

Enabling the Digital Future using Digital Signatures – Use Cases

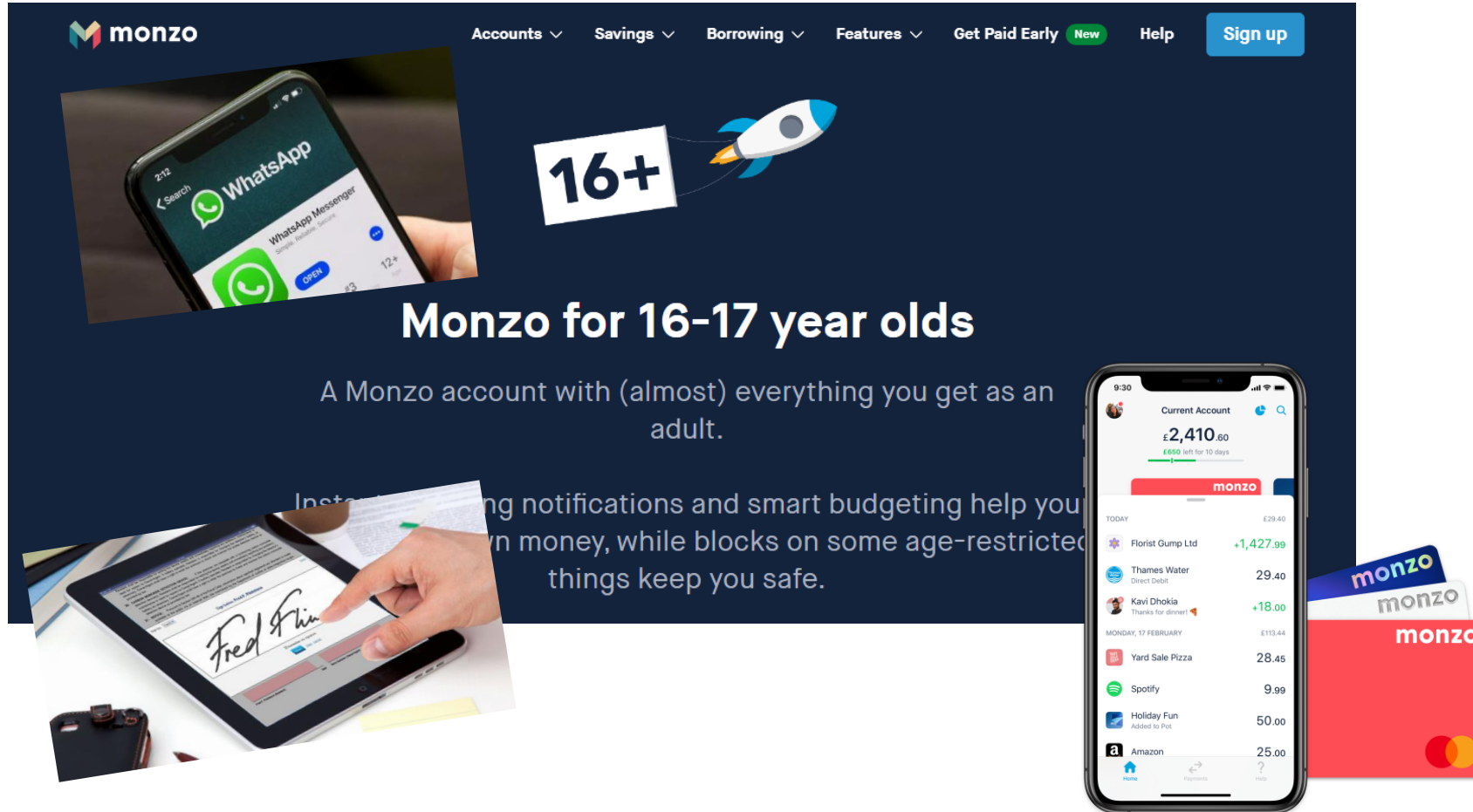
International Symposium -
Securing the Digital Future: Advancements in PKI and Trust Frameworks

Biju Varghese
EVP & Head – APAC, eMudhra

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What the consumers want?



The image shows a Monzo website banner for 16-17 year olds. The banner features the Monzo logo at the top left, navigation links (Accounts, Savings, Borrowing, Features, Get Paid Early, Help, Sign up) at the top right, and a central graphic with a rocket and the text '16+'. Below this, the text reads 'Monzo for 16-17 year olds' and 'A Monzo account with (almost) everything you get as an adult.' To the left, there is an inset image of a smartphone showing the WhatsApp app. To the right, there is an inset image of a smartphone showing the Monzo app interface with a current account balance of £2,410.60 and a list of transactions. Below the main text, there is another inset image of a hand signing a document on a tablet.

monzo

Accounts Savings Borrowing Features Get Paid Early **New** Help Sign up

16+

Monzo for 16-17 year olds

A Monzo account with (almost) everything you get as an adult.

