



AfricaNenda

ACCELERATING INCLUSIVE PAYMENT SYSTEMS

THE STATE OF INSTANT PAYMENTS IN AFRICA: PROGRESS AND PROSPECTS

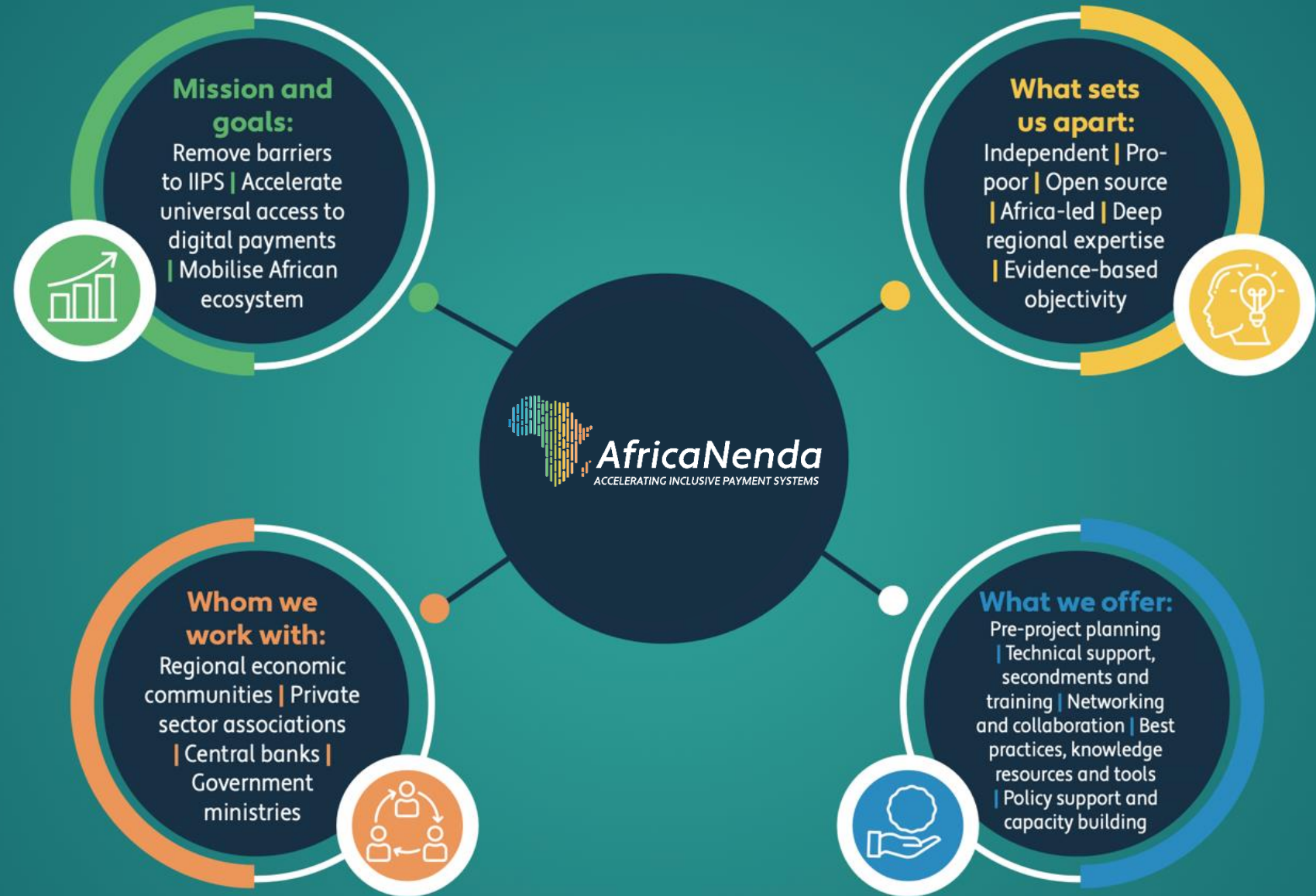


OCTOBER 2021



AfricaNenda is an independent, African-led organisation created to accelerate the growth of instant and inclusive payment systems that will benefit all Africans, including the poorest and currently financially excluded. Our team brings together experts in digital payments and leaders with regional expertise to support African institutions, governments and the private sector.

For more information on AfricaNenda, visit our website at www.africanenda.org



ABOUT THIS REPORT

This report explores the state of financial inclusion in Africa and the role that inclusive instant payments play in achieving inclusion for all. The report is a preview to AfricaNenda's upcoming annual State of Instant Payments in Africa 2022 report, which will zoom in further on the themes and questions explored in this document.



ACRONYMS

| | | | |
|---------------|---|---------------|--|
| ACH | Automated Clearing House | IIPS | Inclusive and Instant Payment System |
| AfCFTA | African Continental Free Trade Agreement | KYC | Know-Your-Customer |
| B2B | Business-to-Business | P2B | Person-to-Business |
| B2G | Business-to-Government | P2G | Person-to-Government |
| B2P | Business-to-Person | P2M | Person-to-Merchant |
| BCEAO | Central Bank of West African States | P2P | Person-to-Person |
| COMESA | The Common Market for Eastern & Southern Africa | PISP | Payment Initiation Service Provider |
| DFSP | Digital Financial Services Provider | MNO | Mobile Network Operator |
| EAC | East African Community | MPS | Mandated Payment Services |
| ECCAS | Economic Community of Central African States | MVP | Minimum Viable Product |
| ECOWAS | Economic Community of West African States | NBFI | Non-Banking Financial Institution |
| FSP | Financial Services Provider | REC | Regional Economic Commission |
| G2B | Government-to-Business | RT-GS | Real-Time Gross Settlement |
| G2G | Government-to-Government | RT-RPS | Real-Time Retail Payments System |
| G2P | Government-to-Person | RTP | Request to Pay |
| IGAD | Intergovernmental Authority on Development | SADC | Southern African Development Community |
| IPS | Instant Payment System | USSD | Unstructured Supplementary Service Data |
| | | WAEMU | West African Economic and Monetary Union |

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WHAT DOES IT MEAN TO BE FINANCIALLY INCLUDED AND WHY IS IT IMPORTANT?

According to the World Bank, financial inclusion means that “individuals and businesses have access to useful and affordable financial products and services that meet their needs.” Having access to a transaction account is a first step toward broader financial inclusion since a transaction account allows people to store money as well as send and receive payments. This creates benefits for all stakeholders involved:



INDIVIDUALS & HOUSEHOLDS

- Widening access to the financial system can improve resilience and access to economic opportunities for those who are currently excluded
 - Research involving market vendors in Kenya revealed that access to formal savings accounts led participants to save more, resulting in a 38% increase in private expenditure and 60% increase in business investment¹
- Access to formal accounts also fosters women’s empowerment by giving women greater agency and control over household financial resources
 - In Tanzania, a UNCDF study found that 78% of women felt access to savings increased their confidence, and 60% felt they were more involved in household spending²



BUSINESSES & FINANCIAL SERVICE PROVIDERS (FSPs)

- Increased financial access facilitates long-term investment in the real economy by increasing domestic savings and bringing more domestic savings into the formal financial system. Additional investment in the real economy allows firms to create jobs or make capital investments that raise productivity
- Digital financial services enable new transactions and reduce the cost of commerce for businesses. It also increases efficiency for financial services providers.
 - Through digitising systems, financial service providers could decrease direct business costs by USD 400 billion annually³

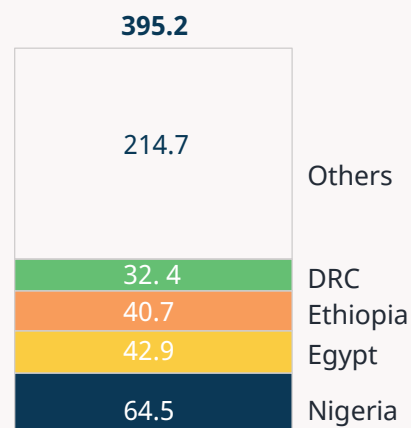


GOVERNMENT

- Increased earnings and economic activity also result in higher tax contributions to the government and increased fiscal capacity of the state to fund social transfers
 - Tanzania could increase tax revenue by USD 477 million per year by digitising Value Added Tax and supporting business formalisation⁴
- Financial inclusion and account ownership can help reduce corruption, discourage tax evasion, and allow for more effective subsidy payouts
 - The Mexican government reduced spending on wages, pensions, and social welfare by 3.3% annually, or USD 17 billion, through moving to digital payments

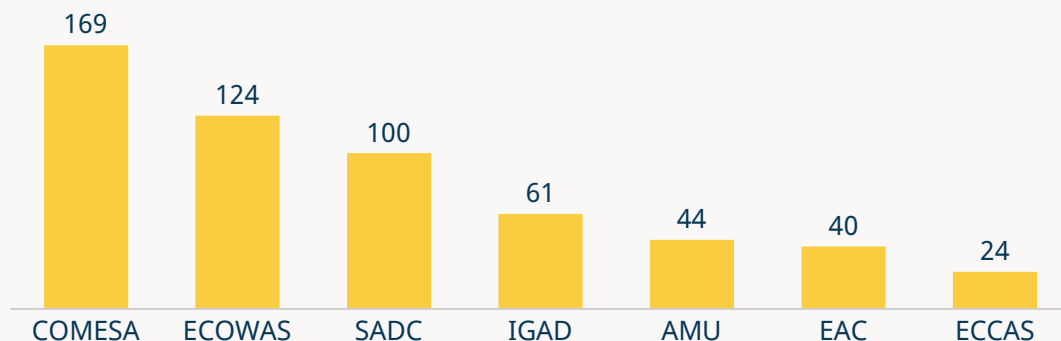
THE STATE OF FINANCIAL INCLUSION IN AFRICA

ADULTS WITHOUT AN ACCOUNT AT A FINANCIAL INSTITUTION OR THROUGH A MOBILE MONEY PROVIDER, BY COUNTRY (MILLIONS, 2017)^{1,2}



Four countries represent 46% of excluded adults on the continent

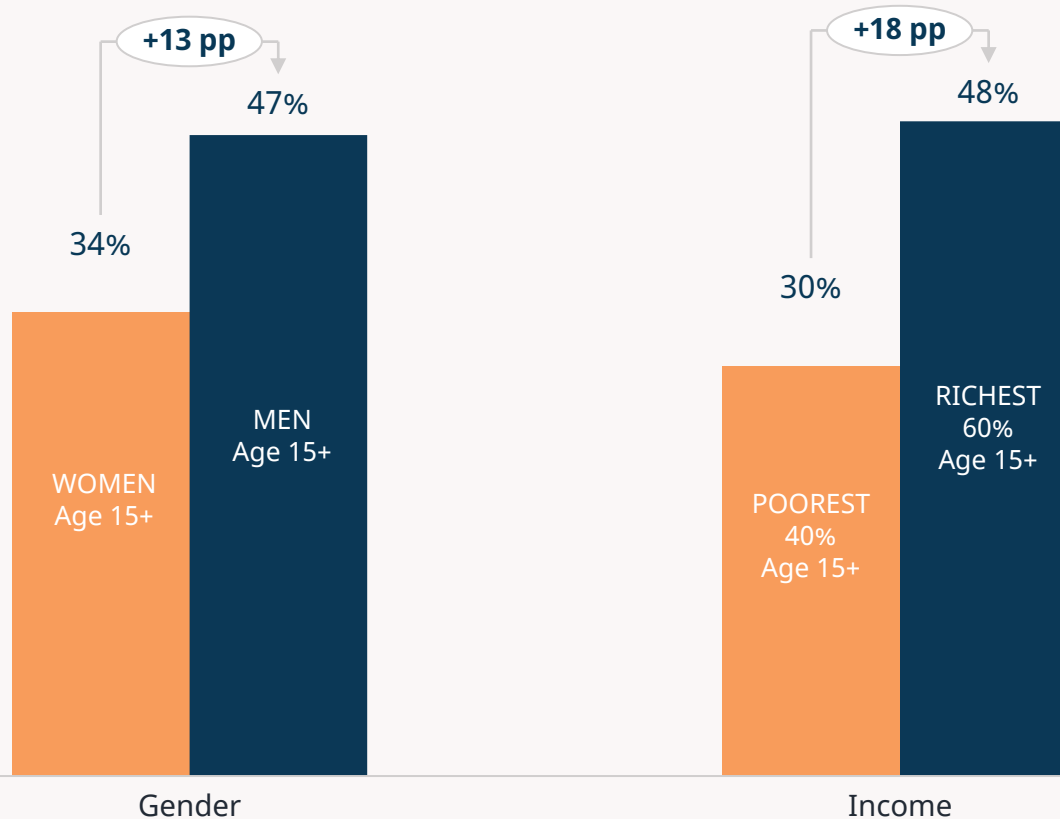
ADULTS WITHOUT AN ACCOUNT AT A FINANCIAL INSTITUTION OR THROUGH A MOBILE MONEY PROVIDER, BY REGIONAL ECONOMIC COMMUNITY (REC) (MILLIONS, 2017)³



