Demystifying Digital Lending

How Digital Transformation Can Help Financial Service Providers Reach New Customers, Drive Engagement, and Promote Financial Inclusion

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Foreword

In Accion's more than 50 years working in financial inclusion, we've seen first-hand the challenges that financial service providers face in their efforts to sustainably offer products and services that address the unique needs of underserved customers. Time-intensive, manual processes and a labor-intensive business model have prevented many from meeting the enormous demand that still exists in their markets.

In our experience, digital lending offers an unprecedented opportunity to address these challenges. Financial service providers across the globe can now take advantage of improving connectivity, increasingly available customer data, and new technologies to offer digital products at lower cost and increased scale. These products offer customers a convenient, fast, and personalized experience that builds engagement and promotes financial capability. However, digital lending also brings new risks and challenges, and it can have unanticipated negative effects on both institutions and clients. Financial service providers must carefully and systematically approach digital product design and development, with a deep understanding of client needs and market trends, and with the right systems and processes in place.

Digital lending has become a core area of focus for Accion's Global Advisory Solutions team, and we're excited to share our insights and experiences through this publication. We hope that you find it a helpful guide to 'demystify' digital lending, as well as an inspiration to build the digital maturity of your institutions.

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Demystifying Digital Lending

EXECUTIVE SUMMARY

Digital lending can be a powerful force for financial inclusion. Innovations in digital lending are enabling financial service providers (FSPs) to offer better products to more underserved clients in faster, more cost-efficient, and engaging ways. Governments are increasingly incentivizing the growth of digital lending models as a way to promote greater financial inclusion and extend high-quality financial services to underserved communities and businesses.

Digital lending offers too many competitive advantages for FSPs to ignore, and we believe that it will have a permanent impact on the financial industry. Although integrating digital lending practices into an FSP's operations can be a challenging process, any FSP can find ways to do so successfully. Moreover, FSPs *should* find ways to do so: digital lending, if done correctly, will help FSPs evolve, scale, and compete in a rapidly changing landscape. Conversely, FSPs ignore digital lending at their own peril. Customers' expectations are rapidly changing and are being shaped by their experience with smartphone apps, fintechs, and social media. Importantly, digital lending presents one way for FSPs to meet those changing expectations.

However, there is typically a gap between the vision of fully-integrated digital lending and the realities that traditional lenders must effectively navigate to complete that institutional transformation. While challenging, FSPs should not be overwhelmed by the prospect of developing a digital product. This guide addresses common concerns, shares insights into new trends shaping digital lending, and distills emerging best practices into a framework that FSPs can use to implement digital lending today. Collectively, these steps are intended to help FSPs plan strategically to navigate the new and rapidly changing landscape of digital lending.

We are aware that not all the actions described in this guide will be relevant for every FSP. While our recommendations are presented here in the most broadly applicable manner, each organization in the financial inclusion space faces a unique set of challenges. The Digital Maturity Matrix, found on page 21 of this paper, can help FSPs select which processes to prioritize based on their current and desired level of maturity.

Regardless of whether an FSP decides to develop its own digital lending capability, explore digital lending partnerships with other organizations, or some combination of these, the recommendations outlined in this paper are intended to encourage FSPs to start adopting the right mindset and processes that will position them for success. While the 'right' level of digitization may vary, our hope is that FSPs can use this framework to deepen their understanding of digital lending, identify their own digital lending objectives and current digital lending maturity, and take the first steps to implement digital lending. Doing so will enable FSPs to better respond to client needs, position themselves strategically for the future, and continue to work toward a financially inclusive world.

Introduction: What's the Big Deal With Digital Lending?

The market for lending is changing across the globe. A new category of digital lenders has emerged that tap into increasingly digitized and accessible customer data, advances in analytics and machine learning, and lower-cost digital channels to design and remotely deliver digital products in seconds to an increasingly connected global clientele.[1] While most digital lenders initially focused on developed markets and higher-income segments, today, many are turning their attention to emerging markets and competing for traditionally underserved, down-market customers. No longer niche, these lenders are taking advantage of improving connectivity and digital literacy to scale customized products and increasingly larger loan sizes. The market opportunity is massive: a 2016 KPMG report found alternative finance[2] globally had become a US$145 billion industry, growing 264% in just one year, from 2014-2015.[3] In many cases, smaller fintech startups have competed for this alternative lending space. But

FIGURE 1. DIGITAL LENDING CUSTOMER JOURNEY: AN ILLUSTRATIVE EXAMPLE

1. The customer finds out about the loan via an SMS blast.

2. Within minutes, the customer downloads the app and applies with minimal documentation.

3. The loan is approved within minutes and disbursed into the customer's mobile wallet.

4. The loan is repaid with the click of a button, and followed up with a customized offer.

5. Help is available 24/7 through chat or call center.

1. 'Bridging the Small Business Credit Gap through Innovative Lending' Accion, November 2016: http://blogs.accion.org/fin-tech/new-report-msmes-small-business-credit-gap/
2. Alternative finance includes financial channels and instruments that have emerged outside of the traditional financial system (i.e. regulated banks and capital markets). Examples of alternative channels are online 'marketplaces' such as equity- and reward-based crowdfunding, peer-to-peer consumer/business lending, and third-party payment platforms. Alternative instruments include new financial products and alternative currencies such as Bitcoin. http://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/
3. 'Global insights from regional Alternative Finance studies', KPMG, October 2016: http://home.kpmg.com/content/dam/kpmg/uk/pdf/2016/10/global-alternative-finance-report-web.pdf

The market for lending is changing across the globe. A new category of digital lenders has emerged that tap into increasingly digitized and accessible customer data, advances in analytics and machine learning, and lower-cost digital channels to design and remotely deliver digital products in seconds to an increasingly connected global clientele.

the demand for digital credit cannot be met by fintech players alone, as they often face challenges with funding and licensing that limit their product offerings.

An FSP's ability to digitize its product portfolio and offer a similar or better customer experience than traditional methods is crucial to staying relevant in a changing financial landscape. Digital lending is also a valuable asset in the global effort to create a financially inclusive world and provide the three billion people left out of or poorly served by the formal financial sector with the tools they need to build better lives. By extending more high-quality services, inclusive digital lenders can foster greater social and economic development, ensuring that people and small businesses can create a better world.

Adopting a digital lending methodology and mindset can offer several important advantages – including lower operating expenses and faster turnaround time, lower delinquency due to better decision-making, improved understanding of client behavior, and enhanced customer engagement through personalized products. It can also provide previously underserved clients with the high-quality, affordable financial services they need to launch or expand businesses, purchase or improve their homes, or send their children to school.

However, adopting a digital lending methodology is not without risks and challenges: some digital lenders struggle with the changes required in risk management and collections of digital loans, and many have yet to achieve profitability. In some instances, digital lending has had unanticipated effects on the end client, resulting in over-indebtedness, misunderstanding, and – in extreme cases – financial exclusion.[4] FSPs seeking to offer responsible digital lending to the underserved need to be aware of these risks and design their products appropriately.

WHAT WILL I GET FROM THIS PAPER?

Much has been written stressing the urgency for FSPs to 'go digital.' FSPs are aware of the competitive pressures and eager to capitalize on new tools that help reduce the costs of acquisition, processing, and servicing loans.

However, the industry has not yet developed a comprehensive, common baseline of what digital lending actually means and what it looks like in practice. Can all FSPs be digital lenders? How can they evaluate their options and get started? With this paper, we set out to 'demystify' digital lending for FSPs, drawing upon discussions with over 100 digital lenders and our more than 50 years of experience working with FSPs across the globe.

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4. Industry leaders, including the Center for Financial Inclusion and Microsave, have conducted important research highlighting some of the client protection risks that can arise from digital lending. See 'Tiny Loans, Big Questions': http://smartcampaign.org/tools-a-resources/1136 and 'Where Credit is Due – Customer Experience of Digital Credit in Kenya': http://www.microsave.net/resource/where_credit_is_due_customer_experience_of_digital_credit_in_kenya to learn more.

With this paper, we set out to 'demystify' digital lending for FSPs, drawing upon discussions with over 100 digital lenders and our more than 50 years of experience working with FSPs across the globe.

We review digital lending in five sections:

SECTION 1.0

This **introduction** discusses the importance of digital lending and why new techniques are helping to reach underserved communities, and lays out some of the basic questions FSPs have about digital lending.

SECTION 2.0

"What does digital lending really mean?" elaborates on digital lending – what it is and what it isn't – and explores why digital lending is relevant for FSPs targeting the base of the pyramid. It also describes four key tenets of digital lending, and delves deeper into the nuances of the definition.

SECTION 3.0

"The digital lending process" breaks down each step in the lending process and describes what a 'digitized lending process' looks like, using industry examples.

SECTION 4.0

"How 'digital' is your institution?" introduces The Digital Maturity Matrix – a tool we developed to help lenders assess their current digital lending capabilities and identify the next steps they should take to better integrate technology into their lending operations. The Digital Maturity Matrix can help FSPs select which processes to prioritize based on their current and desired level of maturity.

SECTION 5.0

"Where do I start?" offers FSPs a path from insights to action – by distilling the trends and best practices of lending in a digital age into a framework that offers practical steps and challenges to consider. While launching digital lending services is a complex, challenging process, FSPs should not be overwhelmed by a sense of paralysis, not knowing how or where to start.

While the 'right' level of digitization may vary, FSPs can use this paper as a framework to deepen their understanding of digital lending, identify their own digital lending objectives and current status, and take the first steps to implement digital lending. This will allow FSPs to better respond to client needs and position themselves strategically in an evolving industry.

2.0

What Does Digital Lending Really Mean?

We spoke with industry experts, microfinance and fintech executives, and investors to capture a range of perspectives on what digital lending means. Responses primarily focused on characterizing the outputs of digital lending – e.g. increased efficiency and faster turnaround times, limited human interaction – rather than the mechanics of the process itself. Many equated digital lending with the product being offered: small, short term, (often) nano-loans that are applied for, disbursed, and collected remotely, frequently through the mobile phone. Those who did speak to the process felt that digital lending encompassed a spectrum of digitization, as one respondent noted: "digital lending takes many shapes and forms – from automating small pieces, to a fully digital lending process, from acquisition to renewal." This lack of clarity on what characteristics are necessary and sufficient to constitute digital lending underscores our experience that not all 'digital lenders' are as fully automated, or 'digital', as they might appear. As one respondent noted, "We have seen a lot of businesses that have a 'digital mullet' – they look digital in the front, but have a lot of labor-intensive work happening on the back end."

Digital lending is the process of offering loans that are applied for, disbursed, and managed through digital channels, in which lenders use digitized data to inform credit decisions and build intelligent customer engagement.