Instant notifications and smart budgeting help you manage your money, while blocks on some age-restricted things keep you safe.

monzo

monzo

monzo

Current Account

£2,410.60

£650 left for 10 days

TODAY

Florist Gump Ltd +1,427.99

Thames Water Direct Debit 29.40

Kavi Dhokia Thanks for dinner +18.00

MONDAY, 17 FEBRUARY

Yard Sale Pizza 28.45

Spotify 9.99

Holiday Fun Added to Pot 50.00

Amazon 25.00

Easy &
Convenient

Seamless
Experience

Security &
Privacy

Organisations are analyzing trends and customer expectations and looking at offering new innovative products/ services

Organisations are transforming and want to achieve sustainable growth...

...and to operate efficiently

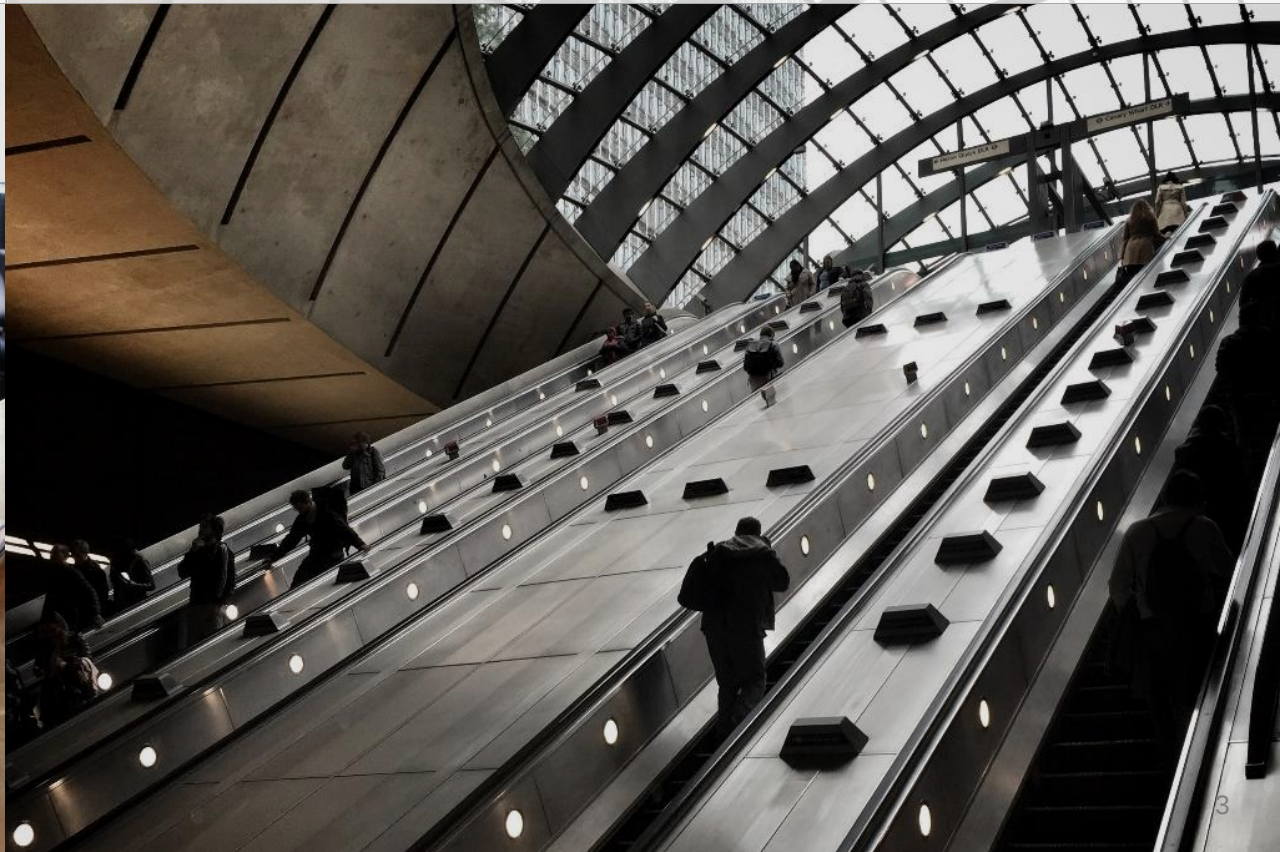
by offering customers

through

Personalisation and exceptional customer experience

Innovative and tailored products and services

Reimagining and transforming core processes with technology



Documents are Everywhere!

