Payment modernisation in South Africa

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Payment modernisation in South Africa

What does payment modernisation mean?

When you think about a payment, your mind likely moves to cash and coins, automated teller machines (ATMs) and card machines. Depending on who you are, payments may be synonymous to anything from bank notes to cryptocurrencies. However, as new market entrants start offering modernisation, the physical infrastructure, interactions or splurge on a little luxury, the transaction likely affects a multitude of stakeholders, inside and outside of the financial services industry, each with their own evolving needs.

As a result of these evolving needs within the digital age, the physical infrastructure, interactions, underlying processes, policies, standards and regulations of payments need to adapt. This transformation is what we refer to as payment modernisation.

What are the driving forces and enablers of payment modernisation?

Mobile phone and internet penetration: As consumers and merchants gain access to mobile devices and network coverage, they are empowered to participate in the digital economy by engaging online marketplaces and using their mobile devices to conveniently effect digital payments. In South Africa, mobile phone and internet penetration are key enablers to payment modernisation. Almost 70% of South Africans are internet users¹. In a recent survey, 98%² of internet users reported to do online shopping and thus had the need to pay online. This is further supported by South Africa’s more than 65m smartphone subscriptions for a 60m population.³

Regulatory drive: Globally the role of central banks and financial sector regulators is to drive towards sustainable economic growth while maintaining the stability of the financial system. Regulators typically play a key role in driving payment modernisation through policy requirements, mandating public and private sector participants to comply with these requirements. In South Africa, the South African Reserve Bank (SARB) has a similar responsibility, playing a key enabling role to modernise our payment system through various reform initiatives in both the retail and wholesale environments. The regulator creates the space for the market to modernise and implement various initiatives to move the country forward, focusing more on market forces than compliance in the retail space.

Technological advancement: Advancement in technology enables payment service providers to expand and improve their service offerings and lower their cost to serve. Cloud platforms, artificial intelligence, digital currencies and application programming interfaces (APIs) are some of the key enabling technologies that are being leveraged for payment modernisation in South Africa. As technology enables merchants to create an online presence and reduce the requirement for physical brick and mortar infrastructure, payment service providers need to develop fit for purpose online payment solutions. The initial cost of the technology investments required by merchants has resulted in various countries having initiatives and investment driven from a national perspective.

Rising customer expectation and market competition: As new market entrants start offering payment and adjacent financial services, incumbents need to continuously reinvent themselves, their services and their enabling infrastructure to remain relevant and meet increasing customer demands. This evolution of payment services further requires constant focus on security, protecting the consumer experience and maintaining their trust. In a global economy where consumers are able to transact across borders, payment service providers need to offer the same or better service than their global competitors to remain competitive. The payment experience is seamless and becomes invisible to the customer; it becomes part of a way of life.

The cost of legacy infrastructure: Maintaining legacy infrastructure is becoming increasingly futile due to system inefficiencies, limited functionality, misalignment with current products, the offline nature of these systems and the skills shortage for the people operating it. As the infrastructure ages, payment service providers need to replace these systems to maintain operational resilience, cost to serve and their online presence. This also impacts interoperability and the drive for open banking.

Notes:


Data rich messaging: ISO 20022 is the latest global messaging standard for financial information adopted by SWIFT. Moving from cash to digital payments, or to a more data rich standard like ISO 20022, provides financial institutions with the opportunity to receive rich client transaction data. In turn, this data may be used to better understand the client and their risk portfolio, or to provide targeted services. This is fundamental to the future of payments as this enables new businesses and new revenue streams. The key factor for payment organisations is how to unlock this data and use it responsibly and appropriately.

Cost-effective merchant solutions: To drive adoption of digital payments, merchants require an affordable means to accept these payments. For many small, micro and medium enterprises (SMMEs), point of sale (POS) solutions are too expensive. Value-added services that enable them to offer additional services to their customers or help them to manage their business, further drive the demand for modern payment solutions. The merchant solutions are dependent on interoperability and standards which therefore require the other fundamentals to be in place to enable the ecosystem to work. The merchants and SMMEs are channels into the market to the customer networks, therefore unlocking this will unlock the economy and create the growth uplift witnessed in many markets across Asia.

