeting new vulnerable segments, breaking down barriers that were once considered insurmountable. This evolution has not only revolutionized the supply of services but has also reshaped the perception of accessibility, democratizing entry to previously restricted financial opportunities.

3.4.1 Constant Pressures on the Value Chain

Value chains within the financial sector are undergoing an unparalleled series of stresses due to continuous evolution and Digital Transformation. These stresses arise from various sources, including shifting customer expectations, growing market competition, and increasingly stringent regulatory demands. This dynamic has compelled financial institutions to reevaluate and redesign their value chains, adjusting to a highly competitive and digitalized business environment. In this context, we will delve into the primary tensions impacting these value chains and explore how financial organizations are responding to remain relevant and efficient in this new paradigm.

Customers' demand for fast, personalized, and 24-hour experiences poses significant challenges for entities. Meeting these expectations requires heightened operational efficiencies and a continuous commitment to innovation. In the present scenario, financial institutions often create what can be described as a "digital illusion." They promise smooth and trouble- free digital onboarding processes, but in reality, the process may involve delays in delivering physical cards, the necessity to complete certain paperwork in physical offices, and other impediments that contradict the notion of a purely digital experience. This discrepancy creates a gap between customer expectations and the operational reality of the institution.

Essentially, this represents a crucial tension in the industry where, in certain cases, customers who have embraced the digitalization wave or are digital natives demand a genuinely digital and efficient experience. Institutions must work to bridge the gap between perception and reality in their digital offerings. This tension, spurred by the industry's own shift towards digitalization, forces entities to overhaul their 'front-to- back' processes. Those unable to provide fast and personalized experiences may find themselves falling behind in the market.

Figure 16: Pressures on the Value Chain

Source: Own production

This tension is particularly evident in financial inclusion entities. As they progress and evolve within their value chain, they encounter a critical dilemma: finding the right balance between retaining their identity as a relationship-focused financial institution, integral to their goal of inclusion, and embracing the escalating digitalization within the sector. This transformation of the relationship model manifests in two essential directions.

Initially, it entails constructing self-consumption solutions that empower customers to effortlessly and independently access and use financial products and services through digital channels. Secondly, it involves equipping the agents and managers of these entities with digital tools, enabling them to deliver an even more comprehensive and efficient service focused on closeness and relationship. This approach leverages the advantages of digitalization while maintaining a steadfast commitment to financial inclusion. Striking this balance presents an ongoing challenge to provide accessible and quality financial services to vulnerable segments of the population.

Innovation should also be directed towards the exploration of hybrid and assisted models that integrate financial education, accounting for the specific characteristics of each vulnerable population they serve. Amidst this ongoing process of digitalization and evolution, it is imperative to incorporate education, follow-up, and assistance strategies that address the specific needs of these population segments. This presents an enduring challenge for financial inclusion entities committed to providing quality financial services while focusing on the inclusion and empowerment of their clients.

Conversely, the banking sector is experiencing an unparalleled level of competition. Competitors, such as fintechs and other non-mainstream financial institutions, are rolling out cost-effective and user- friendly digital solutions, intensifying the pressure on traditional entities to maintain agility and competitiveness in the digital marketplace. This has repercussions on the value chain.

Under the strain of competition, traditional financial institutions have undergone evolution, seeking ways to collaborate with fintechs rather than treating them as adversaries. This shift in approach has played a part in enriching the financial ecosystem and propelling the advancement of its value chain and relational dynamics, thereby expanding options for consumers (see chapter Trends, coopetition).

The tension has compelled traditional financial institutions to reassess their approaches and strategies within the value chain to stay relevant in an increasingly digitalized environment. This has led to an acceleration of their Digital Transformation process, streamlining of technology platforms and Core Banking, simplification of processes, and an improved customer experience through the adoption of more agile practices.

An additional source of tension arises from regulation. While institutions are continually evolving their value chains, they are also required to meet regulatory standards, introducing an extra layer of complexity. Regulation, particularly in the financial sector, has always played a crucial role in ensuring the safety and integrity of markets and the protection of consumers. Currently, financial regulators are progressively embracing RegTech (regulatory technology) approaches for industry oversight.

From a positive perspective, it is crucial to highlight that the introduction of RegTech has triggered transformative changes in the value chain in various instances. The regulation itself creates frameworks that foster innovation, allowing entities to automate processes that were once time-intensive. This not only diminishes operational costs but also mitigates human errors.

Emerging business models may arise due to new regulations like Open Banking, a significant force in Brazil, Colombia, and Mexico. It offers a fresh perspective on building collaborative ecosystems and stands as a pivotal player in fostering environments for innovation and collaboration.

The introduction of new regulations presents a challenge, demanding considerable investment and resources. Initially, compliance and the transformation of processes mandated by regulations require focused attention and prioritization, often competing with initiatives of greater business relevance, especially for smaller financial institutions.

Additionally, the ever-changing landscape of regulations demands continuous adaptation, requiring entities to stay current and prepared for sudden shifts in regulatory requirements. This can pose a challenging and costly task. One of the most crucial areas in regulatory terms encompasses everything related to cybersecurity and the management and handling of customer data.

Entities relying on legacy technologies (including outdated systems, applications, software, hardware, or other obsolete technologies still in use) encounter significant challenges. These systems were not necessarily designed and built with the requisite digital security, fraud prevention, and data management capabilities.

As a result, investing in cybersecurity has become indispensable. The sector's evolution has led to a rise in sophisticated cyber threats, the imperative to safeguard sensitive data, adherence to stricter regulations, an increased reliance on technology, the protection of customer reputation and trust, and the growing adoption of RegTech solutions. Safeguarding data and systems is paramount for maintaining customer trust and meeting regulatory requirements in an increasingly digitalized financial environment, imposing an additional strain on costs and resources.

3.4.2 Impact of COVID-19 on the Value Chain

The pandemic accelerated the pace of digitalization for the region and the value chain of financial institutions. In the midst of challenges and difficulties resulting from the pandemic, an opportunity has emerged for America and the Caribbean to harness the potential of digitalization.

A particularly notable scenario arose with the need to close physical branches as an effort to contain the spread of the virus. This brought about significant tension in the sector, prompting financial institutions to rapidly pivot their efforts towards delivering services through digital channels.

The closure of branches not only heightened demand for online services but expedited digital adoption among customers who, in many cases, were compelled to adapt to the new realities imposed by the pandemic. This abrupt change and the escalating pressure to provide financial services remotely presented a myriad of challenges and opportunities in the value chain of financial institutions.

The impact of COVID-19 on financial inclusion underscores how this global crisis generated deep social and economic disparities in the LAC population. Many were financially unprepared to cope with a prolonged crisis. Over 50% of households in developing and advanced economies found themselves unable to sustain basic consumption for more than three months if their incomes declined, revealing the financial challenges experienced by both households and businesses.[52]

Due to this situation, the financial sector faced an increased risk of default in the payment of loans and experienced a decline in its ability to extend credit, owing to the economic recession and the uncertainty induced by the pandemic. This context generated product innovations in the pandemic-enabled environment, within the global expansion of formal financial services. This growth has ushered in new economic opportunities, playing a role in diminishing gender disparities in account holdings and fostering greater resilience in households to withstand financial crises.

The pandemic has served as a catalyst, expediting the adoption of financial technologies, instilling greater trust in digital payments, and reducing dependence on cash. The influence of COVID-19 has played a crucial role in reshaping the value chain of financial institutions, propelling the region into a swift adaptation to digitalization and the development of more efficient and accessible financial solutions for all.

Agile and Resilient Value Chain

The essential strategy is to adopt technology solutions that not only cater to evolving customer demands but also empower financial institutions to operate with agility and resilience. Digitalization becomes an essential ally in this undertaking, offering the necessary tools to transform the value chain and meet its needs. Entities that can effectively embrace this Digital Transformation will position themselves better to thrive in an increasingly challenging and competitive financial environment.

[52]Banco Mundial: Capítulo 1. Los impactos económicos de la pandemia y los nuevos riesgos para la recuperación

3.5 State of Digital Transformation in Financial Services Entities Focused on Vulnerable Segments

Within this chapter, we delve into the current state of Digital Transformation, challenging the foundations of financial institutions serving vulnerable segments in LAC. Our exploration kicks off by assessing the primary challenges these organizations grapple with in their daily operations, ranging from customer knowledge to the enhancement of operational efficiency.

Building upon this starting point, we will delve into the extent of digitalization that these companies have attained, assessing their adoption of emerging technologies to confront challenges and surmount barriers on their path to Digital Transformation.

3.5.1 Current Needs of Financial Institutions in the Financial Inclusion Ecosystem

Critical challenges and needs, heightened by the intricate economic and post-pandemic context. Trends are surfacing at an accelerated pace, simultaneously being more fleeting; customers exhibit increasingly diverse demands with a digital-oriented approach, and regulators intensify their focus on formulating regulations in digital areas. In this scenario, financial institutions have acknowledged that digitalization is no longer a choice, and constructing resilient digital solutions is the only path to survival.

Here are four areas where financial institutions are focusing their digital efforts:

- Responding to changes in customer needs and behaviors.
- Minimizing the costs of raising capital (financing), and optimizing the risk of credit portfolios.
- Diversifying the portfolio of products and services, either directly or by leveraging on the generation of ecosystems.
- Adapting to new regulations to meet integrity and consumer protection standards.

Transformations in the economic and operational sphere have posed challenges for financial institutions in their effort to stay competitive. Confronted by these market dynamics, these organizations must reassess and adjust their products, operations, and business models. It is crucial to acknowledge and comprehend the challenges they encounter in the present.

In financial institutions, these developmental areas pose challenges that require attention to maximize the added value:

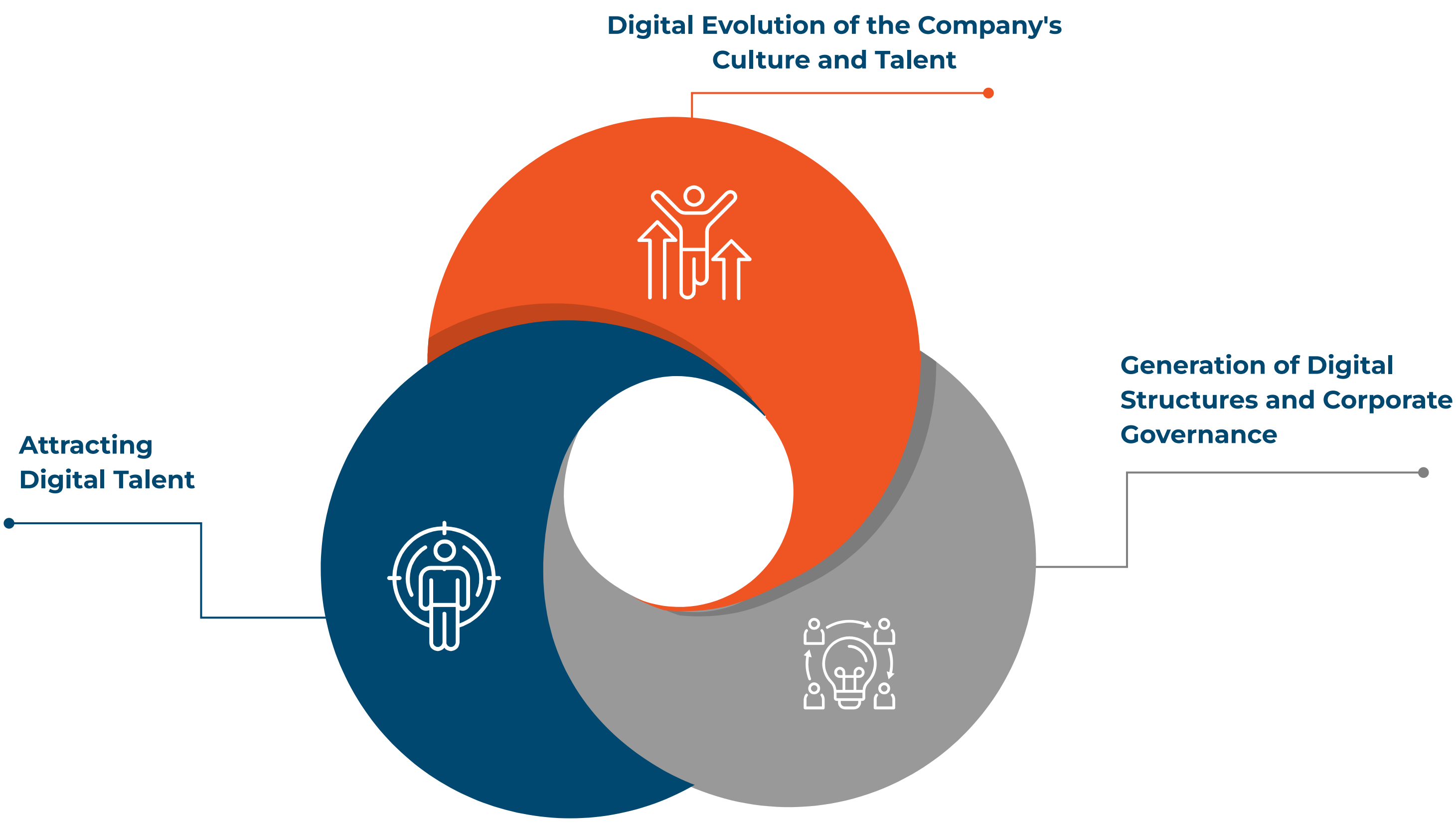
- Adopting a digital culture and improving talent management.
- Reducing operating costs to invest in innovation.
- Strengthening Data Analytics capabilities.
- Expanding the reach of customer engagement.
- Maintaining the closeness of the face-to-face relationship through digital services.

Adopting a Digital Culture and Improving Talent Management

Entities face a central challenge in adopting a digital culture and enhancing talent management. One of the key difficulties is attracting and retaining professionals with specific technological skills. Intense competition, fueled by remote work, has prompted foreign companies to recruit technology experts, providing dollar salaries or other economic advantages that surpass local ones. The removal of physical boundaries in the workplace is placing pressure on the talent market across the region.

Yet another challenge in the talent digitalization process is associated with the concept of 'Unlearning.' As revealed throughout the study, trends are increasingly transient and emerge rapidly, demanding highly resilient talent. This culture is attainable only when company management is dedicated to creating work environments beyond employees' comfort zones, such as job rotation or regional and international mobility, supported by a strong training commitment.

Figure 17: Virtuous Circle



Source: Own production

Governance for Digital Transformation has become top priority. Financial institutions have either established or are currently in the process of creating strong governance structures, displaying a strong commitment to Digital Transformation for enhancing operational efficiency and customer service. This involves forming teams exclusively dedicated to transformation and innovation, along with adept management of organizational change to embrace new work methodologies. As per the results of DMA self-assessment by entities in this study, a mere 5.71% of them have designated roles, such as Data Scientist and Digital Change Leader, entirely devoted to Digital Transformation projects or initiatives.

Reducing Operating Costs to Invest in Innovation

Reducing operating costs to invest in innovation can be challenging for many financial institutions. Microfinance companies or small corporations face the daunting challenge of finding suppliers that cater to their specific needs, given that the majority of available solutions and services are tailored for larger companies.

Achieving internal efficiencies through Digital Transformation is essential, but it comes with its own set of cost-related challenges. The implementation and maintenance of digital technologies and tools for automation and operational agility can incur significant expenses. The lack of standardized architectures complicates the formation of alliances with the ecosystem and new digital players who might provide more cost-effective solutions.

Navigating the balance between reducing costs and investing in Digital Transformation, financial institutions frequently confront the dilemma of sustaining current profitability or directing significant resources toward innovation to maximize future returns. As evidence, 45% of entities highlight their commitment and substantial investment to align with emerging trends. Financial resources and specialized talent are being earmarked to identify and evaluate disruptive opportunities, exploring new business models. Simultaneously, 34% of entities, while recognizing the need to adapt to the latest trends, continue with reactive strategies to keep pace. They grapple with the challenge of advancing and evolving their digital vision for proactive transformations.

Lastly, it is important to consider the challenges between the profitability of Digital Transformation and the digital maturity level of demand. In this context, customers also play a vital role, often lacking the necessary tools or training to fully embrace the digital advancements offered by financial institutions. Therefore, when rolling out digital products, entities must factor in the adoption and actual usage of the solutions, which may sometimes limit the allocation of budgets towards innovation.

The relationship between supply and demand is crucial in this context, as the success and profitability of advanced digital solutions rely heavily on the preparedness of demand to embrace them. The primary objective of Digital Transformation is to synchronize with the level of digital adoption within the population, simplifying the use of services or products, and delivering financial and digital education to customers. This guarantees the implementation of digital services at the right time for effective use.

In short, the search for efficiencies and investment in innovation holds great importance. However, striking the right balance between these factors remains an ongoing challenge for financial institutions, particularly within an environment marked by regulatory dynamism.

Strengthening Data Analytics Capabilities

Fostering a data-centric vision within companies involves recognizing data as a fundamental, strategic asset that steers decision-making, fuels innovation, and contributes to overall business success. This serves as an opportunity for many financial institutions.

As consistently highlighted in interviews with participating entities, the sector lacks a comprehensive set of data capabilities to harness information, whether proprietary or from third parties. Despite recognizing the significance of data analytics, the reality is that the day-to-day operations of companies consume significant resources, complicating the design and implementation of data strategies aimed at maximizing the value of this competitive edge.

Embarking on a data strategy involves several dimensions. It ranges from seemingly simple tasks, such as understanding how data can contribute to achieving strategic objectives, to more complex endeavors like adopting enabling technologies such as the cloud or Artificial Intelligence (AI).

Furthermore, attaining a data-centric strategic vision implies acknowledging that it is not just about the availability of data but also its effective utilization. This, in turn, can only be achieved by fostering a data culture throughout the entire organization.

According to DMA results for this study, a total of 60% of financial institutions indicated that they utilize databases for cross-referencing information and identifying patterns to understand root causes and explain events (customer, product, or other behaviors). Nevertheless, they refrain from employing advanced analytics models that enable the acquisition of predictive and prescriptive information.

In an environment where understanding the unique needs of customers and optimizing operational and process efficiency is becoming ever more critical, this can pose a significant challenge for institutions. Particularly for individuals with low income, having non-financial data on utility payment behavior could be pertinent. This information might facilitate the potential for and enable predictive analysis of credit repayment capacity.

Figure 18: Challenges to a Data-centric Organization

Major Challenges

- Recruiting talent with proficiency in comprehending and managing data.
- Defining standardized KPIs for measuring and monitoring indicators.
- Developing and implementing personalized training plans for data.

Major Challenges

- Developing a data strategy centered on the organization's objectives.
- Establishing a data governance model reflective of the organization's maturity level.
- Adopting a culture that encourages decision-making based on information and insights.

Major Challenges

- Establishing user-friendly visualization tools for user areas.
- Enabling access to sources of business-relevant information.
- Executing and monitoring policies for information security and integrity.

Source: Own production

In this context, it's crucial to underscore the maturity level identified in the study regarding data protection and privacy. In general, surveyed entities emphasize the integration of customer protection practices at various levels within their financial products and services, encompassing secure data handling.

Conversely, it's noted that 13% of the entities under examination are starting to factor in non-traditional variables in credit assessments. These encompass both qualitative and quantitative variables, along with digital transaction data like cell phone top-ups and bill payments. This approach enhances customer segmentation and provides a deeper insight into their financial behavior. Meanwhile, 5% rely solely on basic information variables, 42% indicate analyzing both basic and financial information variables through credit bureau checks and conventional external sources, and 40% are also incorporating basic non-financial variables.

In essence, financial institutions are refining their data analysis capabilities, realizing the importance of this domain in tailoring services and informing strategic decisions. Despite encountering challenges, they are shifting towards a more data analytics-centric approach to steer Digital Transformation in the sector.

Increasing Customer Capillarity

The drive to maximize investments in the digital landscape within a highly competitive environment and under revenue pressures compels financial institutions to concentrate on optimizing service costs. Consequently, there's a heightened focus on creating synergistic and scalable business models. Within this dynamic, the imperative to enhance capillarity takes center stage, bringing about a notably positive impact on historically underserved segments.

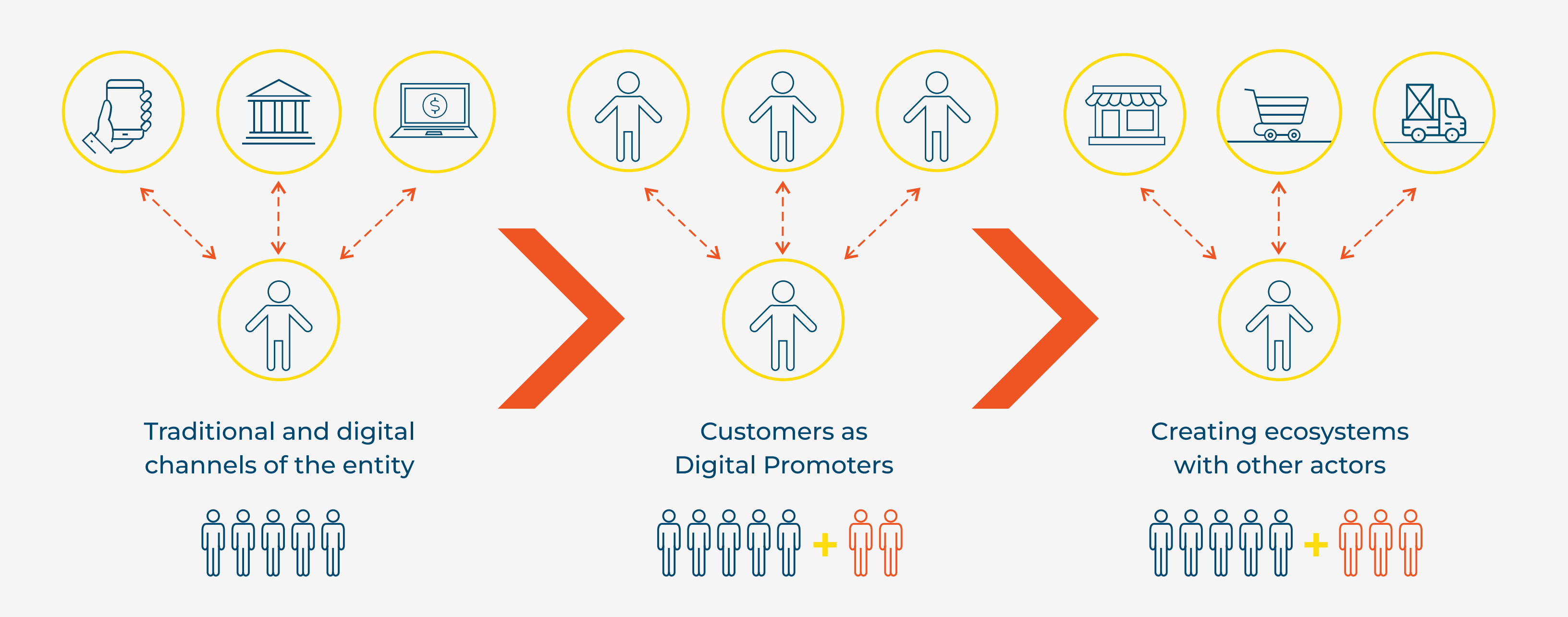
Enhancing capillarity is currently being pursued through the digitalization of channels, transforming customers into digital leaders (commonly known as digital influencers or promoters), and establishing ecosystems with third parties. These strategies form the core approaches adopted by entities.

Channel Digitalization

Mobile apps and websites serve as convenient platforms for customers to carry out a range of operations remotely. The study reveals that 92% of entities have incorporated digital channels into mobile applications and websites, primarily for information checking. Moreover, 28% specifically indicated that customers can adopt a hybrid approach when purchasing savings products within these digital channels.

Another relevant aspect is the influence of digitalization on the face-to-face channel. While digitalization may not expand the capillarity of the face-to-face channel, it can significantly enhance its productivity. This is achieved through appointment optimization, traffic management in branches, and the use of predictive or prescriptive commercial management tools. Examples such as OCR and digital signatures have been highlighted by entities in various surveys.

Figure 19: Dimensions to Increase Customer Capillarity



Source: Own production

Converting Customers Into Digital Prescribers

The ongoing digitalization of society is a golden opportunity for financial institutions to maximize their most crucial asset: customers. Notably, the influence of social media is highly relevant for individuals facing limited financial inclusion or exclusion from traditional systems. A study conducted by INEGI and ENIF in Mexico[53] in 2021 found that 67.4% of participants predominantly sought financial advice from family and friends.

The process of turning customers into digital promoters involves the creation of communities[54], offering an opportunity not just to broaden companies' capillarity but also to cultivate regular communication that strengthens customer loyalty. Countless companies specializing in financial inclusion are shifting from conventional community-building practices in rural areas to hybrid models, using digitalization to enhance relationships.

Ecosystem Generation with Third Parties

The advent of societal digitalization has given rise to a network of networks, optimizing communication and operational processes through technological connections. For the financial sector, especially in the domain of financial inclusion, the challenge is to harness both physical and digital ecosystems to attract customers less drawn to traditional players.

A notable trend in the region, accelerating financial inclusion even preceding full digitalization, is the establishment of collaborative bank managers through networks of affiliated stores. This strategy not only simplifies banking operations for those averse to digital channels but also serves as an entry point to the financial system for individuals without savings accounts, offering payment solutions for services and bills. Additionally, it extends access to financial services in cities lacking traditional bank branches.

Meanwhile, numerous digital ecosystems are emerging in the region, providing clients with the ability to engage in non-financial environments and access savings, investment, credit, and other products.

[53] INEGI. (2022, May). Encuesta nacional de inclusión financiera (ENIF), 2021 [Comunicado de prensa No. 256]. https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2022/enif/ENIF21.pdf
[54] Refers to a business strategy that focuses on creating and managing online or offline communities of people who share common interests, values, goals, or needs.

Despite these advances, there are still significant barriers to reaching vulnerable populations (See chapter 3.2). As highlighted in prior chapters, each population possesses distinct needs and challenges, presenting a persistent difficulty in expanding capillarity.

Successfully tackling this challenge demands entities to tailor their strategies and services to the dynamic and varied needs of their customers. This entails adopting a comprehensive approach that encompasses service personalization, financial education, and collaborative efforts with local partners to gain insights and better cater to the needs of the communities they serve.

Maintain Oneself as a Relationship Bank Through Digital Channels

The critical challenge for entities committed to financial inclusion is to sustain their identity as relationship banks amidst the wave of digitalization. The transition to a more digital model poses various barriers that these entities must surmount to maintain the intimate relationships they have established with their customers.

Acknowledging the barrier of connectivity and the digital divide, as discussed in Chapter 3.2, it constrains the access and use of digital financial services provided by entities. Closing this digital gap becomes imperative to guarantee equal opportunities for all customers to avail the benefits of Digital Transformation.

Based on the findings of this study, 34% of entities note that their digital customer engagement falls within the range of 0% to 10%, while 31% report participation levels between 10% and 30%. This emphasizes the necessity to focus not just on digitalizing financial services but also on enhancing the digital literacy of the population. These statistics suggest ample room for further digitalization efforts within the population and significant potential to elevate these percentages through innovation and initiatives aimed at improving digital literacy.

Lastly, it is imperative that digitalization does not compromise the hallmark attribute of proximity in service, which is integral to entities focusing on financial inclusion. Even with the incorporation of digital channels, maintaining a personalized and easily accessible service is paramount for these organizations. This can be realized through the introduction of customer support systems, user-friendly chatbots, and online support options, facilitating quick and effective interactions between users and the entity.

3.5.2 Current State of Financial Institutions on their Path to Digital Transformation

The findings from the digital maturity diagnostics conducted on 35 financial institutions across the region, encompassing banks, microfinance entities, cooperatives, and fintech firms, along with insights gained from in-depth interviews, provide a comprehensive overview of how these institutions navigate the various stages of Digital Transformation within their value chain.

By including fintech firms in this analysis, we gain valuable insights into the technological strategies and adoption of digitally developed financial institutions, allowing for meaningful comparisons with traditional counterparts.

This analysis is organized around the critical stages of the value chain, including customer knowledge, product design, onboarding, acquisition and placement, and support and service. The insights derived from these stages will illuminate prevailing trends, challenges, and opportunities that are molding the future landscape of the financial industry in the region.

An outstanding parallel among these entities' maturity level is their strengthened commitment to Digital Transformation following the pandemic, resulting in a more refined strategic vision. This shift has prompted the widespread embrace of innovative technologies and customer-centric approaches throughout the financial value chain. The implications highlight the transformative effects on operational practices and the enhanced delivery of financial services.

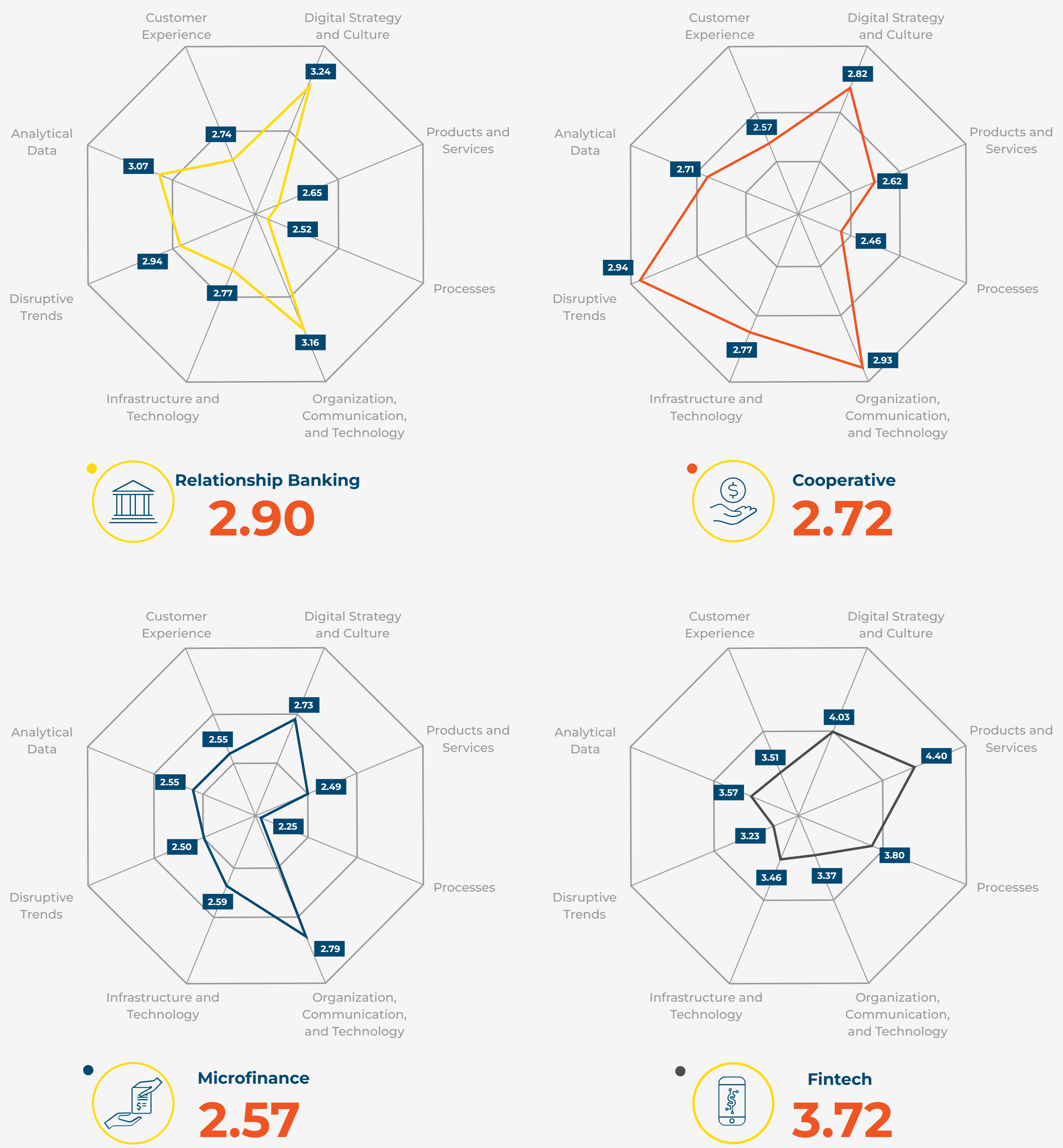
Additionally, entities at elevated levels showcase a clear alignment of their vision with business challenges, strategically framing their Digital Transformation plan to cater to the comprehensive needs of the entire organization.

The shift towards a digital survival scenario[55] has reshaped customer expectations, where digital solutions are now perceived as necessities rather than options. With digital transformation evolving from a choice to an imperative, this paradigm shift is evident in the prominent role assigned to Digital Transformation by the entities in the study. Notably, 57% of these entities emphasize that digital objectives are prioritized and integrated into a corporate strategy through crosscutting plans.

Moreover, interviews revealed that entities boasting higher digital maturity levels often exhibit a well- defined transformation direction. This strategic clarity plays a crucial role in steering digital initiatives, monitoring their progress, and adapting to emerging trends within the digital ecosystem.

[55] Refers to the ability of financial institutions to adapt and thrive in an increasingly digital environment.

Figure 20: Maturity Level by Dimensions and by Entity Type



Source: Own production, self-assessment results of the digital maturity assessment

Enhanced organizational adaptability to changes, coupled with a focus on innovation and continuous improvement, characterizes entities with a strong organizational approach. Particularly noteworthy is their allocation of a specific budget aimed at propelling digital initiatives, underscoring a substantial financial commitment to the Digital Transformation process. This financial dedication empowers them to execute projects successfully and advance the adoption of innovative technologies effectively.

Entities have prioritized the digitalization of channels as a key aspect of their path to Digital Transformation, with a substantial allocation of investments. A noteworthy finding reveals that 92% of surveyed entities have implemented diverse digital channels, including mobile applications, online platforms, and e-banking services. In contrast, only 8% rely solely on physical and face-to-face channels, emphasizing the widespread transition towards digital platforms.

Despite the growing emphasis on digitalizing channels and enhancing customer service, financial institutions, encompassing banks, cooperatives, and microfinance companies, confront considerable hurdles in achieving digital maturity within their internal processes. The study reveals that digital maturity scores in these institutions are relatively meager, with 54% admitting to having rigid processes that obstruct adaptability to changes and the needs of digitalization. This underscores the existence of a "digital illusion"[56] in the financial services sector, where the outwardly digital customer experience conceals substantial challenges and impediments in internal processes, hindering the delivery of a truly seamless digital experience.

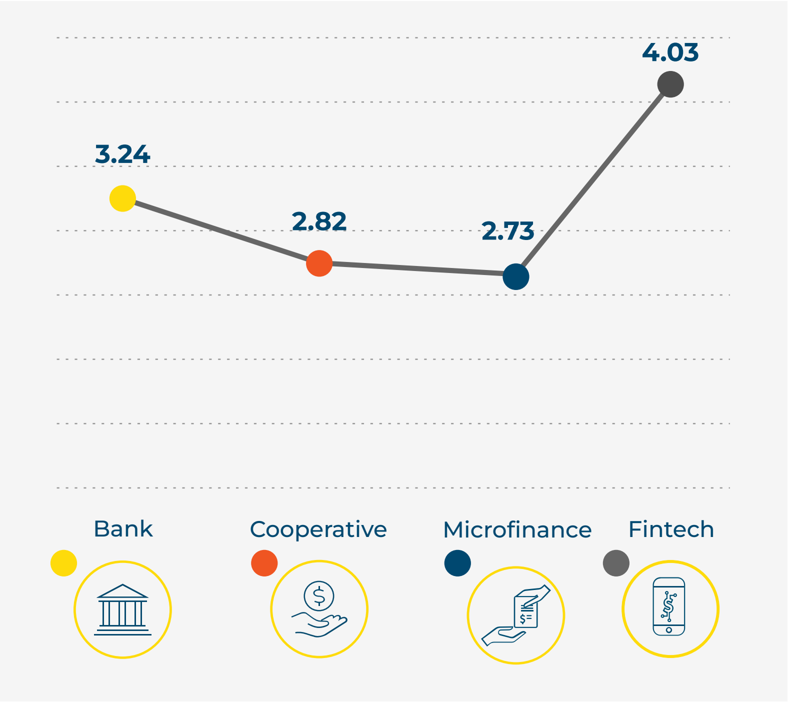
Moving forward, our focus shifts to assessing the current digital maturity level within distinct functions of the value chain and unraveling the strategies organizations employ to tackle their business challenges through innovative technologies.

[56] Refers to the misleading perception that digitalization and customer-centric technology swiftly and easily address all needs. However, operational challenges persist, leading to a mismatch between service expectations and the reality of cumbersome and slow processes.

3.5.2.1 Results by Entity Type and Dimensions of DMA

Strategy

Figure 21: Results by Entity Type in the Strategy Dimension

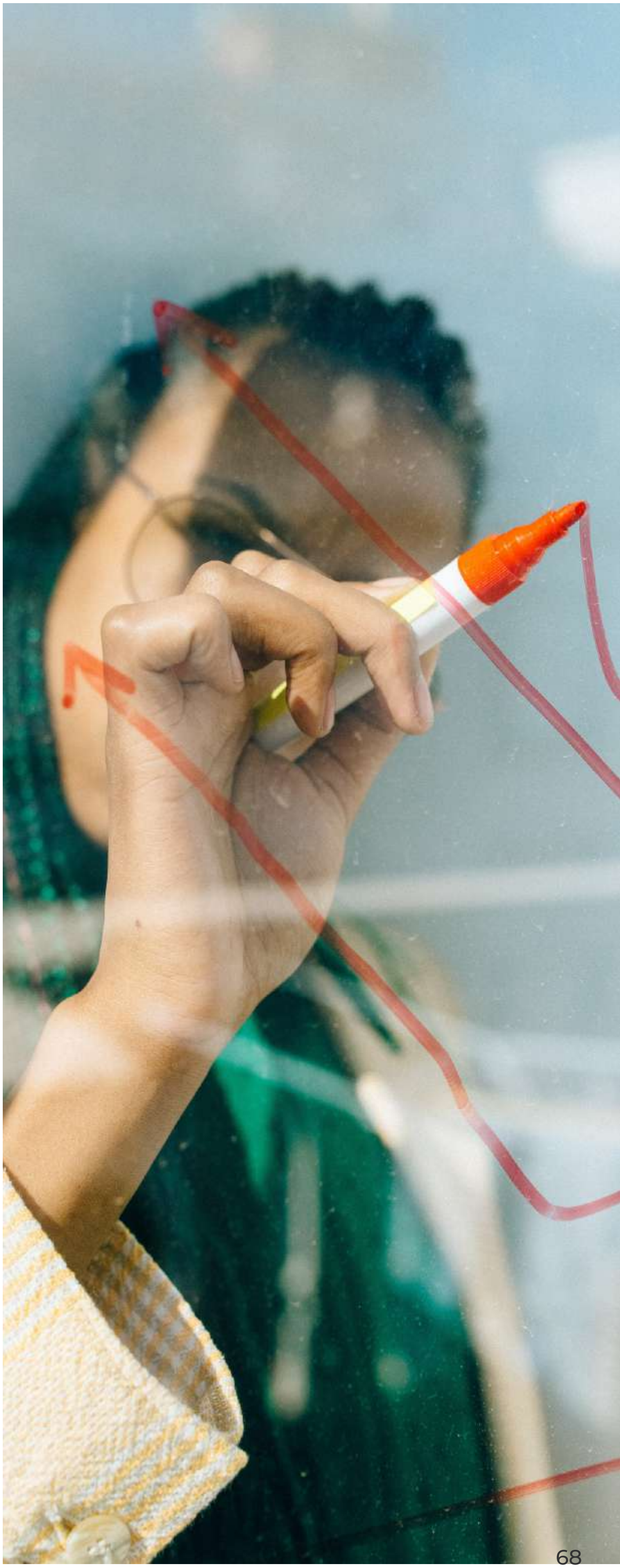


Source: Own production, self-assessment results of the digital maturity assessment

The study indicates that cooperatives and microfinance institutions operate at a **follower** level, showcasing their incorporation of certain digital trends and best practices into their digital strategy. With allocated budget percentages for Digital Transformation and the use of established roles, teams, and current digital assets, these entities enhance their value proposition for clients.

While some entities are exploring alliances within the ecosystem, challenges arise in establishing connections due to API standardization issues. As a result, Digital Transformation is confined to specific areas within the company, emphasizing the importance of prioritizing digital objectives and goals.

Banks demonstrate an **advanced** level of digital maturity as they prioritize digital objectives and goals within the corporate strategy, allocate a substantial budget share for Digital Transformation, and cultivate a culture where senior management encourages the use of digital assets. This approach leads to integrated processes, creating distinctive services valued by clients.



Although some entities have entered partnerships with fintech firms, a strategic approach to digitalization should be built on methodologies and a business culture systematically ingrained at all levels.

Fintech firms operate at an **innovative** level, employing agile and methodological approaches to disseminate the digital strategy throughout the organization. They allocate a significant budget for Digital Transformation and incorporate continuous improvement mechanisms that periodically refine the strategy. The entities actively promote innovation internally and externally, showcasing their ability to form strategic alliances with other entities within the ecosystem.

Senior management has fully embraced Digital Transformation, integrating it into the organization's image and vision. Digital assets are recognized as essential components contributing to their distinctive customer experience.

Customer Experience

Figure 22: Results by Entity Type in the Customer Experience Dimension

Source: Own production, self-assessment results of the digital maturity assessment

The study reveals that Banks, Microfinance institutions, and Cooperatives are positioned at a **follower** level. These institutions have strategically embraced Digital Transformation and prioritized customer experience. They have integrated sophisticated digital channels and self-service solutions to elevate customer interactions and elicit more meaningful feedback. In interviews, entities discussed launching pilot digital education initiatives within their offices, deploying advisors to educate clients on utilizing the diverse features of their digital channels.

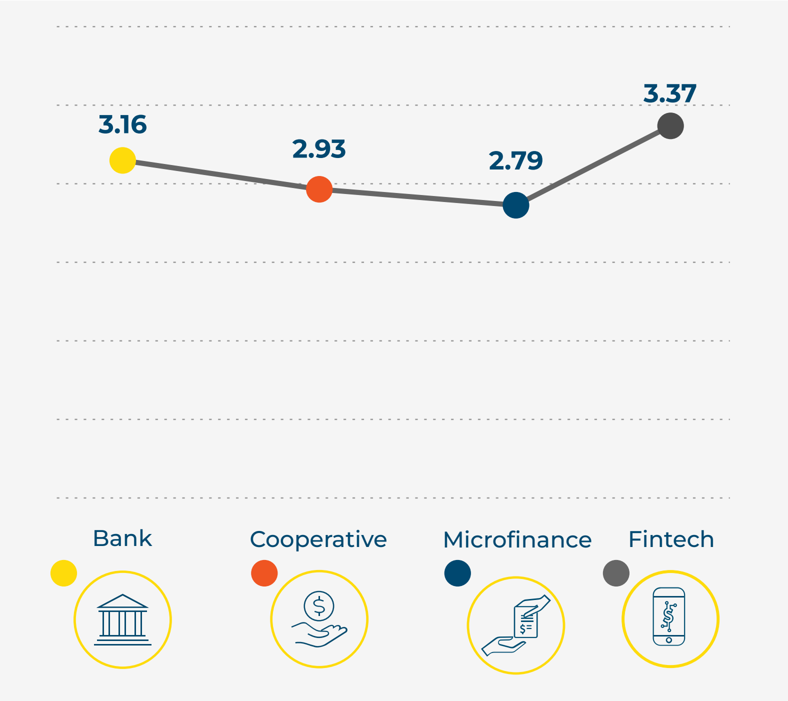
Taking the next step involves a strategic investment in cutting-edge digital tools like IoT (Internet of Things), data analytics for a nuanced understanding of customer preferences, and software for tailoring product and service offerings.

