

THE STATE OF INSTANT AND INCLUSIVE PAYMENT SYSTEMS IN AFRICA

SIIPS 2022

EXECUTIVE SUMMARY



This report was made possible through the partnership involving AfricaNenda, the World Bank, and the United Nations Economic Commission for Africa (UNECA). Cenfri conducted the research.

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About this report

The State of Instant and Inclusive Payment Systems in Africa report, SIIPS – Africa 2022, is at its first edition and will be repeated annually. The report aims to inform public-sector and private-sector players in Africa and beyond about the developments in the instant retail payment system (IPS) ecosystem in Africa, including an assessment of the inclusivity of such systems, both in functionality (accessible to all end-users) and governance (all licensed payment providers have fair access and design input opportunities). For this report, only systems with live transactions and functionality as of June 2022 were included.

The data in this report was gathered from publicly available resources from March to July 2022, and it was supported by extensive stakeholder interviews during the same period. The consumer research was conducted between May and June 2022.

INSTANT AND INCLUSIVE RETAIL PAYMENT SYSTEMS ARE CORE TO FINANCIAL INCLUSION IN AFRICA

Instant and inclusive retail payment systems can play a pivotal role in creating universal access to financial services for all Africans. The rise of mobile transactions has been a key driver of the substantial gains in the reach of the financial services sector in recent years (World Bank Findex, 2022). Payment services also provide the rails for and gateway to other formal financial services such as savings, insurance, and credit, of which usage remains low in Africa. This means that greater uptake of retail payment services can simultaneously help to bridge the broader financial inclusion gap in Africa. Moreover, the ability to transact and exchange value is at the heart of people's daily economic lives. Thus, by facilitating more secure, lower-cost daily transactions, instant and inclusive payment systems form a powerful mechanism for grassroots economic

empowerment in Africa, and even more so for overlapping vulnerable groups like women, rural populations, and the poor.

Significant progress is already being made in transitioning to digital retail transactions but changing end-user behavior towards digital means takes time.¹ To become the basis of everyday exchange of value, digital transactions must provide a compelling value proposition for all transaction needs. To do that, they must be broadly and immediately available, easy to use, and affordable, and they must reach scale to create network effects. The transaction process must also be as quick and reliable as cash. In short, to underpin universal access to formal financial services, payment systems must be both **instant** and **inclusive**.

*What is an instant payment system, and when does it become inclusive?*²



Instant payment systems (IPS) are retail payment systems that are multilateral and open loop and that enable digital push payments in near real time for use 24 hours a day, 365 days a year, or as close to that as possible.



Instant and inclusive payment systems (IIPS) process retail transactions digitally in near real-time and are available for use 24 hours a day, 365 days a year, or as close to that as possible. They enable low-value, low-cost push transactions that are irrevocable and based on open-loop and multilateral interoperability arrangements. Licensed payment providers have fair access to the scheme, and participants have equal input opportunities into the scheme. The central bank has a role in scheme governance. End-users have access to a full range of use cases and channels, as well as transparent and fit-for-purpose recourse mechanisms.

What does it take to build truly inclusive instant payment systems?

To date, there has been limited information on the state of IPS and indeed, by extension, IIPS in Africa and the extent to which these systems are inclusive, especially for lower-income and no-income end-users.

This report is published by AfricaNenda and its partners, the World Bank and UNECA, as the first of a series of

annual reports to assess the landscape and inclusivity of open-loop, instant payment systems in Africa. It combines a desktop-based cataloguing of IPS in Africa with consumer research in seven countries, insights from expert interviews, and detailed case studies to conclude on key trends, barriers, and opportunities for IPS in Africa.

¹ The latest global Findex survey shows that 46% of all African adults with transaction accounts had made or received at least one digital payment in 2021, compared to 33% in 2017 (World Bank Findex, 2022).