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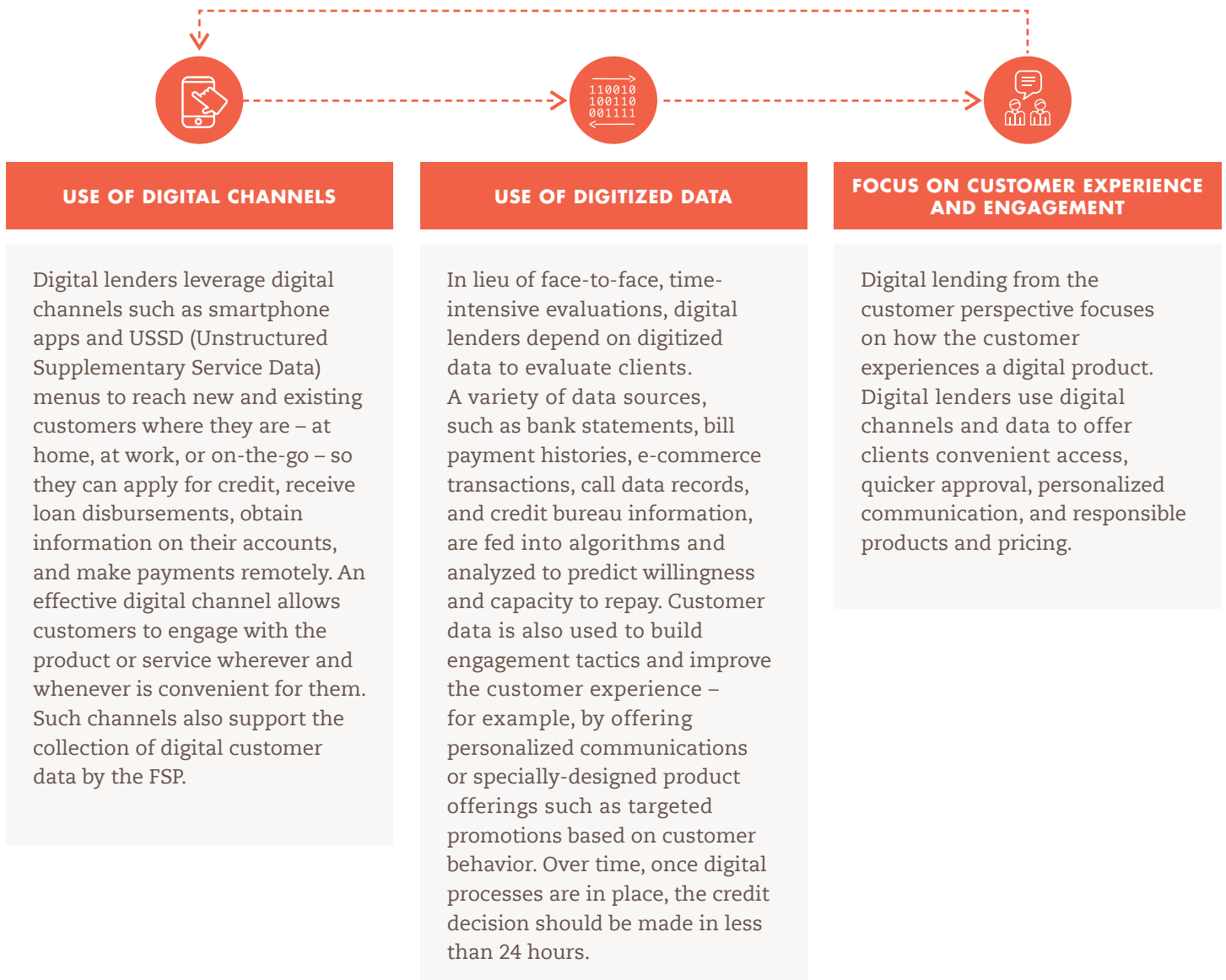
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This definition captures three components that are core to digital lending:

THREE CORE COMPONENTS OF DIGITAL LENDING

USE OF DIGITAL CHANNELS	USE OF DIGITIZED DATA	FOCUS ON CUSTOMER EXPERIENCE AND ENGAGEMENT
Digital lenders leverage digital channels such as smartphone apps and USSD (Unstructured Supplementary Service Data) menus to reach new and existing customers where they are – at home, at work, or on-the-go – so they can apply for credit, receive loan disbursements, obtain information on their accounts, and make payments remotely. An effective digital channel allows customers to engage with the product or service wherever and whenever is convenient for them. Such channels also support the collection of digital customer data by the FSP.	In lieu of face-to-face, time-intensive evaluations, digital lenders depend on digitized data to evaluate clients. A variety of data sources, such as bank statements, bill payment histories, e-commerce transactions, call data records, and credit bureau information, are fed into algorithms and analyzed to predict willingness and capacity to repay. Customer data is also used to build engagement tactics and improve the customer experience – for example, by offering personalized communications or specially-designed product offerings such as targeted promotions based on customer behavior. Over time, once digital processes are in place, the credit decision should be made in less than 24 hours.	Digital lending from the customer perspective focuses on how the customer experiences a digital product. Digital lenders use digital channels and data to offer clients convenient access, quicker approval, personalized communication, and responsible products and pricing.

> Digital lending isn't just doing the same thing better, but rather creating something new. It implies an end-to-end process of developing and delivering data-driven financial products that are applied for, disbursed, and managed through digital channels.

In addition to the three core components of digital lending described above, we further characterized four key tenets of digital lending – the following statements refine the definition and identify and explore the nuances implicit in the digital lending ecosystem.

1: DIGITAL READINESS (ALTHOUGH IMPORTANT!) IS NOT DIGITAL LENDING

At a conceptual level, what makes a lender 'digital?' There are countless 'digital' channels, tools, and products – including digital field applications (DFAs)[5] and cloud-based core banking systems – that FSPs can deploy, many of which help streamline operations, reduce costs, and increase scale. Their implementation is an important step in building digital readiness – the core processes, activities, and systems that will ultimately support the adoption of digital initiatives in any part of the lending process. However, digital readiness is not sufficient on its own to constitute digital lending – what's required instead is a comprehensive organizational transformation to the point that an FSP is using these tools to create an integrated digital product that offers an improved customer experience. From the customer perspective, a well-designed digital product offers quicker access to credit, reduced physical documentation, convenient channels for disbursement and repayment, and a more personalized and customized interaction with the FSP. Section 3.0 dives deeper into the customer experience in a digitized lending process.

This definition draws a useful 'line in the sand' for FSPs: digital lending isn't just doing the same thing better, but rather creating something new. It implies an end-to-end process of developing and delivering data-driven financial products that are applied for, disbursed, and managed through digital channels. To FSPs embarking on or in the midst of this digital transformation process, it may feel more like art than science, but it's an important distinction that underscores the shift in mindset and change management that is required for an institution to truly embody digital lending.

2: THERE ARE MANY TYPES OF DIGITAL LENDERS

The digital lending ecosystem is complex and evolving. Around the world, digital lending models are characterized by distinct market structures, regulatory environments, and customer needs. Some players offer end-to-end digital solutions, while others focus on a specific component of the lending process and leverage partnerships to supplement their models. Figure 3 categorizes some of the major models, and Appendix B provides additional details and company examples.[6]

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5. 'Digital Field Applications Case Study' Accion, September 2015: http://www.accion.org/content/new-case-study-impact-digital-field-applications
6. 'Alternative Data: Transforming SME Finance' IFC, May 2017: http://www.gpfi.org/sites/default/files/documents/GPFI%20Report%20Alternative%20Data%20Transforming%20SME%20Finance.pdf

FIGURE 3. DIGITAL LENDING MODELS

	Online Lender	FSPs that provide end-to-end digital lending products via a website or mobile application.
	P2P Lender	Digital platforms that facilitate the provision of digital credit between many borrowers and lenders, typically playing an ongoing central role in the relationship between these parties.
	e-Commerce and Social Platforms	Digital platforms wherein credit is not their core business, but that leverage their digital distribution, strong brand, and rich customer data to offer credit products to their customer base.
	Marketplace Platforms	Digital platforms that originate and match one borrower with many lenders for an origination fee; the lender and borrower then enter into a bilateral agreement.
	Supply Chain Lender	Non-cash digital loans for specific asset financing, invoice financing, or pay-as-you-go asset purchase within a supply chain or distribution network.
	Mobile Money Lender	Partnership model wherein lenders work with mobile network operators (MNOs) to offer mobile money loans to their customer base, leveraging mobile phone data for scoring.
	Tech-enabled Lender	Traditional FSPs that have digitized parts of the lending process, either in-house or through partnerships.

Adding to the complexity of the ecosystem is its dynamic nature, making strict categorization difficult. Key players continue to test, refine, and evolve their business models and value propositions based on customer needs and market experience. For example, Creditas, a digital lender in Brazil, started solely as an origination platform for banks, but has subsequently moved into credit scoring, customer engagement, and financing solutions for customers, seeing opportunities to expand the scope of its involvement in the lending process. JUMO, a digital lender in Kenya, started as an end-to-end mobile money lender, but is moving away from funding its own portfolio toward a marketplace platform model. An ecosystem frequently in flux represents both an opportunity and a threat: FSPs have time to find their place and identify partners, but cannot be complacent about potential competition.

3: ANY LENDING PRODUCT CAN BE "DIGITAL"

Regulations permitting, any loan (or, more broadly, any financial product) can be designed and delivered digitally. This includes loan products of all sizes, up to large SME loans or even mortgages, providing that willingness and capacity to pay can be assessed credibly with data from digital sources. Delivering different types of loan products digitally requires variations in product design, risk management, and credit methodology; it also affects sourcing data for acquisition and underwriting, and managing collections and customer engagement to ensure a risk-adjusted approach. It is important to differentiate between nano consumption loans (typically assessed on the basis of limited data, which consequently increases the risk premium) versus SME lending (which typically involves a more thorough assessment of the digital footprint of a potential customer). We explore some of these digital product variations in the table below.

FIGURE 4. TYPICAL FEATURES OF DIFFERENT TYPES OF DIGITAL LENDING PRODUCTS

PRODUCT	CREDIT ASSESSMENT	POTENTIAL ADDITIONAL DATA SOURCES	PENALTY OF NON-PAYMENT	IMPLICATIONS FOR DIGITAL LENDER	IMPLICATIONS FOR CUSTOMER
• Short term, small value loans (e.g. nano)	• Focused on *willingness to pay* – behavioral assessment	• Mobile phone data • Alternative data that can assist in assessing customer behavior • Bureau data (if available)	Future access • No further loans from provider • Blacklisting on bureau	• Engagement with customer must be supportive through repayment period to keep interest high and encourage repayment • Non-paying loans of >60 days are typically written off, or selective legal action may be taken to set precedent	• Often a fully digital experience, engagement with institution via online channels (SMS, mobile or web-based applications) • Need to provide access to personal data to support credit assessment
• Longer term, larger value loans (e.g. MSME working capital, mortgages, etc.)	• Focused on *capacity to pay* – proof of income and expenses and sufficient cash flow	• 'Digital footprint' of customer's monthly income, cash flow, and expenses (e.g. digital invoices, tax returns)	Immediate financial loss • Loss of collateral, access to inventory, etc. Future access • Blacklisting on bureau	• Thorough assessment of customer affordability upfront important • Non-payment often involves costly legal action to recover funds	• Application, disbursement, and repayment often via digital channels, evaluation may include some physical checks • Access limited for those lacking digitized records

Any customer can be digital if an FSP uses an effective 'tech and touch' channel strategy that integrates both digital and human elements based on three aspects of the customer segment: the customer's access to digital channels, comfort and willingness to use digital financial services (DFS), and whether they have a 'digital footprint' to provide digitized data for acquisition and underwriting.

The credit assessment of nano loans today often focuses on willingness to pay (whether the applicant intends to repay the loan), rather than capacity to pay (whether the applicant has the financial means to repay the loan). This is due to the lack of credible digitized data sources to assess whether low-income customers have the capacity to pay. In the future, as transactions are increasingly digitized, data such as aggregated cash flows from mobile money platforms could be used as a proxy for capacity to pay.

This paper does not endorse or evaluate the effectiveness of alternative sources of digital data for credit scoring – rather it highlights the typical challenges in scoring underserved customers in the environments in which FSPs operate. The increasing volume and variety of digital data included in scoring processes by lenders suggests that data currently regarded as "alternative" may be considered "standard" in the future, underscoring the pace at which the landscape is changing. Ultimately, an FSP's ability to source data to reliably evaluate capacity to pay for low-income customers will drive its long-term success in digital lending.

4: UNDERSERVED CUSTOMERS REQUIRE THE RIGHT SUPPORT FOR EFFECTIVE DIGITAL LENDING

Sometimes, FSP managers feel that digital lending 'won't work for our customers.' They believe that their customers lack comfort with digital channels, struggle with inconsistent connectivity, or prefer face-to-face interactions with loan officers. Despite these challenges, strong customer segmentation and customer understanding together with a differentiated approach can ensure that digital lending can reach all customers. The key is to offer the right product to the right customer in the right way. FSPs can offer digital lending to any customer if they use an effective 'tech and touch' channel strategy that integrates both digital and human elements, based on three aspects of the customer segment: the customer's access to digital channels, comfort and willingness to use digital financial services (DFS), and whether they have a 'digital footprint' to provide digitized data for acquisition and underwriting. Key considerations for each aspect are outlined in the table below.