Why is payment modernisation important for South Africa and the African continent?

Although Africa has made great strides towards greater financial inclusion and digital enablement, a third of internet users in a recent survey conducted across South Africa, Kenya and Nigeria still prefer to use cash. When asked, half of the survey respondents noted that their preference for cash was due to there being no alternative or because merchants ask for it. This highlights the lack of varied digital payment acceptance mediums and infrastructure in these countries. To many SMMEs, the infrastructure and transaction costs related to accepting POS payments do not justify their income from their sales. In South Africa, 85% of adults have an account with a financial services provider or mobile money service provider, which is high when compared with Nigeria (45%) and Kenya (79%). However, 25% or 8.3m of South Africans remain financially excluded, preferring to withdraw all of their money and transact in cash.

The cost of the current high cash usage is proving expensive for individuals, merchants, financial institutions and the economy at R88m annually. South Africa's lower LSM consumers bear an even heavier cost of cash, due to their high dependence on cash, lack of trust in financial institutions and financial illiteracy.

By broadening digital financial inclusion through payment modernisation initiatives, consumers and SMMEs are able to participate in the formal economy, leading not only to their social upliftment, but also unlocking a new market segment which previously could not be reached.

Broadening the participation in the National Payment System (NPS) leads to innovation, providing consumers with greater convenience and allowing businesses to provide their customers with more options.

Payment modernisation and the move towards digital channels are also inherently safer and more transparent than traditional payment methods. The South African Banking Risk Information Centre (SABRIC) reports that fraud incidents for digital banking on app, online and over the phone decreased by 18% from 2020 to 2021. According to their annual crime stats for 2021, digital banking products are much safer than in-person banking. However, it is important to note that although digital channels are intrinsically safer due to their transparency, criminals are continuously modifying their approaches and require financial institutions and their clients to remain vigilant. Proper authentication of both payer and payee in a payment remains central to secure payments.

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Payment modernisation around the world

Although Africa’s payment modernisation journey may be unique, its drive toward modernisation is not. Globally, payment modernisation is being driven by different combinations of the same forces, resulting in the upgrade of payment infrastructure, its underlying processes and policies.

In South Africa, Vision 2025 and Project Future played a key role in initiating such payment modernisation. From our 2019 Payments Study Tour to Asia, we recognised three critical success factors to large-scale payment modernisation:

1. A digital payment system providing consumers and businesses with real-time, reliable, affordable and inclusive payments.

2. An immensely strong national imperative driven by government, in collaboration with banks, associations and fintechs and a supporting regulatory framework.


These three key initiatives are vital to many countries’ digital stack and are key components of the countries’ digital strategies. Together they bring innovation, speed, convenience, transparency, stability and security to any NPS.

There are globally more than 60 live instant payment systems, covering 79 different countries and territories. These payment systems are supporting economic growth, innovation, security and convenience for consumers and businesses.10 11 Thailand has had one of the most rapid transformations and adoption of instant payments. PromptPay, the domestic scheme which was launched in 2017, quickly achieved critical mass in less than eight months and processes over 1,000 low-value real-time payments per second on average.12 In 2021, the number of PromptPay transactions were 9.7bn, 24.7% of their total payments volume.13 Although these transactions are mostly peer-to-peer (P2P) and person-to-merchant (P2M), the Thai government also uses PromptPay for social grant disbursements.