Sales

- Sales order Processing
- Customer Account
 - Provisioning
- Special Deal Terms
- Referral Agreements
- Reseller Agreements
- Partner Agreements
 - Sales Support
- Support Agreements and renewals

Human Resources

- Offer Letters
- New Hire Paperwork
 - Candidate NDA
- On/Off boarding Checklist
- Employee Policy Distribution and Signature
- Contractor Agreements
 - Non- Disclosures
- Performance Appraisals
- Background Checks

Finance

- Invoice Processing
- Expense Processing
- Credit Notes and Debit Notes
 - Audit Sign-off
- Inventory Management and Sign-off
 - Statutory Returns
 - eInvoicing
- Policy Management

Legal

- Contract Management
 - NDA's
- Internal Compliance
 - IP licensing
- Patent Applications
 - Board Minutes
 - Affidavits
 - Summons
- Engagement Letters
- Memorandum of Understanding
 - Statutory filings

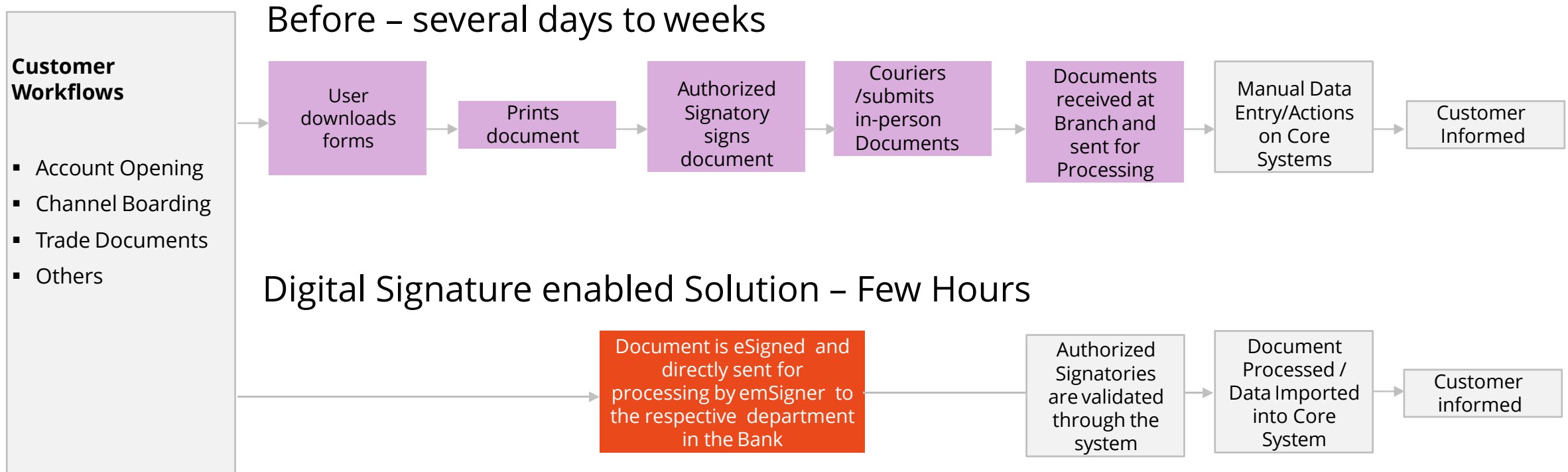
Procurement

- Purchase Order
- Statement of Work
- Master Services Agreement
 - RFP Sign-off
- Supplier Compliance
- Service Level Agreements
 - Termination Letters
- Software/Hardware Licensing Agreements
 - Rate Cards
- Invoice Processing
- Vendor/Sub-vendor Contracts

Others

- Change Management
- Release Management
- Service/Work orders
- Self service requests
- Compliance documents
 - Lease Agreements
- Building Maintenance
- Construction CAD diagrams
- Advertising/ PR contracts
- Brand Licensing Agreements

Document processing automation using Digital Signatures



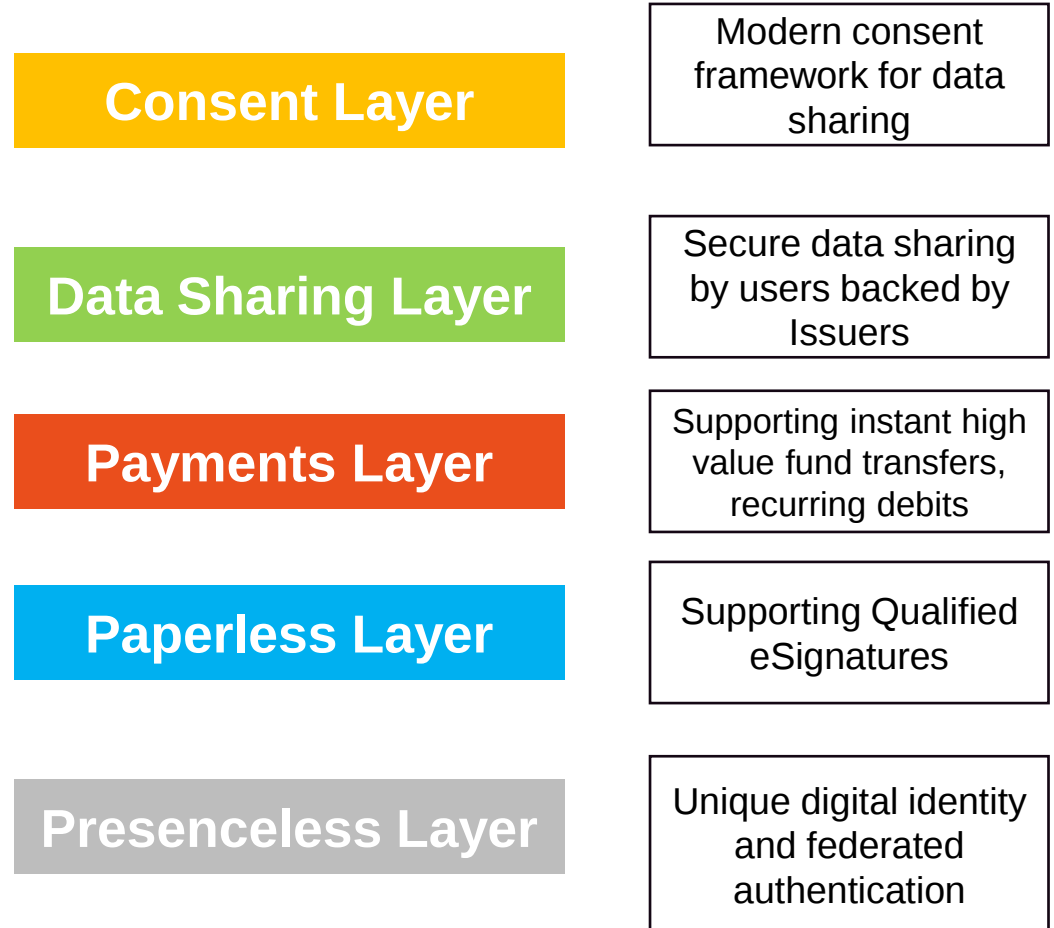
Digital Signature Solution enables significant reduction in TAT, reduction in cost and a much improved customer experience for both domestic and cross border transactions for organisations and customer initiated journeys