ACCESS TO DIGITAL CHANNELS	Access to digital channels is expanding across the globe and this positive trend will continue, thanks to the proliferation of lower cost mobile phones and infrastructure developments that promote better and cheaper connectivity. For example, more than half a billion Africans are now subscribed to mobile services, and data traffic jumped 50% in 2015 alone.[7] However, some customers, particularly those in rural areas, still struggle with inconsistent network coverage, access to smart phones, and literacy.[8] Additional barriers to access include the ability to pay for digital financial services, and the cost of data required to execute digital transactions and engage remotely with FSPs.
COMFORT WITH DIGITAL CHANNELS, E.G. 'USAGE' OF DFS	Clients at the base of the pyramid are increasingly tech savvy, and comfortable communicating, sharing, and transacting over their mobile phones. In Indonesia, for example, a 2016 survey found that 51% of respondents are likely to make or receive payments using their mobile phone, and 37% exclusively conduct banking transactions via mobile.[9] Exposure to top multinational brands like Amazon, Facebook, Uber, WeChat, and WhatsApp has heightened customer expectations about digital product design and service. However, some customers may simply prefer physical interactions. Recent research from the Center for Financial Inclusion at Accion (CFI) found that these interactions are particularly important during initial interactions (to establish the legitimacy of the product), when gathering information and asking questions, and when resolving problems.[10] Physical marketing and outreach in the early stages of a new digital lending product launch supports a phased approach to digitization, providing the upfront education and support necessary for customers to gain comfort and build trust in DFS.
AVAILABILITY OF 'DIGITAL FOOTPRINT'	Digitized data is a pre-requisite for digital lending. Historically, digital lenders – in particular those offering nano loans – have relied heavily on data that assesses client identity and character, such as social media data or call records. In recent years, as the global financial ecosystem has moved towards digital payments, new data has become available that can help FSPs assess client capacity, such as: – E-commerce transaction data, as more market-specific platforms emerge, and more small and medium enterprises offer products and services online – POS or mobile wallet transaction data, as merchants are increasingly able to accept digital payments – Supply chain data, especially for distributors of fast moving consumer goods – Digitized tax invoices, supported by government initiatives in countries like Brazil and Mexico While overall more data provides better information and decision-making capability, the predictive power of some sources, such as data generated by the use of social media sites like Facebook and LinkedIn, remains unproven. Despite the risks of alternative data, more data is generally better than less. FSPs should experiment by acquiring and integrating supplementary data sources where available, then closely monitoring whether these new scores are predictive and reliable. A strong risk team and a disciplined approach to data analytics are critical to support this endeavor.

7. 'The Mobile Economy: Sub-Saharan Africa 2017' GSMA, 2017: http://www.gsmaintelligence.com/research/?file=7bf3592e6d750144e58d9dcfac6adfab&download

8. 'Can Fintech Really Deliver On Its Promise For Financial Inclusion?' Microsave, November 2017: http://blog.microsave.net/can-fintech-really-deliver-on-its-promise-for-financial-inclusion/

9. 'Mobile Money: From shopping to banking to payments, how mobile is transforming commerce around the world' Nielsen, October 2016: http://www.nielsen.com/content/dam/nielsenglobal/kr/docs/global-report/2016/nielsen_global_mobile_money_report_final.pdf

10. 'Uniting Tech and Touch: Why centaur products are better for consumers and providers' CFI, November 2017: http://www.centerforfinancialinclusion.org/storage/Uniting_TechandTouch_Kenya_FINAL.pdf

Digital channels must be supplemented with education and support from the start, particularly at key moments in the customer journey, such as during the initial interaction and when resolving complaints.

While underserved customer segments will differ by degrees in terms of digital access, comfort, and footprint, the general trend for all three is upward. Therefore, FSPs must take a nuanced approach to tailor digital lending to their respective customer segments – by introducing digital channels to engage with customers that qualify in new and different ways, while simultaneously leveraging existing branch and staff networks to serve those that require a higher touch. Like any financial product, the ultimate impact of digital lending on the end client will depend heavily on its design and delivery.

Just as important is anticipating and mitigating likely risks that customers might face when using new DFS. Both the Center for Financial Inclusion and Microsave have conducted important research highlighting some of the client protection risks that can come with digital lending:

– **Over-indebtedness:** Taking out multiple simultaneous loans due to ease of access, limited or no evaluation of capacity to repay, limited customer understanding, and high interest rates (50% to 600% APR) could lead to over-indebtedness. Many digital lenders depend on algorithms that strengthen over time, but in the short term accept clients that ultimately cannot repay.

– **Aggressive (digital) collections:** Collection efforts depend on frequent SMS notifications, which can be stressful for the customer. In Kenya, one provider included in their terms and conditions that the provider has the prerogative to post the names of defaulters to their website, and to post directly to the social media walls of defaulters.[11]

– **Financial exclusion:** In extreme instances, digital lending can actually promote financial exclusion, particularly if clients are not informed of or do not understand the consequences of default. In Kenya, 2.7 million people have been blacklisted for non-repayment of digital credit loans (400,000 Kenyans have been blacklisted for loans of less than US$2).[12] These customers must actively invest time and resources (including paying fines of up to US$20) to get off of a blacklist – and in the interim lose access to any financial services.

It's critical that FSPs ensure customers understand the product features, their responsibilities as a borrower, and the real consequences of nonpayment. FSPs should also closely monitor client behavior and gather feedback on product features and processes, particularly during the early stages. Digital channels must be supplemented with education and support from the start, particularly at key moments in the customer journey, such as during the initial interaction and when resolving complaints. Appendix D contains additional information on consumer protection risks in digital lending, and recommendations by the Smart Campaign[13] to ensure that FSPs incorporate its Client Protection Principles into digital lending product design and delivery.

11. Sarah Ombija and Patrick Chege, 'Time to Take Data Privacy Concerns Seriously in Digital Lending,' CGAP, 2017: http://www.cgap. org/blog/time-take-data-privacy-concerns-seriously-digital-lending
12. 'Where Credit is Due – Customer Experience of Digital Credit in Kenya': http://www.microsave.net/resource/where_credit_is_due_customer_experience_of_digital_credit_in_kenya
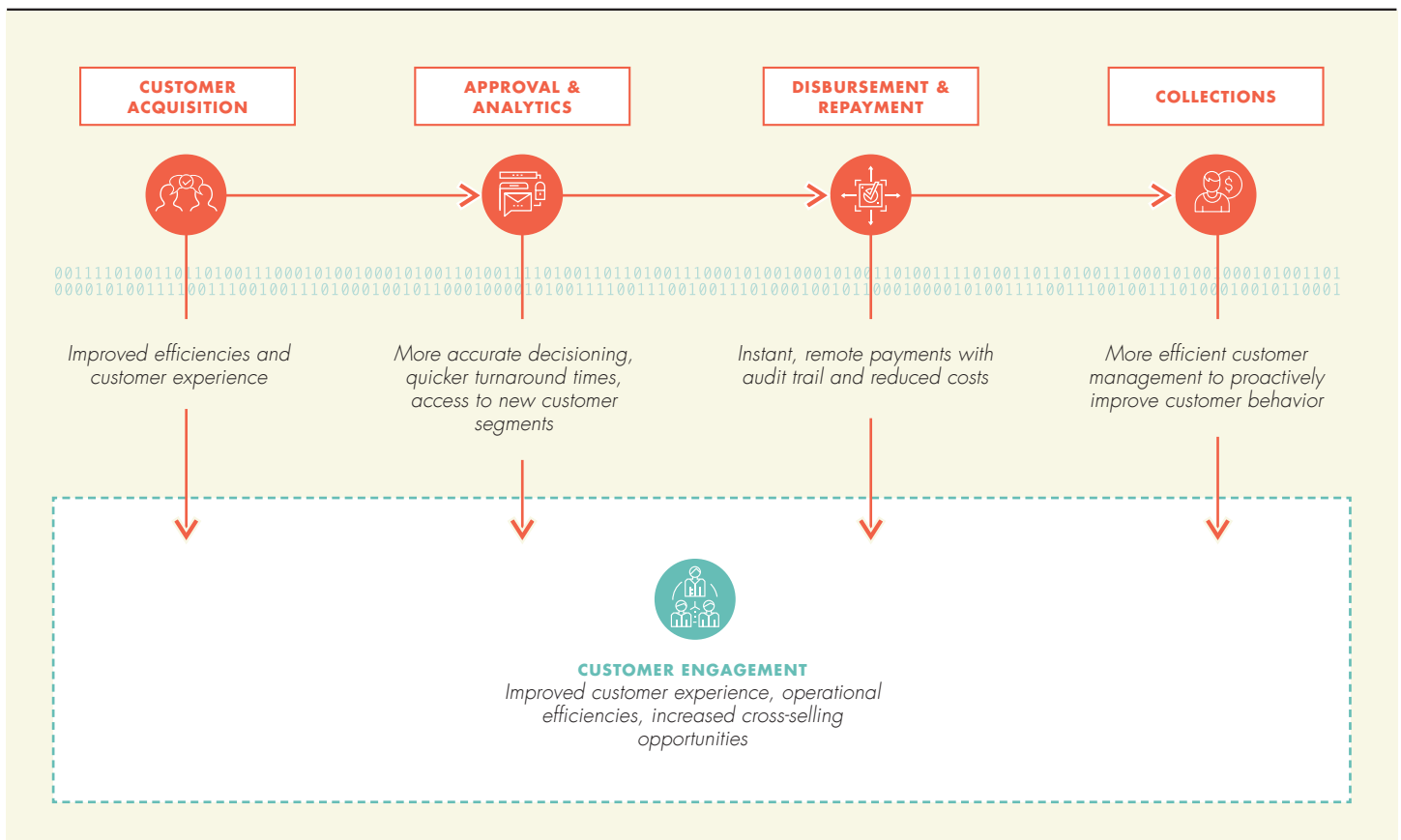13. The Smart Campaign is a global campaign to embed a set of client protection principles into the fabric of the financial inclusion sector. http://www.smartcampaign.org.

3.0
The Digital Lending Process

The lending process refers to the sequence of activities an FSP performs to provide credit – from acquiring and onboarding a customer, to evaluating the customer and disbursing the loan, to receiving repayments and following up on past due loans. Throughout the lending process, the FSP builds customer engagement and loyalty through high-touch interactions that adapt to client needs and preferences.

In its purest form, digital lending refers to the 'digitization' of the lending process by introducing digital channels for acquisition, disbursement, repayment, and engagement and by leveraging digitized data and advanced algorithms for credit decisions, collections, and customer engagement. This section describes each step in the lending process for a typical digital lender, drawing examples from the digital lending business models listed in Section 2.2.

FIGURE 6. THE DIGITAL LENDING PROCESS

CUSTOMER ACQUISITION

APPROVAL & ANALYTICS

DISBURSEMENT & REPAYMENT

COLLECTIONS

Improved efficiencies and customer experience

More accurate decisioning, quicker turnaround times, access to new customer segments

Instant, remote payments with audit trail and reduced costs

More efficient customer management to proactively improve customer behavior

CUSTOMER ENGAGEMENT
Improved customer experience, operational efficiencies, increased cross-selling opportunities

Digital acquisition channels increase efficiency and provide a rich source of digitized data that can be used to assess the customer and, in turn, offer a whole range of customized products.

CUSTOMER ACQUISITION

Digital lenders may acquire customers using a mix of digital marketing tools and digital onboarding channels, enhanced by strategically designed physical touch points and referrals. Digital marketing tools include SMS blasts, search engine optimization, online banners, Secure Quick Response (SQR) codes, and social media advertising campaigns. Direct digital marketing should be done responsibly, as aggressive push marketing can increase impulse borrowing.[14] Digital onboarding channels include USSD, SMS, and online applications via web or mobile platforms. However, remote onboarding can also be enabled by centralized call centers with human agents or AI-driven chatbots. An important aspect of acquisition is the customer's identification; digital lenders commonly make use of innovations in digital identity and e-KYC (Know Your Customer) regulations to access government or private sector verified records, triangulating customer-entered information about their identity and eliminating the need for the customer to come to a physical location to submit KYC documents for verification.

Digital acquisition channels increase efficiency and provide a rich source of digitized data that can be used to assess the customer and, in turn, offer a whole range of customized products. They also offer cost-effective ways to advertise and provide key product information to prospective clients, which can bolster transparency. However, as noted above, physical marketing is still important to address questions and build trust in the initial stages of customer acquisition, particularly in markets with low financial or digital literacy. FSPs can manage this transition and gain legitimacy in target markets by continuing familiar marketing techniques, like door-to-door sales and market storms, to reinforce early digital marketing efforts.