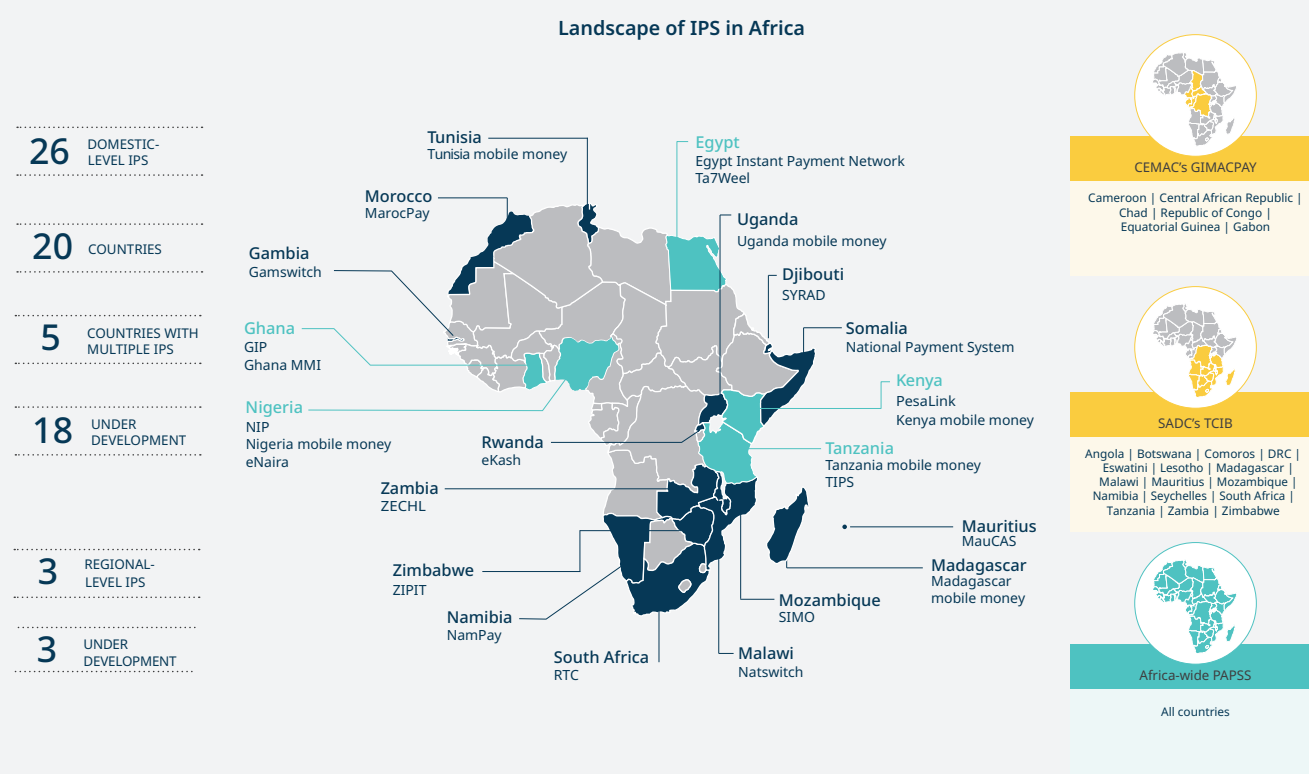
² The definitions used in this report are in principle aligned with the definition of the Committee on Payments and Market Infrastructures (CPMI) but seek to emphasize a few specific aspects that are relevant from a financial inclusion context in several low-income countries – notably mobile money account and push payments. Given this, even solutions that enable mobile money users of different mobile money providers to make and receive transfers in real-time are considered under this definition. Though the limitations of such arrangements are recognized in the different categorizations of IIPS.

RAPID RISE

The need for reliable and efficient payments has spurred significant growth in IPS across Africa (Figure 1), with

on average two new IPS introduced per year during the past decade:³

FIGURE 1. Landscape of domestic and regional IPS in Africa



The growing landscape of provision has seen substantial traction among users:

Key trends

- Approximately 16 billion transactions processed in 2021 with a total value of over USD 930 billion
- 32% average annual growth in total transaction volumes since 2018; 40% average annual increase in total value
- Two out of three end-users make digital transactions on a weekly basis⁴
- Women achieve similar access, despite facing greater constraints⁵

³ The mobile money categorization (i.e., a country name followed by "mobile money") in the graph shows the countries with multilateral mobile money interoperability that operate without an independent commercial name. Mobile money IPS systems such as these may be invisible to the end-users, apart from the ability to transact across multiple mobile money providers.

⁴ Among the sample of end-users covered in the consumer research for this study, MSME respondents transact digitally more frequently than individuals, and digital transaction usage is more common among younger users and those with more predictable incomes.

