



Client Webinar Series

Navigating the EMV[®] Payments Ecosystem

July 30, 2013

Today's Session

Key Learning Objectives

Determine the business drivers for EMV® and its impact to my organization

Explain and define the liability shifts and their deadlines

Identify regulatory and compliance impacts related to debit and Durbin

Review FIS'™ development road map vision

Prepare and plan for EMV implementation

Recognize tools and best practices that are available to help your institution in establishing a cost-effective card reissuance strategy

Polling Question – Audience Participation

Rate your level of knowledge of EMV chip and its impact to the U.S. payments industry on a scale of 1 to 5 (with 1 having no knowledge and 5 being very knowledgeable).

Why EMV Chip and Why Now?

Business drivers



¹Source: EMVCo http://www.emvco.com/about_emv.aspx

²Source: Smart Card Alliance <http://www.emv-connection.com>

Why Chip and Why Now?

Benefits



Security & Fraud

Reduce counterfeit, lost and stolen card fraud
Unique microprocessor that prevents card cloning
Dynamic data
U.S. becomes a target for organized and card-not-present fraud.



Global Interoperability

Increasingly difficult for U.S. travelers to use cards
Vulnerability of U.S. payments infrastructure
Foreign visitors will be able to use their chip cards in the U.S.



NFC and Mobile

Merchants implementing NFC in combination with enabling of EMV on POS devices
Consumer adoption of contactless card and mobile payments will continue to grow.



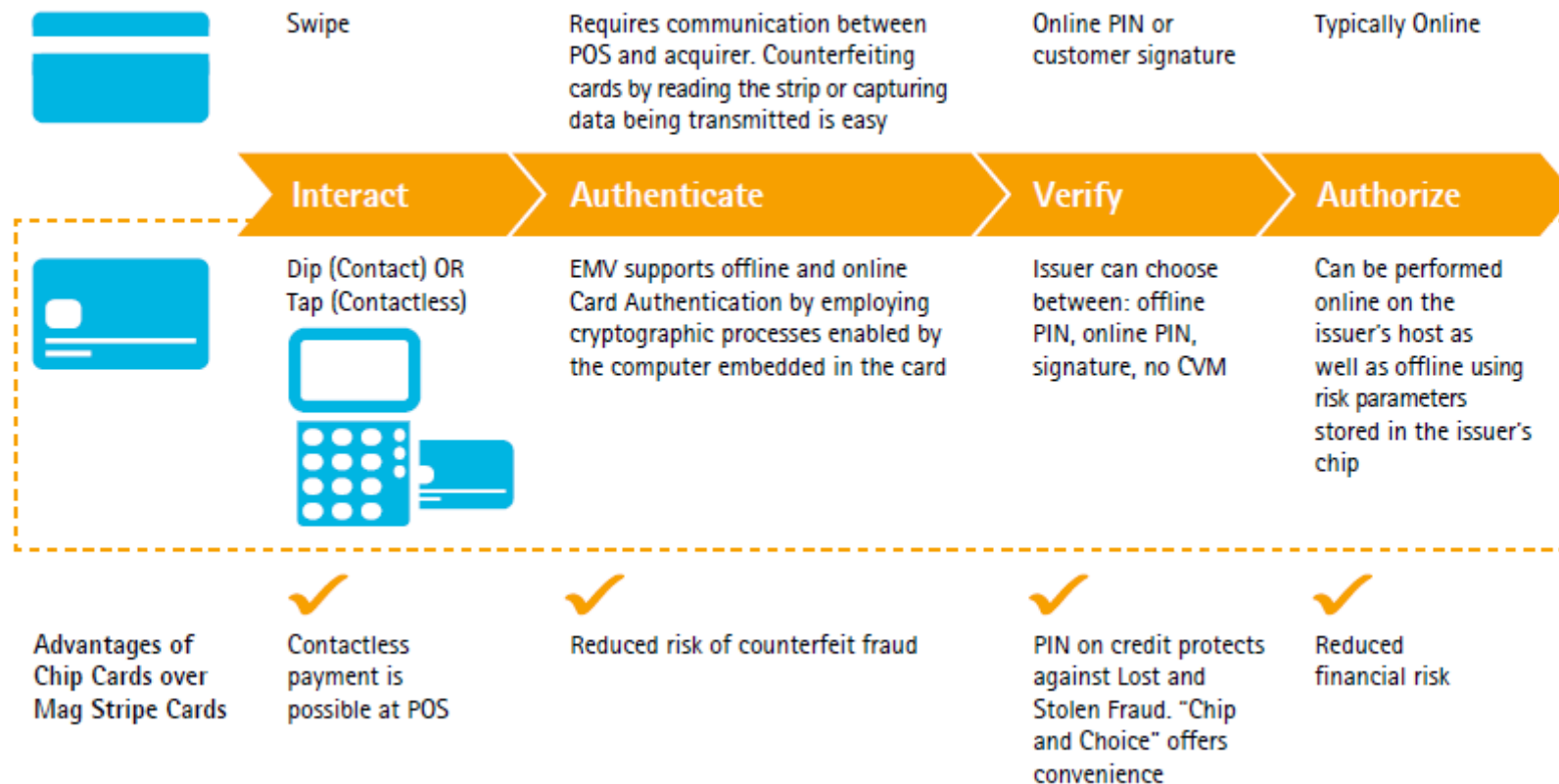
Payment Networks

Major card brands are advancing the adoption of EMV through a series of liability shifts and mandates.

How Does EMV Chip Work?