Fintech firms, on the other hand, exhibit an **advanced** level. These entities have emerged as pioneers in customer experience and digital transformation, implementing innovative and disruptive digital solutions like artificial intelligence and machine learning to provide personalized and proactive customer experiences.

Fintechs use advanced data analytics to predict customer needs, enabling them to proactively provide tailored products and services. Their agile and customer-centric business models are evident. To achieve more ambitious objectives, there is a need for action plans to transform into fully customer-centric entities and establish digital ecosystems for thorough impact traceability.

Organization, Talent, and Digital Culture

Figure 23: Results by Entity Type in the Dimension of Organization, Talent, and Digital Culture



Source: Own production, self-assessment results of the digital maturity assessment

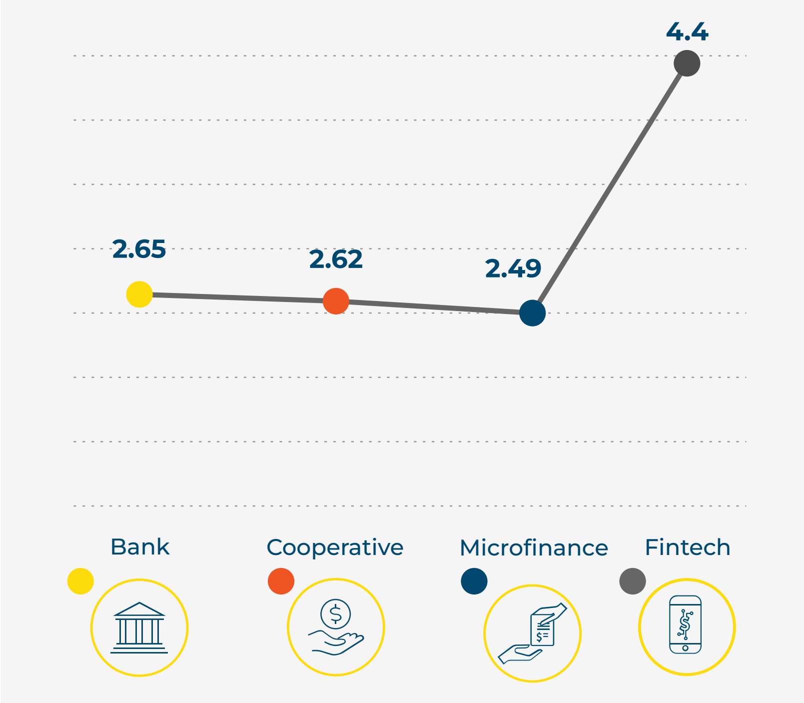
The study indicates that Microfinance Institutions and Cooperatives, participants in the research, are at a **follower** level. While they recognize the importance of digitalization and innovation, there is a concerted effort to create collaborative workspaces, offer digital skills training, and instill a collective mindset to effectively adapt to the ongoing transformation.

Collaborating with universities, some entities have disclosed their efforts to enlist external expertise to address internal challenges, supplementing employee training. To move forward, a suggested approach involves embedding digital capabilities directly within the workforce, spanning horizontal structures and innovation spaces.

Banks and participating fintechs are categorized differently at an **advanced** level in the study, marked by their inclination towards innovation, integration of digital skills into the organizational structure, collaborative methodologies, and a focus on skill evolution. Management recognizes the significance of digitalization, with intentions to address Digital Transformation through training. Specific technology roles are designated to execute strategies. To progress, the implementation of innovation and agile work systems is suggested.

Products and Services

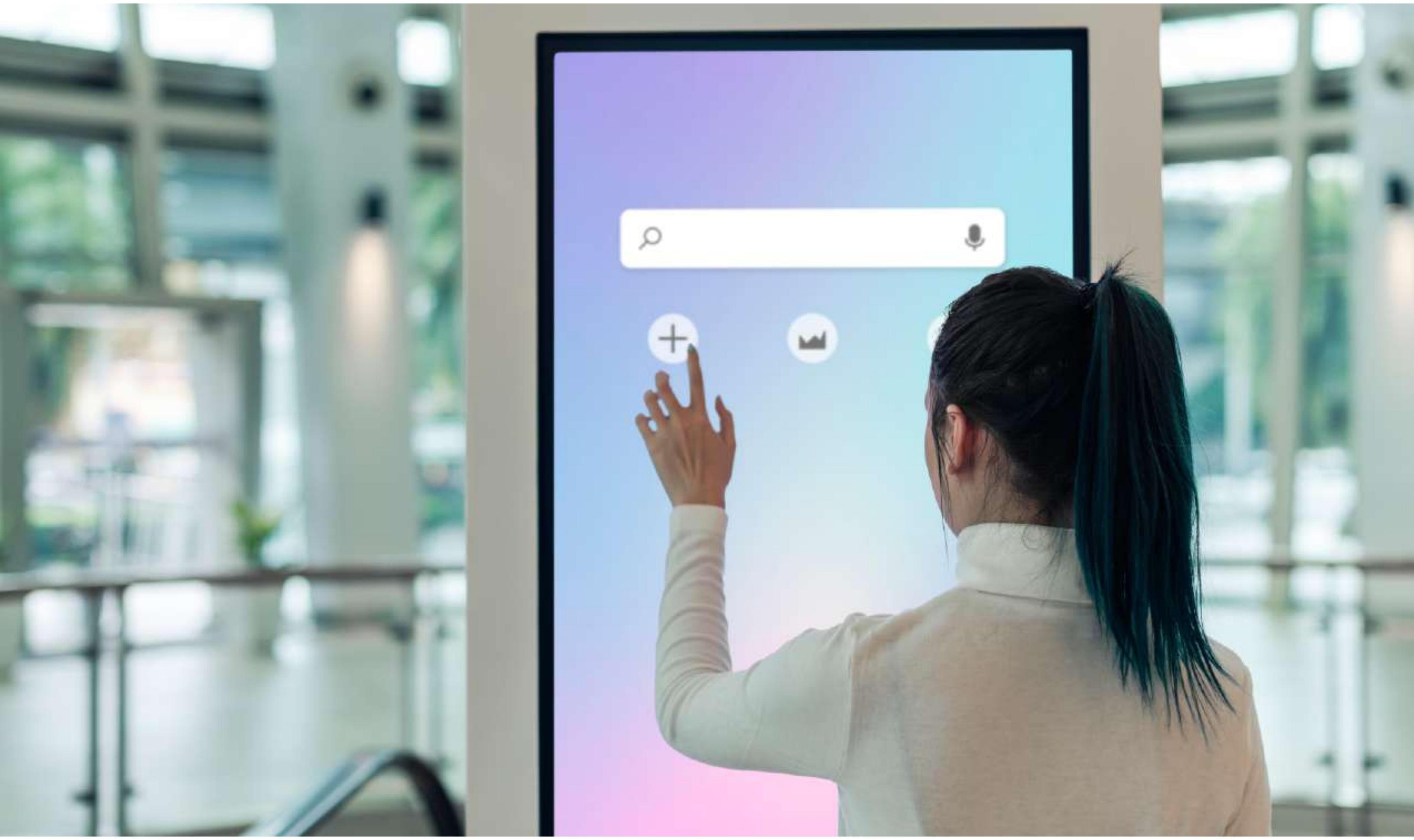
Figure 24: Results by Entity Type in the Dimension of Products and Services



Source: Own production, self-assessment results of the digital maturity assessment

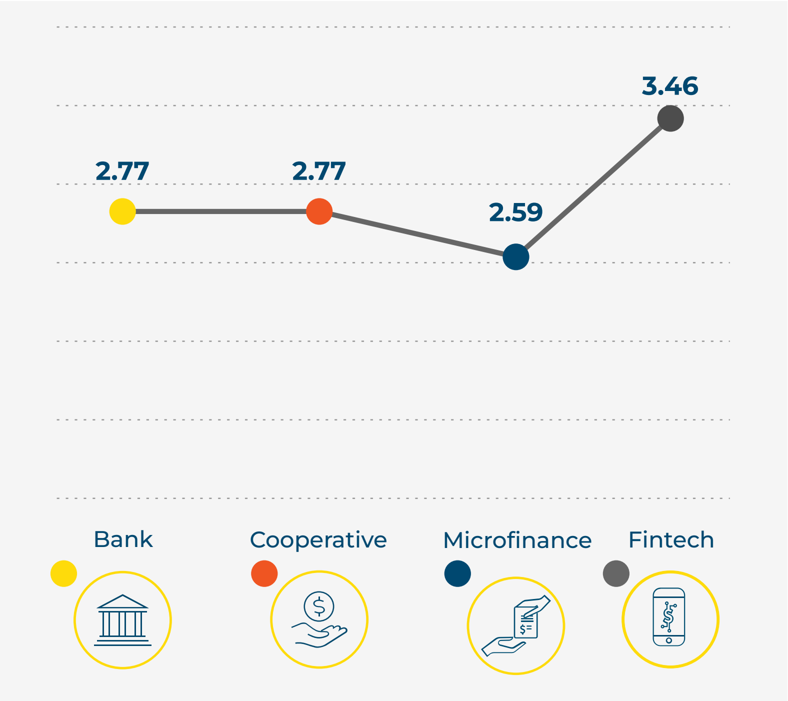
The study reveals that Banks, Microfinance institutions, and Cooperatives are positioned at a **follower** level. While these entities have integrated digital products and services, they are still in an adaptation phase, and their digitalization efforts tend to be reactive rather than proactive. Despite an increase in agility within their structure, a unified digital vision is lacking. To advance, a strategic digital vision must be adopted, and these institutions should transition into proactive drivers of digital innovation.

Fintechs, in this study, are positioned at the **innovative** level, setting the pace in digitalization with a fully digitalized portfolio of products and services that undergo constant evolution. The organizational structure embodies a digital mindset, leading the way in innovation within the financial sector. To sustain this position, continuous exploration of new technologies and trends is essential, pushing the boundaries of what is achievable in the digitalization of financial products and services.



Infrastructure and Technology

Figure 25: Results by Entity Type in the Infrastructure and Technology Dimension



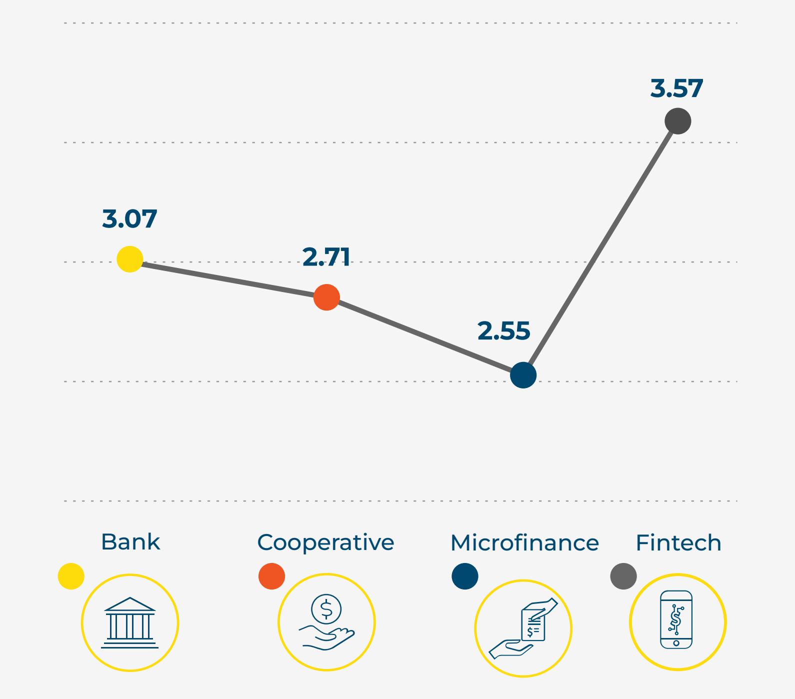
Source: Own production, self-assessment results of the digital maturity assessment

The study reveals that Banks, Microfinance institutions, and Cooperatives are positioned at a **follower** level. While these entities have modernized a significant portion of their infrastructure and incorporated various digital technologies, their ability to innovate and adapt to technological changes is limited. Interviews with these entities revealed a prioritization of Core Banking updates within their roadmap. Moving forward, it is essential for them to continue investing in emerging technologies and concentrate on constructing a flexible and scalable IT infrastructure to support their Digital Transformation.

Meanwhile, fintech firms are positioned at an **advanced** level. These institutions feature cutting-edge and robust infrastructures, using a broad spectrum of digital technologies to enhance their operations. Their proactive approach to digitalization equips them well for adapting to technological changes. To sustain their trajectory, it is imperative for fintech to stay informed about the latest technology trends and persist in investments for the continuous upgrade and optimization of their infrastructure.

Data Analytics

Figure 26: Results by Entity Type in the Data Analytics Dimension



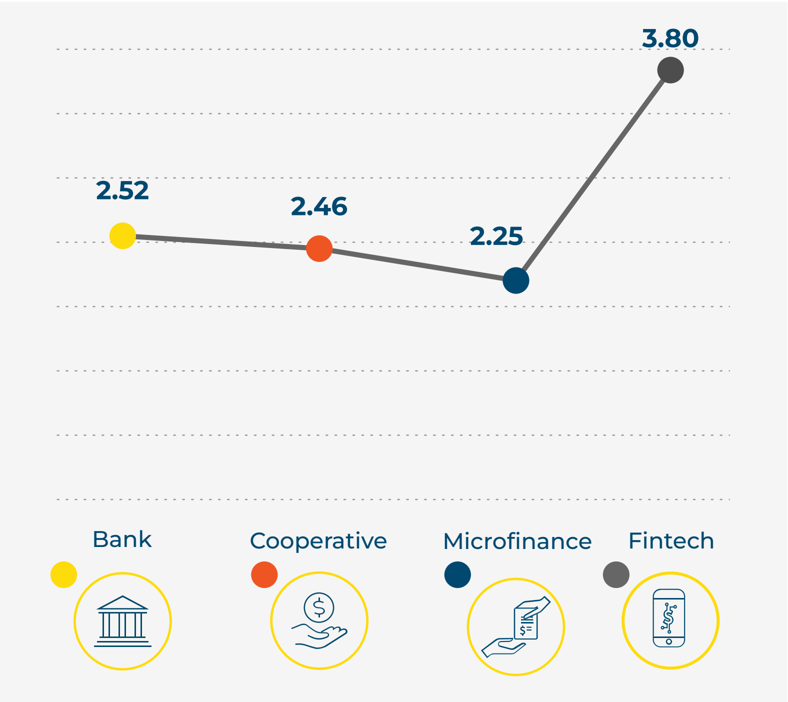
Source: Own production, self-assessment results of the digital maturity assessment

The study reveals that Microfinance institutions and Cooperatives are positioned at a **follower** level. These entities have adopted data analytics across various areas and initiated the use of data for decision-making. However, their capacity to derive useful insights from data and leverage them for innovation remains constrained. Advancing requires investments in more sophisticated data analytics tools and enhancing their proficiency in utilizing data for strategic decision- making.

In the context of participating Banks and fintechs, they are distinctly positioned at an **advanced** level. These entities extensively employ data analytics in their decision-making processes, equipped with tools and infrastructure for collecting, analyzing, and utilizing big data. Furthermore, they demonstrate proficiency in extracting meaningful insights from their data, driving innovation. To sustain progress, it is imperative for them to stay abreast of the latest trends and technologies in data analytics, continuously enhancing their strategic use of data.

Processes

Figure 27: Results by Entity Type in the Process Dimension



Source: Own production, self-assessment results of the digital maturity assessment

The study reveals that Banks, Microfinance institutions, and Cooperatives are positioned at a **follower** level. These entities employ ERP (Enterprise Resource Planning) systems for static planning and recording Back Office transactions. Although they have achieved wider adoption of digital technologies in key processes, significant improvements are evident in the implementation of integrated management systems and the credit analysis process.

It is recommended to invest in digital tools aimed at optimizing credit analysis, incorporating digital platforms with extensive integration capabilities, and enhancing the capacity for improvements aligned with customer service needs.

Meanwhile, fintech firms are positioned at an **advanced** level. Achieving substantial process integration and automation, fintechs exhibit a heightened degree of digital maturity in their operational processes. The deployment of advanced technologies, including data analysis, artificial intelligence, and machine learning, has been instrumental in improving decision-making and operational efficiency. The organizational culture encourages close collaboration and effective sharing of data and information. Digitalization is ingrained throughout the organization, with a persistent commitment to innovating technology use.

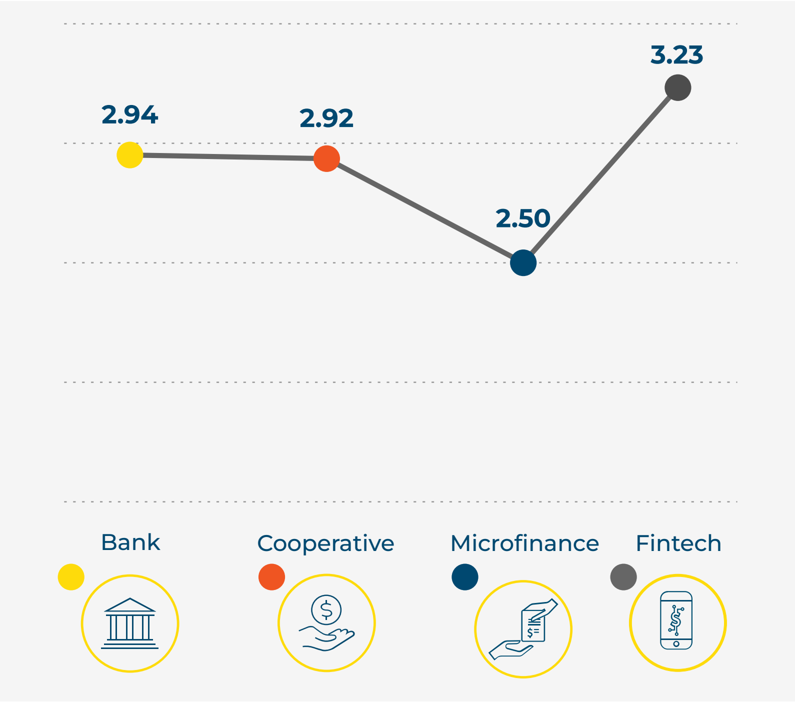
To move forward, it is recommended to invest in processes incorporating Robotic Process Automation (RPA) and other digital technologies. These investments would facilitate seamless information transfers and automated process execution, ensuring efficient responses to customer needs and enabling hyper-personalization of services.

Innovation

The study reveals that Banks, Microfinance institutions, and Cooperatives are positioned at a **follower** level. Entities, to different degrees, actively oversee a documented innovation initiative plan with established roles and clear responsibilities for managing ideation, design, planning, and development processes. It is recommended to standardize these processes and incorporate a platform to streamline the management of innovation stages in initiatives.

Fintechs participating in the study are identified as operating at an **advanced** level. Their business plan is well-structured, incorporating innovation initiatives managed by dedicated roles. The processes are standardized, supported by internal instances, methodologies, and cross-cutting techniques to promote innovation. Notably, they have adopted a platform to manage the various stages of innovation initiatives. Moving forward, the recommendation is to establish an innovation program based on the latest digital platforms.

Figure 28: Results by Entity Type in the Innovation Dimension



Source: Own production, self-assessment results of the digital maturity assessment

3.5.2.2 Overall Results Across the Value Chain

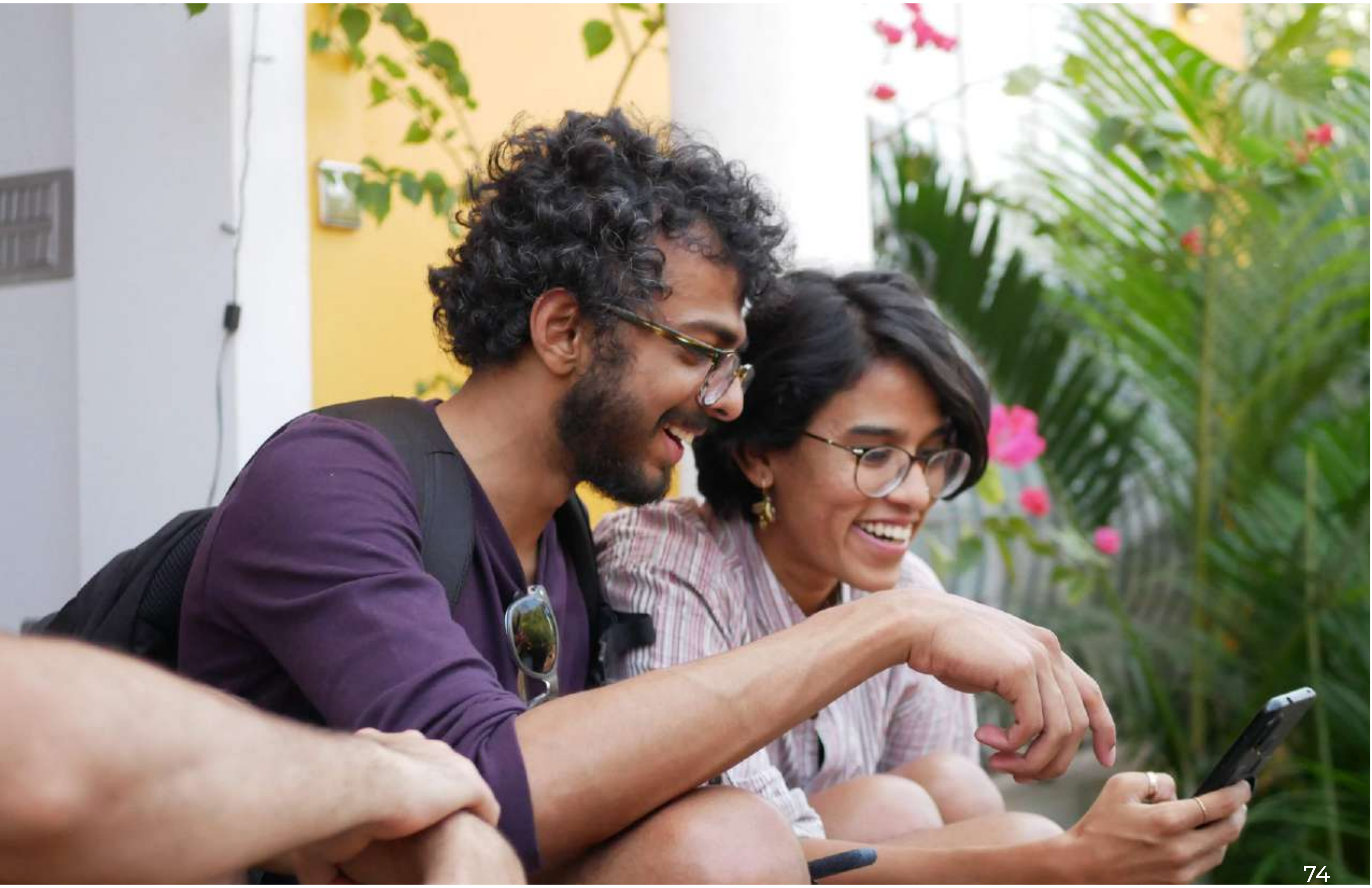
Customer Understanding

Entities with advanced digital maturity heavily rely on data analysis for their daily operations. The key objective is to transform into a data-driven bank, extracting maximum value from customer data to predict their financial needs and provide personalized products and services based on their preferences. According to the self- assessment results, consultants remain the primary channel for data collection. Notably, 14% of entities still rely on traditional methods like physical forms, demanding high manual effort, while only 20% utilize online tools and systems like CRM (Customer Relationship Management) for effective customer management and follow-up.

Customer Segmentation

On the other hand, the findings from this data collection emphasize the significance of segmentation as a fundamental approach. Categorizing customers based on their behavior enables banks to achieve a higher degree of personalization in the products and services they provide. It is noteworthy that 34% of entities maintain a central data repository where customer segments are semi-automatically assigned. This indicates that a substantial number of entities continue to depend on manual processes and traditional segmentation methodologies.

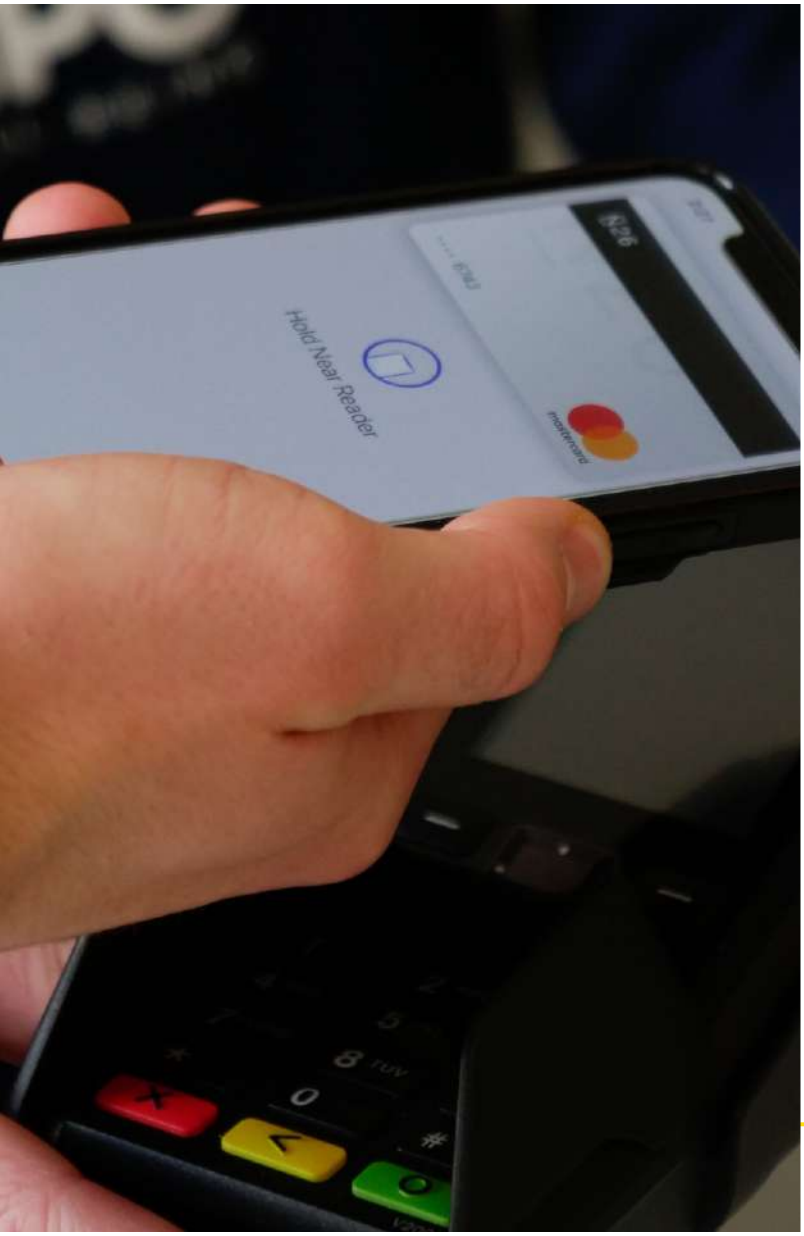
The findings indicate a great opportunity to optimize and enhance data repositories in terms of information, time, and analysis models. A prevailing trend in segmentation is the shift towards real-time data, fostering the creation of dynamic segments that align with changing customer interactions and needs in the digital landscape. This trend propels hyper-personalization of products and services, as well as more efficient follow-up in financial management.



Customer Experience

Evaluating customer experience across entities is a crucial practice for gauging customer satisfaction and loyalty, pinpointing areas for enhancement, and making data-driven decisions to fortify the relationship with users. While 54% of entities indicate assessing customer experience through feedback mechanisms like surveys and focus groups, the application of these insights for improving processes and experiences is still in its early stages.

Moving beyond traditional methods like surveys and focus groups, financial institutions are embracing innovative techniques such as sentiment analysis[57] in online feedback, real-time engagement metrics tracking, and artificial intelligence for understanding and predicting customer needs. This shift not only allows for a more precise and timely evaluation of the customer experience but also facilitates the implementation of real-time changes and improvements, significantly impacting satisfaction and loyalty.



Data Analysis

Examining customer data in financial institutions is a critical practice encompassing the collection, processing, and evaluation of customer-related information to derive valuable insights and inform data-driven strategic decisions. The self-assessment results indicate that institutions have initiated the use of data analysis in specific areas, but their overall capacity to collect, analyze, and leverage data remains constrained. Insufficient tools and infrastructure for advanced data analysis are evident, with a mere 8% of entities reporting an established, organization-wide data governance supported by both IT and business units.

The current digital maturity level in this sector's value chain stage is generally average, with the exception of fintechs, which demonstrate notable progress. There exists a clear opportunity for expansion across the data lifecycle, envisioning a scenario where customer insights and operational data analytics become the strategic backbone of entities. For banks aspiring to lead and outshine competitors, prioritizing the integration of data management is imperative. This will empower them to navigate the sector's ongoing transformation and make well-informed strategic decisions.

Product Design

Within entities, product design emerges as a key strategic element for delivering services that remain relevant and effective in today's market. A noteworthy 42% of entities focus on developing digital strategies specifically aimed at augmenting the product development phase. This involves the creation and conceptualization of financial products and services designed to align with the dynamic needs and demands of customers while ensuring compliance with regulatory standards.

Innovation and Opportunity Identification

For financial institutions to progress towards Digital Transformation, it is imperative to remain attuned to economic, technological, and social trends that shape customer preferences and expectations. Surprisingly, only 36% of entities have a dedicated team focused on innovating new ideas and continually enhancing products and services. This capability encompasses market data assessment, customer satisfaction surveys, competitor analysis, and considerations of regulatory and compliance issues. Entities lacking this capability risk potential obsolescence of their value proposition.

[57] It is a natural language processing technique used to ascertain and assess emotions, attitudes, and opinions expressed in a text dataset.

Personalization and Customer Experience

While 74% of entities recognize the importance of listening to the voice of the customer, only 50% actively incorporate it into the design of the experience and the creation of products and services. This underscores the critical opportunity for entities to implement design tools, such as "customer-centric design," into their daily approach. This approach is rooted in a deep understanding of people's emotions and feelings during their interactions with financial institutions.

The goal is to ensure products are accessible and user- friendly for a broad customer base, emphasizing usability and customer-centric design for intuitive solutions that meet users' needs. In the digital age, the product design stage is pivotal for success in financial institutions. Despite notable progress, there is a valuable opportunity to elevate and move beyond the follower level of digital maturity by strengthening innovation capabilities, capturing the voice of the customer, and implementing effective prototypes.

A glimpse into the future reveals fintech firms operating at an innovative maturity level, thanks to their specialized and agile approach. This highlights the substantial impact of excellence in technology- enabled innovation and design processes in meeting crucial customer needs. Attaining a sophisticated level of financial product design is within reach, and traditional financial institutions can achieve this by demonstrating a continuous commitment to innovation and agile adaptation.

Onboarding

The onboarding stage in financial institutions marks a pivotal moment in customer relationships. In our progressively digitalized world, the capacity to engage, register, and enable customers efficiently and seamlessly is paramount for retention and fostering long-term engagement.

Digital Product Onboarding

Digital onboarding for savings products is reported by 28% of entities, while an additional 28% also offer digital onboarding for credit products. During in-depth interviews, entities revealed the adoption of cutting- edge technologies like biometrics, facial recognition, and even voice recognition. These technologies are especially beneficial for customers with literacy limitations.

Furthermore, entities have introduced assisted processes wherein dedicated advisors accompany and train customers in acquiring products through digital channels. This approach has contributed to a rise in digital education. Notably, these entities have initiated service pilots and efforts within their offices to educate clients on utilizing various digital channels, not only for product acquisition but also for day-to-day interactions with the institution, including checking and transactions.

Credit Analysis

A total of 40% of entities highlight substantial enhancements in the credit analysis process, although complete automation remains unrealized. Notably, many emphasize the necessity to transition from a vision centered on automation and digitalization to a more comprehensive approach, entailing a complete reevaluation of the process towards achieving a fully digital paradigm.

Anticipate significant advancements in credit analysis within the next few years, driven by the evolution of Open Finance and the widespread adoption of AI. Particularly, entities dedicated to financial inclusion are poised for transformative changes. The future landscape envisions standardized utilization of nonfinancial data and the implementation of real-time continuous analysis models as notable progressions.

Financial Education

While 60% of surveyed entities provide customers with online financial training tools, including tutorials and interactive courses tailored to specific needs, there is room for improvement in terms of personalization. Surprisingly, only 20% actively measure the impact of these training tools.

The digital onboarding stage in financial institutions is a pivotal area for advancing their digital maturity. To surpass the follower level, entities must strategically prioritize simplification, customization, and security in this process. Traditionally viewed as a tedious and paperwork-intensive procedure, digital onboarding has evolved into a strategic move to enhance the overall customer experience in the digital age.

Fintech firms have successfully penetrated the market by adopting a specialized and agile approach to customer service, along with the deployment of entirely digital products. This poses an additional challenge for traditional financial institutions. To remain competitive and thrive in the contemporary financial landscape, mainstream institutions must embrace similar agility and customer-centric strategies.

Acquisition and Placement

The stage of customer acquisition and product placement holds paramount significance for the success and competitiveness of financial institutions in the contemporary digital landscape. This stage involves the new customers identification and prospecting, as well as the provisioning and promotion of financial products.

About 32% of entities indicate the presence of multi- channel platforms tailored to customer preferences for delivering products and services. However, they note the need for coding and software enhancements to further bolster their capabilities. Additionally, 60% of entities communicate with customers and deliver product promotions through channels such as mobile applications, push notifications, and mailing, with 40% progressing in the personalization of offers.

Despite substantial progress, institutions are far from reaching an advanced level of digital maturity. Bridging this gap requires a heightened focus on digital marketing efforts from these entities.

Support and Service

The Customer Support and Service stage holds a pivotal position in the value chain of financial institutions, influencing the overall customer experience and digital maturity of these entities. It is crucial for institutions to provide efficient and high- quality service during this phase, as satisfaction directly contributes to customer loyalty and retention.

Daily Operation

A total of 37% of entities indicate the management of Back Office tasks through an ERP system integrated with the organization's main systems, enabling the efficient handling of massive data loads and automated transaction processing. However, a significant number of entities still rely on manual processes for daily tasks like billing, payments, and financial reports. This poses a challenge for introducing digital innovation in their operational context.

Technological Capabilities for Operation - Cloud

Merely 14% of entities have minimal or no adoption of Cloud services, predominantly relying on on-premise infrastructure and applications. The substantial majority (86%) use Cloud technology for various purposes, including storage or email (28%), defining policies and standards for key applications and services (34%), exploring advanced cloud services like artificial intelligence and data analysis (14%), or fully optimizing operations to enjoy the benefits of scalability, flexibility, and agility (8%).

Technological Capabilities for Operation – Big Data

Only 20% of entities acknowledge minimal or no adoption of Big Data[58], expressing a lack of active collection or utilization of large data volumes for valuable insights. In contrast, 42% claim to collect substantial data but lack clear processes or a comprehensive strategy for analysis. Meanwhile, 31% have successfully integrated Big Data technology into their processes and systems.

Entities stand at the threshold of a transformative era, poised to revolutionize operations and service delivery through enhanced efficiency and data-driven decision- making. Big Data, with its myriad applications including fraud prevention, credit risk assessment, portfolio management, process automation, money laundering detection, market intelligence, and a robust emphasis on cybersecurity, presents a significant opportunity for financial institutions.

Technological Capabilities for Operation – Artificial Intelligence

Artificial Intelligence (AI) remains the least leveraged technology among entities today, influenced by various challenges, including regulatory concerns about data security and privacy, the intricacies associated with data cleaning and structuring processes, and the substantial initial investment required.

Despite 60% of entities commencing exploration into Artificial Intelligence (AI) technology through tests or pilot projects, the actual adoption and implementation of AI remain constrained. The entity appears to be in the phase of evaluating the capabilities and potential benefits of the technology. Concurrently, 40% indicate employing AI for specific tasks, such as deploying chatbots for customer service or utilizing data analysis algorithms for decision-making.

Technological Capabilities for Operation – Robotic Process Automation

While 28% acknowledge the potential of RPA, they have not implemented solutions or have only conducted limited pilot tests. This could be due to a lack of knowledge or understanding. In contrast, the remaining 72% state they use this technology primarily for automating administrative tasks or have implemented RPA solutions in specific areas or processes.

[58]ability to manage and analyze massive datasets that are too large and complex to be processed with conventional data analysis tools.

This technology is reshaping how financial institutions operate and deliver services, making them more agile and competitive. Leveraging Robotic Process Automation (RPA), entities can automate repetitive and manual tasks, enhancing operational efficiency and reducing operating costs. Additionally, it results in improved accuracy and speed in data processing, enhances customer service through chatbots and virtual assistants, and allows employees to focus on more strategic, transformative, and high-value tasks.

Technological Capabilities for Operation – Big Data

A total of 60% of entities have adopted standardized, defined, and documented cybersecurity processes, subject to periodic reviews and adjustments when necessary. This management framework is underpinned by preventive measures, risk detection capabilities, and responsive, agile systems.

However, 100% of entities emphasize the presence of various levels of corporate controls. This is noteworthy considering that only 24 out of the 33 LAC countries have enacted laws on privacy and personal data protection[59]. Among them, 37% maintain an inventory of assets, adhere to evolving security standards, and conduct ongoing vulnerability tests. These entities boast 24/7 monitoring, an incident response plan, and robust malware protection.

3.5.2.3 Opening of Collaboration with the Ecosystem

Engaging in partnerships with fintechs, insurtechs, and other innovators presents a strategic avenue for enhancing operational efficiency, refining product design, and augmenting customer insights across all facets of the financial sector's value chain. These collaborations not only grant access to state-of-the-art technologies but also facilitate the adoption of models that streamline access to metadata for the seamless implementation of hyper-personalization.

[59] R. M. Díaz y G. Núnez, “Ciberataques a la logística y la infraestructura critica en América Latina y el Caribe”, Documentos de Proyectos (LC/TS.2023/93), Santiago, Comisión Económica para América Latina y el Caribe (CEPAL), 2023. "According to the Global Cyber Legislation Tracker of the United Nations Conference on Trade and Development (UNCTAD), only 24 of the 33 countries in Latin America and the Caribbean have privacy and personal data protection legislation.”

As the financial sector progresses towards heightened digitalization and a customer-centric approach, forging strategic alliances within the emerging financial ecosystem emerges as a pivotal catalyst for innovation and competitiveness. An overwhelming 82% of entities express openness to various forms of collaboration, with 40% currently exploring and evaluating opportunities, 22% identifying specific areas for collaboration and initiating pilots, 25% solidifying stronger partnerships in targeted domains, and 8% successfully establishing enduring strategic alliances.

The evolving mindset within financial institutions is steering us towards a "coopetition" strategy. Several entities now acknowledge the significance of balancing cooperation and competition. In a progressively digital and competitive landscape, this approach empowers financial institutions to maintain agility, accelerate innovation, and provide enhanced services to their customers. Coopetition serves as a catalyst for embracing disruptive technologies, expanding services, and elevating the overall experience, thus fostering collective benefits for the entire financial industry.

Conversely, ecosystems within the financial sector extend beyond mere interactions among financial entities. A noteworthy trend is the emergence of ecosystems that surpass the traditional boundaries of financial institutions. These collaborations not only grant access to cutting-edge technologies but also open avenues to adopt models like Banking as a Service (BaaS). This enables non-financial entities to integrate services seamlessly into their ecosystems, offering a broader range of services to their customers.

Under this approach, institutions go beyond collaborating with other financial entities and proactively position themselves in places where customers are present. This entails forming partnerships with nonfinancial service providers, including retailers, technology companies, and e- commerce platforms.

The core concept driving these ecosystems is to directly engage with customers in their daily environments, where they interact with a diverse range of products and services. Financial institutions can strategically integrate their financial solutions into these nonfinancial contexts, addressing the everyday needs that customers encounter. This not only enhances customer convenience but also unlocks fresh opportunities for revenue generation and customer retention in a highly competitive market. In short, contemporary financial ecosystems go beyond traditional barriers, centering around the customer in a network of interconnected services and solutions that enhance their financial and everyday experiences.

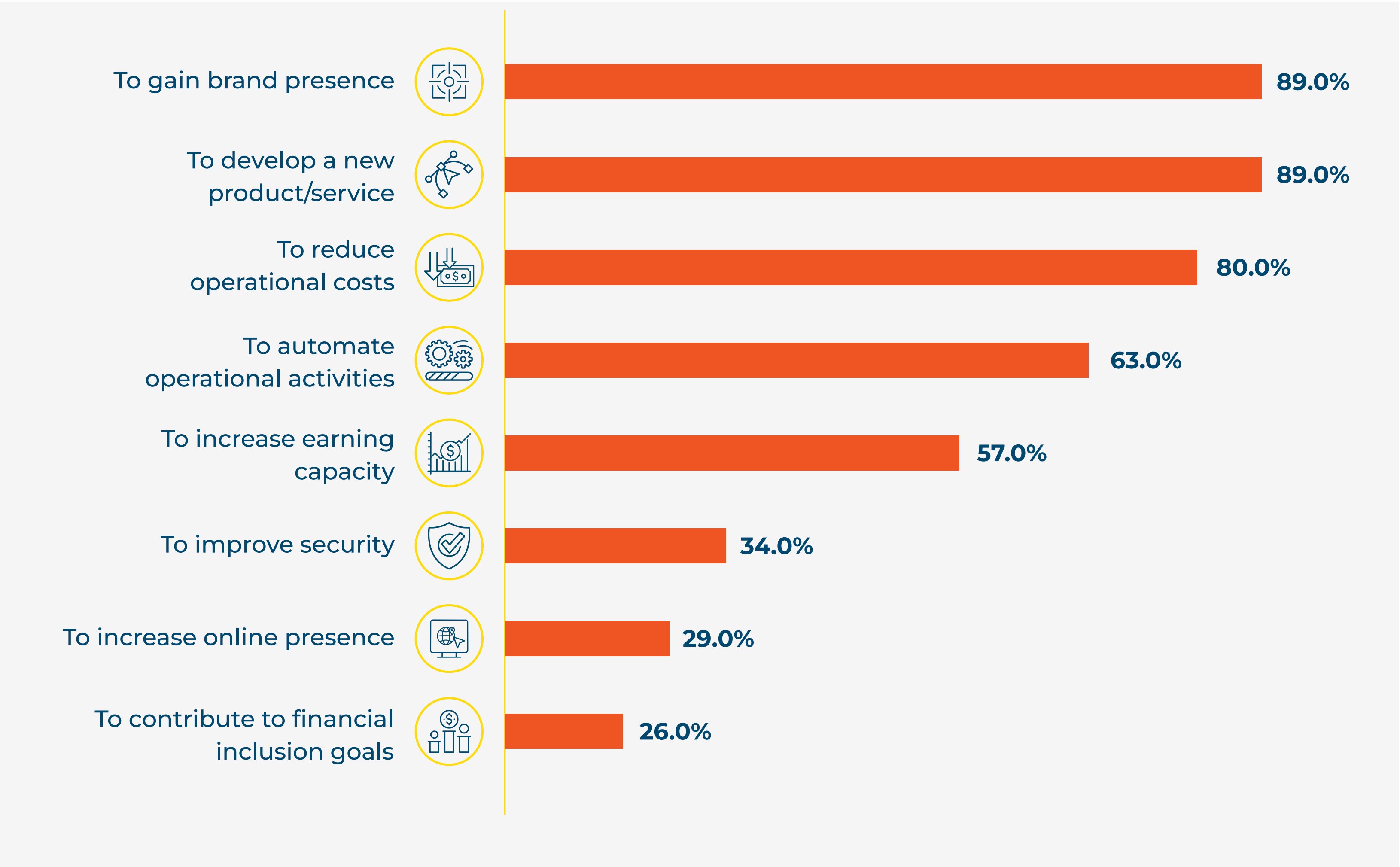
3.6 Objectives, Barriers, and Challenges for Digital Transformation and Financial Inclusion from the Supply Perspective

3.6.1 Objectives and Strategic Focuses of Digital Transformation for Financial Institutions

While there are differences in the digital maturity level among various financial subsectors in the region, it's evident that many entities are aligned in their objectives for Digital Transformation. Notably, these objectives encompass fostering innovation, creating new products, striving for increased financial inclusion, expanding their audience, and achieving operational efficiency. These focal points underscore the collective industry efforts to navigate the dynamic digital landscape and surmount associated challenges.

