



Mobility Payment Solutions LLC
A Mobility International Company
Innovate Incubate Collaborate

MAXxEMV Systems Central Issuance

Secure your digital issuance

Version 1.1



About Mobility



Mobility Payment Solutions LLC
A Mobility International Company
Innovate Incubate Collaborate

- Mobility Payment Solutions, a Mobility International initiative; is a leading innovation focused, research & development, and solutions integration company
- MPS brings value add to business by introducing mobility as an underlying principle for provisioning and bringing a wide range of services in a secure manner to people and businesses
- MPS has developed cutting edge innovative payment technologies, and industry grade secure solutions to perform services on behalf of banks, Financial Institutions, Processors, Retailers and Third Party Service Providers

Agenda



1. MAXxEMV CIS Overview
2. MAXxEMV CIS Modules
3. MAXxEMV CIS Security
4. MAXxEMV Installation / Milestones
5. MAXxEMV CIS Advantages

Overview



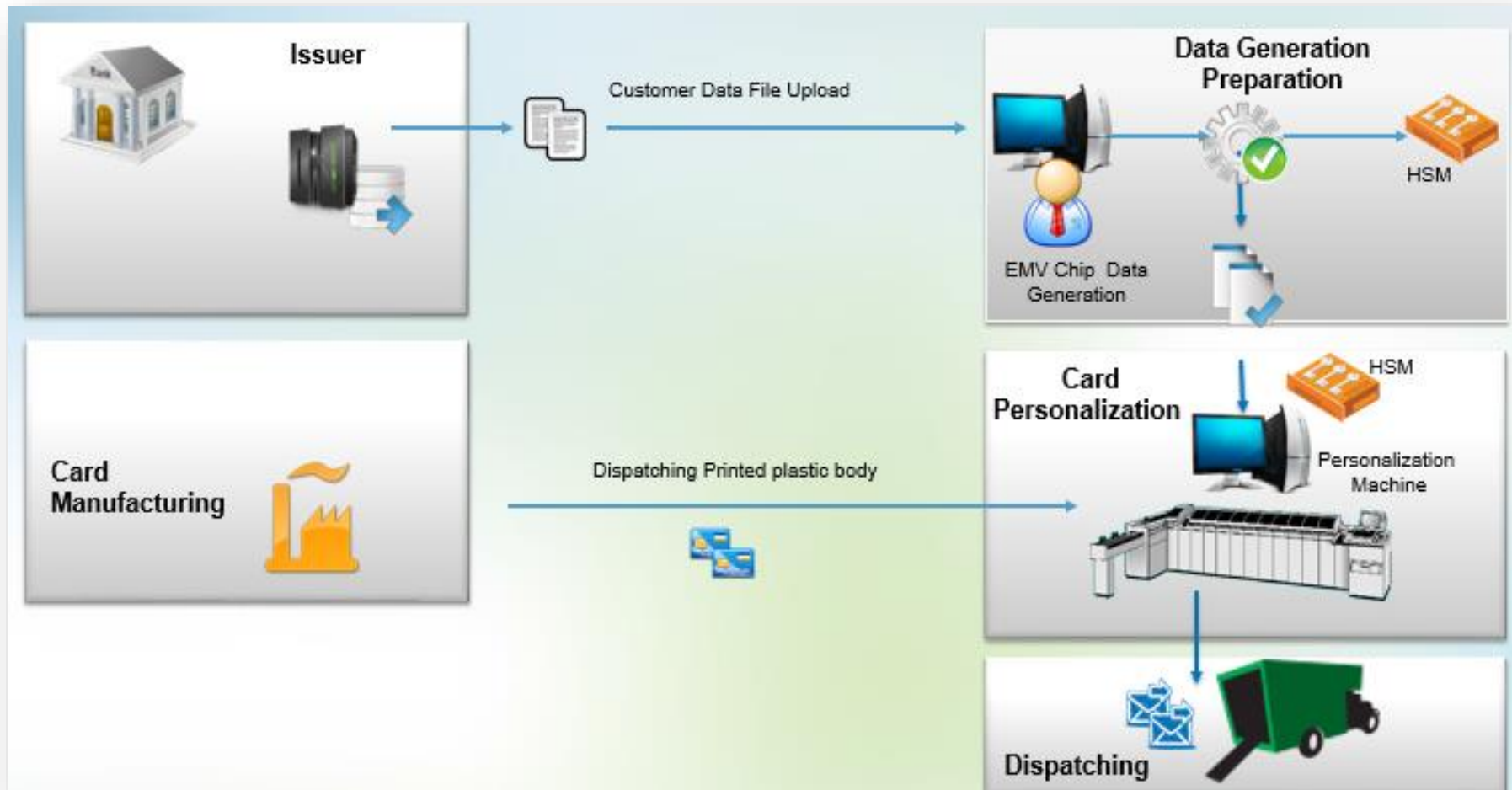
MAXxEMV CIS is state-of-the-art solution that is designed to support Banks and Personalization Service Providers:

- Manage heterogeneous environments:
- EMV Chip/OS
- Payment Schemes
- EMV Personalisation Machines
- Customisable Workflow Operational Processes

MAXxEMV CIS has a strong modular architecture to support multi-brand issuance and ensure scalability for PSP. Cards can be issued for applications in a wide verity of fields such as:

- ATM and POS Systems
- National ID cards
- Ticketing
- Internet Banking
- Reward/Bonus/Loyalty programs

Production flow

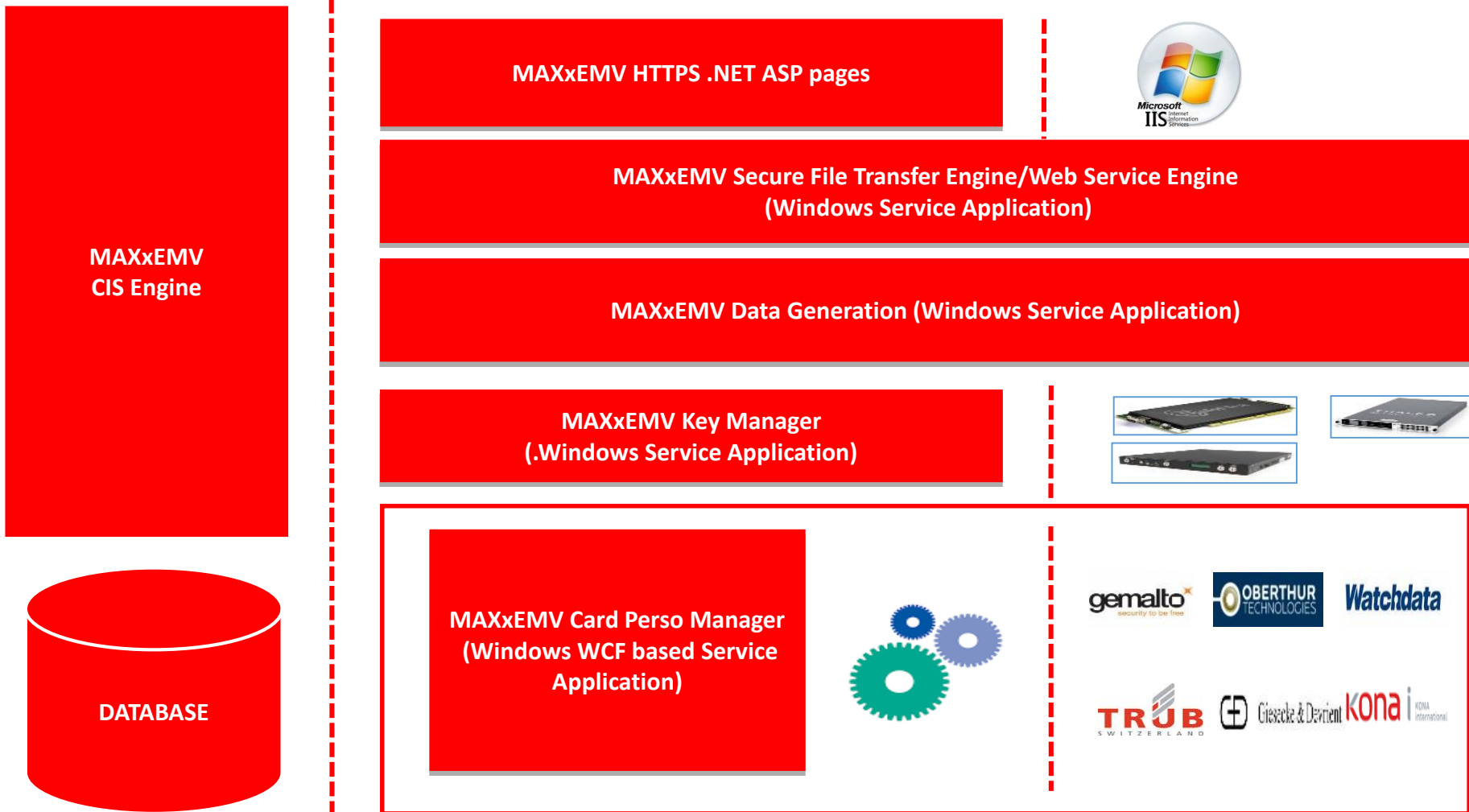


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Modules



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Modules



1. MAXxEMV CIS Engine
2. MAXxEMV Secure File Transfer / Web Service Engine
3. MAXxEMV Data Generation
4. MAXxEMV Key Management
5. MAXxEMV Card Perso Manager

CIS Engine



The MAXxEMV CIS Engine is the core service based application which powers all the modules with required functionality like...

- Schedule File Processing