The type of channel (direct or indirect) through which the customer is acquired will dictate the nature of user data available to the FSP and the type of relationship the FSP has with the customer. Direct acquisition can be difficult and expensive, but it allows the lender full ownership of customer data and direct access to the customer. Another option is to partner with a 'data-rich' third-party (like an MNO or e-commerce player) to leverage their customer databases, but this will require a well-planned and -resourced partnership strategy. Indirect acquisition via partners provides an FSP with 'prequalified' customers, but this often requires that they 'buy' the customer and have access limited by the commercial terms of the contract. Before partnering, FSPs should weigh the pros and cons, while keeping in mind what data the potential partner could offer to supplement the information the FSP already has on its customers. See Section 5 for more information on partnerships.

EXAMPLE

Capital Float is an online lender in India offering short term, flexible working capital loans for over 5,000 SMEs. They have partnered with more than six e-commerce platforms – including Amazon, e-Bay, Flipkart, and PayTM – to offer quick, customized, short-term credit directly to their online retailers. These partnerships have been mutually beneficial: Capital Float gains access to thousands of potential customers with digitized payment histories, retailers can access credit to manage seasonal spikes and grow their businesses, and e-commerce platforms benefit from increased sales and visibility, as well as merchant loyalty. Capital Float has also partnered with travel and hospitality, retail, and taxi providers to offer credit to SMEs operating on those platforms.

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14. 'Where Credit is Due – Customer Experience of Digital Credit in Kenya' Microsave, March 2017: http://www.microsave.net/resource/where_credit_is_due_customer_experience_of_digital_credit_in_kenya

At the heart of digital lending is the potential for lenders to access and use digital data to make quicker, automated, and more accurate underwriting decisions. Digital lenders use both conventional and alternative data sources and advanced algorithms and analytics to quickly and remotely 'score' potential clients and make credit decisions.

APPROVAL & ANALYTICS

At the heart of digital lending is the potential for lenders to access and use digital data to make quicker, automated, and more accurate underwriting decisions. Digital lenders use both conventional and alternative data sources and advanced algorithms and analytics to quickly and remotely 'score' potential clients and make credit decisions. Many lenders supplement self-asserted and independent bureau data with knowledge about the specific borrower collected in the past, as well as call data records, digital transactions (e.g. supplier payments, e-commerce payments, mobile money payments, etc.), and social media information to better understand individual behavior and expand access for 'thin file'[15] customers that may have previously been rejected. Decisions are made in seconds, improving turn-around time and the customer experience.

To score customers, the data is fed into algorithms that predict capacity and willingness to repay – the most advanced of these algorithms use reiterative machine-learning techniques to improve their analysis over time. Regardless of the complexity of the scoring tools, digital lenders often accommodate for a greater level of initial defaults, as the algorithms or risk analysts 'learn' from the emerging patterns and adjust. This is done by allowing almost anyone to borrow up to a low threshold limit, and analyzing their repayment behavior and its corroboration with the alternative data collected. These lenders should also ethically weigh how to handle defaulters during this early stage, particularly for small loans, so as not to overly penalize early adopters who (unknowingly) were helping to test and refine the algorithm.

EXAMPLE

Konfio is a Mexico-based online lending platform that provides loans to those who are creditworthy but underrepresented in the current financial system. Konfio offers small, unsecured loans to small businesses, a sector that is vital to Mexico's economy. To qualify potential borrowers, Konfio uses a proprietary algorithm, which incorporates more than 5,000 data points into its web-based platform, then triangulates this information into a single predictive measure of whether a prospective borrower will repay a loan. The five domains of traditional and innovative data sources the algorithm uses include: demographic data, social network data, psychological and psychometric profile data, transactional data, and lending history data. This information comes from a variety of sources including surveys, social media websites, information on how the customer interacts with Konfio's website, and transactional data from the government.

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15. 'Thin file' refers to customers who have limited credit history or digital records with which to score them and evaluate credit risk.

Building financial capability into product design can help customers understand the long-lasting financial implications of a negative credit score. This goes beyond standalone financial literacy training, which is often ineffective. Instead, FSPs should integrate the content and delivery of educational messages into digital product design and rollout to minimize their collections burden and the negative repercussions for customers.

DISBURSEMENT & REPAYMENT

Digital lenders disburse loans and collect repayments remotely through digital channels, such as bank accounts, e-commerce accounts, or mobile wallets. These cashless channels improve operational efficiency and reduce fraud by providing a clear audit trail. They also allow for rapid, sometimes instant, disbursement providing customers with access to their funds in a matter of seconds.

Repayment comes through the same channel, sometimes by auto-debiting the account. For example, some digital lenders effectively manage risk by deducting repayment from future sales. As with partnerships for acquisition, challenges can emerge around who owns the relationship with the client and their data. FSPs' fears of 'losing their client' can be mitigated by offering a compelling digital lending value proposition that the partner alone cannot replicate.

EXAMPLE

Kopo Kopo is a mobile money lender working across East Africa in partnership with Safaricom. Their main product, Lipa na Mpesa, enables merchants to accept mobile money payments from customers. Customers that have used Lipa na Mpesa for more than 90 days are eligible for Grow, their merchant cash advance product.

Once approved, Grow is electronically disbursed in 24 hours to the customer's mobile money account. While interest rates are fixed, monthly payments are flexible and based on a customer-selected percentage of daily sales – this way, customers pay more in good months and less in bad months. The loan is repaid via direct debit from the mobile money account. Customized repayment plans are a valuable benefit digital lenders are able to offer their customers.

COLLECTIONS

Digital lenders leverage data and algorithms to support their collections process. Some deploy delinquency scorecards that track customer behavior and propose customized recovery strategies. Delinquent customers are blacklisted and lose access to future credit – which can be a powerful motivator. However, an effort to build financial capability[16] into product design can help customers understand the long-lasting financial implications of a negative credit score. This goes beyond standalone financial literacy training, which is often ineffective. Instead, FSPs should integrate the content and delivery of educational messages into digital product design and rollout to minimize their collections burden and the negative repercussions for customers. One tactic is to create short educational videos that explain key messages on repayment, which field staff can show to customers on their phones or tablets.

Partnerships can also support collections – from leveraging third party collections infrastructure for late stage collections, to securing loans against future e-commerce or POS transactions (see the Tienda Pago example below). However, fintechs often build their own collections capability for early stage collections, given how important an 'adjust and learn' approach is to manage portfolio performance, particularly after launching new products.

16. 'A Change in Behavior: Innovations in Financial Capability' CFI, April 2016: http://www.centerforfinancialinclusion.org/fi2020/roadmap-to-inclusion/innovations-in-financial-capability

> Customer engagement must demonstrate the lender's desire to understand a customer's individual behavior and preferences, quickly address their problems or concerns, and create solutions that make sense to the customer on a personal basis.

EXAMPLE

Tienda Pago is a supply chain lender in Peru and Mexico that partners with fast moving consumer goods (FMCG) distributors to offer inventory credit to their retailers. Once approved, funding is paid to the distributor, who delivers the corresponding inventory to the customer. Customers can repay Tienda Pago from sales revenue via a mobile payment platform. Tienda Pago leverages the meaningful relationship between customers and distributors to drive better repayment behavior.

CUSTOMER ENGAGEMENT

Digital lenders use digital channels and customer data to build an intuitive, convenient, and customized customer experience throughout the lending process. This involves both outbound (lender to customer) and inbound (customer to lender) communication and account management. Lenders send customized communications, reminders, and product offers based on customer behavior, and customers are empowered to easily access and manage their accounts, raise questions, or report issues or complaints. Channels can range from simple SMS, call center support, or Interactive Voice Response (IVR) systems, to the use of self-service online portals, chatbots, and in-app messaging.

At the heart of this is a lender's desire to understand a customer's individual behavior and preferences, quickly address their problems or concerns, and create solutions that make sense to the customer on a personal basis. In order to ensure a long-lasting, high-quality relationship

between the FSP and the client, it is important to protect the client through responsible lending practices, for example, by giving simple explanations of the terms and conditions during acquisition, explaining the consequences of not making repayments on time when disbursing the loan, and ensuring accessibility of channels to address customer complaints.

EXAMPLE

Tala is an online lender in Kenya offering mobile-based nanoloans via an Android application. After customers opt-in, Tala's proprietary algorithm scrapes approximately 10,000 data points from the phone (including SMS, call records, locational data, etc.) to analyze and score customers. Tala's customer engagement is completely digital – there are no physical branches or any in-person engagement. However, Tala's customer engagement leverages customer data to provide a personalized financial experience via a sophisticated mobile application and through social media channels like Facebook. Through the app, customers can manage all aspects of their account, including checking balances, making payments, or accessing support through an in-app messenger which promises a response within 24 hours. They can also track their customized 'Tala credit score', set financial goals, and use personal financial management tools.

How 'Digital' Is Your Institution?
The Digital Maturity Matrix

FSPs may be at different levels of digital maturity based on existing processes and activities, local market conditions, and their strategic objectives. The Digital Maturity Matrix helps FSPs assess their current digital lending capabilities and identify the next steps they should take to become more digital. Accion distinguishes three levels of digital maturity – Early Stage, Base, and Plus – characterized by which processes have been digitized, and to what extent. Each level implies a different strategic objective to be achieved through digital lending:

- **'Early Stage Digital'** lenders use digital lending to **increase the access to and usage of financial services by providing existing products and services over new channels.** They focus on introducing digital channels for acquisition, disbursement, and repayment, which brings convenience to their current customer base and allows the lender to access new customers. 'Early Stage Digital' lenders empower customers to manage core components of their account through digital channels, while significant in-person support continues through loan officers or agents. Typically, lenders at this stage leverage new channels to deploy their existing products and services.

- **'Base Digital'** lenders move beyond access to **customization of financial products**. Additional digitization, particularly in scoring and channels, allows for data-driven decision-making and delivery. As a result, sophisticated analysis supports the development of new, more personalized digital products, and intelligent scoring further enables access for both new and existing customers, as product design can be specialized to meet their specific needs and circumstances.

- **'Digital Plus'** lenders deploy a **fully digital business model to enhance the overall experience of financial services.** These lenders have best-in-class data management that enable highly personalized products and experiences specific to the individual needs of new and existing customers. What sets 'Digital Plus' lenders apart from the competition is a (often digitally native) business model that fully aligns with the company's strategy, workforce, culture, and technology to meet the digital expectations of customers and employees. 'Digital Plus' lenders effectively function as 'knowledge hubs' in regard to their customers, and use the insights they glean from customer data they collect to offer curated services.

The following framework helps FSPs self-assess and plan further action by outlining the activities and functionality that should be in place at each stage of the lending process, for each level of digital maturity. The blue boxes represent 'gateways' – the minimum required to have achieved a certain level and to progress through the Matrix. For example, while we expect 'Early Stage Digital' lenders will leverage some analytics in scoring, these lenders at a minimum should introduce digital channels for acquisition, disbursement, repayment, and basic account management.[17] Keep in mind many lenders will be pre-'Early Stage' – in that case, they should first focus on digital readiness activities, mentioned earlier and discussed in more detail in Section Five. Likewise, not all lenders will fit neatly into one level of maturity; there is likely to be significant variation as lenders prioritize different processes based on their institutional goals and market context. Furthermore, cultural preferences to the assisted model, or regulatory requirements for physical KYC, particularly in rural settings, are examples where even a digitally mature lender (capable of delivering via more digital means) may implement more physical interventions to deliver its business model.

17. Note that there are no minimum 'gateway' boxes in the Collections category, as this is primarily focused on driving lender profitability and not customer experience.