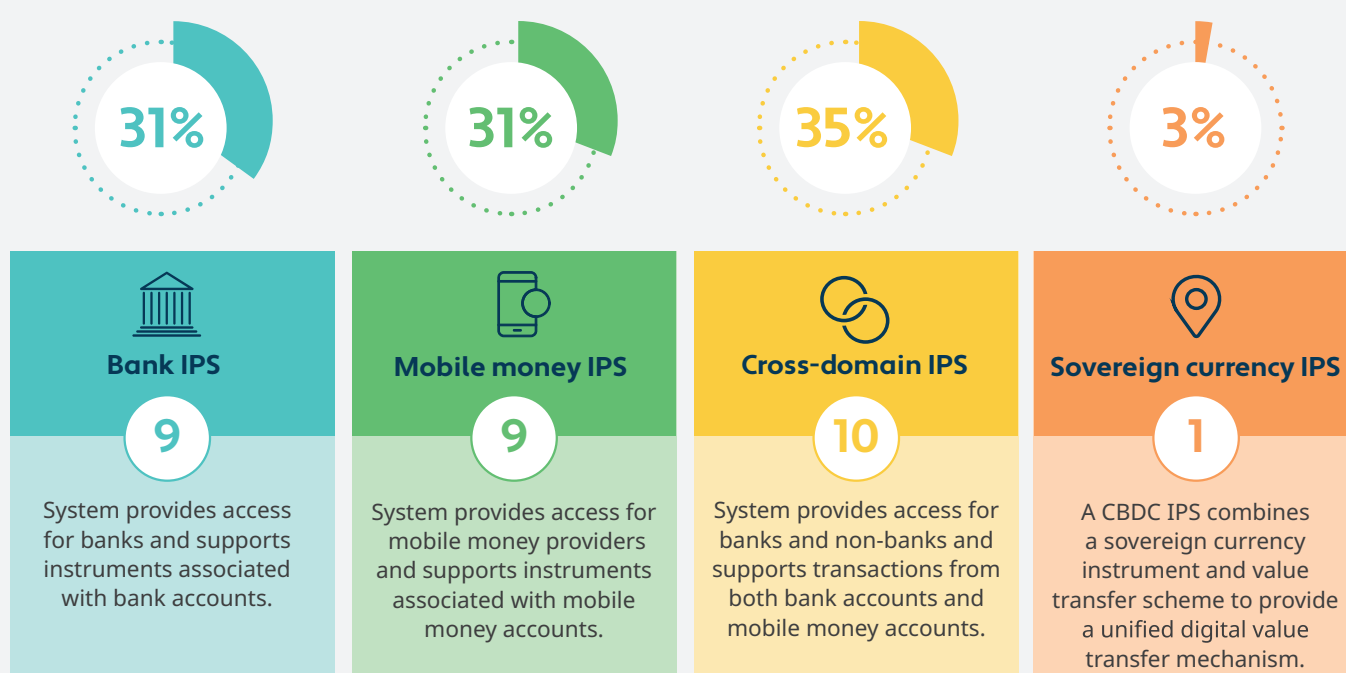
⁵ In the sample of end-users surveyed for this study there is no gender gap for individual women, but women MSME respondents are less likely to make regular digital transactions than male MSME respondents.

FOUR MAIN IPS TYPES

The 29 mapped IPS (26 domestic and three regional) can be divided into four IPS types (Figure 2). Mobile money-only and bank-only IPS traditionally dominated. However, cross-domain schemes that enable the instant transfer

between bank accounts and mobile wallets have caught up with siloed systems and now make up the largest number of systems (ten IPS in total). There is also one case of a sovereign currency scheme:

FIGURE 2. IPS types and definition



Of the nine identified mobile money IPS, four interoperate through a third party (e.g., a switch or clearing layer), while the remaining five integrate directly with one another

(i.e., through multilateral interoperability). All bank IPS and cross-domain IPS are established through third-party interoperability arrangements.

BROAD FUNCTIONALITY

The functionality of an IPS dictates to what extent end-users' payment needs are met: **channels, instruments** and **use cases** determine an IPS's inclusivity.