Going forward, we will take a closer look at the consolidated objectives and their crucial role in shaping the digitalization landscape of the financial industry.

Figure 29: Main Objectives that Lead Entities to Digital Transformation



Source: Own production, self-assessment results of the digital maturity assessment

Innovation and Design of Products and Services

A cornerstone of Digital Transformation for financial institutions is the innovation of new products and services, with 89% recognizing it as their primary objective. Digitalization is instrumental in fostering increased agility throughout the lifecycle of financial product development.

The rapid evolution of mobile banking applications serves as a compelling example of how digitalization propels innovation. In the past, these apps were primarily limited to tasks like checking balances and basic transfers. Nowadays, they offer a diverse array of services, spanning online investing, portfolio management, lending, and insurance – all accessible through a mobile device. This not only enhances customer convenience but also opens up new revenue streams for financial institutions.

The ability to consistently innovate has become paramount for staying competitive in the ever- changing financial market. Digitalization serves as the catalyst, empowering financial institutions to adapt swiftly to evolving customer needs. This adaptability not only influences the improvement of current products and services but also fuels the creation of innovative digital products.

Digital Transformation brings about a more comprehensive understanding of customer behaviors, both internal and external, streamlining the development of personalized products. This not only elevates customer satisfaction but also nurtures loyalty and retention. The synergy of innovation, personalization, and cost efficiency through digitalization propels growth and competitiveness within the financial industry, ensuring success amidst an ever-changing market.

Presence and Positioning in the Market

Enhancing brand visibility in the digital environment is crucial for financial institutions, with 89% acknowledging it as a relevant objective. This enables them to compete effectively in digital channels, draw in and retain customers, establish trust, and provide digital services.

Increasing income-generating capabilities stands out as a significant goal for financial institutions, emphasized by 51% of them. Digitalization opens avenues for opportunities, including diversification through online services and mobile applications, leading to cost reduction and enhanced profitability.

Conversely, the goal of amplifying online visibility and drawing in a digital customer base, highlighted by 29% of surveyed financial institutions, plays a pivotal role in their path to Digital Transformation. This objective is driven by the increasing demand for digital financial services, the imperative to compete adeptly in the digital environment, and the prospect of extending service offerings to areas with restricted access, particularly in certain vulnerable populations.

N26 bank, which entered the Brazilian market in 2023, provides a concrete example of this approach. Functioning solely in the online domain, the bank expeditiously carved out a significant niche in the financial market. Its success can be attributed to a highly effective digital marketing strategy and an exceptional user interface on its mobile application. These elements not only garnered a sizable customer base but also played a crucial role in establishing a formidable brand identity in the digital sphere, notably in Brazil.

However, it's important to highlight that this approach goes beyond the mere implementation of online channels; it involves ensuring their optimal and cost- effective use. This not only helps institutions in prospecting and retaining customers but is also instrumental in achieving sustainable growth in the digital era. In this context, profitability through these channels emerges as a vital element for continuous success.

Contribute to Financial Inclusion Goals

A total of 26% of financial institutions have identified inclusion as a pivotal objective in their path to Digital Transformation. This commitment involves delivering personalized financial services to underserved populations. Leveraging technology, these entities aim to extend their outreach to these communities, striving to enhance service provision.

Employing Digital Transformation as a gateway to reach these emerging segments presents a challenge for many entities. These organizations are actively exploring initiatives centered around financial education, digital literacy, and financial graduation.

A notable instance illustrating the impact of Digital Transformation on enhancing financial inclusion in LAC is exemplified by MercadoPago. This financial services platform is an integral part of the MercadoLibre group, one of the largest e-commerce companies within the region.

In LAC, MercadoPago has been a catalyst in democratizing access to financial services, extending opportunities to individuals and small businesses previously on the fringes of the formal financial system. Its product portfolio, encompassing QR, digital wallets, and credits, is underpinned by the wealth of information generated within its MercadoLibre e-commerce domain.

Automate, Reduce Costs, and Increase Operational Security

Streamlining efficiency and productivity is a paramount goal for 63% of entities as they embark on their path to Digital Transformation. Within this context, the automation of operational activities takes center stage, offering benefits such as diminished manual workloads, increased scalability, error elimination, heightened process control, and reduced operational costs.

The imperative goal of cost reduction is underscored on the path to Digital Transformation, with 80% of financial institutions prioritizing this objective. Digitalization emerges as the catalyst, enabling task automation, curtailing expenses linked to paper documentation, and enhancing efficiency in data management. This set of benefits not only facilitates a more accurate allocation of resources but also culminates in heightened profitability and competitiveness within the digital environment.

Exemplifying this paradigm shift is the incorporation of chatbots and virtual assistants in customer service. These automated solutions not only streamline service procedures, reducing the workload on staff, but also enable rapid and efficient responses to frequently asked questions. Moreover, the strategic use of data analytics consistently enhances these systems, emphasizing that Digital Transformation is not confined to optimizing internal processes alone; it extends its influence to enrich customer satisfaction and fortify data-driven decision-making in the financial sector.

A standout case in the financial sector of LAC is Banco Santander Brasil, which has successfully implemented a chatbot named "BIA" (Banco Inteligente Santander). Functioning through its mobile app and website, BIA serves as an automated solution designed to streamline operations and trim operating costs. Noteworthy features include customer service, tailored recommendations, transaction support, and provisions for financial education.

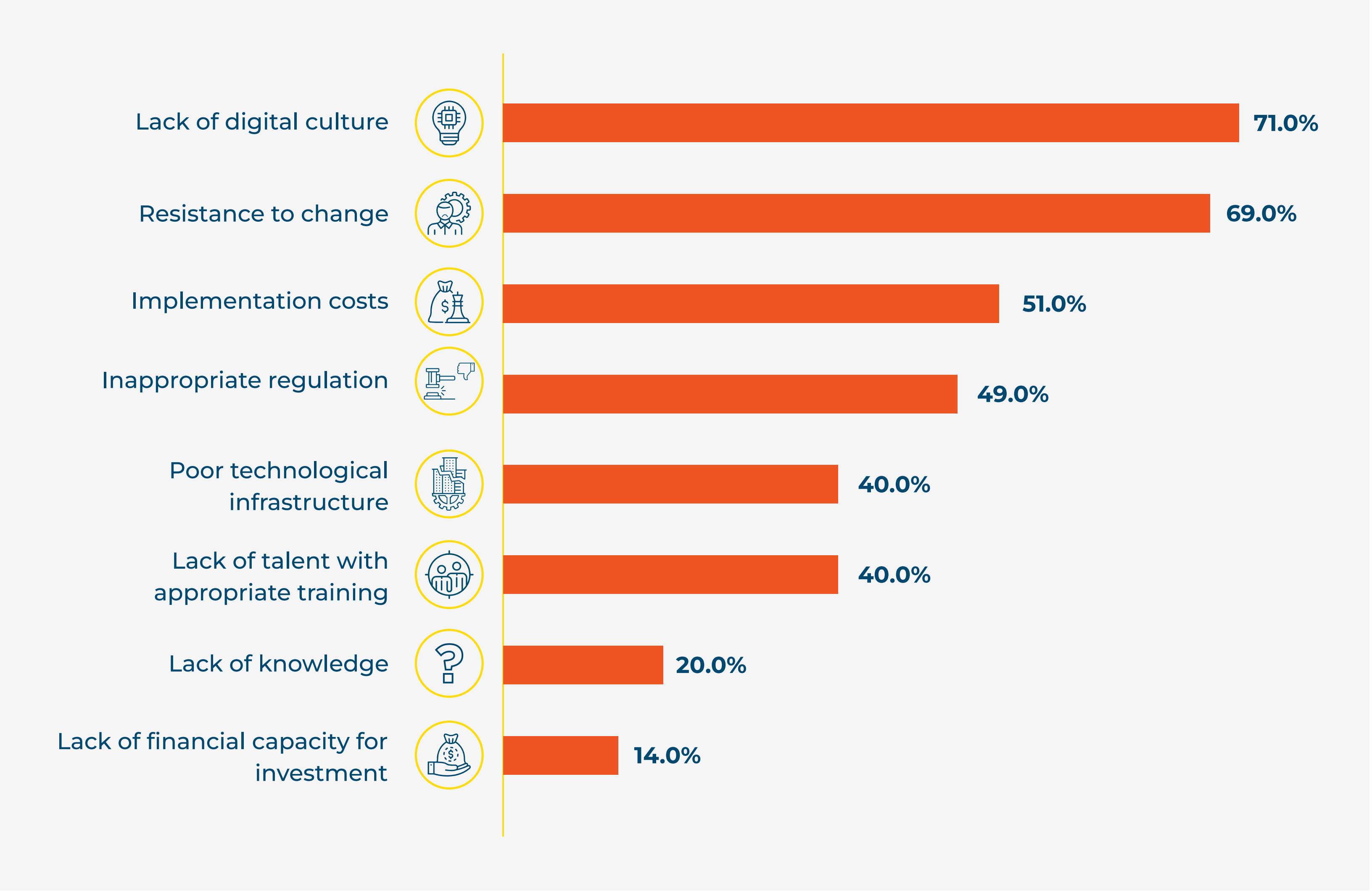
Lastly, as part of their Digital Transformation process, financial institutions prioritize the enhancement of both internal and external security, with 34% emphasizing this goal. The escalating risks of fraud and cyberattacks necessitate robust measures. Incorporating advanced security protocols like data encryption and digital authentication becomes imperative to safeguard vast amounts of sensitive information. This not only ensures compliance with regulations but also reinforces customer trust in the digital environment.

3.6.2 Barriers for Digital Transformation of Financial Institutions

Financial entities in LAC encounter multiple barriers as they endeavor to bring their Digital Transformation plans into reality. The analysis of survey results underscores prevalent challenges, especially in internal domains, where the absence of a robust digital culture takes center stage. Additionally, resource limitations, regulatory complexities, and technological and financial obstacles present significant barriers that demand resolution for successful digitalization.

Going forward, we will explore the main barriers highlighted by entities as they navigate through their Digital Transformation endeavors. These barriers are categorized based on common themes, shedding light on their significance in shaping the digitalization landscape of the financial sector.

Figure 30: Main Barriers to Driving Entities Towards Digital Transformation



Source: Own production, self-assessment results of the digital maturity assessment

Resistance to Change, Culture and Digital Talent

Digital Transformation goes beyond implementing a robust architecture and automated processes for efficiency gains; it necessitates fostering an organizational culture supportive of this digital path. A notable 71% of surveyed financial institutions identify the absence of an ingrained digital culture as a primary impediment. Therefore, synchronizing information and strategy becomes crucial, ensuring cohesive efforts across all areas for impactful internal transformation that translates into an exceptional customer experience.

Overcoming resistance to change emerges as a significant challenge on the Digital Transformation path, as highlighted by 69% of entities. This requires strategic alignment from leadership, articulating the importance of change and instilling an enduring culture of adaptability. Moreover, providing comprehensive support to employees in change management is imperative, encouraging them to enhance their skills in alignment with the entity's Digital Transformation goals. Acknowledging the equal significance of both customer and employee experiences, any transformation process that fails to address employee concerns and challenges is likely to face resistance and fall short of achieving its maximum impact on the organization.

Additionally, the critical factor for a successful Digital Transformation lies in the presence of highly trained teams supported by the organization. Notably, 40% of entities emphasize the substantial hurdle posed by the shortage of talent with the right training. To address this challenge, it is imperative for financial institutions to allocate resources to the internal training of their workforce, empowering them with new skills in innovation, technology, and emerging trends. This strategic initiative not only enhances their path to Digital Transformation but also ensures a reservoir of adept talent ready to confront ongoing digital challenges.

Implementation Costs

Financial institutions encounter a dual challenge in their path to Digital Transformation, with 51% pinpointing resource constraints as a major concern. This encompasses not just financial limitations but also a scarcity of highly specialized personnel crucial for executing this transformative process.

In response to this challenge, certain entities have embraced a strategy of directing investments into targeted technologies. This approach enables them to systematically enhance internal processes and reduce costs throughout the organization. Moreover, these institutions are actively seeking funding avenues to support projects that facilitate their continuous progress towards Digital Transformation.

The dual challenge involving both economic and human resources underscores the complexity of the Digital Transformation process within the financial sector. This highlights the critical need for strategic management and a meticulously planned approach to ensure success.

Inappropriate Regulation

Regulation is acknowledged as a barrier by 49% of financial institutions surveyed in LAC as they navigate the landscape of Digital Transformation. The primary source of this challenge lies in the disparities within the regulatory frameworks of the countries where each entity conducts operations, compounded by the fluidity of regulatory changes.

Many entities express a concern that their Digital Transformation is outpacing the evolution of regulations in their operational countries, potentially limiting their growth and collaboration within the financial ecosystem.

The absence of well-defined regulations poses a potential obstacle to initiatives like adopting cloud technologies or using data for personalized services. To address this challenge effectively, it is crucial to establish open and collaborative communication with regulators. Maintaining robust relationships with regulatory entities, participating in regular hearings to convey industry perspectives and requirements, and adapting Digital Transformation strategies to the regulatory landscape of each country become imperative.

An illustrative case is the regulatory developments in Open Banking. Countries like Brazil and Chile have taken significant strides in implementing regulations that expedite the adoption of Open Banking solutions, including features like customer account aggregation. In these advanced settings, the ability to access financial data comprehensively facilitates the provision of solutions that are highly tailored to customer needs.

Poor Technological Infrastructure

A considerable impediment to Digital Transformation in financial institutions is the inadequate technological infrastructure, acknowledged by 40% of respondents. This challenge stems from factors like the incompatibility with digital technologies, insufficient security measures, and a lack of scalability to cope with the dynamic nature of the digital environment.

Within the context of this barrier, additional challenges surface concerning the selection of suitable technologies. The process of deciding on cloud solutions, on-premise deployments,[60] effective Big Data management, and robust cybersecurity measures becomes a critical and occasionally complex undertaking. Surmounting this barrier demands investments in streamlining infrastructure, encompassing upgrades to core banking systems, improvements in hardware, and the integration of sophisticated systems like cloud technology and Big Data analytics. Focusing on enhancing connectivity and adopting scalable technology solutions is pivotal for facilitating a smooth transition to a more competitive and secure digital environment.

Choosing and integrating the right technologies has emerged as a fundamental aspect of Digital Transformation in the financial sector, with the potential to impact both operational efficiency and market competitiveness.

[60] This refers to the practice of hosting and running information technology software, systems, and resources on an organization's physical premises.

3.6.3 Challenges of Financial Institutions in their Digital Transformation and Impact on Financial inclusion

The in-depth interviews have revealed that institutions operating in the realm of financial inclusion through digitalization confront a series of specific and noteworthy challenges that demand particular attention. It is essential to underline that entities dedicated to financial inclusion have different objectives and user bases compared to traditional banks, resulting in unique and additional challenges in the context of digital transformation. In this context, we will explore the most pertinent challenges related to the uptake and utilization of inclusive financial solutions, emphasizing the significance of effectively tackling these impediments to attain a more extensive and meaningful financial inclusion. These challenges encompass various crucial aspects:

- **Personalization:** The challenge in achieving personalization within the context of financial inclusion through digitalization is rooted in the need to adeptly and precisely tailor financial products to meet the distinct needs of each segment of the population.

  Addressing the challenge of diverse user groups in the context of financial inclusion through digitalization requires careful consideration of unique requirements and circumstances. It necessitates the creation of flexible, personalized solutions that take into consideration factors such as income level, financial literacy, geographic location, and specific savings or investment needs.

  Successful personalization not only elevates the customer experience but also optimizes the effectiveness of financial inclusion by precisely catering to the needs of each segment of the population.

- **Adoption:** The challenge of adopting digital channels in financial inclusion is crucial because the mere existence of technology doesn't ensure effective utilization. It's imperative to guarantee that customers, particularly those from vulnerable populations or previously excluded from mainstream finance, not only adopt but also feel at ease using digital channels for a successful transformation.

Additionally, it is a great challenge as financial institutions need to invest substantial efforts in promotion, education, and accessibility. This entails the implementation of comprehensive training programs, awareness campaigns, and the customization of user interfaces to ensure intuitiveness and user-friendliness.

- **Education:** Financial education stands as a pivotal element in ensuring the triumph of financial inclusion through digitalization. It is imperative that customers possess the requisite knowledge to make well-informed financial decisions and leverage the full potential of accessible digital financial services. This entails not only gaining familiarity with digital apps and platforms but also comprehending fundamental financial concepts, including savings, investment, credit, and budget management.

  A critical challenge for financial institutions is assuming a significant role in delivering impactful financial education programs, whether through online resources or interactive tools. Additionally, there is a critical need to meticulously assess the impact of these programs on customers. By enhancing the financial literacy of individuals, institutions not only empower them to make informed decisions but also contribute significantly to the successful assimilation of digital solutions.

- **Coverage:** The challenge of ensuring coverage becomes particularly pronounced in geographically challenging regions, such as remote or rural areas, where conventional financial infrastructure is often lacking. Financial entities are confronted with the imperative to devise inventive solutions that transcend geographical barriers, enabling them to extend their services to these communities effectively.

  This entails not only setting up physical infrastructure, like branches or ATMs, in remote areas but also formulating digital strategies that facilitate access to financial services through online channels. Overcoming the challenge of geographical access is crucial to ensuring that financial inclusion is not hindered by location. Financial institutions need to take proactive measures, seeking solutions that can reach all communities, irrespective of their geographic remoteness.

- **Data:** Insufficient credit history and irregular income pose substantial challenges for financial institutions aiming to extend financial services to populations lacking a stable financial background. Conventional risk assessment methods, heavily reliant on credit history and income stability, often prove impractical in these scenarios.

  The challenge confronting financial institutions is how to properly assess the credit risk of customers devoid of conventional credit history while ensuring fairness and accuracy. This underscores the necessity for inventive and flexible risk assessment strategies that acknowledge the realities of these populations. The incorporation of alternative data, such as transaction records or spending behaviors, assumes a crucial role in appraising the creditworthiness of individuals facing the challenge of lacking traditional credit history.

  Employing data analytics technologies and advanced algorithms presents a viable solution to mitigate the risks linked with insufficient financial information, paving the way for enhanced accessibility to financial services.

- **Protection:** Safeguarding users in the digital sphere of financial inclusion demands a proactive approach with robust security measures to counter the escalating risks of cyberattacks and fraud. Financial institutions must prioritize the integrity and confidentiality of customer data, along with safeguarding financial assets, to counter these evolving challenges effectively.

  Addressing this challenge requires significant investment in cutting-edge cybersecurity technologies, ongoing training programs to instill secure practices among staff, and the establishment of swift incident response procedures. Financial institutions must adopt a proactive stance to mitigate potential threats effectively.

  In an era where customer confidence takes center stage, security assumes a critical role in the overarching Digital Transformation strategy of financial institutions. The synergy between cutting-edge technology deployment, ongoing training initiatives, and the establishment of effective procedures becomes paramount, fostering the provision of inclusive digital financial services that prioritize both safety and efficacy for a diverse spectrum of users.

  Tackling these challenges isn't just a requirement; it's an opening for entities to thrive. To navigate this landscape successfully, a comprehensive approach is essential. Entities must craft a robust strategy for their Digital Transformation, wherein digitalization becomes the linchpin. This transformation is the key to overcoming challenges and attaining objectives, enabling financial institutions to offer secure, inclusive, and efficient financial services on a wide scale, harnessing the power of technology and digitalization.

DIGITAL SOLUTIONS FOR IDENTIFIED NEEDS

4

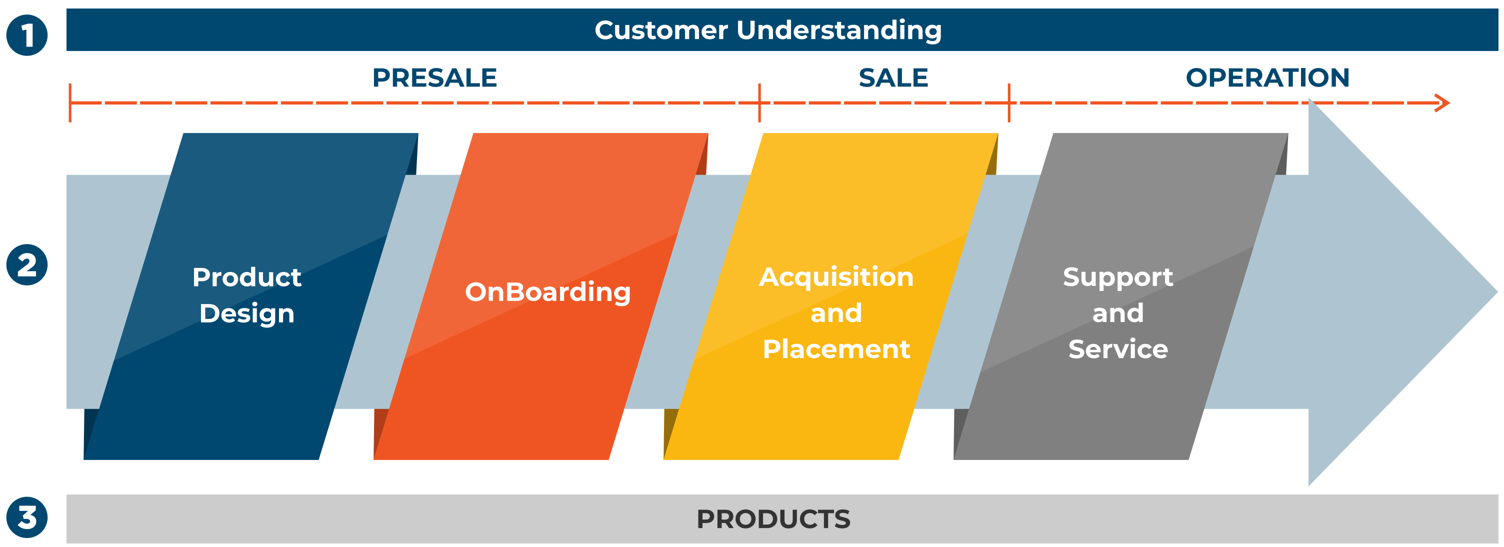
4.1 Digital Solutions for Financial Inclusion

The integration of digital solutions in the financial sector is propelling broader access to financial services across society, particularly among historically underserved segments. In parallel, as society undergoes digitalization and the demand for non-physical payment methods in digital spaces rises, segments comfortable with traditional cash transactions are gravitating toward digital payment solutions.

Recognizing the potential to incorporate new demographic segments into the financial system, various regional actors, with a focus on unveiling digital payment solutions, are offering straightforward and user-friendly products to promote financial inclusion. Nonetheless, entities aiming to take a leadership role in this endeavor must underscore the importance of digitally transforming their entire value chain. The following sections will explore the specific facets of digitalization segmented across the value chain.

The analysis of the value chain will be segmented into three main categories. The first will examine the integration of digital solutions aimed at enhancing customer insight. The second will concentrate on internal processes within financial institutions, including product design, onboarding, and other pertinent aspects. The third will be directed towards the innovative presentation of products and services by these institutions.

Figure 31: Value Chain of Financial Services, Approach Blocks of Digital Solutions



Source: Own production

4.1.1 Starting Point for the Value Chain: Customer Understanding

In the stage dedicated to understanding the customer, three critical drivers shape the extent of advanced technology solutions across the value chain. These drivers encompass the depth, exploitation, and analysis of data. The distinct maturity levels associated with each component highlight the significance of their seamless collaboration. This integrated approach is indispensable for a comprehensive understanding of customer needs and preferences, paving the way for the delivery of financial solutions that are highly personalized and effective.

Starting with the first driver, data depth, different levels of maturity can be pinpointed.

The first level encompasses fundamental data, including the customer's first name, last name, date of birth, and address. This level focuses on preserving essential information, providing institutions with anintroductory understanding of the customer.

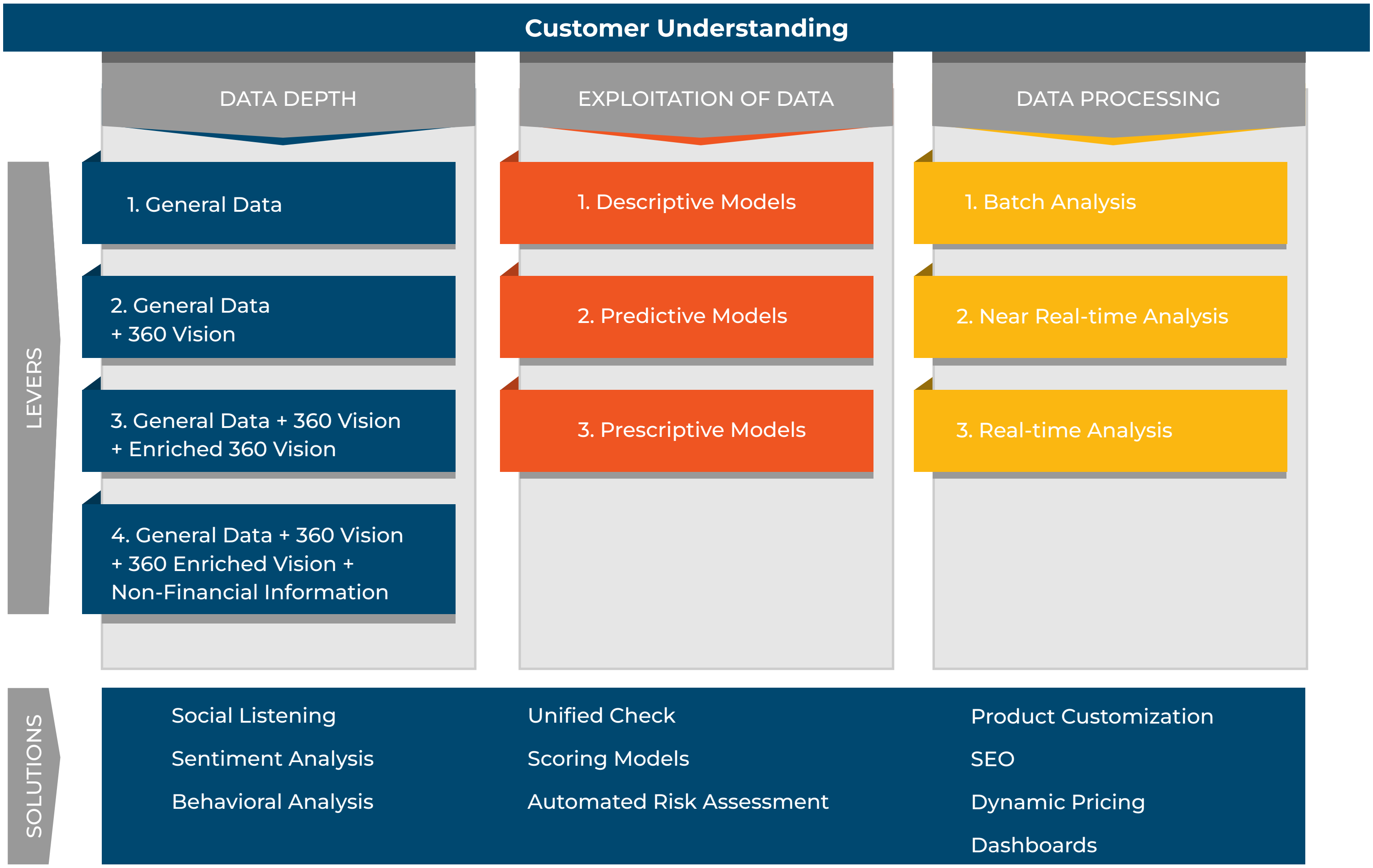
Progressing to the second level, this perspective broadens with the inclusion of data from financial services and products the client has engaged with in the institution. This comprehensive view facilitates a complete understanding of the customer's financial requirements and the entity's approach to addressing them. Internally, it enables the institution to gauge the overall value generated by the customer, paving the way for tailored solutions.

The third level revolves around augmenting the entity's internal data by encompassing financial information that customers may have within the ecosystem. A notable illustration is the advent of financial product/service aggregation solutions from Open Finance, such as PFM (personal finance manager), consolidating all customer financial data. This extended and complete perspective guarantees that entities acquire a thorough understanding of customer needs.

Finally, the most advanced level encompasses all preceding tiers and incorporates non-financial product details. At this stage, the aim is to acquire insights into the customer's daily life – understanding where they shop, the reasons behind their choices, their lifestyle habits, emotional triggers, and more. This advanced level facilitates a holistic understanding, encompassing both financial and non-financial aspects, allowing for the establishment of a contextual relationship in the areas where customers are actively engaged in their routine.

Data depth is paramount in crafting variables that facilitate a comprehensive understanding of customers, notably those from vulnerable demographics like migrants, who frequently confront substantial information and background challenges. While fundamental details offer a starting point, the integration of non-financial data becomes instrumental in enhancing insights into their behaviors and financial needs. An illustrative scenario involves scrutinizing how migrants manage the payment of recurring expenditures, such as monthly telephone bills.

Figure 32: Areas of Customer Understanding in the Value Chain



Source: Own production

The collection and in-depth analysis of data on how these populations manage their bills empower institutions to craft analysis variables. This, in turn, allows for the customization of products and services explicitly designed to address the distinctive needs and challenges encountered by migrants. The depth of data provides a holistic view of customers, streamlining the creation of solutions that are not only more pertinent but also more effective for those traditionally marginalized or underserved.

Concerning the data exploitation driver, three levels of maturity are discernible, and these can be concurrently advanced based on the entity's focus of analysis:

In the initial stage of data analysis, descriptive models are used to understand and succinctly summarize historical data. These models play a crucial role in monitoring various aspects related to financial services. For instance, a descriptive model could be applied to identify customers who faced delays in a preceding period. This retrospective perspective enables financial institutions to enhance their understanding of customer behavior patterns, facilitating well-informed decision-making based on historical data.

Moving to the subsequent level, we encounter predictive models, instrumental in forecasting future events by leveraging machine learning and pattern recognition on historical data. The ability to predict potential behaviors is paramount for proactively addressing challenges or capitalizing on value- generating opportunities. Referring back to the earlier example, a predictive model can proactively identify customers who, based on their behavior, might encounter delays in a forthcoming period.

Lastly, at the most advanced level, we encounter prescriptive models. These models integrate the capabilities of preceding levels, empowering more effective and strategic decision-making. Not only do they identify potential customer behaviors, but they also chart the optimal course of action to maximize the likelihood of success.

In the same vein, a prescriptive model goes beyond identifying potential future defaulters; it strategically devises the best course of action to avert such occurrences. For instance, it might recommend reminders through familiar channels like SMS, digital platforms, or telephone calls, or suggest targeted marketing campaigns tailored to the customer's past preferences. The essence of prescriptive models lies not just in problem identification but in their ability to propose actionable solutions.

The implementation of these analysis models proves invaluable for microfinance companies in discerning the impact of climate phenomena like El Nino or La Nina on individuals or microenterprises in rural areas, particularly those engaged in livestock or agriculture. By comprehending the historical patterns, these companies can anticipate the financial needs that may surge during climate crises. This includes the heightened demand for credit access or repayment.

Importantly, the surge in the demand for credit does not automatically imply an elevated credit risk. The use of data depth and analytical models empowers institutions to fashion bespoke solutions, addressing immediate needs while cultivating long-term relationships. This strategic approach contributes significantly to financial graduation and proactively anticipates the evolving needs of vulnerable populations.

The data analysis driver covers several levels of processing:

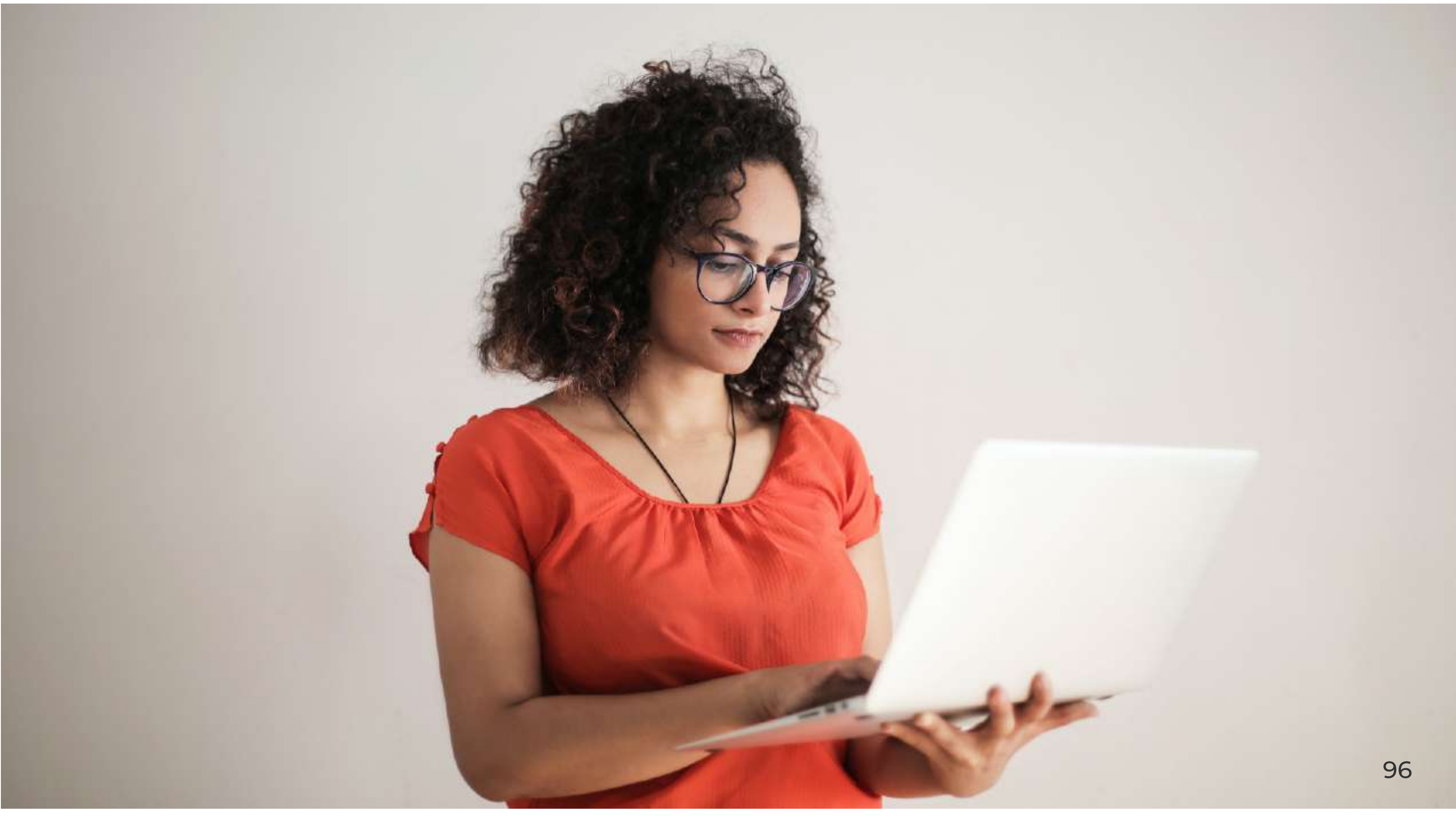
In the first level, known as batch analysis, data is collected up to a designated cut-off point, following which a data block is executed and processed. This form of aggregate processing is commonly recognized as a "batch process" within the industry.

Moving to the next level, referred to as near real-time analytics, the duration between data collection and processing is minimized, enhancing the responsiveness of entities. This is applied, for example, in monitoring customer transactions and swiftly identifying unusual activities.

Lastly, real-time analysis involves the instantaneous processing of data as soon as it is generated. An illustration of this concept is real-time customer service, enabling individuals to instantly access their account information, conduct transactions, and receive advice whenever needed.

Within the context of financial inclusion, this technology allows financial institutions to identify potential customers encountering hurdles related to digital literacy or initial difficulties with digital applications. The real- time detection of a customer's intent or requirement for a loan, along with acknowledgment of their limited familiarity with digital processes, enables entities to intervene promptly. Interventions may include sending notifications and delivering personalized support, aiding these customers in overcoming obstacles and gaining access to the required financial services.

The optimization of these three drivers (depth, exploitation, and data processing) in conjunction with the effective utilization of prominent technologies like artificial intelligence (AI), big data, blockchain, the Internet of Things (IoT), and cloud computing enables the creation of distinctive solutions during the customer understanding stage.



Social Listening

Social listening within the financial sector utilizes data- driven solutions employing technologies like natural language processing (NLP) and artificial intelligence (AI) to monitor and analyze information across social media and various online platforms. This approach empowers entities to comprehend customer opinions, emotions, and needs, enabling informed decision- making, proactive issue detection, reputation management, enhancement of customer experience, and staying competitive through the identification of emerging trends.

Within the financial context, social listening emerges as a crucial player in elevating customer experience, amplifying the impact of marketing endeavors, scrutinizing competitive landscapes, and crafting products that resonate with market needs. A notable example is Quantico Trends, leveraging an AI- supported social listening tool to dissect sentiments within social media conversations. The resultant data aids in foreseeing future trends and enables the formulation of informed decisions.

It's crucial to acknowledge that the reach of social listening technology may be constrained, particularly in segments like the silver economy or among groups with low literacy levels. These demographics, for the most part, exhibit limited engagement with social media or are less acquainted with digital technology.

The limited engagement in online platforms among these specific segments hampers the availability of both quantity and quality of data for comprehensive analysis. Consequently, social listening tools might present a biased or incomplete perspective of these segments, posing challenges in accurately grasping their financial needs and preferences.

Thus, institutions must acknowledge these limitations and supplement social listening with more conventional approaches to understand and cater to the requirements of these vulnerable populations.

Sentiment Analysis

Sentiment analysis is a method that analyzes digital text to identify the emotional tone of messages in digital media, like social media comments, product reviews, news articles, and others. It employs natural language processing (NLP), computational linguistics, and machine learning to categorize these sentiments as positive, negative, or neutral. Within the financial industry, its main objective is to grasp clients' sentiments regarding financial matters. This encompasses various applications such as market assessment, trend prediction, risk management, customer service, and fraud detection.

Demonstrating technological advancement, BERT, or "Bi-directional Encoder Representation from Transformers," is an AI-driven algorithm with the proficiency to discern the intent behind natural language queries, thereby enabling a more accurate understanding of human expressions. Banco Inter of Brazil has effectively employed this technology to scrutinize the financial data of its clients, covering aspects such as income, expenses, and debts through the checking interaction. This streamlined approach not only simplifies credit assessments but also facilitates the provision of affordable loans.

Behavioral Analysis

Behavioral analysis entails evaluating individuals' financial conduct through the utilization of data and advanced technologies. In the financial sector, it delves into understanding decision-making processes, spending habits, saving practices, investment approaches, and responses to financial offerings. Leveraging data like bank transactions, expenditure patterns, and investment histories enables a comprehensive grasp of customer preferences and requirements. The primary objective is to enhance the customization of financial products and services, formulate precise marketing strategies, and elevate overall satisfaction.

Take, for instance, N26, a European digital bank that recently expanded its operations to Brazil. N26 leverages behavioral analytics to monitor how customers engage with its mobile app, aiming to enhance their overall experience. Through this technique, potential issues can be identified and personalized support can be offered to customers facing challenges. Moreover, the bank identifies users expressing interest in new products, informing strategic marketing decisions. This approach has proven effective in elevating customer satisfaction and fostering retention within the company.

Conducting a thorough analysis of the financial behaviors of vulnerable populations is crucial for delivering impactful financial assistance. A comprehensive understanding of their income and expenses enables institutions to provide tailored solutions that promote savings and facilitate the achievement of financial objectives. The automation of financial processes, including programmed savings, emerges as a powerful tool in this regard.

Consider cooperatives or microfinance institutions that have the capacity to define specific savings targets in harmony with the unique needs and aspirations of each vulnerable population. Whether the goal is to procure seeds, invest in livestock, support children's education, or achieve any other objective, this personalized approach to financial solutions not only stimulates savings but also empowers these populations with greater control over their financial resources, contributing significantly to the enhancement of their economic well-being.

Unified Check

The concept of "unified checks" involves compiling credit information from diverse sources, including credit bureaus and risk rating services, to formulate a comprehensive report on the financial history of an individual or entity. This is indispensable for making sound credit decisions. Credit bureaus and risk rating services, operating in various countries, meticulously gather and maintain financial history data for both individuals and companies. The utilization of artificial intelligence (AI) in automated processes significantly improves the accuracy of credit risk assessments.

An instance of this is Banco Bradesco in Brazil, which employs unified checks to evaluate loan and credit card applicants, enhancing the precision of assessments and mitigating the risk of fraud. This is accomplished by integrating data from diverse sources, streamlining credit risk management.

However, concerning financial inclusion, it is crucial to acknowledge that an excessive dependence on these systems may result in the exclusion of marginalized groups and vulnerable populations lacking conventional credit history or government data. This could potentially introduce negative bias, exacerbating exclusion.

Conversely, it is important to highlight that the implementation of Cross-Border credit scoring paves the way for the financial inclusion of migrants. This innovative approach tackles the lack of credit information among this demographic, resulting in the establishment of more equitable credit models and enhanced access to financial services.

