

László Szetnics, MasterCard Europe
30 September 2015

A woman with short brown hair is looking down at a smartphone in her hands. The background is a blurred indoor setting with warm orange lighting. A semi-transparent orange rectangle is overlaid on the bottom left of the image, containing the text.

MDES to support converged wallets
CEESCA – 2015 – Dubrovnik

From the basics to the latest



Digitization
P2P MCBP NFC HCE
PAN Token MDES
DSRP In-app
MasterPass MDEXpress
ID&V EMV

Industry Trends – more and more mobile

There are two rapidly evolving trends in mobile payments...

The number of mobiles
– and within this smartphones –
is increasing exponentially:

2.6
billion
smartphone users
in the world by 2018¹

The growth of
e- and m- commerce:

3 billion internet
users today
vs 1 million
10 years ago²

40%
of global population

Mobile phone
and tablet users will make
195
billion
mobile commerce
transactions
annually by 2019³

1. Statista: Smartphone penetration amongst mobile users worldwide 2012-2018
2. International Telecommunications Union, May 2014
3. Juniper Research

Consumers want to use their smartphones for everything including payments



By embracing mobile devices and always-on connectivity, the boundaries between the physical and digital worlds are becoming blurred.

Consumers:



Want to use their favourite connected devices to browse and buy



Routinely choose to browse in-store and buy online – and vice versa



Expect a unified experience wherever and whenever they buy



Consumers believe in world going mobile



A majority of consumers **(6 out of 10)** believe smartphone payments will eventually replace payment cards (66%) and cash (61%)¹



1. Harris Interactive, "Majority of Americans Foresee Smartphone Payments Replacing Cards and Cash" December 11, 2012



Remote payment

MasterPass is a global interoperable platform, enabling digital transactions. It allows consumers to use any payment card or enabled device to buy the things they want quickly and simply, anywhere.



Simplifies the shopping experience



Consumers can pay with an enrolled payment card anywhere using any device









Card information and shipping details all securely stored in one place, easily accessible during checkout.



Eliminates the need to enter detailed payment and shipping information for every purchase