- As of 2017, the total number of financially excluded adults in Africa stood at 395 million (220 million are women) — representing 59% of adults in Africa. Despite a significant decline from 70% in 2014, financial exclusion remains as high as 90% in South Sudan and Central African Republic.⁴
 - Not having enough money, distance to financial institutions, prohibitive costs and documentation requirements, and lack of trust in financial institutions are some of the most commonly cited reasons for not having an account at a financial institution.⁵
 - Not having access to a mobile phone, preference for cash, not having enough money, literacy and skills, lack of trust, and less developed mobile money services in some countries are factors keeping people from having a mobile money account.
- Levels of financial exclusion also vary significantly across countries, subregions, and regional economic communities (RECs) in Africa
 - Countries with larger populations such as Nigeria, Egypt, Ethiopia, and DR Congo account for a majority of the financially excluded adults in Africa (46%); however, Kenya and Uganda are positive exceptions where the proliferation of mobile money has helped to expand financial access. In Kenya 73% (36.7M) of adults have a mobile money account and 51% in Uganda (21M).⁶
 - Regional Economic Communities vary in their levels of financial exclusion, with ECCAS, which consists of countries in Central Africa, showing the highest level of financial exclusion (66%).⁷

DISPROPORTIONATE FINANCIAL EXCLUSION OF MARGINALISED GROUPS IN AFRICA

PROPORTION OF FINANCIALLY INCLUDED INDIVIDUALS BY GENDER AND INCOME (%, 2017, WEIGHTED BY TOTAL COUNTRY POPULATION) ^{1,2}



- The gender gap persists in Africa, where men's financial access is 13 percentage points (pp) higher than women's, an increase from 9 pp in 2014.
 - The largest gaps are observed in Algeria (27 pp), Morocco (25 pp), and Nigeria (24 pp). On average, the gender gap is largest in North Africa (18 pp).
- Generally, women are disproportionately affected by factors that constrain financial access, such as income and education. In some countries, additional factors such as cultural norms around mobility, decision-making and asset ownership, lack of awareness and trust in FSPs also contribute to the gender gap.
- The gender gap in mobile money account ownership is smaller at only 5 percentage points. Women still have less access to mobile phones than men and face restrictions on autonomy and control of their phones. However, the growth in mobile penetration on the continent has shown the potential to overcome significant physical barriers to access for women such as the need to travel long distances to bank branches.
- Account ownership in Africa also varies by income levels, with higher levels of exclusion seen amongst poor adults. Mobile money account ownership, however, shows no correlation with income.

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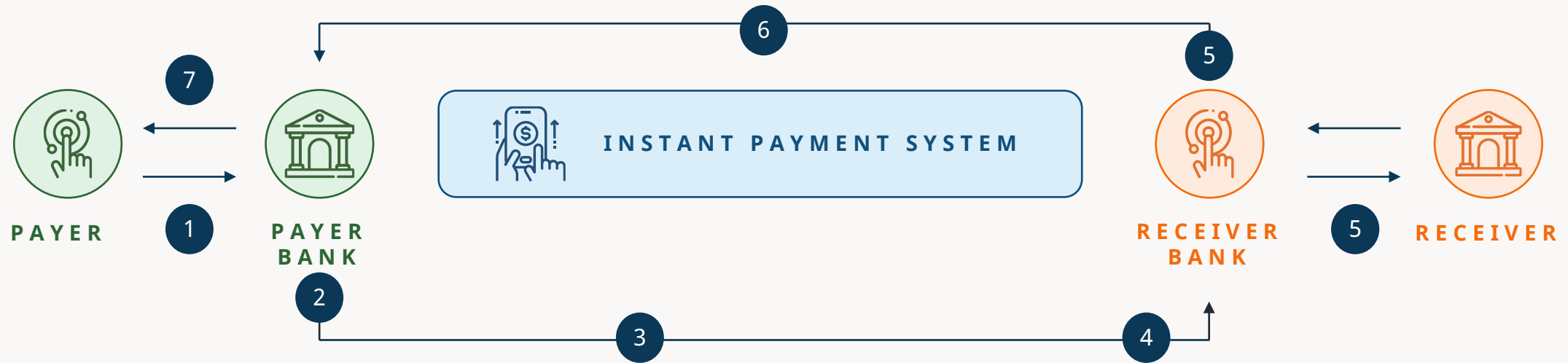
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IIPS CHALLENGES AND TRENDS

WHAT ARE INSTANT PAYMENTS?

Overview

“Instant payments” are digital payments that can be made from customer funds in near real-time, at any given time. Instant payments tend to be lower-value, higher-volume transactions, but they are increasingly being used for larger payments, such as annual income tax payment (P2G) in many countries. The mobile phone is the most common channel for instant payments, also known as ‘mobile payments’ and delivered through USSD or in-app features, but other digital devices such as cards and wearables can be used to make instant payments as well.



**IN AN INSTANT
PAYMENT SYSTEM (IPS),
WITHIN SECONDS...**

- 1 Payer initiates an instant payment
- 2 Payer bank checks limits, reserves the amount at payer's account, and sends the payment to the IPS
- 3 IPS validates and reserves the payment at payer bank's account
- 4 IPS forwards the payment to receiver's bank
- 5 Receiver's bank validates payment and confirms acceptance to IPS and simultaneously notifies receiver of funds transfer
- 6 IPS forwards acceptance confirmation to payer bank
- 7 Payer bank informs payer about execution of payment



WHAT ARE INSTANT PAYMENTS?



The four components of an instant payment system



OVERSIGHT

- **Purpose:** monitoring and assessing payment systems by enforcing legislation and regulation that provide guardrails for all instant payment systems
- **Actors:** the Overseer is almost always a central bank



SCHEME

- **Purpose:** set of procedures, rules, and technical standards that govern the execution of payments
- **Actors:** a Scheme Manager can be a private entity, an association/nonprofit, or a central bank



SWITCH

- **Purpose:** technology that enables safe and efficient transactions by serving a clearing function and other operational functions
- **Actors:** a Switch Operator can be a private entity, an association/nonprofit, or a central bank



SETTLEMENT

- **Purpose:** system used to facilitate the discharge of an obligation on agreed terms, i.e., the actual transfer of final funds to the receiving provider
- **Actors:** a Settlement Agent can be any financial institution including a central bank

SOUTH
AFRICA
EXAMPLE

- *Overseer* is the South African Reserve Bank

- *Scheme Manager* is the Payments Association of South Africa (not-for-profit)

- *Switch Operator* is BankservAfrica (for-profit, private company)

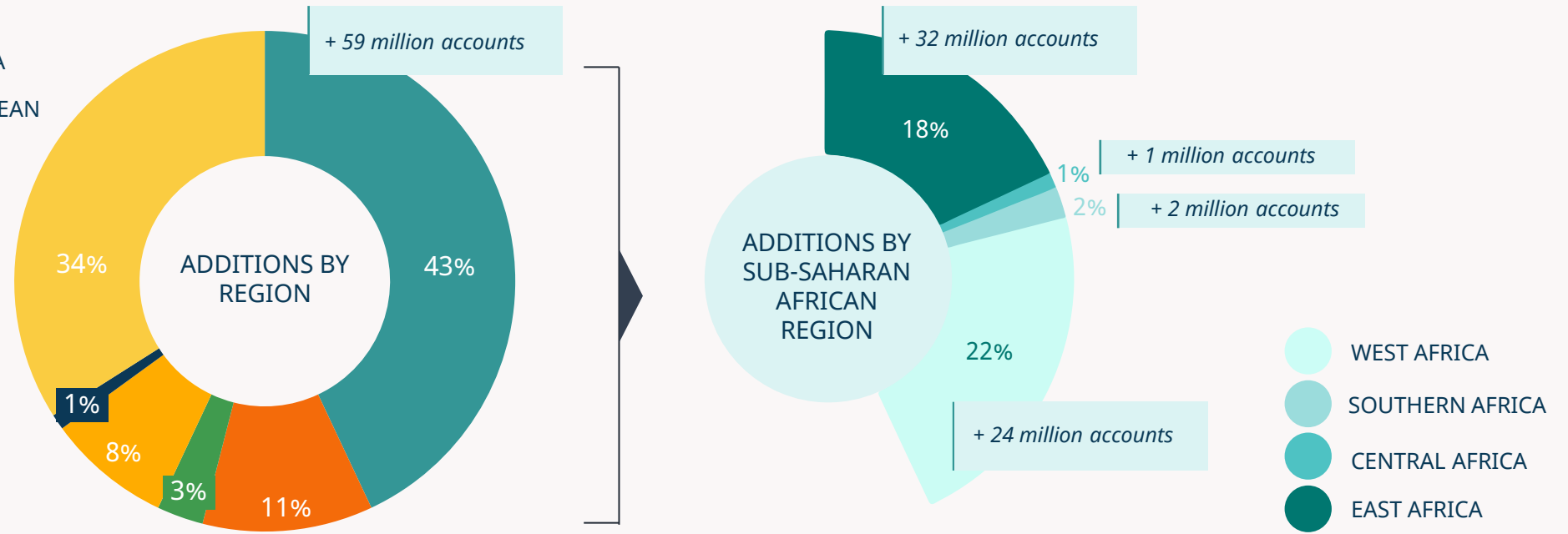
- *Settlement Agent* is the South African Reserve Bank



GROWTH IN MOBILE AND INSTANT PAYMENTS ADOPTION

- SUB-SAHARAN AFRICA
- SOUTH ASIA
- MIDDLE EAST & NORTH AFRICA
- LATIN AMERICA & THE CARIBBEAN
- EUROPE & CENTRAL ASIA
- EAST ASIA & PACIFIC

NET ADDITIONS TO REGISTERED MOBILE MONEY ACCOUNTS (MILLIONS, 2020)¹



The global payments sector is changing rapidly, and Africa is experiencing a significant transformation. The new era started with USSD feature phone technology and Kenya’s M-Pesa in 2007 and has been further accelerated by the COVID-19 pandemic and increasing smartphone ownership.

In 2020, the African continent continued to account for the majority of growth in registered mobile money accounts globally with Sub-Saharan Africa alone accounting for 59 million new accounts, 43% of all new accounts.

There are now 562 million registered mobile money accounts in Africa, a 12% addition from last year. 161 million of these accounts are considered active, having made a transaction in the last 30 days.

