Hello

Safe Harbor

Forward-looking statements are not guarantees of future results, events, levels of activity, performance, or achievements. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. These statements involve known and unknown risks, uncertainties, and other factors that may cause actual results, levels of activity, performance, or achievements to be materially different from any future results, levels of activity, performance, or achievements expressed or implied by these forward-looking statements

We are under no duty to update any of the forward-looking statements in this presentation to conform such statements to actual results or to changes in expectations. We assume no obligation to revise or update any forward-looking statements for any reason.

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Making the move

Smart Transport Ticketing in India

Verifone India
5th Nov 2017

For over 30 years,
we have been
making history

Now, we are creating the future

Leader in almost every market we operate

~5.4B transactions/year

>29 million devices

In >150 countries globally

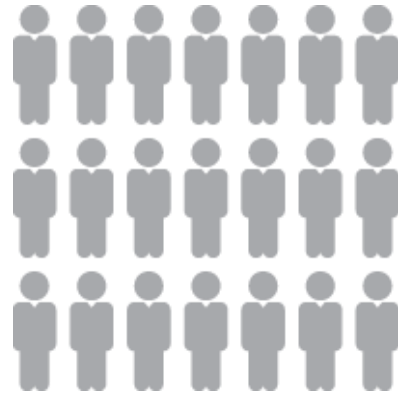**FY16, $2B revenue**

Over 5,700 people across 42 locations

Largest Terminal provider in India

INDIA HAS BEEN CRITICAL TO VERIFONE FOR 25 YEARS

1.7M+

Terminals in India

500+

Engineers

85+

Cities

Field Service, Repairs, Application Development, Helpdesk, Operations

Petro loyalty program management

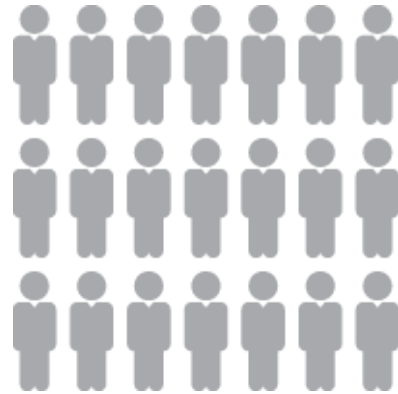## INDIA'S LARGEST FLEET CARD & LOYALTY MANAGEMENT PROGRAM

**India's SOLE provider of
Fleet Card Program Management**

26K+
Terminals in India

Field Service, Repairs, Application
Development, Helpdesk, Operations

3MM+
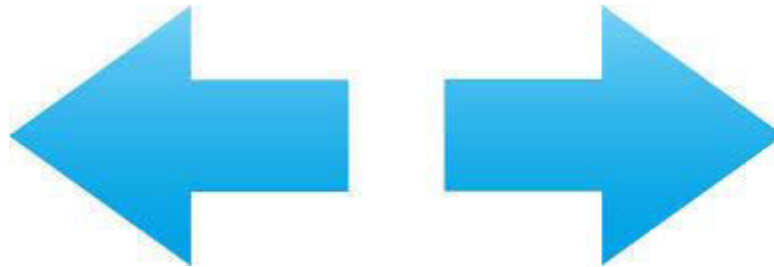**Active cards**

$19B **Transactions
processed per year**

10K+
**Terminals with
Wallet acceptance**

Smart Ticketing – Cashless , Interoperable

Interoperability?