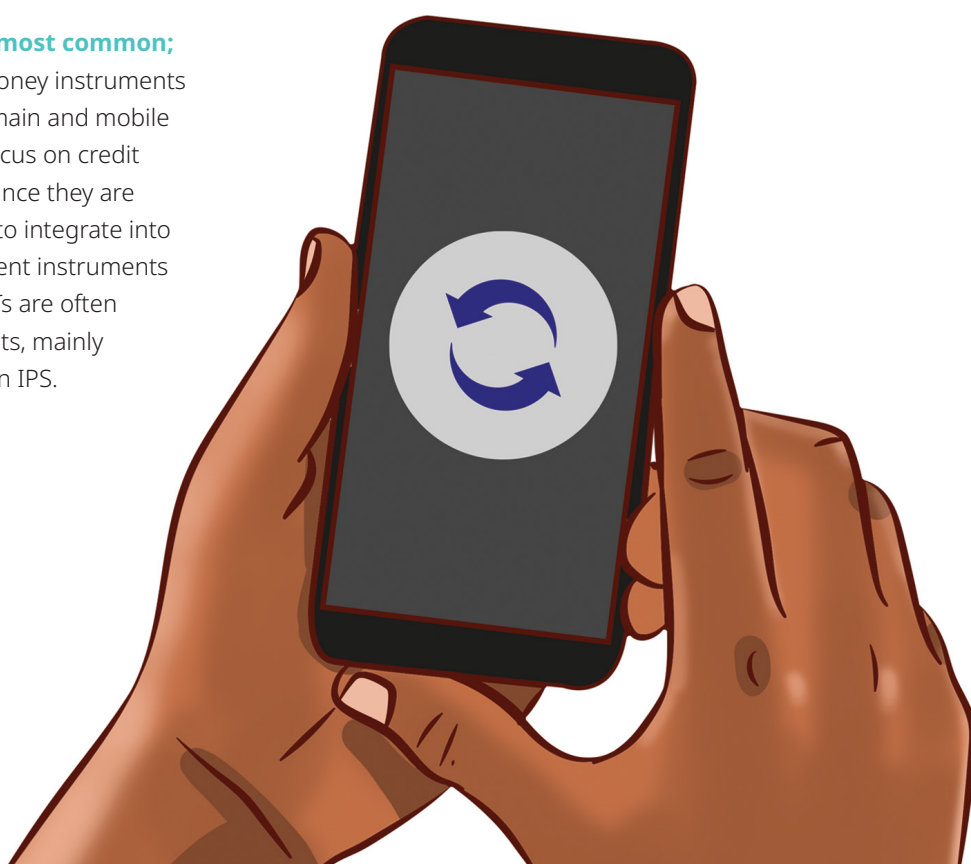
USSD is the most prominent channel, but others are gaining traction. Across domestic and regional systems, USSD is the most prominent channel, offered by 62% of IPS. Given that less than half (48%) of mobile connections in sub-Saharan Africa are via smartphone and only 28% of the population is connected to the mobile internet (GSMA, 2021a), a technology such as USSD, which does not require either, is vital to inclusivity. It should be noted that while USSD will remain an important channel for the foreseeable future, its costs in several countries are prohibitive for end-users, and require attention. Bank systems primarily focus on browser (online banking), ATM and POS functionalities, with a rising number of apps and QR code solutions. Mobile money IPS also increasingly offer payment via apps. In addition, close to 60% of IPS offer branch or agent channels. Cross-domain IPS support the highest number of channels, on average 5.7, compared to the 4.6 channels on average supported by bank-based IPS and 3.3 by mobile money IPS.



E-money instruments are the most common; banks focus on credit EFT. E-money instruments are supported most by cross-domain and mobile money IPS, while banks largely focus on credit electronic fund transfers (EFTs), since they are lower-cost, lower-risk and easier to integrate into core banking systems. Pull-payment instruments such as debit cards and debit EFTs are often available as secondary instruments, mainly offered by bank and cross-domain IPS.



P2P use cases are widely enabled, followed by P2B. Seventy-two percent (72%) of IPS support both person-to-person (P2P) and person-to-business (P2B) payments. P2P payments are the easiest to facilitate, from a technical perspective. Merchant payments are particularly time-sensitive and trust-dependent, thus instant functionality offers a compelling value proposition. All IPS have opted to roll out use cases incrementally rather than integrating all from the start: Only three countries (GhIPSS Instant Pay (GIP) and Mobile Money Interoperability (MMI) in Ghana, MarocPay in Morocco, and NIBSS Instant Payments (NIP) in Nigeria) have so far made business-to-person (B2P), person-to-government (P2G), and government-to-person (G2P) payments possible in addition to P2P and P2B. G2P payments have the scope to drive larger scale through the system and to serve as drivers of first-time use. However, only seven IPS currently integrate G2P payments.



