



We aspire to be the **LEADING PROVIDERS** of **INNOVATIVE AND IMPACTFUL SOLUTIONS** that solve diverse and complex problems in the **DIGITAL PAYMENTS** and **FINANCIAL SERVICES** Sectors the World Over.

PAYSYS COMPANY PROFILE



INTRODUCTION TO PAYSYS

INTRODUCTION TO PAYSYS

Paysys Footprint and Success Stories in the Region



More than 30 clients
including FIs,
Regulators, Private and
Public Sector.



Introduction to the Company

We are a Digital Services and Technology Company that offers cutting edge solutions and advisory services to the Payments and Financial Services Sector.

Our Products And Services come together to build an ecosystem that allows Banking and Non-Banking Financial Institutions deliver an unparalleled experience to their end-customers.



Our Edge Over Others

We excel not just in the technology behind payments and banking, but we also possess and actively impart the knowhow of What is Needed To Make The Technology Being Implemented Effective and for our Customers to Successfully Realize Returns on their Investments.

INTRODUCTION TO PAYSYS



Organizational Structure and Workforce. Breaking Down our Team by Roles and Responsibilities

PAYSYS LABS



Corporate & Sales Office
Dover, Delaware
United States of America.



Corporate & Sales Office
Ras Al Khaimah,
United Arab Emirates.



Corporate Head Office
• Karachi, Pakistan

Development Centers
• Karachi, Pakistan
• Islamabad, Pakistan

Tier 3 Hosting Sites for FSPs
• Karachi, Pakistan
• Islamabad, Pakistan

Tapsys Payments Services
• Karachi, Pakistan

250+ Strong Workforce

25+

Domain Experts/Business

20+

Project Management

20+

Infrastructure Experts

40+

24/7 Operations

120+

Secure Software Development

25+

Research & Innovation

Certified For Excellence



PCI-DSS



PCI-SSF



ISO27001

INTRODUCTION TO PAYSYS



Portfolio of Institutions to whom we have Provided Services Directly or Indirectly in Consortiums

CENTRAL BANKS, GOVT. AGENCIES & REGULATORS



State Bank of Pakistan



NATIONAL BANK OF RWANDA
BANKI NKURU Y'U RWANDA



Saudi Central Bank

DOMESTIC/CROSS BORDER PAYMENT SYSTEMS & SCHEMES



Kenya



Pakistan



Ethiopia



Jordan



ARPCSCO, GCC



Karandaaz Pakistan

FOUNDATIONS & INTERNATIONAL MISSIONS



Government Stack

BILL & MELINDA
GATES foundation

Gates Foundation



International
Telecom Union



Technology for Financial Inclusion



World Council
of Credit Unions

mojaloop
foundation

Mojaloop

INTRODUCTION TO PAYSYS

Portfolio of Institutions to whom we have Provided Services



Private and Public Sector Financial Service Providers



BILRS

Digit+

tapsys



Mobilink Microfinance Bank

and others . . .

INTRODUCTION TO PAYSYS

Paysys Journey

PAYSYS

PAYSYS established in year 2016.



Signed agreement with Afghanistan Payment System for national switch consultancy.



2016



NATIONAL SAVINGS

2018



Signed agreement with SBP as Subject Matter Experts for the development and implementation of Inclusive Instant Payment system

Launched the digital mobile application for the largest state-owned commercial bank in Pakistan, NBP.

Became SME & Technical Consultants for design & Implementation of an IPS, EPG,& a shared Wallet Platform for EthSwitch - Ethiopia



Became technical consultants for integration of BUNA with RAAST for cross border payments

BILL & MELINDA GATES foundation



2020

2021

Signed agreements with 13 banks to provide instant payment solution.



Engaged as SME of PRISM – Real Time Gross Settlement and CSD system migration

Signed Agreement with Careem UAE for implementation of AANI instant payment system



Development of IPSL (Operator of PesaLink) Kenya Scheme Rules.



2022

2023/24

Signed up by 4 Digital Banks to provide payment system integration.



Signed AFT-Digit++ to provide ACS 3DS Solution.



2017

Launched the first-ever mobile-based biometric solution in Pakistan, Instascan for JS Bank

Awarded turnkey project to digitize **National Savings (US\$ 13bn) portfolio. Platform includes** Transaction monitoring, CDD, KYC and AML Screening system.

INTRODUCTION TO PAYSYS

Range of Products and Services that Paysys has to Offer



PRODUCT SUITE

- Payment Middleware
- Digital Banking Channels
- Card Management System

- Wallet Management System
- Merchant Payment Solution
- ACS 3D Secure

MANAGED SERVICES

We provide state of the art hosted solution with complete managed services with 24x7 NOC to multiple clients to deliver Software As a Service (SAAS).

ADVISORY SERVICES

We provide expert advice or counsel to clients on specific issues and problems as well as provide comprehensive strategies for achieving business and IT objectives. Our clients include Central Banks, Payment System operators, Banks and Fintechs.

