

MODERNISING YOUR CARD PROCESSING: OVERCOMING THE CHALLENGES

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Challenges and opportunities of a complex world



Modern Card
Processing



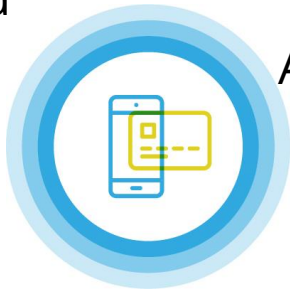
High
Availability



Migration



Modernizing
the
ATM/POS
experience



Real Time
Payments

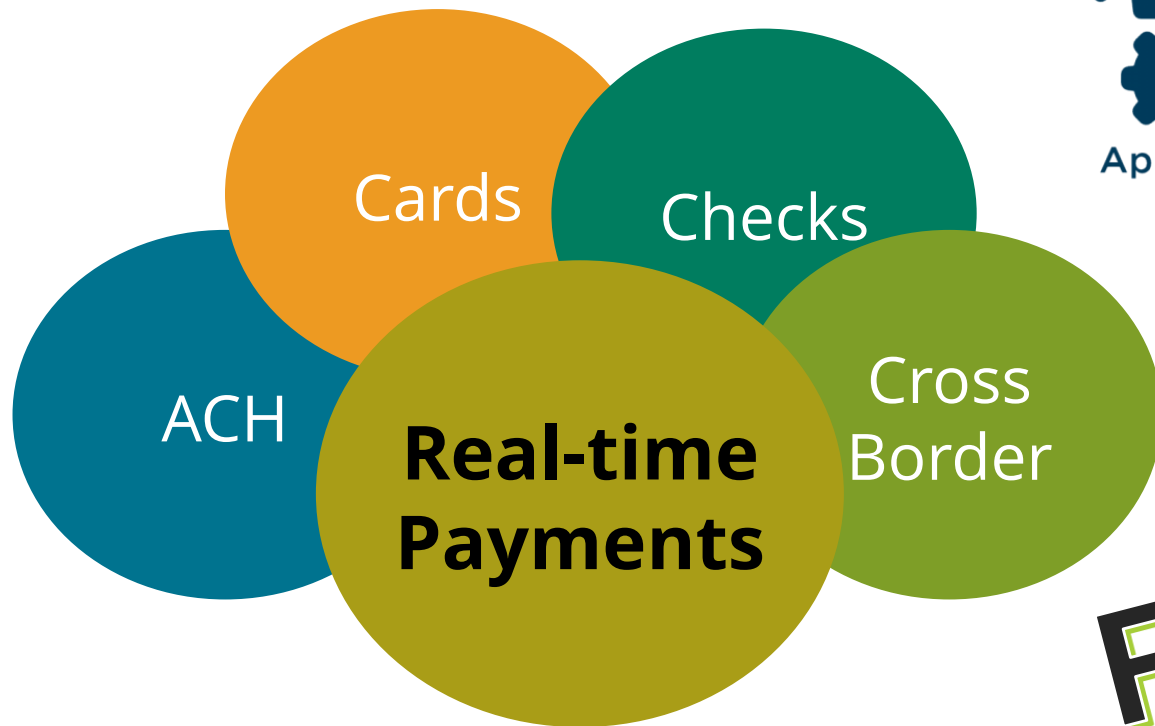


Cloud



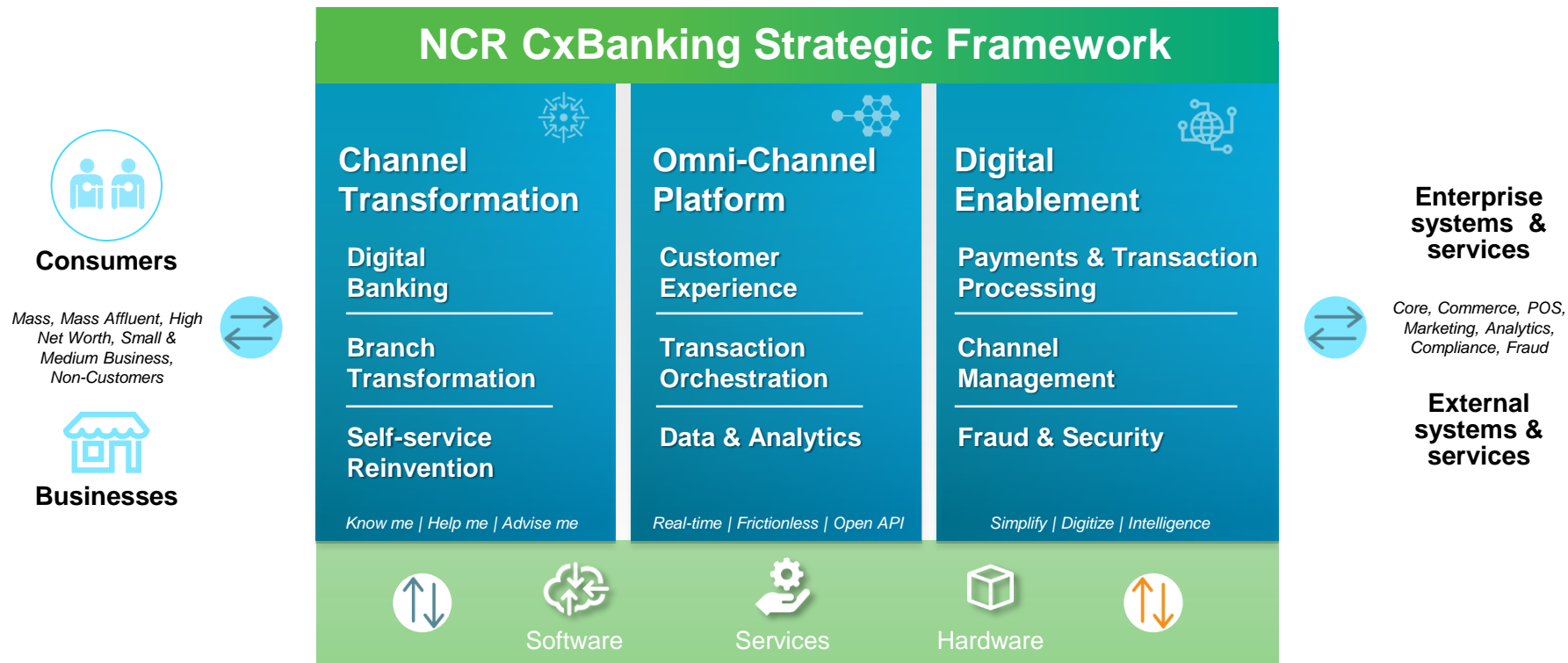
Open
Banking

But where next?