Digital Identity and Verifiable Claims

- The world is moving towards Digital Identities and Verifiable Claims both of which are built on the foundation of cryptographic trust
- This presents an interesting opportunity to build a digital ID platform to allow other agencies/enterprises to
 - Verify user identity and potentially associated details (education, employment)
 - Consume a layer of federated authentication/single sign on across a range of online/mobile based services
 - Leverage keys/signature service that provide cryptographic legal binding
- A Digital Id itself is a type of verifiable claim that contains user's personal data presented in a digital legally binding format using cryptographic technology.
- The same model can be extended to issue other types of user claims around Education, Trade, Employment, Ownership of Assets, Bank Accounts or even complex claims relating User Identity and Asset Ownership etc



Layered Innovation



India Digital Stack Statistics

**1.4 bn+ digital ID (eID)
enrollments**

**125 bn+
eAuthentications**

**300 mn+
eID based bank
accounts**

**600 mn+
eSign**

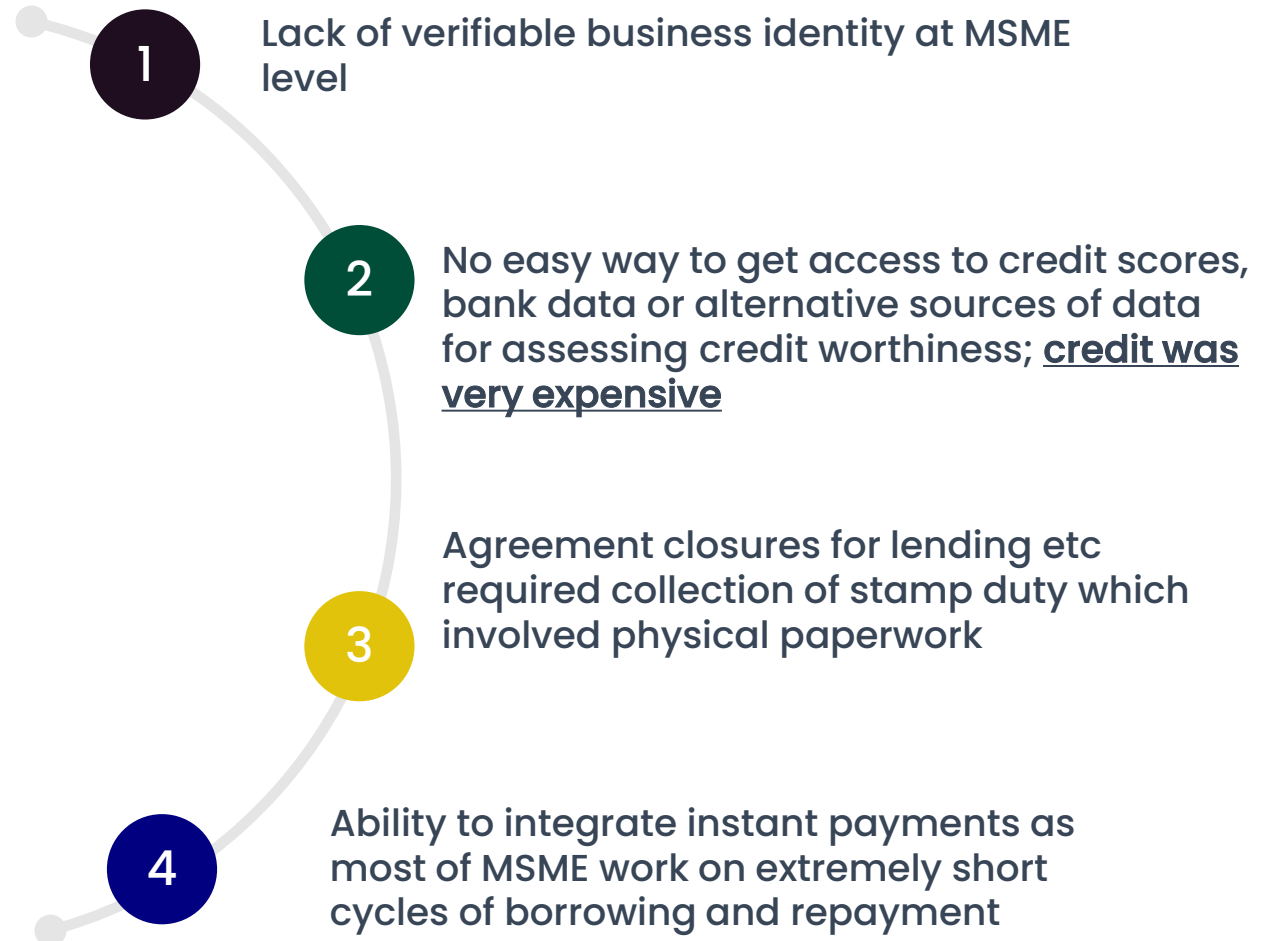
**300 bn+
Digital payments**

**6 bn+
Issued digital docs**

This layered innovation has been a massive success resulting in creation of a technology infrastructure that is accessible to everyone by eliminating barriers

Existing Challenges in MSME trade participation

India has over 60mn Micro, Small and Medium enterprises that produce about 45% of the country's manufacturing output. Enabling access to finance and trade participation has been a huge focus to improve manufacturing, drive exports but this was hindered by a few challenges



India's Digital Public Infrastructure (DPI)

Over the last few years, India has rolled out “Digital Public Infrastructure” a set of “**independent**” innovation layers that connect Identity, Signatures, Citizen Data and Payments through an Open API/Micro-services architecture allowing regulated ecosystem participants to connect and provide integrated capabilities for digitalization



eKYC + eSign

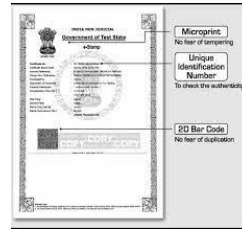
AADHAAR for individuals/businesses is the identity layer that allows online/real time verification

eSign is a remote signing technique built on top of eKYC, is legally valid and allows full verifiability, traceability of data or documents exchanged



Digilocker

National Single Sign On and data repository layer allowing seamless data sharing between issuers and relying parties



eStamping

eStamping services allow the payment of stamp duty and generation of stamp paper via API calls across a number of states for both financial and operational contracts



Instant Payments (UPI)

Real time payments and settlement systems powering billions of transactions and framework for customer data sharing in structured data format between individuals and financial institutions