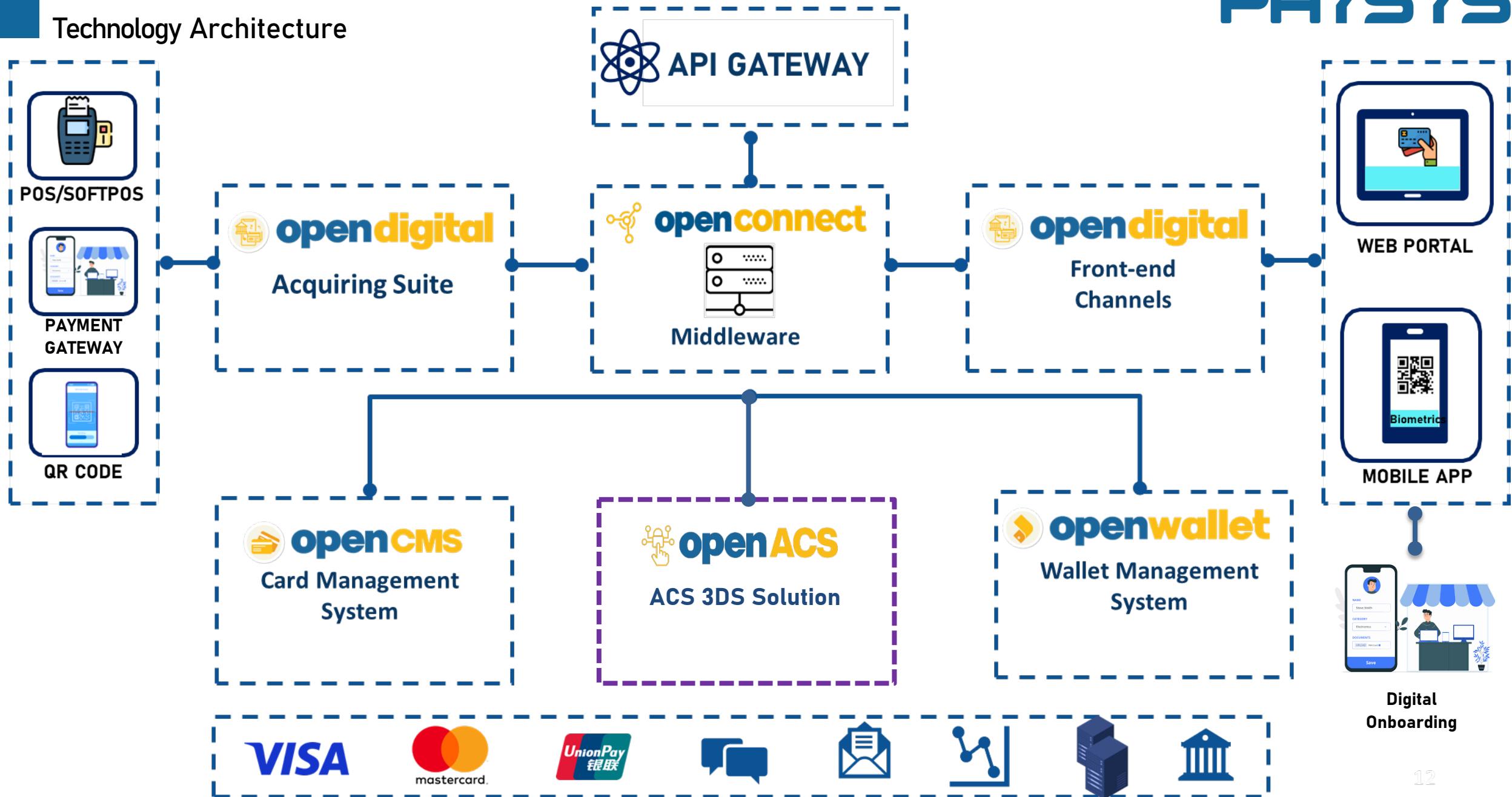


TECHNOLOGY STACK

TECHNOLOGY STACK

Technology Architecture

PAYSYS



PRODUCT OVERVIEW

PRODUCT OVERVIEW

Open Connect Middleware



openconnect

A robust integrate middleware platform that has a horizontally scalable architecture and is also a cloud-ready product. It is widely used for integration between payment systems, core banking systems, wallet platforms, and digital channels.

PAYSYS



Flexible

Supports multiple ready-made industry standard connectors, such as: Message Based – ISO8583, ISO20022, Proprietary fixed length

FEATURES



Robust

Based on RabbitMQ (a reliable, open-source implementation of advance message queuing protocol)



Secure

Supports Mutual TLS for transport layer security (TLS 1.3), JWT (JSON Web Tokens), as well as other security standards.

BENEFITS

Monitoring

Monitoring of transaction messages with latency and turn around statistics and monitoring of queues

Powerful

Core message queuing engine is widely used and benchmarked for more than 1 million messages per second

Configurable

- It supports configurable routing that can be set up based on a single field/combination of fields.
- The middleware is developed in Java and supports cross platform deployment.
- use Elastic search and Kibana for monitoring of logs.

Elastic

- Supports multiple ready-made industry standard connectors
- Message flow configuration to support standard message integration patterns
- Configurable routing that can be set up based on a single field/combination of fields within the message
- Supports both Asynchronous and Synchronous message processing
- Database Agnostic

PRODUCT OVERVIEW

Open Digital



opendigital

An Enterprise Digital Banking platform that gives Banks, Telco's, and Microfinance Institutions the power to drive their mobile banking initiatives by providing their customers with the convenience to access the entire banking products portfolio anywhere, and at any time



Omni Channel Experience

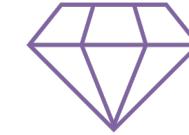
Deliver great mobile banking experiences across any device with full-featured mobility solutions

FEATURES



Enterprise Grade Security

Completely secure mobile banking environment to mitigate risk and encourage user adoption



Value added Services

Value added services such as location-based offers, QR code-based retail payments, m-wallet tagging etc.