Source: [1] GSMA, "State of the Industry Report on Mobile Money 2021" (2021)



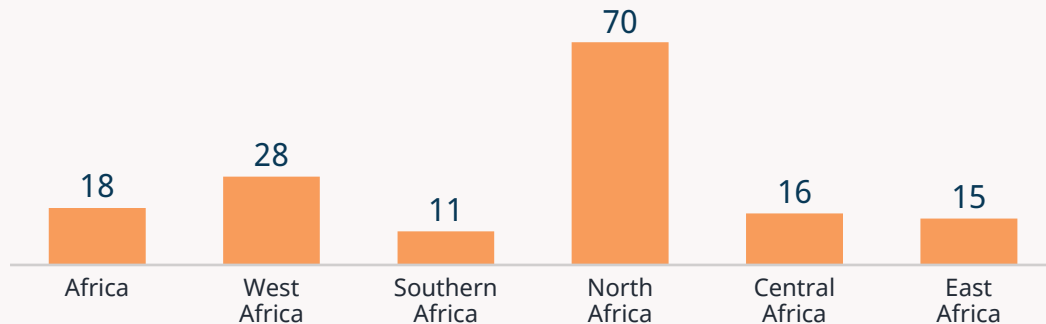
GROWTH IN MOBILE AND INSTANT PAYMENTS USE

Mobile payments currently represent the lion’s share of instant payments on the continent; most systems, however, also support online or app-based payments.

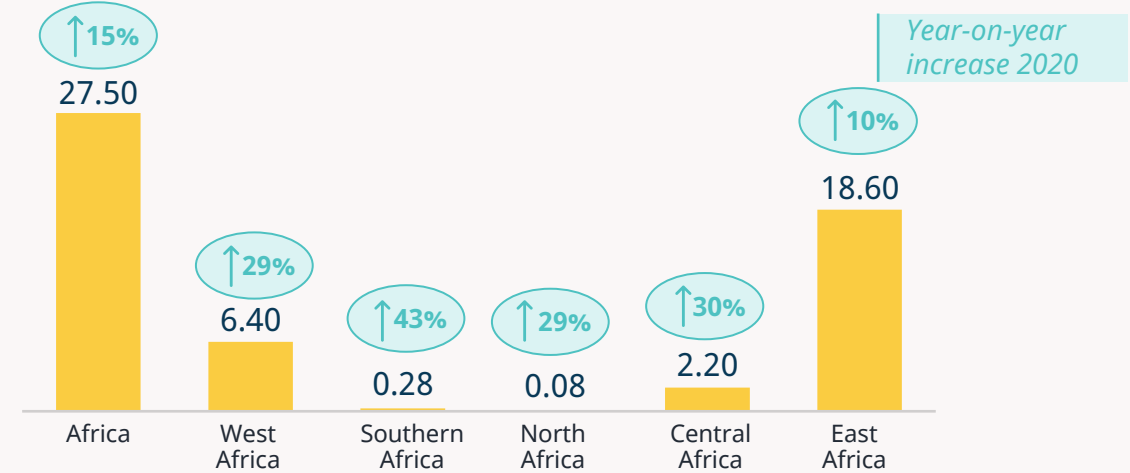
Mobile payment accounts in Africa in 2020 together saw a total volume of 27.5 bn transactions and a total transaction value of USD 495 bn, a 15% and 23% year-on-year increase from 2019 respectively. West Africa showed the greatest year-on-year increase in transaction value (46%), while Southern Africa had the greatest year-on-year increase in transaction volume (43%).

Growth in transaction values outstripped that in transaction volumes in West and North Africa, meaning that the average transaction increased in size over the year. On the other hand, in Southern Africa and Central Africa average transactions became smaller over 2020, while their size stayed constant in the most developed mobile money market on the continent – East Africa. The shift in mobile payment use cases induced by the pandemic (such as airtime vs. bills, P2P payments, etc.) and different baseline values and volumes likely account for these differences.

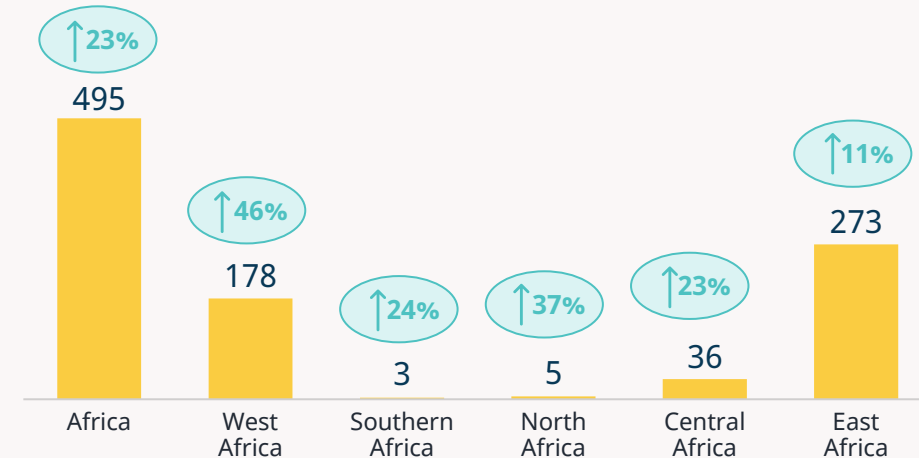
AVERAGE SIZE OF A MOBILE PAYMENT TRANSACTION (US DOLLARS, 2020)¹



TOTAL MOBILE PAYMENT TRANSACTION VOLUME (BILLIONS, 2020)¹



TOTAL MOBILE PAYMENT TRANSACTION VALUE (US DOLLAR BILLIONS, 2020)¹



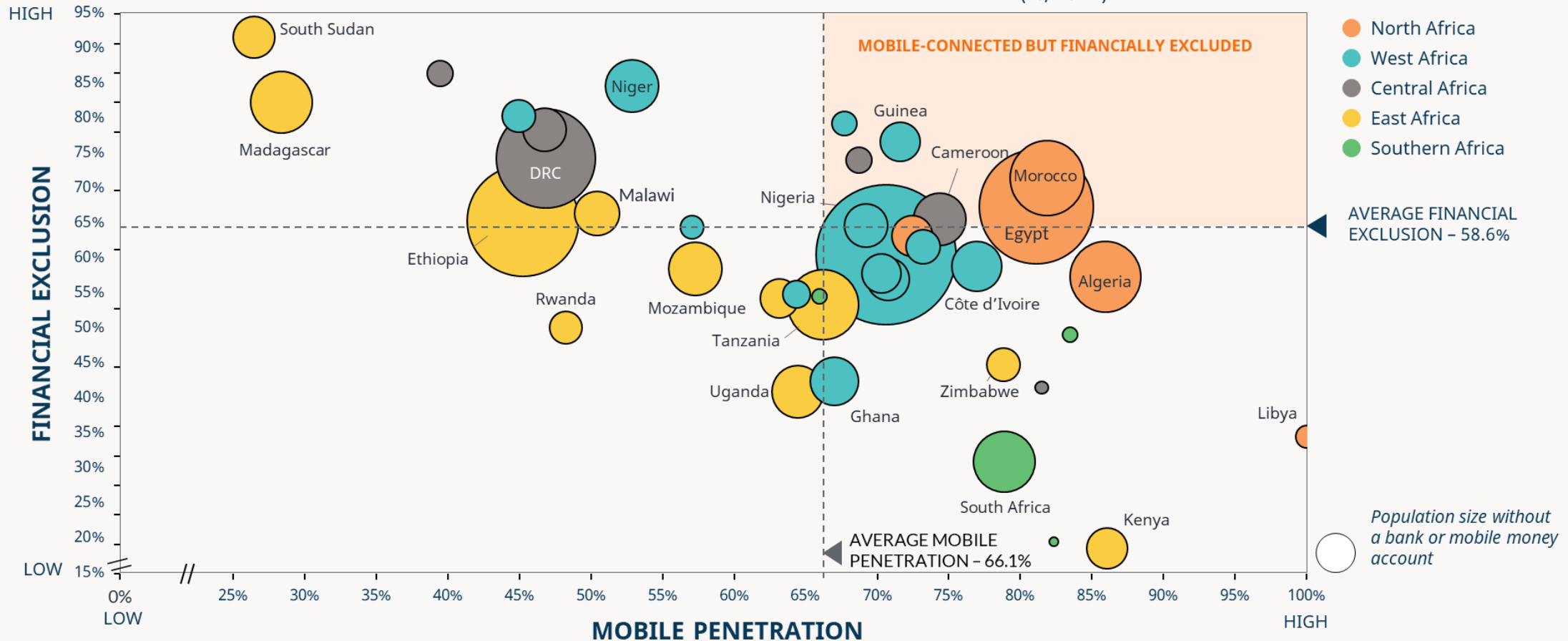
Note: [1] We are using mobile payment data as a proxy for showing growth in adoption of all instant payments in absence of comparable usage data for other instant payments channels Source: [1] GSMA, “State of the Industry Report on Mobile Money 2021” (2021)



LOW-HANGING FRUIT: THE MOBILE-CONNECTED BUT FINANCIALLY EXCLUDED

The gap between the proportion of the African population that has access to a mobile phone and the proportion of the African population that is financially included represents a clear opportunity for instant payments to further boost financial inclusion in a relatively short timeframe. At the same time, it goes to show that there is a need to shift focus from merely developing instant payment systems to scaling inclusive instant payment systems that are accessible by a larger proportion of the African population.

POPULATION OF MOBILE-CONNECTED BUT FINANCIALLY EXCLUDED PEOPLE IN AFRICA (% , 2017)^{1,2}



Notes: [1] 14 countries excluded from analysis due to data unavailability; [2] Bubble size illustrates size of the unbanked population. Sources: [1] The Global Findex database (2017); [2] GSMA, State of the Industry Report (2017)



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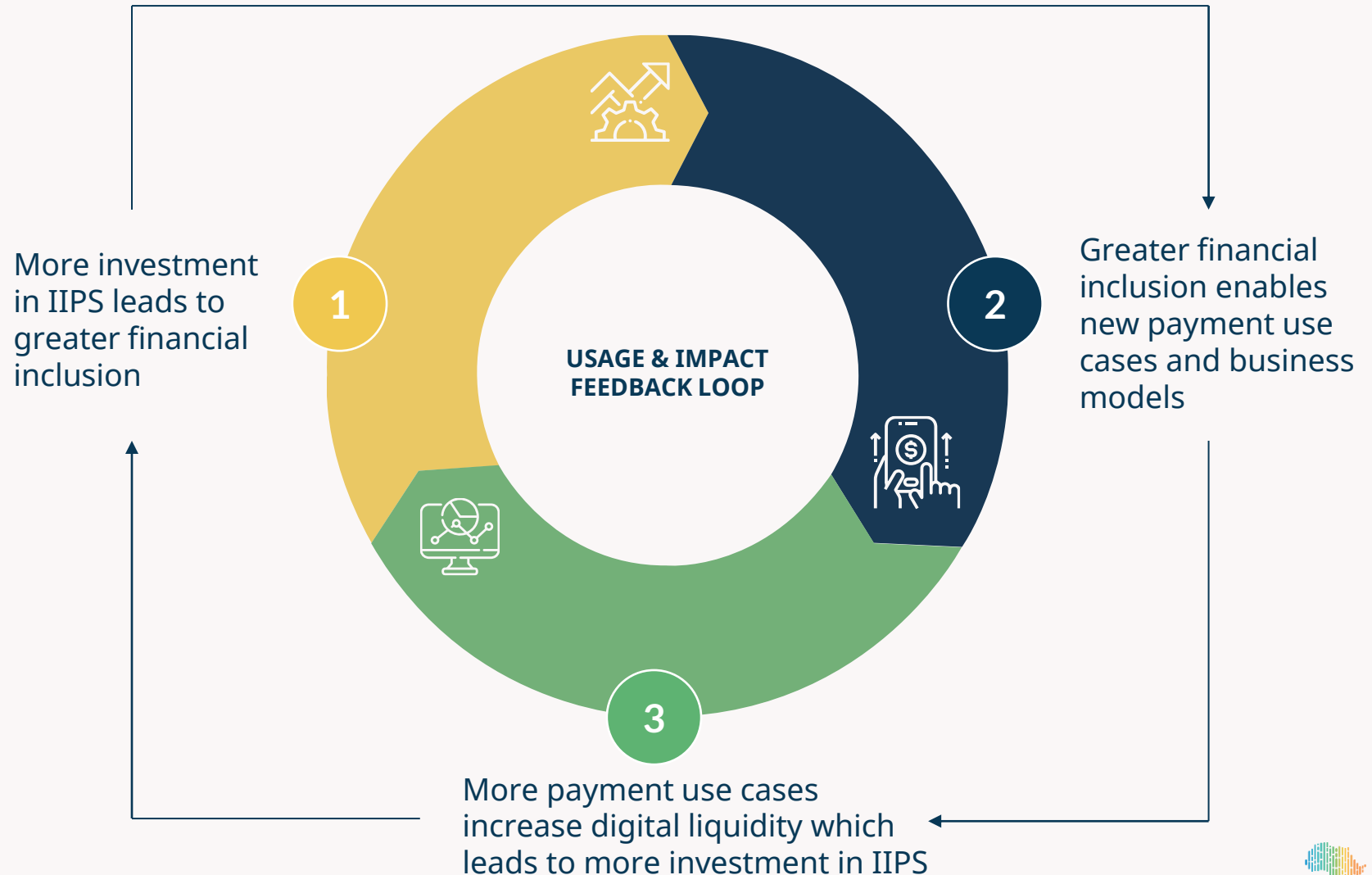
IIPS CHALLENGES AND TRENDS