Fintechs

NCR's CxBanking Platform for Financial Institutions



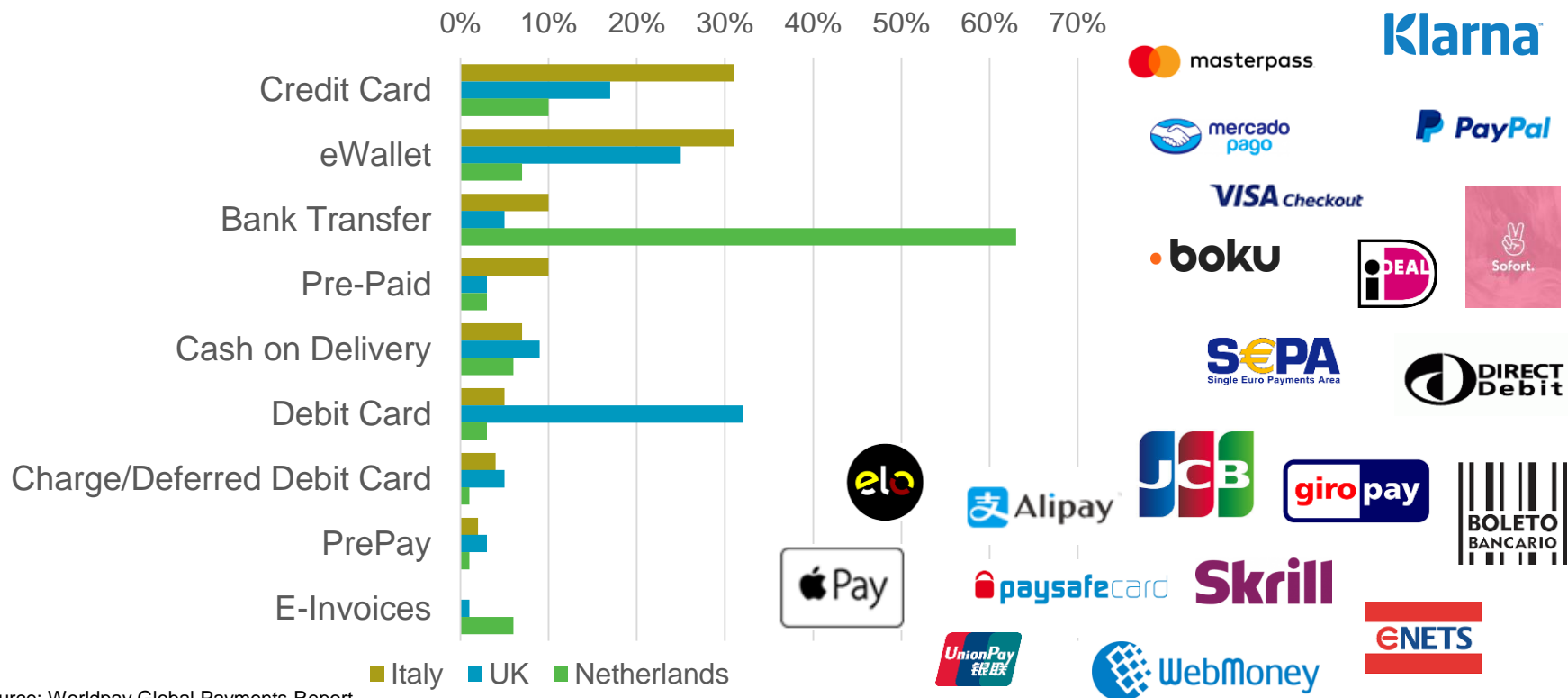
Modernizing card processing



- Card mix – credit, debit, pre-pay
- Card schemes – Bancomat, Visa, Mastercard, Amex, Diners, Union Pay etc
- Responsiveness in authorisation
 - How to reduce decline rates
 - But protect from risk
- Tokenisation – Apple Pay, Samsung Pay, wearables
- Alternative payment schemes – important for acquirers

Many more payment schemes around

eCommerce Payment Usage 2016 (% of total spend)



Source: Worldpay Global Payments Report

Swiss Private Bank



Context

- One of the largest Issuer (Visa, Mastercard, Diners) in Switzerland and other countries
- 1.4m cardholders
- Service and operational excellence
- Early adopter of Authentic

