


Developing Pakistan's future payment ecosystem

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OCTOBER 25TH 2019, KARACHI

INDUSTRY FORUM DOCUMENT

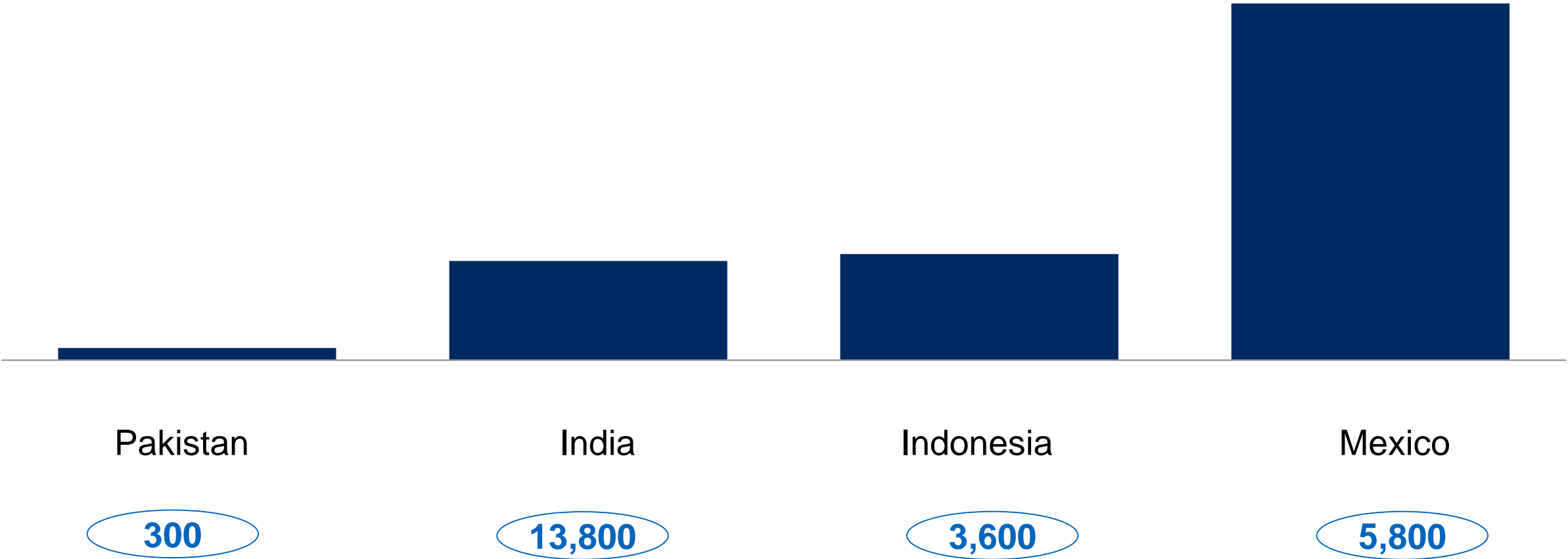


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- 1 | Issues and challenges of Pakistan's Payment Ecosystem** 10 mins
 - 2 | What is Micro Payments Gateway** 20 mins
 - 3 | Implications for participants and Payments landscape** 20 mins
 - 4 | Project progress and next steps** 10 mins

There is significant opportunity to drive digital payments in Pakistan

Electronic transactions per person in 2018, #

X # of electronic transactions (m)



SOURCE: SBP, Central bank, World Bank

Pakistan faces several challenges in digitizing payments

■ Addressed through MPG



Inadequate digital ecosystem and processes to drive digital payments adoption



Difficulty to integrate with existing financial and non-financial systems



High cost of digital transactions



End user experience, limiting convenience vs cash (consumers, merchants, etc.)



No full sector wide interoperability (e.g. USSD-branchless banking)



Perceived low cost of cash and regulatory challenges related to cash vs digital and








Limited investment to drive digitization at scale and at required pace



Lack of incentives and public awareness of digital payments usage vs cash

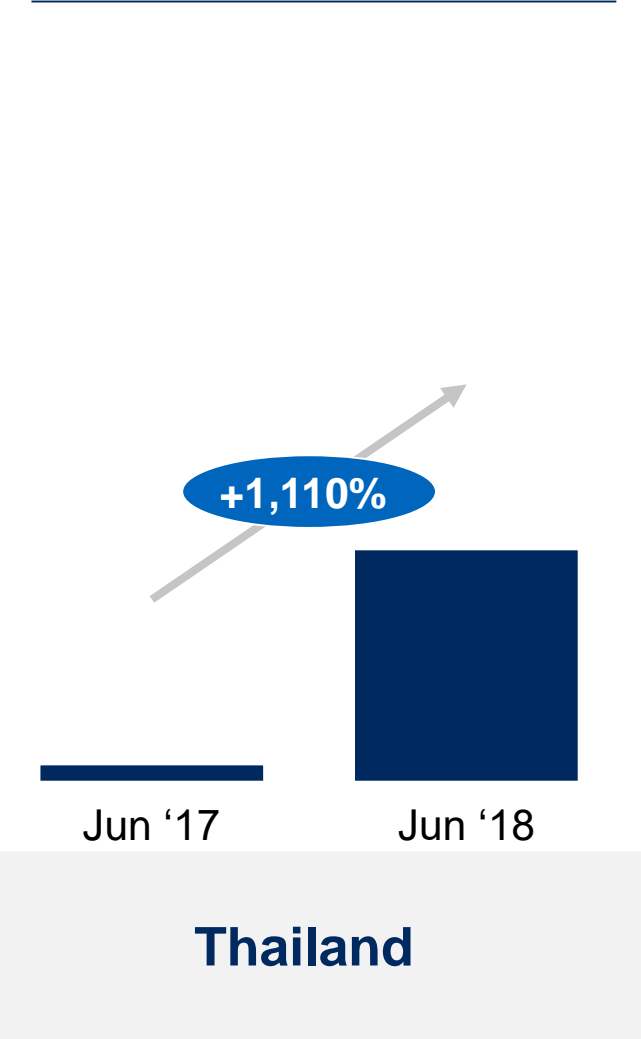
Faster Payments is being adopted globally