It indicates that the judicious and fair application of unified check technology can serve as a valuable tool, especially when prioritizing the inclusion of vulnerable populations and eliminating previously insurmountable financial barriers.

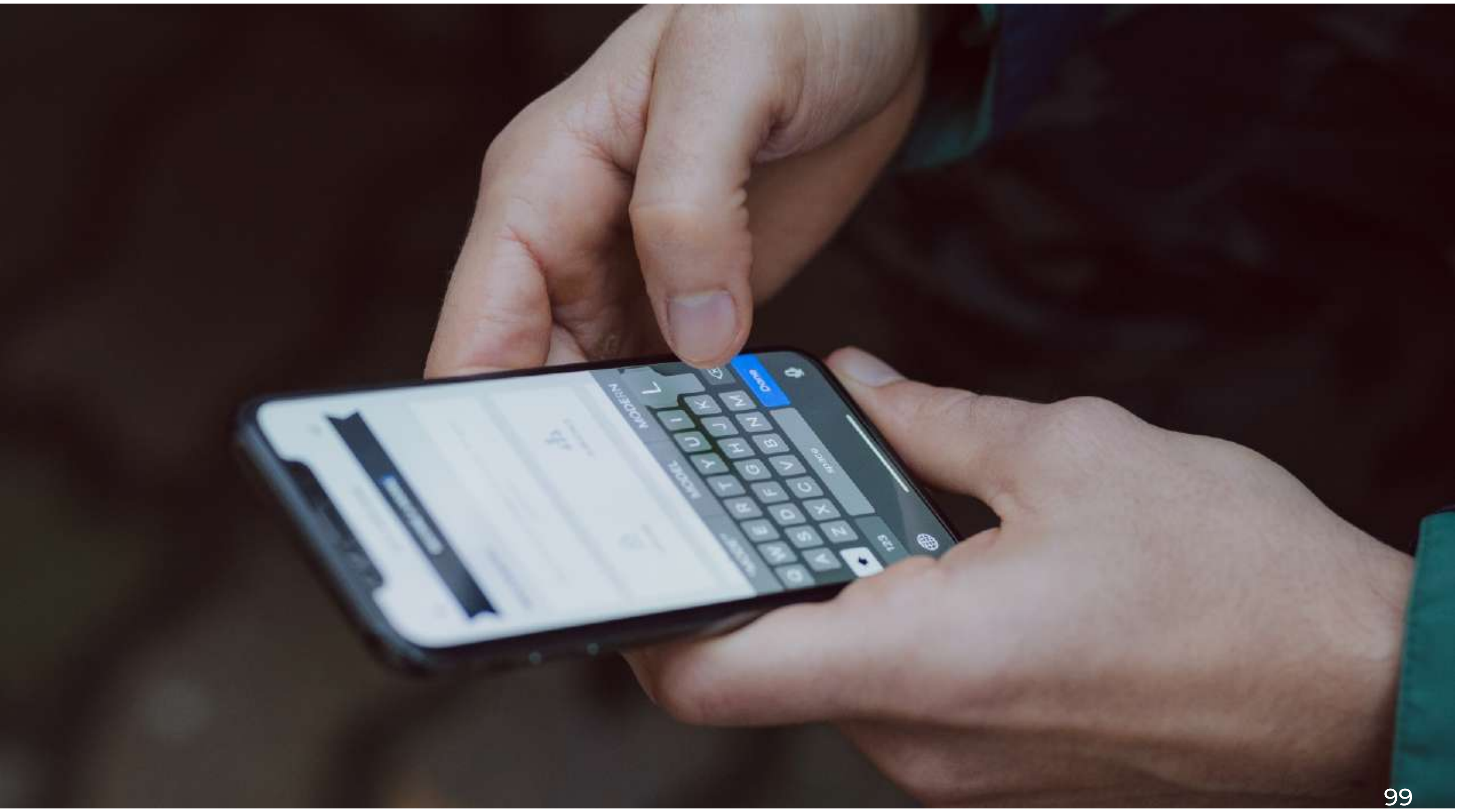
Credit Scoring Models

Credit scoring serves as a statistically-based tool to evaluate individuals' financial history. These models leverage diverse factors, including payment history, indebtedness, and income levels, to forecast the probability of loan default. Presently, the evolution of credit scoring models is attributed to the integration of AI, streamlining the assessment of an individual's solvency. This advancement incorporates not only traditional data but also considers social media behavior and mobile device usage for a comprehensive evaluation of borrowing capacity.

In partnership with Ombu Tech Services, CredoLab has unveiled a credit scoring platform designed for the Latin American market. Leveraging artificial intelligence (AI), this innovative solution rapidly assesses the viability of loan approval by scrutinizing millions of microbehaviors within seconds. The platform's goal is to create an alternative analysis profile for individuals without a credit history in the conventional banking system.

While technology has advanced and credit scoring models have been implemented, substantial challenges remain. A hyper-focused approach to automation and extensive digitalization can lead to impersonal scoring models that lack the necessary sensitivity to individual circumstances. This poses a significant risk, especially for excluded segments and vulnerable populations. The exclusion of specific variables and an emphasis on general indicators might overlook critical aspects that impact access to credit and financial services.

It is crucial to emphasize that digitalization must not contribute to increased exclusion. Scoring models should strike a balance between general and specific variables to guarantee an equitable and precise evaluation of creditworthiness.



Automated Risk Assessment

Automated risk assessment refers to an algorithm- driven process designed to analyze and establish the credit risk level associated with a customer. This involves collecting and analyzing both financial and non-financial data to determine the probability of the individual fulfilling their credit obligations.

The key advantage of this assessment lies in its ability to expedite credit decision-making. Through automation, it efficiently handles a large number of credit applications. Additionally, by automating workflows associated with credit risk, it allows lenders to prioritize the most viable applications, thereby improving the precision of risk assessment.

Zest Finance exemplifies this concept, employing artificial intelligence (AI) and Big Data analytics to automatically aggregate credit profiles from applicant information and online/social media data. Through this technological advancement, banks can assess credit risks directly, bypassing intermediaries and realizing considerable time and resource savings.

Product Personalization

In the financial industry, product personalization stands out as a data-driven solution that harnesses customer-specific information to create personalized financial products. This approach is pivotal for enhancing customer experience, elevating retention levels, streamlining decision-making processes, maximizing profitability, mitigating credit risks, and enhancing competitiveness in the ever-changing financial market.

Personalization relies on robust tools like Big Data and machine learning. These technologies allow the conversion of vast amounts of data into meaningful information, streamlining decision-making and automating actions to enhance the customer experience.

Nubank stands out as an example of personalized financial services, as it customizes its credit card offerings based on the risk profiles of applicants. Through the use of data analytics, the company accurately assesses credit risk, leading to individually tailored credit limits and interest rates.

SEO – Search Engine Optimization

SEO is a digital marketing solution that employs strategies to enhance a website's visibility and positioning. This encompasses careful keyword selection, refining website content and structure, building high-quality links, and implementing technical optimizations. The overarching aim is to amplify organic traffic, ultimately increasing both website visitors and conversions.

Banco Santander Río in Argentina provides a clear illustration by curating highly relevant content that incorporates keywords linked to banking services, financial products, and economic guidance. This intentional strategy has effectively boosted their online visibility, securing an improved ranking in the search results for online banking services in the country.

Dynamic Pricing

Dynamic pricing is a strategy in the financial industry that is characterized by the constant adjustment of prices pursuant to demand and supply. Its primary purpose is to optimize revenue, mitigate risk, and enhance competitiveness in the marketplace.

Playing a pivotal role in dynamic pricing, Big Data analytics facilitates the collection and analysis of massive datasets. These datasets provide valuable insights into customer preferences and behaviors, empowering businesses to attract new customers and retain existing ones through the implementation of pricing strategies that are tailored to individual needs and preferences.

Chase Bank serves as a notable example, strategically implementing dynamic pricing in its personal loan offerings. Employing data analytics, the bank adeptly tailors interest rates and loan terms in alignment with the credit history of each applicant.

Dynamic pricing holds particular significance for products and services designed for vulnerable populations. Entities can identify customer hardships and, in response, proactively adjust interest rates and payment terms. For instance, during financial challenges, an automated reduction in interest rates can be implemented to ease the financial burden on customers.

By leveraging these solutions, MFIs can embrace a long-term approach, prioritizing sustained customer value throughout their lifetimes. This not only ensures customer retention but also involves supporting them through challenges and fostering their financial growth.

Financial Dashboards

Visualization dashboards serve as dynamic tools, providing real-time data views that significantly enhance decision-making processes. Beyond presenting key metrics, these tools offer a comprehensive insight into the customer's financial history, encompassing transactions, balances, and spending patterns. Their indispensability lies in improving operational efficiency, delivering personalized services, and adeptly managing risks within the continually evolving financial environment.

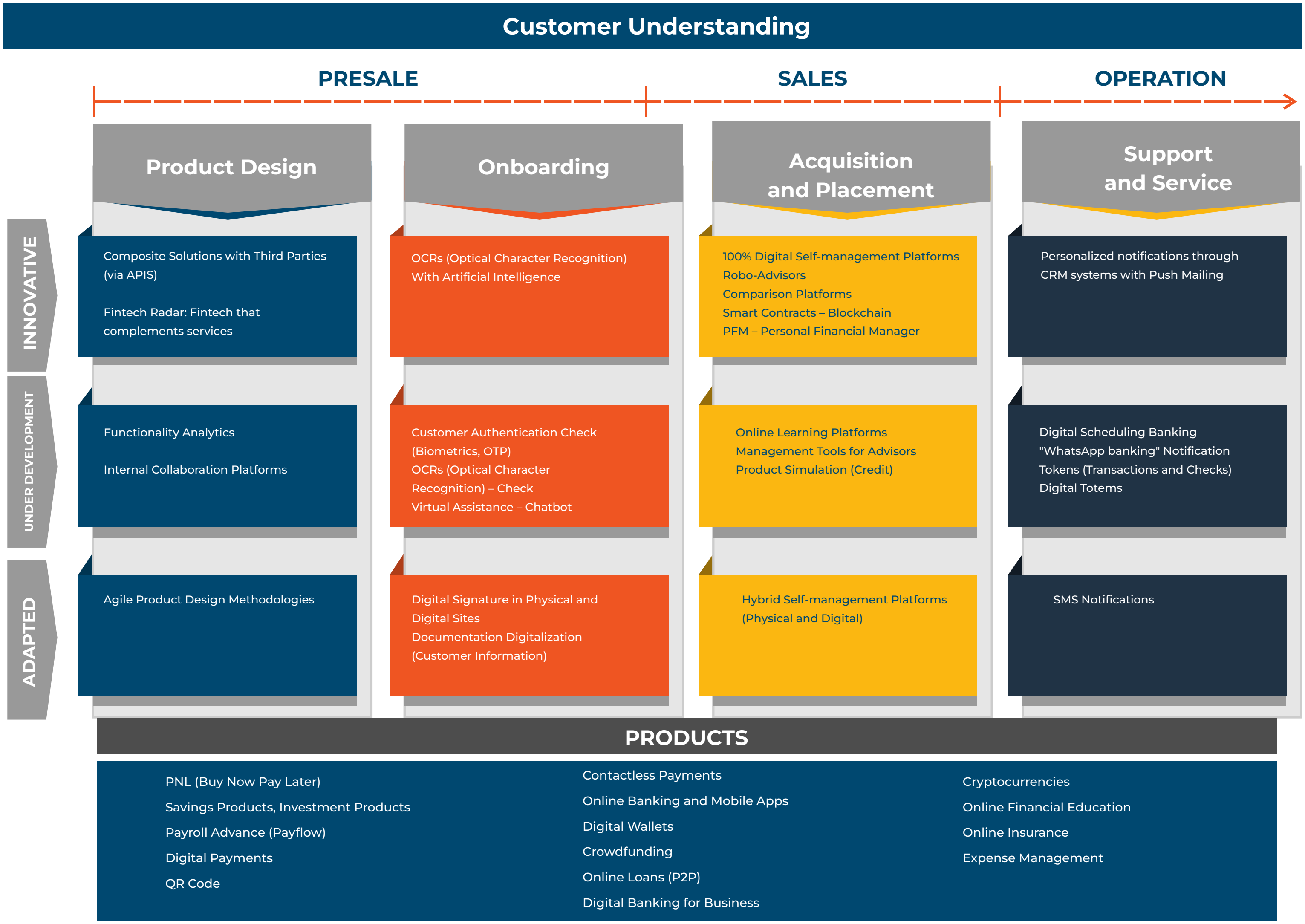
Through the use of Slingshot, its internal visualization dashboard, Capital One has successfully transformed financial performance and operational efficiency. Slingshot integrates data from finance to risk, offering a comprehensive and strategic business perspective. This strategic insight allows Capital One to identify growth opportunities and optimize operations more efficiently.

4.1.2 Digital Solutions in the Value Chain

Alongside technologies focused on data-driven customer understanding, there are additional technological advancements that exert influence on the value chain of entities.

The integration of these technologies into financial institutions is now indispensable for the comprehensive transformation of key aspects across the value chain within the financial ecosystem. Subsequently, we will delve into aspects such as product design, onboarding, service acquisition, and placement, as well as support and service. These solutions stand out for their holistic approach to understanding customer needs and their effectiveness in supporting every stage of the value chain.

Figure 33: Solutions by Value Chain Link



Source: Own production

4.1.2.1 Product Design Solutions

Agile Product Design Methodologies

Incorporating agile methodologies into the sector is essential for maintaining competitiveness and meeting customer satisfaction standards. These methodologies expedite testing and the creation of Minimum Viable Products (MVPs), resulting in product designs finely crafted to suit the needs of customers.

By using agile approaches such as Scrum or Kanban, financial institutions can accelerate the development cycle, quickly identify customer preferences, and make agile adjustments based on feedback. This leads to the creation of more tailored and effective financial products and services.

Kueski, a Mexican fintech specializing in online lending, demonstrates the effective application of agile methodologies. This strategic approach enables constant platform improvement, delivering highly efficient and user-friendly loan application processes.

It is crucial to bear in mind that agility extends beyond the methodology, encompassing the ability to adapt and evolve in response to changing customer needs. Achieving this requires the incorporation of customer voices at every stage of the process. Agility demands the involvement of individuals who intimately know customers and comprehend their day-to-day realities.

In rural areas and similar settings catering to vulnerable populations, gaining insights is exceptionally valuable. It facilitates the tailoring of products and services to precisely meet the needs and circumstances of these customers. The synergy of agile methodologies with a profound understanding of vulnerable populations is paramount in the development of financial solutions that are both effective and sustainable.

Functionality Analytics

Functionality analytics stands as an indispensable tool in the design and enhancement of products within the financial industry. It enables the identification of features most frequently used by customers, facilitating the efficient activation or deactivation of internal features. This analytics framework yields vital insights into the product's performance, aiding in the assessment of its effectiveness and alignment with user expectations.

Envisioning a constant process of design and product improvement allows for the precise tailoring and personalization of financial products to meet the needs of individual customers. This robust approach to analytics guarantees that products not only remain relevant but also perform optimally in the ever- changing financial environment.

PayPal serves as a prime example, using meticulous analytics to monitor user interactions on its platform. This approach enables the identification of frequently used features and areas for improvement, empowering informed decisions to optimize the overall customer experience.

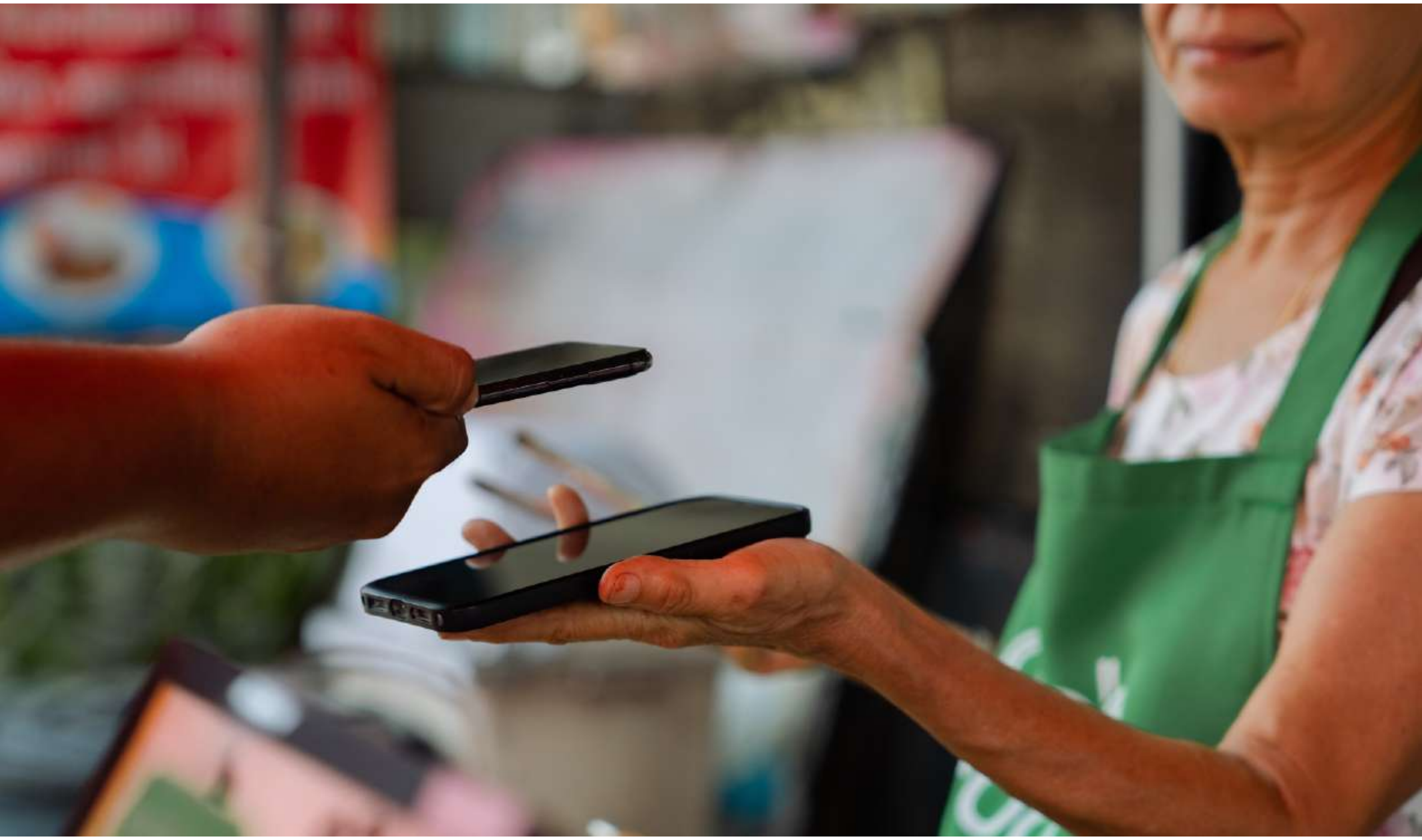
It is imperative that functionality analytics prioritize the unique needs of customers, emphasizing the creation of applications that are genuinely engaging and user-friendly. Customizing functionality for distinct groups becomes essential. A valuable financial application should exhibit flexibility, enabling the activation of functionalities tailored to the specific needs of vulnerable populations.

For banks, a flexible vision is essential to resist deactivating features with low usage volumes, as the application proactively adapts to the preferences of different customer groups. For instance, for a migrant, a high-priority functionality such as remittances requires presetting and customization to provide a genuinely valuable service.

Internal Collaboration Platforms

Internal collaboration holds significance in fostering innovation and driving new product development. The establishment of innovation platforms that involve internal teams, including those in direct contact with customers like field advisors, facilitates a profound understanding of customer needs and challenges. This cross-functional collaboration ensures that the organization's collective knowledge is effectively used to design products and enhancements that meet the evolving demands of customers.

Banco de Crédito del Perú (BCP) uses Google Workspace to improve internal collaboration among its teams and foster innovation in digital products, ultimately benefiting the customer experience. The platform facilitates real- time communication, seamlessly connecting employees across various areas and locations, thereby strengthening the organizational culture.



Composite Solutions with Third Parties

Integrating complementary third-party solutions through APIs stands as a strategic approach in the development of financial products. By harnessing the capabilities of external partners, entities can craft personalized products that combine their distinct features with the resources offered by other vendors.

This opens up new avenues for design, empowering the adaptation of products to customer needs. Rather than relying solely on their own capabilities, institutions can tap into a diverse array of external resources to provide enhanced value.

Take, for instance, Finerio Connect, a regional company that provides an Open Finance-framed API HUB. This platform enables entities and fintechs to securely register user bank accounts, offering services like financial data aggregation and personal finance intelligence. Through Finerio Connect, financial services become more comprehensive and efficient, highlighting the essential role of APIs in complementary solutions across the industry.

It is important to highlight that, in the context of financial inclusion, while solutions collaboratively built with third parties present a promising trend for entities serving vulnerable populations, they encounter certain implementation challenges. Our interviews revealed notable difficulties, particularly in terms of connectivity and adapting these solutions.

On one side, entities focusing on vulnerable populations often struggle to discover solutions precisely tailored to their specific needs and the particularities of the population they serve. Conversely, the absence of standardization in application programming interfaces (APIs) can pose challenges in seamlessly integrating composite solutions with third parties. This lack of uniformity may result in interoperability issues, hindering the effective implementation of solutions that could otherwise benefit vulnerable populations. These challenges stand as a notable constraint for entities aiming to implement composite solutions with third parties.

Fintech Radar

Incorporating a fintech radar into entities is indispensable for pinpointing fintech partners that can seamlessly complement their internal products or services. These radar platforms empower the tracking and assessment of fintechs uniquely tailored to the needs of the financial institution. This, in turn, enhances the capability to design products and services that are more efficient and attuned to market and customer demands.

Banco Santander in Spain employs a fintech radar to identify potential collaborations with fintech companies that complement their internal services, such as mobile payment solutions and personal financial management tools. This initiative has resulted in an enhanced customer experience, offering more agile services precisely tailored to market needs.

4.1.2.2 Solutions for Customer Onboarding

Digital Signature in Physical and Digital Sites

The onboarding process in the industry has experienced significant evolution. Initially, it mandated customers to be physically present in branches for paper signings. However, with the integration of technologies, the process now allows for digital signatures through applications and web platforms. Currently, many entities have embraced such technologies, making it unnecessary for customers to visit a physical branch.

This innovation not only streamlines the customer onboarding process but also enhances its accessibility and convenience. It allows customers to complete the onboarding process from any location with an internet connection.

Some entities in LAC, like Banco Itaú in Brazil, have incorporated digital signatures into their customer onboarding processes. This facilitates the remote opening of accounts and conducting financial transactions, thereby simplifying the process and enhancing convenience.

When it comes to financial inclusion, the integration of digital signature technology marks a significant leap forward for clients in rural areas. It removes the need to move to locations with physical branches for the onboarding process. This not only saves time and travel costs for customers but also significantly enhances their access to fundamental financial services.

Study Case: BancoSol

Location

Bolivia

Products & Services

Products:

- Microcredits.
- Insurance.
- Commercial loans.
- Digital banking services.

Company

BancoSol

Marking a historic milestone, BancoSol emerged as the first commercial and regulated microfinance bank to offer global services. Its innovative financial credit engineering not only extended access to formal financing for previously excluded segments but continues to set a global benchmark. Since its establishment, BancoSol has financed over 5 million microprojects, making a substantial contribution to the development of entrepreneurs in Bolivia.

Clients[a]	Offices[b]	Assets
1,153,909	**1,054**	**$2,721 (USD)**

Study Case

BancoSol distinguished itself as the pioneer microfinance institution in the Bolivian financial system by introducing internet banking as an essential resource for its customers. Acknowledging the increasing importance of digital transactions for its customers, the institution took proactive measures to enhance its digital platforms. This strategic approach not only ensures convenient access to financial services but also underscores the institution's ongoing commitment to leading technological innovation in the Bolivian microfinance sector. These platforms are:

- Solnet (internet banking)
- appSol (mobile banking)
- Digital Assistant (bot)

Problem To Be Solved

The institution sought to enhance operational efficiency and deliver an improved customer experience. BancoSol grappled with an outdated technological infrastructure that proved inadequate for its current requirements.

Implemented Solution

Throughout the years, BancoSol has been at the forefront of innovation in the microfinance sector. In 2016, the bank unveiled its transactional app, and two years later, it introduced non-financial correspondents known as Puntos Sol Amigo Express. In 2019, BancoSol achieved another milestone by becoming the first bank in Bolivia to provide services such as mobile messaging banking, mobile branches, and Simple QR Payment. In 2021, it extended the opening of savings accounts to rural areas, making it accessible online.

In 2022, the institution elevated its proposition with the introduction of an upgraded version of appSol mobile banking and Solnet internet banking. This enhanced iteration prioritizes safety, user-friendliness, and offers an array of additional options for customers. Achieved through an investment exceeding 17 million Bolivians, this marks a significant increase of over 10 million from the previous year's technological investment, underscoring BancoSol's resolute commitment to technological innovation and ensuring customer satisfaction through Digital Transformation.

Results Obtained[c]

- Digital channels already account for more than 60% of operations. The user base has doubled within a span of three years, and the transactionality rate has surged from 17% in 2020 to 50% in 2022.
- By the end of 2022, more than 28 million transactions were recorded through these digital channels. This signifies a noteworthy increase of 114% compared to the 13 million transactions reported in 2021.
- A total of 24,000 customers have undergone digitalization, highlighting the notable advancement in the utilization and acceptance of mobile banking and alternative channels.
- By the end of 2022, the number of depositor customers increased by 80,211, reaching a cumulative total of 1,153,909. This notable growth underlines the trust placed in BancoSol and the diverse infrastructure provided to customers, including physical branches, mobile branches, ATMs, Puntos Sol Amigo, Sol Amigo Express, counters, Infosol, AppSol, and SolNet. In the 2022 management period alone, these channels facilitated a staggering 55 million transactions.

Sources: [a] Informe RSE, BancoSol, 2022, https://www.bancosol.com.bo/wp-content/themes/flatsome-child/SosDoc/informe_rse_2022.pdf
[b & c] Memoria BancoSol 2022, BancoSol, 2022, https://www.bancosol.com.bo/memorias/memoria_bancosol_2022.pdf

Customer Authentication Check

Biometrics is continually evolving to enhance customer authentication in the digital environment. This technology includes facial, finger, iris, and palm recognition, delivering a combination of security and convenience in authentication. This innovative solution empowers customers to autonomously complete the onboarding process through digital channels like mobile banking or home banking.[61]

Biometric authentication not only secures online transactions effectively but also enhances the overall customer experience. By removing the need for intricate passwords, it facilitates quick and convenient access to a range of digital financial services.
Quick response codes (OTP, one-time password) are also available for authentication. These codes, generated for a brief period, add an extra layer of security, ensuring the user's authentication in a single transaction.

By implementing this measure, the access to a specific transaction is restricted solely to the authorized user, offering robust protection against potential cyber threats.

HSBC in the UK stands out as an innovator by implementing palm authentication in specific ATMs. This advanced technology offers customers the ability to quickly and securely withdraw cash and carry out various transactions using a straightforward biometric scan.

Veridas showcases the implementation of voice biometrics, as evidenced by its application at BBVA Mexico. Pensioners can conveniently provide their life certificate through a simple call, eliminating the need for unnecessary travel and achieving recognition in just three seconds. The use of this technology not only greatly enhances security but also increases the convenience of customers in their financial transactions.

During the in-depth interviews, one of the entities disclosed a technology prioritized for authenticating customers in rural areas, particularly those who are unable to read or write. This solution relies on voice authentication, enabling individuals to confirm their identity through their distinct vocal characteristics.

This technology proves to be an effective solution for overcoming literacy barriers and enhancing the accessibility of digital financial services among vulnerable populations. Voice authentication illustrates how technological innovation can be creatively tailored to meet the specific needs of these communities, providing them with more inclusive access to financial services.

Virtual Assistance – Chatbot

The digital onboarding process can be streamlined and guided using virtual assistance, such as a chatbot. This technology offers the option to autonomously complete onboarding, supported by a virtual assistant that guides users throughout the process, addresses queries, and furnishes essential information. This enhances the overall seamlessness and accessibility of the onboarding experience, improving the digital onboarding journey for customers.

Banco Azteca exemplifies the impact on underserved sectors by leveraging a "chatbot" virtual assistant. This assistant plays a crucial role by providing customers with information about financial products and services, aiding in tasks such as balance inquiries and payments. Notably, the chatbot includes filters to assess credit eligibility and remains accessible 24 hours a day, responding to questions and offering assistance in the acquisition of various products and services.

[61] Term used for banking services that can be accessed via the Internet through computers, tablets, or cell phones.

Validation and Digitalization of Documentation

The digital onboarding process commences with the establishment of a client-specific repository at the first level, facilitating the digitalization of their information. At this juncture, documents undergo manual scanning before being uploaded to the repository.

Moving to the second level of the digital onboarding process, Optical Character Recognition (OCR) technology takes center stage. This sophisticated technology is adept at authenticating documents and scrutinizing the information within them. OCR can identify various document types and extract information from pertinent fields, primarily aimed at ensuring the accuracy and validity of customer-provided documents.

Transitioning to the third level of the digital onboarding process introduces a more advanced technology: OCR (Optical Character Recognition) integrated with artificial intelligence (AI). This innovative solution facilitates the direct validation of customer-specific information, including details like document expiry dates. The heightened OCR, powered by artificial intelligence (AI), elevates digitalization by eliminating manual aspects. Beyond ensuring document accuracy, it conducts additional validations, efficiently completing the onboarding process within the entity without requiring human intervention.

Banco de Bogotá in Colombia integrates OCR and artificial intelligence (AI) technology into its customer onboarding and credit decision-making processes. Using OCR for acquiring and preserving document data, the bank simplifies the digitalization process. These innovations have markedly improved the efficiency and security of the bank's procedures, ensuring more accurate verification and quicker decision-making in financial affairs.

The technological solution presents a significant advantage for cooperatives and microfinance companies catering to rural areas. Customers can employ their smartphones to scan and digitize documentation, simplifying the onboarding or product contracting process and eliminating the requirement for physical travel.

Study Case: Fondo Esperanza

Location

Chile

Products & Services

- Microcredits.
- Insurance.
- Commercial loans.
- Digital banking services.

Company

FONDO ESPERANZA

Fondo Esperanza stands as the largest social development organization in Chile, pioneering the implementation of a comprehensive microfinance service dedicated to entrepreneurship in vulnerable sectors. The organization provides financial services, training, and networks, empowering individuals to establish sustainable ventures.[a]

Customers	Offices	Assets
121,036	52	$79,742 (USD)

Exchange rate, Central Bank of Chile
$913.26 as of October 5, 2023

Study Case[b]

The COVID-19 pandemic had a significant impact on both the institution's operations and the lives of its valued partners. Over 70% of them reported a decrease in their income, which serves as the primary source of livelihood for their families. Confronted with this challenge, the institution had to adapt to the evolving circumstances by initiating a Digital Transformation. This transformation included the launch of a mobile app, enabling the digitization of processes previously confined to branches and providing users with self-management tools for the services they offer.

Problem To Be Solved

Fondo Esperanza faced challenges in providing financial services to women in rural and remote areas due to limited technological infrastructure. This difficulty was exacerbated by health restrictions imposed during the COVID-19 pandemic. The institution had only one website accessible in desktop format, restricting access for women without fixed internet connections.

Implemented Solution

The institution introduced a mobile technology platform enabling women to access financial services like microcredit, savings, and insurance. This platform is accessible in rural and remote areas where traditional financial services are scarce.

The platform is a mobile application available for download on smartphones and tablets. It empowers women to perform various financial transactions, including loan applications, savings deposits, and bill payments.

Results Obtained

- In the current landscape, users have the convenience of obtaining all the essential information regarding the status of credits and microinsurance without the requirement to visit a Fondo de Esperanza branch.
- By the end of that same year, more than 75% of the credits to members were signed electronically.
- More than 80% was paid digitally.
- The delivery of credits increased by 64% compared to the previous period.
- Before the Digital Transformation in August 2020, nearly 70% of members reported a decline in their revenues, and 40% of businesses were inactive. By January 2021, only 30% acknowledged revenue losses, with 90% of businesses active.[c]

Sources: [a] Estado situación financiera Fondo Esperanza, 2022 https://fondoesperanza.cl/pdf/EEFF.pdf
[b & c] Memoria anual 2021, Fondo Esperanza, 2021 https://fondoesperanza.cl/descarga/Fondo_Esperanza_Memoria_Anual_2021.pdf

4.1.2.3 Solutions for Acquisition and Placement

Hybrid Self-management Platforms (Physical and Digital)

Hybrid self-management platforms in the financial ecosystem refer to systems that empower customers to independently oversee their accounts and carry out financial transactions. This autonomy extends to physical settings like branches or ATMs, as well as digital environments through mobile applications and websites.

These platforms provide users with flexibility and convenience, offering the choice to interact either in person or remotely based on their preferences. This ensures a versatile banking experience tailored to individual customer needs, delivering the best of both financial worlds.

This solution, among others, prioritizes serving populations like the silver economy that are not fully digitalized and still need assistance in managing accounts and conducting transactions autonomously. Additionally, it aims to furnish the essential tools for a more accessible and user-friendly banking experience by blending the convenience of technology with personalized assistance for users who require it.

Banco Galicia in Argentina has introduced a hybrid self-management platform, seamlessly integrating digital services like online banking, mobile banking, and voice banking with an extensive network of physical branches nationwide. This approach empowers customers to select their preferred mode of interaction with the bank, catering to a diverse population and ensuring accessibility in regions where internet access may be limited.

Online Learning Platforms

Technology platforms play a pivotal role in online financial education, presenting a diverse range of tools like courses, mobile apps, social media, chatbots, and more. These solutions empower institutions to deliver accessible and effective education. Notable examples encompass Moodle, Coursera, mobile banking apps, and interactive tools. The selection depends on the institution's needs and its emphasis on financial education, playing a crucial role in empowering customers in the digital environment.

Banco Popular in the Dominican Republic provides a notable example with its implementation of "Aula Popular," an online platform offering courses and educational tools aimed at enhancing the financial education of its customers. The platform includes courses covering topics like savings, investment, credit, and financial planning.

Management Tools for Advisors

Advisor management tools play a crucial role in the financial industry, equipping field advisors with advanced technology to facilitate the placement of financial products and services. These tools not only expand the reach of advisors, enabling them to connect with new clients in remote locations more efficiently but also streamline credit granting processes by simplifying data collection and processing. This results in a faster and more convenient experience for customers.

A prime example of innovation is seen at Banco Pichincha in Ecuador, where they have deployed the Intelligent Advanced Mobility System (SIMA). This tool is harnessed by the microfinance unit staff to streamline the lending process in remote communities, not only vastly improving the overall experience but also underscoring the critical role of innovation and technology in propelling financial inclusion.

Simulation of Financial Products

Simulation platforms are digital tools that empower users to calculate and visualize various product conditions, such as loan rates and installment terms, before making a request. This capability fosters informed decision-making. Beyond enhancing transparency by displaying interest rates and payment terms, these solutions save time, mitigate risks, and elevate the overall user experience. Moreover, they offer valuable data to institutions, enabling them to customize products according to customer needs, thereby increasing efficiency and customer satisfaction and promoting financial accountability.

Banco Davivienda in Colombia stands as an example by offering an online mortgage calculator. This user- friendly tool empowers individuals to estimate mortgage payments, taking into account variables such as loan amount, interest rate, and term. This resource is especially beneficial for those in the process of buying a home, providing valuable insights into the associated costs.

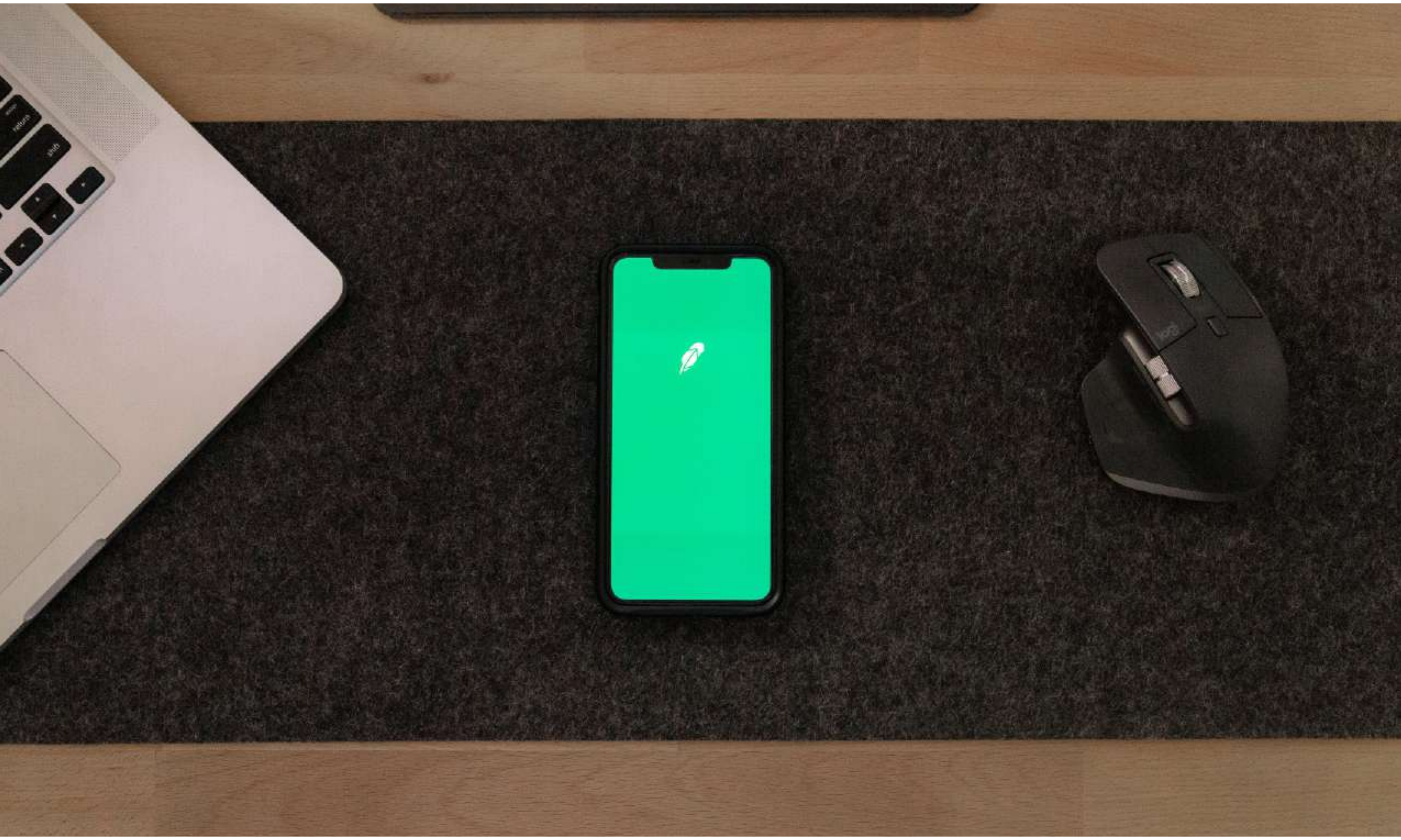
Fully Digital Self-management Platforms

Fully digital financial self-management platforms empower customers to carry out online transactions independently, eliminating the need for advisors or physical branches. These platforms bring several advantages, including global accessibility, significant time and cost savings, personalized experiences, enhanced security, improved customer interactions, and streamlined transaction efficiency. Their digital nature makes them highly adaptable to the dynamic and crucial needs of today's financial industry.

Engineered specifically for the digital native population, fully digital self-management platforms cater to individuals deeply immersed in technology. This demographic can autonomously and comprehensively manage their accounts using these platforms. The solution offers the flexibility and convenience sought by digital natives, granting them efficient access and control over their finances through intuitive interfaces and mobile applications.

Nubank, a digital bank, provides customers with an online self-management platform. Through this platform, users can effortlessly open accounts, apply for credit cards, manage their finances, and execute banking transactions — all without the necessity of visiting a physical branch.

While fully digital self-management platforms excel in providing straightforward processes for self-consumption, they face limitations with vulnerable populations. The absence of personalization and adaptation to the specific needs of these segments may hinder the adoption and use of these platforms.



Institutions must prioritize the development of self-management platforms characterized by clarity and comprehensive digital and financial education. Additionally, establishing a robust support mechanism, including accessible contact channels with support staff, is crucial to providing assistance for customers who require extra guidance. This approach ensures effective access and use of services for vulnerable populations.

Robo-advisors

Robo-advisors are technological platforms providing automated advice and portfolio management, often coupled with the execution of investment orders. Their primary advantage lies in offering financial services at a low cost, a broad diversification of products, and enhanced accessibility for customers. Additionally, they simplify savings with reduced costs, eliminating entry barriers to saving.

Moreover, they deliver efficient financial advice that serves the interests of both customers and financial institutions. These technological solutions enhance the traceability of investments and remain accessible 24/7. Their scalability and efficiency render them invaluable tools for acquiring and placing financial products and services.

Fintual in Chile operates as an investment platform, delivering automated investment advice through a business model based on robo-advisors. This approach ensures customers receive tailored investment recommendations.

Product Comparison Platforms

Within the industry, platforms designed for product comparison play a pivotal role in helping customers identify financial products that precisely meet their requirements. Additionally, these platforms provide financial institutions with elevated visibility and valuable opportunities for strategic product placement in a fiercely competitive marketplace.

Illustrating innovation in this area is "Mi Mejor Crédito" in Colombia, a digital platform committed to comparing and advising users based on the prevailing banking offerings, taking into account their profile and needs. Leveraging public data supplied by banks to the Financial Superintendence of Colombia, this platform employs a banking comparison algorithm to steer users toward the optimal option based on their profile and financial needs.

Smart Contracts - Blockchain

In the industry, "Smart Contracts" are computer programs based on blockchain technology that simplify and streamline processes such as loans and payments. These programs automatically execute agreements and transactions when predefined conditions are met, eliminating the need for intermediaries. By doing so, smart contracts pave the way for automation and transparency, leading to not only cost reduction but also a significant acceleration of financial transactions.

These computer programs operate on the blockchain, activating the terms of a contract once the mutually agreed-upon conditions are verified. This contributes to enhancing the efficiency and effectiveness of conventional manual processes, which tend to be costly in the industry.

BNP Paribas, a European bank, has embraced smart contracts in the securities lending market to automate transaction settlements. Developed in collaboration with Digital Asset in 2020, their blockchain-based securities lending platform utilizes these smart contracts to facilitate a secure and efficient exchange of assets among market players. This initiative is notable for its innovation and its potential to enhance efficiency and transparency in financial operations, illustrating how banks leverage smart contracts to transform their practices.

PFM – Personal Financial Manager

The personal finance manager is a helpful tool for users to understand their financial situation and manage money effortlessly. It allows users to take charge of their finances, gain insights into spending habits, and set financial goals. Many PFMs use artificial intelligence (AI) to provide personalized recommendations and financial advice based on user behavior.

