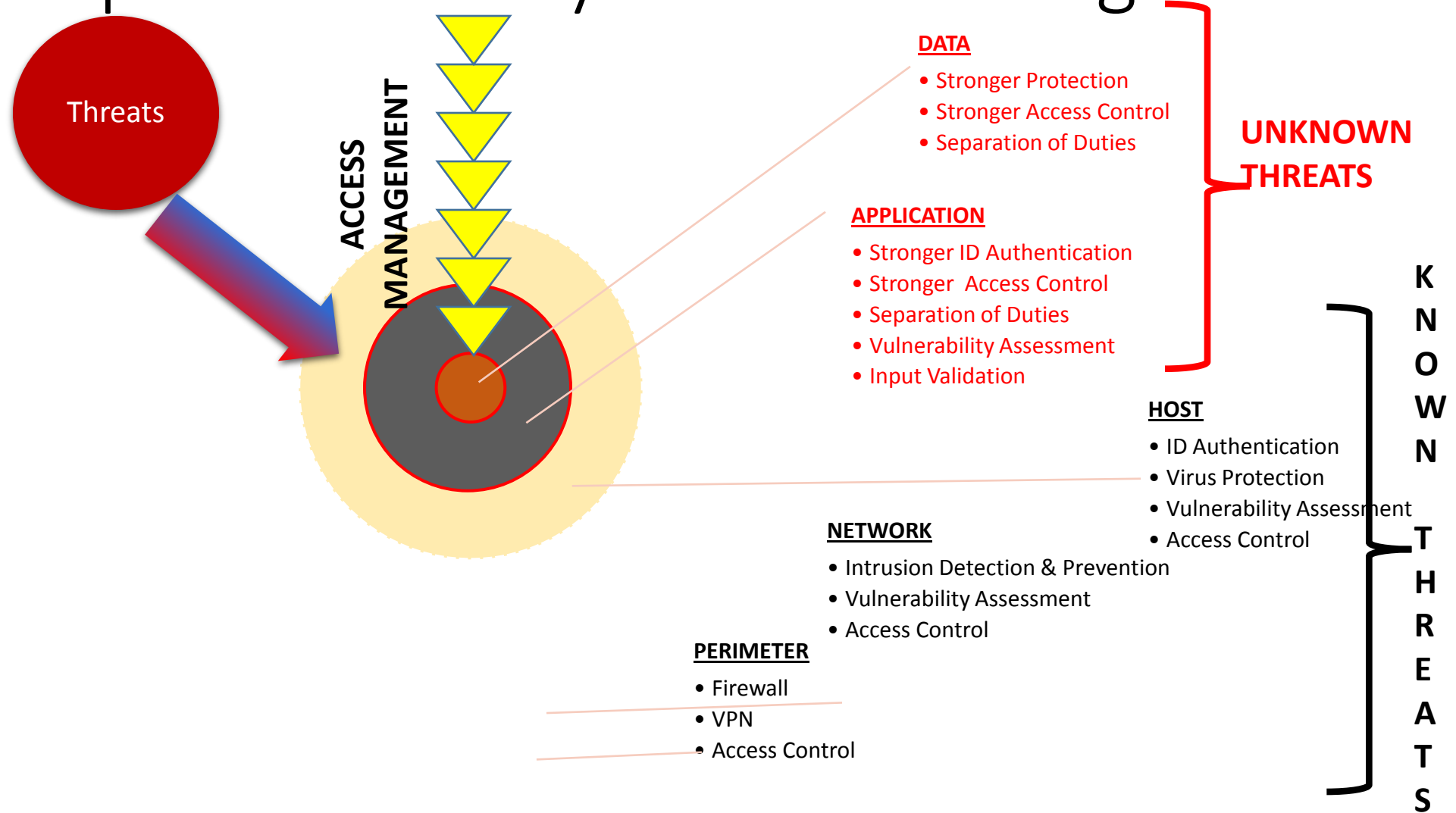# PKI Data Protection
for
BFSI

The Impact of Threats

- Attacks are very costly
  - $1.5 million - $36.5 million lost every year per company annually
- Information Theft is the costliest loss due to attacks
  - Business Disruption, follows
- An organization encounters 1.4 successful attacks per week
- Average number of days to resolve cyber attacks is 18
  - Malicious insider attacks take more than 45 days to recover

Your data is PROFITABLE!