UK		Faster Payments
Turkey		Retail Payment System
Mexico		Interbank electronic payment system, SPEI
Srilanka		LankaPay
Brazil		Fund transfer system
Nigeria		Immediate payment service
USA		Real-time payments system
Kenya		PesaLink
Norway		Realtime 24/7 (Nets RT)
Sweden		Payments in Real Time - BIR
India		Immediate Payment Service
China		Interbank Banking Payment System
Thailand		Prompt Pay
South Africa		Real Time Clearing
Australia		New Payments Platform
Singapore		FAST
Korea		Interbank Home/Firm Banking Network
Bahrain		Fawri+
Indonesia		G3, Fast and Secure Transfers

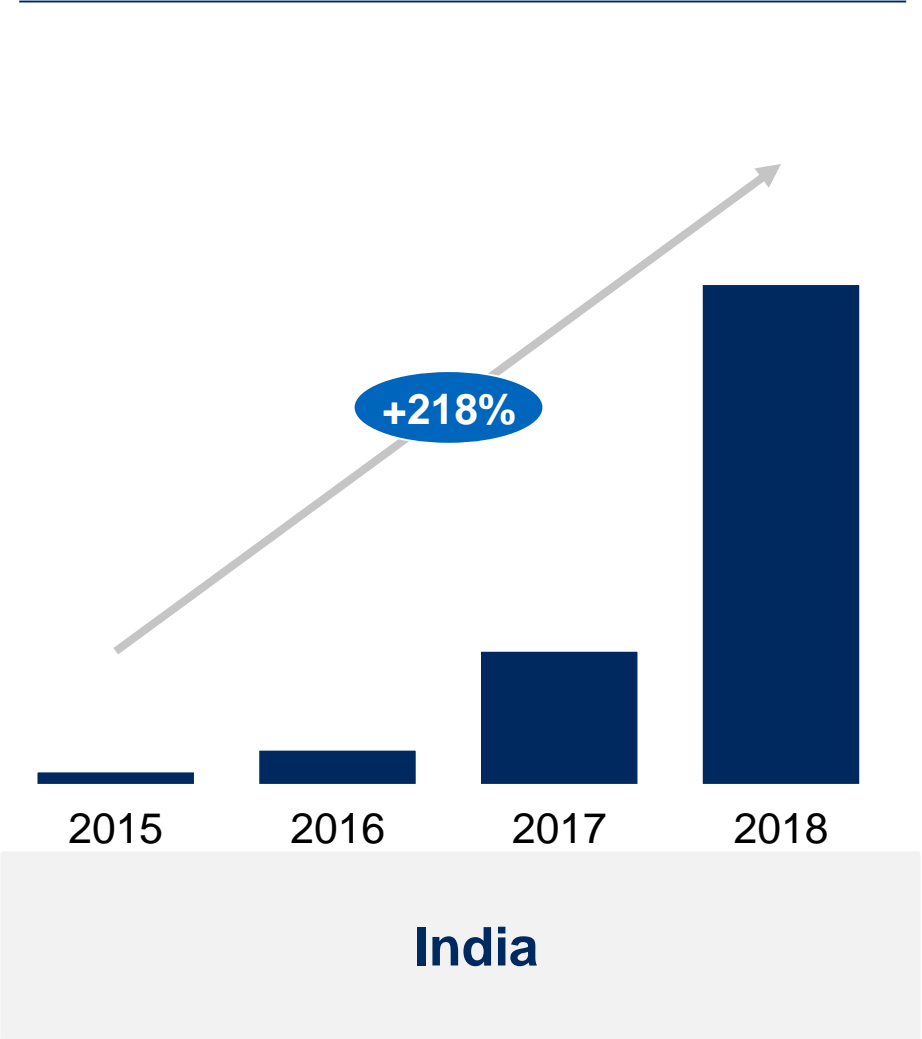
- **Sector wide interoperability**
- **low to no-cost transactions**
- **Instant transfers**
- **System available 24/7/365**
- **API based connectivity**
- **Alias based payments**
- **Clear connectivity mandate**
- **Supporting regulations & adoption policies**

Results of such transformation programs have been significant

Transactions through PromptPay, Mn



Transactions through IMPS, Mn



Transactions through FAST, Mn



¹ Transaction volume in the first half of 2018 is doubled for the complete year
 SOURCE: Cashless India, Deloitte "Leading the Cashless Charge" 2017, Thailand Central Bank Statistics, Monetary Authority of Singapore

Micro Payment Gateway will be the center of the digital payments eco-system in Pakistan