The difference between magnetic stripe and chip card

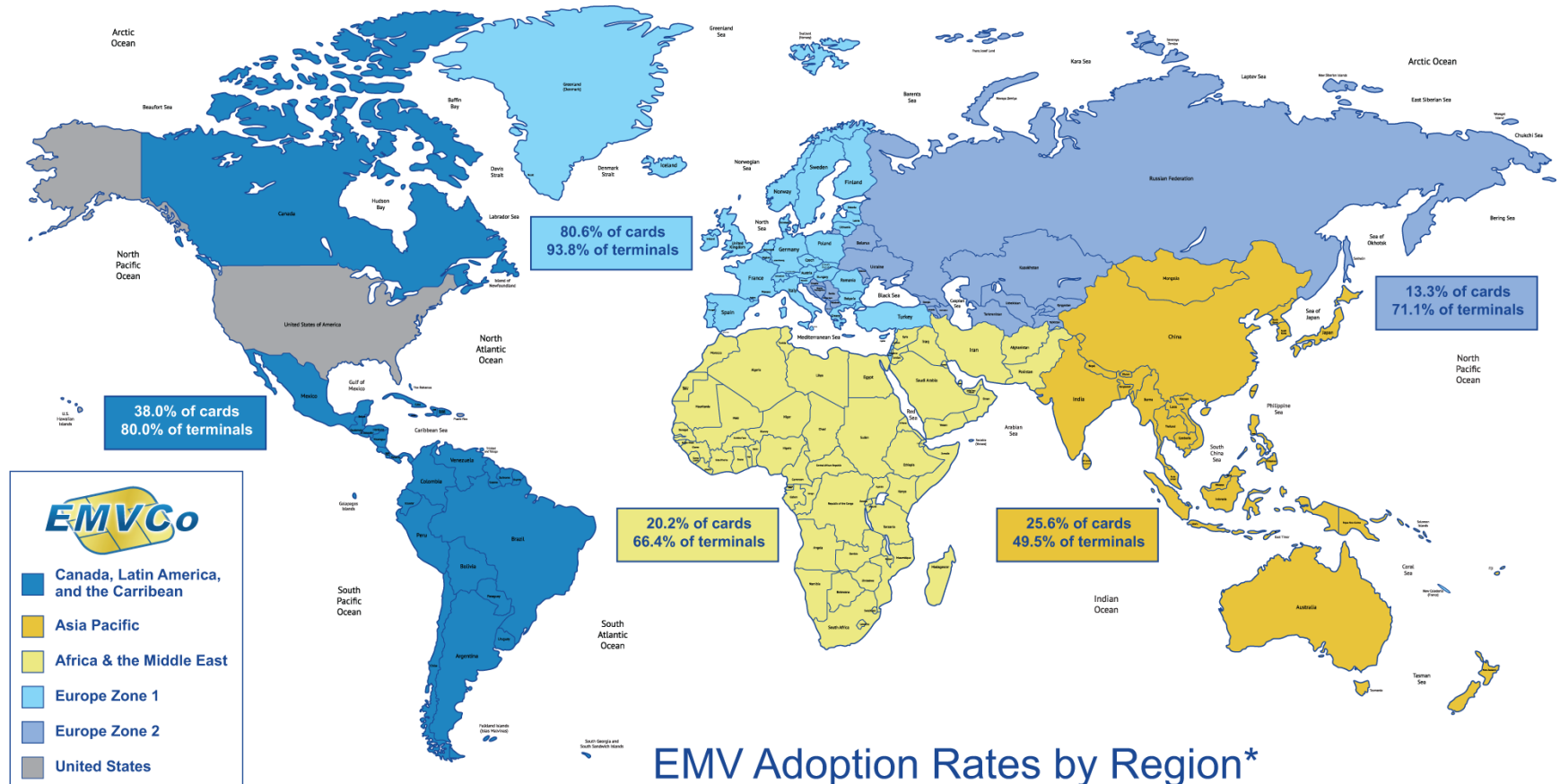
Figure 5. Chip Cards are different from Swipe Cards in many ways and offer several benefits over the latter



Source: Accenture Payment Services "Payment Transformation – EMV Comes to the US", June 2013

Worldwide EMV Deployment and Adoption

EMVCo



*Figures reported as of Q3 2011 and represent the latest statistics from American Express, JCB, MasterCard, and Visa, as reported by their member financial institutions globally. Figures do not include data from the United States.