BENEFITS

User Experience

Consistent, optimized workflow experience providing distinct user experiences by channel, locale or environment

Rapid Time to Market

Accelerated implementation and time-to-value with Paysys' prepackaged mobile banking solution

Quick Response Codes

Scan, store, and share QR codes, while also enabling contactless payments. Our solution supports both proprietary (for on-us) transactions and payment schemes

Host Card Emulation

Encrypted and tokenized data is safely stored and protected by sophisticated layers of security, which is all seamlessly integrated with the financial service provider's existing systems and mobile wallet environment for contactless payments

Location Based Features

Real-time location-based features that enable you to target users within an established geographic area, to deliver content (including directions, promotions, discount offers) based on where they are, or based on the locations they have previously visited

PRODUCT OVERVIEW

Open Card Management System



openCMS

OpenCMS is a Card Management System with an integrated CRM solution that enables customers to manage the issuance of debit and prepaid cards



Hosted

Our Card Management System is offered as a hosted service

FEATURES



TPSP

We are also a licensed TPSP of Union Pay International, which means we can offer the complete product as a package



Flexible

Can be easily integrated with authorization systems (Core Banking Systems, CRM etc.) via APIs

BENEFITS

Integrable

Integrate for functions such as;

- Create card: To create a virtual card.
- Activate card: Initial activation of card from an authenticated channel.
- Block card: Block card temporarily or permanently.
- Link account to card: For linking of card with a new account.
- Get card profile details: Details of card, cardholder, and any wallet/account linked to the card.

Card Product Management

Personalized and Non-personalized, Debit and Prepaid cards, Physical and Virtual cards. Multiple card schemes and multiple card technologies – Magstripe, Chip, and Chip + Contactless. Also support for both bulk and individual issuance.

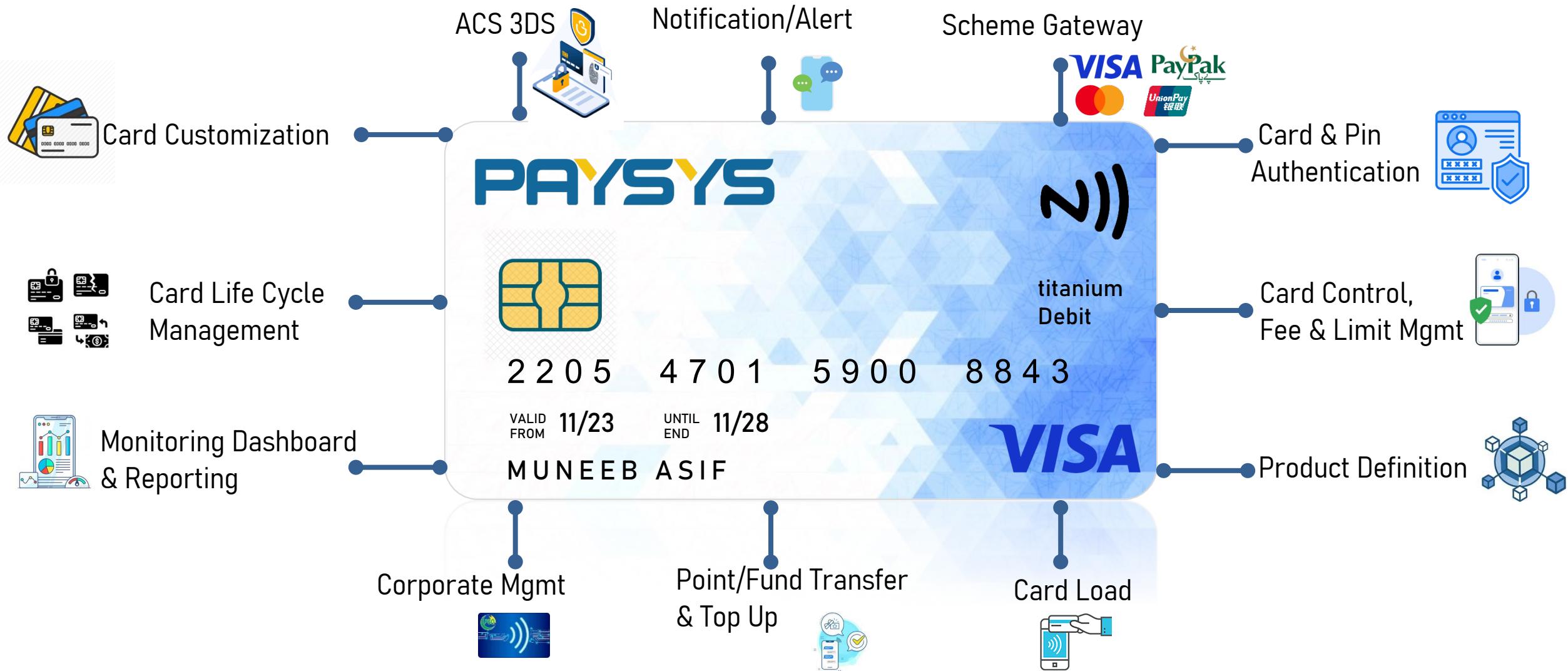
Card Inventory Module

A unique feature in Open CMS, that allows users to:

- Define card inventory – Different types of plastic will be separately classified.
- Tag card inventory to a card product.
- Define card distribution points.
- Efficiently manage inventory operations in back office; features include:
 - ✓ Add inventory
 - ✓ Dispatch inventory to a distribution point
 - ✓ Recall inventory

PRODUCT OVERVIEW

Card Management System Functionalities



PRODUCT OVERVIEW

Open ACS 3DS Solution



Open ACS is an **ACS 3DS Solution** that is an **EMVCo-approved product**, designed to help **Banks, Fintechs, and EMIs integrate with CMS** that improve the security of their E-commerce **transactions**. It is compliant with the latest specifications (**v2.3.1**).



Multi Channel Support

Our ACS solution authenticates payments from any device.

FEATURES



Risk Based Authentication

We are enabling both the EMV® 3-D Secure (2.0) and 3-D Secure 1.0 protocols for risk-based authentication.



Dashboards

Customized dashboards, reports and advanced analytics for better risk decisioning.

BENEFITS

Product Benefits

Product Benefits are;

- Admin Portal Monitoring & Reports
- Continuous Availability Architecture
- Provide 8 Digit BIN
- Benchmarking 1500 TPS.
- Support for PSD2
- Frictionless Transactions
- Flexible rule definition to align with risk appetite

Integration

Personalized and Non-personalized, Debit and Credit cards, Physical and Virtual cards. Multiple card schemes and multiple card technologies including Mastercard, VISA and UPI.