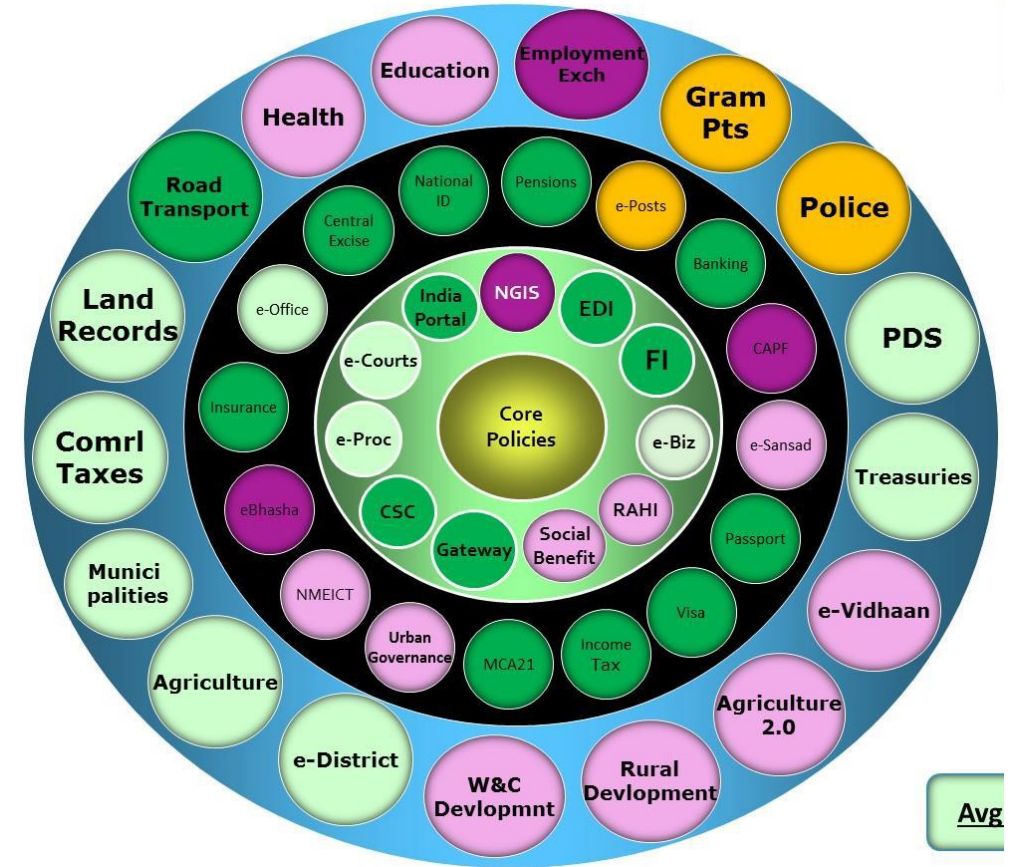


Account Aggregator

Allows sharing of banking data (including deposits, net worth) in a structured format via user driven consent

eGovernance Scenario in India

- As part of Mission Mode projects of Digital India program, the government is aiming to drive better transparency and quicker approvals using digital signatures
- There are 44 projects where both G2C and over time C2G interactions will be made paperless
- The key projects include Company Administration, Taxes, Land Records, Police, Public Distribution, Judiciary, Posts, Procurement, Education, Health