THE EVOLVING LANDSCAPE OF ACTORS

Across the continent, **banks** and **mobile money operators** (MMOs) are key IPS participants: Standard Chartered, Ecobank, the Standard Bank Group, and Absa Bank (formerly known as Barclays) are participants in most of the IPS that enable bank payment instruments, while most MMOs fall under four mobile network operators: Vodafone, MTN, Airtel, and Orange. Of these, Airtel is the mobile money operator that features in most IPS. **Fintechs** are also increasing in prominence: as direct participants, third-party service providers, or aggregators.

Finally, a few other private-sector players are proving influential in IPS development across the continent, notably **BankservAfrica**, a switch operator and clearing house for the Real Time Clearing (RTC) system in South Africa and the regional IPS serving the Southern Africa Development Community (SADC) region, Transaction Cleared on an Immediate Basis (TCIB).



GOVERNANCE RESTING LARGELY WITH CENTRAL BANKS AND COMMERCIAL BANKS

The governance of a scheme determines how all processes within the IPS are carried out and sets the rules for a collaborative space for participants that is important to drive inclusivity. In the African IPS landscape, scheme governance and operator rule-setting are usually performed by the same entity.

Central banks oversee most IPS: 60% of IPS are either directly governed by the central bank or through a **public-private partnership** (PPP). Central banks also usually provide the settlement system.

In all of these schemes, **decision-making largely rests with central banks and commercial banks**. Of the 10 central-bank-led IPS, only Tanzania's TIPS has an explicit process to obtain participant inputs into decisions, while in all nine PPP models identified, the partnership is between the central bank and commercial banks only, thereby excluding non-bank participants. Apart from central-bank-based and PPP-based IPS, twelve IPS in Africa are governed by a **private association**.

DIVERSE TECHNICAL SPECIFICATIONS

ISO 20022 and ISO 8583 are the most prevalent messaging standards across IPS in Africa, each used by five of the eleven systems where information is available. Tanzania's TIPS uses a proprietary standard. Open APIs are enabled by at least nine IPS. This can boost the inclusivity of instant

payments through providing access to different use cases and value-added services (World Bank, 2021a). QR standards have also been established in nine IPS. Ten domestic-level IPS explicitly specify proxy identities. Among them, mobile-phone numbers are the most common proxy ID used.

ARE AFRICAN IPS TRULY INCLUSIVE?

Many IPS fulfil some inclusivity criteria, but none have reached mature inclusivity yet. While the rise of IPS is a substantial achievement, the analysis of the IPS landscape shows significant constraints to inclusivity. Not all IPS offer access to channels that are most in demand; most do not yet enable cross-domain interoperability for greatest end-user choice, and the majority of them do not

allow non-banks to participate in decisions. Many of them also only offer limited use cases, and only a handful have integrated B2P, P2G, and G2P payments. These limitations are challenging the ability of IPS to scale. When assessed for inclusivity, only five IPS are classified as moving towards mature inclusivity, and none are deemed fully inclusive yet (Box 1).

BOX 1. Classification of IPS in Africa by assessed level of inclusivity

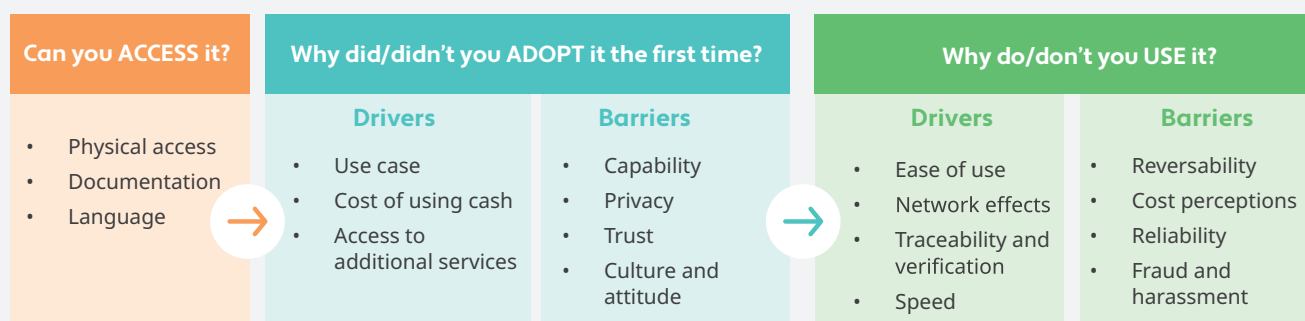
13 <u>IPS</u> Not ranked	<ul style="list-style-type: none"> do not enable P2B transactions or do not offer channels that are most used
11 <u>IPS</u> Basic inclusivity level	<ul style="list-style-type: none"> enable channel currently most used enable P2B and P2P use cases
5 <u>IPS</u> Progressed inclusivity level	<ul style="list-style-type: none"> enable interoperability between all channels (allow all licensed PSPs access to the scheme) allow input into decision-making and design by all licensed PSPs involve central bank as part of governance framework
5 <u>IPS</u> Moving towards mature inclusivity level <small>*the set of systems in Ghana, GIMACPAY in CEMAC, Natswitch in Malawi, TCIB in SADC, and ZEHL in Zambia</small>	Aspirational state: <ul style="list-style-type: none"> reached if the full range of payment use cases has been integrated if provisions are made for transparent and efficient consumer recourse mechanisms, and these are enforced cost of a digital payment transaction for the end-user is as low as feasibly possible (within a not-for-profit business model)