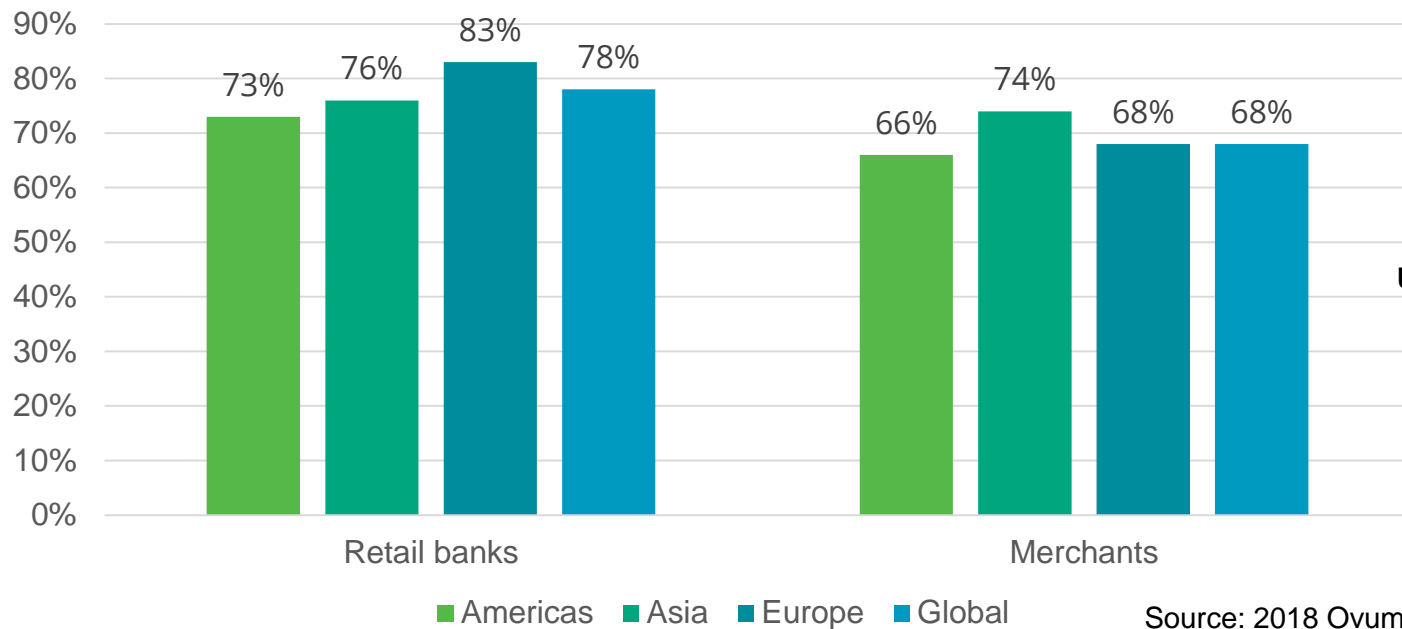
Solution

- Single platform across all countries
- Apple Pay, Samsung Pay
- Rich authorization processing
 - How long a customer
 - Spend behaviour
 - Velocity checks
 - Integration to fraud detection engine
- Responsive to business demands

Real-time Payments + Open Banking Impact Cards



Please state your level of agreement with statement “The combination of immediate payments and open bank APIs will see the importance of payment cards reduce over time”

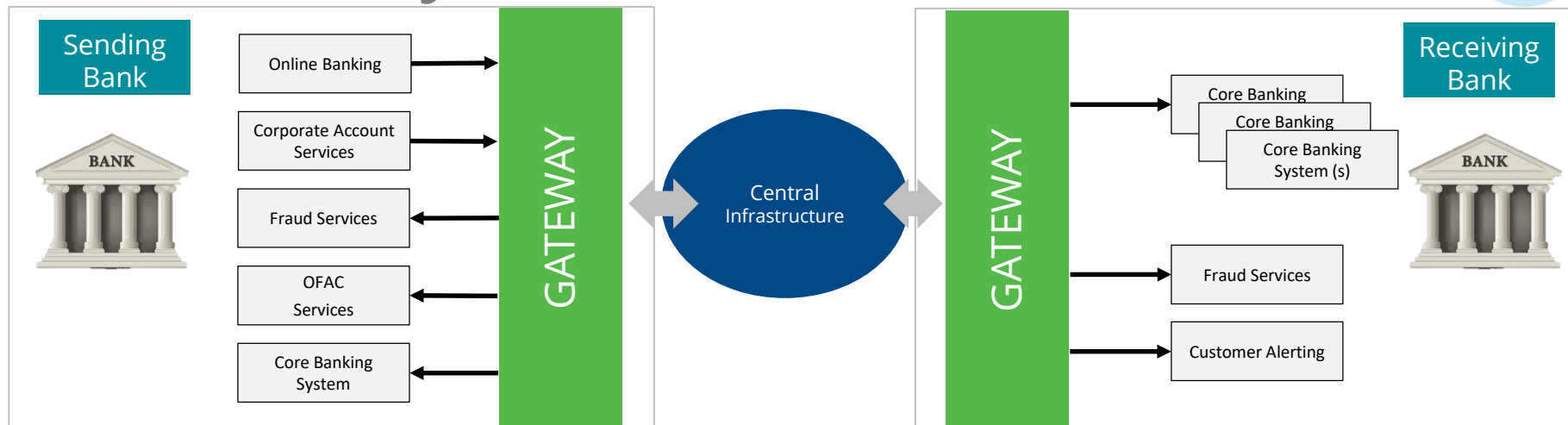


Over time, banks and merchants expect to see card volumes put under pressure by the combination of immediate payments and open banking

Source: 2018 Ovum Global Payments Insight Survey
(report available [here](#))



Real-time Payments



Gateway Functional Characteristics:

- Message Protocol Mapping
- Workflow control
- Monitoring & Alerting
- Authorization & Transaction Monitoring
- Respond to new requirements (Request to Pay)