End-users



Merchants



Businesses & SMEs



Consumers

Payment channels



Internet



Phone



Mobile



Agent

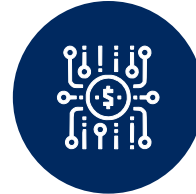
MPG Participants



Banks



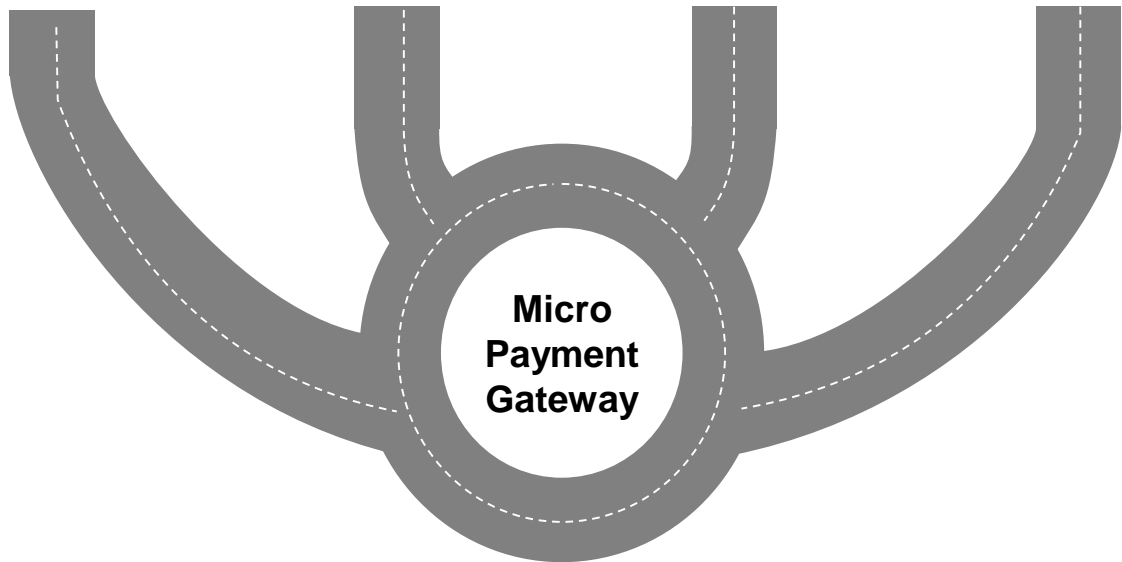
MFBs



**PSPs
EMIs**



**Government
Entities**



Micro Payments Gateway : Simple, secure and innovative instant payment solutions users

Real time transfers: Instant availability of funds and near real time settlement of low value payments

Sector wide interoperability and open governance: Connectivity across all licensed & other entities (Banks, MFBs, PSPs, relevant government entities) removing need for bi-lateral tie ups

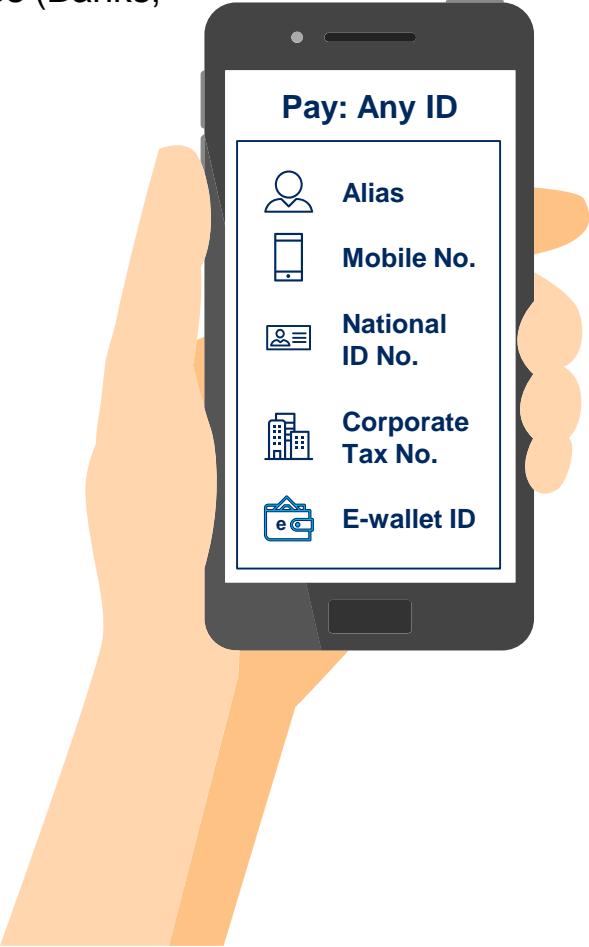
Simple, account-agnostic payment forms: Alias-based (e.g. phone number) simple payments, standardized across the industry

Drive new product introductions and innovation: New message standard, request to pay, sector-wide bulk payments) supported by a dedicated testing environment

Easy and cost effective participant onboarding: API architecture allowing quick and efficient onboarding mechanisms and integration requirements

Low to no transaction cost for end-users: Cost recovery model, maximizing benefit to end-users and participants

Built in security and authentication: Robust end-user data verification and security



MPG is designed to address Pakistan's challenges in payments

CHALLENGES



SOLUTION OFFERED BY MPG COMPONENTS

Complex, time consuming integration

Open APIs simplify integration

Limited products/ services due to legacy messaging

ISO 20022 formats allows new products and services

Cumbersome payment process, due to account numbers

Alias based payments allow account agnostic transactions

Limited direct debit facility

Requested to Pay Messages

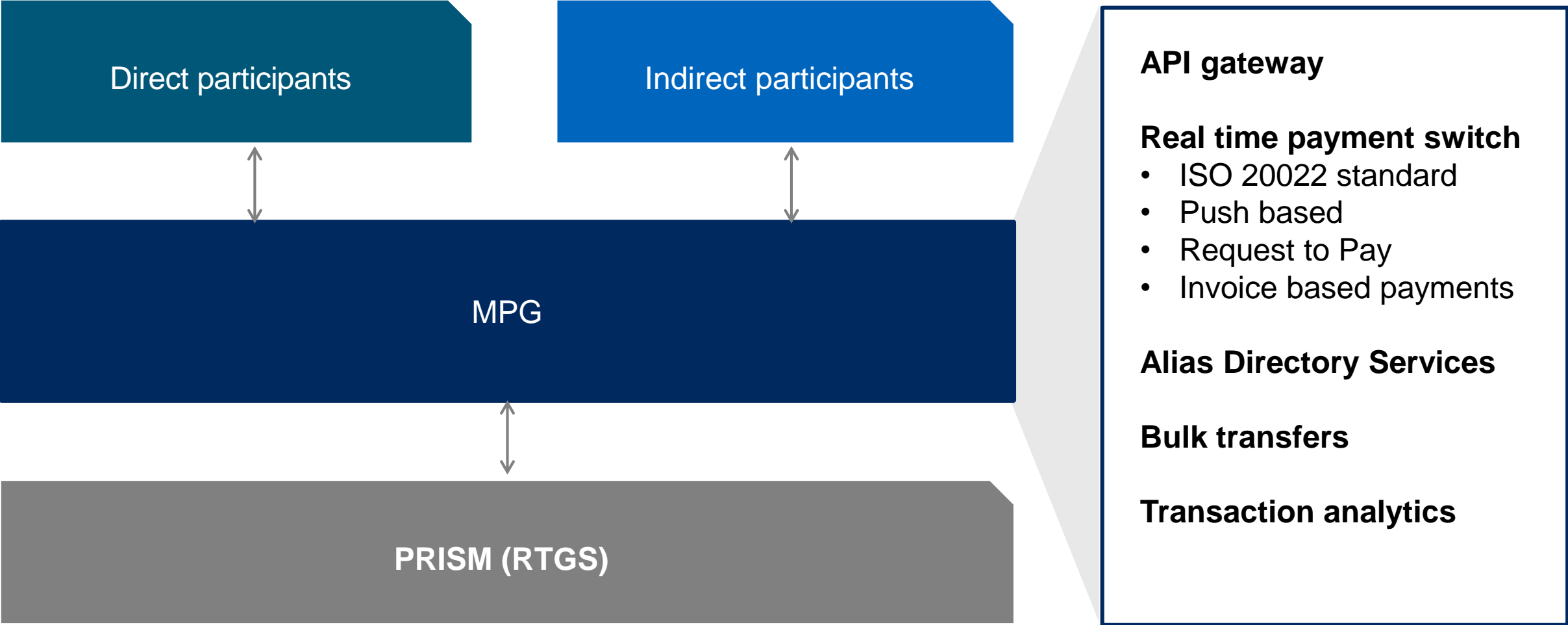
Delayed customer/merchant settlement (T+1 to T+7)

