



# Best Practices in Support of EMV Instant Issuance

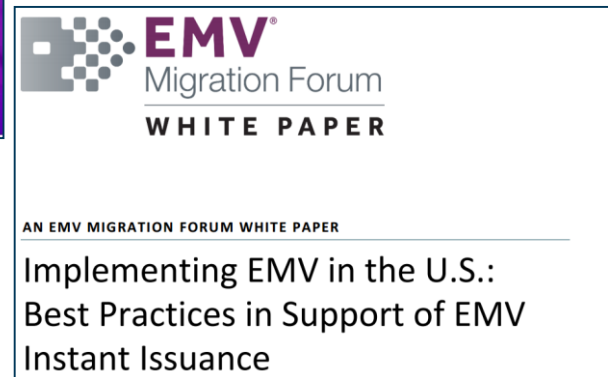
Philip Andrae, Jennifer Cristallo, Randy Vanderhoof

# About the EMV Migration Forum



## Why Are We Here?

“to address issues that require **broad cooperation and coordination** across **many constituents** in the payments space to ensure the **successful adoption of EMV-enabled cards, devices, and terminals** across the US market and to ensure that migration in the US market **is efficient, timely and effective.**”



# Agenda

Introduction

Value of Instant Issuance

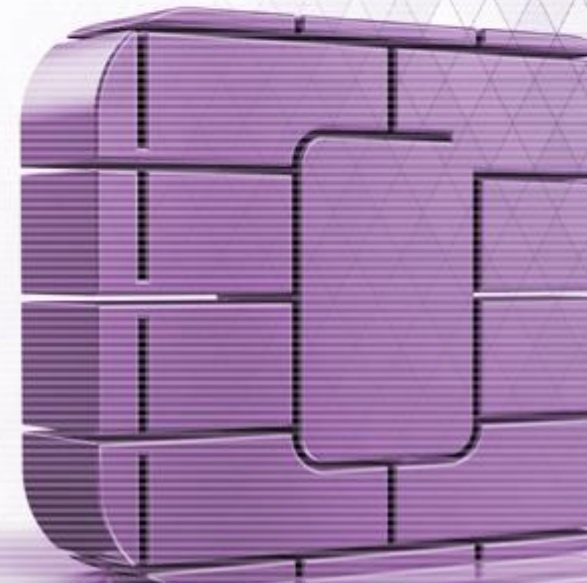
Instant Issuance EMV Upgrade Phases

Planning

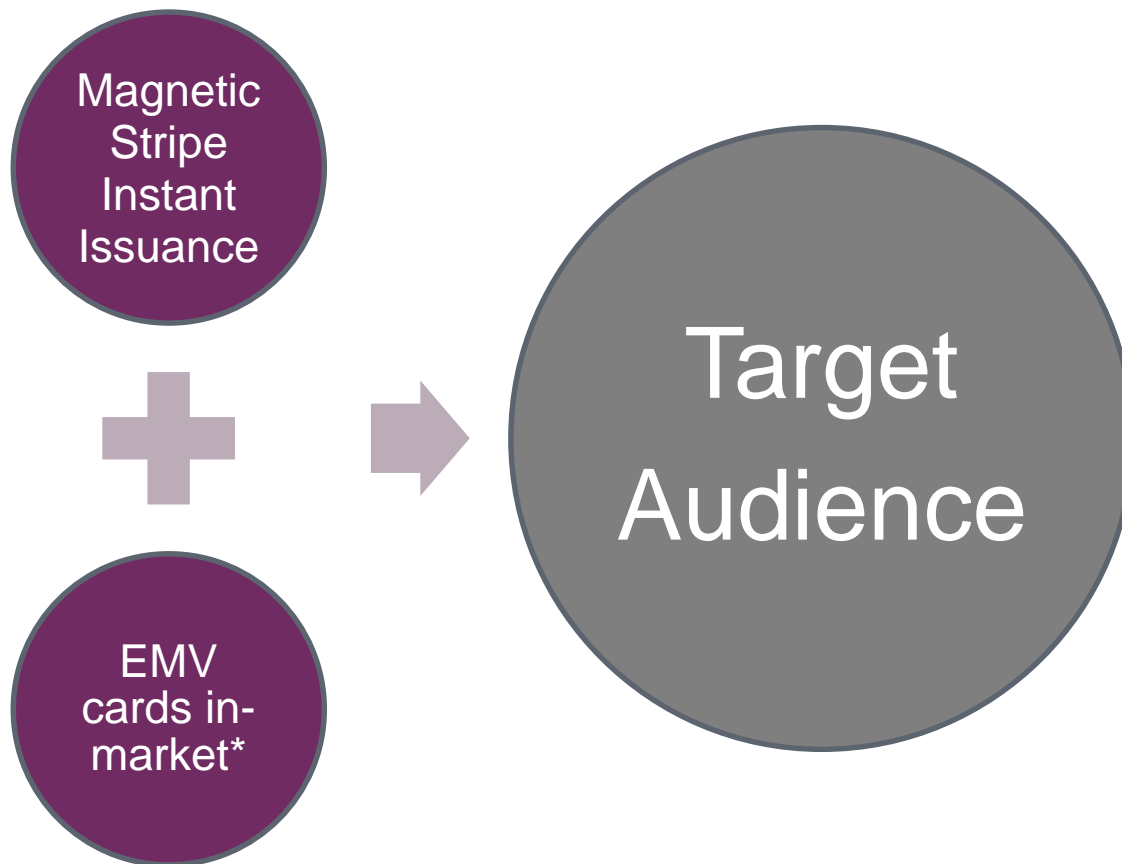
Development

Go-Live

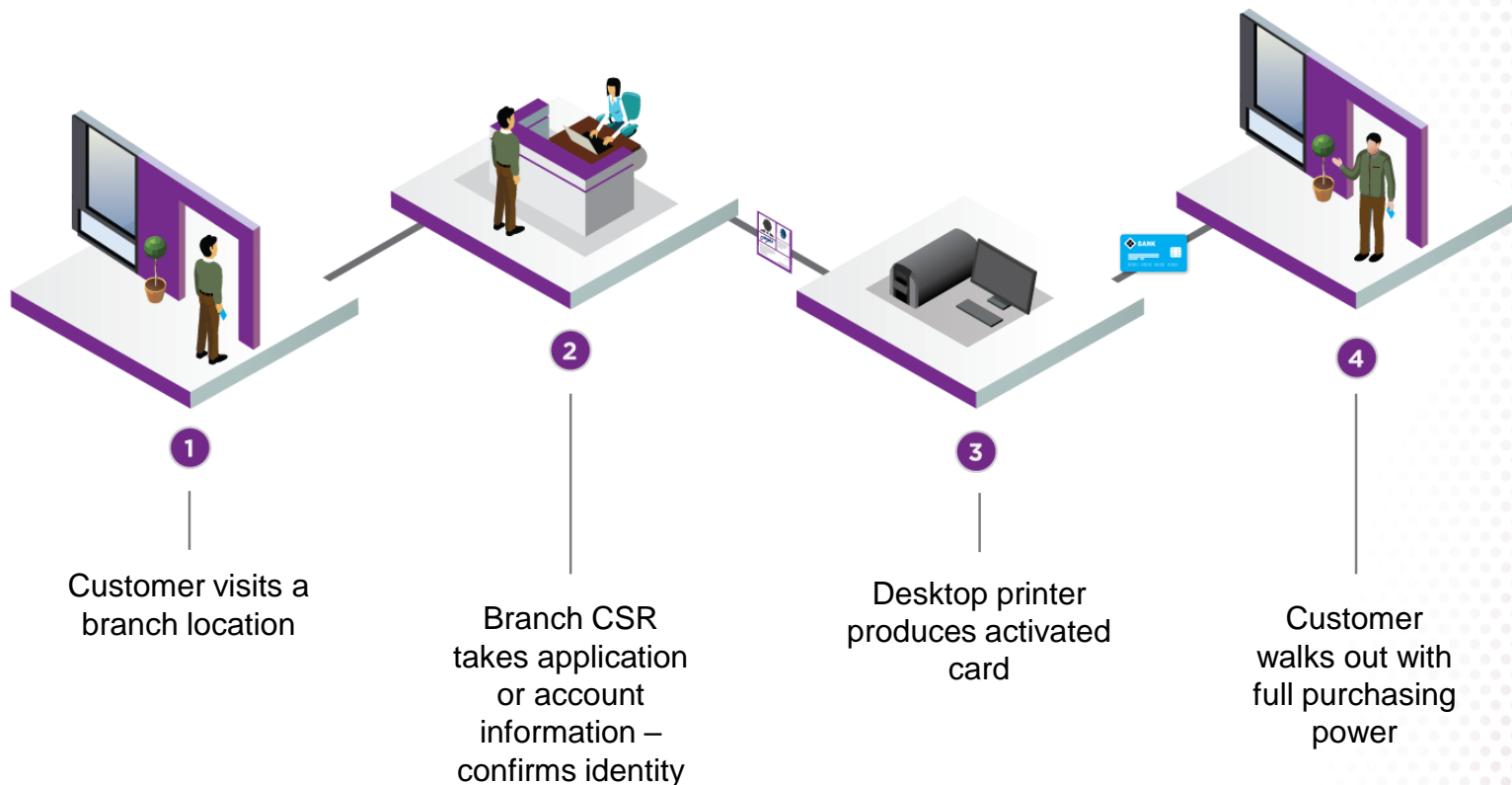
Questions?