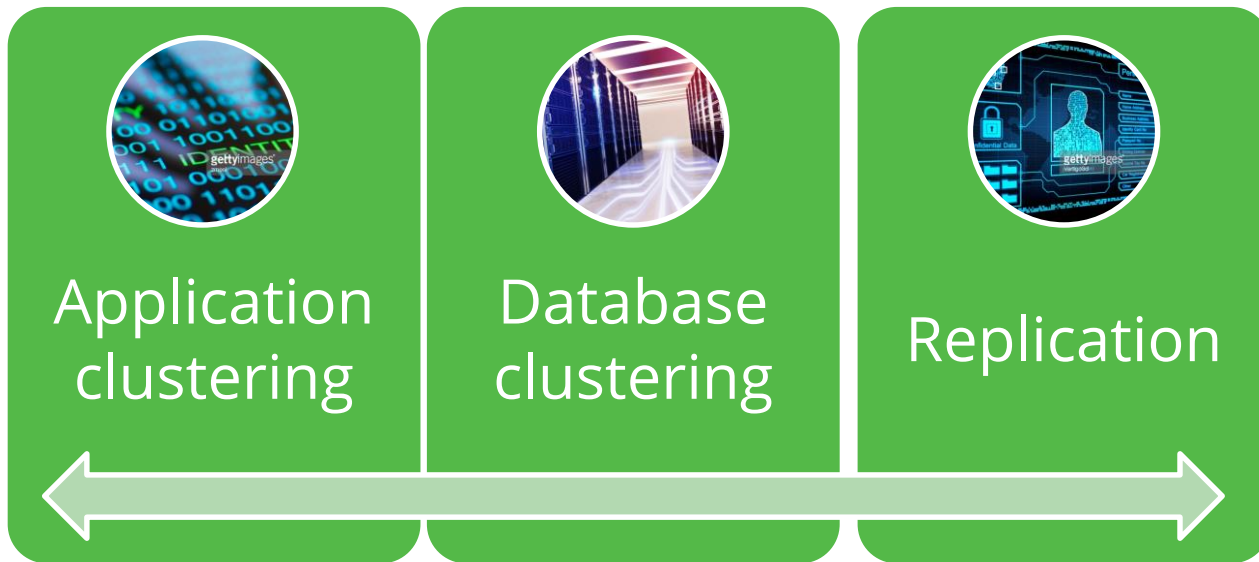


Gateway Non-functional Characteristics:

- High performance
- High availability
- Fail-over / alternate processing options
- Security & Data Integrity

High availability on commodity hardware

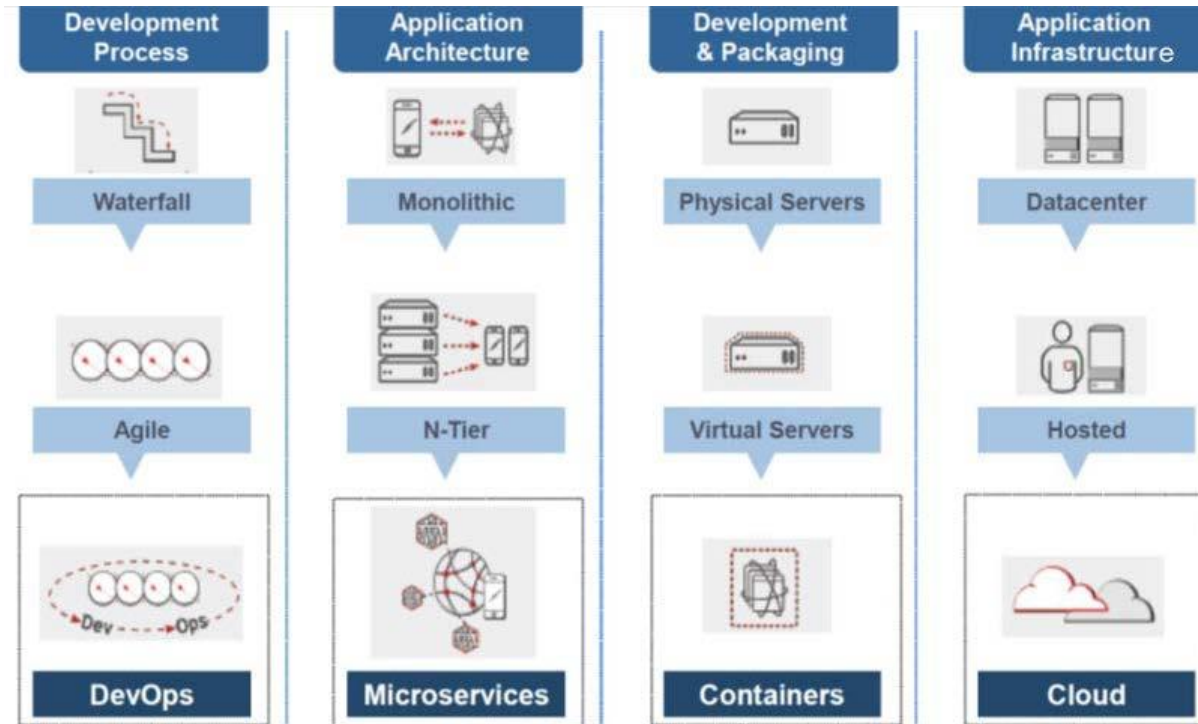
In modern technical topology, resilience and extensibility are achieved through 3 key elements



Example availability: 8bn transactions per year with just 20 having a problem
Customer does not measure availability as % - counts problem transactions

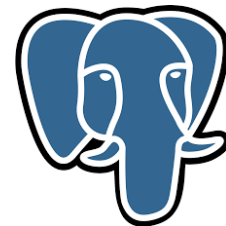
Cloud environments

Changes in How Technology Is Being Developed and Deployed



Cloud Technologies, Challenges, Benefits

- Containerization – Docker and Kubernetes
- Database – Cassandra, PostgreSQL, NuoDB
- HSMs
 - *Cloud providers* – no payment functions
 - *Cloud enable HSM* – non performant
 - *Hosted* – potential performance issue
 - Hosted & collocated – only route for now
- Working with Barclaycard and others
- Key benefits:
 - Reductions in Capital spend
 - Elasticity
 - Deployment cycles (DevOps – CI/CD)