Push based instant payments for merchants and end users

Limited ability to send **multiple transactions in a single file**

Bulk credit services available across participants

MPG will provide the core infrastructure for digital payments across all payments participants



Micro Payment Gateway will focus on high volume low value payment use cases...

NON-EXHAUSTIVE

	Example payment use cases (non-exhaustive)	VALUE p.a. (PKR tr)	VOLUME p.a. (bn transactions)
P2X	a Merchant payments (goods/services)	~20	~39
	b P2P incl. domestic remittances	~3	~1
	c National Savings scheme	~1	<0.1
B2X	d Private sector salaries and wages	~15	~0.5
	e SME supplier payments ¹	~6	~1
	f Tax payments	~3	<0.1
	g Dividends	~0.5	<0.1
G2X	h Federal government salaries and pensions	~0.5	<0.1
	i Provincial government salaries and pensions	~1	<0.1
	j Gov supplier payments (services and goods)	~1	<0.1
	k Welfare payments ²	<0.1	<0.1

Use cases can be addressed through different payment types: Bulk payments, single credit push, RTP

¹ Excl. large value corporate payments; ² BISP

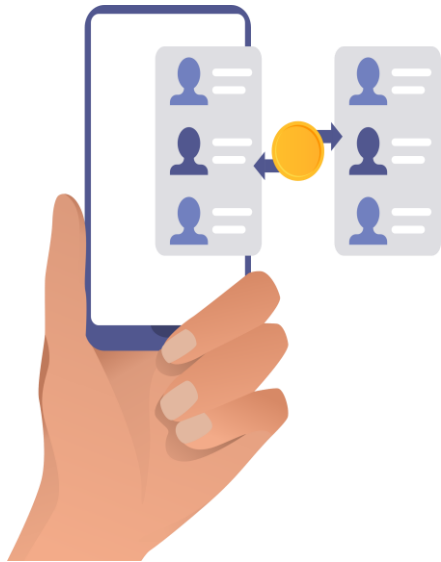
Source: Expert survey, bottom-up quantification of use cases

...and allow the introduction of new and innovative products, services and platforms

Interoperable local QR payment scheme leveraging MPGs Request to Pay features



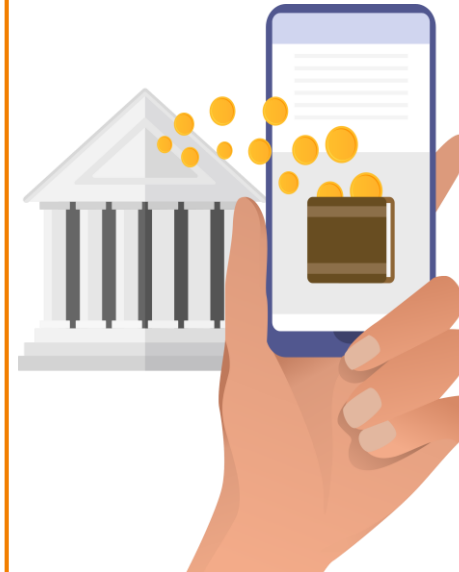
Alias based payments leveraging phone contacts due to MPGs Alias feature



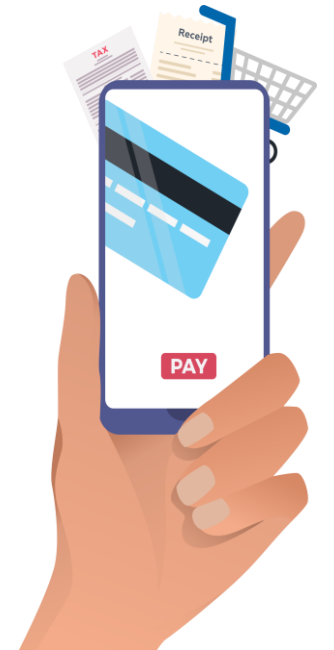
Payments directly through widely used non banking Apps through availability of MPG SDK



Direct to account salary transfer to any licensed institution through bulk payment module



Emergence of super integrators across financial and non financial sector through API integration