As Open Banking evolves in Europe, Wells Fargo's Greenhouse emerges as a standout PFM. Its robust features include expense and goal tracking, earnings notifications, and reminders for payment dates. Notably, it excels in the management of two distinct accounts — one dedicated to fixed expenses and another to variable expenses, delivering heightened financial control. Users can further exercise control by setting weekly spending limits, encouraging a more thoughtful utilization of their debit cards.

Study Case: Coomeva

Location

Colombia

Company

Products & Services

Products:

- Microcredits.
- Insurance.
- Commercial loans.
- Digital banking services.

In Colombia, Coomeva CoopAC stands as a cooperative financial institution with a central objective of advancing the economic well-being and living standards of its members. CoopAC Coomeva is dedicated to providing a comprehensive array of financial services, including savings and credit products, alongside various other related financial offerings, to its associates.
As a cooperative, CoopAC Coomeva sets itself apart from mainstream banks by prioritizing the mutual benefit of its members rather than shareholder interests. Members, serving as owners, play an integral role in the institution's key decision-making processes.[a]

Customers	Offices	Assets
261,407	84	$ 2,500,344,084 USD

Exchange rate, Banco de la República Colombia $4,359.4 as of October 6, 2023.

Study Case

Over the past seven years, CoopAC Coomeva in Colombia has undergone a comprehensive Digital Transformation. This encompasses the streamlining of financial services through the implementation of online platforms and mobile applications, the incorporation of advanced technologies to ensure secure transactions, the promotion of online financial education for members, and a significant enhancement in operational efficiency. Moreover, the cooperative has upheld its commitment to social responsibility, using technology to support community and sustainable development initiatives. This transformation underscores CoopAC Coomeva's unwavering dedication to innovation and its ability to adapt to the evolving needs of associates in the Colombian cooperative financial sector.

Problem To Be Solved

The institution aimed to enhance the financial inclusion of microenterprises and entrepreneurs in rural and remote areas. CoopAC Coomeva grappled with a limited technological infrastructure, posing challenges for microenterprises and entrepreneurs to access financial services. Throughout 2021, the Corporate Management of Technology and Digital Transformation (GCT&TD) and its associated teams in various companies faced the unique challenge of executing technology platform projects entirely in a virtual environment. This unprecedented experience, given its comprehensive nature, significantly influenced the operations of all group companies and services.

Implemented Solution[b]

The institution began with Digital Transformation through a series of projects addressing the challenge faced by GCT&TD:

Golden Record: The construction of services for updating information on associates, customers, and users across any channel reached 100% progress, aligning with the data governance policies of the Coomeva Group. This framework will form the basis for the Single Customer, with updates already underway for Coomeva, Bancoomeva, Corredor, and Medicina Prepagada.

Crediasociado: MiCoomeva Web is now home to the web version of the platform, providing an alternative access channel alongside the MiCoomeva App. The Digital Delegate Election System (Sistema digital de elección de delegados) further modernized the process by introducing skill inquiries through channels like WhatsApp and Mi Coomeva.

Zero Paper (Cero Papel): The partner membership platform underwent various updates, not only enhancing its usability but also focusing on gathering additional information. This improvement supports the generation of more targeted offers to associates through interactions with the sales force. Furthermore, successful integration with the Coomeva Medicina Prepagada (Prepaid Medicine) product was achieved.

Referrals - Red Cooperamos: As the program evolved, several improvements were introduced, encompassing changes to the referral extract, enhancements in the graphical representation of referrals, and upgrades in authentication methods.

Assisted Digital Membership (Vinculación Digital Asistida): During the trial phase, the identification and validation solution, featuring facial biometrics, underwent successful testing and implementation. Notably, it is integrated with the digital membership project, marking the Coomeva Group's pioneering use of this technology across channels.

Digital Onboarding: Facial biometrics for identification and authentication were successfully integrated into the Coomeva Group, with the digital membership service leading as the pioneer in adopting this cutting-edge technology.

Cloud Contact Center: The Coomeva Group has successfully implemented a cloud-based system, enabling Contact Center agents to be connected to the cloud. This not only enhances growth opportunities but also provides exceptional flexibility to the service.

Results Obtained[c]

- Each of the mentioned projects contributed to the success of the MI Coomeva app, the digital embodiment of the Coomeva Group's comprehensive integration strategy. The app recorded an impressive 43,003 downloads, surpassing the 2021 goal of 40,000.
- Another significant accomplishment was the Virtual Store, achieving a remarkable USD 157,361 in gross sales. This surpassed the 2020 figure by USD 45,877 and comfortably exceeded the targeted goal of USD 126,164.
- There were three standout days, each exceeding sales of USD 1,146.
- The number of microenterprises and entrepreneurs served by CoopAC Coomeva increased, accompanied by a reduction in service expenses.

Sources:[a] Coomeva, 2023, https://www.coomeva.com.co/publicaciones/278/conocenos/
[b & c] Informe Annual Coomeva 2021, Coomeva, 2021. Informe Anual Coomeva 2022, Coomeva, 2022. Tipo de cambio Banco de la república Colombia $4,359.4 al 6 de octubre 2023.

4.1.2.4 Solutions for Transactionality, Support, and Service

In the financial sector, Digital Transformation has prioritized enhancing customer experience and operational efficiency through two main avenues. Firstly, by empowering more digital and self-service channels, and secondly, by automating key operational processes.

Enabling Digital Transaction Channels

Transaction channels serve as platforms enabling customers to conduct various financial transactions and manage their accounts, banking products, and services. These digital-powered channels ensure efficient transaction processing. Notable examples include:

Online Banking: It involves online portals that grant customers access to their bank accounts, enabling transactions like viewing balances, transferring funds, paying invoices, managing investments, and more.

Mobile Banking: Mobile apps empower customers to access and manage their accounts seamlessly through smartphones and tablets, ensuring both comfort and accessibility.

Notifications and Communications

Critical for transaction alerts, payment date reminders, and two-factor authentication (2FA) via message codes, notifications are indispensable for ensuring transaction security and keeping customers well- informed. Their ability to be tailored is especially valuable in reaching underserved populations, thereby fostering financial inclusion. Examples of notification types encompass:

SMS Notifications: Their standout features include rapid communication, widespread accessibility, and a high degree of personalization.

Notifications via WhatsApp: They enable banks to communicate effectively with their customers on a daily basis.

CRM Systems with Push Mailing: For delivering exceptional customer service, this channel plays a vital role by automating processes and ensuring the delivery of specific and timely communications to the right individuals.

BBVA employs Push Mailing to keep customers informed about their transactions, balances, and bank alerts. Additionally, the bank uses highly personalized automated response systems to address individual inquiries from its customers.

Geolocation Notifications: Using geolocation, these notifications are alerts or messages sent to users' mobile devices in real time. They inform customers about offers, promotions, events, or services linked to financial institutions when they are near a branch, ATM, or other specific location.

Brubank, an Argentine fintech, leverages geolocation notifications to provide users with real-time information on discounts available at nearby restaurants, shops, and services.

Automation Levels

These solutions are validated through three dimensions, based on their level of automation:

Manual Solutions: Entail human-powered intervention to handle customer inquiries effectively. An illustrative case involves employing an online chat feature, where a customer service representative actively responds to users' queries.

Batch Automation: Delivers automated responses based on specific requirements. For instance, customers might receive scheduled email replies. Although effective, this technology exhibits limitations in incident response processes. In cases like acquiring solutions for micro-commerce, the absence of an immediate communication channel may pose challenges, particularly when relying solely on a digital collection solution.

Consider a scenario where a micro-merchant encounters an issue with their point-of-sale (POS) terminal and sends a notification. The response time of up to one day could lead to lost revenue and substantial challenges. In situations like these, relying solely on automation might not be the optimal solution, requiring a more immediate and personalized approach.

Real-Time Solutions: Deliver support with immediate responses. A notable case is "WhatsApp Banking," presenting customers with an automated yet seamless experience for swift and secure communication with the bank, accessible around the clock. This ensures immediate responses to queries while maintaining the security of interactions, resulting in heightened efficiency and increased customer satisfaction.

Signatures for Operations and Biometric Signatures

Transaction signatures encompass the authorization and validation processes employed to affirm the authenticity and legality of financial transactions, encompassing fundamental operations like fund transfers. Specifically in transfer scenarios, the signature serves as confirmation that the individual or entity initiating the transfer possesses the requisite authorization, ensuring compliance with established policies and regulations.

Conversely, cutting-edge solutions leverage biometric signatures, using unique physical features like fingerprints, facial recognition, or voice characteristics to authenticate customers and authorize transactions. This introduces an extra layer of security and authentication in financial transactions.

Banesco, in Venezuela, stands as a prime example, seamlessly integrating facial biometrics into its mobile application for secure customer authentication and authorization of diverse financial operations.

Digital Scheduling Banking

Digital Scheduling Banking represents a groundbreaking advancement in the way customers and financial entities engage. Through apps and online platforms, clients gain the ability to schedule virtual appointments and meetings with bank advisors, introducing a new era of flexibility in managing financial interactions. This solution not only provides clients with personalized planning and interaction management but also allows financial institutions to streamline resources, cut operational costs, and fortify customer relationships. This leads to an elevated level of customer satisfaction and loyalty.

Bancolombia takes digital scheduling to new heights through its mobile application, providing users with the ability to schedule appointments at branches for transactions and financial assistance. The app simplifies the process by allowing users to easily select their preferred service type, branch, and time, followed by a prompt email confirmation. This digital solution elevates service efficiency and resource management in branches, delivering a convenient experience for users.

Tokens for Transactions and "Tokenization" Queries

In the financial sector, tokenization emerges as a critical technological solution, playing a key role in securing and maintaining the integrity of digital transactions.

Tokens prove particularly valuable in handling sensitive transactions or interactions. The underlying technology facilitates the creation of processes with or without validation, primarily employed in high-value transactions or those involving SMEs.

Additionally, through the replacement of sensitive information with random digits (tokens), this technology serves as a robust defense against fraud, safeguarding user data. This dual function not only simplifies the purchase process, thereby improving the user experience, but also diminishes the risk of transaction rejection. Moreover, by validating operations, it adds an extra layer of cybersecurity, establishing itself as a pivotal tool in the evolving realm of digital payments.

Banco Itaú showcases innovation with the effective use of "iToken" to validate digital transfers on its application and website. This method, requiring just the token for validation, brings numerous benefits, including swift verification, a straightforward process via SMS or email, and an enhanced level of security ensuring the safety of transactions.

Within the scope of financial inclusion, the adoption of tokenization technology faces complexity, especially in the microfinance sector where it has not gained widespread acceptance. Successful implementation demands significant infrastructure development and educational initiatives from both institutions and customers. Vulnerable populations, in particular, may encounter challenges in understanding and using these tokenization systems, potentially restricting their access to safe and efficient financial services.

Digital Totems

Digital totems stand as technological devices providing financial services in physical locations, including bank branches and customer service centers. These user- friendly kiosks empower customers to independently perform transactions and checks without the necessity of interacting with a bank employee.

The array of services offered by digital totems includes check deposits, cash withdrawals, balance checks, bill payments, and statement printing. These devices not only ensure a convenient experience for customers but also assist financial institutions in optimizing branch management and human resources.

Banco Nacional de Costa Rica (BNCR) has integrated digital totems into its branches, empowering customers to independently conduct a range of banking transactions. These transactions include cash withdrawals, bill payments, and transfers between accounts.

Study Case: Fundación Microfinanciera hermandad de Honduras, OPDF

Location

Honduras

Products & Services

- Microcredits.
- Financial Services.

Company

FUNDACIÓN MICROFINANCIERA HERMANDAD DE HONDURAS, OPDF

Fundación Microfinanciera Hermandad de Honduras (OPDF) operates as a non-profit organization, providing financial services to micro and small entrepreneurs. Their mission revolves around enhancing living standards, emphasizing best practices, supporting the financial inclusion process, and adopting a client-centered approach. HDH extends its services across the Western and Central regions, boasting a network of 16 branches and six counters nationwide, strategically located in departments like Ocotepeque, Lempira, Copán, La Paz, Intibucá, Comayagua, Santa Bárbara, and Corté.

Offices	Assets
22	$ 69,452,527 (USD)

Exchange rate, Central Bank of Honduras
L24.76 as of October 3, 2023.

Study Case[a]

The institution has successfully introduced HDH Móvil Dónde tú Estás, a highly configurable mobile operating tool accessible via mobile devices (tablets) and the Internet. This tool facilitates the seamless service of HDH customers in the field. With a central management console and web operation capabilities, HDH Mobile operates efficiently in both agencies and the Main Office. The system incorporates the institution's primary credit and operational policies and regulations, ensuring accuracy in information input to the central system and expediting administrative and institutional control processes.

Problem To Be Solved

The institution faced substantial challenges in delivering timely and personalized services tailored to customer needs, all while optimizing operating costs. Aiming to enhance financial inclusion and adapt to a dynamic market environment, the primary hurdle was the necessity for a profound transformation of its business model. This transformation called for internal cultural shifts and a comprehensive review of the institution's relationship with its customers.

Implemented Solution[b]

It has implemented a Digital Transformation strategy that included the integration of HDH mobile application: The new HDH Móvil application was integrated into the institution's central information system. This integration empowers customers to access and use financial products and services with enhanced agility and efficiency.

Results Obtained[c]

- The Digital Transformation implemented yielded significant outcomes:
- Reduced by 83.3% the disbursement processing times, which improved operational efficiency.
- Achieved a 24% increase in the average number of customers served by a business advisor, resulting in expanded service coverage.
- Reduced the number of customer visits by 75%, which optimized resources and operational costs.
- Continuity in the provision of services without major interruptions during the pandemic, which demonstrated the institution's adaptability.
- Improved financial inclusion and customer experience, which strengthened the long-term relationship with customers and the institution's position in the Honduran financial market.

Sources: [a, b & c] Transformación digital responsable, el caso de Fundación Microfinanciera hermandad de Honduras, OPDF, Raúl Gómez-Velazquez, 2021, https://sptf.info/images/REC-ESP-SPTF-HDH-Transformacion-Digital-Responsable-Final-es.pdf

4.1.2.5 Innovative Products

Currently, the ongoing evolution of technology has significantly transformed the way we address fundamental needs such as savings, credit, and insurance. While these needs have maintained their core essence, technology has spurred a reinvention, reshaping how they are fulfilled in five crucial ways.

Product customization: Customization has evolved into a fundamental element of innovation, enabling users to shape products uniquely to suit their individual needs. Take, for instance, the ability of customers to choose specific features for their savings or insurance plans, providing flexibility.

Products right at the time of purchase: Technology has made financial products universally accessible, placing them directly at the customer's location and moment of need. This enables consumers to effortlessly secure financial products, such as insurance for a newly purchased item, right at the point of purchase, ensuring a smooth user experience.

Simplify and streamline contracting: Streamlining contracting processes has become a priority. Technology has cut down on paperwork and waiting times, providing customers with quick and easy access to financial products. This could involve instant credit approval or immediate activation of insurance.

Versatility and comprehensiveness: The combination of solutions and products has reshaped the financial landscape. Customers now have the ability to combine various financial services into a single comprehensive package. For instance, consolidating savings, investments, and insurance into a unified solution offers unmatched convenience and efficiency.

Smaller amount products: The optimization of internal processes within financial institutions has paved the way for the development of profitable "smaller amount" products. This approach enables customers to access smaller- scale financial services in a feasible and cost-effective manner, playing a pivotal role in expanding access to a broader population.

The transformation and evolution of product design due to digitalization are evident in the emergence of new financial products, including BPNL, cryptocurrencies, and contactless payments, among others. These innovations are responsive to changing demands, specific population groups, and the opportunities presented by advancing technology.

This evolution has created opportunities to enhance financial inclusion for various segments of vulnerable populations. For instance, in the context of the silver economy, retirement planning is improved using predictive models and savings calculators to assess future needs. Moreover, specialized apps and platforms designed for senior citizens simplify financial management and provide secure access to services and transactions.

Banco Santander has successfully implemented the "Santander Senior" initiative, concentrating on delivering personalized and age-friendly banking services for this particular audience. The program includes financial advisory services, discounts on products and services, as well as training activities. The overarching goal is to offer a banking experience tailored to the unique needs of the senior population.

4.2 Benefits and Impact of Digital Transformation

4.2.1 Benefits of Digital Transformation for Financial Inclusion: A Social Perspective

Financial inclusion stands as a powerful tool for realizing the Sustainable Development Goals (SDGs), with the financial sector wielding a pivotal influence on both individual lives and the societal fabric. Notably, the digitalization of financial services has emerged as a potent force driving progress across a majority of the SDGs. In broad terms, Digital Transformation across all sectors significantly impacts the 17 SDGs, aiming to tackle global challenges and enhance the quality of life for people worldwide.

In our examination of the impact of Digital Transformation in the field of financial services, we have identified 13 Sustainable Development Goals (SDGs) that are significantly influenced.

Figure 34: Sustainable Development Goals Impacted through Financial Inclusion

Source: United Nations Sustainable Development Goals and targets

No Poverty

Digital solutions contribute significantly to enhancing the financial management of vulnerable populations, fostering efficiency and transparency in money flow. Offering services like remittance transfers, investment opportunities, digital payments, savings, insurance, and social work, these solutions play a crucial role in stabilizing incomes and fortifying resilience to economic crises.

The pandemic prompted the use of digital infrastructure to extend social security programs and facilitate quick access to credit for small businesses, making a substantial impact on poverty reduction. Notably, Peru responded to the crisis by implementing inclusive digital solutions, introducing electronic payments for the universal family allowance through digital wallets such as BIM, Tunki, and Yape.[62]

Zero Hunger

Digital innovation opens doors for small farmers, providing them with opportunities to access superior agricultural inputs, connect with new markets and value chains, and enhance efficiency and transparency. Furthermore, it enables the elimination of intermediaries, streamlining transactions to boost productivity and fortify resilience against economic and climate crises.

In Peru, the AGROS initiative stands as an exemplar, offering farmers access to traceability systems, lucrative markets, credit, and agricultural insurance based on satellite images. The initiative also provides remote advice from specialized advisors and a range of other 100% online services, aiming to enhance production and facilitate connections with consumers.[63]

[62]https://www.gob.pe/11377-cobrar-bono-familiar-universal-por-billetera-digital
[63]https://agros.tech/index.html

Health and Well-being

The digitalization of wage payments not only streamlines processes but also reduces costs and enhances transparency in health programs. Moreover, by granting individuals and households easier access to financial services, their susceptibility to catastrophic healthcare expenditures is diminished, thereby increasing the likelihood of purchasing medicines and using formal health facilities.

Sofia, in Brazil, represents an insurtech aiming to revolutionize users' health habits through technology integration. The platform offers tailor-made insurance solutions and incorporates online payments seamlessly into the purchase process.

Quality Education

The advent of digital financial services unlocks opportunities to make education more accessible, providing essential tools for funding educational expenses. Through cost reduction and increased convenience, digital savings, loan, and remittance products empower individuals to accumulate funds seamlessly, catering to various education-related expenses.

Additionally, students can leverage digital financial services, coupled with online learning platforms, to purchase additional study material, often through pay- as-you-go plans. In Chile, platforms like daleProfe facilitate shared financing or crowdfunding through online fundraising, where both small and large investors contribute to individuals planning educational projects focused on vulnerable populations.

Gender Equality

Digital technologies, with their lower costs and efficient distribution channels, have paved the way for the development of financial products tailored to address women's needs. These include payments, savings accounts, and credit options, creating inclusive market opportunities. This empowerment allows women to access financial services, make informed decisions about their money, and contribute to gender equality in the region.

ProMujer stands out in Latin America for its innovative approach, having designed and launched a digital platform dedicated to women. This platform offers essential business resources, mentoring, and financial training, with the overarching goal of fostering financial inclusion with a specific focus on gender.

Clean Water and Sanitation

Digital financial services enable efficient payments and reduce collection costs. A prime example is the convenience offered by digital wallets, allowing users to save and pay for water and sanitation services seamlessly. This facilitates access to crucial resources for local communities, ultimately leading to lower rates for users. The digitalization of these processes contributes significantly to ensuring broader access to clean water and basic sanitation, enhancing living standards and advancing environmental sustainability.

For instance, the organization Water.org identified a unique opportunity in Mexico by collaborating with microfinance companies to introduce tailor-made financial products for water and sanitation solutions, exemplified by the innovative WaterCredit initiative.

Affordable and Clean Energy

Digital financial services are facilitating access to energy services, especially in remote or underserved areas. An example is the implementation of prepaid metering solutions and smart meters, empowering individuals to make open-ended and remote payments for their power consumption. These cost-effective digital payments contribute to reducing the overall costs associated with power access.

Edenor Digital in Argentina is a noteworthy example designed to enable individuals to purchase electricity based on their needs and financial capabilities. Users can conveniently recharge their electric meters remotely, providing greater flexibility in payment and preventing sudden power outages.

Decent Work and Economic Growth

Digital payments are instrumental in empowering financial inclusion, encouraging both the ownership and active use of bank accounts. The digitalization of wages provides workers with access to value-added financial services, encompassing bill payments, online shopping, international money transfers, and the opportunity to build a credit history.

The transition from cash payments to digital wages has transformative potential, enhancing payroll management efficiency, formalizing payments for increased access, and driving financial inclusion. An exemplary case is Druo, a next-generation payment network facilitating seamless collection and direct payment to bank accounts. In Colombia, Druo's partnership with Nequi extends payroll payments through digital wallets, making a significant contribution to advancing financial inclusion[64]

[64]https://druo.com/es-co/druo-amplia-su-cobertura-de-red-para-pagos-cuenta-a-cuenta-hacia-cuentas-nequi/

Industry, Innovation, and Infrastructure

The productivity and growth of SMEs are experiencing a positive transformation through digital financial services. These services not only offer financing and streamline loan applications but also leverage alternative data for credit decisions. Additionally, SMEs can harness the capability to accept payments via mobile devices from any location, resulting in cost savings from manual transactions and expanding their geographic reach.

Mendel, a fintech based in Mexico, empowers companies by offering them the tools to digitalize, monitor, and enhance their financial operations. Furthermore, Mendel provides access to both physical and virtual cards without any issuance cost.

Reduced Inequalities

Digital technologies are instrumental in minimizing the costs of short-term loans, ensuring increased accessibility and affordability for low-income households. Through process automation, digital disbursements and refunds, and digital underwriting, credit acquisition becomes more straightforward.

Digital financial services are empowering low-income individuals by equipping them with tools like digital remittances, formal savings accounts, and access to credit. These tools enhance their resilience during emergencies and income crises, contributing to the reduction of economic inequalities. Ualá in Argentina is a prime example, offering convenient and cost- effective financial solutions to the unbanked sector through its digital platform.[65]

[65] https://www.uala-abc.com

Sustainable Cities and Communities

Digitalization, seen in smart cards and mobile applications for public transport payments, not only enhances transport access and efficiency but also diminishes dependence on cash, promoting sustainability. Furthermore, digital financial services, such as micro mortgages, actively contribute to addressing homelessness in informal settlements, offering affordable financing for secure and sustainable housing.

The progress in technology contributes significantly to enhancing the efficiency, sustainability, and accessibility of cities. A prime illustration is Bogotá, Colombia, where the introduction of a smart card system enables citizens to pay for bus fares, streamlining transactions and reducing the reliance on cash. This initiative significantly contributes to the efficiency and sustainability of the city's transport system.

Climate Action

Digital financial services, including savings, lending, insurance, and payment products, hold the potential to encourage and reward climate action at the local level. By accessing these services, households and businesses can invest in the skills, assets, and practices essential for participating in the transition to low-carbon economies.

Digitalization plays a significant role in mitigating climate change and adapting to its impacts by facilitating the financing of climate efforts. Unergy serves as an example, illustrating a regional initiative that leverages sustainable and digital investments based on cryptocurrencies to bring clean energy.[66]

[66] https://unergy.io/protocolo

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

Peace, Justice, and Strong Institutions

The use of digital payments brings efficiency to public resource management by reducing misapplications and implementation costs. It facilitates enhanced monitoring of social protection programs, ensuring a more stringent use of public funds. The transparency and security inherent in digital channels also act as a deterrent to corruption in payment and collection processes, presenting an opportunity for governments to achieve substantial savings.

Brazil's "Bolsa Familia" program showcases the use of digital payments to reach low-income families. This implementation has been instrumental in reducing corruption, enhancing transparency, and optimizing the efficiency of social benefits distribution.

Digital Transformation has become an imperative force driving financial inclusion, aligning with the achievement of Sustainable Development Goals (SDGs) linked to the benefits of financial inclusion. In the financial sector, the application of technologies is not an option but an obligation for all market players. The process of Digital Transformation in finance should be gradual and accompanied, ensuring a seamless experience without disruptions due to a lack of digital education. Enabling digital channels, while essential, should be approached cautiously to avoid restricting physical channels, particularly for the silver economy segment.

The integration of new technologies in the financial sector brings significant benefits for financial inclusion, all centered on the concept of agility. Notably, the impact can be highlighted in terms of:

- Greater efficiency in products/services due to the integration of process automation (RPA), which has a direct impact on the profitability threshold;
- Enhanced personalization of products/ services, spanning savings, credit, payments, and other areas, leveraging AI-optimized models and deeper customer insights;
- Exponential channel capillarity within generated ecosystems by standardziding API usage; or
- Round-the-clock channel accessibility, facilitating digital functionality development. These are a few examples of the advantages conferred by Digital Transformation.

The modernization of core banking, the technological heart of financial institutions, significantly influences time to market and time to experience. Implementing Digital Native Technology Architectures serves as a multiplier effect, enhancing the resilience of companies.

Despite the undeniable impact of Digital Transformation on financial inclusion, there remain substantial challenges that need resolution, including issues like network accessibility and the economic realities within the segment.

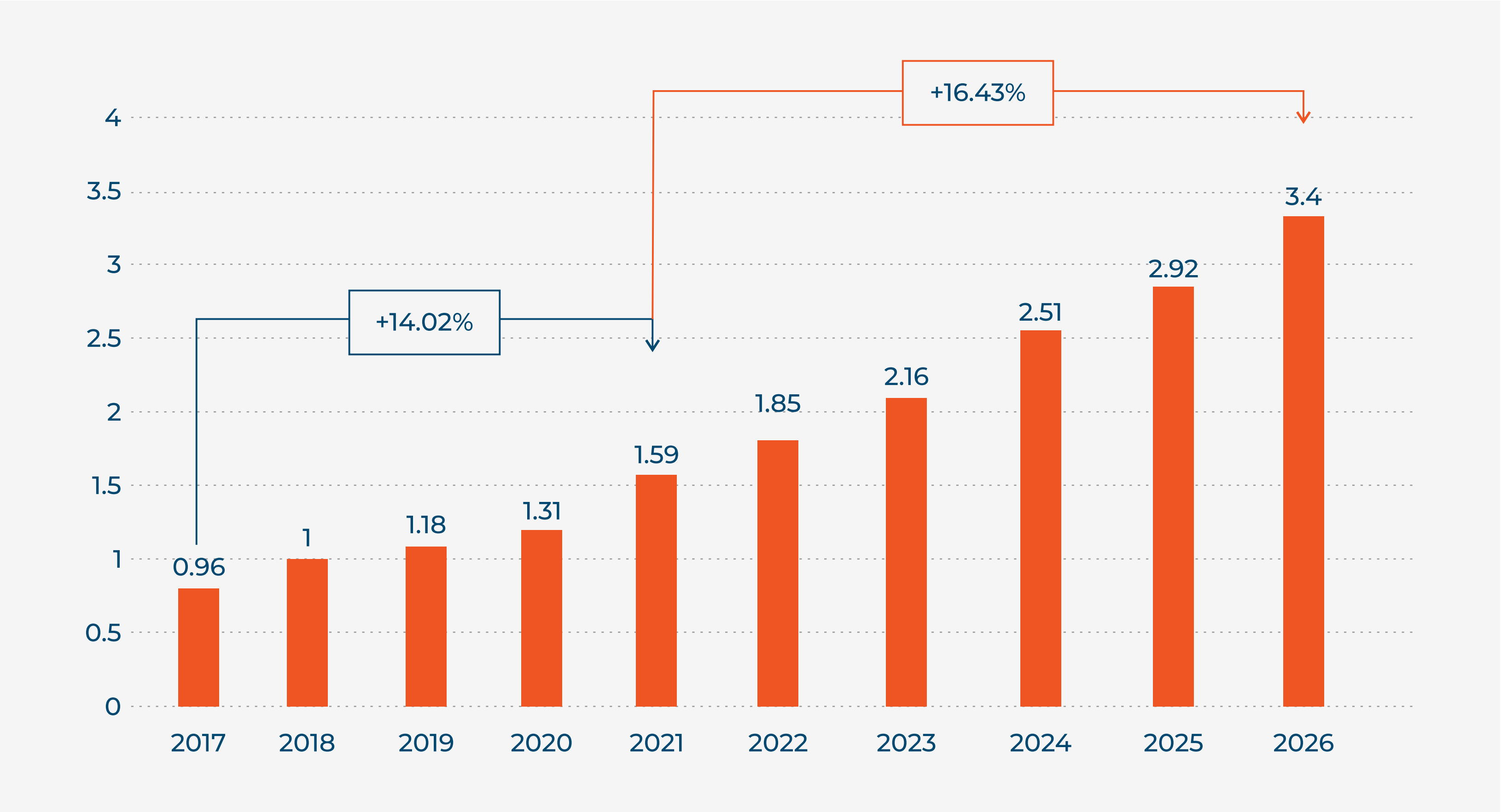
4.2.2 Digital Transformation as a Driver of Financial Inclusion

Digitalization significantly impacts the delivery of financial services and the fundamental operations of organizations. On one side, it enables the agile provision of services, extending reach beyond physical constraints, and ensures 24/7 availability. Meanwhile, internally, digitalization simplifies operational processes, replacing intricate procedures with more efficient solutions, thereby streamlining decision-making.

As outlined in Chapter 3, our study underscores the pivotal role of digitalization as a catalyst for financial inclusion. The integration of technology has a profound effect in surmounting challenges, with benefits reaching diverse groups. These advantages encompass areas such as improved access to financial services, product simplification, and the promotion of financial education, among others.

A critical aspect in realizing the potential benefits of Digital Transformation for financial inclusion rests on the shoulders of a key player: financial institutions. Their focus on the implementation of these technologies is paramount. The way these entities adopt and adapt technological solutions can significantly influence the creation of simpler, more transparent, and accessible financial services. Nonetheless, Chapter 3.6 outlines substantial challenges, such as employee resistance to change, high costs associated with technology implementation, and the need for digital talent.

Figure 35: CAGR Projection for Expenditure on Digital Transformation Technologies and Services Worldwide Until 2026



Source: Prepared internally based on Statista data

Following Statista's projections, it is anticipated that global spending on Digital Transformation will reach a substantial 3.4 billion dollars by 2026. The forecast indicates a growth of 16.43% between 2022 and 2026. This significant increase is attributed to the incorporation of advanced technologies, allowing organizations to streamline their processes and respond effectively to dynamic market changes. Digital Transformation not only advances operational efficiency but also holds a critical role in fostering business innovation. It empowers organizations to embrace change and creativity, unleashing their full potential in an ever-changing competitive environment.

This section delves into a thorough analysis of how Digital Transformation positions itself as a formidable driver of financial inclusion. It systematically breaks down and evaluates its effects on a diverse array of products and services. The essence lies in comprehending how Digital Transformation is restructuring the offerings of entities, thereby enhancing the value proposition extended to their customers.

Figure 36: Impacts of Digitalization on Financial Products

Source: Prepared internally

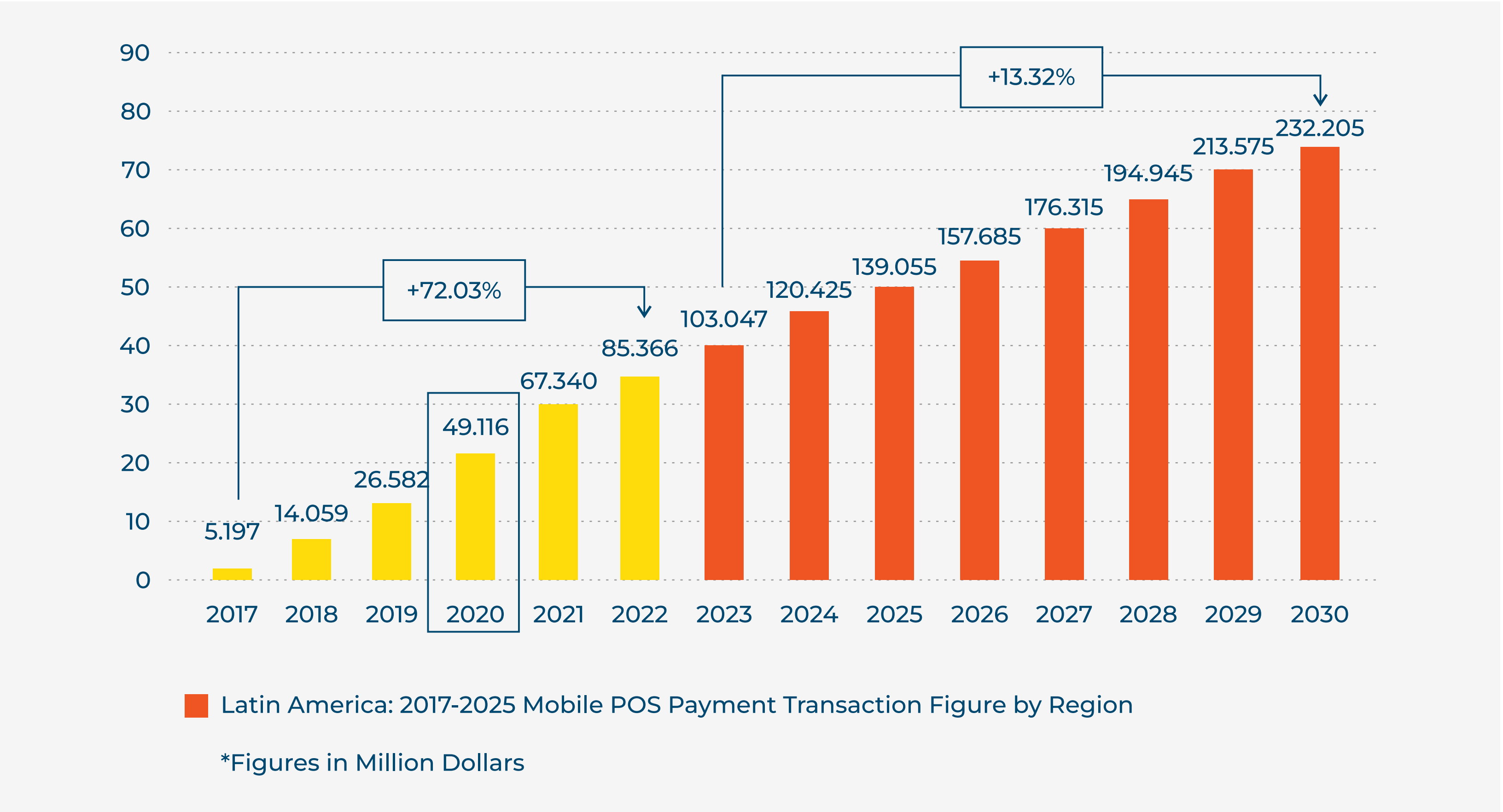
Digital Payments: Entrance to Financial System

Since 2018, there has been a substantial decrease in the use of cash for point-of-sale transactions in LAC, dropping from 58% to 31% by 2022. Conversely, digital payments conducted through digital wallets have exhibited significant growth, quadrupling from 3% to 13% during the same period.[67] This trend indicates a shift in customer behavior towards electronic payment methods and underscores the ongoing transformation towards a more digitalized economy, notwithstanding the existing challenges.

Emerging payment methods like real-time payment systems, QR code transactions, and mobile payments have garnered significant popularity. In 2020, the number of active mobile accounts witnessed an impressive 67% increase. The rise in the adoption of digital payments and financial services in LAC is evident through an expanding transaction volume, a trend anticipated to persist.

[67]FIS, Worldpay. (2021). GPR 2023: THE GLOBAL PAYMENTS REPORT (8th edition). https://www.fisglobal.com/-/media/fisglobal/files/campaigns/global-payments-report/FIS_TheGlobalPaymentsReport2023_May_2023.pdf?mkt_tok=OTc1LUJDVS03MDcAAAGPVXluqstqN3yUx8ikXt0xKnkPb8j81ifQF_MI-KehGf0iBOfUyM7oxVgUB25pPKGIUdhytNrLLbkqjls2iv6b27ZGdigxxp0HD6pOsXAIBuH3_w

Figure 37: CAGR Projection for Digital Transactions in 2030



Source: Prepared internally based on Global Findex 2021 data

The trend towards digital payments unfolds a valuable opportunity. Initiating early engagement with customers through basic financial products enables them to directly experience the advantages of using digital financial services. This initial interaction can serve as a pivotal opportunity to cultivate a long-term relationship with customers and stimulate increased adoption of digital financial solutions.

The challenge lies in executing continuous financial graduation — going beyond offering payment options and taking proactive steps at this point of contact to guide users in expanding their usage of financial services. Leveraging the convenience and efficiency of digital payments can act as a catalyst to help customers enhance their financial well-being and access a broader spectrum of financial services. Despite this, hurdles persist in the adoption of fundamental financial products like bank accounts or credit. Notably, approximately 45% of the Latin American population lacks a bank account, and around 80% does not possess a credit card.[68]

An impactful example of the financial graduation challenge unfolds in Brazil with the introduction of PIX, a digital payment system boasting an impressive user base of approximately 139 million. The magnitude of this adoption presents a substantial opportunity to expand the offering of financial services in the country. The efficiency and convenience of digital payments via PIX have become ingrained in the Brazilian population, facilitating over 40 million people to experience their first bank transfer. This establishes a solid starting point for introducing a broader range of financial services.

An additional significant factor in the payments field is the potential impact of Open Banking regulations on the adoption of digital payment methods. The regulatory opening to new market players, not strictly confined to financial entities, to introduce payment initiation solutions is anticipated to broaden accessibility even further.

[68] BID LAB. World Economic Forum. Mayo 2022.Acelerando los pagos digitales en América Latina y el Caribe. https://www3.weforum.org/docs/WEF_Accelerating_digital_payments_SP_2022.pdf

Savings: Short-term Liquidity

In the LAC context, the act of saving assumes a pivotal role in individual growth and well-being. However, only 63% of the population in the region engages in saving, with a mere 33% doing so regularly (as opposed to 67% who save sporadically). A significant portion, four out of ten individuals in LAC, acknowledges that their income barely covers daily expenses, hindering their ability to allocate funds for savings.[69] Low incomes and the resultant savings decisions pose a substantial challenge for digitalization and financial institutions in bridging the savings gap.

Microfinance institutions encounter a significant challenge in encouraging savings among vulnerable populations through targeted products. In countries such as Mexico, Colombia, Peru, and the Dominican Republic, cash remains the prevailing form of savings. Using digitalization and comprehending the savings needs and behaviors of these populations, institutions can modify their strategies and services to boost savings as a tool for enhancing financial security and long-term well-being. This entails creating accessible and user-friendly mobile apps to facilitate financial management and simplify the savings process.

Moreover, digitalization has the potential to improve the financial education of these populations, emphasizing the importance of saving and providing appealing incentives to encourage this practice.

Creating digital savings solutions not only increases customer interaction in their daily lives but also facilitates the formation of digital communities that encourage savings. Concurrently, these digital solutions allow for the development of gamified features. When combined with the transparency and real-time visualization of savings, these gamified solutions enhance customer motivation.

Building a savings culture starts from the ground up, initiated by financial education that elucidates the fundamental role of saving and its significance in long-term financial success. This educational aspect should be seamlessly integrated into the various digital solutions devised by entities. Cultivating a mindset of financial planning and instilling awareness of the importance of saving for accomplishing goals and managing unforeseen situations is imperative. Saving not only guarantees economic security but also enables individuals to capitalize on opportunities and construct a more stable future.

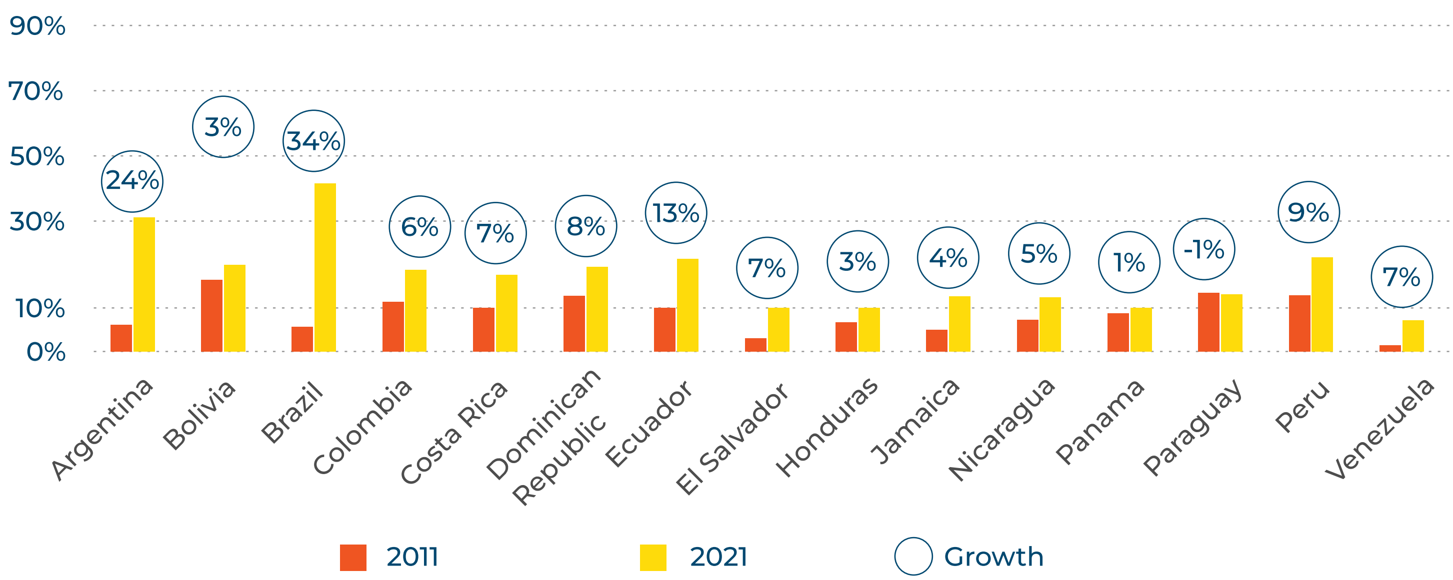
[69] VISA & Maru/Matchbox. (2021). Tendencias del movimiento de dinero en América Latina y el Caribe.: Estudio sobre el uso y las actitudes del consumidor en 2023. https://globalclient.visa.com/lac_moneymovement_sp?CM=LuzAdrianaRamirez&utm_source=eloqua&utm_medium=email-dients&utm_content=SP-landscape-subscription&utm_campaign=landscape2023&utm_source=linkedin&utm_medium=owned-social&utm_content=demandgen-thought-leadership_spa_issuers_customer-eloqua_targeted_single-image_1x2_blog-pg&utm_campaign=lac-lac-spa_consumer-products_q4-fy24_landscape

Table 2: Projected Increase in Digital Transactions by 2030

	Argentina	Brazil	Mexico	Chile	Colombia	Peru	Costa Rica	Dom. Rep.
1°	38% US$	49% Bank Account	50% Cash	51% Bank Account	55% Cash	44% Cash	48% Bank Account	50% Cash
2°	35% Cash	39% App	39% Bank Account	38% Cash	37% App	42% Bank Account	38% Cash	48% App
3°	33% Fixed-term Deposit	27% Cash	36% App	23% App	35% Bank Account	24% App	32% App	11% Fixed-term Deposit

Source: VISA. Trends of Cash Flows in LAC. Study on Consumer Use and Attitudes in 2023.