Add Ons

A unique Add Ons in OpenACS, that allows users to:

- ✓ Scheduled reports to bank
- ✓ Switch on/off recurring transaction
- ✓ Multilingual Support for transactions
- ✓ Card holder Enrollment options in IVS
- ✓ No Build deployment for static UI customization
- ✓ Configurable challenge screens through admin portal
- ✓ Dynamically configurable ACS screen with customization UI

PRODUCT OVERVIEW

Open Wallet Management System



An **omni-channel** solution for hosting both consumer and agent based mobile money accounts / store of value



Transaction Agnostic

Support multiple transactions like wallet to core banking, bill payments, QR, POS payments etc

FEATURES



Flexible

Offers a back office for business wallets, customer wallet management, and onboarding in bulk



Ledger

A separate GL module is also available for managing the general ledger of all financial transactions

BENEFITS

Multi-purpose

Multi-purpose
Can be used by individuals or businesses.

Limit Management

Limits can also be set with ease, for example:
Transaction Amount Limits,
Account Movement Limits.

Validation

Clearly designed KYC attributes, for Card number, gender etc. Sets can be made to group attributes together to determine the elements required for a specific account holder.

Fee Management

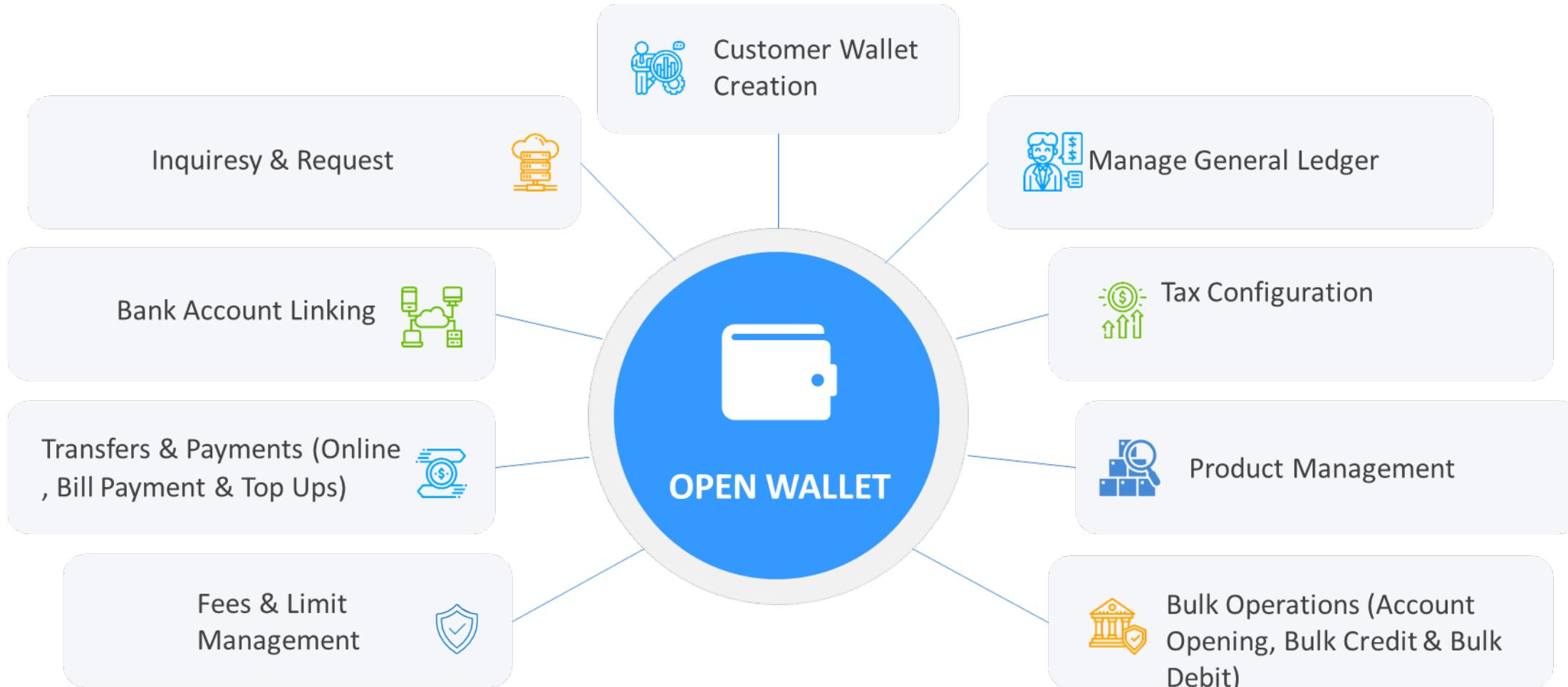
Our solution has a flexible product definition, including definition of taxes and fees for different transactions

Multi-Transaction Support

Supports multiple transactions, including cash in, cash out, transfers from bank accounts to mobile wallets (and vice versa), third party transfers, bill payments, merchant payments, and send money in bulk for salary disbursements, amongst others.

PRODUCT OVERVIEW

Open Wallet Management System functionalities



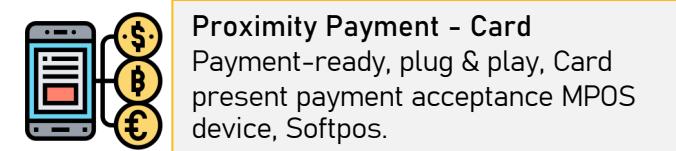
PRODUCT OVERVIEW

Open Digital Acquiring Overview



open digital aquiring

A comprehensive Acquiring and Merchant Management System. The system is user-friendly and possesses a flexible interface through which merchants and acquiring channels can be managed efficiently.