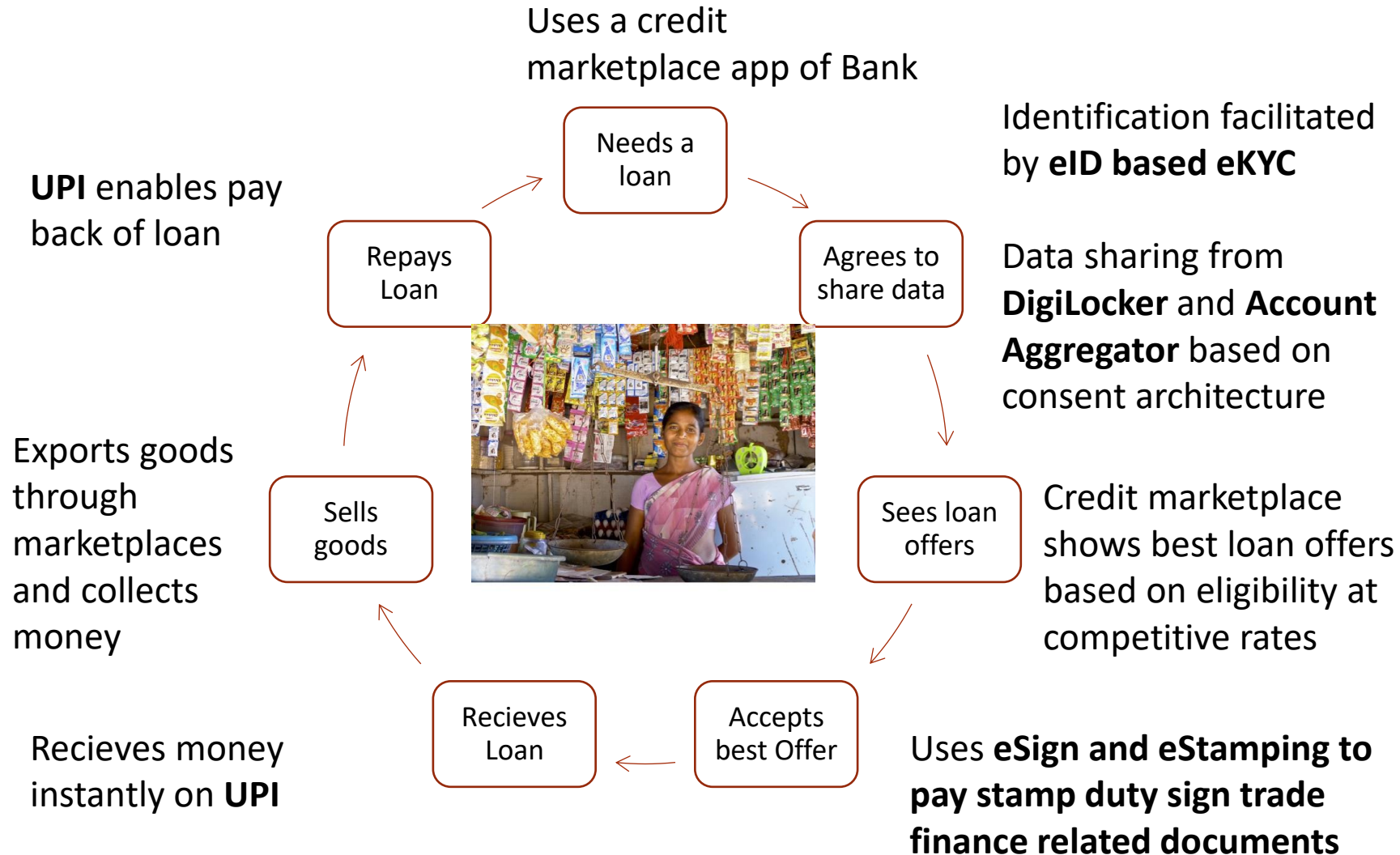


Government Use cases

- **Direct and Indirect Taxes** : eTax filing, eApprovals, eReturns..
- **Company Registration**: electronic filing of company returns, eApprovals of company creation, insolvency
- **Foreign Trade, Customs** : electronic filing of import/export licenses, eApprovals, eCertificates..
- **Civil Aviation** : electronic filing of flying licenses, eApprovals, eCertificates..
- **ePassport and Immigration** : Issuance of ePassports, NPKD, eApplication of passports, eApprovals..
- **Treasury Department**: eApprovals of fund distribution
- **Power Gen and Distribution** : vendor contracts, supplier contracts, eApprovals..
- **Land Registration** : electronic Land Records creation, storage, retrieval, electronic land certificates..
- **Police** : electronic First Investigation Reports, Police clearance certificates, conduct certificates..
- **Courts and Judiciary** : eFiling of cases and eFIRs, electronic and timestamped judgements..
- **Railways and other transport** : eTicketing, Agent onboarding, eApprovals, eContracts..
- **Direct Benefits, Education and Skill Development** : electronic approvals for subsidy, eDipolmas, eCertificates..
- **Health** : electronic Health records, Patient onboarding, ePrescriptions, eLab Reports..
- **Smart Cities** : PKI security for devices like traffic lights, monitoring cameras, smart bins, smart lighting..

Building a unified workflow platform to integrate DPI for MSME

A large Bank in India (USD 30bn market cap) built a **no-code** workflow engine that integrates all **key components of DPI** to offer a unified workflow engine for MSME customers for instant issuance of loans, working capital, letter of credit, packing credit, bank guarantees etc



Banking Use Cases

Digital Signature has wide possibilities in automating paper based workflows across Retail, Corporate and Transaction Banking. Given below are illustrative processes that can be made paperless



**Customer
Onboarding**



**Digital
Lending**



**Channel
Onboarding**



**Contract
Management**



**Re-KYC
Documents**



**Payments
and Remittances**



**Vendor
Workflows**



**Cash
Operations**



**Credit Card
Application
/Processing**

Enterprise Use Cases

eSignatures can be used to extensively transform interaction with customers and supply chain from paper to paperless

Contract Signing

Payment
Authorizations

eInvoicing

Return and Refund
Management

Proof of Delivery

Authorizing
Shipments

Trade
Documentation

Design
Approval

Marketing
Campaign
Authorization