# Financial Institution Assumptions



# Instant Issuance — Customer & Branch Perspective



# Webinar Presenters

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# Instant Issuance — Customer Perspective

## Why Customers Like Instant Card Issuance



# Instant Issuance — Branch Perspective

## Benefits Delivered to Branch Banks





# The Value of Instant Issuance

The EMV Migration Forum Instant Issuance white paper includes industry-recommended best practices:

- Key risks and suggested risk mitigation steps
- Key considerations during each of the planning, development and go live phases
- Sample timeline for an instant issuance project
- Payment network references on instant issuance

**“Implementing EMV in the U.S.: Best Practices in Support of EMV Instant Issuance”** – available at <http://www.emv-connection.com>

**“Despite the costs, financial institutions should aim to keep instant issuance in play as part of their migration to EMV.”**

Randy Vanderhoof, Don't Let EMV Quash Cardholders' Instant Gratification, 12/14/15

# Contributors

The following EMV Migration Forum members participated in the development of the white paper:

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- David Worthington, Bell ID

# Planning Phase



# Who should be involved in my EMV upgrade project?

EMV chip card manufacturer	<ul style="list-style-type: none"><li>• Produce high quality chip cards</li></ul>
Instant issuance hardware vendor	<ul style="list-style-type: none"><li>• Set up and install personalization hardware</li></ul>
Instant issuance software vendor*	<ul style="list-style-type: none"><li>• Set up and install personalization software and personalization script</li></ul>
Issuer	<ul style="list-style-type: none"><li>• Successfully implement the upgrade project</li></ul>
Issuing processor	<ul style="list-style-type: none"><li>• Ensure all EMV application elements are included in the personalization script and implement the upgrade project on behalf of the issuer</li></ul>
Payment network	<ul style="list-style-type: none"><li>• Card compliance with brand standards</li></ul>
Personalization bureau	<ul style="list-style-type: none"><li>• Support EMV issuance from the central environment</li></ul>
Personalization certification lab/agent	<ul style="list-style-type: none"><li>• Verify chip personalization is correct</li></ul>

# What steps do I need to take with my card vendor and instant issuance equipment vendor?

KICKOFF AND PRE-INSTALLATION	Customer	II Vendor	Vendor Partner
Schedule/conduct customer kickoff call		X	
Provide customer documentation bundle and project plan		X	
Schedule recurring status calls		X	
Send EMV Test Cards to Customer		X	
Procure and install new server	X		
Install HSM with IP address	X		
Request and install SSL Certificate(s)	X		
Complete and return Pre-Installation Checklist	X		
Identify Key Custodians	X		
Locate/obtain required Keys	X		
Transport key and EMV Keys	X		Card Manufacturer
Issue Master Keys	X		Switch Vendor
Complete and return Key Check Value (KCV) Worksheet	X		
Provide card formats	X		
Provide card proofs for artwork	X		
Order EMV test cards and production stock	X		Card Manufacturer

# How do I pick an EMV profile?

## Recommendation

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**Simplicity**: use the personalization bureau's standard EMV profiles

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**Consistency**: instant issuance profile the same as the central issuance profile

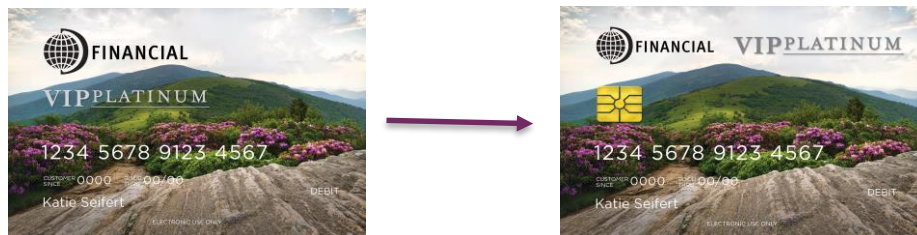
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**Supported**: issuer processor needs to be able to support the chosen profile

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# How does my card design change?