Figure 38: Percentage of Growth in Credit Use in a Financial Institution



Source: Prepared internally based on Global Findex data.

Credit: Access to Financial Opportunities

Access to credit serves as a crucial instrument for financial inclusion, empowering individuals and businesses to secure funds for various purposes, including investments in businesses, educational pursuits, and material acquisitions. Despite significant advancements in credit accessibility, as observed in countries like Argentina with a growth of 24% from 2011 to 2021 and Brazil with a growth of 34%, some countries continue to grapple with low rates of credit access. For instance, in countries such as Panama, there was only a 1% increase in credit access over the same period, and in Paraguay, there was a decrease of 1%.

Credit empowers individuals with increased purchasing power, the capacity to invest in personal and professional ventures, financial flexibility during times of necessity, and the prospect to establish long-term wealth. However, it is imperative to exercise responsible usage to prevent the accumulation of excessive debt and financial issues.

The significant challenge of expanding access to credit and supporting the sustainability of microfinance institutions is evident.

Digitalization presents solutions that facilitate financial institutions in reaching people who have traditionally experienced limited access to credit more effectively.

This involves establishing online platforms that streamline the loan application process and simplify approval procedures. Additionally, using alternative data and risk assessment algorithms aids in evaluating borrowers' creditworthiness more accurately and equitably. An intriguing example is the integration of geolocation technologies and mobile data to assess one's ability to pay. These technologies identify the geographical area where a person works or resides, allowing assumptions about average income levels to be established.

Conversely, digitalization facilitates the monitoring and efficient management of loans, promoting sustainability and ensuring borrowers' compliance with credit commitments. Through the adoption of digital approaches, microfinance institutions can play a pivotal role in economically empowering marginalized populations by offering responsible credit.

Smart Investing: Empowering the Region Towards a Secure Financial Future

According to a Visa study in LAC, the distinction between saving and investing is often blurred among the population. The study reveals that merely 36% of the population engages in investing, with fixed-term deposits and investment funds being the most favored investment methods. Investing entails allocating resources with the anticipation of profits, usually spanning a longer time horizon, and is directed towards medium and long-term financial objectives like retirement or home buying. It commonly involves assets such as stocks and bonds, presenting a higher level of risk and lower liquidity compared to saving.

The impact of digitalization on the evolution of investment products worldwide has been profound. In a majority of countries, the primary avenue for investment usually centers around traditional financial instruments such as stocks and bonds. The challenge presented by digitalization is to unveil a new realm of possibilities by incorporating features and functionalities that enhance the accessibility and attractiveness of these products.

Secondly, there is an increasing demand to create investment products using new technologies that enable a broader and more diverse audience to access investment opportunities. A notable example of this trend is the emergence of cryptocurrencies and digital investment funds, which are gaining prominence and securing top- ranking positions among investment options in various countries. Digitalization is democratizing access to investment opportunities, granting a more extensive audience the ability to engage in the financial market in a more straightforward and direct manner.

Table 3: Ways to Invest in some LAC countries

	Argentina	Brazil	Mexico	Chile	Colombia	Peru	Costa Rica	Dom. Rep.
1°	43% Fixed-term Deposit	35% Fixed-term Deposit	36% Investment Funds	36% Investment Funds	30% Investment Funds	28% Small Businesses	31% Investment Funds	24% Crypto-currencies
2°	39% US$	30% Investment Funds	23% App Interest	31% Fixed-term Deposit	29% Crypto-currencies	25% Fixed-term Deposit	24% Fixed-term Deposit	18% Real Estate
3°	34% Crypto-currencies	26% App Interest	19% Fixed-term Deposit	18% Crypto-currencies	23% US$	20% Crypto-currencies	23% US$	17% Interest-bearing Money Loans

Source: VISA. Trends in the movement of money in LAC. Study on Consumer Use and Attitudes in 2023.

Given that vulnerable populations often exhibit higher risk aversion, digitalization and financial entities face the significant challenge of providing financial education tools. These tools are essential in aiding individuals to make informed decisions in the realm of investments. Such solutions mitigate the fear of potential losses on less liquid investments.

In turn, access to online information and investment platforms empowers individuals to compare and assess various investment opportunities, analyze financial trends, and make more informed and strategic decisions.

Conversely, digitalization has streamlined the efficient management of investment portfolios. Automation and artificial intelligence enable individuals to receive personalized advice and recommendations tailored to their goals and preferences. This not only saves time but also empowers individuals to make more informed investment decisions while accessing these solutions at a reduced cost.

Insurance: The Vital Role of Protection in the Region

Regarding penetration in the life insurance segment, there is a cumulative growth of 28.0% over the decade spanning from 2011 to 2021. Particularly noteworthy are Chile (3.6%), Brazil (3.1%), and Colombia (3.0%), emerging as the countries with the highest levels of penetration in this segment for 2021. These figures markedly surpass the regional average of 2.98%.[70]

The impact of digitalization extends beyond the generation of digital attributes to the creation of new distribution models. This technological evolution is transforming the design, marketing, and management of insurance, promoting efficiency, and increasing accessibility for customers.

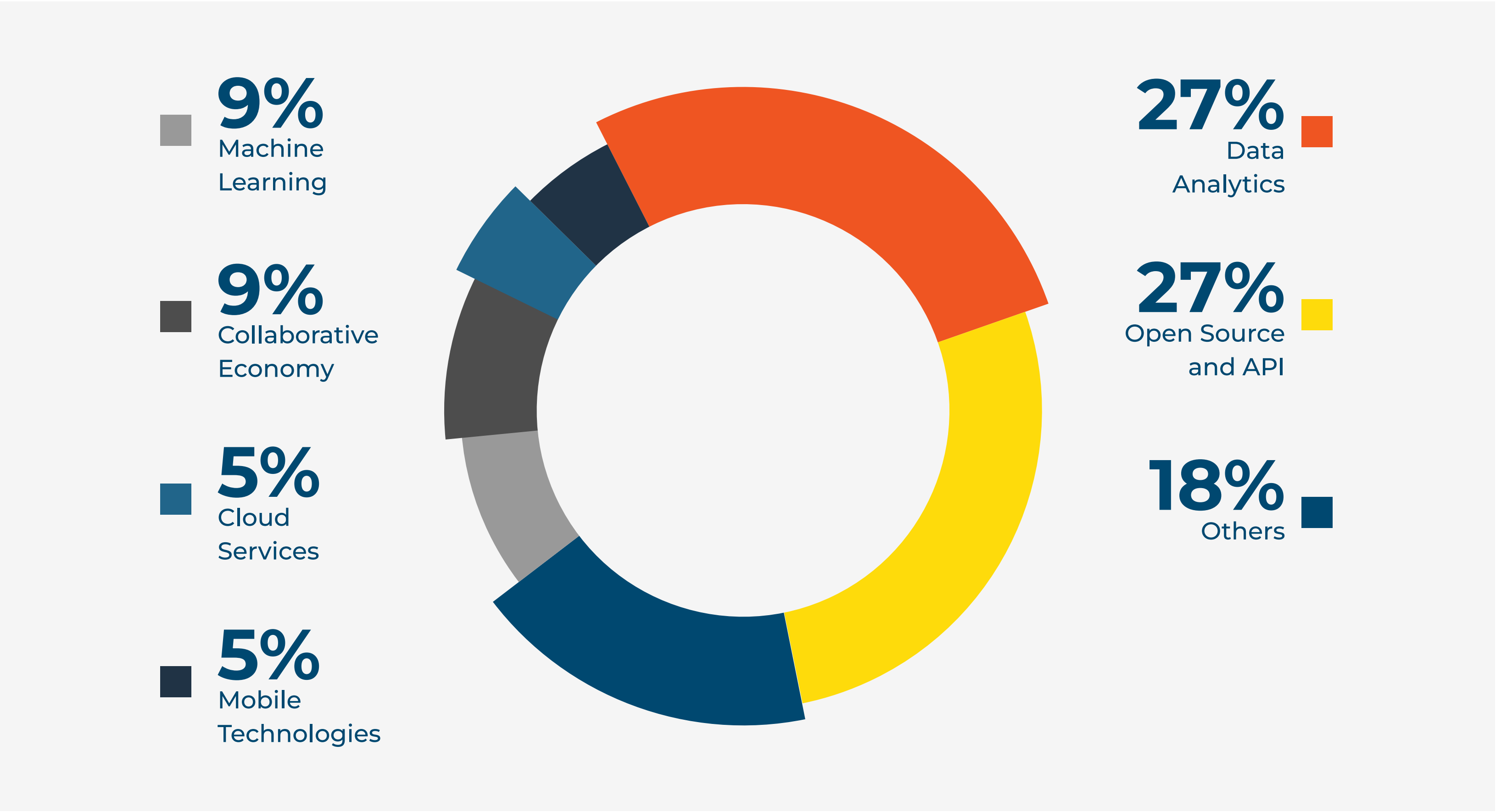
Personalization, efficiency, transparency, and security are attributes that have significantly influenced the insurance landscape. This translates into tailored policies, streamlined processes, heightened transparency regarding coverage, ongoing communication with insurers, cost reduction, and improved data security. These attributes not only enhance the customer experience but also enable insurers to operate more efficiently in the digital age.

[70]MAPFRE Economics (2022), El mercado asegurador latinoamericano en 2021, Madrid, Fundación MAPFRE. In: https://documentacion.fundacionmapfre.org/documentacion/publico/es/media/group/1116648.do

Accessibility to insurance has been significantly enhanced by digitalization. Through the use of online channels, insurers can now target a broader audience, simplifying the access to insurance services for a larger demographic. This holds particular importance for financial inclusion, offering individuals a more convenient and affordable means to access insurance protection.

An illustration of this transformation is the emergence of insurtech platforms that cater to the specific needs of the population. Additionally, Business-to-Business (B2B) models targeting financial institutions present an opportunity for the Digital Transformation of insurers. However, it is estimated that only 25% of insurers in the region have engaged in collaborations with insurtech start-ups, underscoring the need for further development of an ecosystem that encourages mutually beneficial strategic partnerships for both users and insurance providers.[71]

Figure 39: Technologies that Enable Innovation in Insurance Products in Latin America



Source: FINNOVISTA. IDB. IDB Invest. Fintech in Latin America and the Caribbean. A Consolidated Ecosystem for Recovery

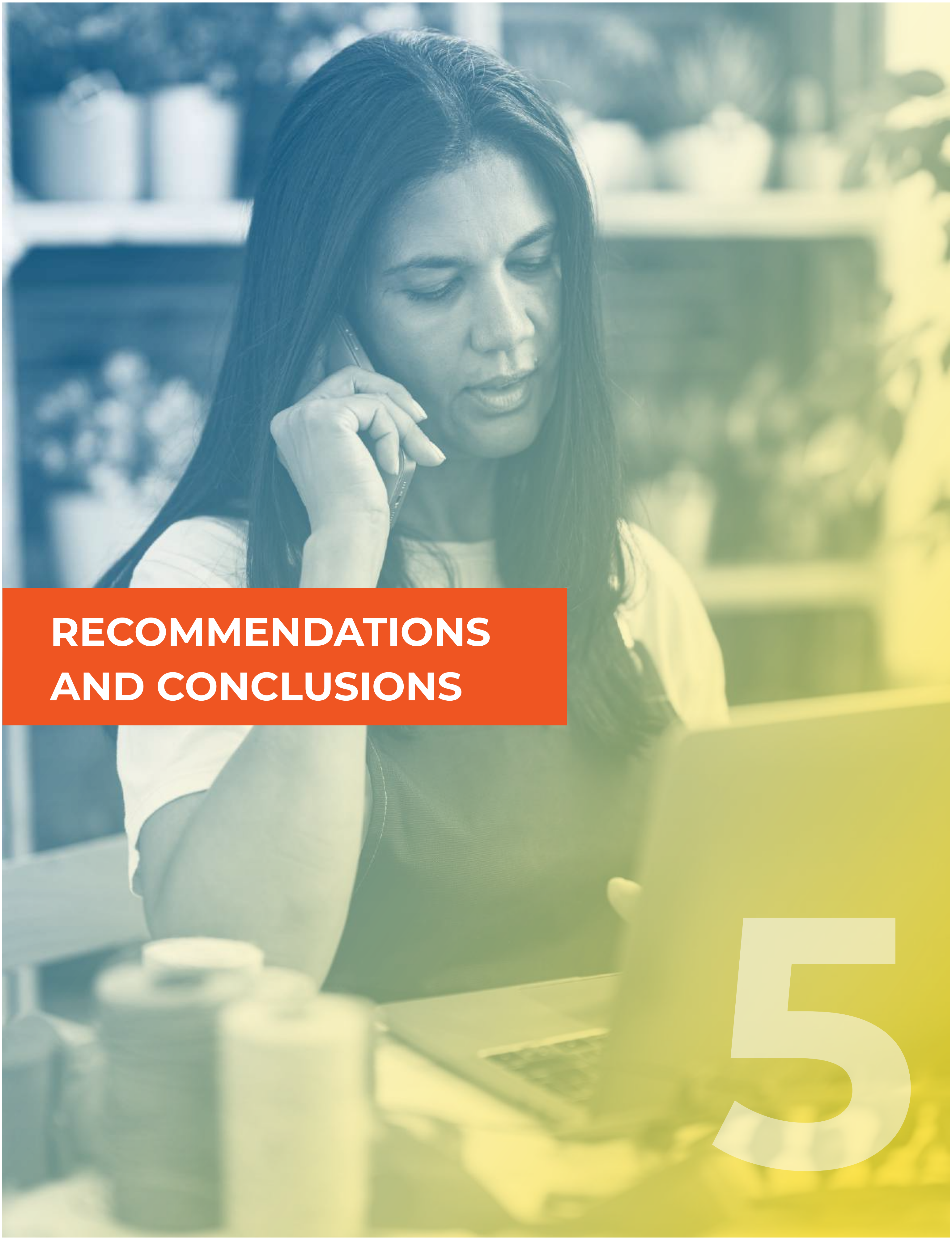
Innovation driven by digitalization is reshaping the insurance sector, leading to a heightened level of product customization for the population. Insurance, coupled with savings and investments, plays a pivotal role as financial instruments fortifying people's resilience to the impact of technology. This proves advantageous for a substantial part of the population in LAC. The ongoing Digital Transformation within insurance entities is enabling greater accessibility, efficiency, and tailoring to individual needs, facilitated by innovation and collaboration with financial institutions in the region.

[71]Fintech in Latin America and the Caribbean: A Consolidated Ecosystem for Recovery

In conclusion, the substantial growth in insurance penetration in Latin America over the past decade signifies an encouraging awareness of the importance of financial protection in a region susceptible to economic and environmental challenges. The pivotal role played by digital solutions in enhancing the accessibility, efficiency, and personalization of insurance has been instrumental in driving this increase in penetration.

However, it is essential to recognize that even with increased awareness of the importance of financial protection and the pivotal role of digital solutions in enhancing insurance accessibility, vulnerable populations in the region still confront significant barriers in accessing these services.

The persistent poverty gap and limited economic accessibility persist as formidable obstacles for many in Latin America. In many cases, families in vulnerable situations are compelled to prioritize immediate expenses like food and housing over investing in insurance. Consequently, this results in a lack of insurance coverage for those who need it the most, caught in a cycle where the pursuit of long-term financial protection is impeded by immediate needs.



RECOMMENDATIONS AND CONCLUSIONS

5

5.1 The Path to Digital Transformation in the Sector

5.1.1 Roadmap

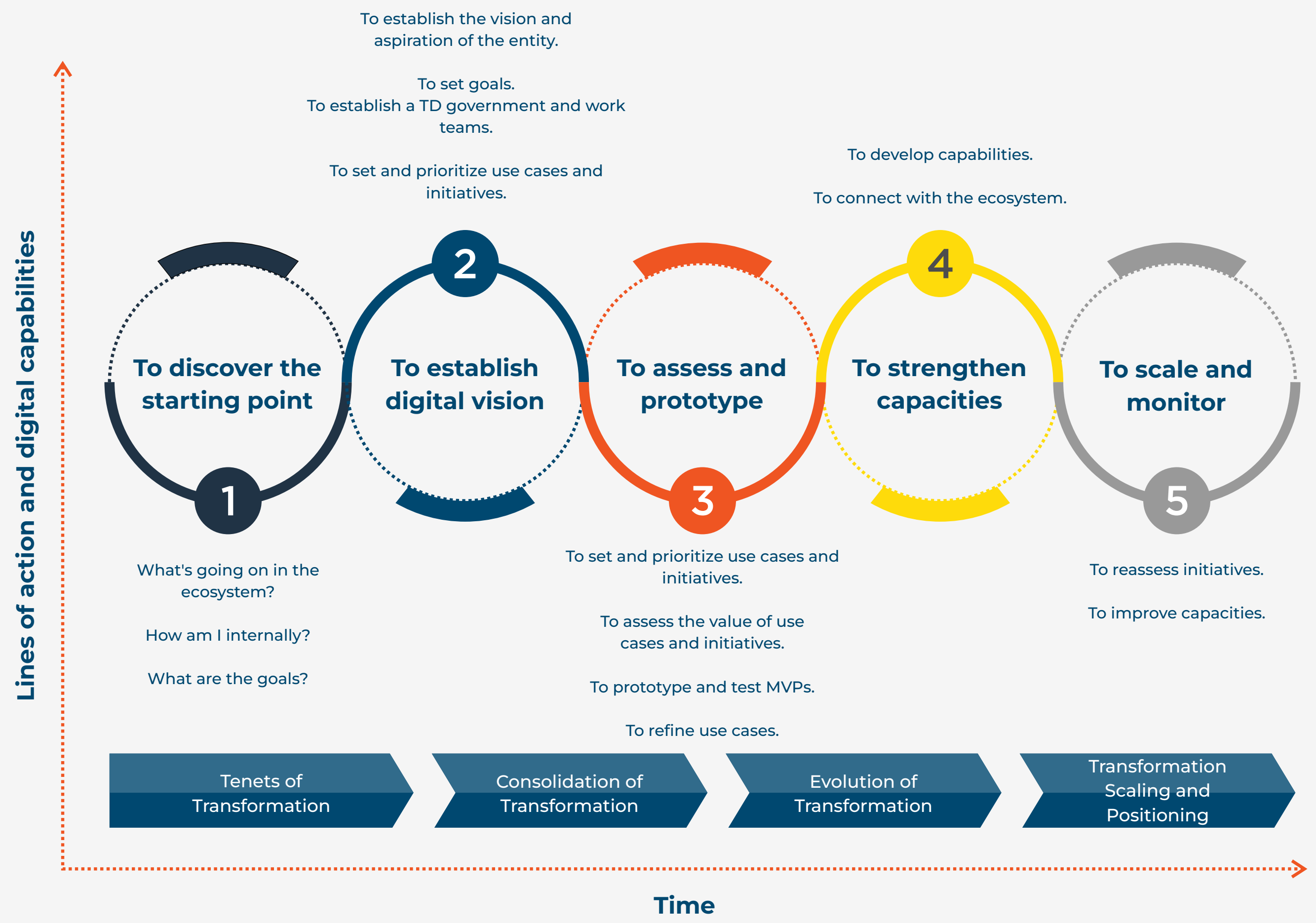
The path and evolution toward Digital Transformation in financial institutions are essential endeavors. In a world where technology continually redefines the rules, these organizations stand in a unique position to offer cutting-edge financial services to diverse and often underserved populations. The roadmap presented in this chapter serves as a blueprint for accelerating concrete actions toward Digital Transformation.

Understanding that this process is continuous and iterative is essential. Digital Transformation is not a goal reached once and overlooked; instead, it is an ongoing pursuit of improvement and adaptation. The results attained should be thoroughly analyzed, assessed, and, if needed, enhanced. Given that each organization has unique ambitions and capabilities, the provided roadmap is an open-ended framework designed to adapt to individual needs.

The five main recommended steps to develop the path to Digital Transformation are:

- **Discover:** Understanding the initial state of the entire ecosystem.
- **Design and Plan:** Establishing the digital vision.
- **Assess:** Developing a proof of concept and a minimum viable product.
- **Strengthen Capacities:** Advancing and building connections within the ecosystem.
- **Scale and Monitor:** Expanding and monitoring connections within the ecosystem.

Figure 40: Roadmap Stages



Source: FINNOVISTA. IDB. IDB Invest. Fintech in Latin America and the Caribbean. A Consolidated Ecosystem for Recovery

Discover: To Understand the Starting Point Regarding the Overall Ecosystem

The first step in the Digital Transformation roadmap is recognizing and comprehending the entity's starting point, a pivotal element in establishing a strong foundation for the path. This step is categorized into two fundamental aspects: internal understanding and external understanding.

Within the scope of internal understanding, it is crucial, initially, to grasp and delve into the company's overall strategic goals. This sets the groundwork that will direct the Digital Transformation, guaranteeing its alignment with the organization's fundamental purposes. Moreover, conducting a comprehensive review of existing partnerships and collaborations is of utmost importance, serving as a connection to the external environment.

For instance, it is imperative to discern whether the company has a focus on acquisitions or if the strategic goals encompass the acquisition of a specific segment. Additionally, it is essential to determine the role the financial institution aims to play in expediting the development of vulnerable populations or communities, as the solutions designed will align with these specified segments and strategic goals.

Likewise, an evaluation is conducted on the entity's level of digital maturity across all dimensions. This encompasses the adoption of technology, the efficiency of internal processes, and the use of data. Furthermore, a thorough examination is undertaken on the current business model, scrutinizing products and services, channels, customers, and the type of relationship maintained with them.

A thorough review of internal operations and technology infrastructure is conducted to identify areas for improvement and potential bottlenecks. Concurrently, an evaluation is carried out on staff readiness for innovation and the adoption of new technologies, emphasizing organizational culture.

In the external analysis, the assessment of customer experience and their journey with the entity is conducted. All interactions customers have with the organization are examined to identify opportunities for digitalization that enhance their experience. This process is carried out using segment-specific samples to understand the particularities and differences between them.

For instance, in the case of migrants, it is crucial to determine their distribution in the country, their prevailing ages, and the financial products they most commonly engage with the entity. This analytical process not only enables the identification of challenges and obstacles that customers encounter in processes such as credit disbursement, payments, and portfolio management but also unveils valuable information guiding enhancements in existing products and the design of new products.

These aspects should receive heightened attention in digitalization initiatives.Moreover, a comprehensive view of the financial ecosystem is taken, considering emerging digital trends, the strategies of competitors, and how similar entities approach Digital Transformation.

In this initial phase of definition, a critical step is to analyze the impact of technology and Digital Transformation on segments that were not previously considered priorities. This includes the indigenous population, migrants, and the so-called silver economy. These segments have the potential to evolve and become valuable niches for long-term value generation, as long as financial institutions fully leverage the potential of technology.

Conversely, an assessment is made of the disparity between the current state of the entity and industry best practices, offering clear guidance on areas requiring immediate attention and those that can be addressed progressively. In the final step, one should glean insights from the financial ecosystem, be it through success cases, industry groups, or collaborations with fintechs, to apply the lessons learned internally.

The process of self-assessment and continuous learning establishes the groundwork for the subsequent stages of the roadmap, ensuring that Digital Transformation is guided by a robust understanding. This fortifies its impact objectives, maintaining a realistic grasp of the current situation and future opportunities.

Design and Plan: To Establish the Digital Vision

In this stage, five essential components are explored, shaping the pathway to successful transformation: the formulation of the digital strategy, the design of key initiatives, the establishment of an effective assessment model, the organization of the work team, and the creation of a sound governance model.

Formulation of the Digital Strategy

Establishing the direction that will govern the company's Digital Transformation is crucial, as investments need to be prioritized and focused on achieving impacts aligned with strategic goals.

Initially, a clear strategy is crucial. This strategy will act as the map guiding all the organization's efforts on its journey to Digital Transformation. Once a clear vision of the entity's digital direction is established, it becomes vitally important to define concrete goals.

This is exemplified by the decision to simultaneously create a 100% digital bank. Examples include Chile's Banco Estado with Banco Estado Digital, Itaú Unibanco's Itaú Digital, and BCP's BCP Digital. The definition of this strategy entails outlining a complete roadmap for its implementation encompassing technologies, people, operations, and culture.

Design of Key Initiatives

It is equally essential to construct tangible efforts that align with the previously defined digital vision. These initiatives constitute the steps that the entity will undertake to progress towards its envisioned state of Digital Transformation. Each initiative should be designed to address specific areas where digitalization gaps have been identified across the various dimensions of the organization.

It is worth noting that the implementation of digital financial solutions should include efforts that extend beyond the solution launch, actively fostering its adoption. For instance, in the case of the silver economy population, incorporating digital education programs is relevant to facilitate the adoption of new digital solutions and products arising from the definition of the initiatives intended to achieve the desired impact.

Effective Assessment Model

A critical element in this stage is the development of an assessment and prioritization model. This model assists in determining which initiatives should be addressed first and how available resources will be allocated, considering the following variables:

Convenience: How well do these initiatives align with the entity's digital vision and strategic goals? Do they directly contribute to closing identified gaps?

Feasibility: Is it viable to implement these initiatives with the available resources and capabilities? What obstacles might arise, and how can they be overcome?

Complexity: How complex is the execution of each initiative? Do they require significant changes to existing infrastructure or operational processes?

Impact: What level of impact is anticipated with each initiative? Will they significantly contribute to the Digital Transformation and the achievement of goals?

Work Team Setup

Another crucial element in this phase is the formation of a team solely dedicated to Digital Transformation. This team should consist of executive and management roles with a cross-cutting approach. It should possess the capacity to grasp and address the complexities of transformation across the organization, working closely with different departments and teams.

Within this work team, the presence of specialized roles with a profound understanding of the multidimensionality of various customer segments is indispensable. These roles should possess the capability to comprehend and address the specific context of each segment, encompassing their distinct needs, challenges, and preferences.

For the successful attainment of the intended impact, it is crucial that these roles possess a deep understanding of the cultural and linguistic characteristics of clients, particularly in the case of the indigenous population. Continuous coaching and training of these roles are paramount to ensure they remain updated and can adeptly address the evolving needs of various customer segments.

Governance Model

Finally, a robust governance model is imperative for overseeing decision-making. This model defines how decisions related to Digital Transformation will be made, identifies those responsible, and outlines how these decisions will be communicated across the organization. Effective governance guarantees the efficient execution of efforts and maintains a consistent approach within the established digital vision.

Assess: Proof of Concept and Minimum Viable Product

In this phase, the financial institution engages in a critical assessment and refinement process of the efforts designed in the previous stage. This phase is pivotal to ensure that future investments are made in an informed manner and that the desired results are achieved through the Digital Transformation.

Before committing to a significant investment in the complete development of a digital solution, it is advisable to create a prototype or Minimum Viable Product (MVP). This prototype offers a simplified version of the solution, allowing for a visual understanding of its core functionality. The creation of an MVP acts as an intermediary phase to assess the viability and effectiveness of the solution before allocating additional resources.

Once the MVP is developed, it is time for extensive testing. These tests may engage internal users and, where applicable, actual customers. In the sphere of financial inclusion, it is paramount to acknowledge varying levels of digital literacy among different segments and adapt the testing process to guarantee its effectiveness and relevance to the needs and skills of each population. The objective is to evaluate the solution's performance under real-world conditions and determine whether it meets expectations. The test results can highlight areas requiring improvement and adjustment.

MVPs find application in various scenarios. For instance, they have been crafted with a specific focus on online credit platforms. In these instances, to evaluate the demand and feasibility of a fully digital banking model, MVPs provide small, short-term loans through digital platforms.

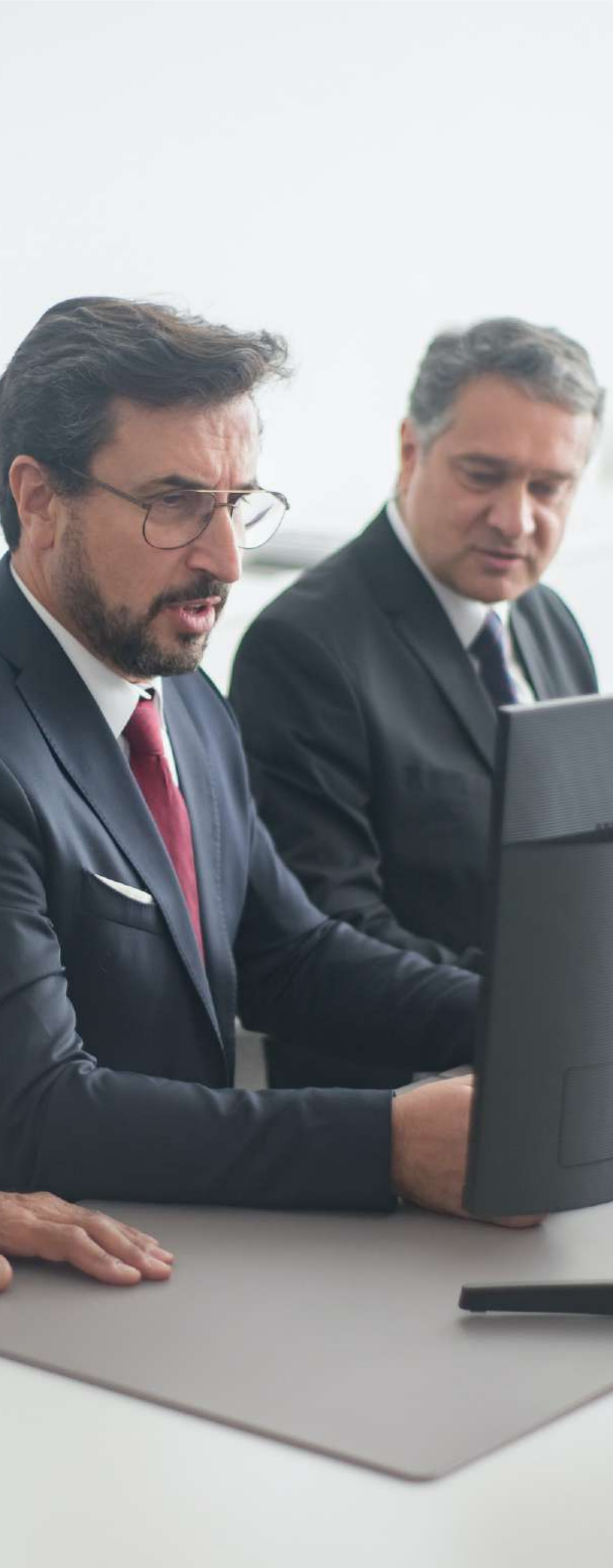
Test outcomes and user feedback constitute crucial inputs for optimizing Digital Transformation initiatives. This iterative refinement process guarantees that solutions are tailored to meet the actual needs of users and maximize their efficacy. Multiple rounds of testing and improvements can be undertaken until the solution attains readiness for full deployment.

Building on the example of the MVP for online platforms, after crafting the credit application site and launching the MVP, user tests commence at different levels. These assessments encompass cover elements ranging from user experience (UX/UI) to the credit application process, alongside gauging the reception of the new business model.

Based on the initial feedback received, identified adjustments are implemented across different aspects, encompassing information fields, button layout on the platform, and even the overall business model. This iterative refinement process occurs through multiple stages, ensuring the credit product evolves to its conclusive state, poised for release to the entire customer base.

Strengthen Capacities: To Evolve and Connect with the Ecosystem

Enhancing capacities stands as a pivotal phase in the path to Digital Transformation, anchored by two fundamental pillars: Advancing current capabilities and discerning those that merit acquisition from the ecosystem, potentially via fintech or start-ups. To make well-considered decisions in this area, it is crucial to identify critical capabilities for Digital Transformation, including data analytics, cutting-edge technology, customer insight and experience, ongoing innovation, cybersecurity, and external collaboration.



Yet, in the path to Digital Transformation, a particular capacity takes precedence: the business culture and leadership of the company. A digital culture, deeply rooted within the organization and championed by top management, acts as the propelling force for any successful transformation. In the absence of a culture that nurtures innovation and adaptability, investments in technology or training may face limitations.

Within this process, certain capabilities can develop through dedicated training and investments in technology. This encompasses acquiring essential digital and technological skills to maximize the utility of existing digital solutions. Conversely, specific capabilities must be established anew, either through internal training initiatives or by sourcing external talent, forming partnerships, or acquiring companies already possessing these capabilities in the market.

An often overlooked yet critical facet is the imperative to unlearn. Digital Transformation is not solely about acquiring new skills but also about relinquishing outdated methodologies that have become ineffectual in the digital realm. Without the practice of unlearning, extracting maximum value and fostering synergy with the constantly evolving digital ecosystem becomes a challenging endeavor.

For instance, unlearning entrenched habits within traditional work practices presents challenges for entities. Notably, rigid hierarchies, hindering agile decision-making and collaboration between areas, and a lack of flexibility, impeding quick adaptation to the evolving ecosystem and customer needs, are key examples.

Monitor and Evolve: Digital Growth and Continuity

Measuring and tracking an entity's Digital Transformation is essential for comprehending its progress and ensuring successful evolution. This assessment uses both quantitative and qualitative methods to provide a comprehensive picture of digital maturity.

Effectively undertaking this task requires organizations to establish a solid plan and a robust system for continuously measuring their digital maturity. This approach allows them to identify areas for improvement, measure the impact of digital efforts, and make real-time strategy adjustments.

Conversely, in this phase, financial institutions are dedicated to ensuring that the digital solutions implemented evolve effectively, deliver profitability, and stay aligned with long-term strategic goals.

Continuous assessment methods need to be in place to measure the performance of digital initiatives. This includes gathering feedback from both internal and external customers through methods like feedback surveys or collecting app usage and transaction data. Consistent monitoring enables timely corrective actions and ensures the ongoing effectiveness of solutions.

In addition, assessing the impact of Digital Transformation on financial inclusion is essential. This includes measuring achievements in terms of acquiring new customers, especially in diverse population groups, and understanding how they contribute to the expansion of financial and digital education.

Moreover, it is important to assess how Digital Transformation has facilitated the engagement of diverse actors and customers in traditional segments in development initiatives. An impactful example is seen in an investment product, like a Certificate of Deposit (CDT), which not only yields returns based on the term and invested amount but also expedites the financing of social or community initiatives. Assessing these outcomes is essential for comprehending the scope and effectiveness of Digital Transformation in financial inclusion and its contribution to social development.

Another essential method to assess Digital Transformation is through ROI (Return on Investment), which gauges the impact of Digital Transformation by assessing the profitability of investments in digital projects or the implementation of digital technologies.

Furthermore, it is important to measure the influence of Digital Transformation projects on the company's overall financial well-being and its ability to generate long-term value through EBITDA. EBITDA serves as a key financial indicator, reflecting the organization's operational efficiency and profitability.

This financial approach offers a robust and quantitative perspective on Digital Transformation, empowering data- driven strategic decision-making to continue propelling the digital evolution of the business.

Identifying and analyzing the efforts that were well- executed in previous implementations is vital. This allows for the replication of successful practices and learning from past mistakes. Financial institutions canestablish best practices and points of attention to apply in future initiatives, fostering a cycle of continuous improvement.

To stay at the forefront of Digital Transformation, financial institutions can establish dedicated innovation areas. These areas provide an environment conducive to exploring new ideas, technologies, and approaches, such as devising new financial products, designing innovative credit scoring models, and seeking new partnerships to enhance operations or strengthen existing products. Encouraging both internal and external collaboration can lead to the evolution and continuous improvement of digital initiatives.

5.1.2 Recommendations to Ensure the Successful Implementation of the Roadmap

Digital Transformation is uniquely experienced by each organization, shaped by its specific needs. However, there are critical aspects that are common to various entities in the region and are vital for the success of this process. Notably, the following recommendations, derived from the analysis performed, should be taken into account.

- Clear, cross-cutting vision and strategy
- Inspirational commitment from senior management
- Ongoing training and development
- Active involvement of associates in transformation and innovation
- Collaboration with the ecosystem
- Flexibility and adaptability
- Adoption of cutting-edge technologies

Clear, Cross-cutting Vision and Strategy

Successful Digital Transformation requires the organization to establish a clear vision and strategic approach that permeates all levels. This involves continuous planning and result assessment, with concrete goals in the short, medium, and long term. Clear and achievable goals are crucial for guiding the transformation process.

Additionally, the use of strategic analysis tools such as FODA is advantageous. This tool can help identify areas of strategic focus and develop robust plans that leverage strengths and opportunities while addressing weaknesses and threats.

Another valuable analysis tool is the PESTEL analysis, which assesses political, economic, social, technological, environmental, and legal factors influencing the financial industry, providing a comprehensive perspective.

Furthermore, conducting a product portfolio analysis, along with a comprehensive customer and segmentation analysis, provides an expanded view of the most profitable business lines and insights on aligning products and services with customer needs.

Inspirational Commitment from Senior Management

Achieving a successful Digital Transformation hinges on having an inspiring commitment from Senior Management. This entails continuous and robust support from the organization's leaders. Moreover, it demands leadership dedicated to fostering a digital culture, not just endorsing transformation but also inspiring and communicating to all employees the importance of adopting this new digital mindset. These leaders can function as true "champions" of transformation, motivating others to embrace change and contribute to the initiative's success.

Ongoing Training and Development

Ensuring that employees are prepared to embrace innovation requires the creation of a specialized educational path. This path should guide them in acquiring new digital skills and knowledge through partnerships with educational institutions. This approach not only helps them stay updated on the latest technological trends but also empowers them to play a role in reshaping the entity. In addition to internal training, it is valuable for employees to engage with innovation areas within the financial inclusion ecosystem. Attending events, conferences, and industry groups provides them with a broader understanding of trends and best practices in Digital Transformation.

Furthermore, encouraging the adoption of new ways of working within the organization is crucial. Embracing agile methodologies and cultivating a trial-and-error environment can expedite innovation and enable teams to be more flexible and adaptable in their approach. This mindset of continuous learning and constant improvement is pivotal for success in an ever-evolving digital environment.

Active Involvement of Associates in Transformation and Innovation

Establishing an ideation and innovation hub involving collaborators at all levels is highly recommended. This space facilitates the free flow of ideas and fosters collaboration across departments. By engaging employees at all levels in the innovation process, opportunities and solutions can be identified from various perspectives, enhancing the value of the Digital Transformation approach.

Collaboration with the Ecosystem

In a continuously changing environment, using synergies and leveraging ecosystem knowledge can make all the difference. Embracing the "Coopetition" trend, this strategy empowers entities to use the experience and resources of other market players, advancing their own transformation process.

Moreover, the ecosystem is an endless well of knowledge and learning. Through connections with other participants, entities can identify best practices, emerging trends, digital solutions, and cutting-edge strategies. This shared knowledge can inform decision-making and facilitate staying abreast of industry developments.

Collaboration can also result in cost reduction on the path to transformation. Leveraging existing advancements and solutions in the ecosystem can be more cost-effective than developing all capabilities on-premises.

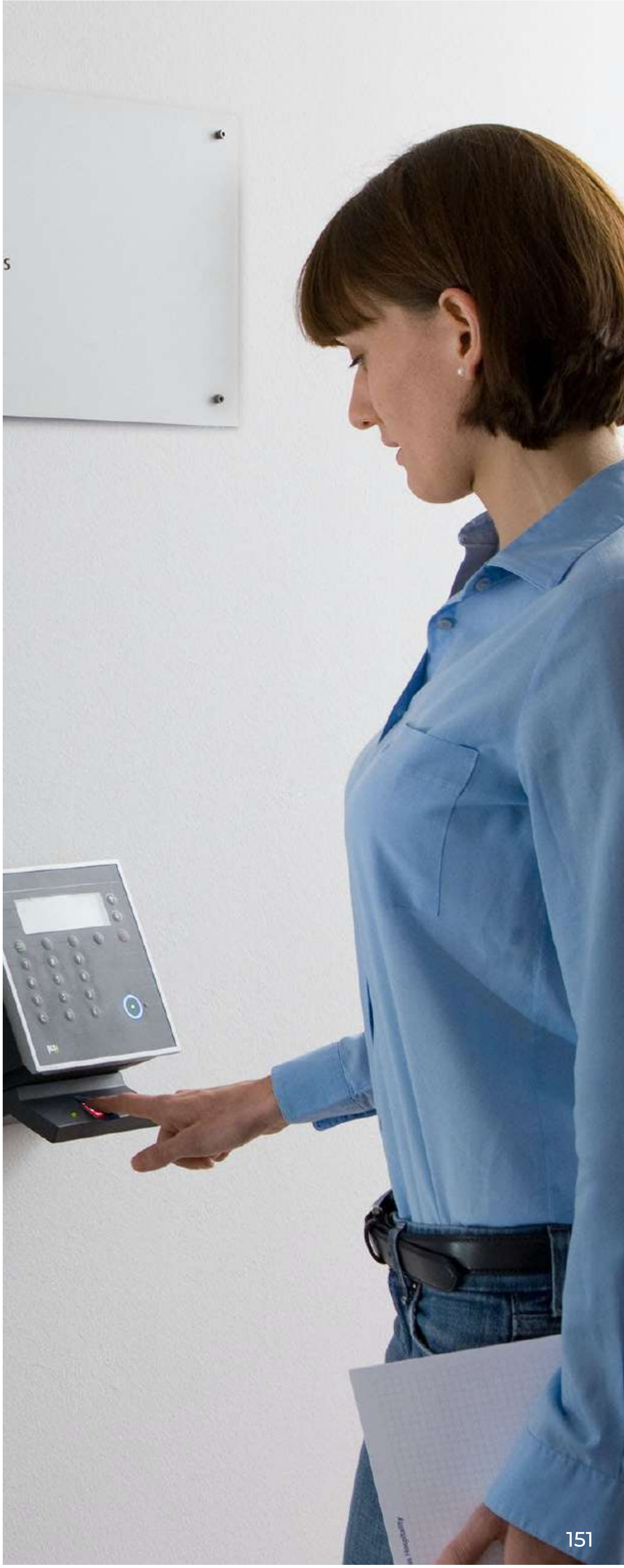
Conversely, financial institutions possess the ability to establish strategic partnerships to enhance areas of value that may not align with their core capabilities. A practical example would involve focusing on the rural segment, where needs include the realization of savings or investment. In this scenario, alliances could be formed with livestock companies, enabling customers to achieve their savings or investment goals through specific assets, such as the acquisition of livestock. This exemplifies how partnerships can augment the supply of financial services.