In Brazil, another instant payment system is revolutionising the way consumers pay. Pix, launched in 2020, has become the most popular form of payment in Brazil. It enables anyone with a bank account to send money from their mobile banking app to another bank account owner instantly, knowing only their phone number or taxpayer ID. Alternatively, a payer may scan a static (including the payment destination only) or dynamic (including the payment destination and payment amount) QR code to initiate funds transfer. In addition to its convenience, 24/7 availability and accessibility, Pix is also low cost to businesses and requires no fees from consumers.14

Although Pix payments are mostly targeting low value cash transactions, the growth in the number of transactions has been remarkable. In the first quarter of 2022, 4.2bn transactions were made using Pix, at 22.9% of all electronic transfers, surpassing credit cards and debit cards at 19.3% and 19.8% respectively.15

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The implementation of such instant payment systems is often mandated, or at least encouraged by regulators as part of broader modernisation efforts. Canada has been driving a major modernisation initiative since 2015, propelling Canada towards a fast, flexible and secure payments system that promotes innovation — by being more accessible — and strengthens Canada’s competitive position.¹⁷ As part of this initiative, Payments Canada, which oversees the Canadian Payments System as legislated by the Canadian Payments Act, has seen consultations and changes regarding development of new payments infrastructure, enhanced payments system access and changes to legislation.¹⁸

Another government-driven project was India’s implementation of a centralised digital identity, which proved to be one of the most successful digital identity programmes globally in terms of adoption and use. With almost 18% of the world population, the Indian government implemented an all-inclusive identity management system which could serve as a unique identifier for its citizens. Aadhaar, India’s digital identity, serves as a single identifier across all major service sectors of the country.

Aadhaar-enabled use cases have been widely adopted in both public and private sectors, benefiting both businesses and individuals. These use cases impact key areas such as e-KYC, government aid, social welfare schemes and direct benefit transfers (DBT). Aadhaar has changed the Indian socio-economic and demographic landscape, not only for the citizens but also for its government. It has impacted the lives of its citizens by valuing privacy, shaping up public policies and harnessing technology.

Key highlights in South Africa's Payment Modernisation Journey

1999
- Bankserv Africa incorporated

2001
- Publishing of the “Blue Book” - a Framework and Strategy for the South African National Payment System

2002
- PASA formally established

2003
- The NPS Act is promulgated

2004
- SAMOS goes live

2005
- PASA is recognised as a Payment System Management Body (PSMB) by the SARB under the provisions of the NPS Act

2006
- A number of large non-bank payments participants enter the payments space and start a flood of non-bank entrants

2007
- BanksevenAfrica, VISA, Mastercard are authorised as Payment Clearing House System Operators (PSOs) in the Card payment stream

2008
- The SARB launches Vision 2010 for the NPS. Updated in 2011 as Vision 2015 and in 2016 as Vision 2025

2009
- Early Debit Orders (EDO) and Real-Time Clearing (RTC) are launched in South Africa

2010
- Competition Commission Banking Enquiry Investigates payment charges and infrastructure access improvement

2011
- PASA partly opens up to non-banks as AC Emeers participants in the Authenticated Collections (AC) project

2012
- The SARB conducts a formal review of the effectiveness of PASA and publishes their findings

2013
- The Financial Sector Regulation (FSR) Act signed into law, marking an important milestone on the journey towards a Twin Peaks model

2014
- SA’s first ISO 20022 system, Authenticated Collections goes into production with enhanced functionality released in 2018

2015
- Two new regulators come into operation, the Prudential Authority (PA) and the Financial Sector Conduct Authority (FSCA)

2016
- NT’s Policy Paper “Review of the National Payment System Act 78 of 1998” proposes a withdrawal of the PSMB concept from the NPS Act

2017
- Project Future sets a target state architecture for electronic low-value credits and high level requirements for a retail instant payment system

2018
- PayShap launches in the market with six bank participants

2019
- The detailed design for a new ISO 20022 based instant retail payment system, based on Project Future, is completed

2020
- AC/DeliCheck formally implemented as per the SARB Directive 1 of 2017 as the only early debit order (EDO) system

2021
- In June 2021 the SARB proposes the commencement of a collaborative design process for a new Payments Industry Body

2022
- South Africa successfully implements the ISO 20022 message standard on SAMOS and in high-value payments