EMV Instant Issuance cards must be re-certified through payment brand



Direct to card EMV printing awareness:

- Need recessed chip
- OR
- White area around the chip



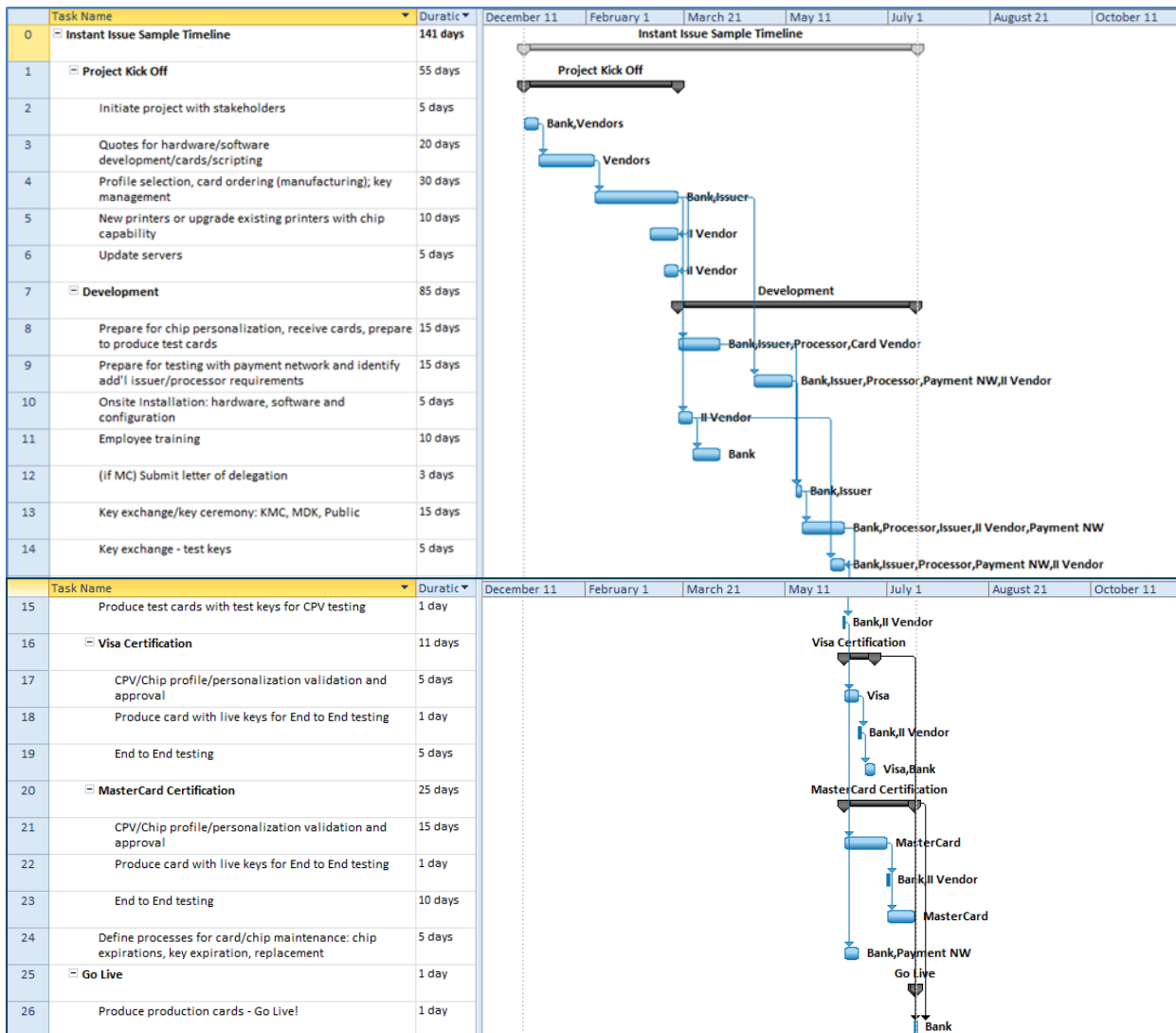
Does EMV affect my secure environment?

# Physical Security Remains the Same

Existing Instant Issuance environment and issuing processes remain the same



# How long will the EMV upgrade process take?



4-6+ months

Shorter: copying a certified profile

Longer: new chip and certification

# How much will the Instant Issuance EMV upgrade project cost?

## Hardware

- Printer update or replacement
- PIN pad
- HSM (in-house solution only)
- Card validation tool

## Software

- Update or migration

## Personalization script(s)

## Project management, education or training courses

## Data transmission, validation, key creation, test cards

Do I have to replace my printers or update my software?