- HSM interface for all the cryptographic operations
- Database interface for all DB related activities
- logging all the user activities / errors / trace
- Real time transaction monitoring
- User based access control management
- PIN Pad Management & PIN Generation
- Card Perso Management interface

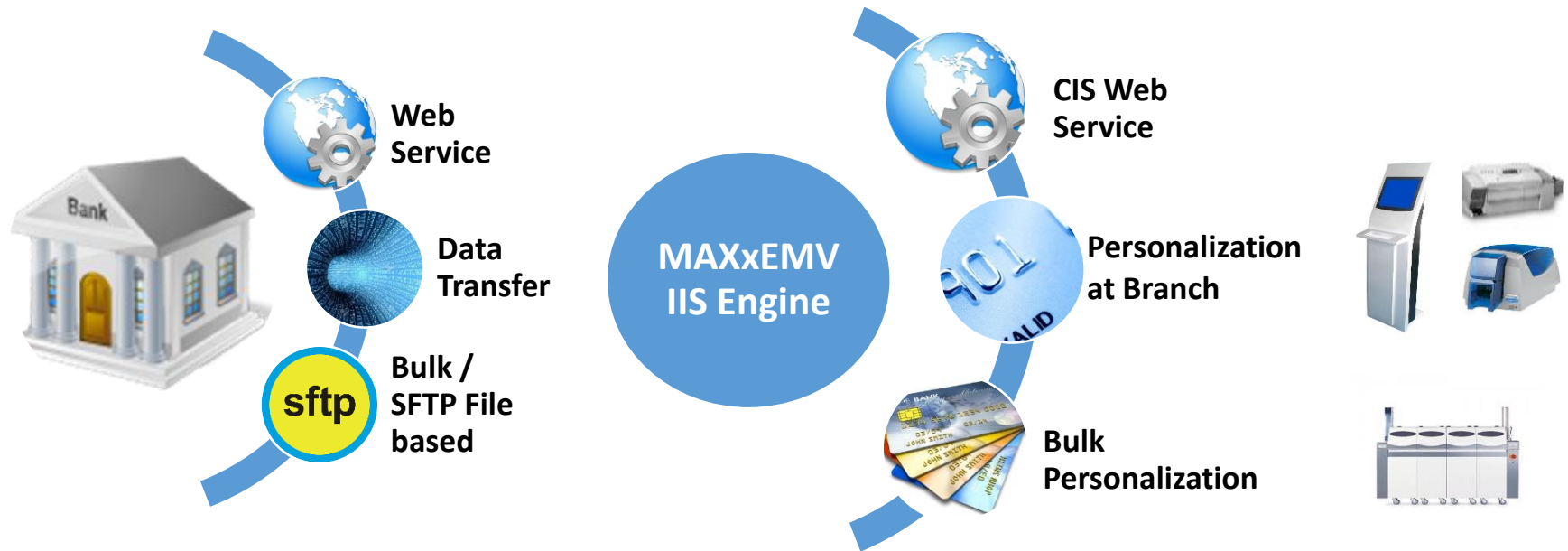
Secure File Transfer / Web Service Engine



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- Secure File Transfer Engine communicates with Issuer's SFTP sever and download files to local server for processing
- Secure web service can call by Issuer's CMS for automated data push
- Secure web service can talk to Issuer's CMS for automated data pull at stipulated intervals
- All the communication with the customer server / CMS is in encrypted manner

Data Generation – High Level



EMV Data Generation



Data Generation generates EMV Data based on card holder magnetic stripe data, issuer configurations such as Profile, Keys and Certificates.