Flexibility and Adaptability

In an ever-evolving environment, these characteristics are crucial for addressing challenges and capitalizing on the opportunities that arise throughout the transformation process.

Flexibility means having the ability to adapt and alter strategies and plans as necessary. Instead of strictly adhering to a predefined plan, financial institutions should be ready to navigate new circumstances, changes in the market, and advancements in technology. This could involve reevaluating strategies, priorities, and approaches based on effectiveness.

Adaptability involves the organization and its staff's capacity to embrace new working methods and incorporate new technologies. This requires an open mindset towards innovation and a readiness to learn, letting go of outdated practices in favor of more efficient and agile approaches. It may also involve the training and development of new skills to ensure that the staff is well-equipped to tackle digital challenges.



Adoption of Cutting-edge Technologies

Legacy systems pose a considerable challenge in the transformation and innovation process for many organizations. Developed decades ago, these systems were primarily designed for manual operation, and their maintenance and updates have become costly and complex. The inherent lack of flexibility and complexity often hinders the implementation of new technologies and the adoption of agile approaches.

Simultaneously, these challenges associated with legacy systems result in errors such as data loss, service interruptions, and security problems. This highlights the urgency of addressing these challenges in the Digital Transformation process.

For optimal impact of digitalization on financial inclusion, it is imperative to implement systems that harness the benefits of all available technologies. These systems should be agile, facilitating quick adaptation and evolution, and should establish effective connections with third parties. Furthermore, it is crucial that they demonstrate flexibility in adopting new cybersecurity standards to ensure data protection and the integrity of financial operations.

Overcoming the challenges of legacy systems requires researching and adopting cutting-edge technologies such as cloud computing, microservices, containers, and open-source solutions. In the rapidly evolving and competitive business environment, having an agile and advanced technological infrastructure becomes essential. Addressing the hurdles associated with legacy systems is critical for driving transformation and innovation and maintaining relevance in today's marketplace.

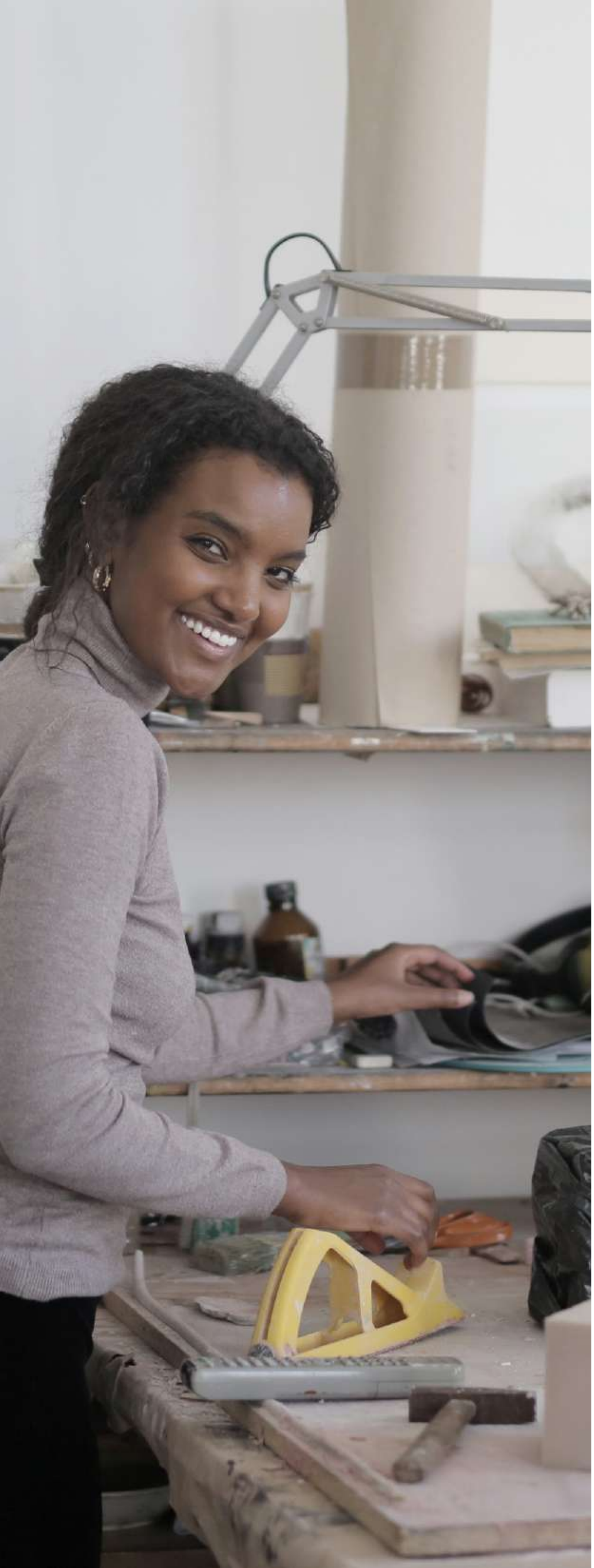
5.2 Study Conclusions

Over the past few years, the world has confronted unprecedented challenges, notably with the onset of the COVID-19 pandemic. This event not only transformed our lifestyles and work patterns but also accelerated Digital Transformation in financial institutions. The need to rapidly adjust to a changing environment and evolving customer expectations prompted a distinct shift in mindset across the industry. The pandemic has played a pivotal role in hastening the digital maturity of financial inclusion entities to a certain extent.

Based on the analyses conducted, it is evident that entities are in the midst of Digital Transformation, with a current maturity level of 2.80 out of 5, positioning them as followers. This signifies that, although there exists a strategic plan supported by indicators aligned with organizational goals and 92% have emphasized the design and development of new digital service channels, there is still a substantial journey ahead in laying the foundations and executing the transformation.

Advancing to the next level requires financial institutions to make Digital Transformation a central component of their strategy. This entails not only recognizing the importance of digitalization but also dedicating significant resources to digital initiatives. Additionally, the establishment of strong transformational governance is essential for effective mobilization of initiatives. This will enable institutions to adapt agilely to the ever-changing environment and provide highly personalized financial products and services.

The analysis of digital maturity level results was conducted with a comprehensive perspective on the value chain. This encompassed assessing each crucial stage, including customer knowledge, product design, onboarding processes, product acquisition and placement, as well as support and service. Adopting this holistic approach provided a comprehensive view of how each component of the value chain contributes to the digital maturity of the financial institution. The key conclusions regarding the level of digitalization for each stage of the value chain will be presented below.



Advances in the Digitalization of Customer Understanding

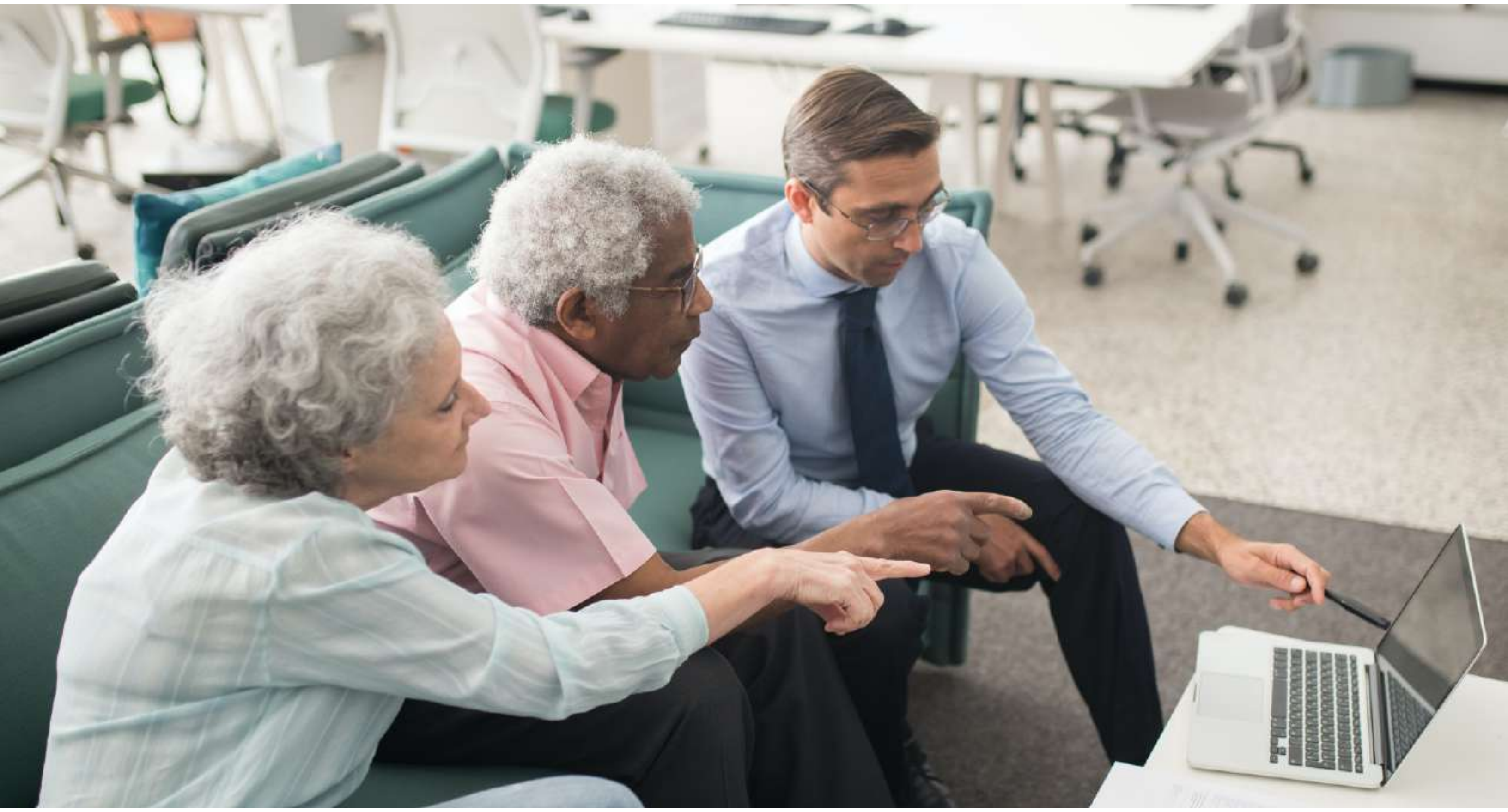
Evidently, when it comes to customer understanding, despite progress, most entities are still in an intermediate stage in terms of digital maturity. A total of 60% of entities still mention predominantly relying on traditional methods for data collection and analysis, emphasizing the urgent need to shift towards more digital and automated approaches. A greater investment in solutions and infrastructure is required for more advanced analytics. The challenge of lacking established data governance across the organization needs attention.

In the field of customer segmentation, it emerges as a key aspect for the personalization of products and services. Although 34% of entities have transitioned towards more automated segmentations, there is a significant opportunity to enhance and optimize data repositories in terms of information quality, temporal efficiency of analysis, and analysis models.

Advances in the Digitalization of Product Design

Conversely, 40% of entities exhibit significant progress in incorporating digital strategies for product development, underscoring the substantial room for growth and improvement. A pivotal factor in this context is the imperative to maintain a constant focus on innovation and the identification of opportunities for enhancement in products and services, particularly in a rapidly evolving environment. Furthermore, it was found that only 50% of entities are integrating a customer-centric product development approach. This is crucial in a context where personalization and experience have become the essence of the product design process.

Fintechs, leveraging their specialized and agile approach, take the lead in innovation and product design at an advanced level, leaving a substantial impact on customer satisfaction and loyalty. In conclusion, mainstream financial institutions hold the potential to achieve heightened levels of maturity in this domain through a persistent commitment to innovation and agile adjustments to changing market demands.



Advances in the Digitalization of Onboarding

This study reveals that 56% of entities are making significant strides in digital onboarding, employing innovative technologies and assisted processes. Nevertheless, there remains a strategic opportunity to streamline, personalize, and enhance the security of this process, thereby delivering an exceptional customer experience in the digital age. In the field of financial education, even though 60% of entities provide more comprehensive and tailored online tools, there is still room for improvement in terms of personalization and measuring the impact of these tools on customer satisfaction and education.

Collectively, these aspects underscore the perpetual need for evolution and adaptation in the industry toward a customer-centric digital approach and innovation. Moreover, such digitalization accelerates the frequency of interaction and lays the groundwork for potential financial graduation scenarios.

Advances in the Digitalization of Acquisition and Placement

Despite 32% of entities adopting multi-channel platforms and 60% using digital channels, such as mobile applications and push notifications, for customer communication and product promotion, challenges remain regarding software coding and offer customization.

The findings imply that, while financial institutions have made notable progress, there is room for improvement to reach higher levels of digital maturity in product acquisition and placement. To achieve this, it is essential for these institutions to enhance their efforts in digital marketing, with a focus on personalization and optimization strategies to align with the changing needs of customers in the digital age.

Advances in the Digitalization of Support and Service

While there has been some progress, substantial challenges remain in crucial areas. For instance, 37% of entities heavily rely on Back Office systems that require improvements to achieve more efficient and automated operations, presenting a challenge amid channel innovation.

Regarding technological capabilities, even though 86% of entities have embraced cloud services for diverse needs, there is still potential to fully exploit the benefits of the cloud in terms of scalability and flexibility. Additionally, the adoption of technologies like Big Data, Artificial Intelligence, and Robotic Process Automation (RPA) is varied, with limited emphasis on Artificial Intelligence.

It is encouraging to observe that numerous entities are implementing robust cybersecurity and data protection measures, which are crucial in a digital environment where information security is of paramount importance.

To a great extent, entities possess a significant opportunity to overhaul their operations and services by embracing advanced technologies and increased automation. This will empower them to enhance efficiency, make more informed data-driven decisions, and provide a more agile and efficient service to their customers. To uphold a competitive edge in an ever- evolving environment, financial institutions should persist in advancing their digital maturity in these critical areas.

The analysis in this report indicates that institutions are on the brink of advancing to the next level of digitalization. This suggests that strategic goals are fully harnessed in the Digital Transformation to achieve robust results. The organizational structure should be reinforced within the organization to nurture a culture of digital innovation, fostering creative processes and allocating resources to instigate changes across all areas. This is crucial for executing a business plan that facilitates a fully digital operation and ultimately ensures success in an increasingly competitive world.

5.2.1 Recommendations on Study Findings

The findings from the study on digital maturity in the financial sector provide valuable insights into key areas of opportunity. This section offers five practical recommendations to outline key guidelines that will empower the ecosystem and financial institutions to strengthen and accelerate their path to successful Digital Transformation.

During the study and review of digital maturity in the financial sector, a pivotal step was taken by bringing together the relevant entities in focus group sessions. These sessions proved to be a valuable platform for generating proposals for solutions and strategies to effectively overcome these barriers.

Through open dialogue and collaboration, the entities shared their knowledge, experiences, and visions to define concrete recommendations that can pave the way to more advanced digital maturity.

Here, we will outline the key recommendations that arosurfaced from these interactions and result analysis, offering valuable guidance for financial institutions striving to enhance their position in the ever-evolving digital environment.

- Leveraging the ecosystem to cut costs and invest in innovation.
- Prioritizing knowledge management and cultivating digital culture.
- Amplifying the impact of the transformation on underserved segments.
- Immersing in data as the driving force behind transformation.
- Identifying potential areas for ecosystem players.
    - Establishing a regional digital identity.
    - Ensuring connectivity and access.
    - Promoting digital and financial education.
    - Creating secure spaces for regional innovation.
    - Fostering connections between entities in the region for learning experiences.

Harnessing the Ecosystem to Reduce Costs and Invest in Innovation

Regulators' limited understanding of the potential of technology-based financial institutions has been identified as a challenge by the entities. This lack of comprehension hampers internal improvements and collaborations with other players in the financial ecosystem. Furthermore, there are notable generational gaps in product design and challenges in seamlessly integrating traditional and digital banking.

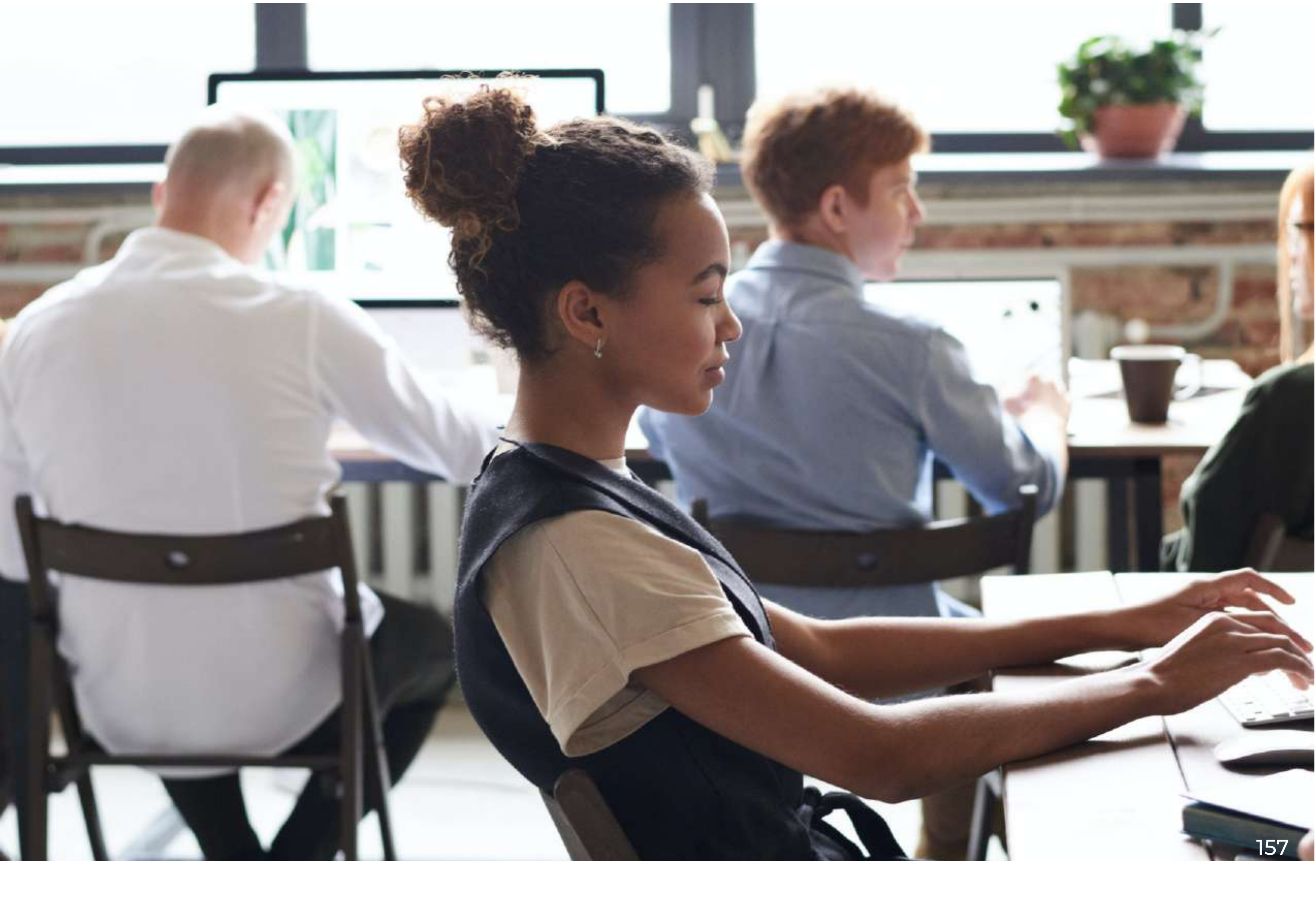
Efforts to overcome these barriers should focus on streamlining end-to-end processes to elevate the customer experience and on relaxing regulations to encourage collaboration among ecosystem players. This strategic approach will empower institutions to strengthen their current business models or venture into new and advantageous opportunities in the market.

Throughout the interviews, a cooperative shared its collaborative experience with a fintech in the onboarding and credit placement process. This collaboration has significantly streamlined the credit application process for the cooperative's customers, eliminating the need for physical visits to offices and accelerating the credit release. Despite the initial challenges of aligning strategic goals within the ecosystem's framework due to the differing cultures of the two companies, overcoming these hurdles has resulted in a distinct and valuable proposition for the customer.

Building on the shared case, our focus groups underscored the importance of establishing connections within the ecosystem to drive innovation and bring value to customer, product, and operational aspects. This includes forming partnerships with companies adept at analyzing behavior across multiple channels, thereby enhancing the comprehension of customer needs and preferences. Additionally, the significance of collaborating with institutions providing personalized financial education based on specific segments was emphasized. The need to use the ecosystem for the digitalization and modernization of end-to-end processes was also highlighted.

Efficiency and innovation stand as fundamental pillars for a financial institution aiming for a successful digital transformation. A strategic approach to simultaneously cut costs and foster innovation involves harnessing the service ecosystem through the "As a Service" model.

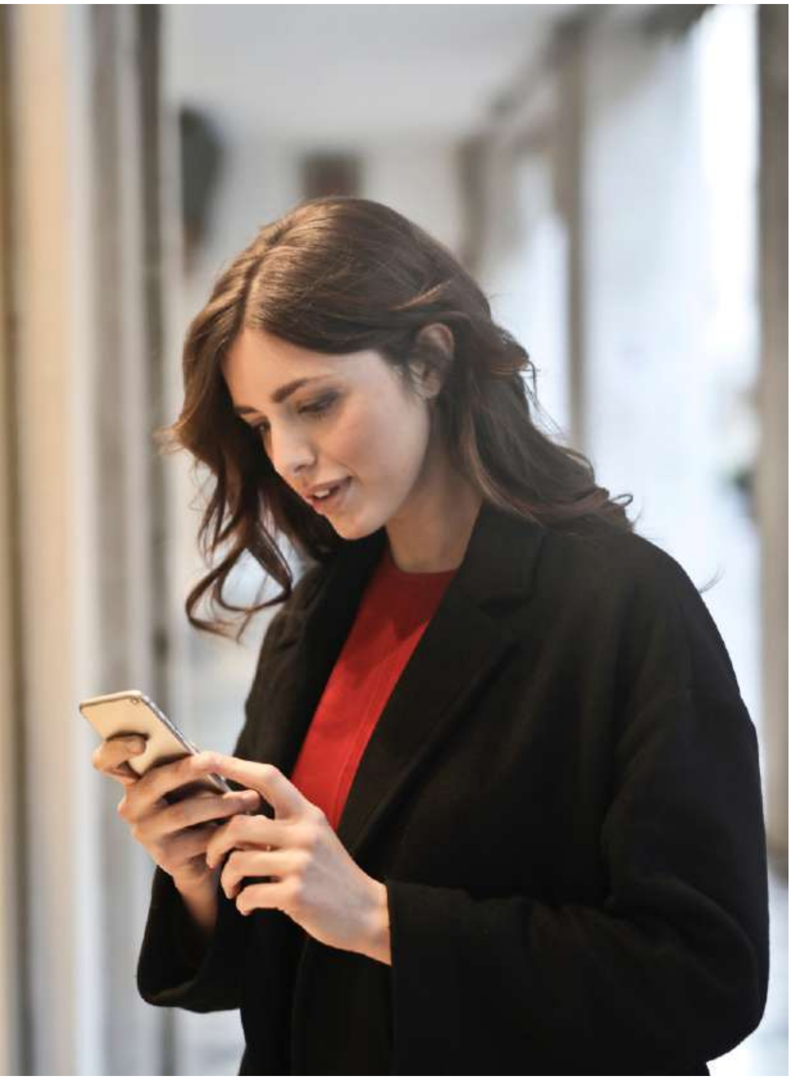
This approach involves embracing an acquisition mindset that shifts away from traditional asset ownership. Instead, it focuses on acquiring predominantly cloud-based services, software, and platforms delivered externally.



Outlined below are different methods of collaboration, made possible by the advantages of the "As a Service" model:

- **Infrastructure as a Service:** Rather than investing substantial amounts in constructing and sustaining their own technology infrastructure, financial institutions can use cloud infrastructure services, such as Infrastructure as a Service (IaaS). This significantly reduces capital expenditures and provides greater flexibility for scaling as needed.

- **Software as a Service (SaaS):** Financial institutions can opt for cloud-based solutions instead of acquiring traditional software licenses. This not only reduces licensing costs but also simplifies upgrades, ensuring the use of the latest software version consistently. Additionally, Platforms as a Service (PaaS) offer an alternative means of accessing cloud-based solutions, allowing financial institutions to swiftly and cost-effectively develop, customize, and launch applications and services. Through the use of PaaS, companies can enhance innovation speed and decrease development costs.



It is crucial to note the existence of shared capabilities in cross-cutting areas, such as automation using RPA and advanced analytics services. While these capabilities may not be developed internally, they play a pivotal role in accelerating the digitalization process significantly.

- **Robotic Process Automation (RPA):** Financial institutions can automate a diverse range of manual and repetitive tasks by acquiring RPA-as-a-service solutions. This not only reduces operational costs but also allows employees to redirect their focus towards higher-value activities.

- **Advanced Analytics as a Service:** Instead of starting from scratch to build a data analytics infrastructure, financial institutions can leverage a data analytics as a service solution. This alternative enables them to obtain valuable information more rapidly and at a lower expense.

Ultimately, the "As a Service" model not only aids in reducing operational costs but also releases financial and human resources, which can then be reinvested in digital innovation activities. Through this adoption, financial institutions can maintain agility and competitiveness in an ever-evolving financial environment.

Prioritizing Knowledge Management and Digital Culture

Countless obstacles confront financial institutions, particularly concerning internal issues such as organizational structure, talent management, and the establishment of a strong digital culture. These challenges are underscored throughout the report. In today's context, continuous training for advisors and employees is not merely an option but an essential requirement.

Digital culture stands out as a critical differentiator for financial institutions. It transcends the mere attraction of digital talent and underscores the importance of cultivating and developing these skills internally. This approach is dedicated to strengthening the digital skills of both internal company employees and those engaging directly with customers. Consequently, not only does this enhance the institution's competitiveness, but it also raises the quality of service provided to customers.

During the interviews, one of the entities shared an initiative related to training and acquiring new talent. This entity forged a collaboration with a local university, not only offering educational opportunities to its associates but also facilitating the inclusion of interns from graduate programs with expertise in the financial sector and Digital Transformation.

Throughout their time at the entity, these interns engage in assessing processes, technologies, and products, actively contributing to the development of value initiatives within the framework of Digital Transformation. Moreover, interns actively participate in project implementations and transfer knowledge about methodologies and working practices to the entity. This partnership is particularly intriguing, as it not only facilitates knowledge acquisition but also provides concrete support for advancing on the path to Digital Transformation.

In our focus groups, additional solutions that could significantly enhance the response to this challenge were identified. These solutions encompass the implementation of financial education programs and the delivery of financial services through a blend of digital and in-person channels, particularly for customers who educate the bank's employees. Notably, we have also confirmed the significance of cultivating a culture within entities where financial inclusion programs take precedence, coupled with the establishment of a digital laboratory that integrates feedback from both face-to- face and digital interactions.

- **Digital Culture:** Promoting a digital culture within a financial institution requires the strategic management of beliefs and the encouragement of interactions that bring about meaningful change. Each organization has its own unique culture, and there are no universally applicable solutions when it comes to individuals. However, within the context of a digital culture, certain key elements must be underscored, including leadership, collaborative work, continuous learning, and the cultivation of digital thinking. This involves fostering skills and competencies that empower individuals to reshape their current business model in accordance with the challenges of the future.

  The foundation of this process lies in gaining a profound understanding of the organization, involving an awareness of its employees, comprehending their aspirations, and recognizing their needs in the digital realm. Moreover, it entails ingraining digital culture into the organization's DNA. This goes beyond just preparing individuals to adopt digital behaviors and integrate them into the entity's culture; it's about empowering them to evolve into digital citizens capable of actively contributing to the broader digital community. Today's digital culture extends beyond the organizational boundaries and reaches out to the external world.

- **Digital Talent:** Transitioning towards a more agile and flexible talent pool is essential, with individuals who are not only quick learners but also open to questioning and transforming traditional practices. Digital Talent becomes a crucial cornerstone in this transformation, leveraging technology to acquire essential digital skills. Prioritizing employee access to digital tools and resources that facilitate the development of relevant skills becomes imperative. This requires a shift to a new approach to tasks, where digital talent is adept at automation and considers digitalization as an integral and natural aspect of every company's work methodology.

- **Digital Collaboration and Teleworking:** Implementing digital tools that promote collaboration, innovation, and knowledge sharing among teams, including those engaged in teleworking. Enhancing online communication and collaboration to improve efficiency and creativity across the organization, ensuring employees can work effectively irrespective of their geographic location.

- **Digital Leadership:** Encouraging leadership that not only supports digital transformation but also takes on the responsibility of driving it forward. Leaders are expected to lead by demonstrating a shift in mindset and embracing the adoption of digital tools and skills. They should guide the transformation of their teams and actively contribute to the accomplishment of digital objectives.

In a digital environment, talent enablement processes should be open-ended and progressive, catering to different levels of knowledge. These processes should be self-managed and may incorporate gamification, enabling each employee to select the aspects they wish to develop and receive rewards based on their didactic progress. The training should be digital, accessible, and experiential, designed for participants at various points in time.

Additionally, it is crucial to align training with cross-cutting projects, utilizing existing initiatives to ensure that training processes are dynamic and aligned with the organization's needs. Training should be flexible, making use of the existing ecosystem, reusing current resources and tools, and incorporating new channels.

Enhancing the Impact of Transformation on Excluded Segments

There are opportunities for transformation within vulnerable populations in relation to their access to financial services. These populations consist of micro- entrepreneurs, indigenous populations, migrants, and seniors. The adoption of digital technology can be instrumental in improving financial services, catering to their specific needs, and providing these populations with broader and more agile access to these services.

Hereafter, we will outline some of the key opportunities for each of these groups, emphasizing the critical role that digitalization and innovation can play in this process.

Microenterprise Segment

Microenterprises represent a challenging segment characterized by obstacles like a lack of credit history, challenges in providing income information, income variability due to the nature of their businesses, and their operation in the informal economy. The following outlines key recommendations to foster financial inclusion in this segment:

- **Product:** Adaptability is crucial for financial solutions, as they need to be responsive to variations in revenue and offer payment options that align with the profitability of the micro-entrepreneur's business. Additionally, it is vital to design specific products that cater to the unique needs and challenges of these entrepreneurs, such as acquiring working capital. These solutions should extend beyond the delivery of financial services, incorporating support tools for the growth of start- ups. For instance, digital solutions can be developed to facilitate inventory tracking, provide personalized financial education to enhance business management, and offer access to online communities for promoting and gaining visibility for their ventures.

- **Channel:** In this segment, developing solutions through mobile applications is essential, catering to the reality of micro-entrepreneurs who typically work on the move or in the streets.

- **Service:** Given the nature of their activities, individual assistance is crucial. The availability of 24-hour service is key to providing immediate advice and ensuring that business opportunities are not missed.

- **Financial and Digital Education:** Offering guidance not only on personal finance issues but also on financial aspects related to their business is essential to drive the growth of these microenterprises. These micro-entrepreneurs typically manage both their business and personal finances, and there is a crucial correlation between business and personal financial education. This education is fundamental as it influences the savings capacity of these entrepreneurs and their preparation for the financial future. Moreover, it is essential to educate these entrepreneurs about the advantages of digital and how they can harness technology to grow their businesses.

- **Data:** Data collection from this segment is crucial in assessing their eligibility for credits. Consolidating variables that reflect revenue variability is critical to designing financial products that meet their needs. In addition, relying on non-traditional sources to assess income history will expand access to financial services and address the credit history barrier.

Indigenous Populations

Access to financial services for this population is hampered by multiple barriers, including language, poverty, financial literacy, limited access to devices, and limited connectivity. The digitalization of entities can play a capital role in overcoming these barriers. The following outlines key recommendations to enhance the impact of financial inclusion on the indigenous population:

- **Product:** Tailoring solutions to their language and culture is essential for ensuring closeness and trust. Additionally, it is crucial to design products based on the specific forms of income generation for this population, such as agriculture or livestock. Digital solutions can also contribute to identifying risks associated with climate change and expediting quotas according to harvest seasons.

  Moreover, it is essential to develop products that are seamlessly integrated and tangible in the daily context of users, such as those related to investment in land or the acquisition of livestock. Lastly, we emphasize the importance of designing products that foster interaction between communities, like community banks, using digital solutions that enable them to connect with other members and collaborate to achieve common goals.

- **Channel:** For indigenous populations residing in rural areas, designing user-friendly digital channels and applications is crucial. Incorporating voice solutions for authentication and virtual assistance in their native language can make a significant impact. Furthermore, services should be provided through virtual channels with advisors who understand the needs and context of this population.

- **Service:** Assistance plays a central role in the financial inclusion process of the indigenous population. It is not merely about acquiring customers but accompanying them in their financial growth. This involves broadening the range of services, from credit to savings and investment, and consistently providing service to enhance the use and quality of financial products.

Moreover, concerning field service, it is crucial to equip advisors with digital work tools that incorporate solutions such as geolocation, digital OCR, and real-time procedures. These tools can decrease the time spent on operational processes and optimize interactions to provide information and financial education to customers.

- **Financial and Digital Education:** Financial and digital education are essential for training the indigenous population in the use of digital financial services. An effective strategy is to integrate financial education directly into financial products through gamification approaches that promote savings. Interactive courses can also be offered through voice platforms, allowing for greater interaction and understanding. These courses should be tailored to the cultural context and specific needs of the indigenous population.

- **Data:** The financial inclusion of the indigenous population relies heavily on data collection and analysis. Digitalization empowers the creation of variables based on the context of this population, encompassing data on harvests, climatic variations, and personal goals. This data facilitates a greater understanding and personalization of financial services. It is imperative that entities can shift from a short-term approach focused on profitability to adopting a long-term perspective, recognizing the benefits of accompanying and enriching the life cycle of the indigenous population.

Migrant Populations

The migrant population encounters significant obstacles in their access to financial services, including a lack of credit history, complete documentation, and knowledge of the formal product offerings in the country of arrival. Presented below are key recommendations:

- **Product:** Customizing financial products is vital to cater to the distinct stages of migration — covering transport, arrival in the destination country, job stabilization, family obligations, and retirement. This involves offering services for cost-effective remittance transfers, providing savings accounts dedicated to creating funds in the country of origin, extending credit facilities for investing in fixed assets such as homes or businesses, and offering life insurance.

Designing these products should account for the absence of credit history and the limited financial knowledge of each individual. This requires the development of non-traditional variables, such as the frequency of remittances and other financial behaviors that indicate creditworthiness. In the context of transit migrants, the relevance of digital payment and account solutions is significant to mitigate the risks associated with cash transactions. For migrants at their destination, leveraging digitalization and gamification is recommended to improve access to financial products.

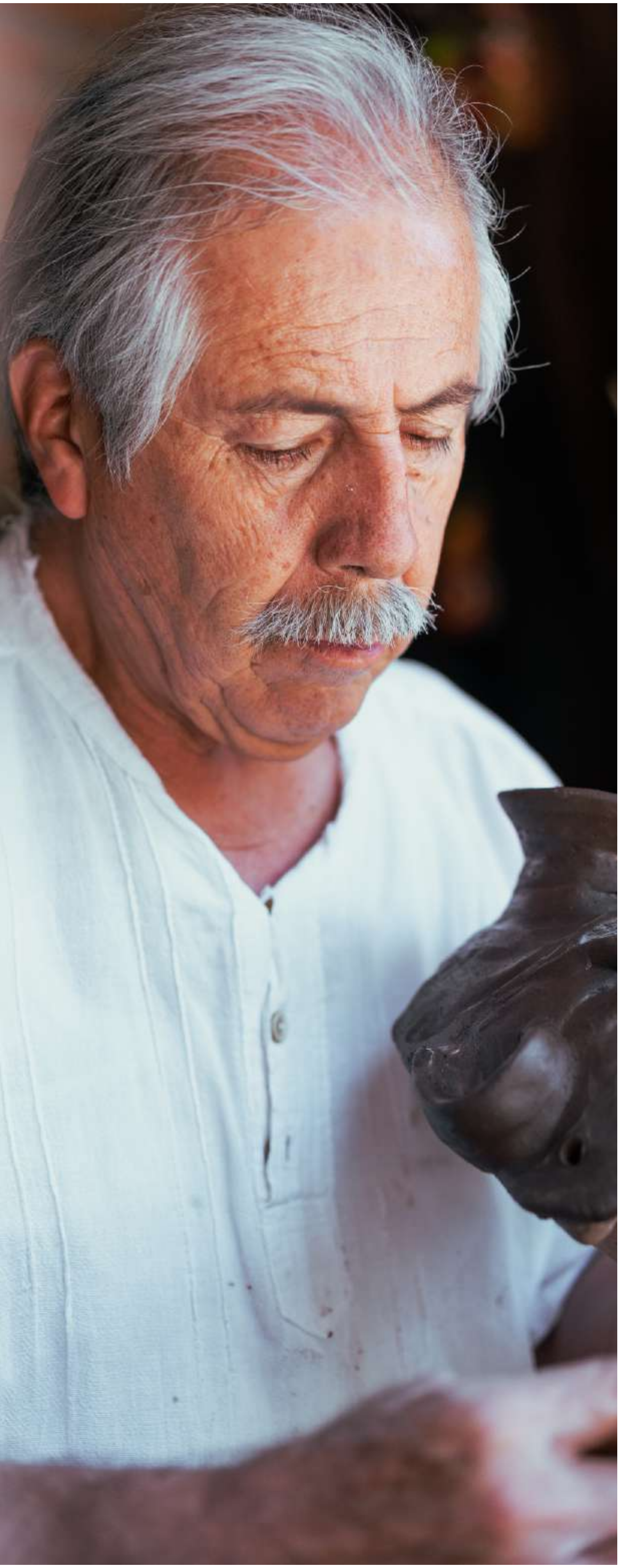
- **Channel:** Expanding cross-border coverage, particularly for sending remittances to countries of origin, requires the use of technology and mobile accounts. Digitalization can facilitate cost-effective transactions and the diversification of savings and investment products. All efforts should be directed towards enabling the migrant population to send money to their homes quickly and at a low cost.

- **Service:** Achieving effective financial inclusion for migrant populations requires a dual and long-term strategy. This strategy involves not only providing financial products and services in the country of arrival but also developing solutions that specifically address the needs of migrants in their countries of origin.

  The service can also be predominantly digital, with user-friendly and easily accessible digital platforms, particularly in the context of remittance transfers and real-time access to information on costs and transaction times. This approach will empower migrants to efficiently access financial services and leverage the opportunities offered by financial inclusion.

- **Financial and Digital Education:** Alongside delivering financial education, it is crucial to provide migrants with comprehensive information regarding the range of financial products and services available in their destination country. This empowers them to acquaint themselves with the practices and comprehend the workings of the financial landscape in their new environment. The information should encompass details about costs, access to credit, savings and investment options, and other critical financial aspects essential for their adjustment and success in their new lives.

- **Data:** Digitalization presents an opportunity to centralize data regionally, incorporating not only data from the country of origin but also data from the destination country in a singular repository, such as digital identity. This approach enables the exploration of new non-traditional variables specific to this population. Additionally, there are unique variables, such as remittance flow data and mobile bill payments, which can enhance customer understanding and enhance the provision of financial services.



Silver Economy Populations

Despite the silver economy population currently making up 13% of the LAC population, it is clear that this percentage will escalate with the continuous evolution of life expectancy, projected to reach 24% by 2050. This highlights the importance of overcoming the barriers faced by this population in accessing financial services and formulating proactive strategies that align with their particular needs. The following are recommendations to harness digitalization and propel the financial inclusion of the silver economy population.

- **Product:** Tailoring products to the degree of digitalization and the life stage of senior citizens is crucial. This involves crafting products that complement pensions, such as personalized savings goals that align with their needs and aspirations. In the case of credit products, incorporating options for a family guarantor can help reduce the risk associated with age and potential default. Leveraging digitalization is essential to optimize and streamline this process, facilitating remote procedures and providing comfort to senior citizens and their guarantors.

  Exploring free investment products that emphasize entrepreneurship is essential. This grants senior citizens the opportunity to leverage their knowledge and experience, remaining productive and generating additional income. Furthermore, considering innovative investment products, such as crowdfunding, is relevant, enabling them to invest in ongoing projects and attain a suitable return.

- **Channel:** Developing user-friendly apps is essential. Applications should consider the specific needs of this population and incorporate features such as the use of larger icons, user-friendly solutions, and an intuitive user experience. The implementation of virtual assisted care is critical for addressing the needs of this population.

- **Service:** Offering assisted care to educate senior citizens on using new digital tools is advisable. Although the service doesn't need to be exclusively physical, it should be designed to facilitate the continuous learning of the population in the use of digital tools for accessing and utilizing high-quality financial products.

- **Financial and Digital Education:** Prioritizing a digital education approach is recommended for this population. This may involve creating training programs in the physical offices of the entities, providing older adults with the opportunity to become familiar with the new tools and service channels.

  Establishing digital education centers dedicated to their needs can also be considered, offering them the opportunity to acquire skills and confidence in using digital applications and platforms. This investment in digital education is crucial to ensuring practical knowledge and confidence in the utilization of digital financial products, thereby expanding financial inclusion and active participation within this population.

- **Data:** Leveraging digitalization allows for the collection of data across the entire life cycle of the silver economy population, simplifying the comprehension of their financial behavior. With this comprehensive information, tailored financial products can be designed to meet the specific needs of this population, particularly in the context of long-term savings and investment. These products can act as a complement to pensions, offering solid financial opportunities to ensure the economic stability of the silver economy.

Delving Deeper into Data as the Engine of Transformation

The challenges faced by financial institutions in data collection, management, exploitation, and analysis stem from the prevalence of manual processes, inaccurate extraction, and a lack of internal knowledge in data management. Overcoming these hurdles is essential for making substantial progress in achieving effective Digital Transformation.

Entities must adopt automated technology tools for data management and updating customer information to overcome these barriers. This not only simplifies data analysis but also expedites the development of personalized products and services. Additionally, training in these areas is crucial, and organizations can explore innovative approaches, like collecting data through customer surveys, to acquire information efficiently and enhance operational efficiency. It is critical to recognize that an effective Digital Transformation should be reinforced by a strong database.

The goal is to ensure that the organization possesses end-to-end (E2E) data that can be utilized for product design, the onboarding process, and the formulation of retention strategies to expand the loyalty and growth of the financial institution's customer base. Having robust and complete data at all stages of the customer journey is essential for delivering high-quality services and enhancing their experience.

It goes beyond the internal data of the entity. Moreover, it is crucial to acknowledge that data sources extend beyond the information generated solely by the entity. Customers, through their interactions with other entities and platforms, generate valuable data that can be harnessed. Establishing strategic collaborations with other organizations to access this wealth of external data can offer a more comprehensive and enriching perspective, driving innovation and continuous improvement in the Digital Transformation of the entity.