Proximity Payment - Card

Payment-ready, plug & play, Card present payment acceptance MPOS device, Softpos.



Online & Remote Payment

Card & Non-Card Payment, Request to Pay Now or Later, Pay By Link



QR Code Payment

Static QR Payments (with Amount, without Amount, With Unique Reference Number)



Merchant Tools

Merchant Portals, Merchant App View Settlement, Dispute ,Refund & Reconciliation



Back Office Tools

Merchant Onboarding, Merchant e-KYC, Pay Out , Flexible MDR Configuration, Split MDR.



open digital aquiring



openconnect



Schemes/Wallet Providers

PRODUCT OVERVIEW

Open Digital Acquiring Suite Features



Allows merchants to onboard digitally



Reporting



POS or SoftPOS



E Payment Gateway



Static & Dynamic QR generation for receiving payments



Merchants can initiate payment requests via ID or IBAN, which supports real-time automated settlement



Allows merchants to raise payment-related disputes, and respond to customer-initiated disputes



Easy access to transaction history and payments received allows filters



Allows merchants to transfer funds, utility bill payment, manage Wallet & Mobile Top-ups

INSTANT PAYMENT SYSTEM EXPERTISE

INSTANT PAYMENT SYSTEM EXPERTISE

PAYSYS

What Have We Done In The Instant Payments Space



Cross Border Integration of RAAST with BUNA for Remittance Outflows to Pakistan



Subject Matter Experts for conducting the feasibility of integrating BUNA & RAAST to establish an instant payments-based remittance corridor. This is to serve as an alternate to the legacy correspondent banking-based remittance industry.



Subject Matter Experts for;

- Review of existing landscape, market, and licensing regime.
- Review of payment system rules and governance structure of 4 relatively mature countries (UK, Canada, Singapore, and Hong Kong)
- Comprehensive report on analysis of current payment ecosystem and drafting of regulations for PSPs and EMIs to accommodate PSOs/PSPs

Development of Core Scheme Rules in the first phase followed up with the development of P2P Scheme Rules in the second phase.



Lead firm for the development of requirements, selection of a vendor, procurement, and implementation of three distinct payment ecosystem components at the same time,

- Hosted wallet platform.
- Payment Gateway
- Instant Payment Platform



Careem Pay has chosen to partner with Paysys Lab to integrate with its system and the (CBUAE) AANI instant payment system.

INSTANT PAYMENT SYSTEM EXPERTISE



What Have We Done In The Instant Payments Space

Our Instant Payments Expertise

We excel not just in the tech behind Instant Payments but the science, the rationale of What Really Makes An Instant Payment Better Than A Deferred One and under what circumstances the cost of instant is a viable proposition.



RAAST – Micro Payment Gateway @ SBP [2018]

We have served as Subject Matter Experts for the development of requirements, selection of vendor, procurement, and implementation of Pakistan's Instant Payment Platform "RAAST".



PRISM – Real-Time Gross Settlement System @ SBP [2021]

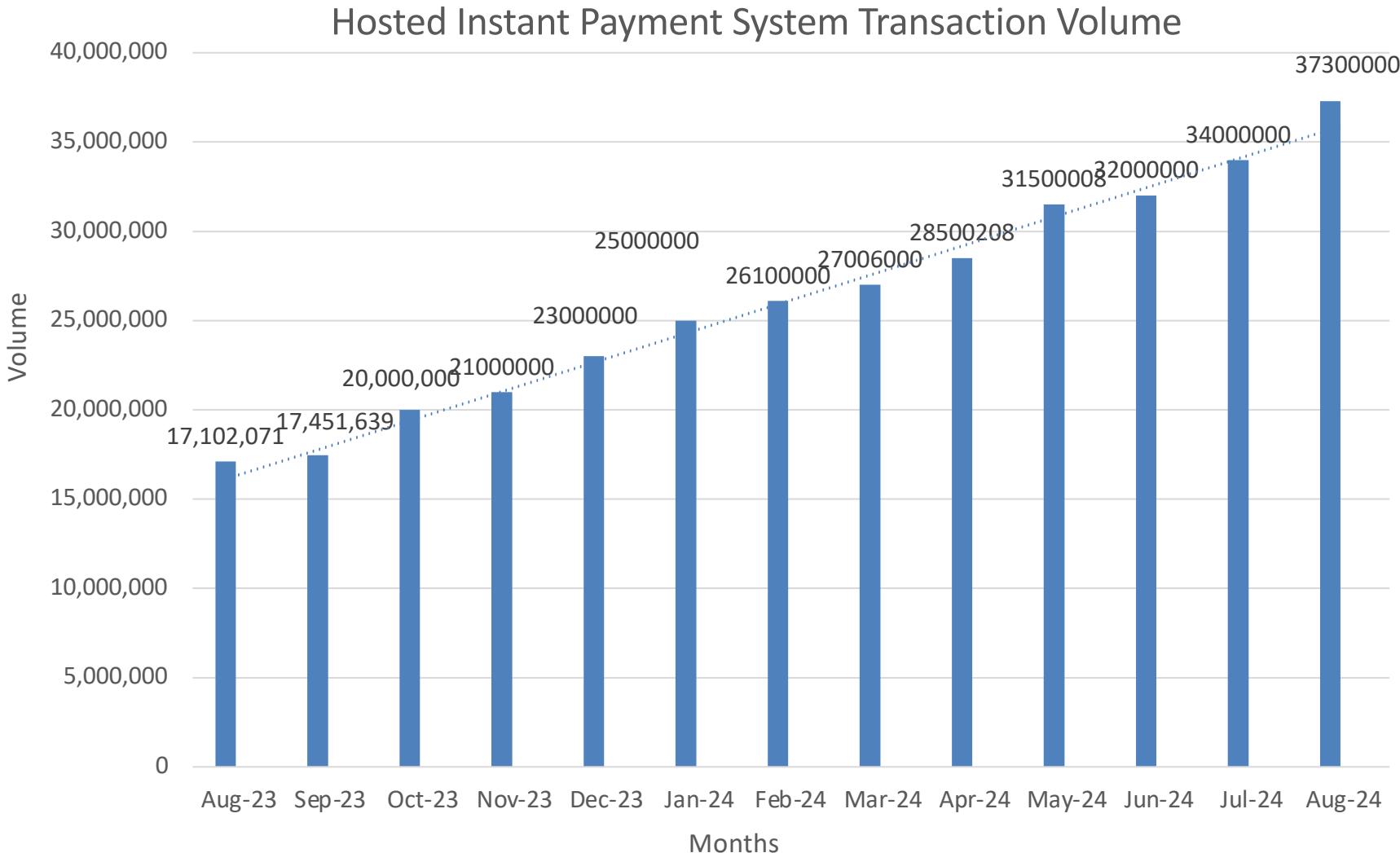
We are the lead consulting firm that has developed requirements and is in process of selection of vendor, procurement, and implementation of the revamped RTGS platform.