WHAT IS AN INCLUSIVE INSTANT PAYMENT SYSTEM (IIPS) I/II

Inclusive instant payment systems (IIPS) is the common name used to describe interoperable systems designed to make instant payments low-cost, open, and accessible.

IIPS are characterised by interoperability and continuous, real-time availability, ensuring that, in addition to being able to pay anyone, customers can make payments quickly and at any time. These features replicate the liquidity of cash, while providing users with additional security and a digital footprint that accelerates formal financial inclusion and transaction safety.

As system adoption accelerates, liquidity also improves—and virtuous adoption cycles can unlock novel payment functionalities that can enhance access to other services like remote pay-as-you-go financing, further enhancing the customer experience and improving livelihoods.



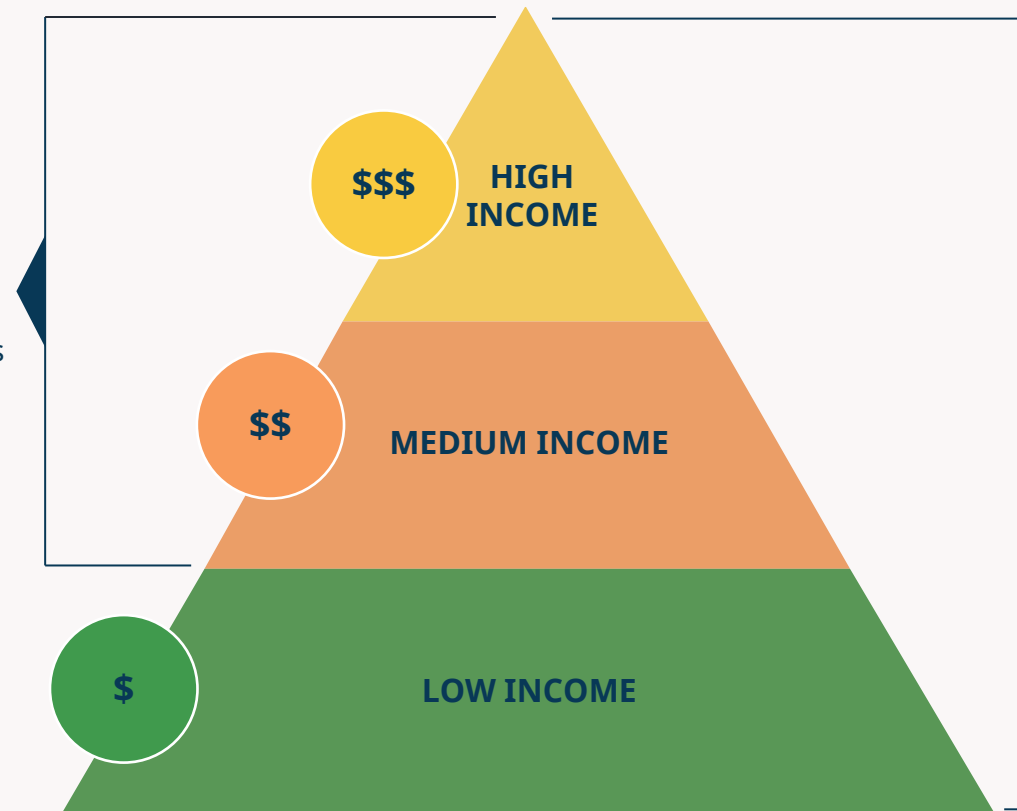
WHAT IS AN INCLUSIVE INSTANT PAYMENT SYSTEM (IIPS) II/II

IIPS pro-poor design principles

- 1 **Interoperable, open loop:** universal digital financial services provider (DFSP) access and open payments drive competition, improve access, and lower costs
- 2 **Same day settlement and real-time push payments:** remove processing risks of batch processing and “pull” payments
- 3 **Cost recovery model:** enhances public value creation; payments conceived as utility and take into account needs of the poor
- 4 **Governance by participants with oversight and tiered KYC:** all DFSPs can be overseers; tiered KYC improves accessibility
- 5 **Shared investment in fraud detection and other platform services:** compliance burden remains with DFSPs but costs are shared

For traditional for-profit payment systems (e.g., Paypal or Alipay), high- and medium-income groups tend to make up the main customer segment

Due to high payment system participation costs and little focus on shared investment and open competition, it is not profitable to serve low-income users



Inclusive Instant Payment Systems tend to expand the addressable market, foster competition, and make it profitable to serve low-income users, lowering costs overall through high volumes

IIPS AT THE NATIONAL VERSUS REGIONAL LEVEL

The infrastructure behind a payment system can be national/domestic or regional. Countries often navigate a trade-off between economic sustainability and payments sovereignty and data security when choosing between the two options

- Economic sustainability**
 Reaching sufficient scale is critical for the well-functioning and economic sustainability of an IIPS. Cost per transaction drops drastically as volume of transactions rises, given the considerable economies of scale involved. Thus, regional systems can offer an alternative for smaller nations when sufficient scale is not possible in a domestic payment system at a reasonable timeline.
- Payments sovereignty & data security**
 When aggregating countries into regional systems, one should carefully consider the risk of data exposure. Small countries may still choose to build national systems for security reasons despite smaller scale and higher cost.

NATIONAL

Typical domestic IIPS use cases



SPOTLIGHT: GHANA

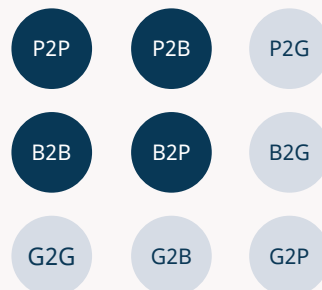


Overview: GhIPPS is the payment and settlement system for Ghana, set up in 2007 as a subsidiary of the Bank of Ghana to develop interoperable payment systems for FSPs, MNOs, and NBFIs throughout Ghana. GhIPPS manages a national switch and processing system called gh-link. In 2018 GhIPPS introduced a real-time interoperable payment service called 'GhIPPS Instant Pay' running on the gh-link network.

Service offerings: P2P, P2B

REGIONAL

Typical regional IIPS use cases



SPOTLIGHT: SADC TRANSFERS CLEARED ON AN IMMEDIATE BASIS (TCIB)



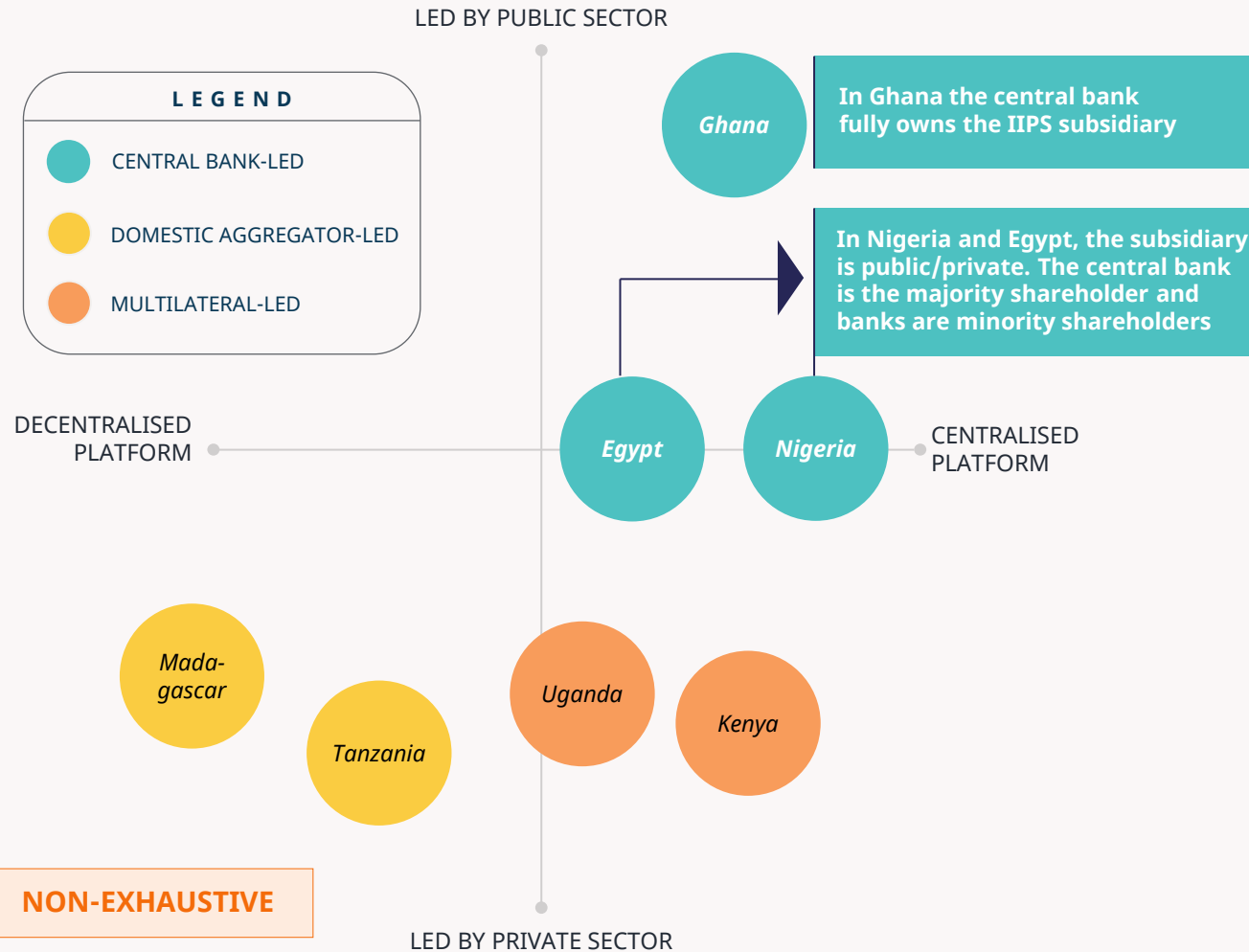
Overview: The SADC TCIB system aims to link low value real-time payments across the SADC regional economic community, leveraging the already functional SADC SIRESS RT-GS to allow mobile network operators (MNOs) and FSPs under a domestic central bank to make low-value cross-border payments. The TCIB is an innovative, first of its kind system that aims to build the infrastructure necessary for an IIPS in a region without a shared currency, or regional central bank.