Banks will need to assess and prepare for integration - Example

Ensure 24x7 real time processing in core banking

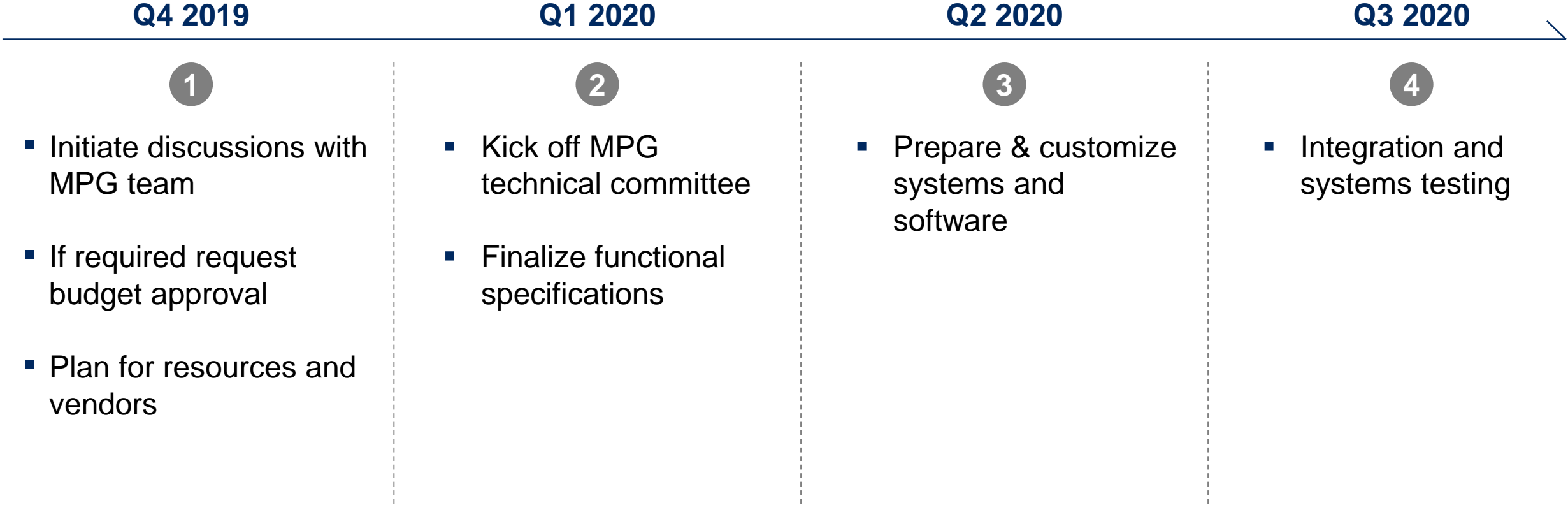
Ability to credit and debit within 5-15 seconds

Adjustment in reconciliation procedures if required

Adjustments to business process if required

Alignment with business on upcoming changes

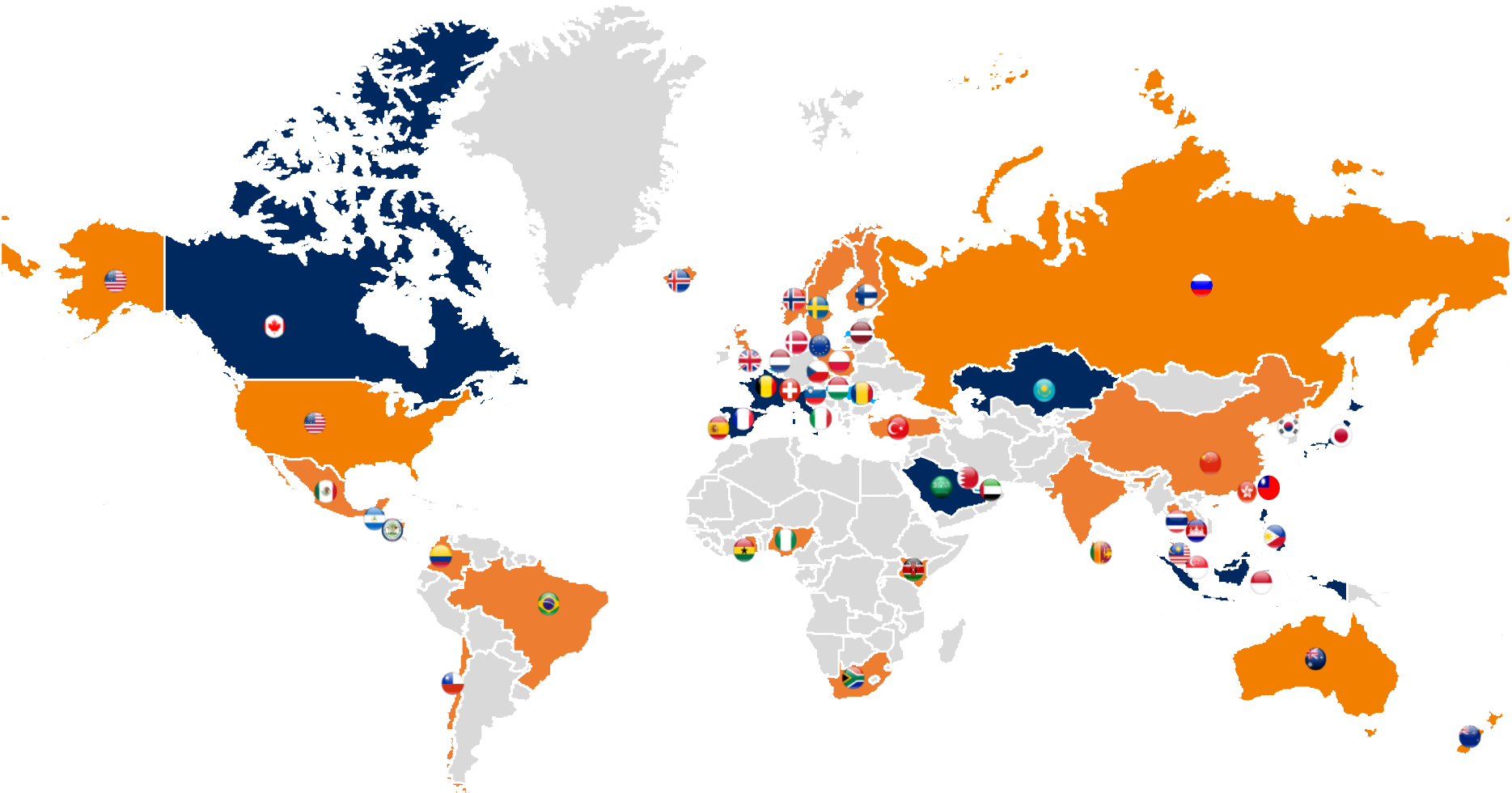
Plan going forward – Potential participant actions