Middleware provider of choice for connecting with Instant Payment System for 20 Financial Institutions. This is on both a hosted as well as on-prem configuration



INSTANT PAYMENT SYSTEM EXPERTISE

Hosted Instant Payment Clients Volume



In last 12 months, Paysys Hosted payment platform processed an incredible number of Transaction

Volume of Transaction 330+Millions

Value of Transaction 950+Millions USD

PAYSYS CASE STUDIES

CASE STUDIES

Key Focus on Our Engagements in Ethiopia



INSTANT PAYMENTS PLATFORM

EthSwitch is implementing a Real-Time Payments Platform that offers Request to Pays, Bulk as well as Single Credit Transfers on a ISO20022 enabled Platform.

EthSwitch aims to take this platform live in 2023 and start connecting participant banks to the infrastructure.

PAYMENT GATEWAY & ACCESS CONTROL SERVER

EthSwitch is currently implementing a Payment Gateway as well as ACS for EthioPay as well as international scheme cards.

Industry Testing is currently under progress and EthSwitch aims to take this platform live in Q1 of 2023.

SHARED WALLET PLATFORM

EthSwitch is currently implementing a Shared Wallet Platform. This platform will enable subscribed financial institutions to offer mobile wallets to their end customers without needing to setup their own infrastructure and software to host wallets. They can simply connect their back-officers to the EthSwitch platform and begin to issue wallets.

COMPLETED!

Engagement with EthSwitch, Determination of Scope

COMPLETED!

Drafting of Bidding Specifications and aiding technically on Procurement of Platforms

COMPLETED!

Assisting EthSwitch with Vendor negotiations and contracting.

COMPLETED!

Assisting EthSwitch in Design & Analysis Workshops. Finalizing Designs.

COMPLETED!

Testing of Products and Helping with Industry Engagement

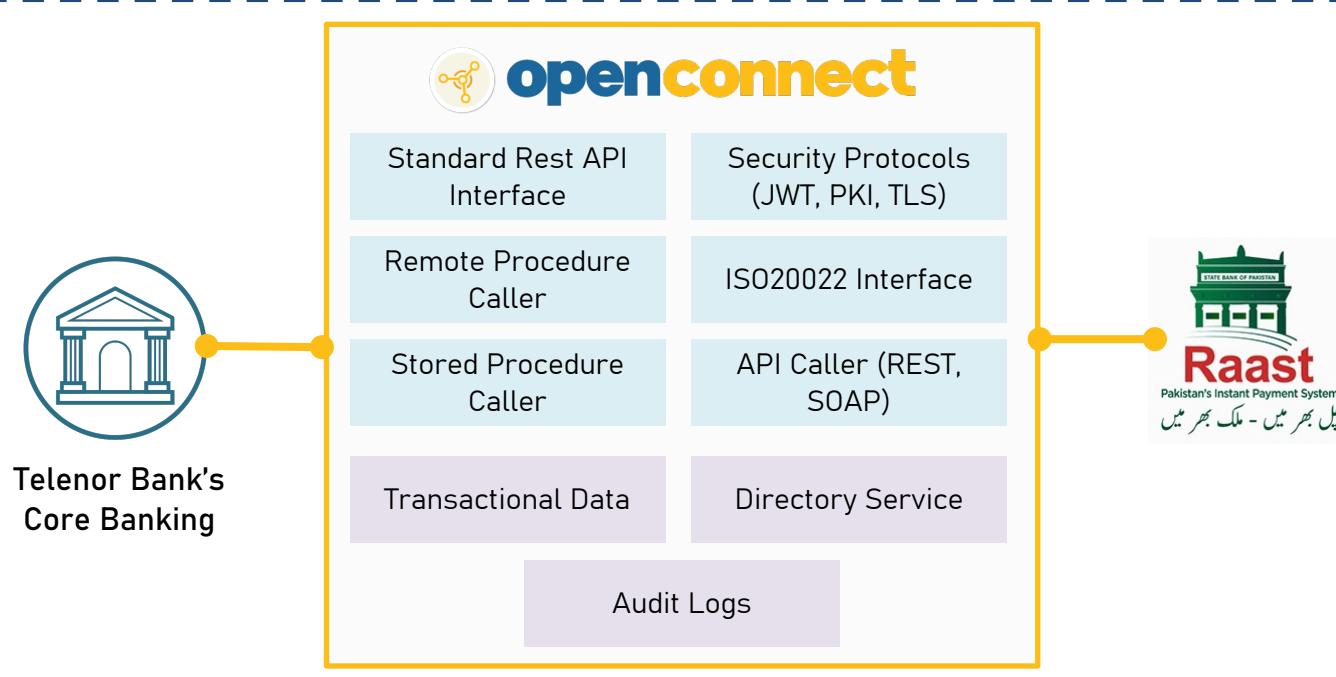
IN PROGRESS

Take all products live and assist with developing Operating Procedures

CASE STUDIES

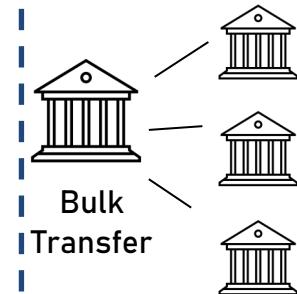
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Easy Paisa Instant Payment System (RAAST) Case Study



Telenor Microfinance Bank has chosen us to implement Open Connect as the intermediary interface between their infrastructure and system.