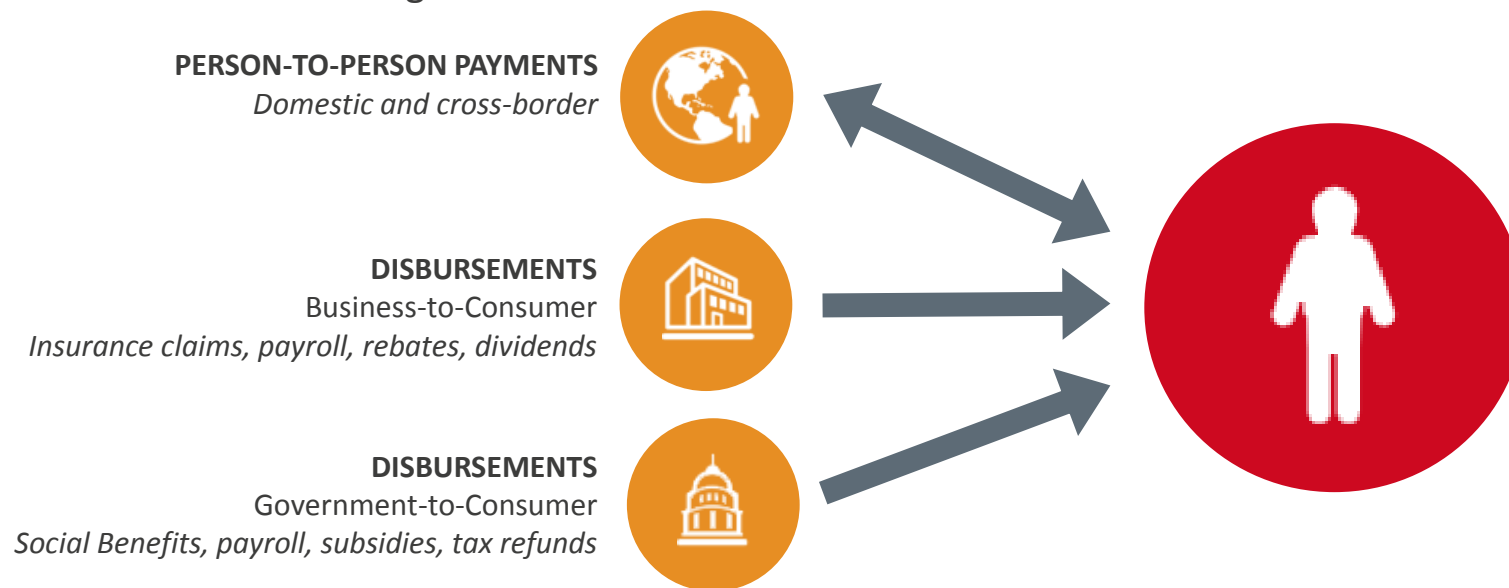


Benefits of MasterPass

Merchants	Issuers
 Conversion: Fast and simple checkout, reduced cart abandonment and improved conversion	 Flexibility: An easy to implement, or a fully customizable wallet solution
 Trust: Cardholder payment information held securely in one place, greater confidence at every checkout	 Trust: MasterCard processes billions of transactions each year on the world's fastest secure payment network
 Loyalty: Stores and automatically passes a consumer's loyalty card during checkout, fosters loyalty	 Loyalty: A digital payment solution that works across devices and geographies, extends relationships with customers
One button, many wallets – Fast, Simple and Secure checkout with increased revenue and reduced cost.	Relevancy to consumers, profitability and protection from new entrant dis-intermediation.

MasterCard Personal Payment Solutions

Personal payments solutions focus on optimizing payment flows to consumers from other consumers, from businesses and from governments.



The Vision: One User Experience Enables a Network of Wallets for Shopping at Home, in Stores, and on the Go



Connected digital wallets/apps from issuers and retailers



At home

Smartphone
Tablet
PC, Laptop
Fridge*
TV*
Game Console*



In store*

Tablet
Kiosk
Mobile in Aisle
POS via NFC, QR



On-the-Go*

Store Window
Bus Stop
Subway Platform
Airport
Anywhere



* Illustrative only, functionality not yet available

To drive growth, we need to enhance security and convenience for in-store and remote (DSRP) transactions



Convenience



Security

Tokens
Device binding
Biometry












Dynamic crypto
PIN
Single Use Key



Proximity/in-store payment

MasterCard Contactless

MasterCard contactless payments allow consumers to make everyday purchases by simply tapping their contactless-enabled card or device.

Consumers	Merchants	Issuers
 Enables payments with mobile phones	 Enables POS for mobile NFC payments	 Provides a key differentiator via mobile payments
 Provides a faster, simpler and safe way to pay for purchases	 Simpler way to pay results in faster checkout	 Increase top of wallet behaviors
 Offers greater convenience eliminating need to restrict spend to cash on hand	 Reduces costs related to cash handling	 Displaces cash
	 Promotes higher average spend	 Promotes more frequent account usage and higher spend

MasterCard Contactless

Card

A contactless-enabled card has an antenna inside to communicate with a terminal and enable contactless transactions with a simple tap on the terminal



Mobile

Also contains an NFC antenna, card details are stored in either a secure element in the phone or SIM, or in the cloud. Allows for additional services like rewards, transaction history etc