END-USER INSIGHTS CONFIRM FUNCTIONALITY CHALLENGES TO INCLUSIVITY

Functionality pain points erode trust. The lack of inclusivity translates into sub-optimal usage. Although digital payment adoption is rising, consumer research in Kenya, Nigeria, Ghana, Tanzania, Zambia, the DRC, and Egypt suggests that many customers use digital payments only for limited use cases, such as sending and receiving

money between friends and family. Consumer payments to merchants remain under-digitalized: Only 44% of individual respondents make P2B payments digitally. The qualitative research highlights factors that drive **access** to, initial **uptake**, and ongoing **usage** of digital payments (Figure 3):

FIGURE 3. Pathway toward continued digital payment usage



Given that cash transactions often have no implicit attached fees or are perceived to be free, consumers are highly sensitive to transaction charges and consistently noted them as a major barrier to digital payment usage. Network outages result in negative customer experiences, deterring individuals and MSMEs from using digital payments. They also introduce transaction failures or delays and undermine the instant component of IPS design. Furthermore, digital payment users are concerned about their ability to quickly reverse transactions that they made in error and are frustrated when systems do not support key use cases that they value.



Sometimes you can pay using your phone, but it won't indicate [the payment on the other side]. It takes long to indicate [on the other side] so you would rather pay cash.

— Focus group discussion respondent in Zambia

KEY BARRIERS TO INCLUSIVITY

These challenges are the result of four underlying barriers to IPS inclusivity in Africa:

1 Value proposition is limited for participants and lower-income end-users:

Larger players are often unwilling to integrate and competitive forces deter the integration of new and smaller players. This results in limited use case and channel integration observed across the IPS landscape. Complex payment processes constrain first-time and early end-users of digital payments.

- **Result for end-users:** Limited options for users constrain uptake and usage.

2 Cost drivers undermine business and use case:

Infrastructure and digital constraints in most countries combined with limited consumer literacy create a high-cost base that limits access and drives the cost of delivery to providers, which requires scale for sustainable delivery. However, the duplication of infrastructure across providers fragments scale. This drives up per-transaction costs. The staggered rollout of use cases observed across the IPS landscape further limits scale and means that the value proposition to end-users is undermined. These elements are fueled by the processing load and variation on data standards and fields stemming from required messaging standards, as well as by digital transaction levies, which can dampen digital financial service providers' business models. Moreover, some IPS have complex trade-orientated forex models not suited for IPS transactions and response times.

- **Result for end-users:** The various cost drivers result in high transaction fees for end-users, which affect the level of end-user engagement.

3 Regulatory hurdles affect competition and innovation, and delay implementation:

Scheme governance frameworks are set up to favor participation in decision-making by larger players, specifically banks. This creates an unlevel playing field. This can be a result of a PSP licensing regime that curtails the access to payment infrastructure for new entrants. A second regulatory barrier exists among the requirements for customer due diligence and that implementation of such requirements differ across jurisdictions and between participants. Finally, if there is no oversight of financial institution recourse processes, individuals are less likely to use the IPS in general.

- **Result for end-users:** An unlevel playing field can fuel mistrust in digital payments, which stifles uptake and usage. Inconsistent onboarding processes affect usability. Recourse mechanisms that are unclear, difficult, or costly to navigate undermine user trust.

4 Risk of fraud and cybercrimes:

The digital and instant nature of IPS makes them vulnerable to financial cybercrime and fraud, especially via mobile channels.

- **Result for end-users:** Perceived fraud and security risks erode end-user trust in IPS, which impedes adoption and usage.