Throughout its history, South Africa has often showcased its supremacy in payment innovation. Some of our real-time gross settlement (RTGS) system’s features are best in class and observed globally. South Africa has also been a pioneer, being one of the first countries to have a same-day batch clearing capability for electronic fund transfers (EFT), a real-time clearing (RTC) capability, an early debit order collections functionality, and an authenticated electronic mandate management and early collections capability (DebiCheck).22

However, to remain at the forefront, the South African payment industry needs to continuously innovate and reinvent how it operates and what it offers. The rising complexity to address the SARB’s Vision 2025 goals for Competition and Innovation, Interoperability and Financial Inclusion further requires a novel approach. Addressing these goals requires large-scale transformation and cross-industry collaboration, all driving towards a common national imperative with a clear business case.

In an attempt to reach these goals, the payments industry is hard at work driving three key modernisation programmes:

1. PayShap, developed as part of the Rapid Payments Programme (RPP)
2. Payments Industry Body (PIB) Design
3. Co-design of a digital identity for South Africa

PayShap

When South Africa launched RTC in 2006, it was one of the early account-to-account electronic instant payment systems globally. Although RTC has served the country well, the SARB released a consultation paper in 2020 highlighting the need for an instant payment system that better serves South Africa, including individuals, businesses, and the economy. The consultation paper highlighted the need for an instant payment system that is less costly, provides a better client experience, is offered by more participants, drives efficiency through high transaction volumes, fosters competition and innovation, and drives financial inclusion.

PayShap, an instant proxy payment solution, is envisioned to be a viable alternative to cash payments with a core focus on humanising digital payments for all of South Africa. Simultaneously, PayShap is designed as a platform infrastructure to enable future modernisation and extension of the credit payment system. Built on an accessible national payments platform, PayShap is designed with three key features:

1. **Instant Clearing**: Within seconds of the payment being effected, both the payer and beneficiary are notified of successful payment. The funds are in the beneficiary’s account and ready for use instantly.

2. **Proxy**: A payer no longer requires the beneficiary’s bank account details, but can make the payment to an identifier they already have, such as a mobile number.

3. **Request to Pay**: The payer receives a request for payment of a certain amount from the beneficiary, which the payer can simply approve to effect the payment.

BankservAfrica, the Payments Association of South Africa (PASA), the SARB and a large number of South African banks have been driving the development of PayShap since 2019, supported by a number of enabling partners, including PwC Strategy&.

On 13 March 2023, PayShap launched with two features, an instant clearing feature which enables consumers to instantly pay to another bank account (using account details), and a proxy payment feature which enables consumers to make a payment to a proxy (called a ShapID) without knowing the bank account details. PayShap’s next product launch will see the introduction of its Request to Pay function. PayShap, similar to other modern global instant payment systems, is likely to keep evolving following its launch. This evolution is likely to improve client experience of the system or broaden the use cases that PayShap could cater for.

With the recent implementation of PayShap, consumer education is critical in the early launch months to drive adoption of this new payment method. Simplicity and accessibility of the solution would be key to enable adoption where this solution is set to achieve its objective of providing a superior alternative to cash. It then needs to meet the objectives of being as close to cash from a cost, usage and efficiency perspective to enable customer adoption. With the first cohort of banks having launched PayShap, it will be interesting to observe the market forces as additional and challenger banks deploy into the market.
Over the last 25 years, PASA has been playing a central role in the management and regulation of payments in South Africa. During this time PASA was, and at present still is, the Payment System Management Body (PSMB) as defined in the NPS Act. Although PASA has fulfilled this role well for 25 years, its membership is currently limited to clearing participants, which are mostly banks. This has been identified as a concern and the need for greater inclusion was described as follows: “To remain relevant and be sustainable it is recognised that the NPS management structures need to be inclusive of all payment participants and service providers, not only to prevent fragmentation of payment systems but also to leverage the power of payments digitisation and modernisation to better serve the needs of the economy and society in general.”