# Maybe

Some printers are EMV capable, but may require firmware updates

If you are using a server solution – expect software upgrade/update

# What information should be prepared to educate my customers on EMV?

## GO CHIPCARD

### Have a chip card?

During the transition to chip, you can swipe your card as you normally would and follow the prompts. If the terminal is chip-enabled, it will prompt you to insert it instead. If you already know your chip card works there, start by inserting your card.



1

At chip-enabled terminals, insert your card with the chip toward the terminal, facing up. Do not remove until prompted.



2

Provide your signature or PIN as prompted by the terminal. Some transactions may not require either.

3

When the terminal says the transaction is complete, remove your card.



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## GO CHIPCARD.COM

### CONSUMER FAQ

#### What is a chip card and why am I getting one?

Chip cards are payment cards that have an embedded chip. Chip cards offer you advanced security when you use the chip to pay in store or at an ATM.

#### What is EMV?

Chip cards are based on a global card payment standard called EMV, currently used in more than 80 countries. There are more than 3.4 billion chip cards issued across the globe. Learn more at [www.emv-connection.com/consumers](http://www.emv-connection.com/consumers).

#### Why are chip card transactions more secure?

Chip card transactions offer you advanced security in-store and at the ATM by making every transaction unique. And, your chip card is more difficult to counterfeit or copy. If the card data and the one-time code are stolen, the information cannot be used to create counterfeit cards and commit fraud.

#### How do I know if I have a chip card?

If you have a chip card, the chip is located on the front of the card. You will still have a magnetic stripe on the back so that you can use it at merchants who don't accept chip cards yet.

#### How do I use my chip card in stores?

During the transition to chip, you can swipe your card as you normally would and follow the prompts. If the terminal is chip-enabled, it will prompt you to insert it instead. If you already know your chip card works there, start by inserting your card. These basic steps will help ensure successful transactions:

1 Insert your card with the chip toward the terminal, facing up. Do not remove until prompted.

2 Provide your signature or PIN as prompted by the terminal. Some transactions may not require either.

3 When the terminal says the transaction is complete, remove your card.

Always remember when you use your chip card to follow the prompts on the terminal and leave your card inserted until prompted to remove it.