Quality Control
And Safety Check

Customer
Transaction
Consents

Compliance
Documentation

Case Study- Large IT/ITES Company in India

Largest Indian multinational information technology company with more than 500,000 employees that provides business consulting, information technology and outsourcing services. The company decided to adopt eSignatures as an organization wide initiative to go paperless across several departments. This has helped in significant cost reduction, operational efficiency and increased TAT. The implementation was split into phases-

Phase 1 – 1 year

- Integration with ERP system (SAP S4/HANA) for digital signing of purchase orders and invoices.
- Integration with HRMS system for Employee onboarding and release of offer letters
- Expanded eSignature Solution to sign-
 - All finance related documents including credit and debit notes, Audit sign off and Quarterly results
 - Other HR related documents such as Employee reimbursement, Employee Work life documents

Phase 2 – 1 year

- Integration with Contract management system for NDA's and Vendor, Partner agreements
- Expanded to other contracts such as Master Service Agreements, Service Level Agreements

Phase 3 – 3 months

- Integration with MS office suite of products with MS Teams connector
- Expanded to MS Word and other office applications

The Business Impact:

- A procurement process became 75% faster
- Vendor onboarding became a seamless exercise; the client was able to easily handle 2000+ vendor contracts every year
- Seamlessly sign 40,000+ POs in an year
- 100% transparency and control
- A reduction of up to 50% in overdue tasks
- Complete audit trail; time-saving in report generation
- 100% process compliance with internal and external regulations

Pharma/Healthcare Use Cases

The road towards
“Paperless” can
be fully achieved
which touches
multiple
processes with
the organisation!

Digital Signature can be used to complete documents, approvals and agreements in the pharmaceutical and life sciences industry which includes-

Pharmaceutical

- Patient informed consent
- Label change requests
- Electronic batch records
- Clinical trial onboarding
- Key Opinion Leader programs
- Vendor contracts
- Monitoring trip reports
- Patient assistance documents
- Sales agreements
- ...

Healthcare

- Automated Patient intake and consents
- Patient centric operations
- Flexible Hiring & On-boarding
- Regulatory compliance documents such as HIPAA, BAA & CMS
- Academic research documentation
- Optimized workflows
- Patient assistance documents
- Sales agreements
- ...