Worldwide EMV Deployment and Adoption

EMVCo

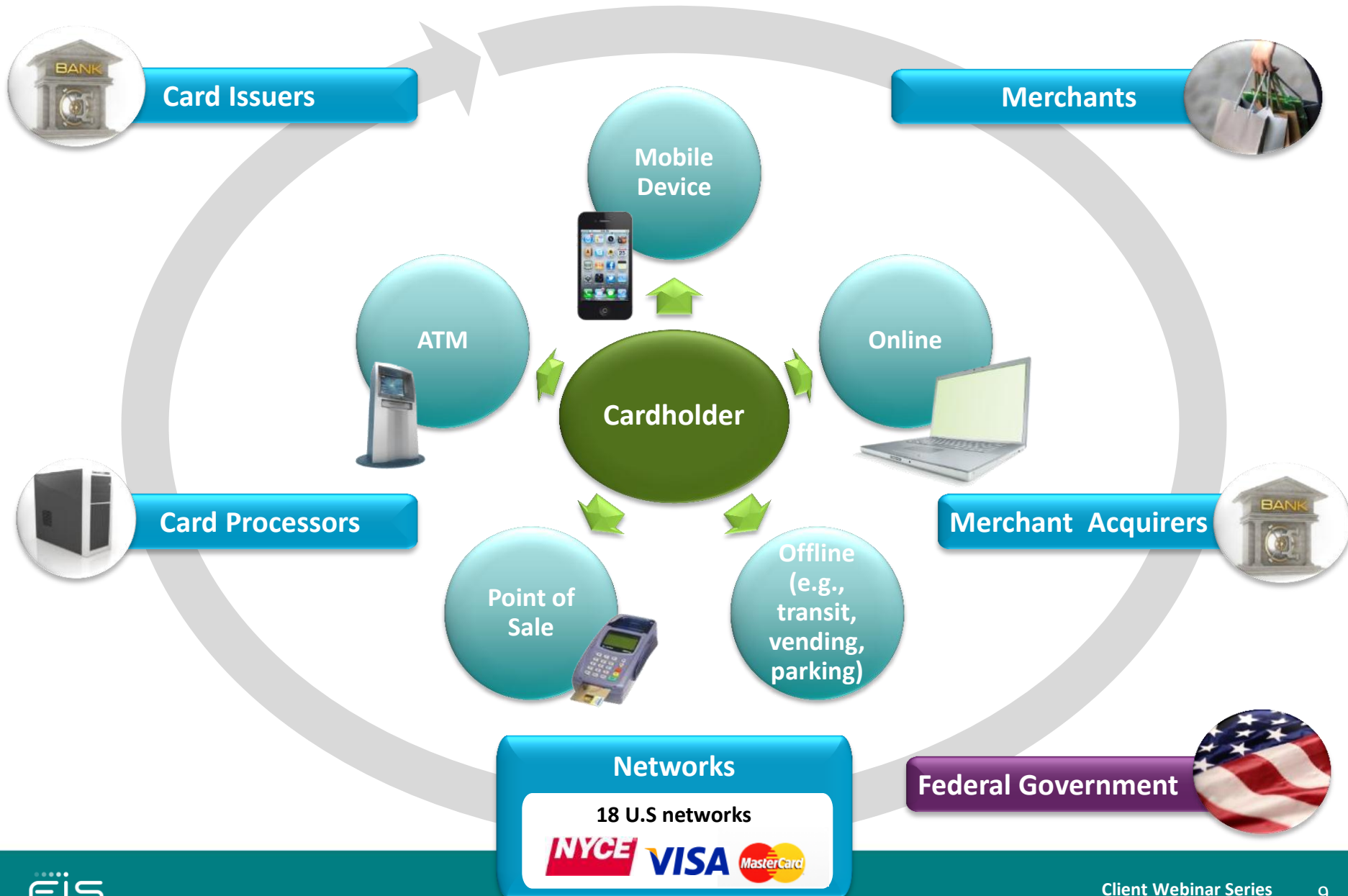
Worldwide EMV Deployment and Adoption*

Region	EMV Cards	Adoption Rate	EMV Terminals	Adoption Rate
Canada, Latin America, and the Carribbean	259,549,827	38.0%	4,342,000	80.0%
Asia Pacific	317,316,028	25.6%	4,174,000	49.5%
Africa & the Middle East	25,882,716	20.2%	380,000	66.4%
Europe Zone 1	708,914,657	80.6%	10,985,000	93.8%
Europe Zone 2	31,739,128	13.3%	586,500	71.1%
United States†				
TOTALS	1,343,402,356	42.4%	20,467,500	75.9%

* Figures reported in Q3 2011 and represent the latest statistics from American Express, JCB, MasterCard and Visa, as reported by their member financial institutions globally.

† Figures do not include data from the United States.

U.S. EMV Ecosystem



Polling Question – Audience Participation

Which of the following six drivers to issuing EMV cards are most important to your institution? Select as many as you'd like.

- Competitive advantage
- Cardholder retention
- Lost interchange (to competitive payments overseas)
- Overseas acceptance issues for frequent travelers
- 2015 liability shift
- Fraud reduction



Key Dates and Liability Shifts

Liability Shift versus Mandate

- **Liability shift:** The process of determining where the liability resides for a particular transaction/situation. Each payment network defines the rules around their liability structure.
- **Mandate:** An official order or commission to do something; give (someone) authority to act in a certain way.

VISA BULLETIN – August 9, 2011

VISA sets U.S. Acquirer Processor Mandate to Support EMV Chip Transaction Processing

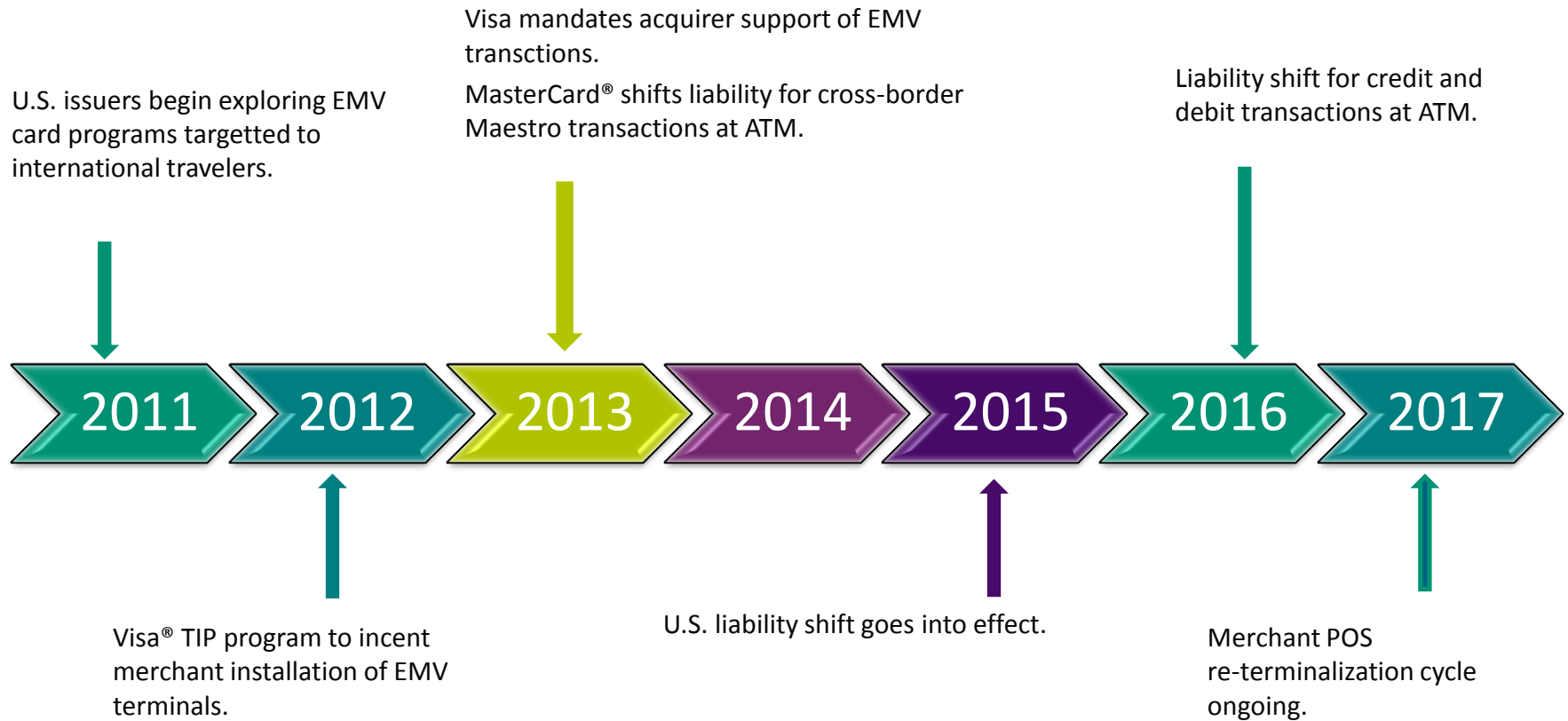
Visa will require VisaNet acquirer processors to ensure that their systems support merchant EMV chip acceptance. Effective 1 April 2013, acquirer processors and sub-processor service providers will be required to support merchant acceptance of EMV chip transactions. EMV chip acceptance will require acquirer processors and sub-processors to be able to carry and process the additional data that is included in EMV chip transactions, including the cryptographic message that makes each transaction unique.