Migrating to a new system



THE TIMES

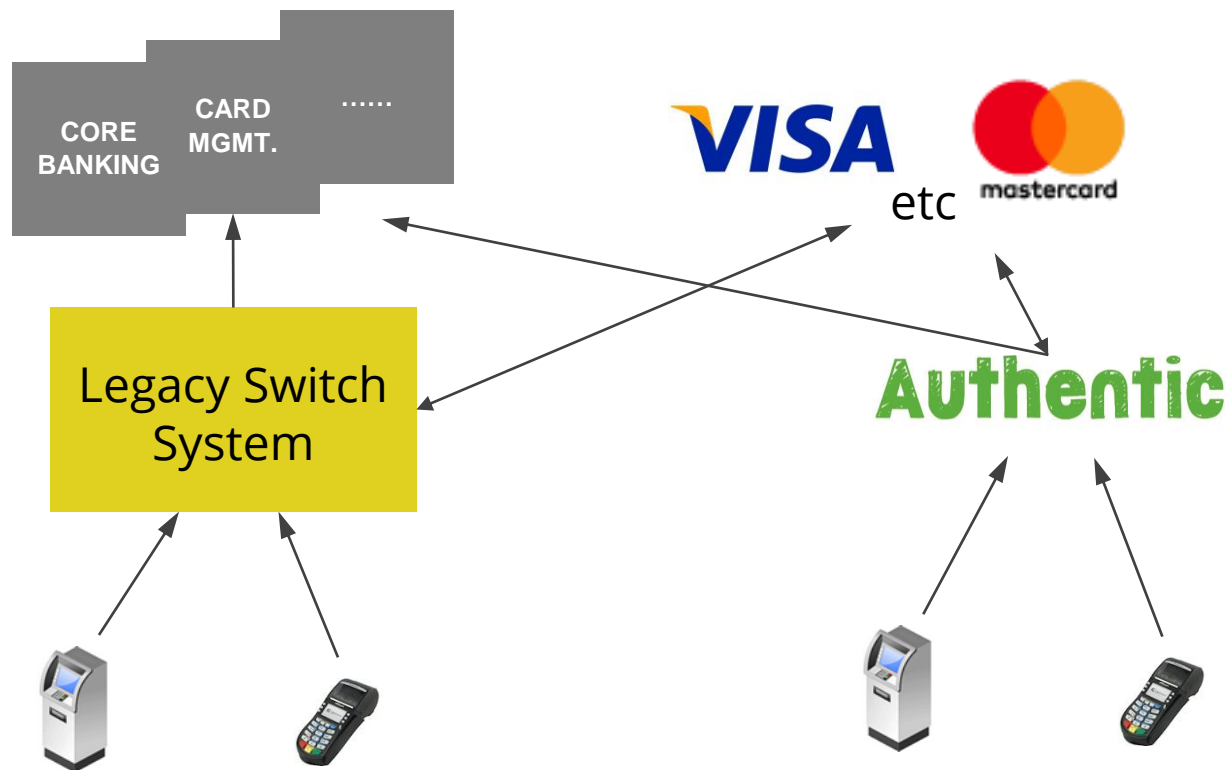
Paul Pester quits TSB after latest computer meltdown

September 4 2018

Paul Pester has quit as chief executive of TSB four months after a botched systems upgrade as the bank continues to struggle with IT failures.

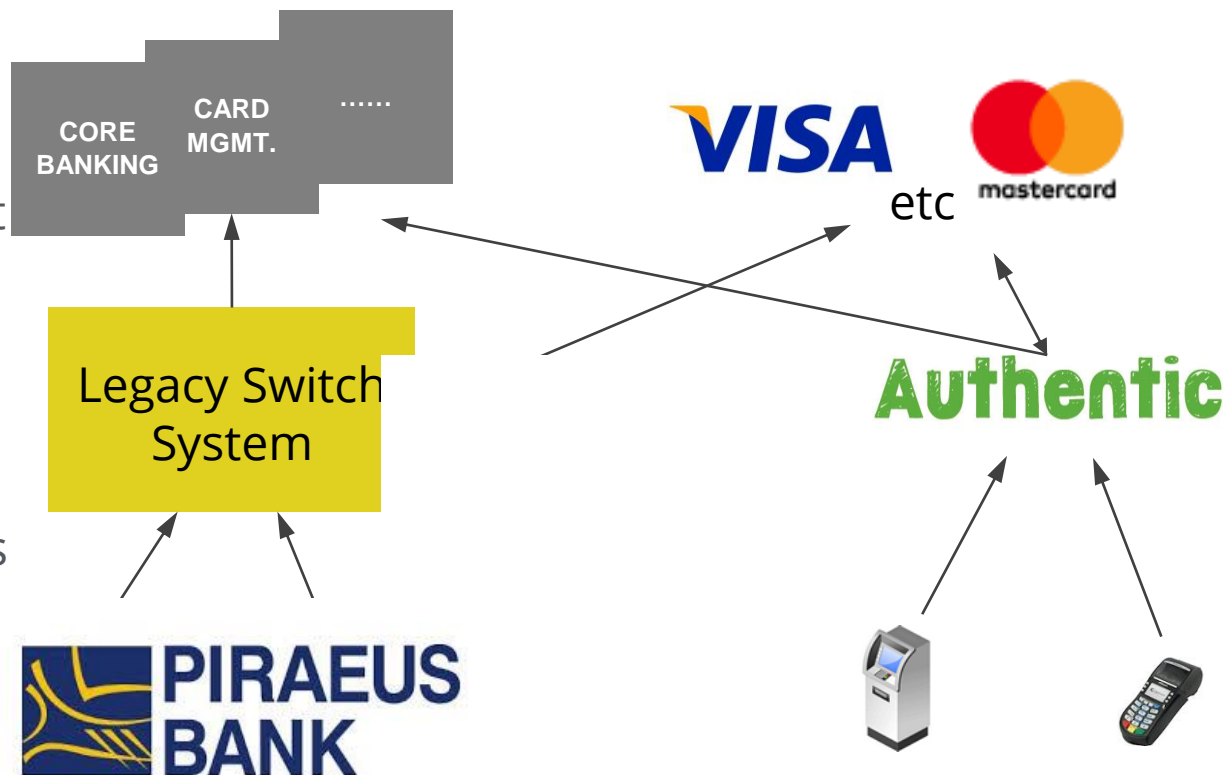
Up to 1.9 million people were locked out of their online or mobile banking accounts after the IT upgrade in April. Yesterday the bank was forced to apologise again after some customers suffered further digital disruption over the weekend.