Following a National Treasury policy paper in 2018 and much debate within the industry, the SARB presented a proposal to the Payments Council in June 2021, which affirmed the SARB’s view that there is a need for a more inclusive payments industry body to assist the SARB in managing the NPS. The Payments Council agreed to the proposal and that the design of a new industry body should be facilitated by PASA.

A programme that is referred to as the PIB Design was initiated in July 2021, with PIB or “Payments Industry Body” being the placeholder name for the new entity that would replace PASA. Over the next 15 months PASA, supported by PwC Strategy&, as the programme partner, mobilised, facilitated and managed a design process which included more than 240 participants from the payments industry. This process produced a design proposal known as the PIB Design Report that was formally presented to the SARB for consideration in November 2022. The SARB will also consider how the proposed design needs to be accommodated in the regulatory changes that are currently under review.

Should the SARB accept the PIB design proposal with no or minimal changes, the following implications can be expected:

- The PIB will be recognised as the new industry body
- PASA’s recognition in the NPS Act will be terminated and the entity will be dissolved over time
- Licensing of payments entities will be done by the SARB
- The PIB will focus on interoperability rules
- Settlement rules will move to the SARB
- Operators will be responsible for operator rules
- Schemes will be responsible for scheme rules
- Project management involvement to be reduced to interoperability initiatives, multiple PSOs, PIB rules, etc.
- The PIB will play a strong role in industry support (white papers, capacity building, etc.)
- All licensed players will be mandatory PIB members: Clearing Participants, Payment Clearing House System Operators (PSOs) and Payment Services Providers (PSPs)
- Voluntary membership options will be available for non-licensed players
- Voting rights in decision making structures will be risk and participation based
- The PIB will be a non-profit company
- Similar to today where the members of PASA funds the organisation, the PIB will be funded by its members
Co-design of a digital identity for South Africa

Digital identity is a set of electronically captured and stored attributes and credentials that can uniquely identify a person. Identity attributes can be used to unlock access to banking, government benefits, health, education and other critical services. According to the World Economic Forum, organisations or authorities issue credentials detailing a qualification, competence, or authority for the individual after verifying the individual, and they can attest to the individual’s identity claim.

Introducing a digital identity solution in South Africa presents opportunities for the South African market at a citizen, government and economic level:

**Citizens**
1. Simpler, more convenient FICA process that will save time
2. Improved quality of service provision
3. Reduced fraud
4. Better user experience

**Government**
1. Reduced government expenditure due to improved administrative processes across its departments
2. Increased tax revenue collection through the boost to digital eCom, SME, financial services and health

**Economy**
1. The commercial benefits associated with this application for banks is an increased customer base
2. The processing of applications in a paperless form results in an efficient administrative process, which can save users and the service providers both time and money
3. Integrated services across G2P and G2B and increased transparency and accountability

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BankservAfrica, supported by PwC Strategy& as programme partner, has embarked on developing a community-driven digital identity solution for South Africa. BankservAfrica took on this journey given their role in managing and maintaining the country’s NPS, their experience in building and maintaining the latest SASSA grant distribution system and their role in the development of PayShap.
South Africa’s digital identity journey

Mar 2021 - Sep 2021
- Engaged the community to explore and unpack building blocks of South Africa’s Digital Identity story and published the digital identity report

Oct 2021 - Jul 2022
- Present the business case to the BankservAfrica Board
- Designed the Digital identity iamza brand
- Socialised the initial governance and trust models and frameworks

Aug 2022 - Sep 2022
- Finalised the business and technical flows
- Progressed in the development of a minimum viable product
- Socialised the Governance and Trust Framework, Participant Rules, Standards and Glossary
- Drafted the Assurance Guidance, Trust Mark Policy and Governing Body Policy

Oct 2022 - Mar 2023
- Finalised Revision 1 of the Trust Framework and subsequent supporting documents
- Developed a high-level case for the Banking industry
- Continuous engagement with the community to further the technical and governance design work; and focused engagement with various community members