Data Generation module has the features like ...

- Managing Issuers and their products
- configuring profile, Keys, Certificates
- Configuring embossa
- schedule automated processing

Key Management



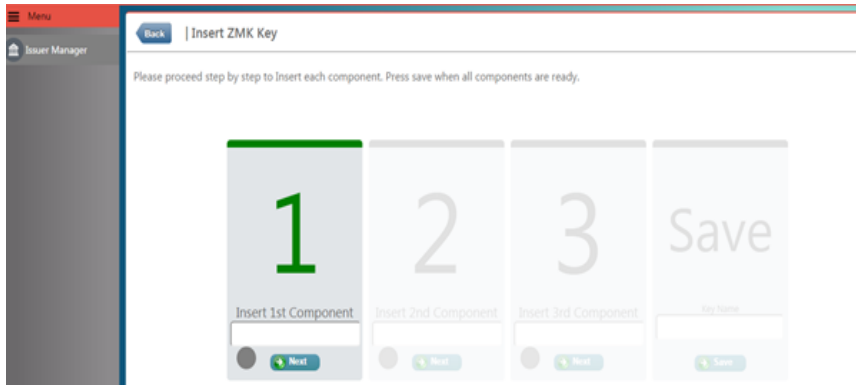
KMS silent features described below...

- User friendly GUI helps SO to perform their tasks
- Split knowledge & Dual control throughout
- Manages all the keys of magnetic-stripe and EMV
- Supports both static and dynamic key generation
- Simplifies implementation of HSM functionalities
- LMK Management
- Key Generate / Export / Import / Archive / Suspend / Activate / Delete in easy steps