- Free resources
- Communication tips
- Social Media posts



# Development Phase

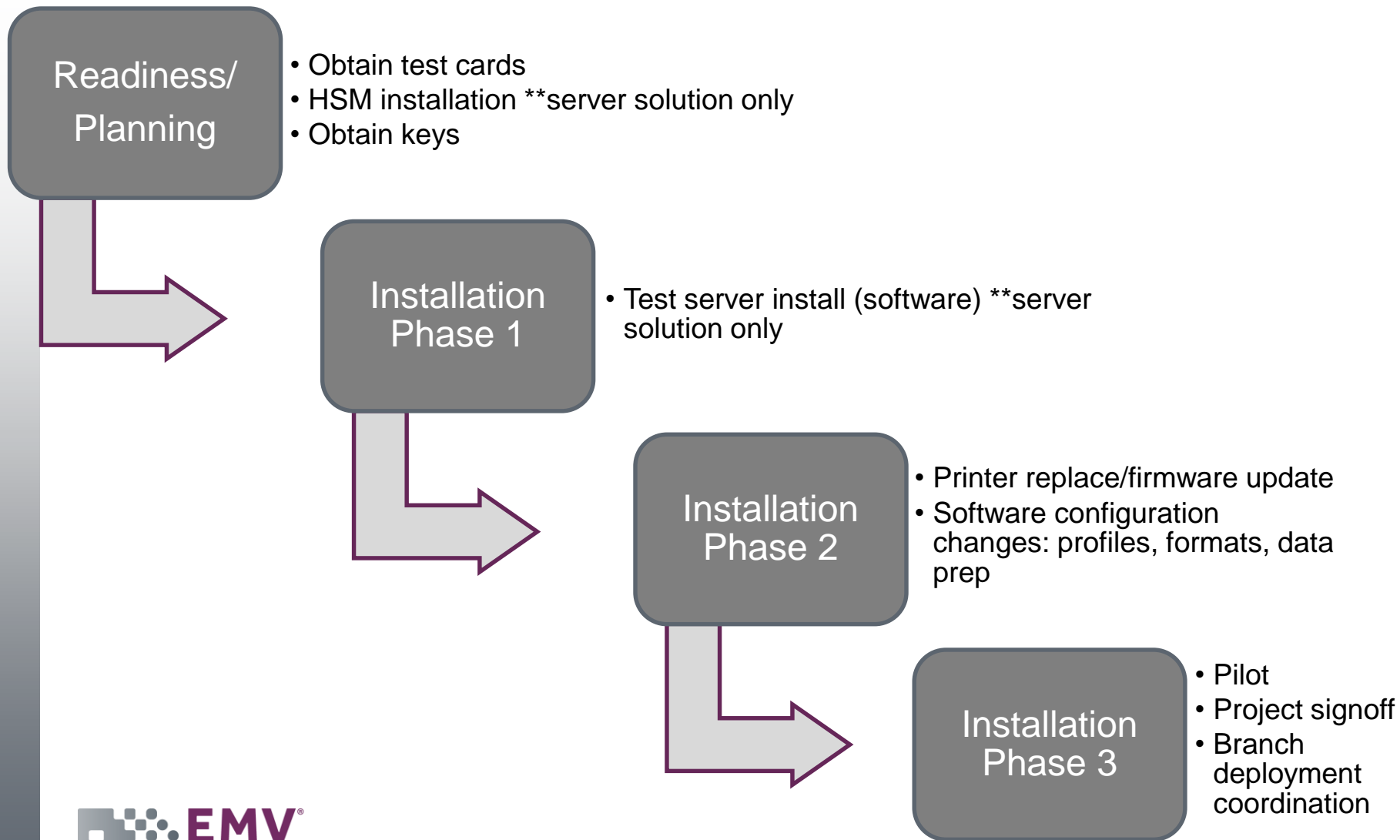


# What is the best EMV issuance strategy for Instant Issuance?

All Cards

Reissuance  
Only

# What does the typical installation process look like?



# What are the Key Management changes?

In addition to the keys utilized for a magnetic stripe transaction (e.g., CVV/CVC and PIN Encryption Key), there are **additional keys for EMV transactions** (e.g., MDK/, IMK) that support the creation of the EMV cryptogram that is authenticated in the transaction process to offer **greater security** from counterfeit.

In addition, your instant issue hardware vendor will require **keys to lock and unlock the chip on the card**, prior to in-branch personalization of an EMV card.

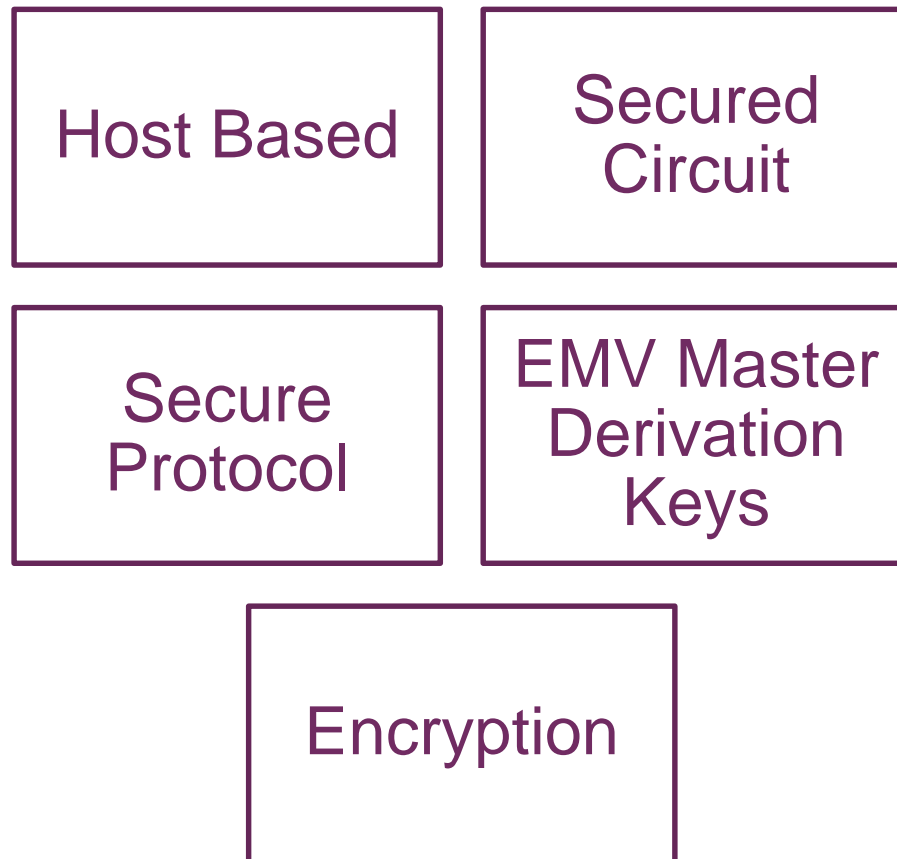
The keys will need to be loaded into the hardware security module (HSM), either on premise or hosted, utilized by the instant issuance system.