Backup

Faster payments is being adopted globally

■ Exploratory/Design/Build ■ Live – some form of Real Time Payments



- **Sector wide interoperability**
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1 Also referred to as "instant" or "immediate" payments

SOURCE: McKinsey, Press search

Real-time payments have provided a wide range of benefits to banks and other players across the globe



Increase in electronic transactions and fee revenue



THAILAND



135%

increase in **electronic transfers** within two months of launch by Kasikorn bank in 2017



Increase in float



INDIA

8.4_{PKR tr}

increase in **deposits of banks** in 5 years



Introduction of innovative product offerings



UK



Barclay's Pingit
(integrating all user accounts into one platform)

282_B

PKR worth of transactions within 4 years of launch



Decrease in operational costs



INDIA

16%

decrease in **cheque processing** across India within 3 years of launch



Growth in merchant acquisition



THAILAND

60%

growth in **acquired merchants** in 2018 to 1.6Mn, fueled by innovative and cheaper payment form, e.g., QR codes

2_M

downloads within two years of launch

48_K

businesses registered within 2 years of launch

1 Share of money supply deposited with banks increased by 4 p.p. from 86% in 2011 to 90% in 2016 in India. 4% of India's money supply in 2016 is \$80Bn converted @104.7 rupees per dollar
2 GBP 2bn worth of transactions in 4 years converted at 140.8 rupees per GBP

MPG enabled merchant payments vision– QR code example

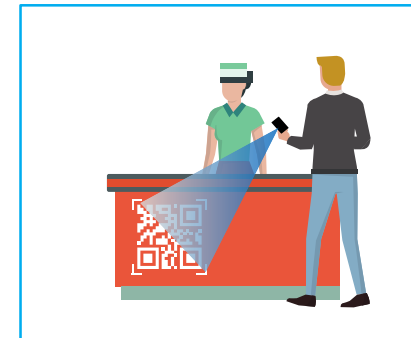
PUSH
STATIC
QR¹



1 Merchant tells payment total



2 Customer opens payment app with QR code scanner



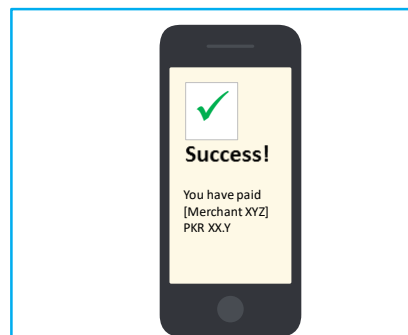
3 Customer scans merchant static (e.g., printed) QR



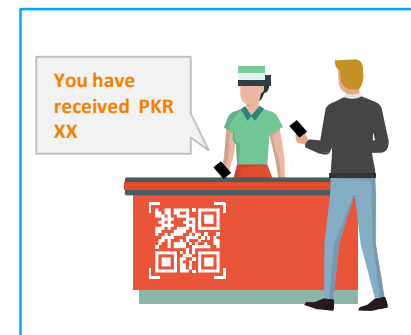
4 Customer inputs payment total



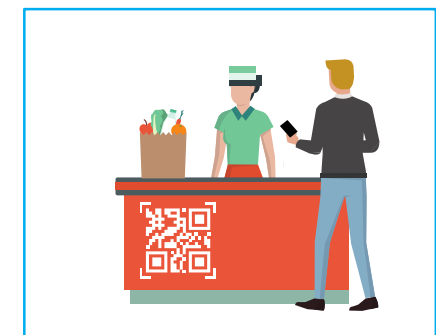
5 Customer authorizes payment



6 Customer receives confirmation



7 Merchant informed of receipt of funds

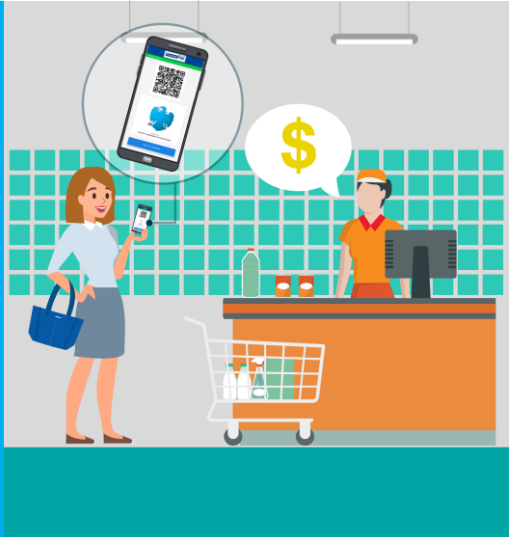


8 Merchant hands over merchandise

¹ Payment forms are not exhaustive - other modes (like bar codes and NFC tags) are also possible but would have similar process flows