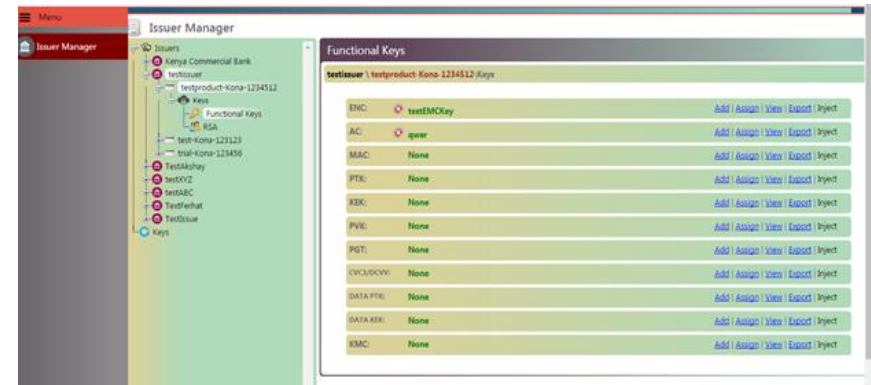
Key Management



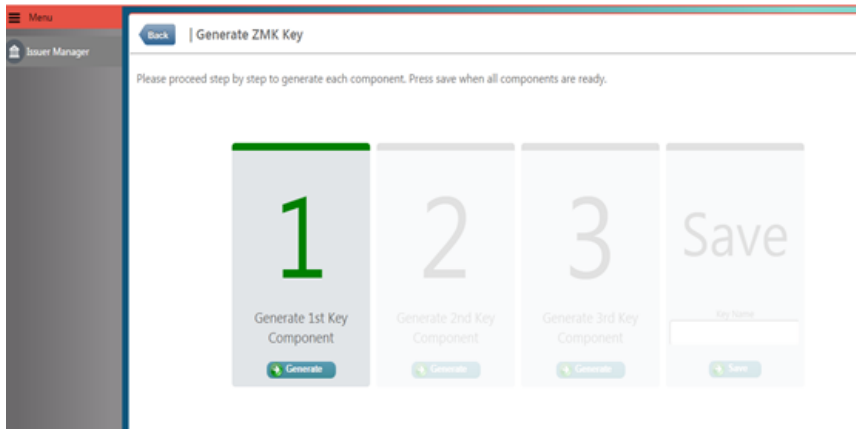
Insert ZMK from Components



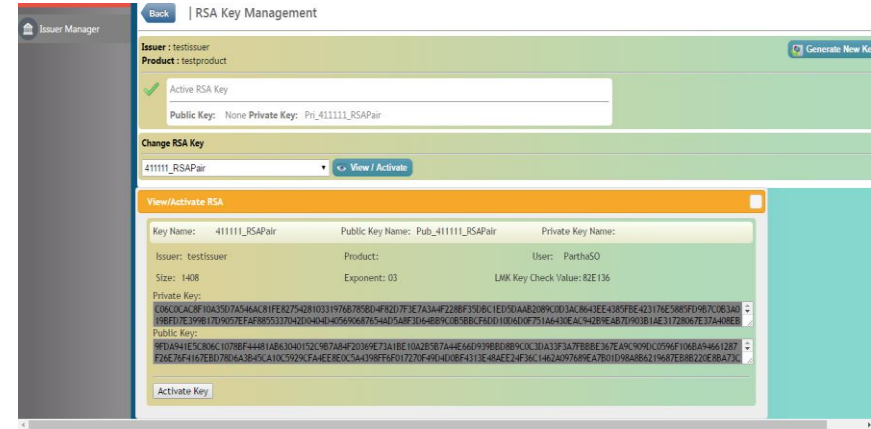
DES Key Management



Generate ZMK Components



RSA Key Management



Card Perso Manager



- Perso Manager is independent of machines and card types
- Perso manager choose the respective script based on the machine being used and card type
- Perso manager interacts with HSM securely for card authentication & other cryptographic activities
- Perso manager updates all the communication like machine reader interface, APDU commands, errors if any in the audit files. The system administrator can analyze the log files to find the root cause of the issue if any
- Supports most of the personalization machines from **Matica, CIM, Datacard, NBS, Zebra, EVolis etc**

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The system is developed basis of core principle of security. The security features described below...

- Roll based user login – governed by group policy
- Data received from customer is encrypted using 3DES / AES / RSA mechanism
- All the sensitive information stored in the Database is encrypted
- LMK resides at HSM all the times & backed up in smartcards
- Communication internally within the system with the other modules is encrypted
- Machine communication can also in encrypted manner if the OEM supports

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System requirements



Deployment Models		MAXxEMV Central Issuing Data Generation / Database Server	
Option 1	<ul style="list-style-type: none"> 1 * Data generation Server 1 * Database Server 1 * HSM Server <p>Total 3 Servers</p> <p>(Please check MAXxEMV Central Issuing Data Generation / Database Server table for config details)</p>	Hardware	<ul style="list-style-type: none"> HP DL 380 G9 Ram 12 GB Ram Hard Disk 1 TB
Option 2	<ul style="list-style-type: none"> 1 * Data generation Server/HSM Server 1 * Database Server <p>Total 2 Servers</p>	Software	Windows Server 2012– 64 bits
Option 3	<ul style="list-style-type: none"> 1 * Data generation Server/HSM Server/Database Server <p>Total 1 Server (Recommended 1 for PSS)</p>	Database	SQL Server 2014
Option 4	<ul style="list-style-type: none"> 1 * Data generation PC 1 * Database PC 1 * HSM Server PC <p>Total 3 PCs</p> <p>PC : 4th Generation Intel(R) Core(TM) i5-i7 processor quad-core [3.5GHz, 6MB Shared Cache]</p> <p>For example : Dell OptiFlex 7020 , i5 Quad Core, and Core™ i3 Dual Core, PDC</p>	Application Server	Internet Information Server IIS(6.0))
Option 5	<ul style="list-style-type: none"> 1 * Data generation / HSM PC 1 * Database PC <p>Total 2 PCs</p> <p>PC config:</p> <p>4th Generation Intel(R) Core(TM) i5-i7 processor quad-core [3.5GHz, 6MB Shared Cache]</p> <p>For example : Dell OptiFlex 7020 , i5 Quad Core, and Core™ i3 Dual Core, PDC</p>		
		MAXxEMV Key Management	
		Hardware Security Module	Safenet PS1e PL 25 (SDA), PL220 (DDA) or PL600 (The hsm will be on the server)
		MAXxEMV Central Issuing Data Generation Operator PC	
		Hardware	<ul style="list-style-type: none"> Intel Core 2 Duo processor 8 GB RAM 300 GB hard disk drive Windows 7 64 bit
		MAXxEMV Central Issuing Personalization Matica PC	
		Hardware	<ul style="list-style-type: none"> Intel Core 2 Duo processor 8 GB RAM 300 GB hard disk drive Windows 7 64 bit

Milestones



Project Kick-off

- Approval of project, cost and defining responsible personal at both sides
- Project formal initiation