FIGURE 7. DIGITAL MATURITY MATRIX

	CUSTOMER ACQUISITION	APPROVAL & ANALYTICS	DISBURSEMENT & REPAYMENT	COLLECTIONS	CUSTOMER ENGAGEMENT
EARLY STAGE DIGITAL	• Acquisition process (including promotion and onboarding) is partially digitized (e.g. provision of basic details in early stages of application) but still includes many manual steps (e.g. physical KYC document provision). • Strategic use of existing physical network to raise visibility and educate clients is common.	• Little or no use of scorecards or advanced analytics. • Underwriting process relies on manual checks to verify information and confirm score. • Data for underwriting derived primarily from internal application process, including application form, interviews and/or site visits. • Credit decisioning often determined by simple rule-based decision trees and gating criteria.	• Combination of digital and cash disbursement and repayments. • Where available, use of existing third party agent networks to support remote payments.	• Limited data analytics in delinquency workflow management. • May deploy simple processes to remind clients about repayment.	• Customer can manage basic account functionality through digital channels (e.g. check loan balance, repayments history). • Strategic use of existing physical network to build trust and address concerns.
BASE DIGITAL	• Lender capable of mostly digitized acquisition process, majority of customers acquired and applying via digital channels (e.g. SMS, internet, mobile applications). Physical interactions may still be a feature here, if required by regulators or per cultural preference.	• Use of basic scorecards[18] for application and renewal. • Underwriting process requires minimal manual checks to confirm score (medium-high confidence in score). • Where available, use of additional data sources for underwriting – both standardized (e.g. credit bureau) and alternative (e.g. e-commerce transactions).	• Primarily digital disbursement and repayments, via mobile wallet or bank account.	• Data-driven delinquency workflow management with use of basic analytics. • Delinquency scorecard developed with basic internal data points (e.g. repayment time, amount).	• Customer manages majority of account functionality via digital channels (e.g. issue resolution, edit account details, access all documents). Physical assistance is possible if requested. • Outbound communication by lender is data-driven and customized to individual behavior, and uses digital channels.
DIGITAL PLUS	• Lender capable of fully digitized acquisition process. • Physical interactions may still be a feature here, if required by regulators or per cultural preference.	• Use of advanced, data-based scorecards that include sophisticated data analytics or machine learning. • Underwriting process entirely automated with limited manual interventions to confirm score (high confidence in score). • Use of multiple alternative data sources common for underwriting and product offerings tailored to specific customer segments.	• Exclusively digital disbursements and repayments. Cash-in and cash-out handled via partners and external to business model.	• Data-driven delinquency workflow management with use of advanced analytics (e.g. chat bots or Artificial Intelligence). • Delinquency scorecard developed with multiple complex data points (e.g. linkage to other delinquent customers).	• Customer can (and is expected to) manage all account functionality and interact with the institution through digital channels. No need to come to a physical location. • Data-driven customer interactions throughout customer lifecycle, customized cross-selling and communication.

18. Accion's Credit Risk Scoring Tool Guide has additional information on the distinctions between basic and advanced scorecards: http://www.accion.org/sites/default/files/credit-scoring.pdf

Given market trends, there is a genuine threat to the profitability of lenders that don't embrace some form of digital lending. Traditional lenders should strive to develop their digital maturity to 'Base Digital' – with a focus on the customization of financial services – to provide an improved customer experience and ensure they can remain competitive.

Regardless of these nuances, the Digital Maturity Matrix can help FSPs select which processes to prioritize based on their current and desired level of maturity. To use the Digital Maturity Matrix, consider your current lending methodology, and tick the boxes that best describe how your institution operates today. Keep in mind the levels are cumulative – Base Digital activities should include and build upon Early Stage Digital activities, and so on.

WHAT IS THE END GOAL?

Should all FSPs seek to become fully digital lenders, and achieve 'Digital Plus' maturity? Not necessarily! Digitally native lenders have different business models than traditional FSPs, which often possess significant physical infrastructure, scale, brand, and market knowledge. In the end, the remit of any financial service provider is to optimize financial intermediation (effectively channeling funds from lenders to borrowers) across multiple dimensions: first and foremost, customer experience, but also risk management, regulatory concerns, responsible finance considerations, and investor yield requirements. The digital lending business models discussed above attack this endgame from various angles. The right level of digitization for a FSP will vary based on institutional goals, client segments, market distribution, institutional skill set, existing assets, and culture.

However, given market trends, there is a genuine threat to the profitability of lenders that don't embrace some form of digital lending. Traditional lenders should strive to develop their digital maturity to 'Base Digital' – with a focus on the customization of financial services – to provide an improved customer experience and ensure they can remain competitive. This means moving beyond simply providing access – although that is an important first step in advancing financial inclusion – and going further, to gathering and leveraging digital data to design innovative products and build personalized experiences that meet the needs of all customers. Innovative product and process design will help FSPs compete in the market, build customer satisfaction and loyalty, and ultimately drive profitability and over time. By extending these high-quality services to typically underserved communities, FSPs help to create a financial system that works for everyone and provide the financial tools that families and small businesses need to build better lives. Some lenders may even seek to incorporate elements of the 'Digital Plus' stage based on their own competencies and business goals.

5.0
Where Do I Start?

STEP 1:	**STEP 2:**	**STEP 3:**	**STEP 4:**	**STEP 5:**
Assess and Build Your Digital Readiness	Set your Digital Lending Goals and Objectives	Define your 'Tech and Touch' Channel Strategy	Identify Potential Partners that can Supplement your Digital Offering	Prioritize and Build a Roadmap to Digital Maturity Over Time

Given the scope of digital lending, it can be difficult for interested lenders to know where to start. While digital transformations won't happen overnight, there are steps any lender – regardless of market or maturity – can take today to advance along the continuum.

We've developed the following guide to help FSPs plan their digital lending journey. Please note these steps are not necessarily sequential – many could be conducted in parallel, and the process is also iterative.

STEP 1: ASSESS AND BUILD YOUR DIGITAL READINESS

Implementing digital lending can be complex and challenging, and it requires a strong structural and cultural foundation to be successful. An important initial step is for lenders to assess their digital readiness. As noted above, this includes the core processes, activities, and systems that will support the adoption of digital initiatives across all parts of the lending process. Activities that build readiness, like implementing a data warehouse to help standardize data collection and visualization, play an important role in introducing operational efficiencies and laying the groundwork necessary to design and deliver digital lending products in the future.[19] A strong baseline of digital readiness can help mitigate common digital lending implementation challenges.

Digital readiness can be broken down into three broad categories – people, processes, and systems. To assess their current state of digital readiness, FSPs' senior management should ask themselves the following questions within each category:

- **People – ensuring the business is ready for scale from an organizational culture and internal capacity perspective.** This includes reviewing the skills, capacity, and commitment of the institution at all levels, and assessing organizational structure and incentives.

  – Is there strong support and commitment from the senior management team? Are we willing to commit the resources to make digital lending work? Have we identified why we need to change and articulated our vision for transformation?

  – Do staff possess the appropriate skills needed to execute the processes and manage the systems required to support and scale digital initiatives?

  – Do we have the capacity in house to operationalize digital products? How stretched is my current team?

  – How are staff currently incentivized? What should change to promote digital lending?

  – Does our organizational culture support innovation and new business models? Is the organizational structure conducive to embracing technology-enabled products at scale?

19. For a more detailed guide on planning and implementing the data infrastructure required for digital lending, refer to our 2017 publication, 'Unlocking the Promise of Big Data to Promote Financial Inclusion': http://www.accion.org/content/unlocking-promise-big-data-promote-financial-inclusion.

Transforming institutional objectives into a compelling customer value proposition requires a deep understanding of and empathy for the customer, which can help avoid poorly designed products or a poor customer experience.

- **Processes – ensuring the business is ready for scale from an operational perspective.** This includes process reengineering, data and channels strategy, and customer segmentation and understanding. FSPs should avoid merely digitizing existing processes, or they risk compounding inefficiencies.

  – Are our business processes clearly defined and mapped? Are they well-designed and intuitive?

  – Are paper forms easily and quickly digitized? Have we introduced automation wherever feasible to increase efficiency? (For example, is application data entered directly into a DFA in an agent-assisted model?)[20]

  – Do we have a deep understanding of our current and potential customer segments – including their needs, priorities, preferences, digital literacy, and expectations? Have our assumptions about our customers been validated with research? What features can a digital product enable to offer additional value? What support will customers require to adopt a digital product?

  – Have we conducted operational and fraud reviews?

  – Have we conducted cash management review?

  – Have we developed a plan on how the business will strategically source and use data to improve scoring, product design, and customer engagement?

- **Systems – ensuring the core infrastructure and enterprise architecture is in place to scale the business, such that information flows smoothly and is used effectively across the organization.**

This includes an institution's core banking system, electronic document management system (EDMS), data warehouse, middleware, and reporting dashboards. In aggregate, one can view the systems required to offer digital lending as comparable to a CRM (customer relationship management) system in which the institution has the capability to disaggregate customer-level information from the lending process and ultimately build a comprehensive, digital view of individual customers over time.

  – Do we have systems in place to support organized, accurate, and accessible internal data management (e.g. data warehouse)?

  – Are our systems (including our core banking system) built to support scalability? Do the systems connect in a way that permits a holistic view of operations across the organization, or is reporting fragmented across systems? Is the overall design of our enterprise architecture consistent and coherent? Do we have an API strategy?

  – Have we implemented an electronic document management and workflow to centralize credit underwriting?

What if the answer to any of the above questions is no? While FSPs don't necessarily need to meet all the readiness requirements, it's important to have at least considered the above questions, identified your current state, and noted potential risks and challenges that may arise with implementation. Proceed with caution, at a small scale, and be prepared to address underlying issues as soon as they arise during implementation.

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20. Accion has developed a number of tools and resources to help FSPs build their digital readiness through the use of DFAs, available here: http://www.accion.org/content/new-case-study-impact-digital-field-applications

It may seem like an obvious point, but it's critical to differentiate between the lender's objectives and the customer value proposition. For example, an FSP may decide a digital lending product will help to build a larger loan book and increase operational efficiencies, but fail to consider or articulate why their customers will want this product in comparison to competing products.

STEP 2: SET YOUR DIGITAL LENDING GOALS AND OBJECTIVES

Digital lending failures often derive from an assumption by the lender that 'digital will simply be better than the status quo.' Before embarking on (or revisiting) their digital lending journey, FSPs should take the time to define their overall objective for digital lending. Important questions to consider include:

- What do you hope the end result will be – for your institution and for your customers? This could include increased operational efficiency, driving scale with existing customers, reaching new customers, or improving the customer experience.

- How does this align with your overall mission and strategic objectives?

- What state of maturity are you ultimately aiming to achieve – and why?

It may seem like an obvious point, but it's critical to differentiate between the lender's objectives and the customer value proposition. For example, an FSP may decide a digital lending product will help to build a larger loan book and increase operational efficiencies, but fail to consider or articulate why their customers will want this product in comparison to competing products. Transforming institutional objectives into a compelling customer value proposition requires a deep understanding of and empathy for the customer, which can help avoid poorly designed products or a poor customer experience.

It's also important to differentiate between long term and pilot objectives. Even if the long term objectives are profitability and efficiency, at the pilot stage, FSPs should prioritize and track customer adoption as the primary key performance indicator (KPI). The goal of a pilot is to drive adoption, which requires a single-minded focus on understanding how customers are engaging (or not) with the new product, and a willingness to learn and adapt to the offering as necessary. The business model can be adjusted over time to drive sustainability. In building out their roadmap to digitization, FSPs should understand the distinction between digital readiness (the ability to offer existing products in a digital format, typically enabled by a number of digital tools) and a digital product proposition (the launch of an end-to-end digital product). Many FSPs plan to launch digital products without realizing the time required to build their digital readiness first – this often involves multi-year planning to develop systems and skills to enable the delivery of digital products before actual digital products are launched.

The digital lending ecosystem in your market can provide reference points for what's achievable. See Appendix C for a high level overview of key regional trends.

The key is for customer engagement to always remain human – that is, focused on the needs of the end end customer. Over time, this will involve a less physical approach, even in emerging markets.

CAUTION! POTENTIAL CHALLENGES

- **Mission drift** – Digital lending can sometimes be seen as mission drift for an FSP – particularly in industries where digital credit is equated with low-touch, high-interest consumption lending. An FSP should reflect on how digital lending aligns with their mission and target segment, ensure their approach is in line with their strategic goals, and communicate accordingly to all stakeholders.