Reaching greater inclusivity will mean converting barriers into opportunities.

If not checked, these barriers can become self-reinforcing. Exclusion of a significant population from the system drives down scalability, sustainability, and the overall utility of the system. A fragmented digital ecosystem leads to rising costs and fees, further disincentivizing uptake among the vulnerable population. However, if addressed, each barrier becomes an opportunity for reaching scale and inclusivity:

- **Overcoming the limited value proposition:**

The value proposition challenges present an opportunity for IPS stakeholders to articulate a vision to demonstrate the market and ecosystem value proposition, and to consult and bring in digital financial service providers to drive scheme buy-in. As part of this vision, emphasis is needed on use cases and channels that match consumers abilities and preferences.

- **Keeping transaction costs down:** By critically assessing existing payment infrastructure and standard adoption, and by analyzing market

contexts to understand what it would take to appropriately integrate use cases aligned with end-user needs, key cost drivers can be reduced to unlock opportunities for scale.

- **Overcoming regulatory hurdles:** Taking a pro-poor governance stance where all digital financial service providers have an equal opportunity for input into scheme rules and decisions, promoting consolidation between participants on a risk-based customer due diligence approach, and providing clarity for end-users on how to access recourse mechanisms in a cost-effective way will ensure that regulatory hurdles do not stifle competition and innovation.
- **Mitigating cybersecurity threats:** The rising risk of fraud and cybercrime present a system design opportunity to ramp up consumer protection mechanisms and utilize additional tools, such as transaction receipts, to boost consumer awareness and protection from bad actors.



TRENDS

As underlying technology evolve, cognizance is needed of emerging trends that will shape the IPS ecosystem. A few emerging trends at the scheme, market, and end-user level are likely to shape the African IPS

ecosystem in the coming years and determine the scope for inclusivity (Table 1). For IPS in Africa to optimize inclusivity, these trends need to be accounted for both in the design and implementation phases.

TABLE 1. Key IPS trends for Africa

	Trend
Scheme trends	<ul style="list-style-type: none"> • Rise in cross-domain IPS • Enabling merchant acceptance • Participant involvement in the design phase • Utilization of open-source software • Transition toward open API and cloud computing • Movement toward ISO 20022 messaging standard • Emergence of original credit transfers (OCTs) in card networks
Market trends	<ul style="list-style-type: none"> • Payment technologies that emphasize convenience • Increased risk of fraud and cybercrime • Market entry by social media platforms • Increasing 3G, 4G, 5G rollout, impacting USSD functionality • Utilization of data through data mining
End-user trends	<ul style="list-style-type: none"> • Greater flow of value and volumes through IPS reflecting consumer uptake • Rising consumer security concerns and the importance of consumer protection • Increasing smartphone adoption
CBDC trend	<ul style="list-style-type: none"> • Exploration of retail CBDC and potential co-existence with existing IPS

THE ROAD AHEAD

The foundation is there. Instant payments already have a foothold in Africa. IPS have made substantial efforts to extend access to lower-income populations. However, more is needed. To truly transform the way that African citizens and MSMEs transact to meet their daily needs, deliberate steps are needed to make the IPS landscape even more inclusive.

To close the inclusivity gaps, all payment system stakeholders must collaborate to design IPS that meet end-user needs. Considerable efforts are underway to

increase instant payments' capacity in Africa. This report shows the importance of ensuring that the increase in the number of operational IPS in Africa results in more access for lower-income populations to achieve scale and long-term sustainability for IPS. The significant challenges encountered call for a collaborative effort between public and private stakeholders to ensure optimal inclusivity. Reaching sustainable scale and triggering market-wide lower-income, end-user adoption will require inclusive governance as well as inclusive functionality:



Inclusive governance provides open access for all licensed PSPs to shared payment infrastructure and invites all players to contribute to scheme rule books and decision-making. Effective stakeholder motivation to join an IPS depends on a clear rollout plan spearheaded by a champion that can effectively incorporate both public- and private-sector interests. To ensure that commercial interests do not dominate, a leading role for central banks in scheme governance will remain essential.