Source: Ponemon Institute 2015 Annual Cost of Cyber Crime Study

Enterprise IT Eco-system - Evolving

Threats

ACCESS MANAGEMENT

DATA
- Stronger Protection
- Stronger Access Control
- Separation of Duties

APPLICATION
- Stronger ID Authentication
- Stronger Access Control
- Separation of Duties
- Vulnerability Assessment
- Input Validation

HOST
- ID Authentication
- Virus Protection
- Vulnerability Assessment
- Access Control

NETWORK
- Intrusion Detection & Prevention
- Vulnerability Assessment
- Access Control

PERIMETER
- Firewall
- VPN
- Access Control

UNKNOWN THREATS

KNOWN THREATS

3

Protection needs to be *centered* on data itself

Data-centric Protection Objectives

| Data Confidentiality | Integrity of digitized information | Accessibility |

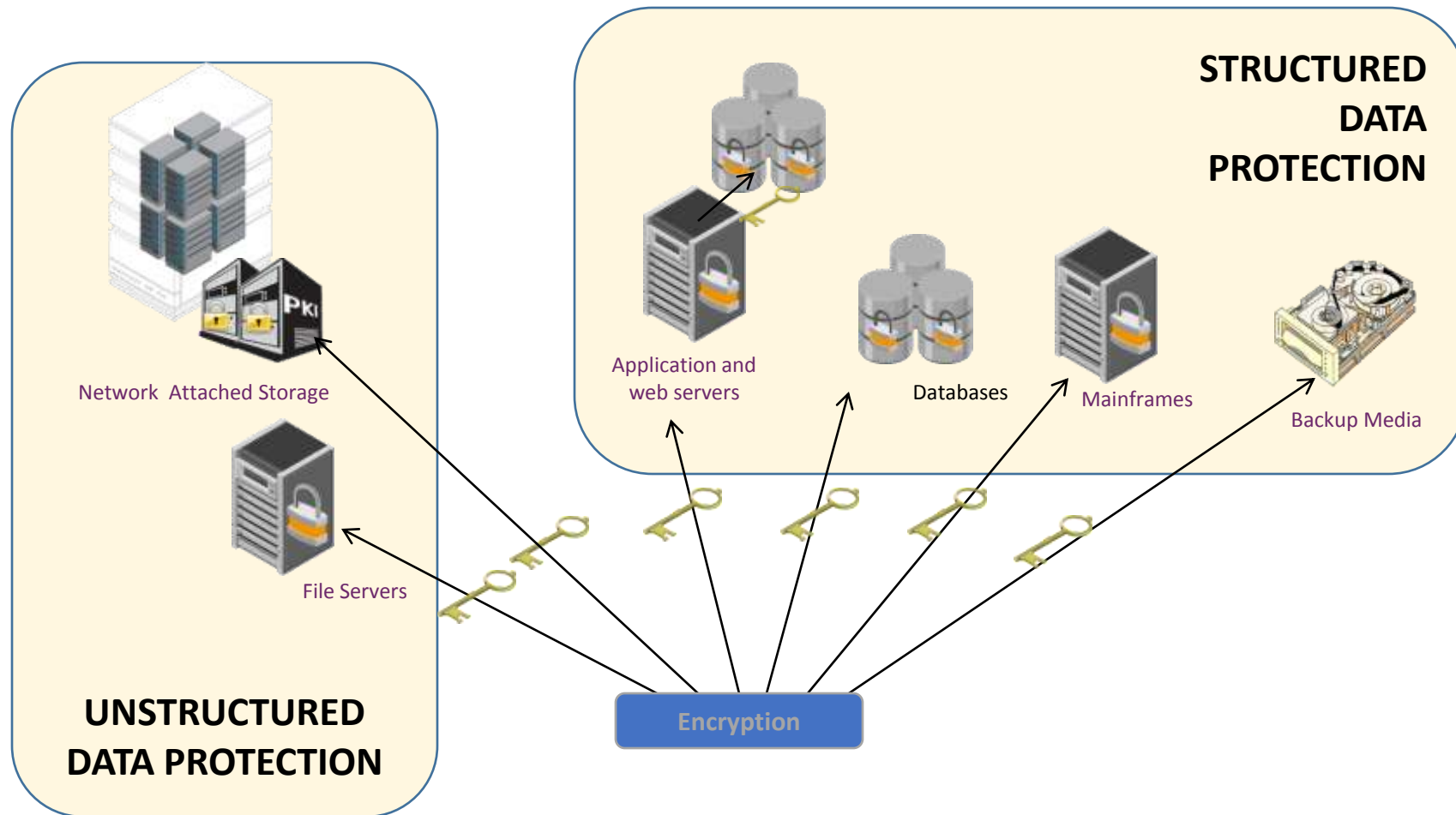# Cryptography for Data *centric* Protection