Across modes of transport ?
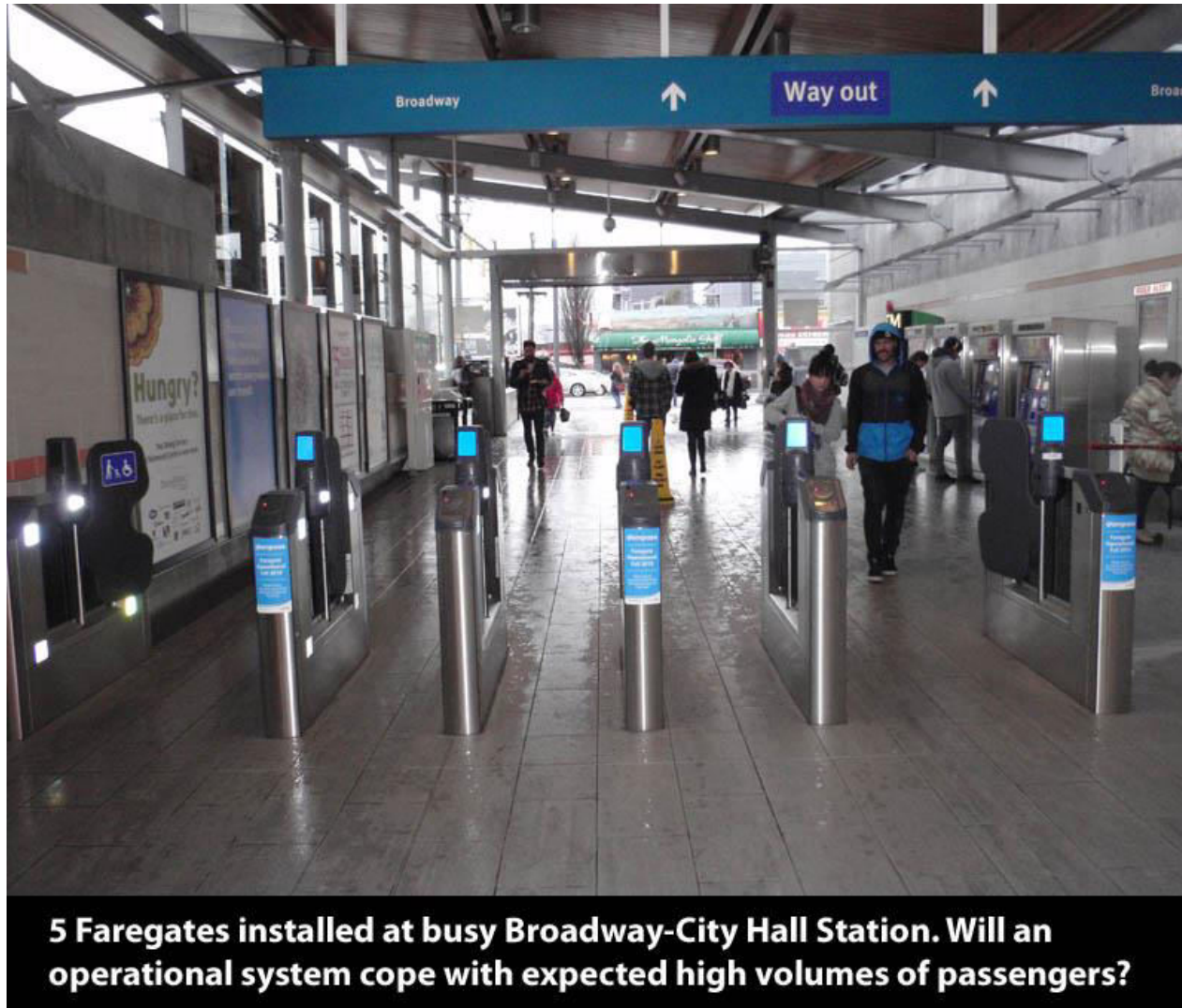Across retail and transit ?

Intra City? Or Inter City?
Across country?
International?

After all its payments!