U.S. EMV Migration Key Dates and Framework

Date	PCI Validation Relief	Liability Shifts	Mandate
2012	Visa Merchants receive PCI audit relief for installing EMV contact and contactless POS terminals in which 75% of the merchant's transactions originate from contact and contactless chip-enabled terminals. This does not relieve merchants from being PCI-compliant.		
2013	MasterCard, Amex, Discover (October) Merchants receive PCI audit relief for installing EMV contact and contactless POS terminals in which 75% of the merchant's transactions originate from contact and contactless chip-enabled terminals. This does not relieve merchants from being PCI-compliant.	MasterCard (Maestro) (April) ATM owners and operators will bear liability shift for fraud that takes place at non-EMV-enabled ATMs. All Maestro® cross-border ATM transactions.	Visa, MasterCard, Amex, Discover (April) Acquirer/Acquirer Processor networks must support chip (contact and contactless).
2015		Visa, MasterCard, Amex, Discover (October) Merchant acquirers and merchants will bear the liability for fraud at the POS if the card presented is EMV-enabled and the terminal processing it is not capable of supporting contact chip EMV.	
2016		MasterCard ATM owners and operators will bear the liability for fraud that takes place at non-EMV-enabled ATMs if the card that is compromised is EMV-capable.	
2017		Visa, MasterCard, Amex, Discover Fuel dispensers (AFD) get an additional 2 years before the liability shift takes place. Visa ATM owners and operators will bear liability for fraud that takes place at non-EMV-enabled ATMs if the card that is compromised is EMV-capable.	

Timeline

Scenarios for EMV deployment in the U.S.





Debit and Durbin – The impact to U.S. EMV deployment

Current U.S. Debit Environment

Durbin regulation and routing

U.S. Debit Environment

- 18 debit networks (unlike many other countries with a single or minimal domestic debit networks – e.g. Interac Association in Canada, Link in the U.K.)
- Current magstripe environment is shared equally by all networks
- Issuers may support multiple debit networks (ie. STAR, NYCE®, AFFN, etc.).
- Change network affiliation without reissuing cards or replacing terminals