Case Study – Large Pharma Company in India

One of the top three Pharmaceutical companies in India decided to adopt eSignatures as an Enterprise-wide initiative to go paperless across several departments. This has helped in significant cost reduction, operational efficiency and position ESG focus. The implementation was split into phases-

Phase 1 – 1 year

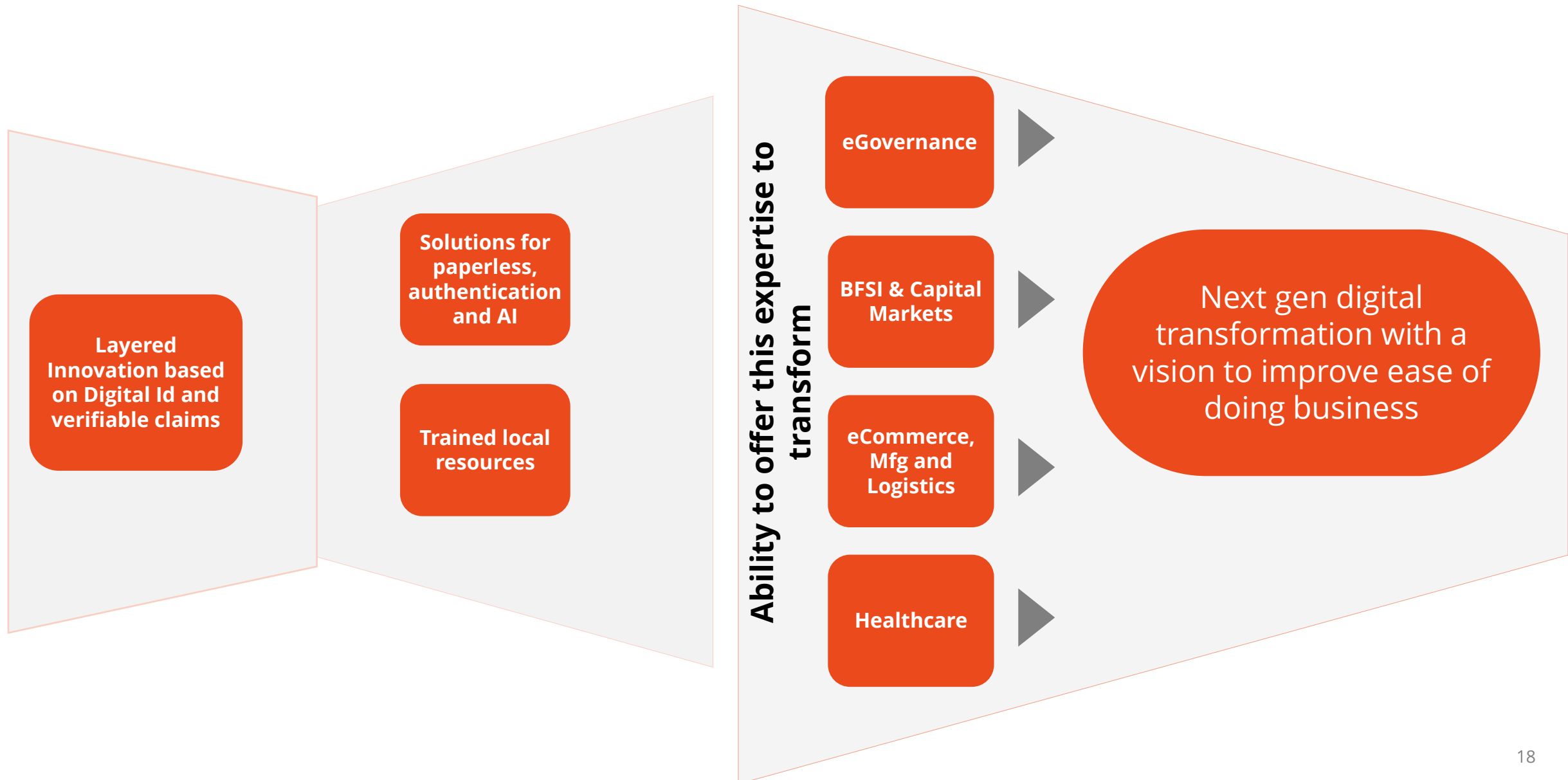
- Implemented eSignature Solution in 2-3 months for signing company's regulatory documents which are needed to be submitted to various regulators for approval including US FDA and EudraLex
- Integration into company's internal systems for the flow of documents into eSignature Solution
- Expanding solution to sign-
 - Signing regulatory admissions and clinical trial documents
 - Signing Investigational new drug filings (INDs), new drug applications (NDAs), patent submissions, internal compliance, and trademark registrations
 - Signing sales contracts, order processing, field service reports, and more

Phase 2 – 2-6 months

- Expanding eSignature Solution to other departments within the organization to HR, Legal, Sales and Procurement
- Automating signing of bulk documents such as Invoices and Transport related documents

A total of 400 internal users and > 3000 external users have been onboarded onto eSignature Solution

Conclusion





THANK YOU

eMudhra enables enterprises and consumers to engage, exchange information and transact securely, efficiently and with enhanced customer experience.

USA

Netherlands

UAE

Singapore

Colombia

Indonesia

Kenya

Saudi Arabia

India