- Limit use of *<sensitive data>*
- Control access to *<sensitive data>*
- Encrypt *<sensitive data>* in transit
- Encrypt *<sensitive data>* at rest
- Keep *<sensitive data>* confidential
- Keep the integrity of *<sensitive data>*
- Digitally sign *<sensitive data>* for non-repudiation
- Enforce separation of duties of *<sensitive data>* access and administration
- Report and audit your controls

C I A

Is Cryptography the core of your Data Protection Strategy ?
Why or why not ?

Data *Centric* Protection – The Framework

STRUCTURED DATA PROTECTION

Application and web servers

Databases

Mainframes

Backup Media

Network Attached Storage

PKI

File Servers

UNSTRUCTURED DATA PROTECTION

Encryption

C I A

PKI is an essential process to protect
sensitive data,
provide risk management, and
ease proof of compliance.

Behind every great PKI solution stands a
key waiting to be used

PKI Needs Secure Key Management

- Encryption gave you control over data, but now you need to control encryption:
  - ✓ Make key proliferation manageable
  - ✓ Definitive proof of ownership
  - ✓ Trusted key lifecycle
  - ✓ Controlled access for key usage
  - ✓ No unknown copies of keys
  - ✓ No lost keys
  - ✓ Managed key rollover
  - ✓ Secure key decommissioning
  - ✓ Performance, scalability, and redundancy
 - ✓ Disaster recovery
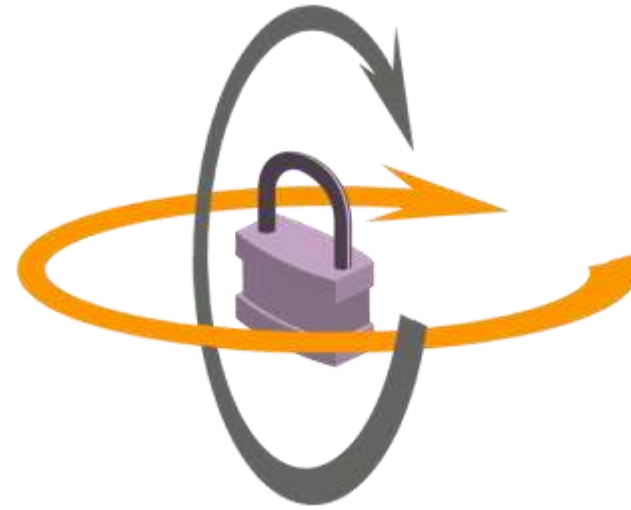
Trends in the Indian Market

Trends and Projects – PKI Pinpad Readers
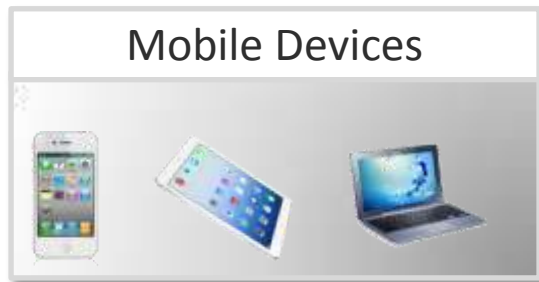
Mobile Devices