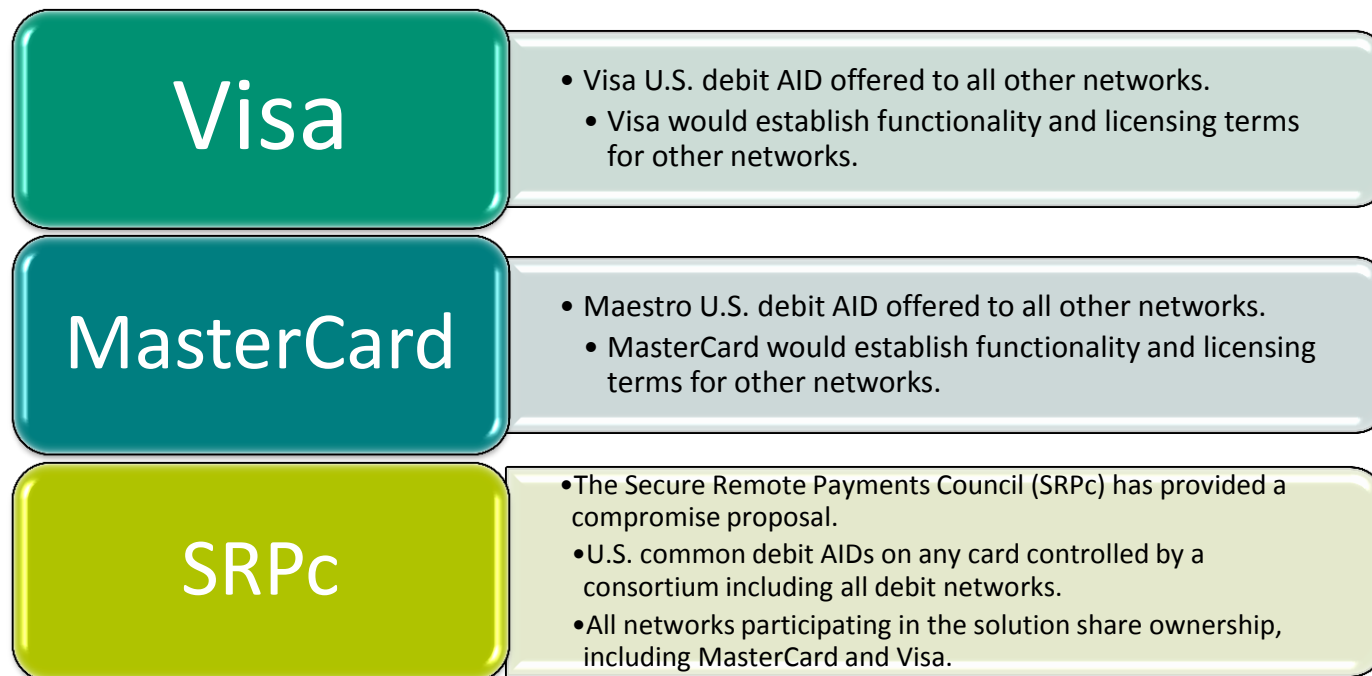
Challenge in Moving to Chip Cards

- Regulation requires that all U.S. issuers participate in at least two unaffiliated debit networks.
- Merchants must be given debit transaction routing choice.
- In standard EMV environments, routing is controlled by issuer preference on cards.
- Consensus: The preferred approach, agreed upon from merchants and issuers, is a single debit application per card. Dual applications would require significant changes on the part of all stakeholders.

Working Towards a Common Industry Solution

The Industry is working together toward a solution with a single U.S. debit AID per card

- EMV Migration Forum is a focal point for discussions with representation from the international networks, domestic networks, issuers, merchants, processors, etc.



Next Step: Industry stakeholders must work together to work through remaining details.

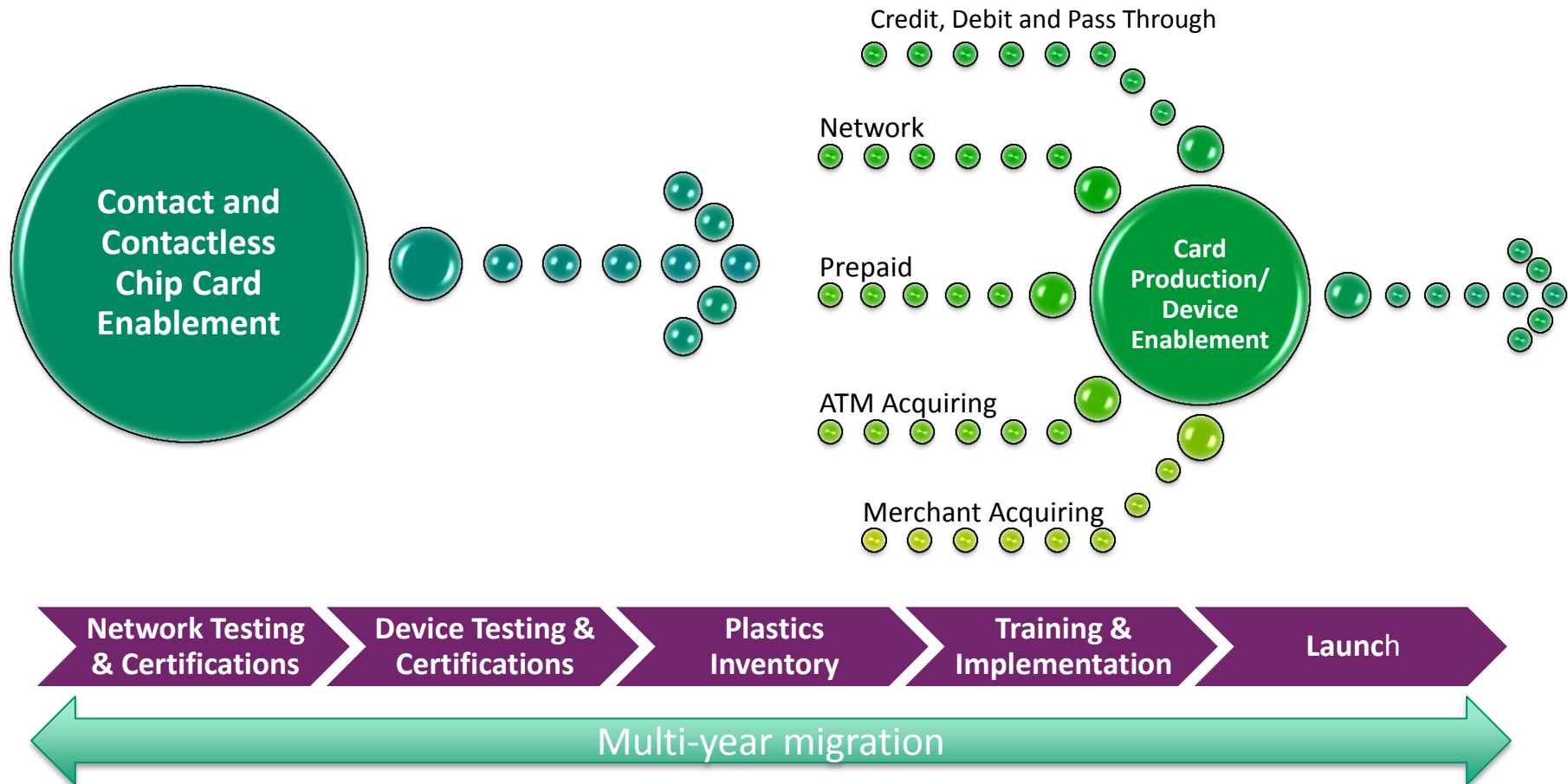
- The business issues can only be solved by 18 independent companies (the U.S. debit networks) agreeing to participate in a common approach – conversations continue.
- Many details to resolve to ensure a strong solution for the U.S. Payment industry.