This can allow new and innovative products, services and platform introductions

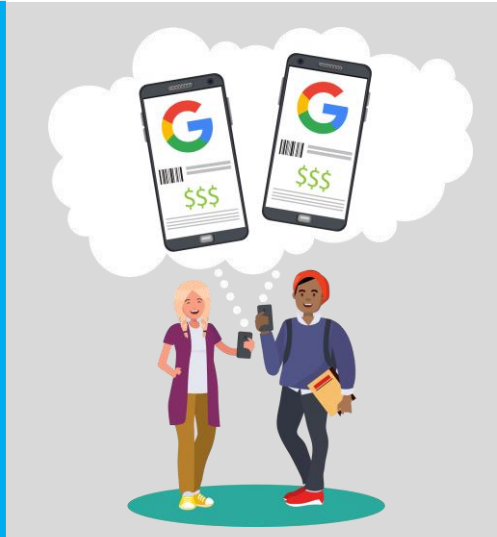
Interoperable QR payments



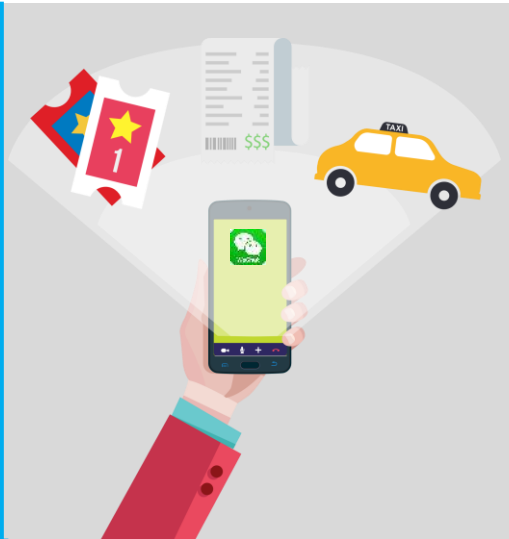
Contact payments



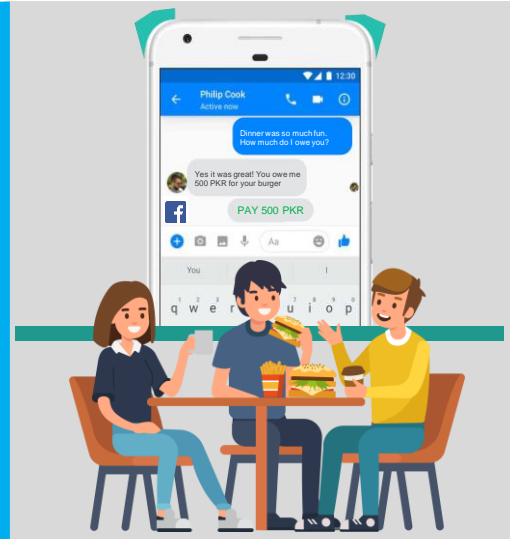
Close range payments



Integrated payment ecosystems and platforms



Integration into widely used apps



Platform for robust marketing



Payment digitization presents multiple benefits to financial institutions

Decreased costs from cash handling

Banks currently spend 5-10% on cash management

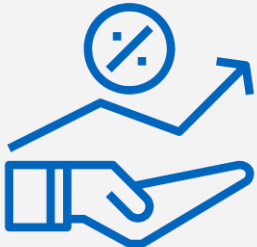


Increase in transaction revenue

stemming from overall increase in digital transactions



Benefits of Payment Digitization



Increase in deposits

More PKR in accounts due to digitisation of payments, of which only 0.2%¹ is digital today



New revenue streams

Opportunity to capture new segments and markets

¹ Retail payments

Digital payments in India have significantly grown, with UPI and IMPS transactions steadily increasing in volume and share