Migration Routes



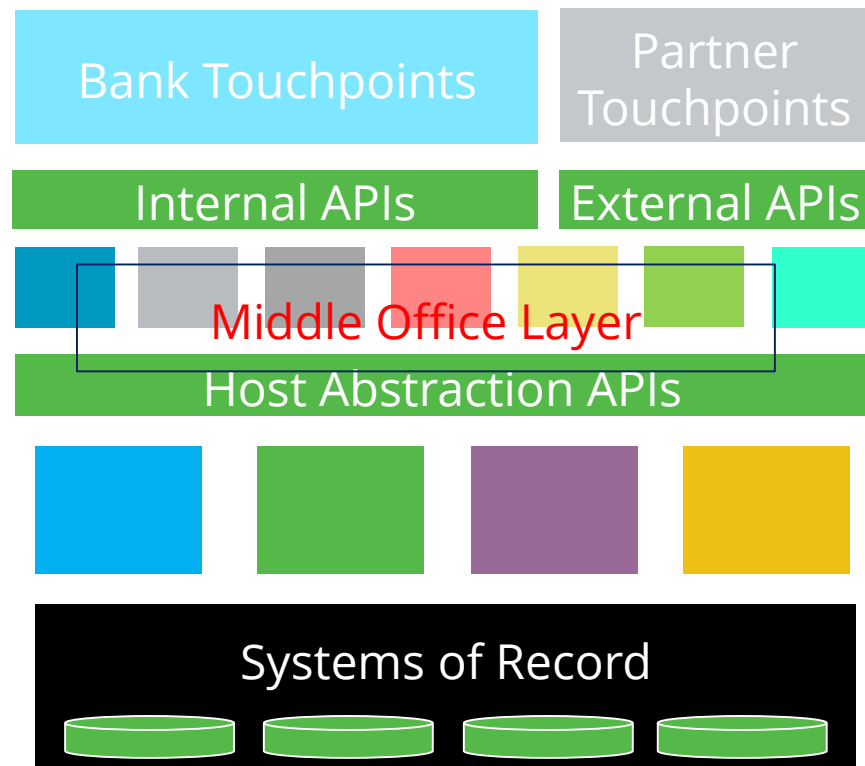
Migration Routes

- Steps
- Rollback
- Source for settlement & reconciliation
- Incorporating new business functions
- Risk vs time
- Fast example: Piraeus Bank: 16 months contract to finish



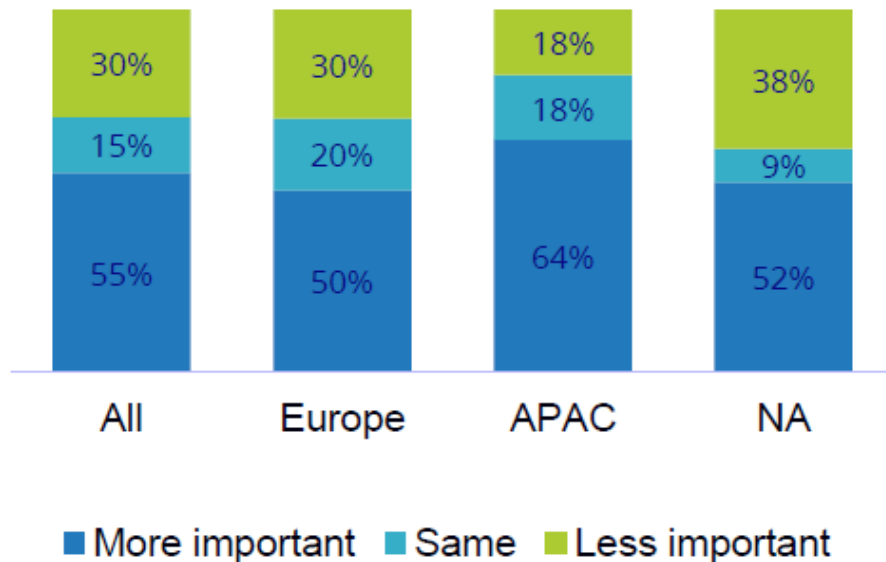
Open Banking

- Another 'channel' to your customer
- Another silo of data processing?
 - Adding to branch, cards, digital banking
- Move to Omni-channel transaction processing
 - Middle Office
 - Single transaction execution layer
 - Single point to integrate with internal (core banking etc) and external systems
 - Ability to execute cross channel capability
 - start in digital complete in branch
 - Knowledge across channels
 - APIs for bank touchpoints and external