Service offerings: P2P, B2B, B2P

THREE ARCHETYPES OF NATIONAL/DOMESTIC IIPS

NATIONAL

DOMESTIC IIPS ARCHETYPES IN AFRICA



CENTRAL BANK-LED¹

A central bank manages the scheme and operates the switch of an IIPS through a subsidiary. The bank either owns the subsidiary outright or uses a public-private model, where commercial banks hold minority ownership shares. The platform comes with operating standards and rules, which enable the flow of payments between MNOs and FSPs.

MULTILATERAL-LED

Mobile network operators and e-money issuers negotiate directly with each other, through direct bilateral agreements with each other that set interparty fees for cross-net transactions. There is no central switch, instead settlement occurs through prefunded accounts held between MNOs or FSPs.

DOMESTIC AGGREGATOR-LED

MNOs and FSPs negotiate directly with each other, and hire/create a third party to act as a scheme manager and/or switch operator. This private sector aggregator will connect multiple stakeholders as a technical service. Terms and standards may vary widely depending upon the preferences of the participants.

NON-EXHAUSTIVE

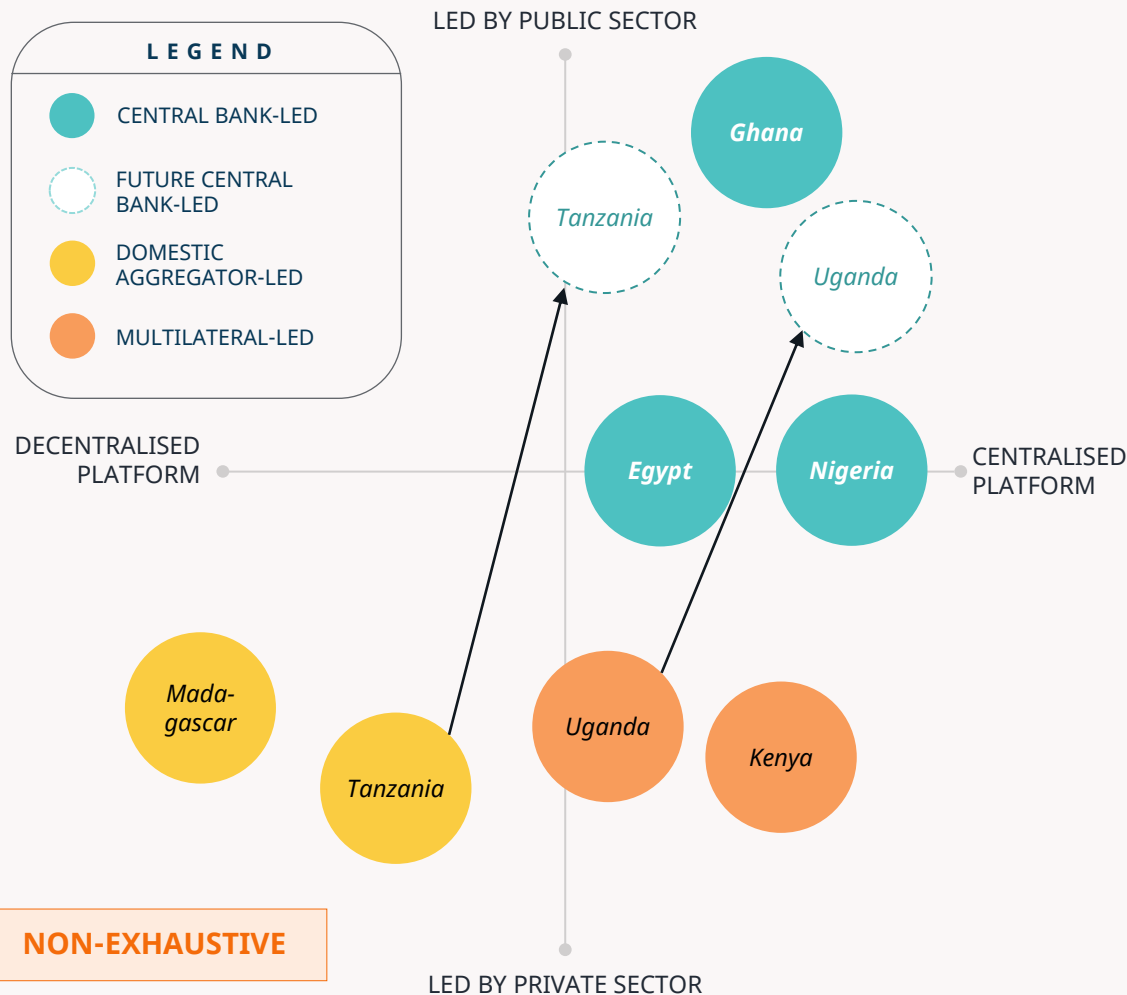
Notes: [1] This will take the form of a subsidiary of a central bank, who is either fully owned by the central bank, or, in a public/private arrangement with commercial banks in the country
 Sources: [1] GSMA, "Tracking the journey toward mobile money interoperability", 2020; [2] GSMA, "Many paths to mobile money interoperability", 2020; [3] CGAP, "Building Faster Better — A guide to Inclusive Instant Payment Systems", 2021; [4] CGAP, "Building Inclusive Payment Ecosystems in Tanzania and Ghana", 2018; [5] CENFRI, "Payment systems in Sub-Saharan Africa", 2018; [6] CENFRI, "Madagascar Financial Inclusion: Diagnostic Report", 2017



RECENT SHIFTS IN ARCHETYPES OF NATIONAL/DOMESTIC IIPS

NATIONAL

Recently, countries with an interest in inclusive payments have moved to developing IIPS that are owned by a central bank



NON-EXHAUSTIVE

IIPS which are operated through a publicly owned central bank-led subsidiary have achieved pro-poor system characteristics through three key features:

LOW COST

The central bank-led subsidiary can set the scheme, switch, and inter-party fees for interoperable transactions,¹ and has the capacity to lower fees once at scale

In contrast, domestic aggregator-led instant payments systems have often been developed in response to regulation and thus often have high switch and interparty fees

OPEN AND INTEROPERABLE

A central bank-led subsidiary has the capacity to develop regulation which develops an integrated and interoperable system between agency banking and mobile money wallets

Aggregator- and multilateral-led archetypes can develop interoperability in P2P use cases, but are often limited beyond that

PRO-POOR GOVERNANCE

A central bank-led subsidiary often has the technical expertise to develop an IIPS scheme which allows smaller DFSPs, as well as non-financial banking institutions (NFBIs), to participate in the switch

A publicly owned switch also has the legal remit to advance pro-poor know-your-customer (KYC) practices

Sources: [1] GSMA, "Tracking the journey toward mobile money interoperability", 2020; [2] GSMA, "Many paths to mobile money interoperability", 2020; [3] CGAP, "Building Faster Better — A guide to Inclusive Instant Payment Systems", 2021; [4] CGAP, "Building Inclusive Payment Ecosystems in Tanzania and Ghana", 2018; [5] CENFRI, "Payment systems in sub-Saharan Africa", 2018; [6] CENFRI, Madagascar Financial Inclusion, Diagnostic Report



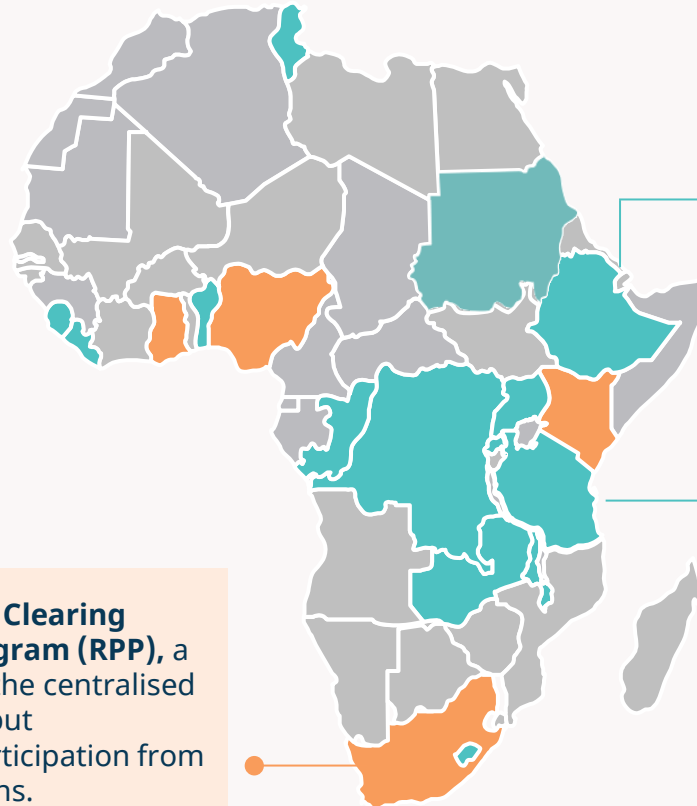
THE STATE OF INSTANT PAYMENTS INFRASTRUCTURE IN AFRICA: NATIONAL/DOMESTIC SYSTEMS

NATIONAL

Over the last several months, AfricaNenda has been collecting insights from various industry actors to map ongoing IIPS projects on the continent. Below are some emerging insights from 18 African countries, as a preview of AfricaNenda's 2022 State of Instant Payments report, which will include more comprehensive insights on the progress and ambitions of all African countries developing an IIPS.

Countries currently developing interoperable national instant payment systems
Tunisia, Sudan, Sierra Leone, Liberia, Benin, Republic of the Congo, Democratic Republic of Congo, Rwanda, Uganda, Ethiopia, Tanzania, Zambia, Malawi, Lesotho

Countries with active national instant payment systems
Ghana, Kenya, Nigeria, South Africa



Ethiopia is building an IIPS using legacy Automated Clearing House (ACH) infrastructure. Ethswitch is owned by all banks in Ethiopia, and its IIPS development is outsourced to a private vendor. A phased introduction of all use cases is planned over the next four years.

Tanzania started with a bilateral payments system, where banks all settle transfers bilaterally, but is currently in the process of switching to a centralised switch system. Tanzania Instant Payments System (TIPS) is being developed independently using open-source Mojaloop code, and initial testing of a few use cases is planned with an intention to expand over time.

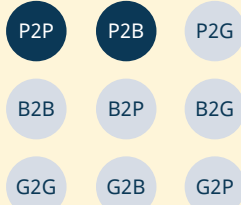
South Africa is upgrading its existing Real-Time Clearing (RTC) system with the new Rapid Payments Program (RPP), a mobile-friendly IIPS. BankservAfrica is developing the centralised switch. Participation in RPP will not be mandated, but BankservAfrica is investing heavily in attracting participation from a broad swathe of South African financial institutions.

This map is non-exhaustive and continually updated. Research is ongoing as we continue to verify our insights and collect new ones. Please reach out at info@africanenda.org if you are involved in IIPS projects that you think should be on this map.