One of the interviewed entities provided an example highlighting a focus on data analysis to steer their development strategy. Their approach began with capturing a holistic view of the customer through 360- degree data analysis, considering a broad range of dimensions, including financial and social aspects. This information was consolidated into a data warehouse and utilized to create more than 20 distinct segments with mathematical weights that correlated data, incorporating factors such as the Poverty Index (PPI).

The essence lies in the fact that this data analysis yields a personalized development roadmap, extending in both directions, along both the X-axis (financial) and the Y-axis (social). This approach empowers the financial institution to tailor its strategies and offerings to the specific needs of each customer segment.

Apart from the case we discussed and the insights gathered from our focus groups, we have identified additional solutions that could enhance our ability to address this challenge effectively:

Real-Time Technological Tools: The importance of technological tools for real-time updates of customer data was underscored by the entities. Real- time operation dashboards were highlighted as an effective approach to attain this objective.

Standardization of Data Collection: A recommended approach for enhancing information management and analysis involves the standardization of data collection through the implementation of a data dictionary.

Data Collection Automation: Emphasizing the establishment of standards to automate data collection was underscored as an effective practice, ensuring consistency and efficiency in acquiring information. Pertaining to relevant topics, training individuals, especially in data management, was identified as an essential means to optimize available data.

Data Measurement Governance: Implementing data measurement governance was highlighted as a key approach to enhance tracking capabilities and ensure effective use of data.

Product Prequalification Surveys: Entities also mentioned conducting prequalification surveys for products as a strategy to evaluate customers' financial well-being and provide tailored microcredits to meet their specific needs.

Areas of Opportunity for Ecosystem Players

Within the context of Digital Transformation, it's crucial to identify and address areas of opportunity that can fuel growth and success by leveraging the impact and collaboration of various actors in the financial ecosystem. Some of these opportunities include:

Local and Regional Digital Identity

The concept of local digital identity marks a substantial advancement in how individuals interact with services and products in the digital age. Essentially, it is a system that empowers citizens to identify themselves efficiently and securely across a diverse array of services offered in their country.

The true potential of local digital identity lies in its ability to amass valuable information about the general population. As individuals employ their digital identity to access various services, a significant amount of data is generated. Responsible handling of this data, with a focus on privacy and respect, can provide an in-depth understanding of the path, behaviors, tastes, and preferences of the population.

Resulting from a highly innovative vision developed through collaborative ideation in focus groups, the entities put forth the idea of creating a cross-border digital identity. This identity would facilitate traceability, ensuring recognition of personnel across the entire region. Such an initiative could lead to substantial benefits in financial inclusion and product innovation for the sector. It would enable the identification and tracking of migrants, facilitating their access to financial services in different countries and expediting their adjustment to the new financial environment.

Additionally, the development of cross-border financial products includes solutions related to remittances, investments, and savings, specifically tailored to meet the needs of a continually mobile population.

Connectivity and Access

Collaborative efforts between the public and private sectors to extend mobile access and connectivity to excluded and low-income individuals represent a pivotal opportunity in financial inclusion and Digital Transformation. This partnership has the potential to eliminate economic and technological barriers, easing access to financial services and fostering digital inclusion and economic development. It stands as an effective strategy to bridge the digital divide and promote financial equity in society. However, it is crucial to acknowledge that despite the considerable impacts and benefits, this initiative demands a significant level of effort, as it necessitates substantial time and infrastructure resources.

Financial and Digital Education

Fostering public-private partnerships for financial education and digital skills in young individuals and those not native to the digital environment is pivotal to drive inclusion and prepare society for the digital world. These collaborations further innovative programs that strengthen the necessary skills and facilitate participation in the digital economy.

It is essential to remember that financial and digital inclusion goes beyond the provision of digital products and services; it extends to the genuine ability of populations to embrace the products offered. Individuals at the bottom of the pyramid may lack a high level of digital literacy, posing challenges for them to fully engage in the digital world. Despite efforts to facilitate digital products, the absence of knowledge and inherent limitations in such products could serve as obstacles.

Consider the case of PIX in Brazil as an illustrative example. In terms of the offering, a free service was implemented, allowing broad access to digital payments. This represented a milestone in financial inclusion, granting the population automatic access to financial services. Between November 2020 and March 2022, more than 40 million people conducted their first bank transfer. The truly compelling aspect now is to analyze the adoption rate of products offering more intricate attributes than a simple money transfer.

Safe Spaces for Regional Innovation

Establishing safe zones for regional innovation, like sandboxes, presents a valuable opportunity to propel financial inclusion. These environments encourage collaboration among actors to devise and assess innovative solutions. Moreover, they facilitate experimentation with products and services focused on inclusion, potentially identifying replicable solutions across the region. This, in turn, accelerates the extension of financial inclusion into communities that might otherwise face marginalization.

A notable case exists in Europe, specifically in the UK, where the Financial Conduct Authority (FCA) has established a Diversity, Equality, and Inclusion (DEI) sandbox. This sandbox is crafted to offer companies interested in launching innovative products or services that prioritize fair treatment of consumers and service to vulnerable populations the opportunity to test these proposals in a practical manner in the real market with real consumers.

The DEI sandbox is specifically tailored for companies that, while eager to test their innovations, may lack the required expertise to fully comprehend the intricacies of the FCA's regulatory framework. Essentially, this approach provides a controlled and secure environment for companies to develop and validate their concepts and products. This benefits both companies and consumers by ensuring the creation of solutions that promote diversity, equality, and inclusion in the financial sector.

Generating Connections between Entities in the Region for Learning Experiences

Establishing connections among financial institutions in the region, led by multilateral institutions, presents a pivotal opportunity. These connections not only foster the development of robust relationships between institutions but also pave the way for meaningful learning experiences. The potential for entities to conduct exchange visits and share experiences with other successful institutions in the region provides a valuable opportunity to accumulate unique knowledge and perspectives. This can drive the replication of success stories across the region and effectively promote financial inclusion.

For instance, one of the entities we interviewed shared an impressive experience regarding partnerships with a wholesale chain, offering working capital loans to shopkeepers. This fully digital solution is seamlessly delivered through financial products integrated into the retailer's mobile app. Shopkeepers can perform diverse activities such as card transactions, order placement, and credit requests directly from this platform. This 100% digital solution originated as a response to a market need.

Expanding its digital credit portfolio, the entity now includes employees of the wholesale chain. This entails a digital approach for issuing digital money orders. In addition to financial services, cross-selling opportunities have been utilized, offering medical assistance to customers who have availed credit.

These collaboration models establish win-win scenarios, where companies exchange distinctive capabilities, resulting in cross-value generation.

Final Reflection

In summary, this study assesses and reveals the potential impact of Digital Transformation on financial inclusion in LAC, emphasizing the necessity of involvement from various actors in the ecosystem. Entities, through the adoption of technologies and the implementation of innovative strategies, have strengthened their capacities, providing more accessible, efficient, and inclusive services to the population. Digitalization has successfully surmounted geographical and financial barriers, opening up opportunities for vulnerable populations to access financial services.

However, the evolution must continue. Despite the evident progress, there are notable challenges in the internal transformation of entities and hurdles in addressing the specific needs of each population. The challenges identified in the Digital Transformation process to drive financial inclusion include critical areas such as the personalization of financial products, the adoption of digital channels by customers, and financial education. These are fundamental factors that require continuous attention.

In addressing these challenges, entities are expected to acknowledge that data emerges as the central enabler of transformation, and technology serves as the driver required to enhance the value chain.

ANNEXES

6

6.1 Limitations in Data Collection and Analysis

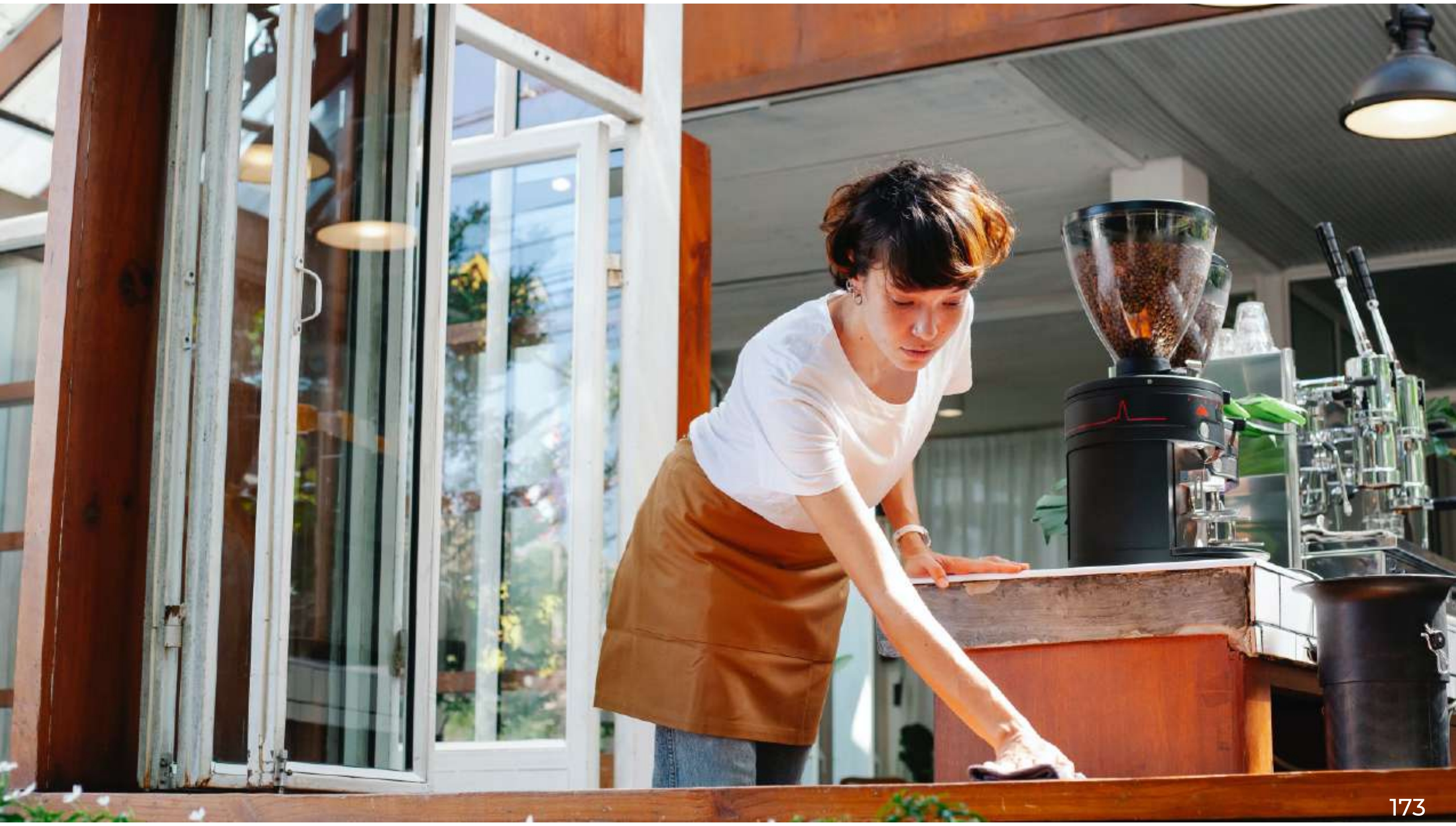
For a comprehensive understanding of the results of this study, it is essential to emphasize the limitations associated with data collection and the information used in this report. A substantial effort was dedicated to obtaining data from primary sources, specifically through the DMA (Digital Maturity Assessment) and interviews conducted with a representative group of financial institutions in the region.

However, this methodology has the potential to introduce biases inherent in surveys and interviews, which may impact the results. This becomes especially relevant concerning differences in the characteristics and maturity levels of the entities, as well as the diverse perspectives of the interviewed profiles. Despite efforts to alleviate these biases, it is important to note their existence and acknowledge that certain relevant perspectives or data might not have been included in the study due to limitations in data collection.

The potential limitations in the results of the study are as follows:

1. **Choice Bias of Regional Entities:** In this study, participation was restricted to financial entities in the LAC region, encompassing banks, cooperatives, microfinance, and Fintech firms, who voluntarily opted to take part and were validated by IDB Invest. The participating entities received a complimentary assessment of their digital maturity and gained access to the materials produced in this report.

2. **Representative Bias of Countries and Subsectors:** Aiming to provide a comprehensive view of the current situation of financial institutions in these subsectors across the LAC region, wide-ranging participation was actively pursued. Nevertheless, the entities' acceptance rate to be part of the study has exhibited considerable variation according to the country or subsector, resulting in differences in the composition of the final sample. Therefore, the conclusions presented in the study by country or subsector should be interpreted with caution, considering the potential bias associated with the level of maturity and perspectives of the entities that opted to participate in the region.



3. **Institutions' Self-assessment:** The outcomes of this study are derived from the self-assessment of digital maturity conducted by multiple senior management profiles in financial institutions. The study team did not conduct a thorough diagnosis in any entity. The intention was to involve at least two profiles with different roles within each entity, such as CEO, COO, CTO, or Digital Transformation Officer. Nevertheless, considering the diverse profiles participating in both DMA and the interviews, the information provided may not present a holistic view of the entity and could be subject to bias based on the perspectives of the participants.

6.2 Additional Description of the Variables Analyzed in the Assessment of DMA

For a comprehensive assessment of the digital maturity level of the organizations involved in this study, a Digital Maturity Assessment framework has been devised. This framework centers around eight crucial domains that entities need to address during their transformation process.

One of the central challenges faced by these organizations in their pursuit of transformation is making comprehensive progress in each of these areas. As a result, a detailed analysis of each of these aspects has been conducted in both the questionnaires and the interviews.

The areas assessed are listed below:

1. Strategy
2. Customer Experience
3. Organization, Talent, and Digital Culture
4. Products and Services
5. Infrastructure and Technology
6. Data Analytics
7. Processes
8. Innovation

Strategy

This dimension centers on assessing the digital vision and commitment of an organization's senior management. It gauges how an organization strategically embraces Digital Transformation, examining its alignment with emerging trends, the presence of a defined roadmap, and whether Digital Transformation holds priority in the entity's budget.

- **Strategic Focus:** Assesses whether the organization possesses a clear strategy for its Digital Transformation, the strategic course it is undertaking, its prioritization within the business objectives, and the alignment of technology with this vision.
- **Economic Focus:** Assesses the financial institution's commitment and investment level in adopting the latest trends at the business level.
- **Ecosystem and Work Environment:** Assesses the current conduct and state regarding strategic digital partnerships with ecosystem partners.

Customer Experience

This dimension centers on how the organization manages its relationship with the customer, including the level of understanding of their needs and their involvement in the process of enhancing and designing digital solutions.

- **Customer Relationship:** Analyzes the organization's approach to customer relations. Is there a consistent focus on them in all interactions? To what extent are digital channels used to enhance these relationships?
- **Customer Insight:** Analyzes the organization's proficiency in understanding customers. Is pertinent information about them collected and analyzed to personalize interactions and provide tailored solutions?
- **Customer Engagement:** Analyzes whether the organization actively engages customers in the process of designing digital products or services. Is their feedback collected and used for continuous improvement?

Organization, Talent, and Digital Culture

This dimension centers on comprehending how an organization oversees its human capital in the context of Digital Transformation, encompassing specialized digital teams, digital talent management, and flexible working methods.

- **Digital Team:** Assesses the presence of specialized teams in Digital Transformation, their proficiency in leading projects, and the existence of digital leaders who drive change.
- **Talent Management:** Analyzes how the organization attracts, retains, and fosters digital talent, including the identification of critical skills, training, and the continuous development of employees in digital skills.
- **Forms of Work:** Analyzes the presence of agile methodologies and flexible work practices facilitating quick adaptation to digital demands, as well as seamless communication and collaboration across different areas of the organization.

Products and Services

This dimension centers on assessing how an organization navigates its offerings in the digital environment. It emphasizes understanding how an organization positions itself in the digital market and adjusts its offerings to meet evolving customer demands in the online environment.

- **Value Proposition:** Analyzes the organization's approach to product design and the strategic articulation of the value of its digital products and services.

- **Sales Channels:** Analyzes the organization's distribution and sales strategies for its digital products and services. What channels are used to reach customers? How is the online sales process done?

Infrastructure and Technology

This dimension centers on understanding how the organization builds the essential infrastructure and technology to support its digital initiatives, guaranteeing a secure and efficient environment throughout its Digital Transformation.

- **Infrastructure:** Analyzes the underlying technology infrastructure that supports the organization's digital operations. This includes servers, networks, data storage, and other essential components.

- **Technology:** Analyzes how the set of technologies such as Cloud, AI, Big Data, and Robotics are used by the organization in its Digital Transformation.

- **Security:** Analyzes how the organization protects its digital assets and customer data. This includes measures such as data encryption, access management, and threat detection.

Data Analytics

This dimension centers on evaluating how an organization manages, uses, and exploits its data within the Digital Transformation process. It encompasses aspects of data governance, diversity of data sources, and the tools utilized for data-driven analysis and decision-making.

- **Data Governance:** Analyzes how the organization establishes policies and procedures to manage its data effectively. This includes things like defining roles and responsibilities around data, data quality, privacy, and data security.

- **Data sources:** Analyzes the data sources incorporated by the organization in its operations and decision-making, focusing on the development of analysis models and credit scoring.

- **Tools:** Focuses on the tools and technologies used for data analysis. This could include data analysis software and visualization tools.

Processes

This dimension centers on evaluating the efficiency and effectiveness of the organization's internal processes, as well as its capacity to collaborate and engage with external agents in the Digital Transformation process.

- **Business Management:** Analyzes how the organization manages its internal processes and business operations. This includes aspects such as operational efficiency, process automation, alignment of processes with strategic goals, and quality management.

- **Integration and Collaboration with External Agents:** Analyzes how the organization engages and collaborates with external agents, such as business partners, suppliers, customers, and other stakeholders.

Innovation

This dimension centers on evaluating the organization's ability to identify, embrace, and implement disruptive trends in the business and technology environment.

- **Disruptive Trends:** Analyzes the organization's awareness of trends that could impact its industry or sector. This involves actively monitoring technological developments, changes in consumer behavior, government regulations, and other forces that may significantly impact the business.

6.3 Regions, Countries, and Type of Entities Participating in the Study

For a thorough insight into Digital Transformation in the LAC financial sector, a validation analysis was executed, incorporating a diverse range of entities from distinct subsectors, such as cooperatives, microfinance, banking, and fintech, all committed to banking and financial inclusion. This selection was made after a detailed examination of the regions in Central America, South America, and the Caribbean, considering the unique characteristics of each country. This diverse approach facilitated a more complete comprehension of the challenges and opportunities in advancing greater financial inclusion through Digital Transformation in the region.

Figure 40: Digital Maturity Level Weighting by Region

Caribbean

Weighted
Maturity Level:
2.39

- 6 Dominican Republic
- 1 Jamaica
- 1 Haiti

Mexico and Central America

Weighted
Maturity Level:
2.83

- 1 Belize
- 1 Costa Rica
- 1 El Salvador
- 3 Mexico
- 2 Guatemala
- 1 Honduras

Southern Cone

Weighted
Maturity Level:
2.59

- 2 Brazil
- 1 Chile
- 5 Colombia
- 4 Ecuador
- 2 Paraguay
- 1 Guyana
- 3 Peru

Source: Prepared internally, self-assessment results of the digital maturity assessment.

In **Mexico and Central America**, six countries were deliberately chosen: Belize, Costa Rica, El Salvador, Mexico, Guatemala, and Honduras. Presently, these countries are undergoing notable progress in adopting online banking services and mobile applications to deliver digital financial solutions to their citizens, rendering them an intriguing context for Digital Transformation and financial inclusion in the region. Despite these advancements, the region grapples with challenges related to technological infrastructure, particularly concerning internet connectivity in remote areas.

Additionally, owing to various geopolitical issues, migration stands as a prominent reality, characterized by substantial emigration to countries like the United States. This amplifies the importance of financial services, specifically regarding sending and receiving remittances, for the population in the region. Furthermore, within this area, there exist indigenous populations grappling with cultural and linguistic barriers in their pursuit of access to financial services (especially in Guatemala and Honduras). These variables make these countries a compelling case for understanding how Digital Transformation can influence financial inclusion in diverse and challenging settings.

In the **Southern Cone**, seven countries were deliberately chosen: Brazil, Chile, Colombia, Ecuador, Paraguay, Guyana, and Peru. These countries predominantly possess a robust technological infrastructure, leading to rapid advancements in the adoption of online banking services and the use of mobile applications for payments and transfers. This showcases their significant progress in Digital Transformation.

Concerning financial inclusion, these countries are proactively employing technology to reach out to populations that have traditionally faced hurdles in accessing financial services. In the migration area, akin to Central America, issues related to remittances are being actively addressed, recognizing the critical significance of these financial flows in the region. Similarly, in countries like Peru and Ecuador, marked by substantial indigenous populations, efforts are being made to surmount cultural and geographical barriers that have historically limited their access to financial services.

In the **Caribbean** region, three countries were deliberately chosen: the Dominican Republic, Haiti, and Jamaica. Notably, the Dominican Republic distinguishes itself with a more substantial and diverse economy, facilitating significant investments in technological and telecommunications infrastructure. This investment has played a crucial role in fostering the widespread adoption of digital services and enhancing the overall penetration of financial services across the country.

Conversely, Haiti and Jamaica encounter economic and political challenges that impede their progress in Digital Transformation. Despite these obstacles, both countries are actively engaged in financial inclusion initiatives aimed at reaching underserved populations. These initiatives present substantial opportunities for advancing Digital Transformation in the region, enhancing accessibility, and improving the quality of financial services for the population.

Subsectors

An assessment was undertaken to validate financial subsectors in LAC, with a specific emphasis on their advancements in Digital Transformation and commitment to enhancing financial inclusion for vulnerable and underserved populations. Banks, microfinance companies, cooperatives, and fintech firms collectively aim to deliver financial services to diverse and marginalized groups, leveraging technology to enhance accessibility and operational efficiency.

Banks

Notably, this subsector prioritizes financial inclusion by offering personalized services to clients spanning various socioeconomic levels. The adoption of technology, such as mobile apps and online services, reflects a trend seen across other subsectors. Relationship banks, often sizable and well-established institutions, provide an extensive array of products and services. To comprehend their current state of Digital Transformation and their role in financial inclusion, eight banks were meticulously selected for this study.

Microfinance

Demonstrating a steadfast commitment to financial inclusion, microfinance companies focus on catering to low- income individuals and small businesses. Following the trend in other subsectors, they are actively integrating digital technologies to broaden their reach and offer specialized products, such as microloans. The inclusion of eleven microfinance institutions in this study was deliberate, aiming to investigate their influence on the regional financial inclusion landscape and evaluate their progress in Digital Transformation.

Cooperatives

Embodying collective ownership and community-focused values, cooperatives utilize digital technologies to improve their services, aligning with practices in other subsectors. Differing in size, from local organizations to larger credit unions, these institutions are guided by a social mission. The selection of thirteen cooperatives for this study aims to uncover how this subsector contributes to financial inclusion through Digital Transformation in the region.

Fintech

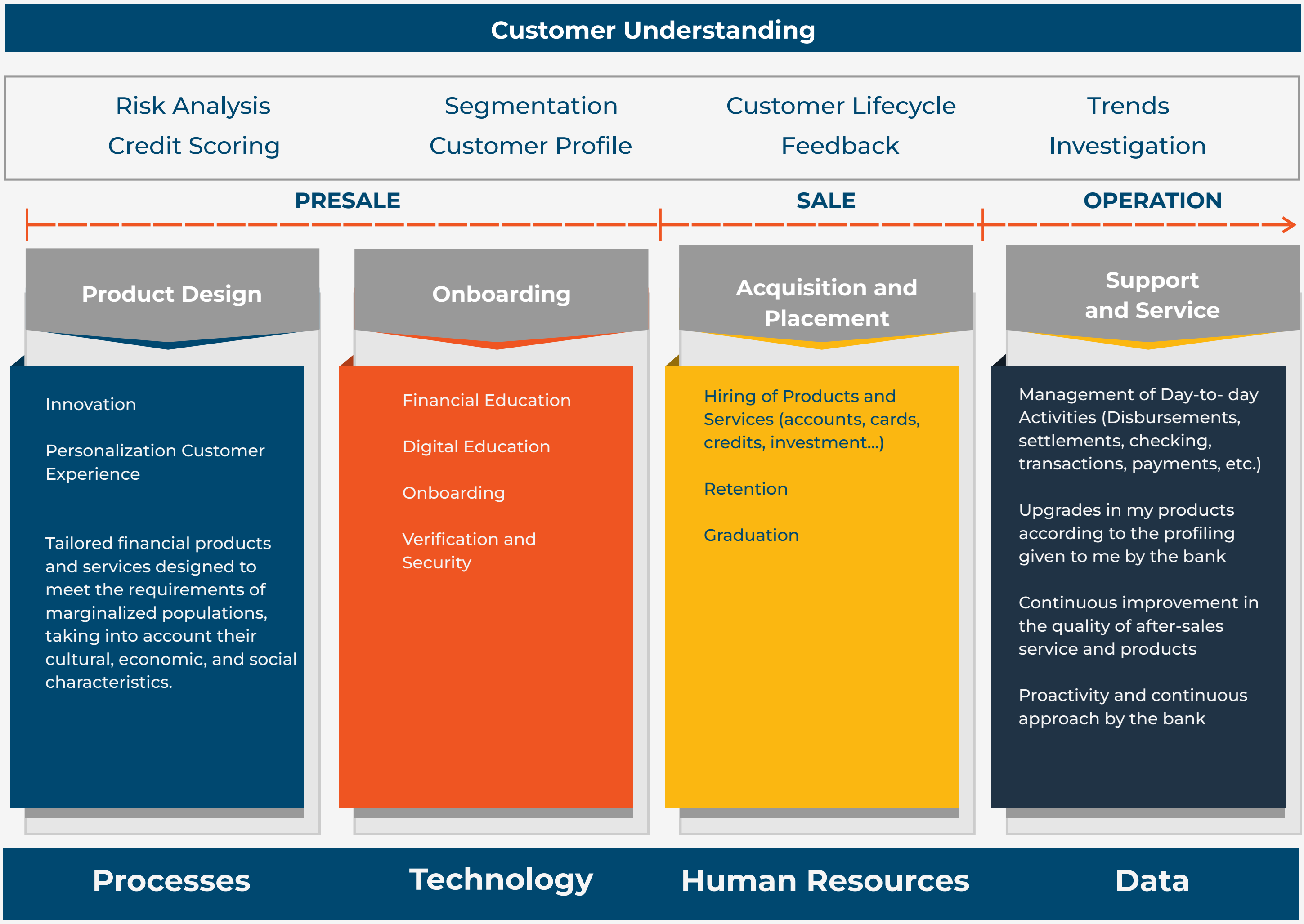
Fintechs stand out through their emphasis on technology and innovation, offering a diverse range of financial services with agility, fintech firms distinguish themselves. Their flexible structure and propensity to challenge conventional business models differentiate them within the financial subsectors. Three fintechs were deliberately chosen in the region to deepen insights into these entities spearheading Digital Transformation in the financial industry.

6.4 Description of Financial Services Value Chain Activities

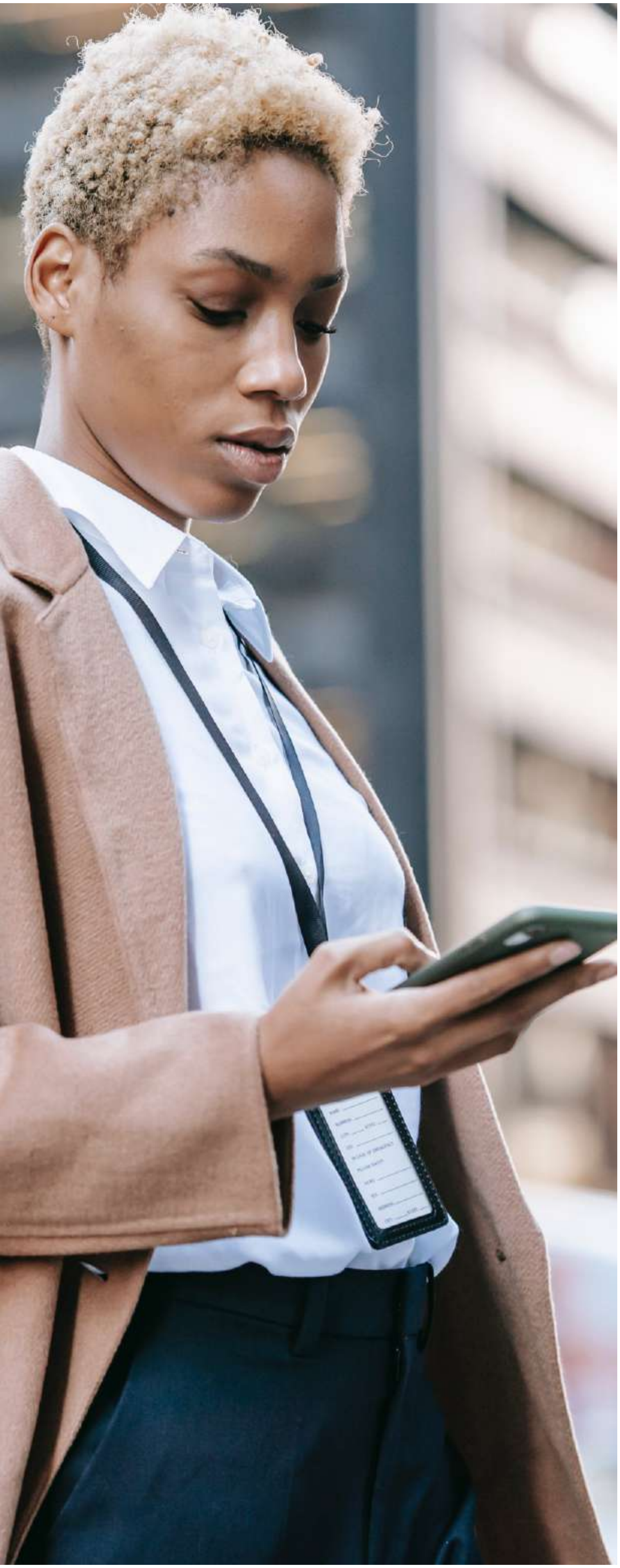
Within the context of financial services, the value chain stands out as a fundamental concept employed to deconstruct and comprehend the various processes involved in the creation and delivery of financial services. Each link in this chain assumes a critical role, contributing substantially to the customer experience and the overall efficiency of financial services.

Today, the core of the entire chain finds support in capabilities like cutting-edge technology, adept data analysis, well-trained human resources, and efficient processes. These elements serve as the groundwork on which each stage is erected and progressed, enabling a smooth and successful integration of Digital Transformation.

Figure 41: Financial Services Value Chain



Source: Prepared internally



Customer Knowledge

At the core of this chain lies a comprehensive understanding of customers, serving as a pervasive element that shapes and directs every phase of the process. The pre-sales stage comprises two fundamental components: product design and onboarding.

At this stage, the emphasis is on three pivotal drivers that define the extent of customer understanding, delivering essential insights for subsequent stages. These drivers encompass data depth, data exploitation, and data analysis. Each element exhibits varying levels of maturity, and their seamless collaboration is indispensable for a comprehensive grasp of customers' needs and preferences. This, in turn, facilitates the provision of more personalized and effective financial solutions.

Concerning data depth, various levels are recognized, ranging from basic customer data to the integration of external financial data and, ultimately, the inclusion of non-financial information to gain deeper insights into lifestyle and preferences. Data exploitation manifests at three levels: descriptive, predictive, and prescriptive models, enabling an understanding of the past, prediction of the future, and strategic decision-making based on data.

Finally, data analysis spans from batch processing to real-time analysis, enhancing the agility of financial institutions, including functions like transaction monitoring and real-time services. The fusion of these drivers, backed by advanced technologies such as artificial intelligence, Big Data, and cloud computing, facilitates deeper comprehension and enhanced service delivery in the financial sector.

Product Design

At this stage, entities emphasize the conceptualization and development of financial solutions tailored to meet the needs of different population segments. Simultaneously, they focus on seamlessly onboarding customers into the digital environment.

An impactful demonstration of agile and digital product design within the financial industry is evident in the development of highly intuitive mobile banking applications. Designed to provide customers with straightforward and uniform access to a myriad of financial services, these applications boast a user- friendly interface. Users can easily check balances, perform transfers, settle bills, and venture into investments, all with the ease of their mobile devices.

Most importantly, these applications are consistently updated to bring forth improvements and new functionalities, delivering ongoing incremental value to customers. Notably, features like biometric authentication or the option to swiftly open an account through the app exemplify how agile and digital product design is reshaping the delivery and consumption of financial services.

Digital Onboarding

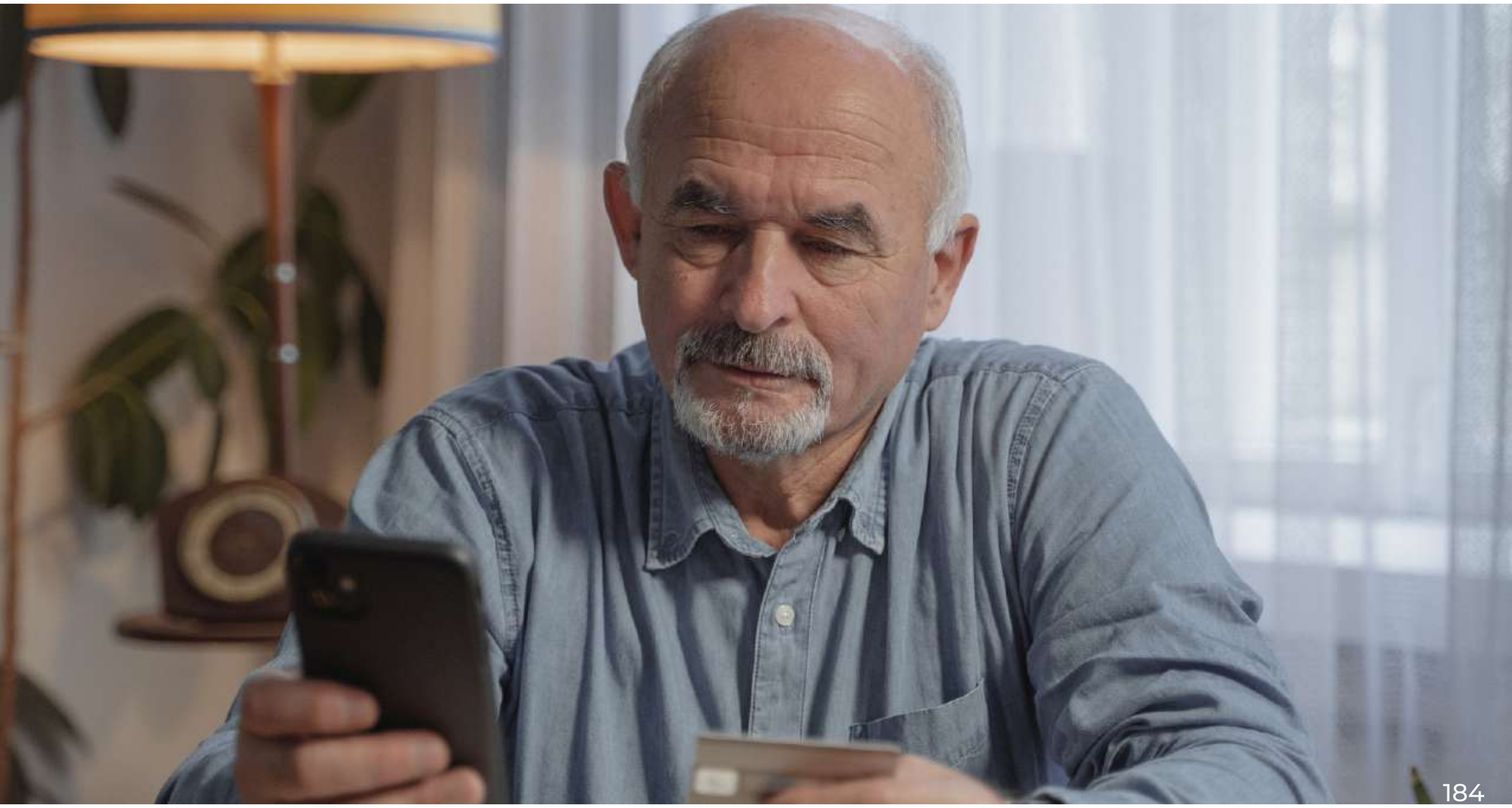
The digital onboarding of financial products has become a prevalent practice in the sector. Take, for instance, the scenario where a customer opts for an online bank account. Instead of the traditional visit to a physical branch, the entire process can be seamlessly completed using a mobile device or computer. Throughout this process, the customer furnishes personal details and undergoes identity verification, achieved either through biometric technology or by uploading digitized documents.

Upon completion of the registration process, customers can promptly commence using their accounts. This provides them with access to a range of services, such as online banking, self-service management, account administration, alert configuration, and more – all digitally, eliminating the need for physical branch visits. This digital onboarding method greatly streamlines the adoption of financial products, reducing paperwork and wait times, offering mutual benefits to both customers and financial institutions.

Acquisition and Placement

The subsequent stage in the chain revolves around the sales process, categorized into the acquisition and placement of financial products and services. In this stage, financial institutions focus on enticing and converting potential customers, leveraging digital channels to offer access to a diverse range of financial products tailored to individual circumstances and needs.

Financial institutions employ digital channels to creatively engage potential customers. For instance, they implement highly targeted online marketing strategies, reaching specific audiences through social media ads, search engines, and other relevant websites. Moreover, they actively promote participation in digital referral programs, enabling satisfied customers to recommend financial products to their online contacts. This establishes a "network of networks," turning customers into digital promoters for the institution's financial products and services. This digital strategy not only broadens the customer base but also taps into the influential realm of personal online recommendations, fostering trust and credibility in the digital financial sector.



Support and Service

The operational stage, the third element in this chain, consolidates all tasks associated with support and service. This stage is dedicated to ensuring that customers, having acquired financial products, receive ongoing support for their optimal and effective utilization. Encompassing technical support and financial advice, this stage stands as a linchpin in maintaining customer satisfaction and cultivating loyalty within the digital environment.

Financial institutions are increasingly adopting self- service solutions and artificial intelligence to enhance and streamline customer service. For instance, they have integrated chatbot systems leveraging artificial intelligence to address frequently asked questions and deliver real-time assistance via their digital platforms.

These chatbots demonstrate an ability to comprehend and respond to queries with precision and efficiency, leading to a substantial reduction in wait times and an enhanced overall experience. Furthermore, self-service solutions empower customers to access online resources and tools for resolving common issues, like account setup or transaction management.

Collectively, these technologies are revolutionizing how financial institutions deliver support and customer service. They guarantee that customers, upon acquiring financial products, receive swift and effective support.

REFERENCES

Castells, P., Corvalan, L., & Rattel, F. (2023). Brechas de conectividad en América Latina: Una hoja de ruta para Argentina, Brasil, Colombia, Costa Rica y Ecuador. En GSMA Latin America. URL: https://www.gsma.com/latinamerica/wp- content/uploads/2023/03/FINAL-Brechas-de-conectividad-en-America-Latina_- LONG-report-SPANISH-DIGITAL-30-03-2023.pdf
Central Bank of Brazil. https://www.bcb.gov.br/en/financialstability/pixstatistics

Comisión Económica para América Latina y el Caribe (CEPAL), Estudio Económico de América Latina y el Caribe, 2022 (LC/PUB.2022/9-P/Rev.1), Santiago, 2022. https://repositorio.cepal.org/bitstream/handle/11362/48077/4/S2201058_es.pdf

Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, and Saniya Ansar. 2022. The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. Washington, DC: World Bank. doi:10.1596/978-1-4648-1897-4. License: Creative Commons Attribution CC BY 3.0 IGO

Dilip Ratha, Eung Ju Kim, Sonia Plaza, Elliott J Riordan, Vandana Chandra, and William Shaw. 2022. Migration and Development Brief 37: Remittances Brave Global Headwinds. Special Focus: Climate Migration." KNOMAD-World Bank, Washington, DC. License: Creative Commons Attribution CC BY 3.0 IGO.

EIU (Economist Intelligence Unit), 2020; Microscopio Global de 2020: El papel de la inclusión financiera en la respuesta frente al COVID-19; Nueva York, NY

Finnovista. BID. BID Invest (2022). Fintech en America Latina y el Caribe: Un ecosistema consolidado para la recuperación. licencia Creative Commons IGO 3.0. https://publications.iadb.org/publications/spanish/viewer/Fintech-en-America- Latina-y-el-Caribe-un-ecosistema-consolidado-para-la-recuperacion.pdf

Harrys, J. y Maldonado, R. 2023, 27 marzo. Remesas hacia América Latina y el Caribe en 2022: ¿el crecimiento llegó a su techo? La maleta abierta. http://url-del- blog.com. https://blogs.iadb.org/migracion/es/remesas-hacia-america-latina-y-el- caribe-en-2022-el-crecimiento-llego-a-su-techo/#:~:text=Las%20remesas%20que%20recibieron%20en,anual%20de%2012%2 C5%25.

IDB INVEST: Los pagos digitales como forma de impulsar la inclusión financiera: https://idbinvest.org/es/blog/instituciones-financieras/los-pagos-digitales-como- forma-de-impulsar-la-inclusion-financiera

REFERENCES

IDB LAB. World Economic Forum. Mayo 2022.Acelerando los pagos digitales en América Latina y el Caribe. https://www3.weforum.org/docs/WEF_Accelerating_digital_payments_SP_2022.pdf

INEGI. (2022, mayo). Encuesta nacional de inclusión financiera (ENIF), 2021 [Comunicado de prensa No. 256].
https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2022/enif/ENIF21.pdf

Informe mundial sobre el edadismo. Washington, D.C.: Organización Panamericana de la Salud; 2021. Licencia: CC BY-NC-SA 3.0 IGO. https://doi.org/10.37774/9789275324455.

Okumura, M; Stampini, M; Buenadicha, C; Castillo, A; Vivanco, F; Sanchez, M; Ibarrarán, P; Castillo, P. (2020). La Economía plateada en América Latina y el Caribe: El envejecimiento como oportunidad para la innovación, el emprendimiento y la inclusión. Grupo BID. URL https://publications.iadb.org/publications/spanish/viewer/La-economia-plateada- en-America-Latina-y-el-Caribe-El-envejecimiento-como-oportunidad-para-la- innovacion-el-emprendimiento-y-la-inclusion.pdf

Pompeo, C. (2022). PIX eleva el nivel de la inclusión financiera y digital en Brasil, muestra estudio de Beyond Borders. LABS Español. https://labsnews.com/es/articulos/negocios/pix-eleva-el-nivel-de-la-inclusion- financiera-y-digital-en-brasil-muestra-estudio-de-beyond-borders

Raithatha, R., Awanis, A., Lowe, C., Holliday, D., Storchi, G. The state of the industry report on mobile money 2023. 11th edition. GSMA. https://www.gsma.com/sotir/#download

CONTINUE THE CONVERSATION

idbinvest.org

idbinvest.org/linkedin

idbinvest.org/twitter

idbinvest.org/facebook

idbinvest.org/blog