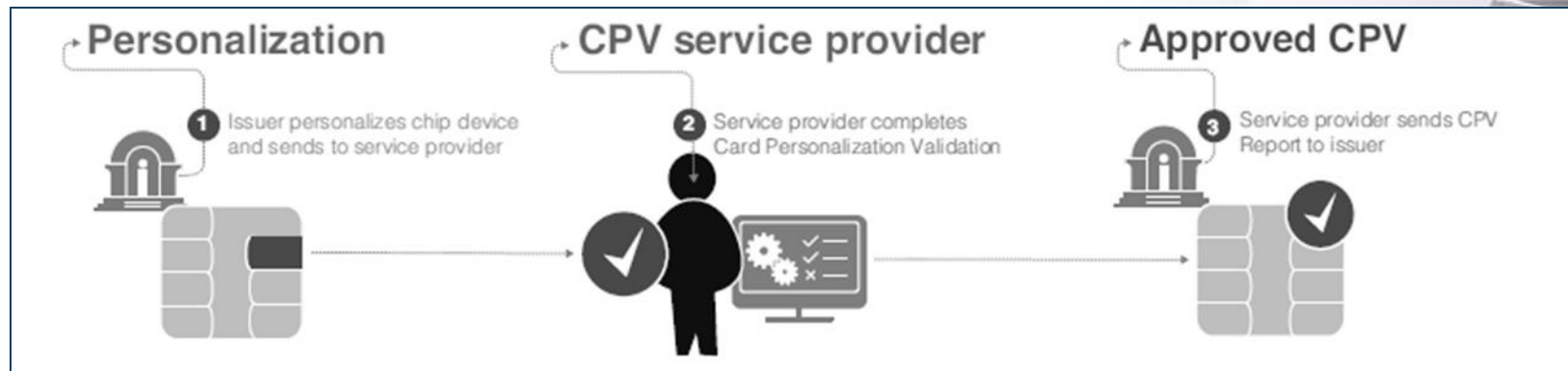
# What is the Key Exchange/Key Ceremony?

To prevent eavesdropping on the communication between the card and the device:

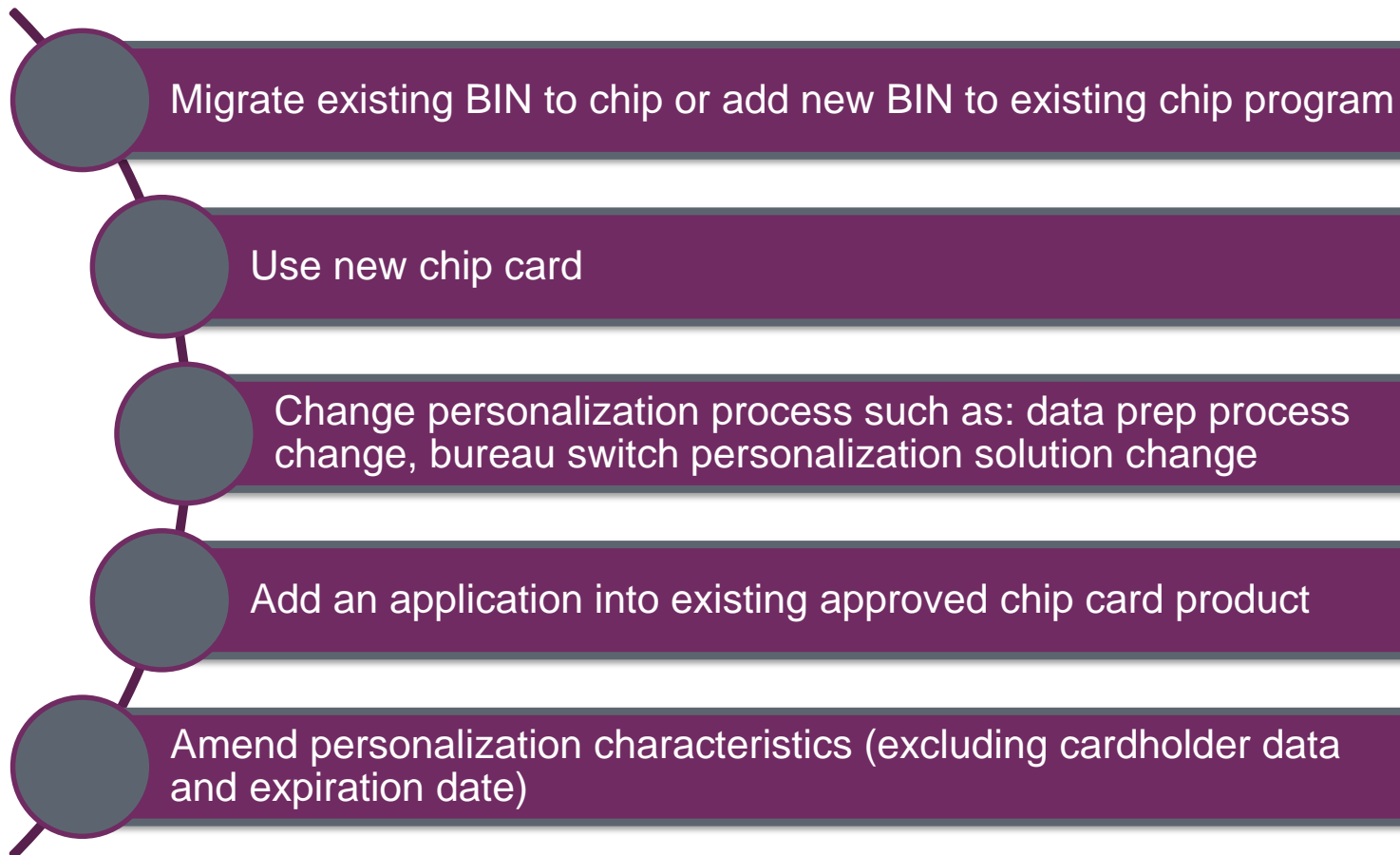


# Who will perform the required chip certification?

**Card Personalization Validation (CPV)** is a process designed to ensure that the “personalization” of a chip card or other chip payment device meets card brand requirements.



# When do I need to execute a new chip certification?



# What should my pilot look like?



## Who?

- Friends and Family (employees)
- Card Management/Fraud departments

## How Long?

- Varies, 4-8 weeks suggested

## When?

- Prior to go-live

# Go Live Phase



How do I manage my in-branch chip inventory?

# Work with Card Manufacturer/Processor

- Reference chip manufacturer roadmap
- Utilize card provider established process
- Centralize inventory processes
  - Remove out of branch (manage daily/weekly/monthly)



# How do I know cards are working?



Handheld  
Verification



Hardware  
Installed



ATM with EMV

# Questions?





# EMV Migration Resources

- Wealth of EMV resources to help with education and implementation
  - White papers
  - Infographics
  - Webinar recordings
- Information about EMV Migration Forum activities and membership

The screenshot shows the EMV Connection website homepage. At the top is a navigation bar with the logo and links for Home, EMV Resources, EMV Migration Forum, EMV News, and Contact Us. The main content area features a large article titled "EMV in the United States" with a sub-header "EMV in the United States". The article text states: "Secure EMV chip payments are here in the United States! Consumers are now using chip cards to pay at chip-enabled merchant locations nationwide. EMV chip payments will:" followed by a bulleted list: "• Reduce counterfeit card fraud", "• Enable cardholders to use secure EMV chip cards globally", and "• Prepare for NFC mobile contactless payments". Below the list, it says: "The EMV Connection web site provides up-to-date information for all industry stakeholders on the status of EMV migration, along with tutorials and educational resources that will assist with migration." To the right of the text is a photo of hands holding a gold EMV chip card. Below the photo is a banner for a webinar: "Webinar: Best Practices for EMV Instant Issuance" with the text "Join the July 14th webinar to learn about issuer best practices for transition to an instant issuance solution supporting EMV chip cards." Below the main article are four columns, each with a heading and a "Read More" button: "Issuers" (Get your EMV migration on track with tutorials and implementation guidance that take advantage of global best practices.), "Merchants" (Learn from industry experts about the impact that EMV chip technology will have on the point-of-sale environment and key strategies for managing migration.), "Acquirers/Processors" (Acquirers/processors need to consider the support that will be required to equip merchants with EMV-compliant POS solutions.), and "Consumers" (Learn how EMV chip technology helps to reduce fraud and protect payment transactions and how chip cards will be used in stores.). At the bottom of the page are four promotional banners: "EMV Migration Forum", "KNOWLEDGE CENTER EMV Migration Forum", "Contactless EMV", and "Smart Card Alliance".

<http://www.emv-connection.com>

# Thank you!



[WWW.EMV-CONNECTION.COM](http://WWW.EMV-CONNECTION.COM)