FIS Development Road Map

FIS EMV Development Strategy

Many moving parts





What FIS is Doing

FIS Vision

“To enable our clients to plan, organize and execute the migration to EMV, thereby enhancing global chip card acceptance and decreasing the likelihood of counterfeit card fraud.”

What FIS is Doing

Shaping the future of payments

Strategy

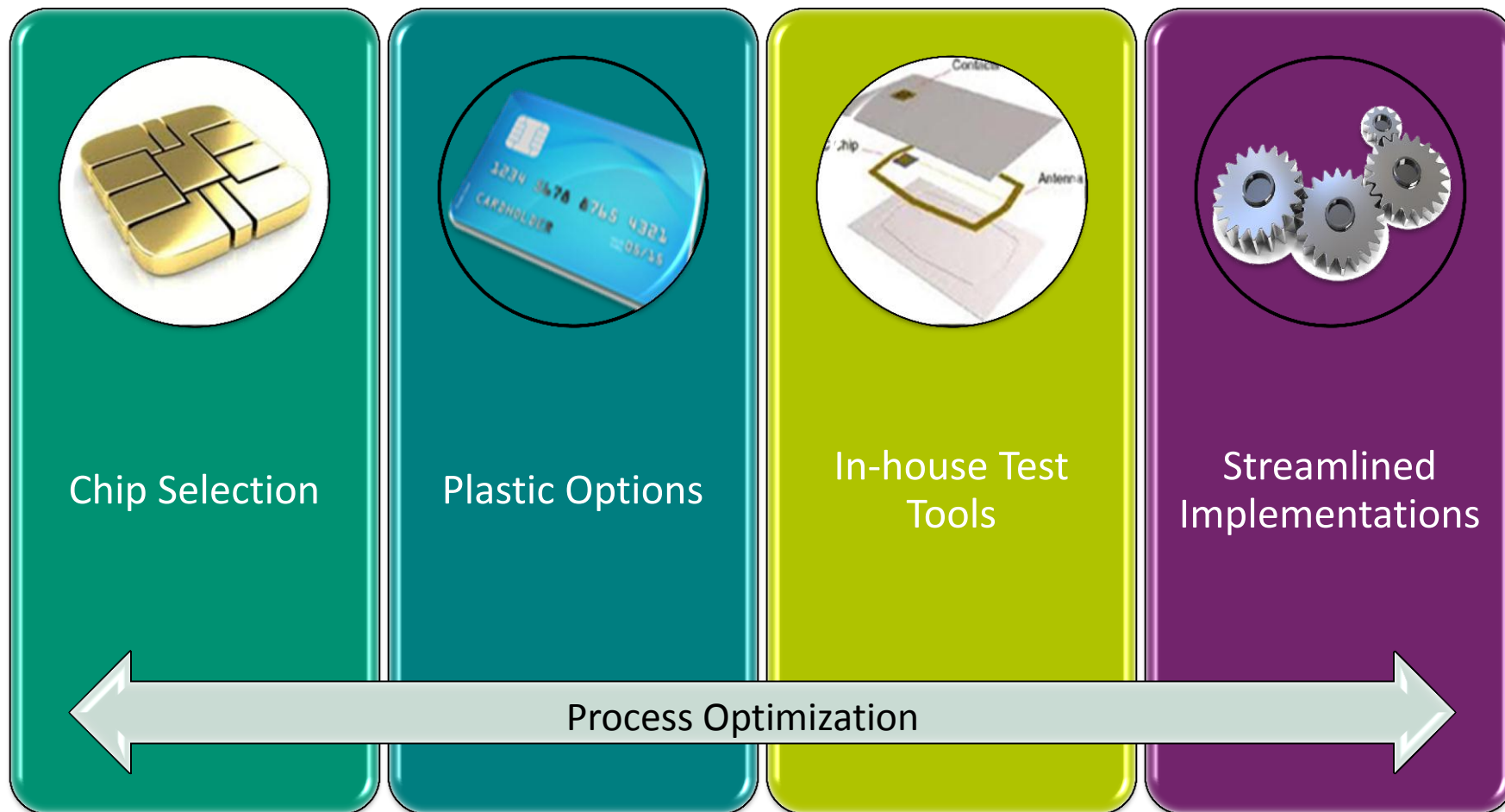
- Build out card payment and network infrastructure (credit, debit, prepaid, card production and NYCE) to mass-produce EMV cards
- Enhance all card platforms to support EMV cards to lower the losses due to fraud while improving the retention of affluent customers
- Educate and train all financial institution customers on EMV standards and requirements, and support them through migration planning
- Educate and train all FIS internal stake holders on EMV standards and FIS' strategy

Approach

- Dedicate resources to drive growth in EMV payment cards and contactless payment transactions
- Multi-year infrastructure build-out and expansion
- Seamless migration of financial institutions to EMV cards to lower losses due to fraud
- Leverage advancements of EMV and mobile to guide future development and go-to-market capabilities in mobile payments