Convergence

Physical and Digital Worlds are Converging



Benefits of MasterCard's digital convergence strategy

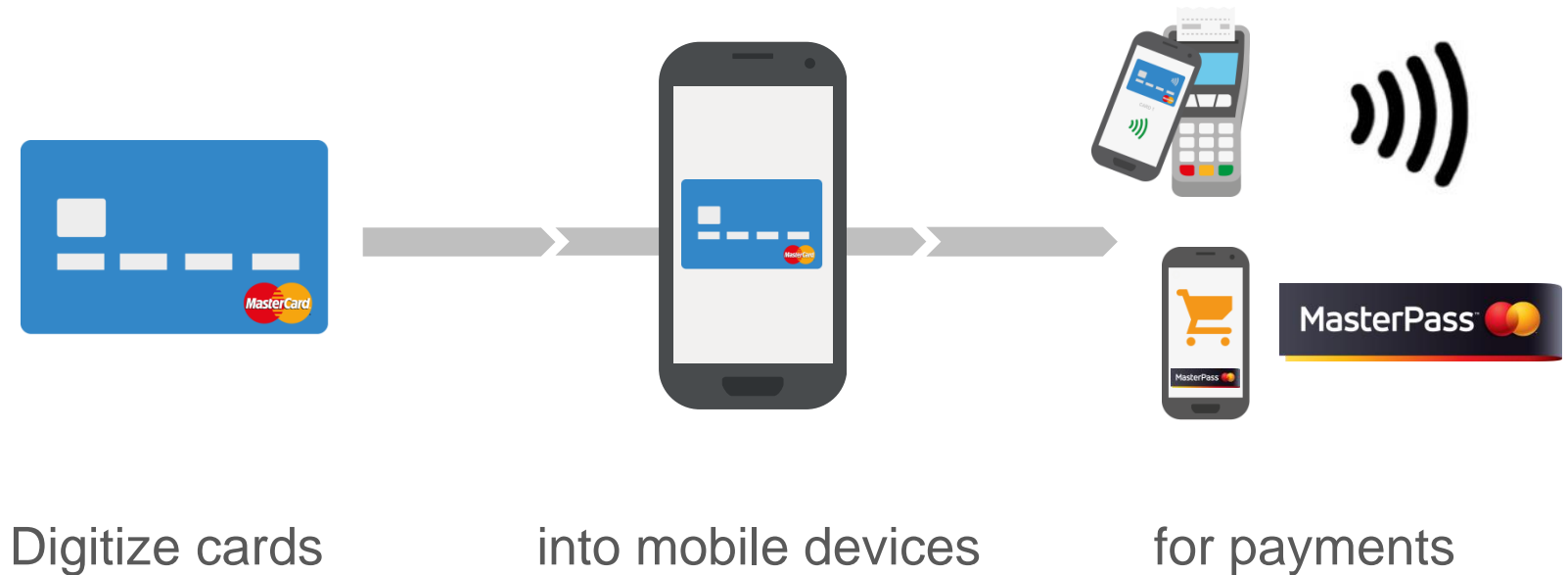


Digital convergence redefines the connections between everyone within the payments value chain.



MasterCard's Vision for Mobile Payments

Every card can be digitized into a mobile device to offer ubiquitous payment experience



What is digitization?



The process of **delivering tokenized card details and associated data onto a mobile device** and/or onto a secure server in the **cloud**



What is tokenization?



The process of **replacing a card's primary account number (PAN) with an alternate card number**, or "token"



MasterCard Digital Enablement Service (MDES)



The MasterCard Digital Enablement Service is a new suite of On-Behalf Services that:

- **replaces card numbers with tokens and places these into digital environments e.g. mobile wallets**
- maps tokens to card numbers during a transaction in a **secure way** (with cryptograms)
- is a centralized hub **connecting issuer** with digital wallet providers
- thus enabling connected devices to make purchases in-store, in-app or online.



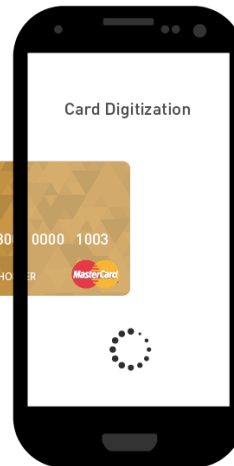
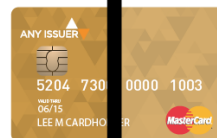
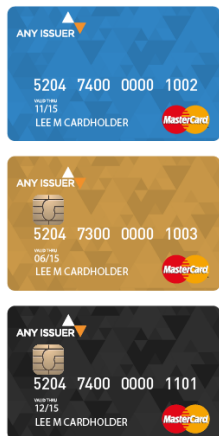
MDES is a MasterCard platform that enables end-to-end tokenization and digitization services “on-behalf-of” Issuers



Tokenization & Digitization services

Transactional services

Transactions



POS



Online



In-app

Security is Front and Center for MDES

MDES protects cardholder data by making sure that the merchant does not see the PAN number.



MDES is connecting issuers with digital wallet providers and environments

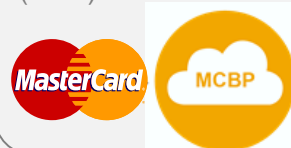


Issuers



Wallets

1. Issuer's own wallet (HCE)



2. Issuer's card in digital giants' wallets



3. MasterPass (remote wallet) will be connected to MDES



MCBP=MasterCard Cloud-Based Payments, see details on next page

What is MCBP (MasterCard Cloud-Based Payment)?



MasterCard Cloud-Based Payments enable consumers to make contactless in-store transactions and secure online purchases.