USE CASES



P2P

Request To Pay

Payment To Merchant

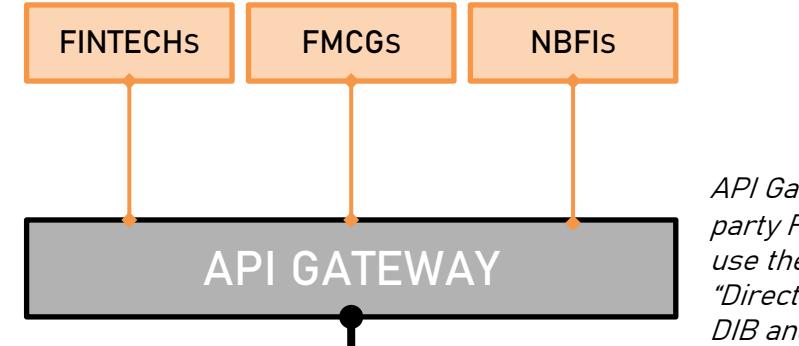
	DAILY	MONTHLY	TO DATE
VOLUME	750,000+	23 Million+	185 Millions+
VALUE	2 Billion PKR	55 Billion PKR	600 Billion PKR
TRANSACTIONAL THROUGHPUT OF SYSTEM			

CASE STUDIES

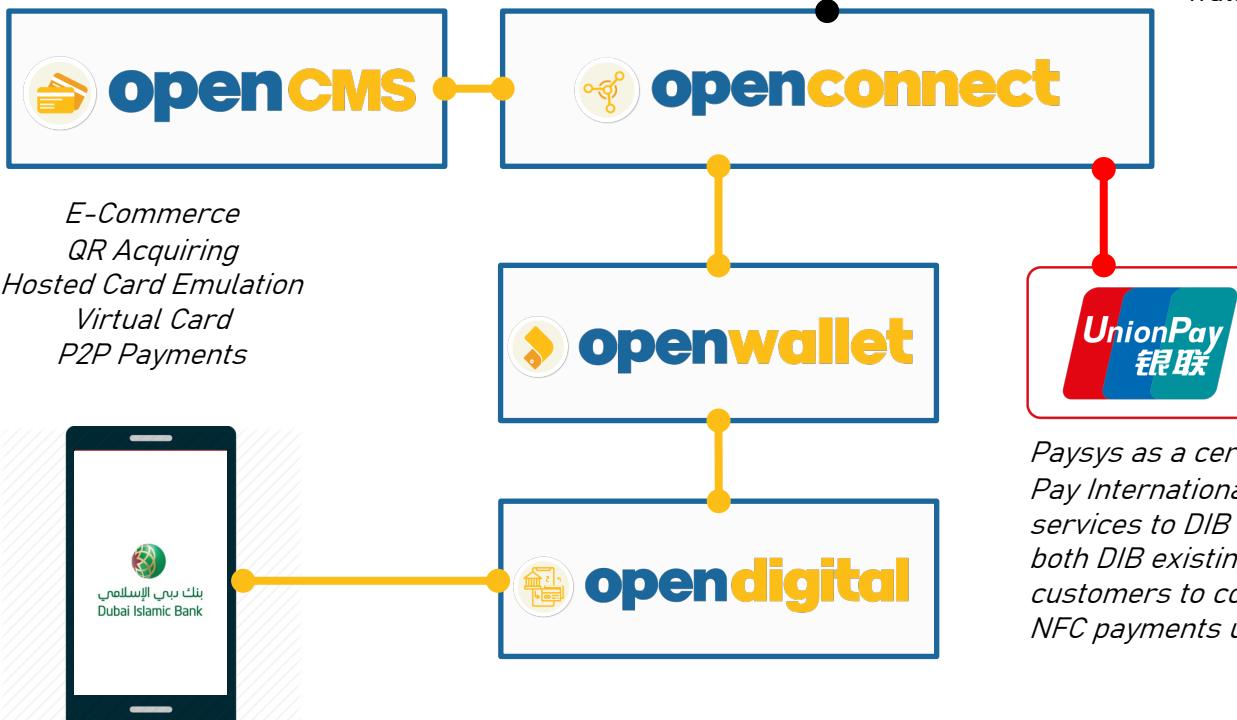
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DIB PAISA App

3rd parties like Fintechs will be provided with SDK and APIs to enable in-App use of DIB open loop wallet



API Gateway for 3rd party FinTech's to use the platform as "Direct Agents" of DIB and use the platform for hosting wallets.



بنك دبي الإسلامي
Dubai Islamic Bank

Dubai Islamic Bank has setup a Branchless Banking Setup that is powered by Paysys's Open Stack to manage integrations through the OpenConnect Middleware and OpenWallet for the issuance and management of Branchless Banking Wallets.

This entire arrangement also leverages our status of a UPI TPSP which fundamentally provides a channel to the UPI network for any transactions that occur.

200,000+ DIB Account Holders are to be direct users of the infrastructure at Go-Live

CDNS Digitalization

CENTRAL DIRECTORATE FOR NATIONAL SAVINGS (CDNS)

National Savings as it stands today is one of the primeval institutions in Pakistan with a legacy of more than 140 years that came into existence in 1873.