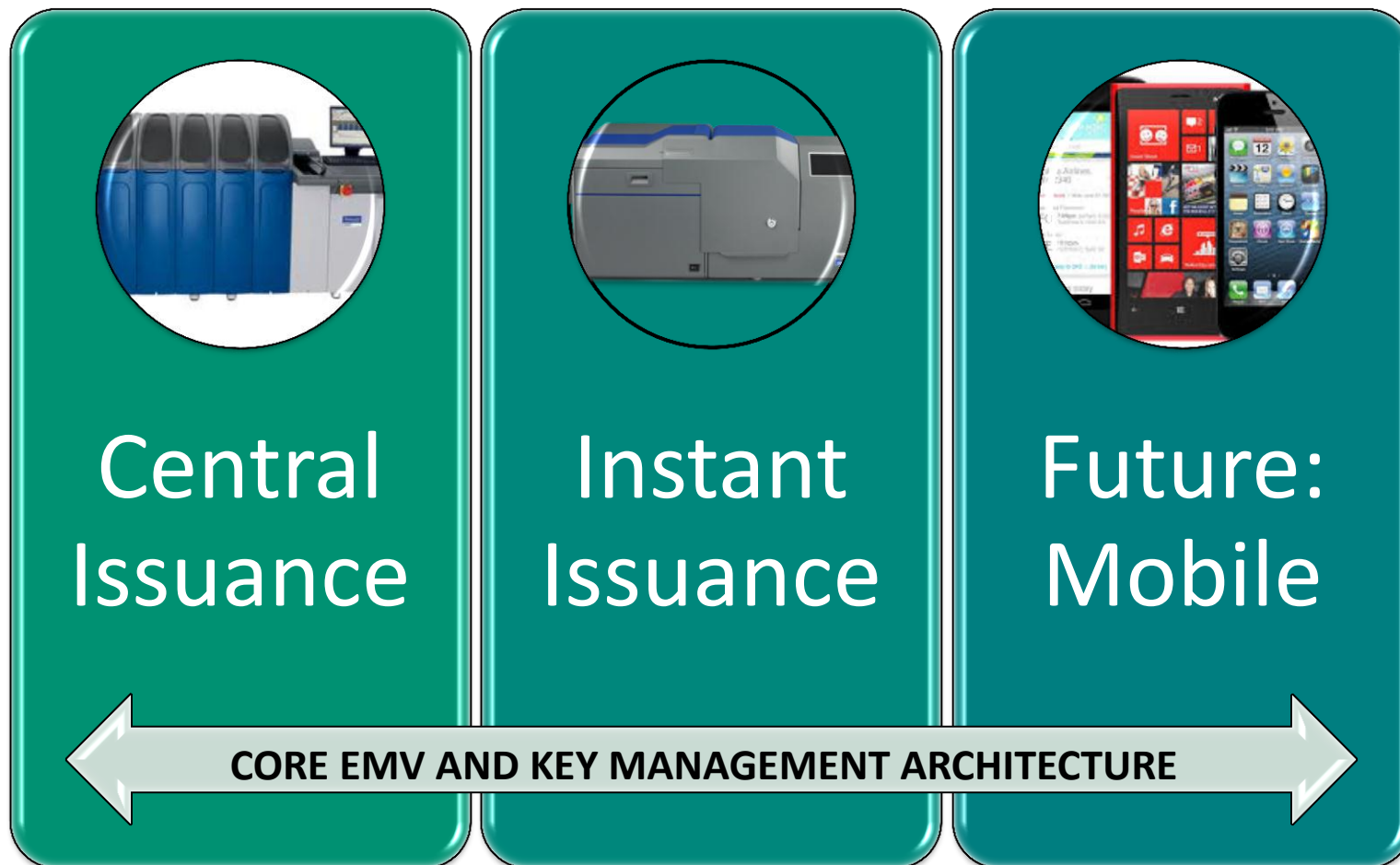
What FIS is Doing

Optimizing process and vendor partnerships




What FIS is Doing


Instant issuance and EMV



What FIS is Doing

View current art with chip



ePix™ Custom Card Designer DEMO


[Product Details](#) | [FAQs](#) | [Image Guidelines](#) | [Contact Us](#) | [Returning User Login](#) | [Exit Designer](#)

Step 2 - Customize Your Card Design


Use the tools below to customize your card design. To select a different background, click **Go Back**. When you are happy with your card design, click **Continue**.


Note: Uploaded photos must meet [Image Guidelines](#).


Resize Image







ROTATE



ROTATE


FLIP


FLIP

GO BACK

CONTINUE



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What FIS is Doing

Industry associations and activities

- **Smart Card Alliance**
 - Payments Council
 - NFC and Mobile Council
 - EMV Migration Forum (EMF)
 - Working Groups
 - Communication and Education
 - Debit
 - Testing and Certification
 - Phase 1 Deployment
 - ATM
 - CNP
- **Multos Consortium**
- **ATM Industry Association (ATMIA)**
- **Secure Remote Payments Council (SRPc)**
- **EMVCo** – governing standards body for EMV



What FIS is Doing

Client education and communication

WHITE PAPER



Implementing an EMV Chip Card Strategy: Best Practice Discussions for IBS Clients

UPC Workgroup:

Cindy Cole, Alliance Bank
Cathy Hansen, Washington Trust Bank
Laura Kramer, Tri-City Bank
Brian Morrison, Tri-City Bank
Kim Seidel, Park Bank
Bret Berta, FIS
Nancy Cody, FIS
Phil Collins, FIS
Don Shipley, FIS
Terry Smith, FIS



Client Webinar

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You are invited to attend a complimentary webinar sponsored by FIS™. We develop each webinar around our clients and focus on topics that matter most to you and your institution's future. As the leader in the financial services industry, our focus at FIS is to put you first. Please register today for your complimentary webinar.

REGISTER

WEBINAR INFORMATION

Date:
Tuesday, **March 26**



EMV Extra Edition

Milwaukee Debit Edition



"Your source for FIS EMV Chip Card information"

What FIS is Doing

FIS participation in the news

EMV Migration Forum Releases Standardized Terminology to Promote Consistent Communication in U.S. Move Toward Chip-Based Payments.

Princeton Junction, N.J., March 5, 2013 – To promote clear and consistent communication as EMV technology is introduced into the U.S., the EMV Migration Forum today released its first official publication, “The Standardization of Terminology.”