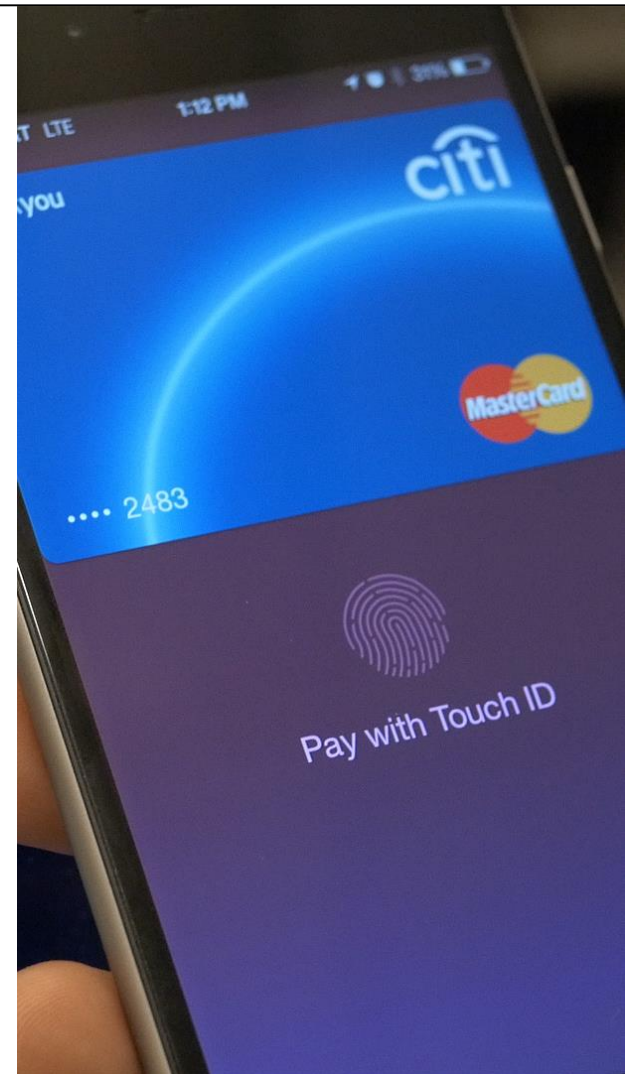
MDES first use case: Apple Pay



Apple is partnering with MasterCard and using MDES to support its Apple Pay service. MasterCard customers can use their Apple device:

- Contactless payments
- In-app payments

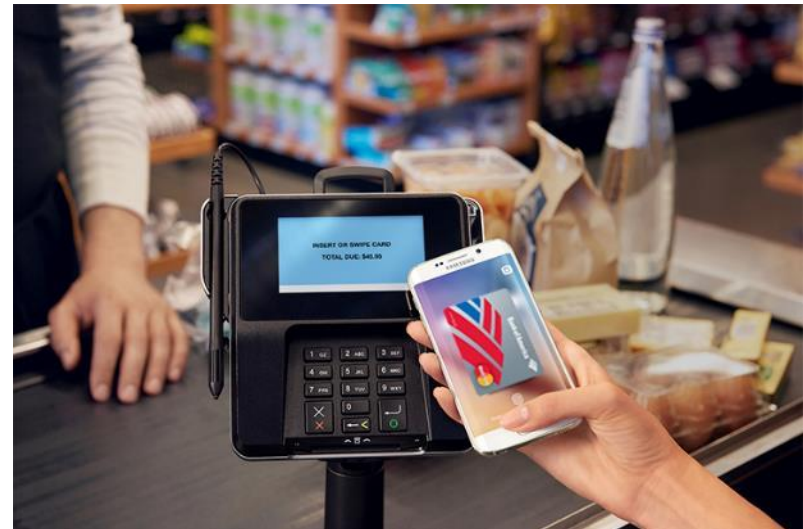
Apple Pay was launched in the US in October 2014 in UK July 2015



Samsung Pay runs on MDES

- Samsung Electronics Co., Ltd, a leading global technology company, has unveiled Samsung Pay, a mobile payment service that will enable MasterCard cardholders to use their Samsung Galaxy S6 for everyday in-store purchases...The MasterCard Digital Enablement Service (MDES) enables MasterCard consumer credit and debit cardholders to use Samsung Pay.
- Samsung Pay is available in South Korea and in the U.S.