- **Regulatory environment** – the regulatory environment around digital lending is frequently shifting as regulators seek to understand potential risks and impact. Regulator engagement pre- and post-piloting is important in markets where there is no set framework for digital lending. Open engagement with regulators can drive a more market-friendly approach to regulatory development and will help FSPs stay abreast of regulatory changes.

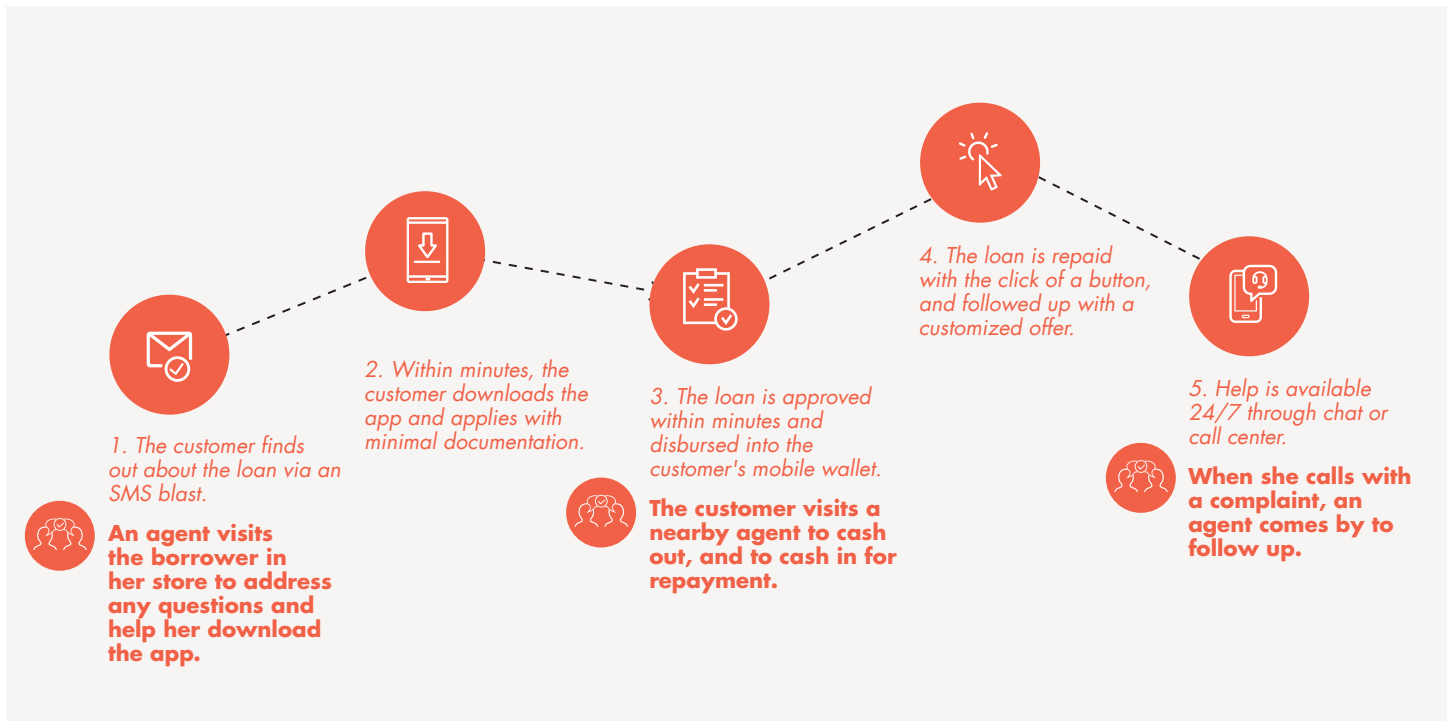## STEP 3: DEFINE YOUR 'TECH AND TOUCH' OR CHANNEL STRATEGY

While physical interactions are generally reduced as lenders advance along the Digital Maturity Matrix, there are situations where human touch can enhance the customer experience, build loyalty, and improve repayment behavior. It can also assist the lender to make more informed credit decisions, and can be particularly useful at the early stages of piloting and scaling up a digital product. There are three main areas that lenders should consider when designing their 'tech and touch' strategy.

- **Who is our target customer segment?**
  Not all customers require the same amount of human touch. As discussed previously, the right level for your customer segment will depend above all on their access to digital channels and willingness and comfort to use those channels. Many FSPs still work in regions where poor connectivity and low smartphone penetration restrict advanced digital engagement or payment. Market and cultural context also play an important role: some customers, particularly those with lower financial or digital literacy, may have a limited understanding of both the product and channel being used, or a strong preference for physical channels. Customer understanding is critical: targeted face-to-face interactions at the right times in the customer journey can go a long way toward increasing adoption. Agent-enabled mobile money programs, like EasyPaisa in Pakistan or BKash in Bangladesh, can be particularly helpful when targeting unbanked, rural customers.

- **What is the type of credit?**
  Lenders may choose to strategically incorporate a physical evaluation based on the loan type, primarily to manage risk. For instance, larger loans with longer terms concentrate risk for the lender; in these instances, lenders may benefit from additional in-person checks. Smaller loans need to scale to be profitable, and, in those instances, physical checks are not economical; they require a lower-touch model. The use of the loan also matters: for example, loans used for fixed asset purchase and collateralized by that asset can give lenders more confidence that customers will repay, because the borrower fears the loss of the asset (versus working capital loans, with less-clearly defined coercive mechanisms for collections). FSPs may be more comfortable offering a lower-touch model for asset-backed loans.

- **How effective is our current distribution network?**
  FSPs that currently have an existing, efficiently-run branch network should leverage it. This existing infrastructure can provide a competitive advantage in accessing customers in more rural locations, or those that require a higher-touch engagement. It's important to first determine whether these networks are running efficiently, and then to deploy them strategically, supplemented by lower-cost digital channels as appropriate.

1. The customer finds out about the loan via an SMS blast.
An agent visits the borrower in her store to address any questions and help her download the app.

2. Within minutes, the customer downloads the app and applies with minimal documentation.

3. The loan is approved within minutes and disbursed into the customer's mobile wallet.
The customer visits a nearby agent to cash out, and to cash in for repayment.

4. The loan is repaid with the click of a button, and followed up with a customized offer.

5. Help is available 24/7 through chat or call center.
When she calls with a complaint, an agent comes by to follow up.

The bottom line is that human touch is still important, particularly in emerging markets, and can be a key differentiator and competitive advantage for traditional lenders. In many emerging markets where cash is still preferred, FSPs must either build a proprietary network to facilitate cash-in and cash-out, or externalize these functions from its business model by partnering with third parties (such as agent networks) that can help convert cash into digital currency. If there are no third parties in the FSP's operating environment that can take this cash burden off of them, they are forced to drive industry-wide change. That can be an expensive responsibility for many FSPs, though those up-front costs could eventually create returns if they help the FSP become a first-mover.

As digital financial infrastructure and literacy continue to advance, and as the usage of mobile wallets becomes more common, customers will likely be more willing to use digital channels – and may even prefer the convenience these channels offer. The key is for customer engagement to always remain human – that is, focused on the needs of the end customer. Over time, this will involve a less physical approach, even in emerging markets.

A customer journey map is a useful framework from which to develop a balanced 'tech and touch' strategy at the product level. It can be used to describe every stage in which a customer interacts with the FSP, i.e. how the customer learns about a new digital lending product, what are the channels that can influence whether they decide to apply, what is the application process, how the customer receives the disbursement and make the repayment, what types of customer support are available, whether there is a loyalty program for repeat customers, etc. The customer journey map allows an FSP to visualize all touchpoints (both physical and digital, and with internal staff or with partners) at each stage, and it can help to identify gaps or areas of significant drop-off, in order to diagnose challenges and focus support and human touch where needed most.

In the short term, FSPs should leverage the clear, competitive advantage of their existing distribution networks, while ensuring branches and agents are efficiently managed and commercially feasible. However, as usage of digital channels becomes more common in the long term, there will be an increasing need to offer human touch via low cost, digitally-enabled channels. FSPs, therefore, need to build a long-term strategy for 'tech and touch' and to consider investments into branch, call center, and digital lending channels over the next decade.

Digital lending implementation involves new and different skill-sets and competencies, which traditional FSPs may lack. Partnerships are an important way to supplement an FSP's lending model with specialized skill-sets and in depth experience in a particular aspect of the lending process.

- **Customer preferences** – Digital lending is not one size fits all. FSPs need to assess their customer segments' willingness and ability to engage with digital products, and design their processes accordingly. This begins with understanding target customer needs (often during the Digital Readiness stage), designing the customer journey to include a strategic mix of physical and digital touch points, and developing products and services that build in effective human touch.

- **Data availability** – As noted above, digital data drives digital lending. FSPs must carefully consider what additional data is available in their markets that can support customer targeting, evaluation, and communication, and plan accordingly. This data should supplement existing institutional data to support more informed decision-making. FSPs can start by integrating alternative data into credit processes in a manual manner (e.g. uploading and cross-referencing the additional data, such as an applicant's tax ID from a national database, without developing APIs and automated integration into internal systems).

STEP 4: IDENTIFY POTENTIAL PARTNERS THAT CAN SUPPLEMENT YOUR DIGITAL OFFERING

Digital lending implementation involves new and different skill sets and competencies that additional FSPs may lack. Partnerships are an important way to supplement an FSP's lending model with specialized skill sets and in depth experience in a particular aspect of the lending process.[21] They can help FSPs gain access to new market segments, create new offerings for existing customers, improve their competitive position and product efficiency, deepen customer engagement and product usage, and drastically reduce time to market. The following chart describes what types of partnerships an FSP could pursue to support core functionalities at specific stages of the lending process.

21. For more information on how financial institutions and fintechs are partnering for financial inclusion, read the recent report by the Center for Financial Inclusion, 'How financial institutions and fintechs are partnering for financial inclusion': http://www.centerforfinancialinclusion.org/publications-a-resources/browse-publications/872-how-financial-institutions-and-fintechs-are-partnering-for-inclusion

FIGURE 10. POTENTIAL PARTNERS FOR DIGITAL LENDING

	CUSTOMER ACQUISITION	APPROVAL & ANALYTICS	DISBURSEMENT & REPAYMENT	COLLECTIONS	CUSTOMER ENGAGEMENT
POTENTIAL PARTNERS	• MNOs • Agency networks • E-Commerce platforms • Supply chain distributors • Payments businesses • Retailers/FMCGs	• Alternative data scorers • Digital lenders w/ advanced scoring capabilities • Psychometric assessment service providers	• Agency networks • Digital wallets • MNOs • Payment aggregators	• Specialty collections companies • Score providers • Suppliers to applicant, e.g. wholesalers to retailers	• E-Commerce platforms • Social platforms and applications • Third-party call centers • Marketing specialists • Customer engagement platforms
BENEFITS	• Lower cost of acquisition – access to 'prequalified' segments • Digitization of application data • Enhanced and simplified customer experience	• Advanced, highly specialized analytics that would be difficult to develop in house • Opportunity to leverage additional data sources through fintech partnerships • Can decrease time to market for digital products	• Lower cost channels – leverage existing networks • Relieves pressure on branch network, promotes rural business • Quickly drives operational efficiencies	• Reduced labor for collections – focused efforts • More effective collections strategy	• Leverage social features to improve customer experience • Drive increased remote account management • Helps cross-selling opportunities
EXAMPLE	Capital Float is partnering with Flipkart in India for customer acquisition	FINCA is partnering with First Access for support in data maintenance and scoring	M-Shwari loans are underwritten by CBA but disbursed and repaid via Safaricom's M-PESA mobile money	True Accord operates a data-driven debt collection platform powered by machine learning and customized digital-first communications	Loan Frame offers a blog and loan counseling to SMEs that it then connects to partner lenders

Some partnerships support digital readiness activities across all stages of the lending process, and are, thus, fundamental for institutional digital transformation, e.g. companies that provide electronic document management, process automation services, agent network management, mobile and web design and development, etc.

FSPs should honestly review their competencies in the digital lending process, specifically the systems and skills required, and identify business-critical areas of strength versus competency gaps or activities that could be outsourced to a specialized partner or fintech to expedite delivery. An FSP's strengths might include a good understanding of customer segments, a strong brand, a wide range of product offerings, and a high-touch physical distribution network, which is often important in an emerging market context. Access to funding and licensing are also big advantages, particularly as compared to fintechs.