5 Faregates installed at busy Broadway-City Hall Station. Will an operational system cope with expected high volumes of passengers?
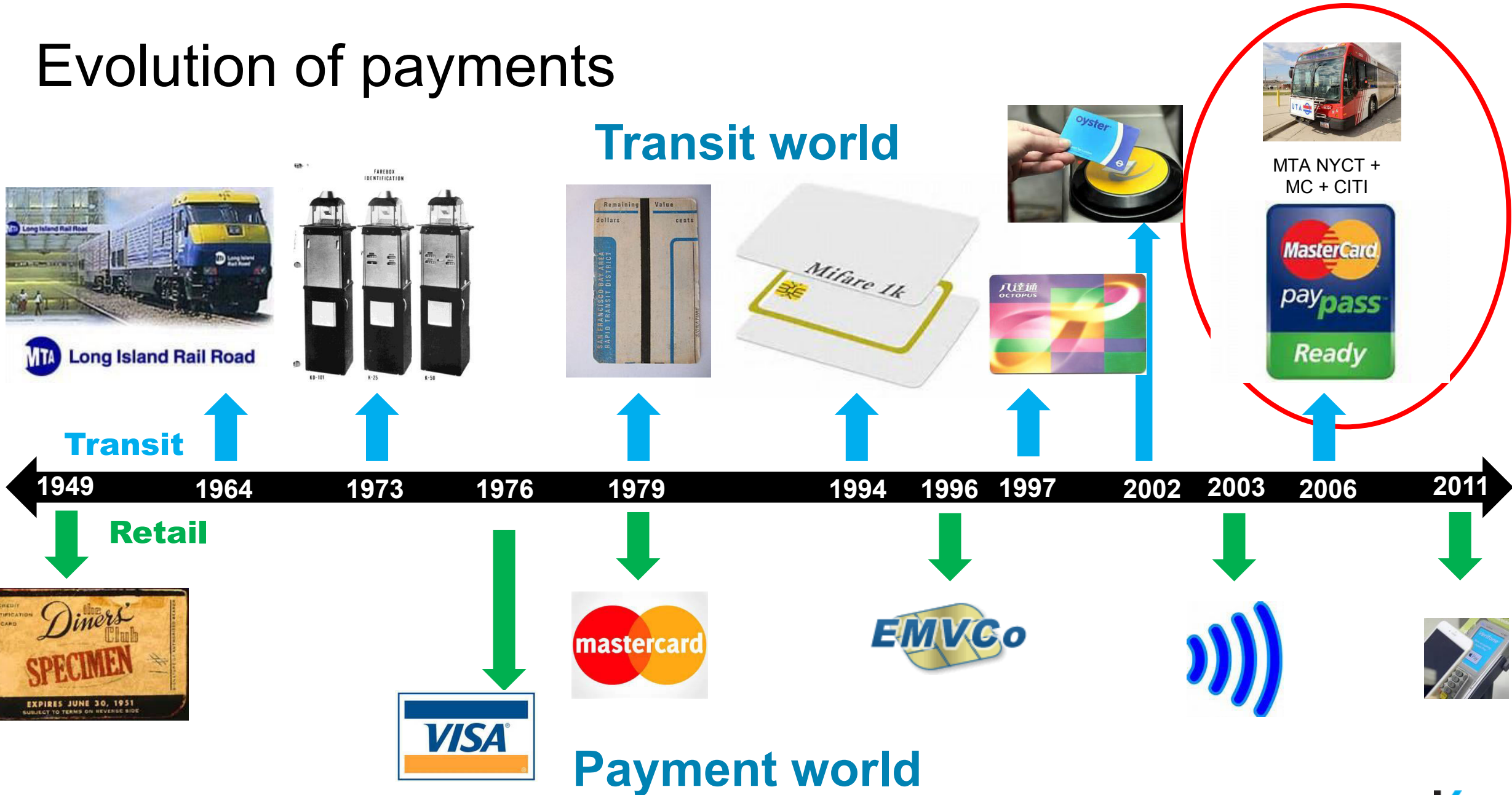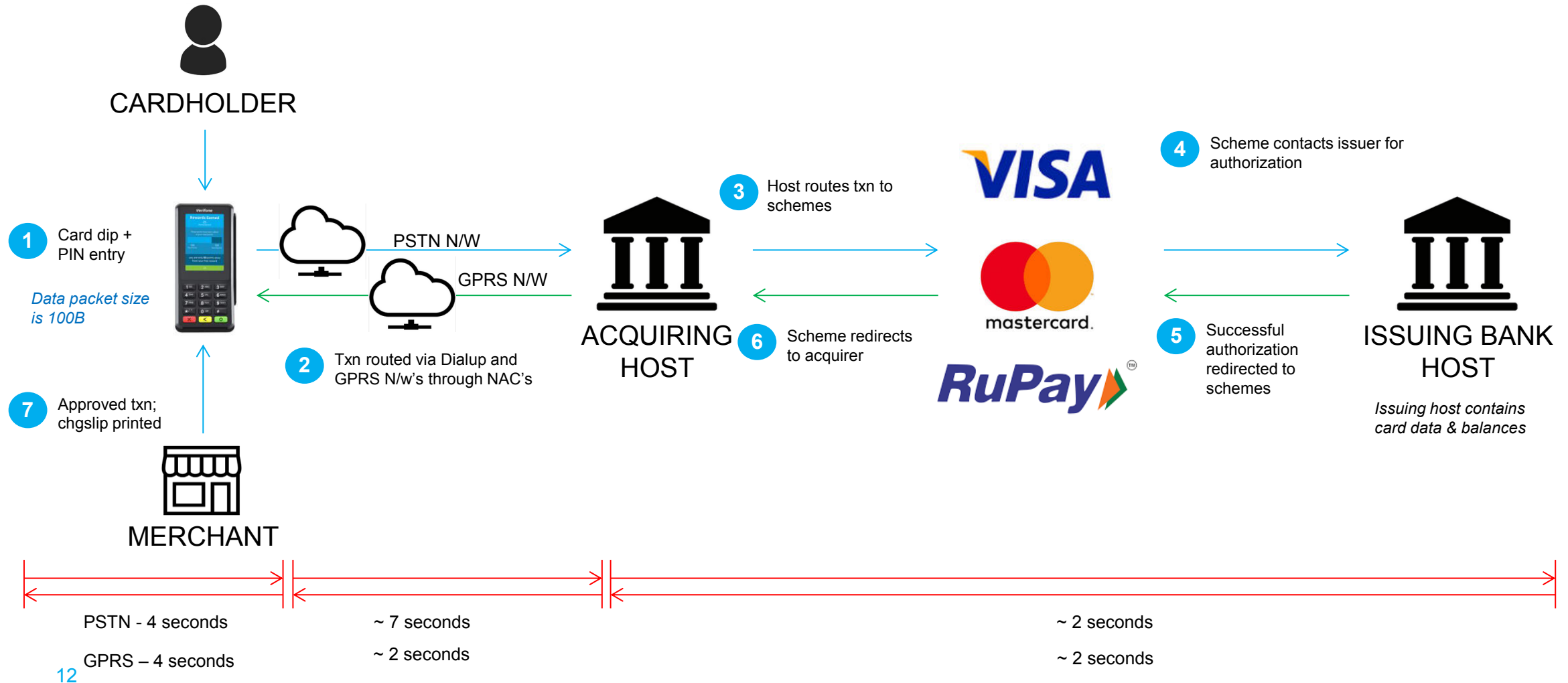
Problem Statement