- Extend Pinpad usage to mobile devices for corporate banking

- Bluetooth Low Energy (BLE) enabled

- Secure bluetooth pairing

- Banks currently evaluating technology
  - Launch by Tier-1 bank in Q4 2015

A scalable mobile security framework to counter further threats AN ABSTRACTION LAYER ALLOWING EASY MIGRATION TO SECURE ELEMENTS
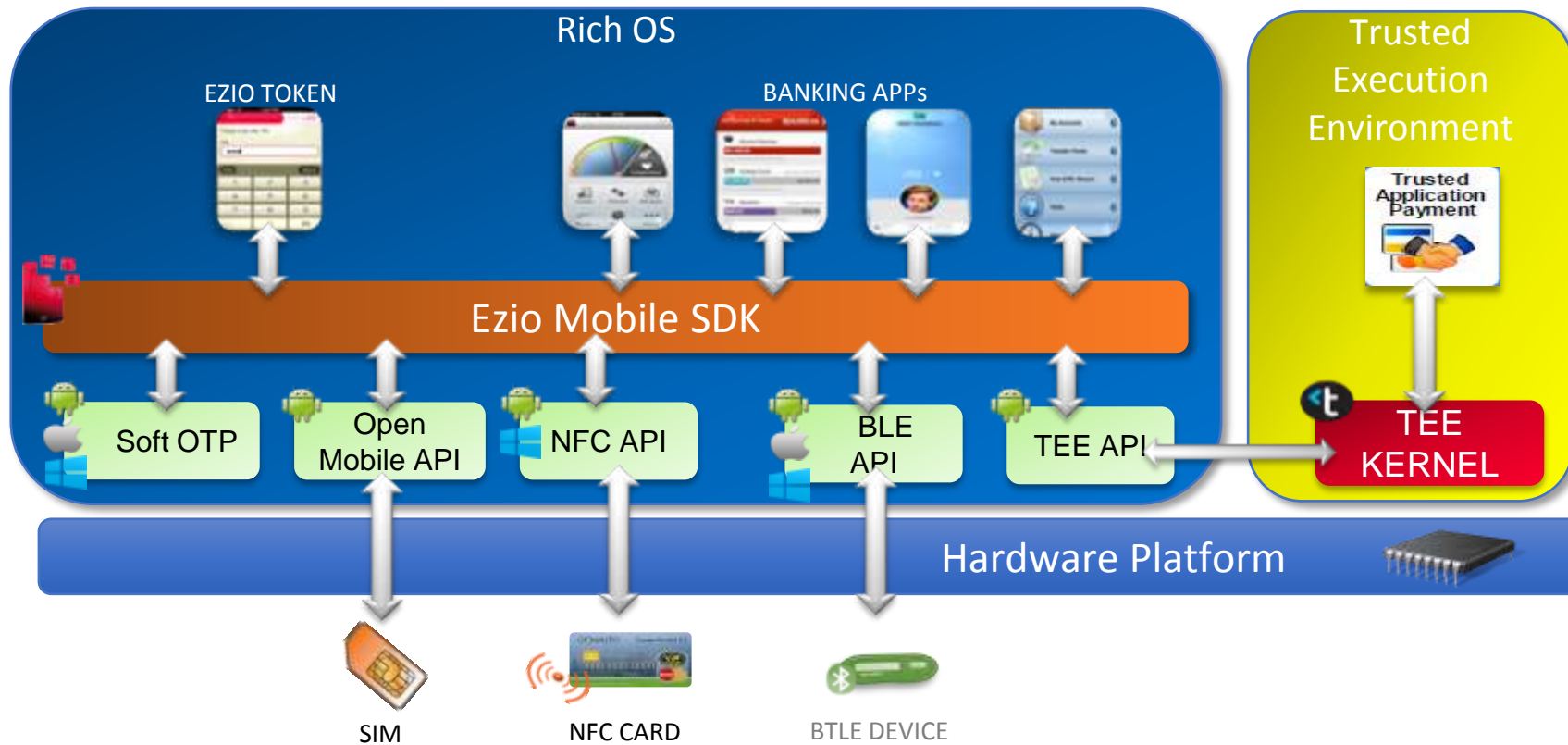
Trends and Indian projects – Display Cards

- Main driver - to combat CNP fraud
- Unique features
  - Manage batch and telephone orders
  - Verify my bank feature