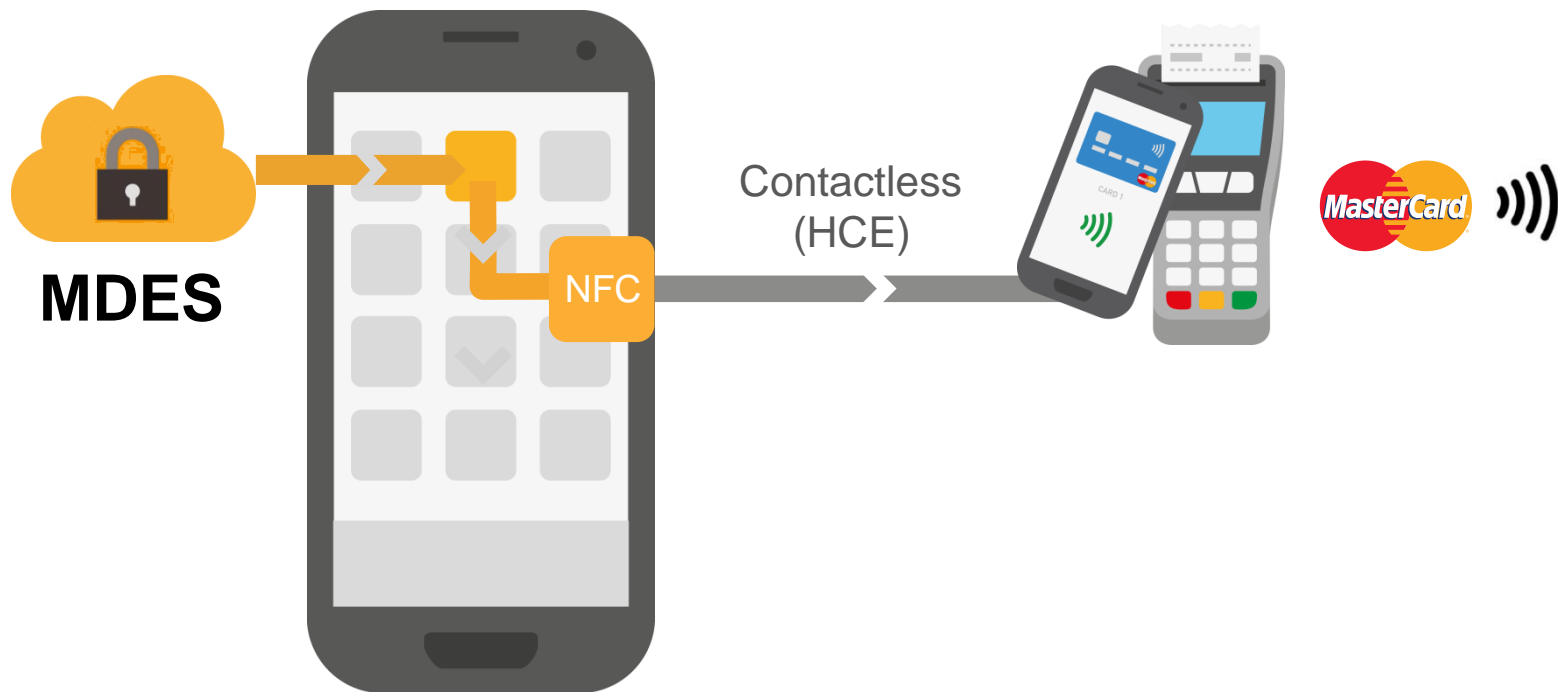
SAMSUNG pay



Android Pay is built using MasterCard Cloud-Based Payment technology



MasterCard Cloud-Based Payments is an MDES solution that leverages Card Emulation (HCE) technology with tokenization

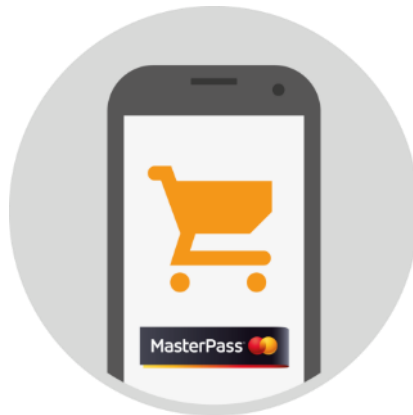


Digital Secure Remote Payment (DSRP) enables EMV-like security for remote payments



A DSRP transaction is a new MasterCard payment method specification that uses EMV-like cryptography, achieving the same security level for mobile commerce as in a “card present” environment.

Digital Secure
Remote Payment
is an in-app
e-commerce transaction

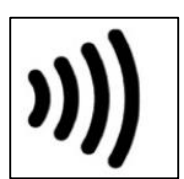


Digital Secure Remote
Payment uses similar
credentials as contactless
payment

Summary: MDES helps you to develop a scalable mobile payment solution to allow in-store and online transactions



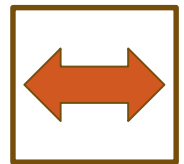
- The number of mobiles and within this smartphones are increasing exponentially.



- Consumers want to use their smartphones for everything, including payments and believe mobile payments are going to replace cash.
- Tokenization and digitization provide a secure way to deliver card credentials into mobile phones.



- MDES from MasterCard is a suite of on-behalf services providing tokenization and digitization services as well as a link to digital wallet providers and environments. MDES is also offering additional business services.



- MDES is easy to implement and provides a single connection to a lot of future use-cases including Apple Pay, Samsung Pay, MasterCard Cloud-Based Payment Services.



Thank you for your attention!
Questions?

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Connect to the future – with MasterCard