Move riders quickly through the fare gates while ensuring that the transit authority collected its appropriate fare from each rider

Evolution of payments

Transit world

Payment world

Transit

Retail

| 1949 | 1964 | 1973 | 1976 | 1979 | 1994 | 1996 | 1997 | 2002 | 2003 | 2006 | 2011 |

MTA NYCT + MC + CITI

Payment Ecosystem

CARDHOLDER

1 Card dip + PIN entry

Data packet size is 100B

PSTN N/W

GPRS N/W

2 Txn routed via Dialup and GPRS N/w's through NAC's

3 Host routes txn to schemes

ACQUIRING HOST

6 Scheme redirects to acquirer

7 Approved txn; chgslip printed

MERCHANT

VISA

mastercard.

RuPay

4 Scheme contacts issuer for authorization

5 Successful authorization redirected to schemes

ISSUING BANK HOST

Issuing host contains card data & balances

PSTN - 4 seconds

GPRS – 4 seconds

~ 7 seconds

~ 2 seconds

~ 2 seconds

~ 2 seconds

Fact of the matter

Most transit agencies have proprietary fare payment systems today. These systems were implemented years or decades ago when there was no practical alternative, and even today they are still the most proven and widely available transit payment systems.

Push Factors

- Cost

- Vendor Lock-in

- Resource allocation

- Customer Inconvenience

- Lost revenue opportunities

Pull Factors

- Electronic payments

- Prepaid cards

- Open loop payment systems

- Contactless Payment Systems

- ISO standards

- Demonetization / Cashless society

- Smart Cities

Challenges

- Very few cases to follow

- Differences between card systems

- Interchange fees

- Banking laws

- Payment association rules

- Hostile conditions in emerging markets

- Make in India

- Resistance from crew due to personal interests

- Bank concerns - ROI

NFC Tap & go

Swipe & Pin

Unattended Solutions

- Verifone's UX series of unattended terminals – enabling contactless use cases

- Acceptance of closed/open loop payments – across card & Mobile forms

- Capabilities to manage end-end AFC Programs for bus/rail/metro transit systems – including:

  - Stored value management systems

  - Authentication systems

  - Access control systems
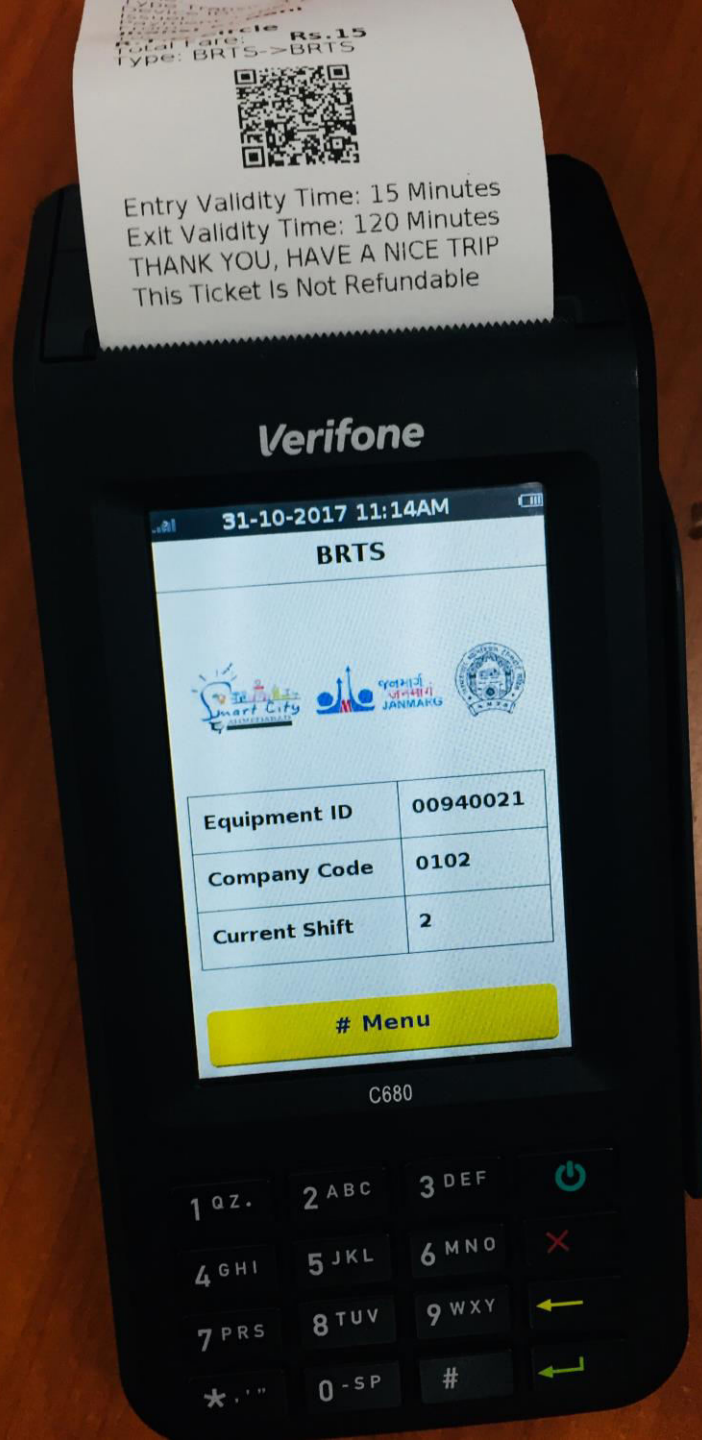
Attended Solution

- Issuance

- Acceptance (NCMC, EMV, CTLS, MiFare)