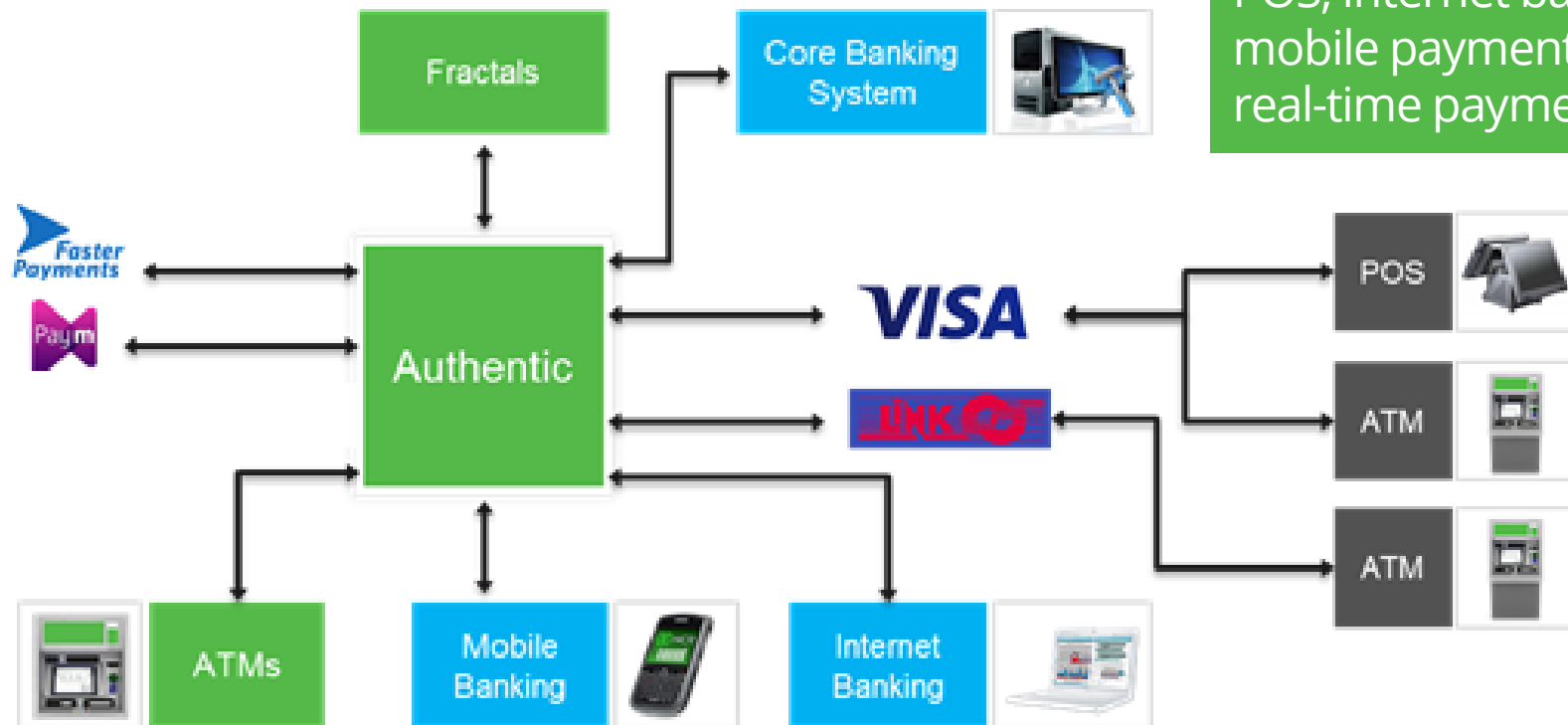
Omni channel more important with open banking

Will omnichannel capabilities become more, or less, important in the open banking era?



Source: IDC research 175 FIs globally (Q2 2018)

The Cumberland



Hub for all payment transactions – ATM, POS, internet banking, mobile payments, real-time payments

Modernizing the ATM and POS



- ISO 20022 based protocols for ATM and POS
- Two layers to standard:
 - Information elements
 - Syntax of the message
- Protocols:
 - nexo Acquirer Protocol (merchant to acquirer)
 - nexo-IFX ATM protocol
 - (others)



These standards have now been included in the acceptance platform used by Carrefour, a global leader and the reference in food retail. Meanwhile, nexo standards also enable Natixis Payments to more easily and swiftly design new innovative services, as an in-flight mobile device/tablet payment service for airlines.

Natixis press release 3 October 2018

Nextgen ATM: industry and Deployers Asking for Change



“The ATM network has grown increasingly complex. and it’s our job to create meaningful change that makes ATM technology easier to own and operate, and more supportive of the digital-first consumer.” Frank Gauld

The mission is to **define the next generation ATM architecture, to simplify standardize and rationalize.**