As a custodian of the nation's savings, today the National Savings is the largest investment and financial institution in Pakistan with a portfolio of over **USD 13 Billion** and more than 7 million valued investors are being served through a large network of 376 branches nationwide controlled by 12 Regional Directories of National Savings (RDNS) and 4 Zones.

2017 : Pre-Digitalization (CHALLENGES)

- 200+ Branches operating on a Distributed Ledger System.
- 150+ Branches operating standalone, manually/paper based.
- Incoherent, Inconsistent Data Generation and storage.
- Faulty MIS.
- Completely Paper Based Operations.

2021 : Post-Digitalization (SOLUTIONS)

- Reengineered business process in place
- All 375 Branches centralized.
- **4.6 Million USD** worth of additional profit previously paid, recovered.
- Comprehensive Dashboards.
- Alternate delivery channel enablement.
- AML/CFT and KYC/CDD compliance activated
- Built on cutting edge technology stack using Kubernetes/containerization

 ● Number of Registered Customers **2.7 Million**

 ● Number of Active Customers **1.6 Million**

 ● Number of Active Male Customers **900 Thousand**

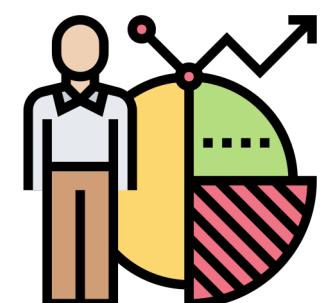
 ● Number of Active Female Customers **700 Thousand**



	DAILY DEPOSITS	DAILY WITHDRAW	DAILY PROFIT
VOLUME	26,300	10,500	68,300
VALUE	16 Million \$	18 Million \$	9 Million \$

TRANSACTIONAL THROUGHPUT OF SYSTEM

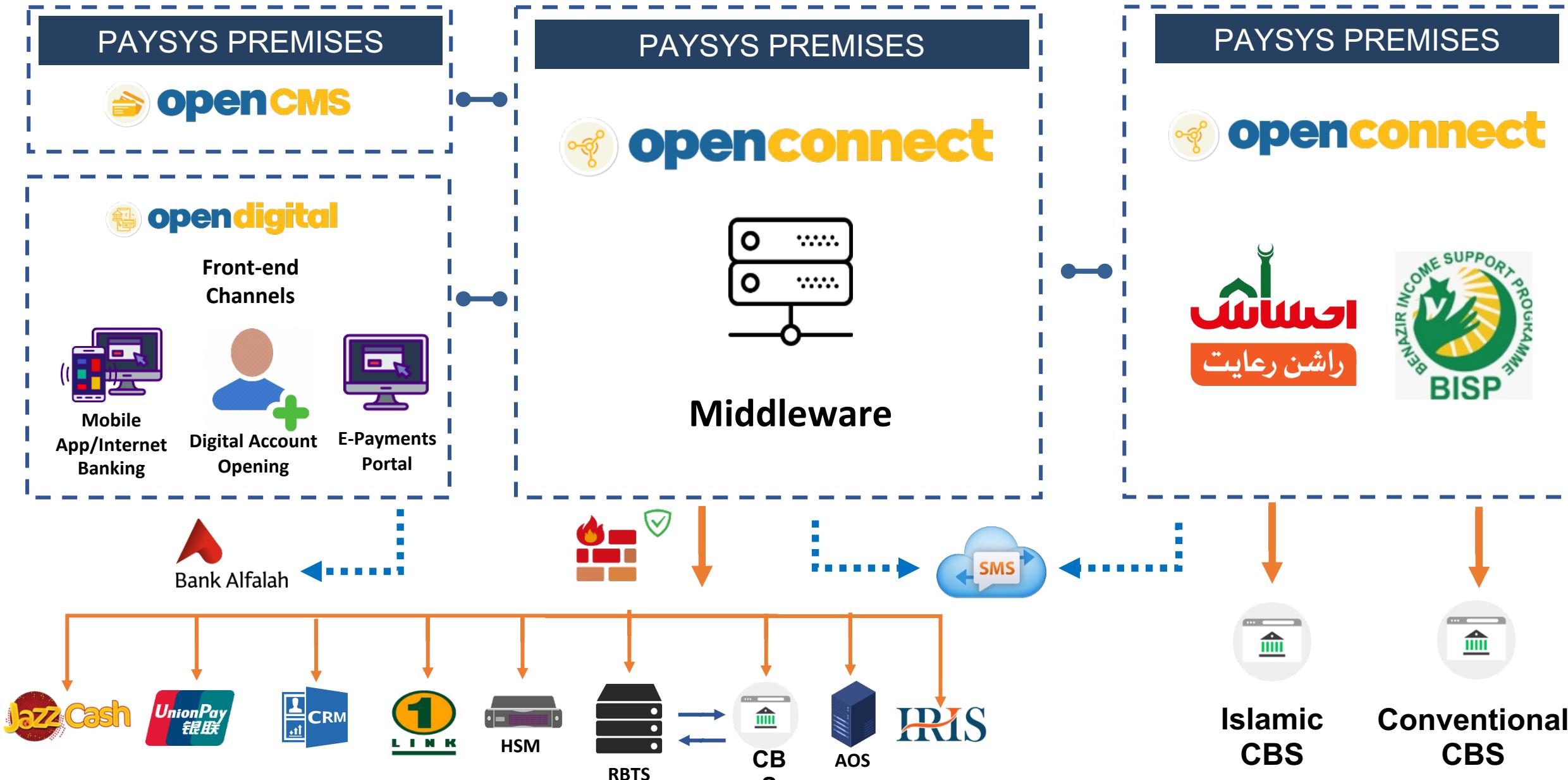
13 Billion US Dollars



TOTAL INVESTMENTS

CASE STUDIES

NBP Digital Stack



THANK YOU