Finding and working with the right partner can be complex and challenging. FSPs should conduct a market scan to identify potential partners. FSPs should ask themselves: Which service providers are available in our region? Do they have experience in our market, with similar FSPs, or with similar lending models? It's important to select a partner with technical and regional experience that clearly understands the FSP's needs and is willing to work to make the partnership a success. Yet it can be difficult to find the right partner for the right price. Striking the right balance requires a clear proposal outlining the FSP's requirements and expectations, as well as a rigorous selection and evaluation process by a multidisciplinary team to assess compatibility, competence, and competitive advantage.

Partnerships involve commercial, cultural,
infrastructural, and legal considerations, and
can suffer from mismatched expectations,
insufficient internal resources, loss of control,
or lack of commercial clarity.

Partnerships involve commercial, cultural, infrastructural, and legal considerations, and they can suffer from mismatched expectations, insufficient internal resources, loss of control, or lack of commercial clarity. Common examples of challenges that FSPs may encounter include:

- **Limited partner availability in emerging markets** – particularly for acquisition. It can be difficult to find partners that have market knowledge and local context. Often, available partners such as MNOs have monopolies, which can make partnerships one-sided and expensive.

- **Potential competition** – as regulators continue to introduce new banking licenses, some FSPs worry that they may lose customers if their partner starts offering credit – especially if the partner is the main acquirer and interface with the customer. Customers sometimes have confusion as to who the actual provider is.

- **Loss of control/understanding of core functions** that are outsourced to the partner can limit an FSP's ability to make changes and foster dependency on the partner.

- **Unclear roles can limit accountability**, particularly for complaint resolution.

- **Operational challenges,** like reconciliation issues between the two institutions' systems, can further complicate the process.

- **Reputation issues** – if the partner interacts poorly with customers, then their behavior can damage the FSP's brand.

- **Cultural challenges** – FSPs and fintechs often vary in terms of work culture, with many FSPs emphasizing methodical execution according to well-defined processes that may have been developed and validated over time, in contrast to the test-and-learn approach common to early stage start-ups.

As noted above, clearly defining roles and developing commercial agreements that incentivize both parties is crucial to mitigating these challenges. FSPs should also apply a collaborative approach to build internal capacity and ensure they do not lose touch with core aspects of the business.

Digital lending represents a significant cultural and operational change at every level of an organization, which requires thoughtful, comprehensive change management. This includes clear C-suite support, appropriate resourcing, and consistent and frequent communication with all stakeholders.

STEP 5: PRIORITIZE AND BUILD A ROADMAP TO DIGITAL MATURITY OVER TIME

Once an FSP has built a strong foundation of digital readiness, defined their digital lending goals and 'tech and touch' channel strategy, and identified potential partners, they can take specific actions to improve their digital maturity at each stage of the lending process. This will not happen overnight: FSPs should build a clear roadmap that takes a phased approach, builds core competencies first, and works within the existing parameters of the organization and accounts for customer preferences. A roadmap facilitates long-term, organization-wide planning, strategic thinking beyond annual budgeting cycles and departmental silos, and takes into consideration multi-year dependencies between projects to achieve what may seem today as fairly ambitious goals for the FSP. It also allows for better cross-functional alignment in achieving these goals, which is crucial given the complexity of most digital initiatives. Again, not all FSPs will aspire for the 'Digital Plus' Maturity stage; every FSP's roadmap will depend on their individual customer segments and organizational goals.

One tactic that can be effective, especially in early stages, is to dedicate a separate unit within the FSP that has sole responsibility as a standalone business vertical to prepare for, pilot, and implement digital lending – with the intent to integrate the unit with the rest of the team at a later stage. This approach addresses two specific challenges: 1) staff are often over-committed across different projects, whereas designing and implementing a digital lending product requires a single-minded focus; and 2) digital lending also requires a different mindset from 'business as usual,' and staff can find it difficult to operate in both 'modes' simultaneously.

An 'innovation SWAT team' composed of high-achieving and technically minded staff across commercial, operational, and IT departments can be free to focus all their effort on the one (enormous) task at hand and be allowed to 'fail fast' and iterate until they create a highly desirable and viable product. Required skill sets for this team may vary, but they should include creative problem-solving and analytical skills, in addition to cross-functional subject matter expertise. A separate unit can also serve to align staff incentives, since other business verticals will have competing KPIs, and contain costs. While incubating a separate unit can help foster innovation, integrating the group into the core business at a later stage can still be a challenge and must be handled carefully.

Each time an FSP advances in digital maturity, there is an important opportunity to revisit its digital lending objectives and further optimize processes. As FSPs continue the digital transformation process, they must remain focused on delivering an enjoyable customer experience.

CAUTION! POTENTIAL CHALLENGES

- **Change management** – Digital lending represents a significant cultural and operational change at every level of an organization, which requires thoughtful, comprehensive change management. This includes clear C-suite support, appropriate resourcing, and consistent and frequent communication with all stakeholders.

- **Pilot, pilot, pilot** – Pilots are essential to test out processes and products with customers and staff, but are too often skipped or not properly resourced. Set and monitor key metrics, and adjust product design and delivery accordingly before full-scale roll out. A major consideration is the manner in which to pilot – whether enabling an autonomous, separate unit within the corporate umbrella as discussed above, or driving through existing teams and infrastructure.

PUTTING IT ALL TOGETHER: A CASE STUDY

This next section presents a representative case study of a pilot launch of a digital lending product at a traditional FSP, synthesizing recommendations and lessons learned from the typical challenges encountered in this process, outlined in steps one through five above.

DIGITAL LENDING CASE STUDY: MIRACLE MICROFINANCE INSTITUTION

Miracle is a mature microfinance institution (MFI) with more than ten years of experience in their market, over 40,000 borrowers and more than 100,000 savers. They provide a number of products and services, including five loan products and three savings products, offered through 60 branches across the country and accessible via an ATM network. Recognized as an industry leader in their country, they are constantly looking for opportunities to innovate further.

Miracle MFI recently rolled out a mobile savings-based credit product aimed specifically at low income entrepreneurs. The outcome of several years of discussions at Miracle to launch a digitally enabled product, it had two key business objectives:

- To attract new, lower-income customers, who are too expensive to serve with Miracle's standard credit methodology
- To attract new deposits for the bank in a cost-effective way

While originally envisioned as a pure savings product, Miracle ultimately designed a saving-led credit product, with the assumption that the credit-proposition would be more attractive to customers than just savings. The product was developed in partnership with a local MNO, whose network was used to identify and reach out to potential customers via targeted SMS broadcasts. Customers were identified based on airtime usage and were then prompted to register via USSD and save a minimum amount (on average equivalent to USD $50) over a period of three months. Successful completion of the three-month savings goal entitled customers to a loan of up to twice the amount saved.

Initial results have been disappointing. Over the course of two months across the two pilot regions, 20,000 customers have been contacted, 350 accounts were opened, and 15 savings plans started. Categorizing the key challenges faced according to the five-step process outlined above yields several lessons learned.

STEP 1: ASSESS AND BUILD YOUR DIGITAL READINESS

There wasn't a coordinated effort to assess Miracle's institutional readiness to support the development of a digital lending product or its roll out. This manifested as:

- Inconsistent support of senior management: While Miracle's senior management team was enthusiastic about the product idea, they were ultimately unable to commit dedicated resources or sufficient budget to its execution.

- Insufficient staff capacity and skills: Miracle leveraged existing staff to support the product roll out, but didn't reduce their current workload or adjust incentives. Staff were overloaded, with no motivation to prioritize work on the new product, leading to challenges in alignment and accountability. In addition, the staff assigned to the core project team rotated frequently due to competing priorities. There was a significant gap in key skills required to make the product a success, particularly marketing and project management skills.

- Legacy organizational culture and structure: While open to innovation, the Miracle management team tended to be results-oriented and risk-averse. This is important to efficiently grow the business, but can make it difficult to take some of the short term risks required to test a new product. In addition, Miracle's leadership didn't create an organizational structure to support full cross-functional collaboration and enable a quick turnaround time, which had an impact on product delivery.

- Process mapping and systems review were conducted retroactively after the launch of the product, and took much longer than expected. While the product's overall systems were sufficient, there were some challenges with API integration.

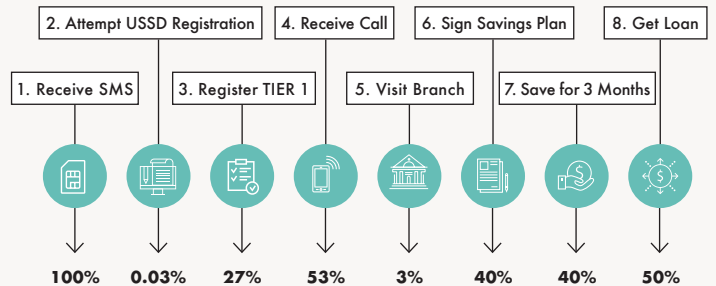## STEP 2: SET YOUR DIGITAL LENDING GOALS AND OBJECTIVES

While specific product objectives were set, neither leadership nor staff had a clear understanding of the digital lending product's overall strategic goal for the institution, how it aligned with the mission, and how the product would affect Miracle's current culture and working environment. As noted above, it's critical to differentiate 1) between the lender's objectives and the customer value proposition, and 2) between long term and pilot objectives.

For example, Miracle's management team was very focused on product profitability, which drove financial projections and informed crucial pilot decisions. Last-minute decisions were made to cut marketing expenditure and increase the interest rate to prevent losses: this limited Miracle's ability to attract customers and test the product proposition. Furthermore, the shift in product objectives (from savings- to credit- led) also contributed to confusion around the product's ultimate business goals.

Combined, these issues contributed to an overall customer value proposition that was unclear and lacked sufficient customer incentives to drive usage. This compounded communication and conversion challenges at each stage of the processes; the dual savings/credit value offer was difficult to communicate to customers and proved to be less attractive to clients than anticipated. While the Miracle team had a general sense of the type of client the product should target, limited market research was done to validate the needs, priorities, and preferences of this new segment.

STEP 3: DEFINE YOUR 'TECH AND TOUCH' OR CHANNEL STRATEGY

While Miracle MFI did deploy a mix of 'tech and touch' channels to reach clients, customers encountered significant friction when using the product that reduced acquisition and led to drop-off. The graphic below depicts key challenges, with sample conversion rates at each step for the digital lending product:

Step	Conversion
1. Receive SMS	100%
2. Attempt USSD Registration	0.03%
3. Register TIER 1	27%
4. Receive Call	53%
5. Visit Branch	3%
6. Sign Savings Plan	40%
7. Save for 3 Months	40%
8. Get Loan	50%

- Limited 'touch' at the acquisition stage: Product marketing relied heavily on SMS notifications to a broad spectrum of potential clients via the MNO partner. This proved to be an ineffective strategy for the target segment, due to cultural preferences for in-person sales combined with low digital and financial literacy. While eight marketing storms were planned, half were cut due to budget. The marketing storms that were executed were outsourced, and led to low levels of conversion (see Step 4).

- Branch visits created friction in the customer journey: Customers were required to physically visit branches to submit KYC documents and sign a savings plan. This step was inconvenient for customers, and led to a high drop-off rate.

- Physical branch infrastructure was centralized in the capital, and Miracle MFI had no agent network. The physical touchpoints required by this digital lending product's customer journey would make it difficult for the product to scale.

STEP 4: IDENTIFY POTENTIAL PARTNERS THAT CAN SUPPLEMENT YOUR DIGITAL OFFERING

Miracle MFI relied on a number of partnerships to design and roll out the digital lending product. This included an MNO, a marketing vendor to lead market storms, a call center for sales, and a technology developer who designed the USSD solution. These commercial agreements lacked clear structure to ensure quality deliverables from partners, with the following results:

- Incentives were often misaligned or poorly designed. For example, the marketing vendor and the sales call center had contracts based around activity completion (making calls, leading marketing storms), rather than conversion. As such, their services resulted in little to no conversion.

- The end client experienced brand confusion and inconsistent service. Miracle's partners provided an inconsistent customer experience that had an impact on Miracle's reputation. Limited training was provided to partner agents, which led to mixed messages and sometimes poor service.