The programme team is currently working with BankservAfrica to deliver on the next phase of the Programme which will run until the end of the second quarter of 2023. As part of this phase, the programme team is creating more awareness regarding the benefits to implementing digital identity for the country.
The fundamentals for modernisation

Initiatives such as PayShap, PIB and Digital Identity become building blocks to payment modernisation in a country, but having the individual building blocks is not enough. These building blocks need to form part of a broader enabling ecosystem, which requires three fundamentals for success:

- A collaborative environment where stakeholders are bound by objectives that drive them beyond their organisational objectives for SAInc and the greater good of the country.

- Incentive for industry stakeholders to participate to create interoperability within the ecosystem. This has been evident across other territories, market forces are not enough to enable modernisation. You require infrastructure, incentives and policy objectives that bring various players into an environment where innovation and competition can find a balance to the benefit of the economy and the people.

- Large scale adoption from the target market by focusing on consumer needs and the experience with enabling standards to protect this.

Without these fundamentals, modernisation may battle to be realised and reach its full potential even with all building blocks in place.

What payment modernisation will mean for South Africa

Payment modernisation will not only benefit the economy, government and payment service providers. Its far-reaching benefits will even touch ordinary South Africans in their day-to-day lives:

- Instead of the NPS remaining exclusive, those previously excluded from the formal payment system could be empowered to participate in the formal NPS based on their risk profile and be regulated accordingly.

- Payment service providers could be better equipped to comply with regulatory requirements, such as those relating to fraud and anti money laundering (AML) requirements.

- New entrants could be welcomed into the NPS with clear accountability frameworks, promoting innovation and competition.

- Payment service providers could be enabled to monetise the benefits of digital payments and payment data.

- The South African government and broader economy could benefit from improved efficiencies through the digitisation of services and greater financial inclusion.

At a 2022 Fraud and Risk Management conference, BankservAfrica’s acting Chief Information Officer Ben Janse van Rensburg cautioned the industry to “build rivers, not dams.” Janse van Rensburg was explaining how the payments industry has traditionally tried to build the best dams, having to link these up later on.

Instead of trying to revolutionise the industry by taking years to build individual dams, why not build rivers, evolving as it flows, accelerating, decelerating and meandering as required by its surroundings, nourishing the surrounding ecosystems? Enabling interoperability in the banking system requires enabling traditional players to partake at a greater scale to offer more to their consumers as well as enabling the non-traditional players.

Although it may seem obvious that we immediately pursue all modernisation efforts, the industry will need to carefully prioritise and optimise the timing of these initiatives amidst budgetary and other resource constraints. Both functional and non-functional requirements of priority initiatives should be aligned to overall country and industry objectives, while conforming to global best practice. It should deliver high impact results, while driving a sustained outcome. In the face of an ever-changing environment, this may seem impossible, but by building modern, modular, interoperable platform solutions, it can be achieved.
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She has over 20 years of experience serving clients across sectors with deep specialisation in Financial Services and digital transformation. Chantal is specifically responsible for transformational projects that provide new growth and innovation strategies and solutions for clients. She leads teams in blue-printing the future for her clients and what this means at a practical level. Chantal has actively been part of the innovation and payment modernisation within the South African market.

Jana has more than five years of consulting experience with an educational background in Industrial and Systems Engineering. She has spent the past four years in PwC Strategy&’s Payments Transformation team where she has been supporting clients across the financial services industry with payment modernisation.

Prior to joining the Payments Transformation practice, Jeaunes was a Senior Economist in PwC’s Economics Practice with 15 years of extensive economic experience which lies primarily in economic modelling techniques such as economy-wide modelling within the micro- and macro-economic environment, as well as Input-Output analysis for segment and industry/sector analysis. Jeaunes also has extensive experience conducting macro-economic impact analysis and general economic analysis.

Since joining the Payments Transformation practice she has been instrumental in the Digital Identity programme being responsible for the PMO, Business and Governance Streams.

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