- Online

- Ticketing

- Integrated into AFC as well as Acquirers over private network
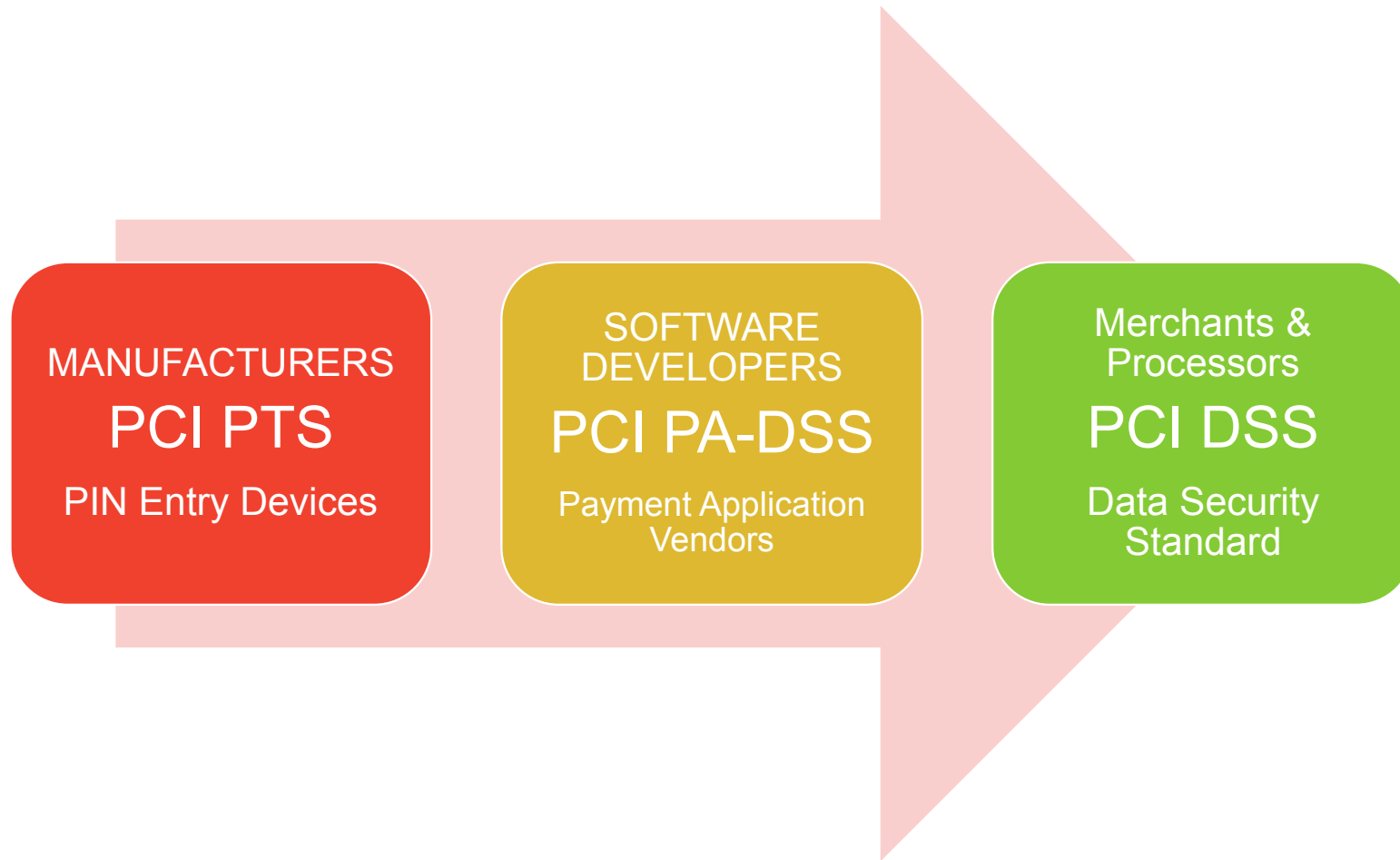
BMTC

- Instant Issuance

Kochi Metro

- Closed loop & Open loop

- Unattended (Integrated into the Kiosk)