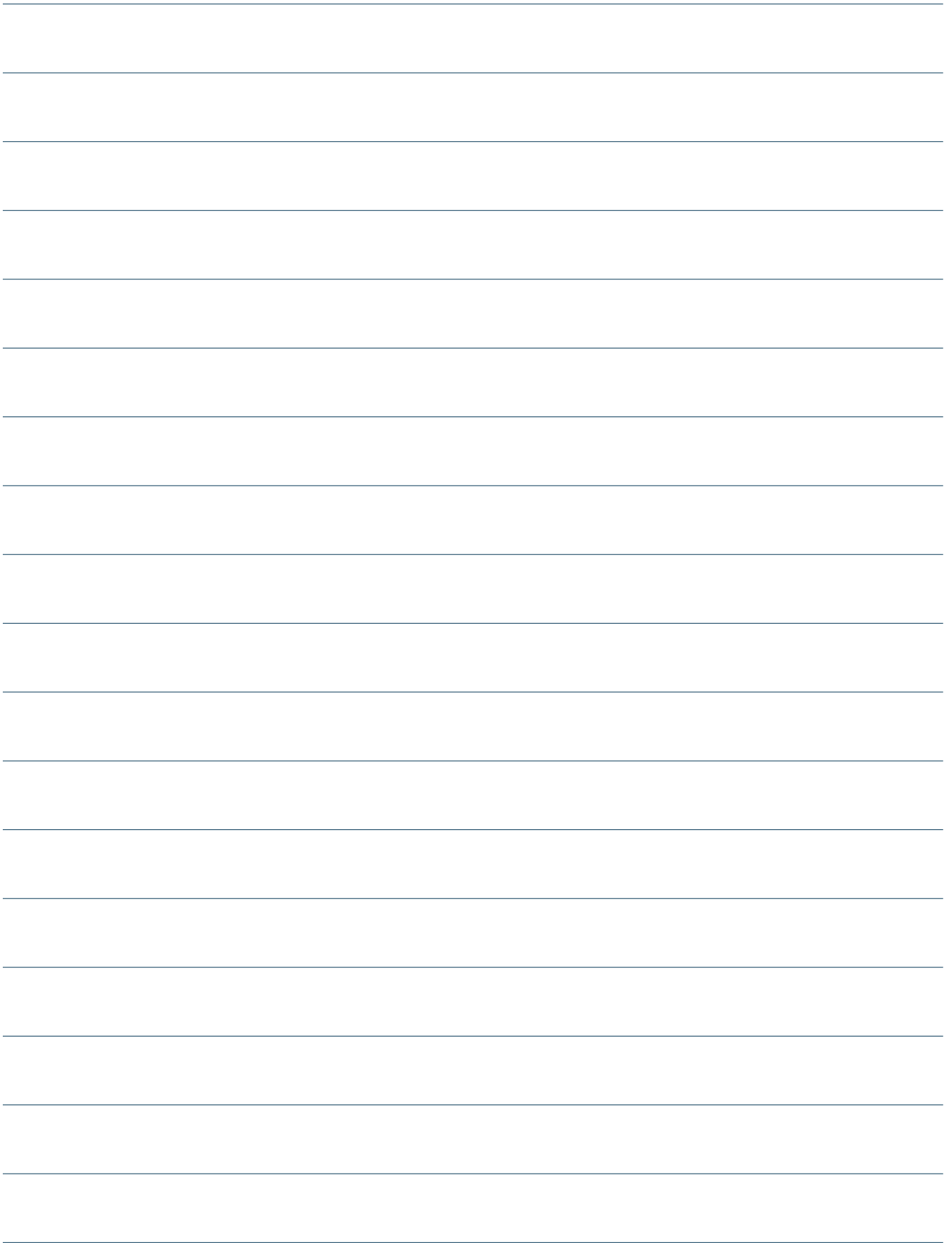
Inclusive functionality incorporates designs to provide a compelling value proposition for all use cases relevant to end-users within the digital payment ecosystem. The choice of IPS capacity, full use-case rollout, and technology standards all need to be fit for purpose to achieve a sustainable business model and a seamless end-user experience that works for all. Doing so also requires a re-evaluation of infrastructure use: by considering IPS within the broader context of a market-wide digital transition, stakeholders can leverage existing, and often underutilized, infrastructure to speed the implementation process and assess where it would be appropriate to decommission duplicated infrastructure that fragments scale and drives up per-unit costs.

AfricaNenda, the **World Bank**, and **UNECA** will continue to engage on the agenda for making digital instant payments accessible and useful for all. In this agenda, there is a need for even greater data transparency among existing players, to allow effective tracking of the progress and performance of the IPS landscape in Africa and to inform the collaborative agenda for greater inclusivity.

The full and short versions of the report are available on our website:

www.africanenda.org/SIIPS2022







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