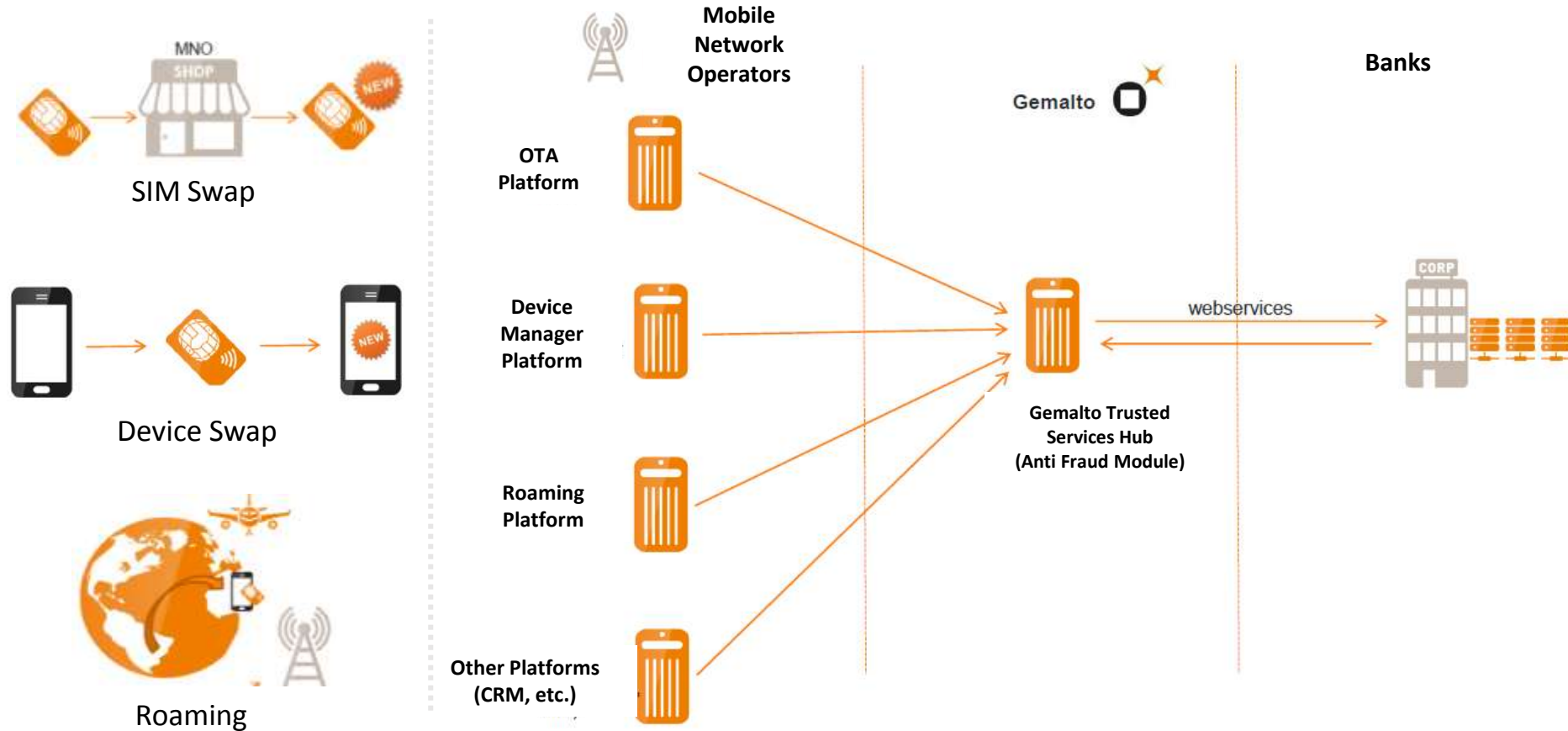# Trends and Projects – New Form Factors

WRISTBAND PAIRED WITH A GALAXY NOTE 4 TO SHOW CORPORATE USE CASES BASED ON eSE

1. Secure email (encrypt/decrypt/sign)

2. Digital signature of document

3. Data protection (pdf file encryption/decryption)

4. Strong authentication to a specific secure zone dedicated to Corporate applications (partnership with Good Technology)

Trends and Projects – User integrity Validation

Thank You