SNAPSHOTS OF FOUR CURRENTLY ACTIVE NATIONAL IIPS

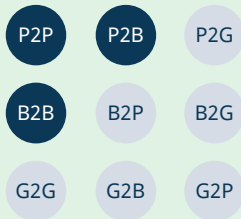
NATIONAL

GHIPSS INSTANT PAY (GIP)
GHANA

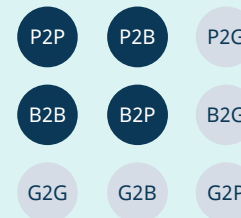
Year of launch – 2007

Annual volume of transactions 2020 – **6.8 million**Annual value of transactions – **1.5 billion USD**Archetype – **Central bank-led**Status – **Currently developing QR code-based payments, bill payment, and alias capability (USSD code or mobile number)**PESALINK
KENYA

Year of launch – 2016

Annual volume of transactions 2020 – **1.8 billion**Annual value of transactions – **47 billion USD**Archetype – **Multilateral-led**Status – **Currently developing account alias service (mobile number) with USSD, and working on digitising government payments for eCitizen services**NIBSS INSTANT PAYMENTS (NIB)
NIGERIA

Year of launch – 2011

Annual volume of transactions 2020 – **2 billion**Annual value of transactions – **380 billion USD**Archetype – **Central bank-led (but excl. key MNOs)**Status – **Currently developing picture authentication, account alias, chat banking, merchant mobile services, bill payments, name enquiry, and transaction status query**REAL-TIME CLEARING (RTC)
SOUTH AFRICA

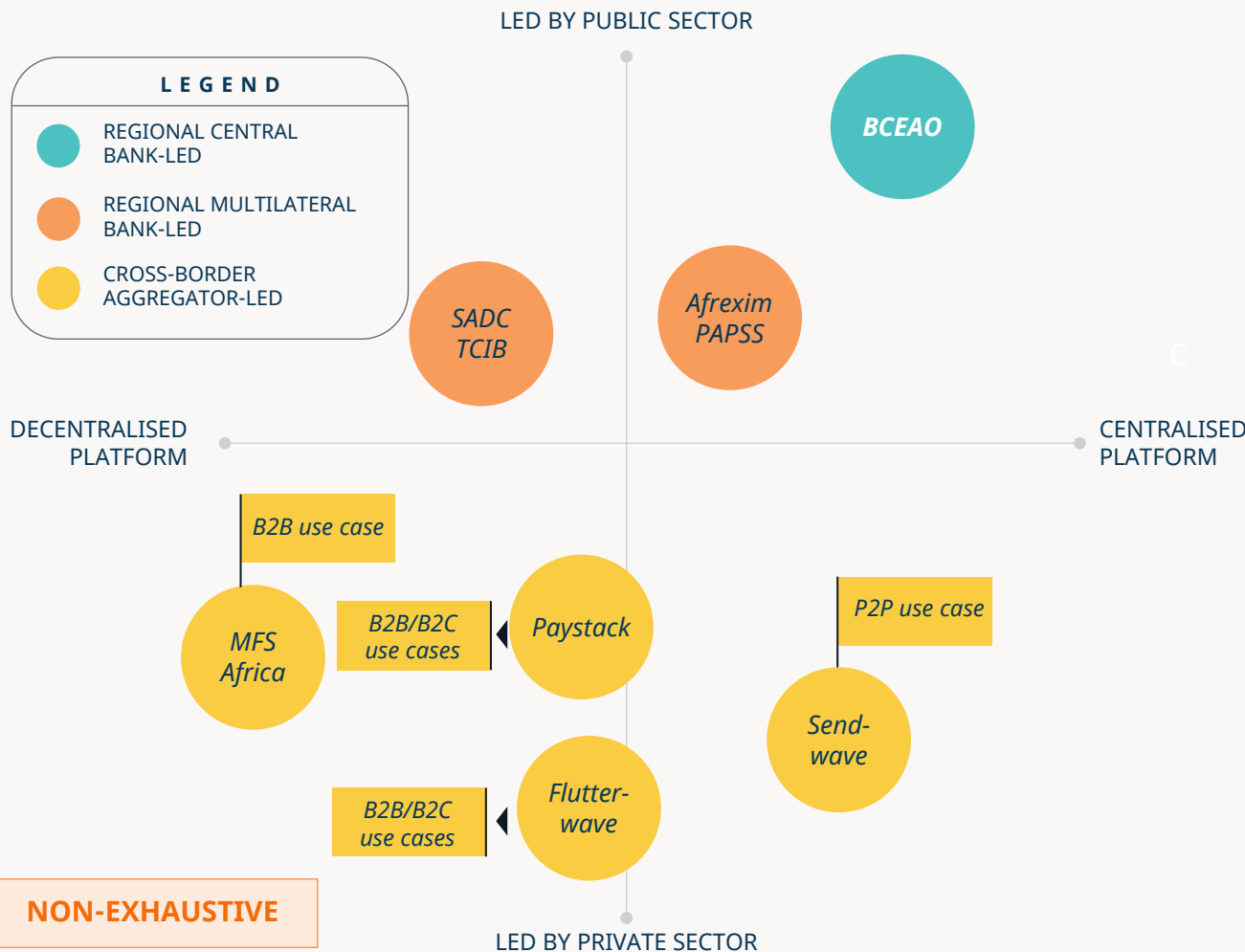
Year of launch – 2006

Annual volume of transactions – **79 million**Annual value of transactions – **50 billion USD**Archetype – **Domestic aggregator-led**Status – **Currently preparing for launch of new Rapid Payments Program (RPP), a mobile-friendly instant payments solution**

THREE ARCHETYPES OF REGIONAL/CROSS-BORDER IIPS

REGIONAL

CROSS-BORDER IIPS ARCHETYPES IN AFRICA



REGIONAL CENTRAL BANK-LED¹

A regional central bank can manage or operate an IIPS through a subsidiary, particularly when operating within a shared currency union. This can be built upon a shared real-time gross settlement (RT-GS) system already in operation. Under this system, all transactions flow through the single regional central bank.

REGIONAL MULTILATERAL-LED

A multilateral institution/regional economic community can encourage MNOs and financial sector players to connect their domestic switches to a shared regional clearinghouse, which facilitates real-time cross-border transactions.

CROSS-BORDER AGGREGATOR-LED

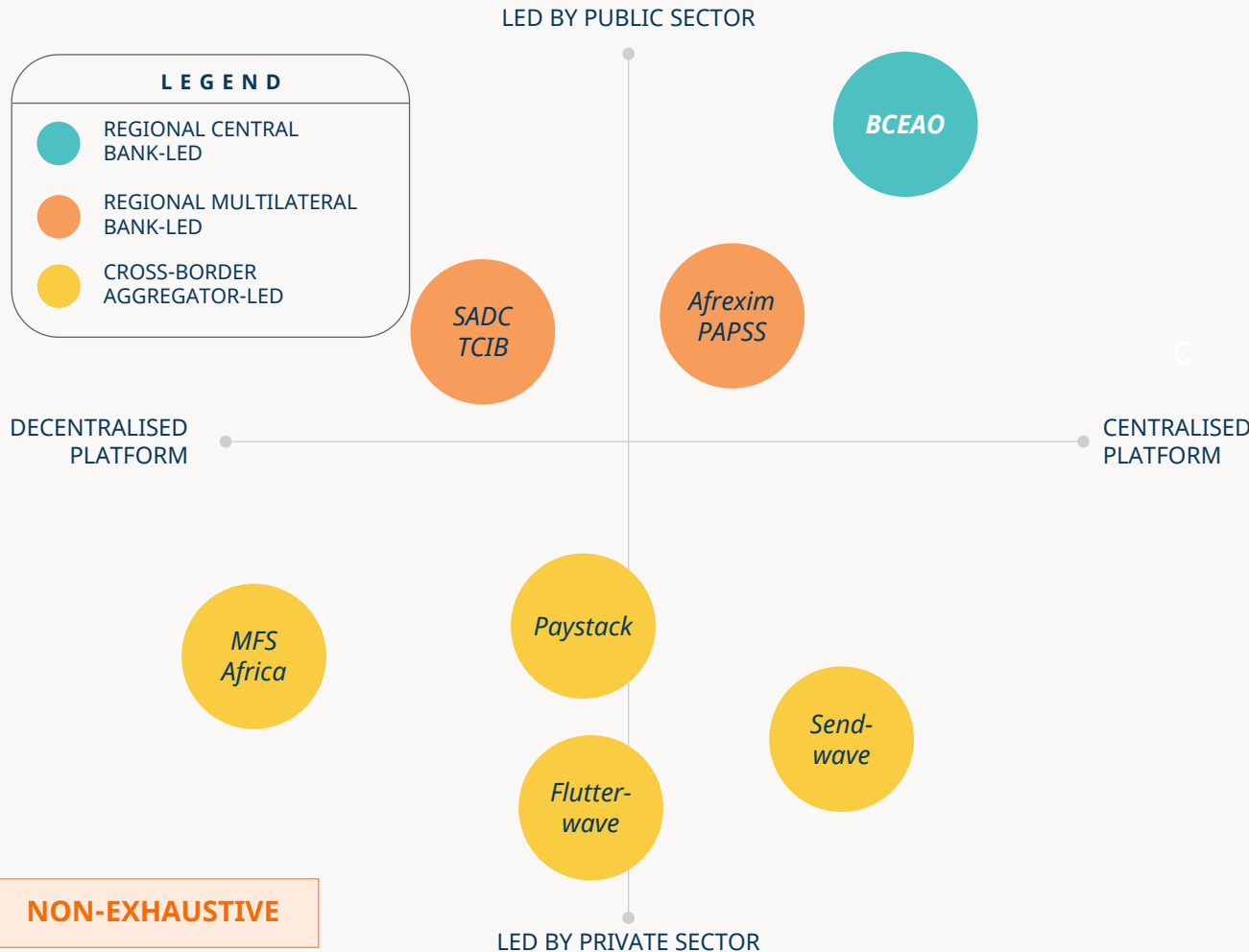
A private sector aggregator works to connect cross-border infrastructure by establishing partnerships between MNOs, establishing functional interoperability for a variety of use cases.

Sources: [1] GSMA, "Mobile money: Thriving in a year of global upheaval (Dare Okoudjou comments from 19:30)", 2021; [2] Tech Cabal, "MFS Africa is building Africa's largest money transfer network", 2020; [3] CENFRI, "Payment systems in sub-Saharan Africa", 2018; [4] CGAP, "Building Faster Better — A guide to Inclusive Instant Payment Systems", 2021; [5] TechCrunch, "African payments company Flutterwave raises USD170M, now valued at over USD1B", 2021; [6] Harvard Business School, "SendWave: Plugging into Africa's Mobile Money Web", 2020



RECENT SHIFTS IN ARCHETYPES OF REGIONAL/CROSS-BORDER IIPS

REGIONAL



Recently, cross-border aggregators have been providing interoperable cross-border systems for multiple use cases. They bring several advantages:

**STAKEHOLDER ENGAGEMENT**

Cross-border aggregators have an incentive to harmonise the software¹ and technical standards of banks/MNOs/other FSPs

Aggregators allow MNOs/banks to continue to compete where they have a competitive advantage, while leaving management of the back-end technical infrastructure for cross-border financial transactions to a more technologically proficient actor

**ABILITY TO SCALE**

Aggregators have been able to meet the increased demand for cross-border transactions given their ability to monetise payments services and attract investment to scale their operations

Conversely, harmonisation of regulations and standards across countries by public institutions has progressed at a slower pace

**DOMESTIC CONTROL**

States that aim to maintain control over their domestic transactions can make common ground with aggregators to circumvent the issue of domestic control

On the other hand, multilateral-led cross-border IIPS are advocating for a single institution to operate both domestic and cross-border IIPS transactions so that their system can reach economies of scale

THE STATE OF INSTANT PAYMENTS INFRASTRUCTURE IN AFRICA: REGIONAL/CROSS-BORDER SYSTEMS

REGIONAL

WAEMU (BCEAO)

Status: Project ongoing since 2017 with launch expected around December 2022 after delays due to the COVID-19 pandemic

What we know so far:

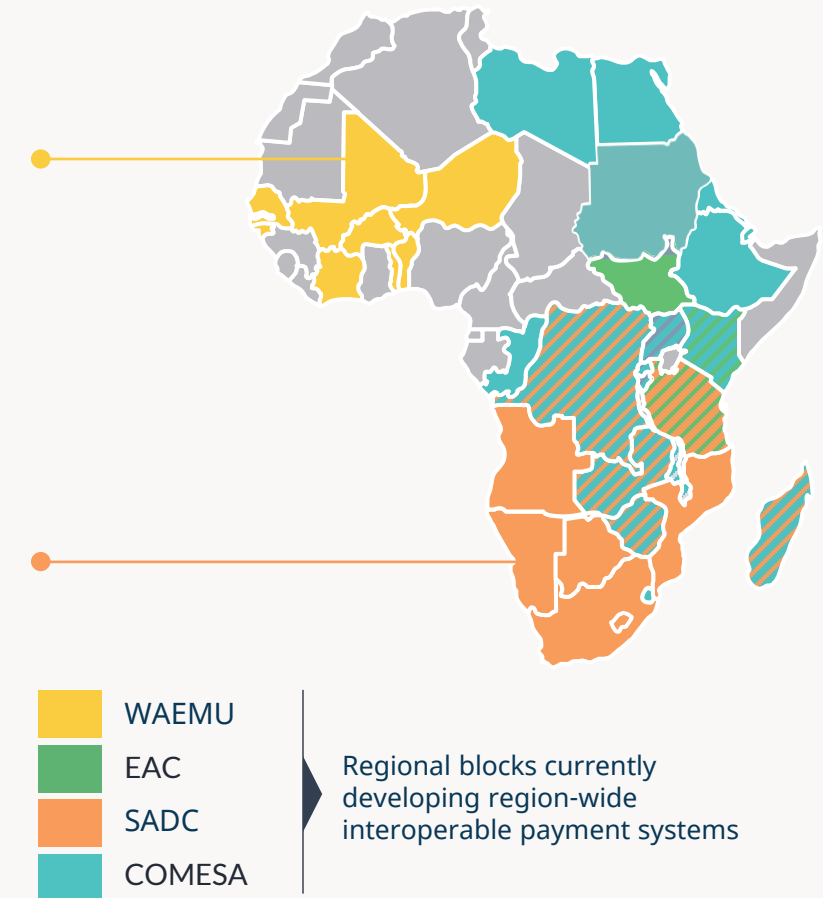
- BCEAO, the WAEMU central bank, is working to develop an interoperable IIPS across the WAEMU monetary area. The IIPS will build off the current regional switch, GIM-UEMOA, which handles Real-Time Gross Settlement (RT-GS) payments. BCEAO's model plans to connect all digital financial service providers (DFSPs) within the single currency WEAMU region for all use cases.

SADC (TCIB, Transfers Cleared on an Immediate Basis)

Status: Project ongoing with full launch initially planned for July 2021. While the system's first successful cross-border payment was made in July 2021, the full launch has been delayed

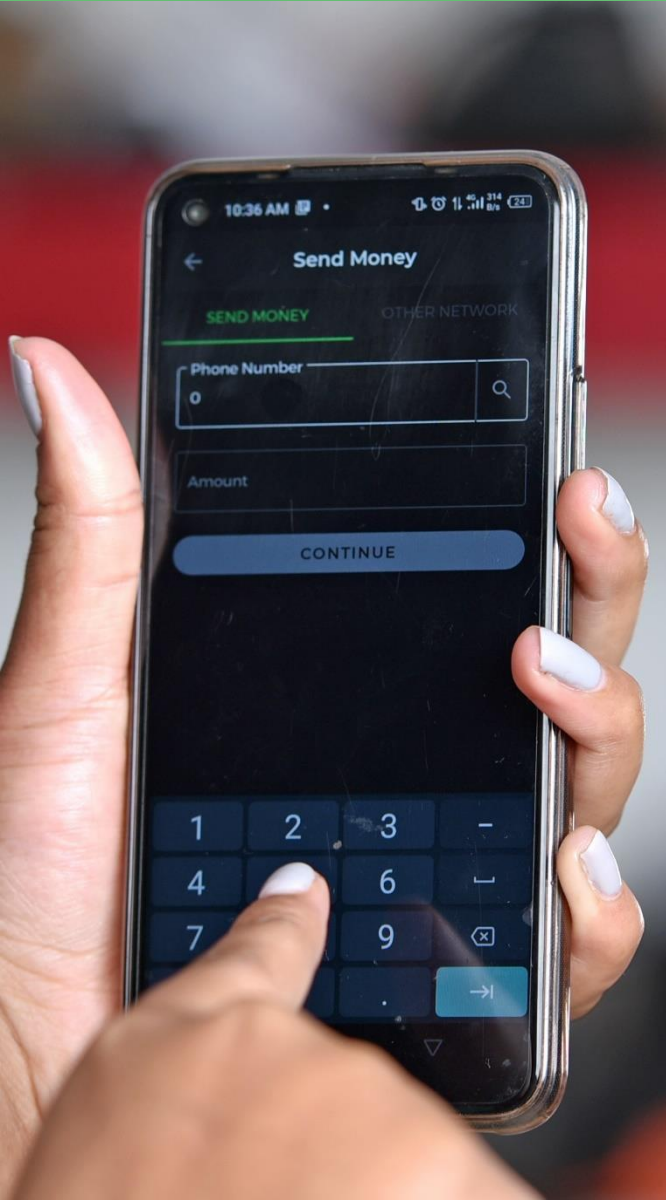
What we know so far:

- The key focus of the SADC TCIB system is on building low-cost remittance corridors from South Africa to rest of SADC region. A minimum viable product (MVP) is expected to launch with three connected participants – one bank and two non-banks – in the near future
- The South African Reserve Bank will serve as a common settlement agent, and participation in TCIB is not mandatory. BankservAfrica will act as the scheme manager, business administrator, and switch operator. Terrapay is the software provider and will cover all upfront development costs in exchange for a fixed fee per transaction



This map is non-exhaustive and continually updated. Research is ongoing as we continue to verify our insights and collect new ones. Please reach out at info@africanenda.org if you are involved in IIPS projects that you think should be on this map.

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IIPS CHALLENGES AND TRENDS

CHALLENGES INHERENT TO DEVELOPING IIPS

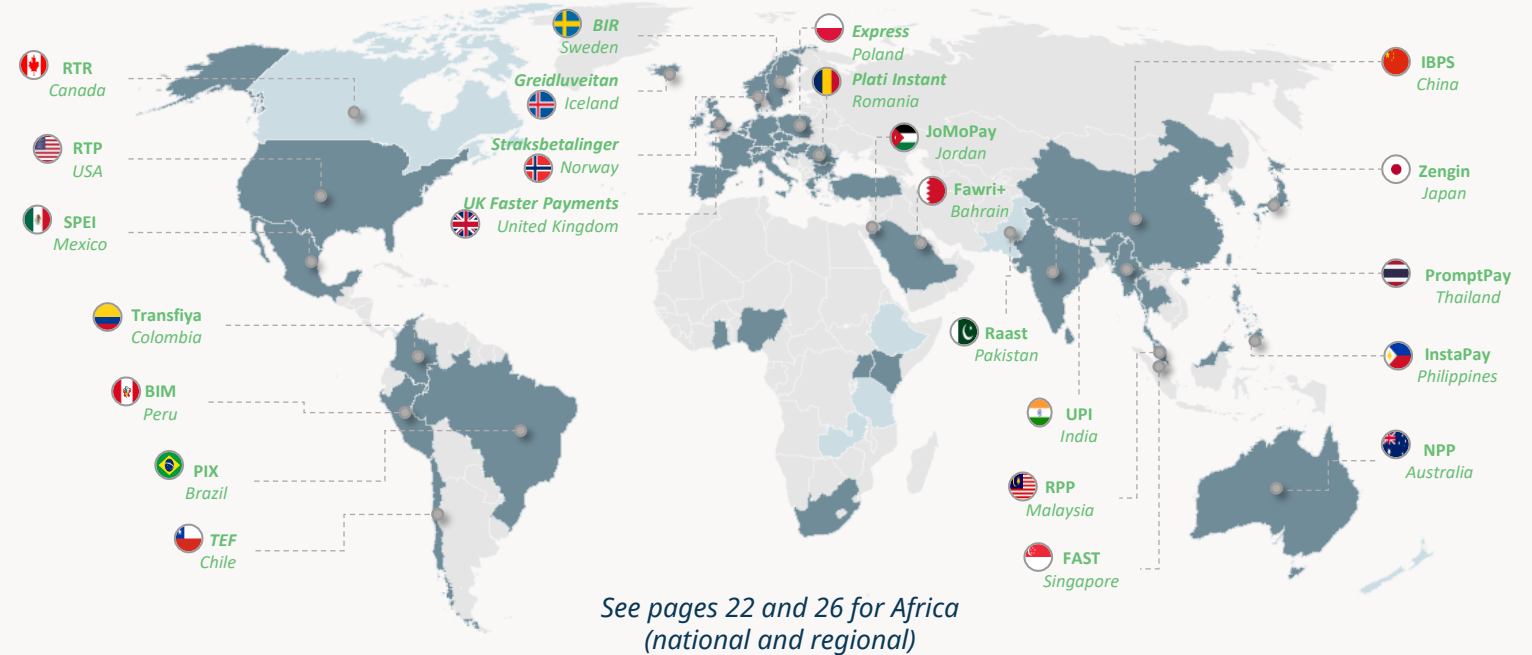
Developing Inclusive Instant Payments Systems is a complex process. While more than 50 have been built globally, inadequate documentation of best practices and benchmarks for determining optimal system design and assessing appropriate budgets has slowed progress.

IIPS development involves implementation and enforcement of supporting policy frameworks, stakeholder alignment on design and business models, sophisticated technical build, and ongoing management of scheme operations. Macroeconomic decisions, incumbent infrastructure, and political realities inform design decisions, and industry participation is impacted, often unpredictably, by payment service providers' (PSP) capacity to onboard and the value they see in participation.

Managing this complexity is challenging and made more difficult by diverse levels of technical understanding and competing stakeholder incentives – established PSPs can see IIPS as a threat, governments may lack sufficient understanding of supporting policy frameworks, and donors can lack sufficient reference points to vet proposed budgets or funding gaps.

AfricaNenda sees an important role to play in addressing these bottlenecks by equipping stakeholders with the necessary capacity, technical assistance, and partnerships.

OVERVIEW OF INSTANT PAYMENTS SYSTEMS DEVELOPED GLOBALLY¹



● OPERATING

● UNDER DEVELOPMENT

IIPS CHALLENGES SPECIFIC TO AFRICA

In addition to challenges inherent to developing IIPS, IIPS on the African continent pose some unique challenges:



1. **Low average GDP per capita** means value of transactions tends to be lower, thus making it more expensive to process an instant payment per dollar.



2. **Relatively small market sizes and low population density** as compared to South Asia or East Asia undermines economies of scale available to achieve last-mile connectivity.



3. **Inherent trust in cash** makes it difficult to convince users and businesses to switch to a digital alternative. There is also a preference for paying for goods/services after they are received.



4. **Access to electricity** remains relatively low. According to the World Bank, only 47% of the population in Sub-Saharan Africa has access to electricity. This is a hindrance to adoption of digital devices and therefore digital payments.



5. **Connectivity/affordability of data** is key to access many instant payment services. According to the IFC Africa has the lowest number of Internet connections—only 22% of the continent has access.



6. **Relatively low smartphone adoption**, which is key to using many of the advanced instant payment features, is another obstacle to for digital payments to compete with cash. Today only 44% of mobile connection owners in Africa own a smartphone, but the proportion is growing rapidly.

TRENDS IN PAYMENTS I: RISE OF THE FINTECH INDUSTRY

With growing smartphone access, a young population open to change, and an increasingly conducive policy environment, the conditions are ripe for fintech startups to thrive and make their mark on the payments sector in Africa.

According to Briter Intelligence, from 2017 until September 2021, fintech startups in Africa raised more than 4.5 billion USD, more than double the amount raised by startups in any other sector.