Requirement Specifications

- Defining all the requirements
- Defining gaps to be customized, finalization of the use case

Development

- Development of customizations if any
- Development of the specifications

Procurement of hardware

- Bank to procure all the servers, hardware related to card perso machine, etc

Implementation & Testing

- Installation of the product, integrating with Bank software if required.
- Testing of all the modules

Pilot testing & Go live

- Soft launch of card in production environment
- Go live

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CIS Advantages



MAXxEMV CIS is state-of-the-art solution that is designed to support Banks and Personalisation Service Providers comes with various key advantages:

- Simple and Easy Use
- Resource Access Control
- Issuance Controls
- Activity Logs
- Operational Process Flow
- Operational Controls
- Reduced Wastage/Errors
- Flexibility & Scalability

CIS Advantages...

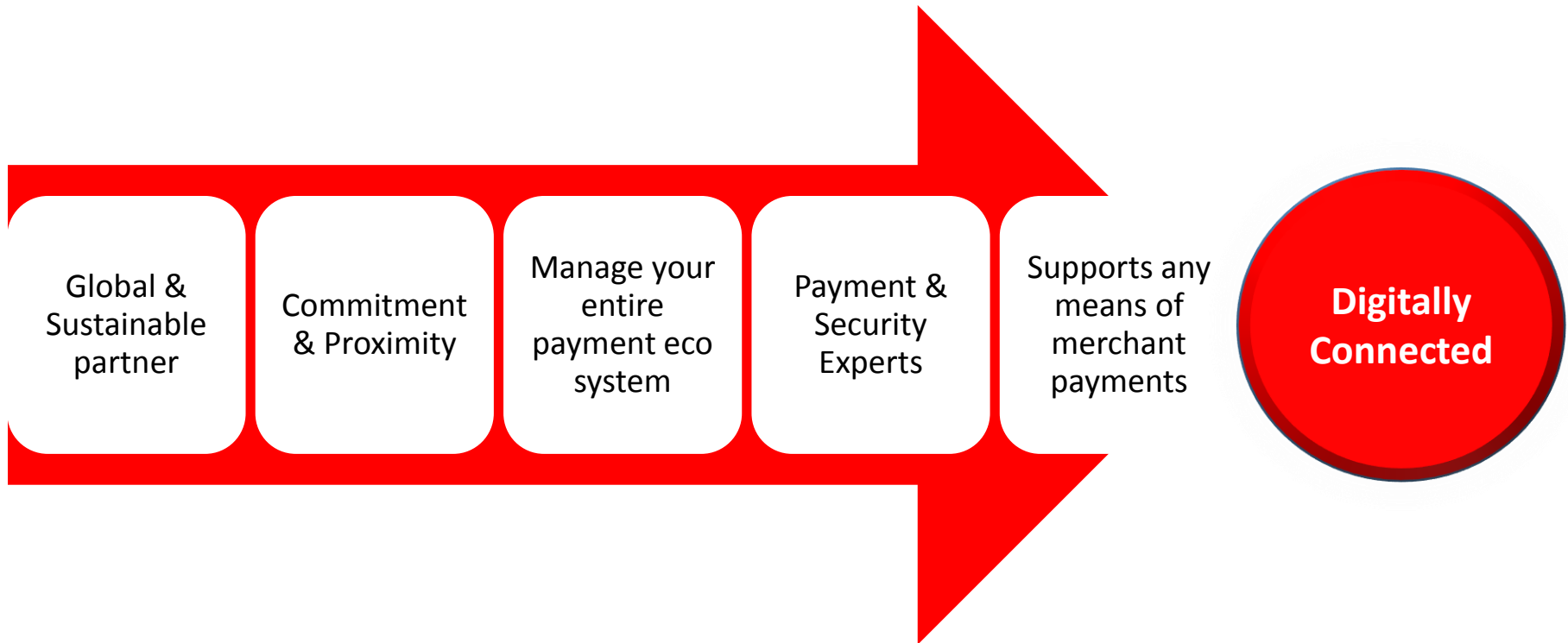


- EMV Workflow Process Management
- Multi-Scheme Support
- EMV Personalisation Machine agnostic
- EMV OS/Chip agnostic
- EMV compliant Key Management
- Secure EMV Data Preparation
- EMV Quality Assurance and Validation
- Multi-application personalisation support
- Multi-sector support

Why Mobility



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Thank you
Questions