THE ATM MUST EVOLVE

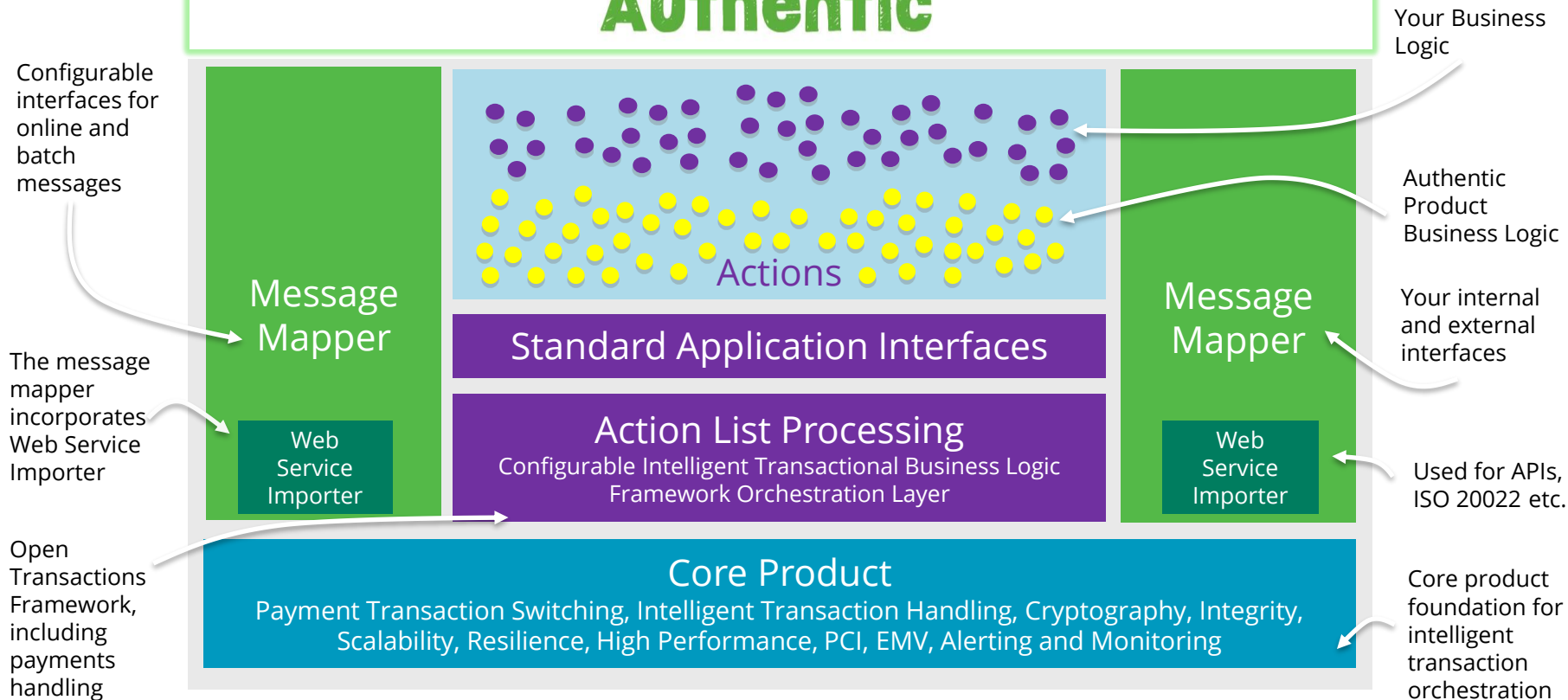


CONSUMER BEHAVIOURS ARE CHANGING

AUTHENTIC TECHNOLOGY

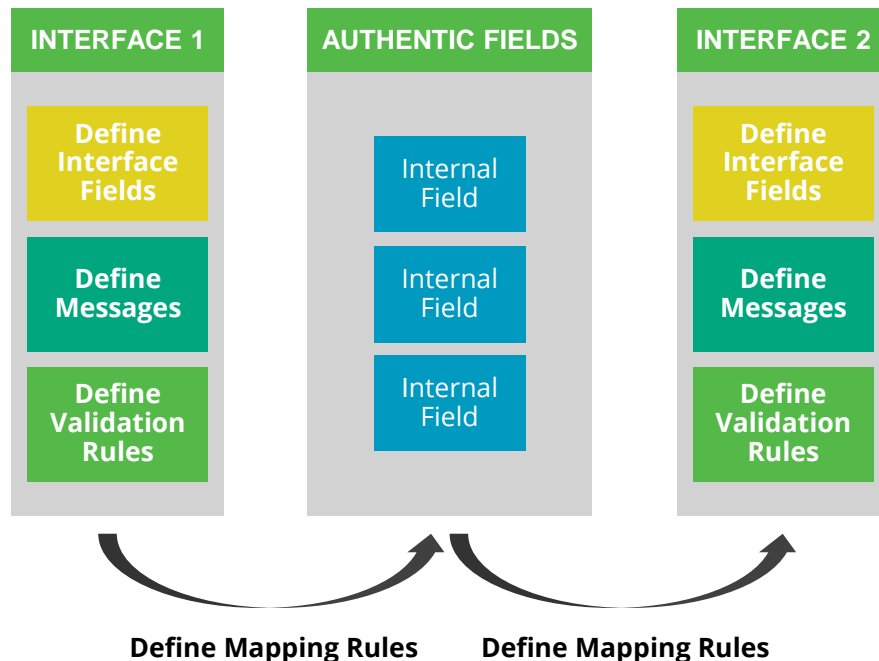
Intelligent Transaction Handling

Authentic



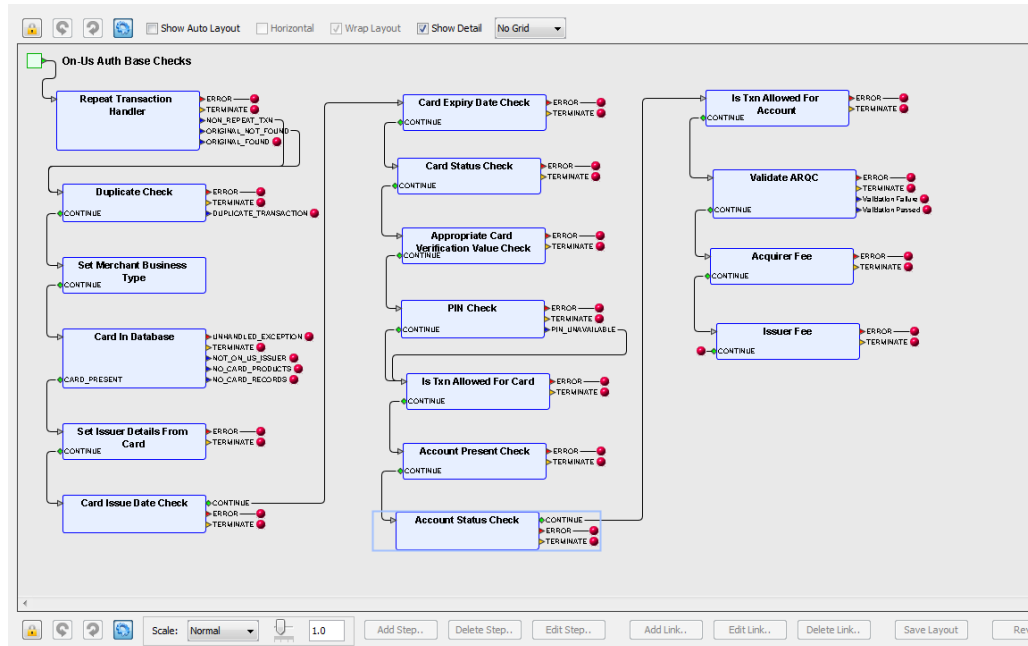
Message Mapping

- External / internal translation
- GUI to define message conversion
 - Transformation rules
 - Parsing and formatting rules
 - Validation rules
- Fixed length, variable length, bit mapped, XML/web service
- Web service importer
- Java code for complicated transformation



Action List Processing

Orchestrating the transaction processing



End-to-end transaction workflow management

- Combines workflow with routing
- Actions grouped into lists
- Lists assigned to scenarios
- Actions re-usable across lists
- Lists re-usable across channels
- Alaric provide hundreds of actions
- Customer add own – Java 'applet'

CONCLUSION

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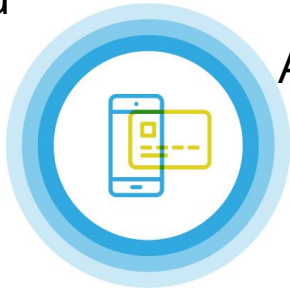
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Where next?

THANK YOU

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