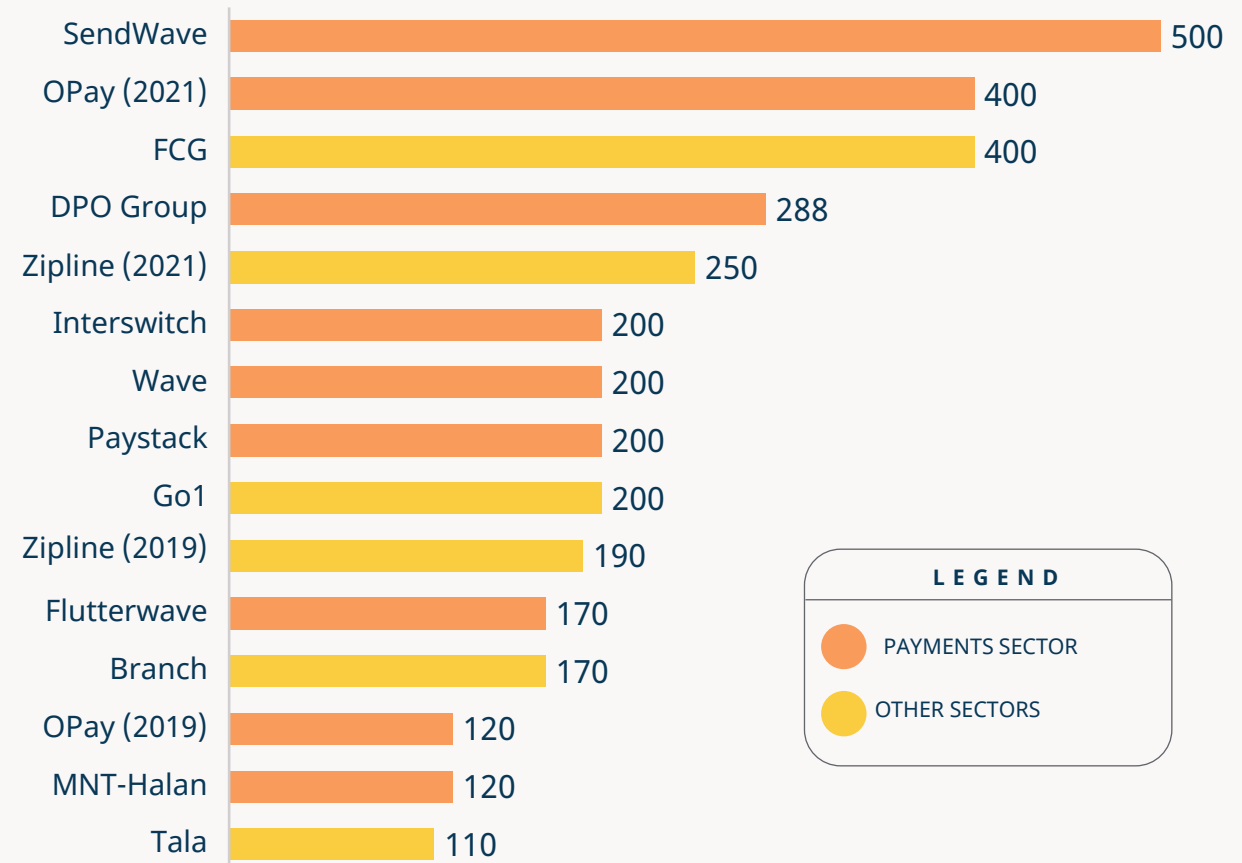
The figure on the right illustrates the predominance of payments firms in Africa's largest funding rounds, making up over 3 billion USD since 2017.

What does this mean for IIPS in Africa?

A growing payments fintech sub-sector calls for a shift in the way instant payment systems are designed and governed.

Scheme design and governance of IIPS may want to include key fintech players in the market. Fintech actors can often mobilise large amounts of funding and scale technological advances and innovations for better customer experience.

TOP 15 HIGHEST FUNDING ROUNDS BY AFRICAN START-UPS 2017-2021 (US DOLLAR MILLIONS)¹



Source: [1] Briter Intelligence online database (as of October 1 2021). FCG = Frontier Car Group. Year of round noted for start-ups that raised several large rounds over the period.

TRENDS IN PAYMENTS II: INCREASING FOCUS ON IMPROVED CUSTOMER EXPERIENCE

While in the last decade most countries on the continent have been focused on laying the groundwork for an IIPS and setting up payment rails and infrastructure, the focus is increasingly shifting towards encouraging customers to proactively use instant payments for all transactions. This involves offering a customer experience that makes instant payments more convenient and indeed “better than cash,” which is still the preferred mode of payment for most.

Thus, payment systems in many African countries are working on going beyond the standard use cases such as P2P to develop additional system functionalities such as PISP, RTP, and MPS (see below).

What does this mean for IIPS in Africa?

In light of the latest trends in the development of new instant payment functionalities around the world, African IIPS must prepare their systems to be upgradable and compatible with these functions – now or in the future. The flexibility of systems, including hard and soft infrastructure, as well as policy, is crucial to allow for rapid innovation.

The three functionalities below for instance are considered to have been driving factors in India’s success in encouraging adoption of its instant payment system UPI.



PISP (Payment Initiation Service Provider)

Allows users to make and receive payments through apps, which has a multiplier effect primarily on P2P and B2B transactions



RTP (Request to Pay)

Allows a merchant to digitally request that the customer initiate the payment, which has a multiplier effect primarily on P2M transactions



MPS (Mandated Payment Services)

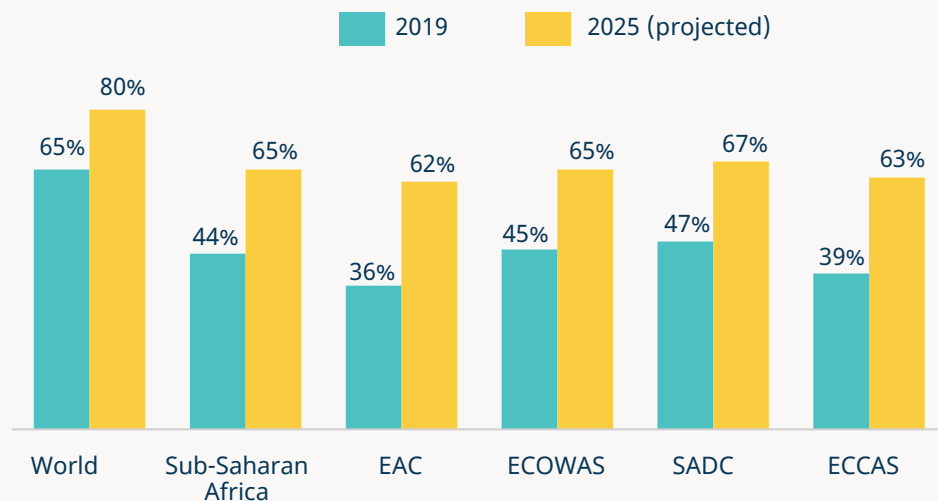
Allows users to authorise third parties to initiate payments from their bank accounts, which has a multiplier effect on B2P, G2P, and G2B transactions



TRENDS IN PAYMENTS III: RAPID SMARTPHONE PENETRATION AND FASTER, CHEAPER DATA

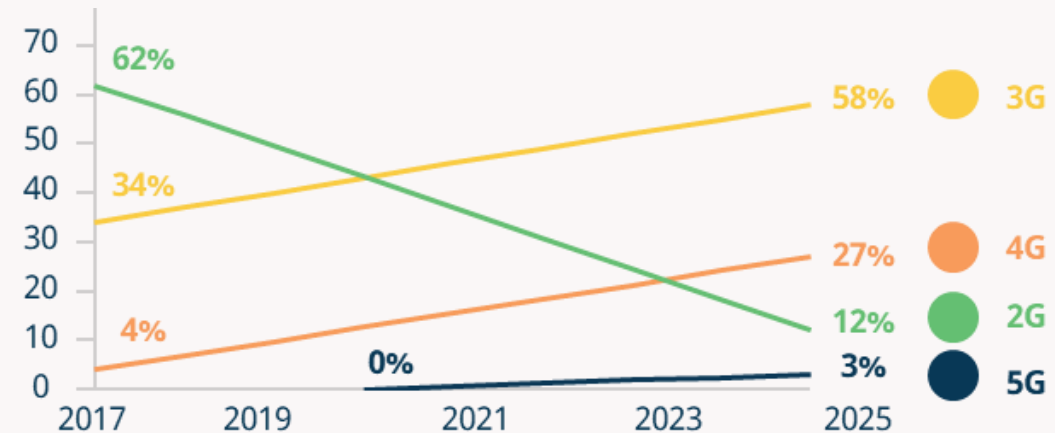
Access to smartphones unlocks access to a large array of IIPS features for a user and can improve the overall user experience. The African continent is experiencing unprecedented growth in smartphone adoption. In 2019, smartphones represented 44% of all mobile connections in Sub-Saharan Africa; by 2025, smartphones are projected to represent 65% of all mobile connections in Sub-Saharan Africa, representing 678 million smartphones, as smartphones continue to become more affordable and smartphone financing models continue to make them more accessible to low-income populations.

PROPORTION OF MOBILE CONNECTIONS THAT ARE SMARTPHONES (% , 2019, 2025, EXCLUDING LICENSED CELLULAR IOT)¹



In parallel, African mobile phone users' available bandwidth is increasing as the price of mobile data falls and customers switch over from 2G connections to 3G and 4G connections – projected to make up a combined 85% of connections in 2025, while 2G connections made up 62% of connections in 2019. Mobile data consumption in Sub-Saharan Africa is expected to grow by 4.4x by 2025.

PROJECTED PROPORTION OF MOBILE CONNECTIONS IN SUB-SAHARAN AFRICA AT DIFFERENT BANDWIDTHS (% , 2017-2025)¹



What does this mean for IIPS in Africa?

Smartphones, faster connections, and lower data costs are together expected to facilitate and accelerate enhanced customer experiences through more intuitive end user-facing interfaces on smartphone payments applications, incl. contactless mobile payments and QR code payments.

As African retail customers migrate from feature phones to smartphones, telcos and mobile money operators will face increased competition from new providers of mobile money, e- and digital wallets, etc., as well as from online banks.



AFRICANENDA 2022 RESEARCH AGENDA



- **What payments trends in Africa do new financial inclusion data show?**

- **Which national and regional IIPS are under development to be deployed in the next 2-5 years? The next 5-10 years?**
 - What are their planned use cases and system functionalities?
 - What are their business models, launch plans, and impact targets?
 - Which types of IIPS are being developed? E.g., central bank-led vs. other types
 - What are the key risks and opportunities in the IIPS space?
 - How inclusive are the instant payment systems under development, and how could they become more inclusive?
 - How will new deployments of IIPS impact cross-border payments/remittances and the Africa Continental Free Trade Agreement (AfCFTA) mandate?

- **How is customer behavior evolving when it comes to instant payments use?**
 - What are African low-income customers looking for?
 - Which IIPS use cases and features are most popular?

- **What, according to ecosystem actors, are other important trends on the demand and supply sides that are impacting the payments sector in Africa?**
 - What are the spill-over implications of these trends on financial inclusion?
 - How are different ecosystem actors responding?
 - How is private-public sector collaboration and coordination changing?
 - What are the emerging opportunities and challenges as a result of emerging demand and supply side trends?



AfricaNenda is ready to support inclusive instant payments

AfricaNenda is uniquely positioned, as a neutral entity and a bridge between the public and private sectors, to research trends in instant payments and provide unbiased, data-driven insights, which will help stakeholders from policymakers to donors make informed decisions.

Keep a look out for more to come, including AfricaNenda's 2022 State of Instant Payments in Africa report, as we continue to research the progress and prospects of this complex yet exciting and deeply impactful sector.

Please reach out to info@africanenda.org to get in touch for opportunities to collaborate and/or if you are involved in IIPS projects that we could profile and support.