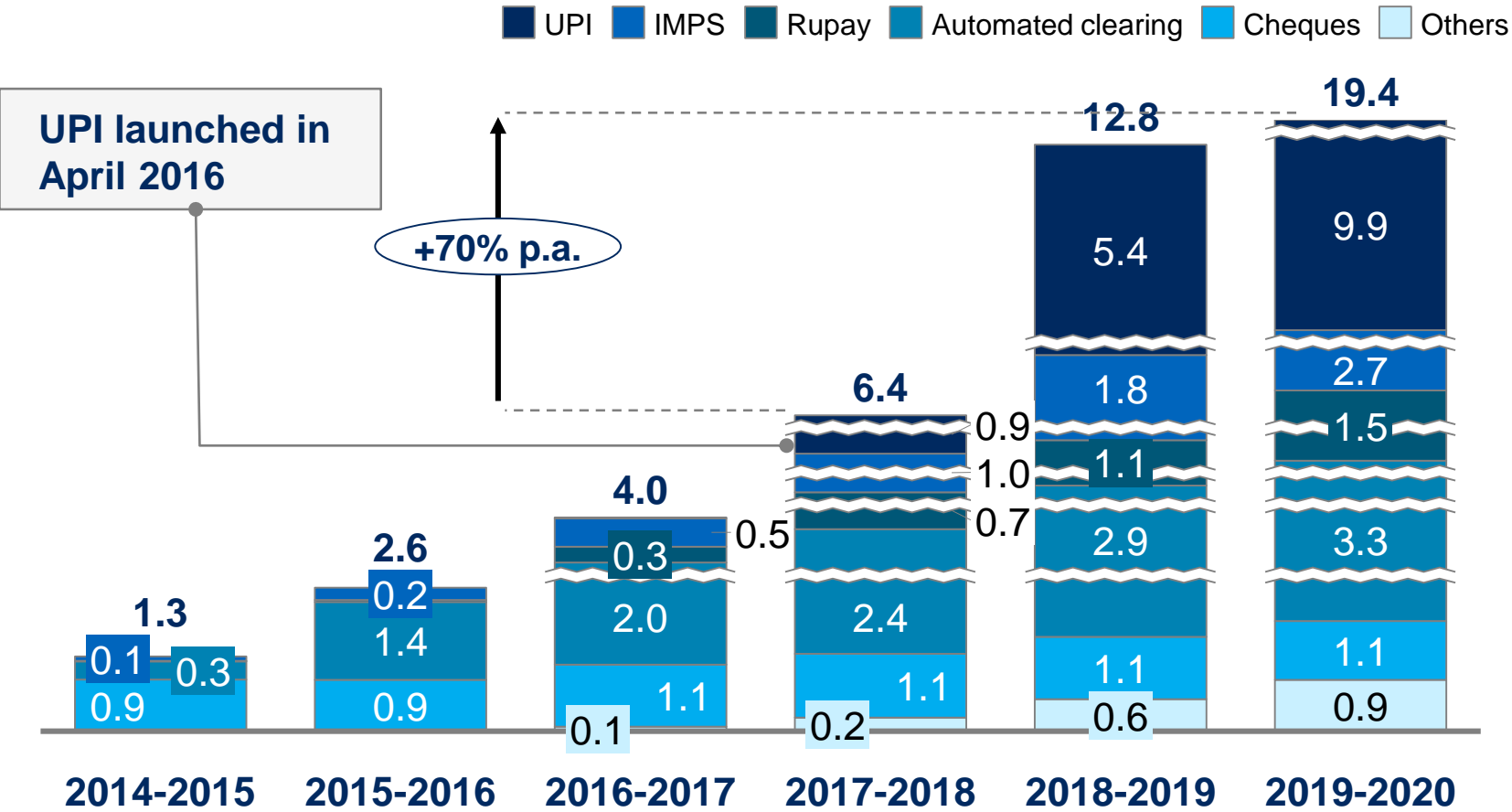
Transactions on NPCI operated systems¹

Bn transactions

CAGR²

%, 2016-2019

Takeaways



722%

74%

74%

19%

-2%

125%

- Total digital transactions increased more than ~5x between 2016 and 2019
- UPI and IMPS currently account for over 60% of total transactions
- Cheques and automated clearing have been steadily losing transaction share

¹ Excludes ATM cash withdrawals
² CAGR for UPI calculated from 2016-2019
³ Others include Rupay, BBPS, NETC and USSD 1.0
⁴ Actual data from April 2019 – September 2019, straight line projections thereafter

Digital payments in India have significantly grown, with UPI and IMPS transactions steadily increasing in volume and share

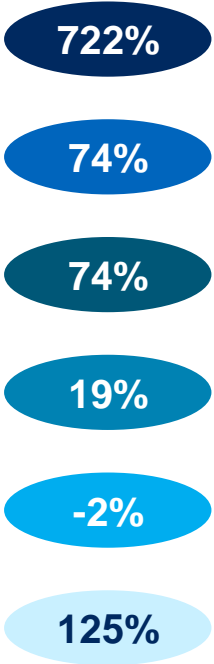
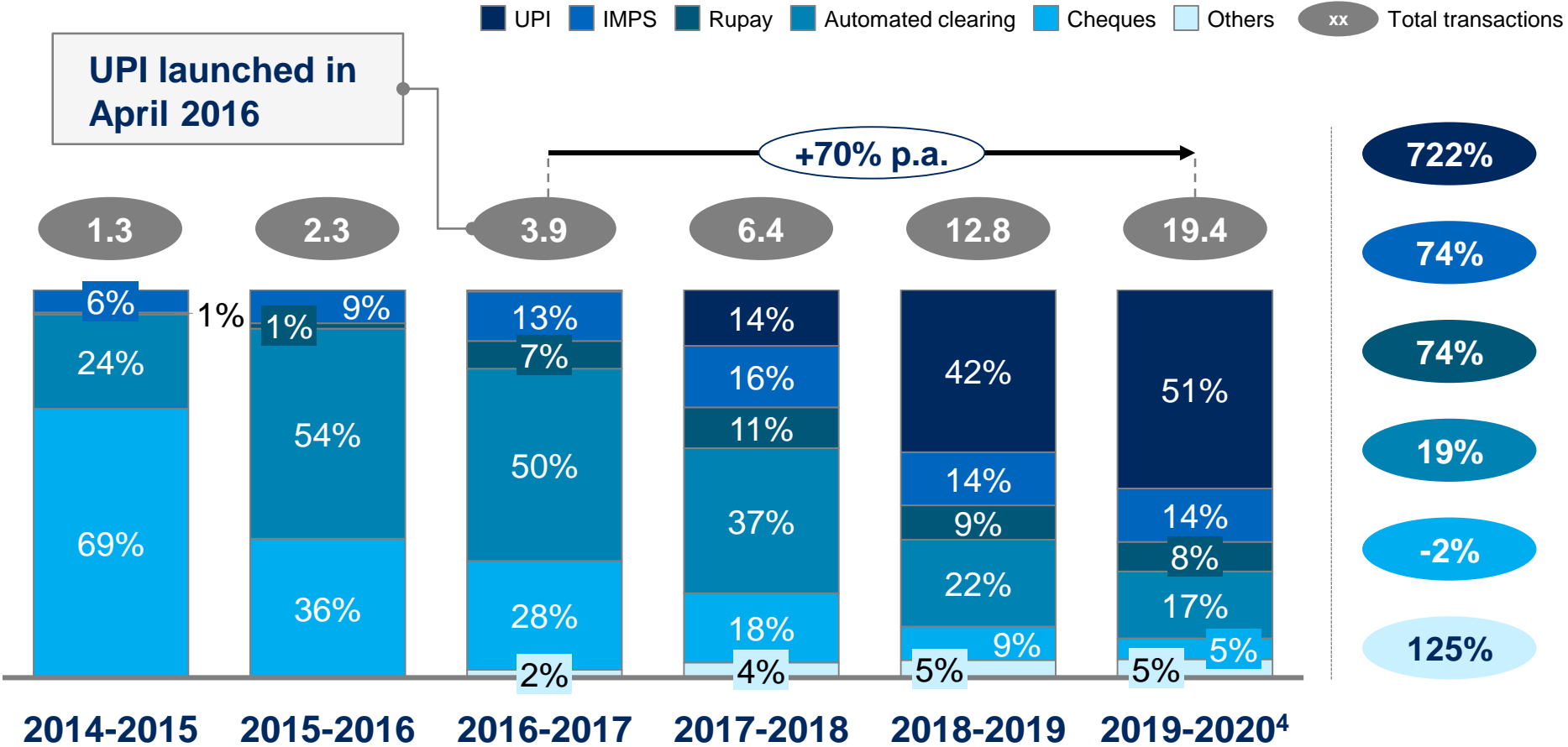
Transactions on NPCI operated systems¹

Bn transactions, % of total

CAGR²

%, 2016-2019




Takeaways



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Project progress and next steps

 Completed
  On-Going
  Not started