Ahmedabad – BRTS & AMTS

- QR ticketing

- Terminals double up as gate validators

Payment Card Industry Security Standards

Protection of Cardholder payment Data

MANUFACTURERS
PCI PTS
PIN Entry Devices

SOFTWARE DEVELOPERS
PCI PA-DSS
Payment Application Vendors

Merchants & Processors
PCI DSS
Data Security Standard

Card holder's identity

- Track 2 data

- PAN

- PIN

Secure POS

- Application Authentication

- Tamper Proof

- Secured memory

- Water tight partitions

- Secure PIN entry

- P2PE

Secure Card processing

- Data Authentication

- Card holder verification

- Processing restrictions

- Risk Management

- Generate Application Cryptogram

- Issuer data authentication

Secure Application

- Transient card data

- Mandatory PIN

- Batch data encryptions

- PAN Masking

Secure Data Exchange

- Secure Key Injections

- PIN Encryption

- MAC authentication

- Message / Data encryption
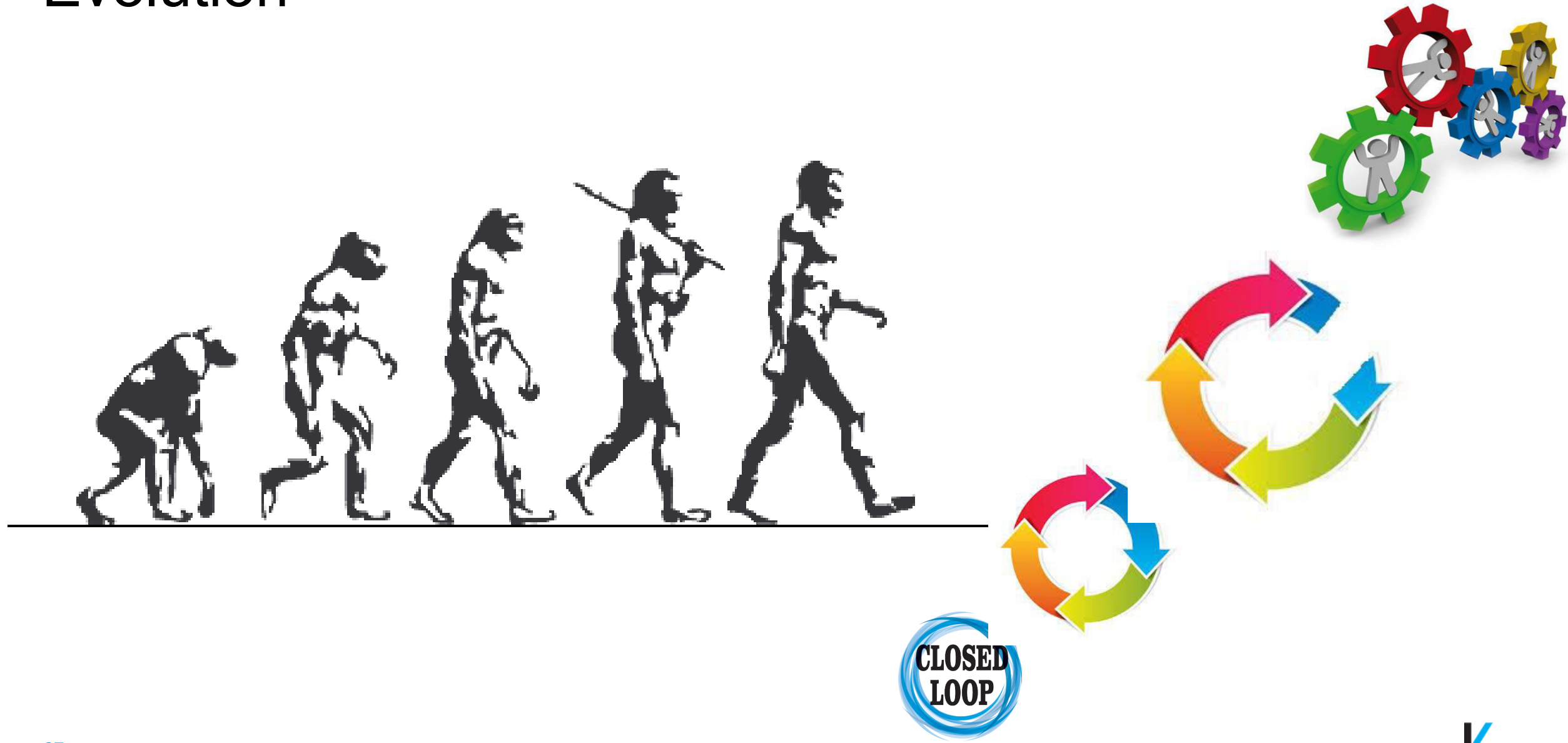
- TKS 1.2 over IP media

- Private Networks

Secure Estate Management

- Secure upgrades

- Secure Diagnostics

- Secure Repairs

- Alerts enabling better remote control

Evolution