- Many of Miracle's partners were delayed in their deliverables. Reporting parameters weren't included in initial contracts, making it difficult to get information about progress to date.

STEP 5: PRIORITIZE AND BUILD A ROADMAP TO DIGITAL MATURITY OVER TIME

Miracle MFI was able to 'fail fast' and quickly decided it would use the pilot to identify key learnings in order to pivot the product offering. Concurrently, it revisited its strategy and conducted a deeper customer segmentation to develop a cross-functional roadmap identifying key gaps and dependencies. This allowed Miracle to prioritize and sequence the activities required to deliver on its long term strategy for digital lending. It is now on the path to achieving its ambitious goals with a better understanding of the complexity inherent in a successful digital transformation.

6.0

Looking Ahead

Considering how dynamic digital lending is, how quickly contributing and competing technologies arise, the unforeseen ways that those technologies interact with one another, and broader changes to regulations and economies, predicting what's next for digital lending is a difficult – if not impossible – challenge.

The on-the-ground realities of implementing digital lending can be even more challenging than predicting its future. We want to be up front about those challenges, and find and share solutions whenever possible. There is a way forward!

Despite the challenges, we are confident that digital lending is here to stay, that it will help FSPs streamline operations and create better products, and that it will ultimately help many FSPs extend high-quality financial services to underserved communities. With three billion people left out of or poorly served by the formal financial sector, digital lending represents a powerful new solution for helping to create a financially inclusive world and for creating a financial system that works for everyone.

7.0
Appendices

A. RESEARCH METHODOLOGY

To generate the insights and analysis included in this report, we conducted the following activities:

- Literature review of key publications and secondary research on trends in digital lending in emerging markets, including 'How FIs and Fintechs are partnering for Inclusion' (CFI), 'Introduction to Digital Credit' (CGAP), 'Alternative Data Transforming SME Finance' (IFC), 'Data Analytics and Digital Financial Services' (IFC).

- Primary qualitative research interviews with more than 35 MFI executives, fintech executives, experts in microfinance research and consulting, experts in providing technology assistance to FSPs, investors, risk and compliance experts in emerging markets, and Accion staff

- Desk research into more than 30 digital lending business models

- Survey of 41 senior and mid-level managers at MFIs

B. DIGITAL LENDING MODELS

DIGITAL LENDING MODEL	EXAMPLES	
	SME	CONSUMER
Online lenders provide end-to-end digital lending products directly to the customer online or via a mobile app. Customer acquisition, disbursement, and account management processes are usually fully digital, and underwriting is conducted using advanced scoring and alternative data provided by the customer. This model is heavily reliant on the quality of scoring and is specifically designed such that there is no need for face-to-face contact or even for customers to call into a call center.	**Capital Float** **Konfio** **Lidya** **Lulalend**	**Branch** **Tala**
P2P platforms facilitate the provision of digital credit between many borrowers and institutional or individual lenders, and play a central role in managing their relationship. The P2P lender usually designs the product, scores the borrower, and may support the repayment and collection processes. Funding is provided by the lender, with the platform taking an origination fee or a cut of the interest income. Some P2P platforms take the risk of nonpayment and bear the loss; others build a loss reserve fund for the portfolio, from fees taken at loan disbursement, etc.	**CreditEase** **KwikCash**	
While the core business of **e-Commerce and Social Platforms** is not the provision of credit, they leverage their digital distribution, strong brand, and rich customer data to offer credit products to qualified borrowers from their customer base. While some simply act as an origination platform for a third-party lender, others offer end-to-end solutions, including funding. For these platforms, the pressure for the customer to repay comes from a desire to continue using the platform's primary services. Poor repayment habits will show up on the customer's record and lead to exclusion from the platform for purchases or activity.	**Amazon** **Flipkart**	**Alipay** **WeChat**

DIGITAL LENDING MODEL	EXAMPLES	
	SME	CONSUMER
Marketplace Platforms originate and match one borrower with many, often institutional, lenders. Lenders use the platform as an acquisition channel, whereas borrowers use it to access a wide range of lending products at competitive pricing. Many marketplace platforms offer independent credit and risk assessments that leverage non-traditional data, whereas lenders control product design and provide funding. These platforms take an origination fee; after the disbursement of funds, the customer relationship is directly with the lender.	**Loan Frame**	**Creditas**
Supply Chain Lenders provide digital loans for specific asset financing, invoice financing, or pay-as-you-go asset purchase within a supply chain or distribution network. These firms typically offer closed-loop lending products, where they partner with players within the supply chain or distribution network to acquire customers, access data, and make loan decisions. Repayment is often enforced through penalties exerted by the distribution network; for example, the wholesaler or distributor may withhold inventory or asset suppliers may turn off utility functionality.	**Tienda Pago**	**M-Kopa Solar**
Mobile Money Lenders partner with mobile network operators (MNOs) to offer credit to their customer base. These lenders acquire customers from the MNO network, use transactional or phone data for scoring, and disburse to a mobile wallet. The digital interface is supplemented by a physical agency network for cash-in and cash-out. Loan sizes often start small, due to limited data points on the customer, but increase dramatically as the customer repays and builds credit history with the lender.	**Kopo Kopo** **Safaricom**	**Airtel** **Jumo**
Tech-Enabled Lenders are legacy financial services providers that have embraced technology to digitize parts of the lending process, either in-house or through partnerships. This could include adding digital acquisition channels, digital disbursement and repayment via bank account or mobile wallet, and digital account management. This is supported by a physical distribution network for a blended approach of technology and human touch.	**Accion Microfinance Bank** **AYE Finance** **FINCA**	**Equity Bank Kenya**

Structural factors within different regions and individual countries play a significant role in the ability of FSPs to develop digital lending solutions. Some noteworthy regional trends are highlighted below:

Latin America

In Latin America, the current enabling environment is ripe for digital innovation. Policies mandating electronic invoicing have been implemented throughout the region, substantially increasing access to digital transactions and detailing vendors' cash-flows and repayments. Peru and Ecuador have seen successful launches of government initiated interoperable mobile money platforms. In addition, there has been an increasing number of non-exclusive agent networks that serve multiple FSPs in Latin America. Nearly 40% of fintech services are focused on serving un/underbanked MSMEs, and merchant lending and payment models that cater to retailers is on the rise (e.g. Tienda Pago in Peru). Finally, non-cash payments volume[22] and, in particular, the usage of mobile financial services are both growing: there are currently 17.3 million mobile money accounts with 47% active. As of December 2014, over one quarter of all mobile money transaction volumes in Latin America involved third parties, such as bill payments and merchant payments, up from 14 percent in 2012.[23] This growth has been supported by the proliferation of 'cuentas basicas' (basic accounts) that have low KYC requirements and can be opened via mobile channels.

Africa

MNOs are strong players in Africa's financial inclusion market and have buoyed the evolution of mobile payments throughout the region. Because of this, Africa has seen a new wave of partnerships between MNOs and FSPs (e.g. MTN Mobile Money, Safaricom, and CBA from mShwari), but revenue sharing agreements can be a source of tension between large MNOs with strong negotiating power and fintech startups or small FSPs. Further enabling more digital lending activities, most digital products are designed for USSD. However, even though there is a push to develop tools and support for financial services, the growth of digital lending in Africa will likely be hampered as digital financial literacy remains low. In addition, the aggressive use of SMS marketing for nanoloans has been linked to rising defaults in the region. Finally, Microsave studies in Kenya have revealed the importance of human intervention in repayment and collections, emphasizing again the need for responsible lending and a blended 'tech and touch' approach when appropriate.

22. 'Non-cash Payments Volume' Capgemini, February, 2018: http://www.worldpaymentsreport.com/#non-cash-payments-content
23. 'New GSMA Report Finds that Latin America and the Caribbean Have Fastest Growth in Mobile Financial Services Globally' GSMA, May, 2015: http://www.gsma.com/newsroom/press-release/gsma-report-latin-america-caribbean-fastest-growth-in-mobile-financial-services-globally/

India

India Stack is a powerful public digital identity, payments, and documentation infrastructure that is highly conducive to digital lending. It was created by the government in 2010 and is creating a new age of paperless, frictionless, and low cost financial transactions. The root of this system is Aadhaar, which uses biometric data for unique identification and will soon be linked to secure document verification for e-KYC and e-signatures.

The Aadhaar Enabled Payments System (AEPS) supports online transactions through any bank. There is also high smartphone penetration and a focus on design for digital financial services which adds to and complements India's enabling regulation. Increasing rates of DFS usage indicates an advancing digital maturity of users. Finally, collaboration between banks and fintechs is on the rise, as is an increasing application of artificial intelligence, machine learning, and blockchain in the lending space.

China

China's e-commerce and social platforms, namely Alibaba and WeChat, leverage deep data that has transformed digital banking. They use this data to originate, score, lend, and create a seamless online experience, backed by recently acquired banking licenses. These non-bank giants dominate lending – Alibaba and WeChat's total number of clients match or exceed China's top banks. Elsewhere, traditional retailers often collaborate with financial institutions to offer digital credit. In China there is a high cultural willingness to share personal information and adopt mobile technology. New fintechs are taking advantage of this trend and targeting niche markets like rural SMEs, agricultural supply chains, or specialized consumption (education or salary). This has led to near universal merchant acceptance of mobile payments (using QR codes) which can support a cashless economy. 'Right touch' regulation policy is conducive to new business models.

D. CONSUMER RISKS IN DIGITAL LENDING

The transition to digital lending brings out new risks for consumers and ongoing risks may manifest themselves in new ways. Digital lenders will want to prevent or mitigate such risks as they design their products and consumer interfaces. This table notes a few salient risks, with suggestions for addressing them, based on the Client Protection Principles promoted by the Smart Campaign.[24]

CLIENT PROTECTION PRINCIPLE	RISKS IN DIGITAL LENDING AND SUGGESTED PREVENTION MEASURES
Appropriate Product Design and Delivery	Digital lending can be easy and fast, and borrowers are susceptible to "push" marketing and fraud. Lenders are advised to give customers time to reconsider borrowing decisions, e.g. "cooling off periods". Careful customer segmentation may reduce the drive towards aggressive marketing. Clear communication with borrowers can help them differentiate fraudsters from legitimate lenders.
Prevention of Over-Indebtedness	Where possible, lenders engaged in refining new credit algorithms should consider not penalizing or reporting early defaulters to credit bureaus for small infractions. When offering small, short-term loans, lenders can protect customers from debt traps by mandating a "resting" period with no outstanding loans every few cycles. Algorithms should take into account repayment capacity.
Transparency	It is very important, though often especially challenging, for lenders to present prices, terms, and conditions clearly on digital interfaces. However, well-designed interfaces can increase uptake. Small digital surveys offer simple ways to confirm customer understanding.
Responsible Pricing	As technology brings down the cost to serve, lenders should look for opportunities to pass on those savings to consumers.
Fair and Respectful Treatment	Algorithms are intended to avoid human biases, but biases can appear. Algorithms should be reviewed from time to time to see whether they introduce unwanted discrimination.
Data Privacy	Lenders are advised to seek consent from consumers for the use and sharing of their data. Given the security vulnerabilities that researchers have noted,[25] lenders are also advised to perform thorough data security audits.
Complaint Resolution	Problem resolution systems need to be available to consumers, preferably including some ability to speak directly to a person. Lenders are advised to inform customers frequently about how to resolve problems.

24. The Smart Campaign is a global campaign to embed a set of client protection principles into the fabric of the financial inclusion sector. http://www.smartcampaign.org. For more details, see "Tiny Loans, Big Questions: Client Protection in Mobile Consumer Credit," Smart Campaign Brief #1, 2017.
25. Patrick Traynor, "Digital Credit and Data Security," Center for Financial Inclusion. Forthcoming, 2018.

Citi Foundation

ACCION

ACCION

Accion is a global nonprofit committed to creating a financially inclusive world, with a pioneering legacy in microfinance and fintech impact investing. We catalyze financial service providers to deliver high-quality, affordable solutions at scale for the three billion people who are left out of – or poorly served by – the financial sector. For more than 50 years, Accion has helped tens of millions of people through its work with more than 90 partners in 40 countries. More at http://www.accion.org.

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