Ten Debit Networks Adopt Common U.S. Debit Aid

Westwood, NJ – March 19, 2013 – The Secure Remote Payment Council (SRPc) today announced that the ten debit network members of its Chip and PIN Workgroup have agreed to adopt a common U.S. debit application identifier (AID) and work with Discover Financial Services to license the D-Payment Application Specification (D-PAS) as the foundation of the common U.S. debit chip payment solution.

The EMV Ecosystem: An Interactive Experience for the Payments Community (January 2013)

The U.S. migration to secure chip-based EMV payments requires new activities and collaboration of many participants throughout the payments industry. Who are the players and what parts do they play? The Smart Card Alliance Payments Council answers these questions in a new [interactive PowerPoint presentation](#).

What FIS is Doing

FIS EMV Ambassador Program

Mission: *To facilitate the proliferation of EMV chip card knowledge and operational support throughout the FIS enterprise through communication, education, employee engagement and action.*



What FIS is Doing

FIS eLearning Series coming soon



What FIS is Doing

EMV tools for reissue planning and migration



What FIS is Doing

Launched Q3/2012

The screenshot shows the FIS website interface. At the top left is the FIS logo. To its right is a navigation menu with links: Products | Services | Solutions | About Us | Contact Us | Login | Global Sites. Further right is a search bar with the text 'Search...' and a green 'SEARCH' button. Below the navigation menu is a sidebar with a 'FOR SELF NAVIGATORS' section containing links: FOR SMALL BUSINESSES, FOR THE INTERNATIONAL TRAVELER (EMV) (highlighted in green), FOR THE UNDERBANKED, FIS INSIGHTS, and RETAIL SOLUTIONS. The main content area has a header with 'Home • Solutions • For the International Traveler (EMV)' and a large image of an EMV chip card with the text 'For the International Traveler (EMV)'. Below this image is a paragraph: 'EMV® is a global standard for credit and debit payment cards based on chip card technology as opposed to magnetic stripe. The EMV name comes from Europay, MasterCard® and Visa®, the companies that initiated development of the EMV specifications in 1994.' To the right of this paragraph is a box titled 'Who is using/will use EMV?' containing a list: Visa®, MasterCard®, Discover®, American Express®, and NYCE® Payments Network. Below the paragraph is another paragraph: 'EMV chip-based payment cards, also known as smart cards, contain an embedded microprocessor which contains the information needed to use the card for payment, and is protected by various security features. Currently, EMV is the payment method of choice in Europe and other parts of the world. Those travelling abroad especially benefit from EMV given the adoption rates of retailers in many of the world's top business and tourist destinations.' Below this is a section titled 'Advantages of EMV Contact and Contactless Payment Cards' with a bulleted list: 'More secure against card fraud than cards that rely only on magnetic stripe', 'A transaction-unique digital seal or signature in the chip proves its authenticity in an offline environment and prevents criminals from using fraudulent payment cards.', and 'Can be used to secure online payment transactions and protect cardholders, merchants and issuers against fraud through a transaction-unique online cryptogram'. At the bottom right is a box titled 'Immediate needs' with text: 'If you have an immediate need to address cardholders traveling internationally, FIS has a convenient and easy to implement Travel EMV Prepaid Card program. As a part of the FIS Prepaid Solution, you can become a reseller of prepaid cards with no upfront implementation costs and no application integration required. The program offers a simple front-end application to sell cards and manage the program. The option to customize your card by adding your bank's logo is or a standard, non-customized version of the card.' The browser's status bar at the bottom shows 'Internet | Protected Mode: Off' and a zoom level of '100%'.

FIS

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Home • Solutions • For the International Traveler (EMV)

FOR SELF NAVIGATORS

FOR SMALL BUSINESSES

FOR THE INTERNATIONAL TRAVELER (EMV)

FOR THE UNDERBANKED

FIS INSIGHTS

RETAIL SOLUTIONS

For the International Traveler (EMV)

EMV® is a global standard for credit and debit payment cards based on chip card technology as opposed to magnetic stripe. The EMV name comes from Europay, MasterCard® and Visa®, the companies that initiated development of the EMV specifications in 1994.

EMV chip-based payment cards, also known as smart cards, contain an embedded microprocessor which contains the information needed to use the card for payment, and is protected by various security features. Currently, EMV is the payment method of choice in Europe and other parts of the world. Those travelling abroad especially benefit from EMV given the adoption rates of retailers in many of the world's top business and tourist destinations.

Advantages of EMV Contact and Contactless Payment Cards

- More secure against card fraud than cards that rely only on magnetic stripe
- A transaction-unique digital seal or signature in the chip proves its authenticity in an offline environment and prevents criminals from using fraudulent payment cards.
- Can be used to secure online payment transactions and protect cardholders, merchants and issuers against fraud through a transaction-unique online cryptogram

Who is using/will use EMV?

- Visa®
- MasterCard®
- Discover®
- American Express®
- NYCE® Payments Network

Immediate needs

If you have an immediate need to address cardholders traveling internationally, FIS has a convenient and easy to implement Travel EMV Prepaid Card program. As a part of the FIS Prepaid Solution, you can become a reseller of prepaid cards with no upfront implementation costs and no application integration required. The program offers a simple front-end application to sell cards and manage the program. The option to customize your card by adding your bank's logo is or a standard, non-customized version of the card.

Internet | Protected Mode: Off 100%

What FIS is Doing

FIS EMV Prepaid Travel Program

EMV Travel Card

Safe, easy, low-cost payment option for travelers

No worries about acceptance in countries where chip card technology is adopted

Accepted at magnetic stripe terminals

Can be customized with FI logo

Available to any participating NYCE institution

Processed and maintained by FIS

Issued through experienced, registered and prepaid sponsor



Polling Question – Audience Participation

If FIS were to offer a fee-based EMV chip card consulting service to aid you in developing your business case and planning your EMV migration, would you be interested in this service?

- Yes
- No
- I don't know



What You Need to Do

What You Need To Do

Step-by-step planning guidance



What You Need To Do

Educate



Use Resources

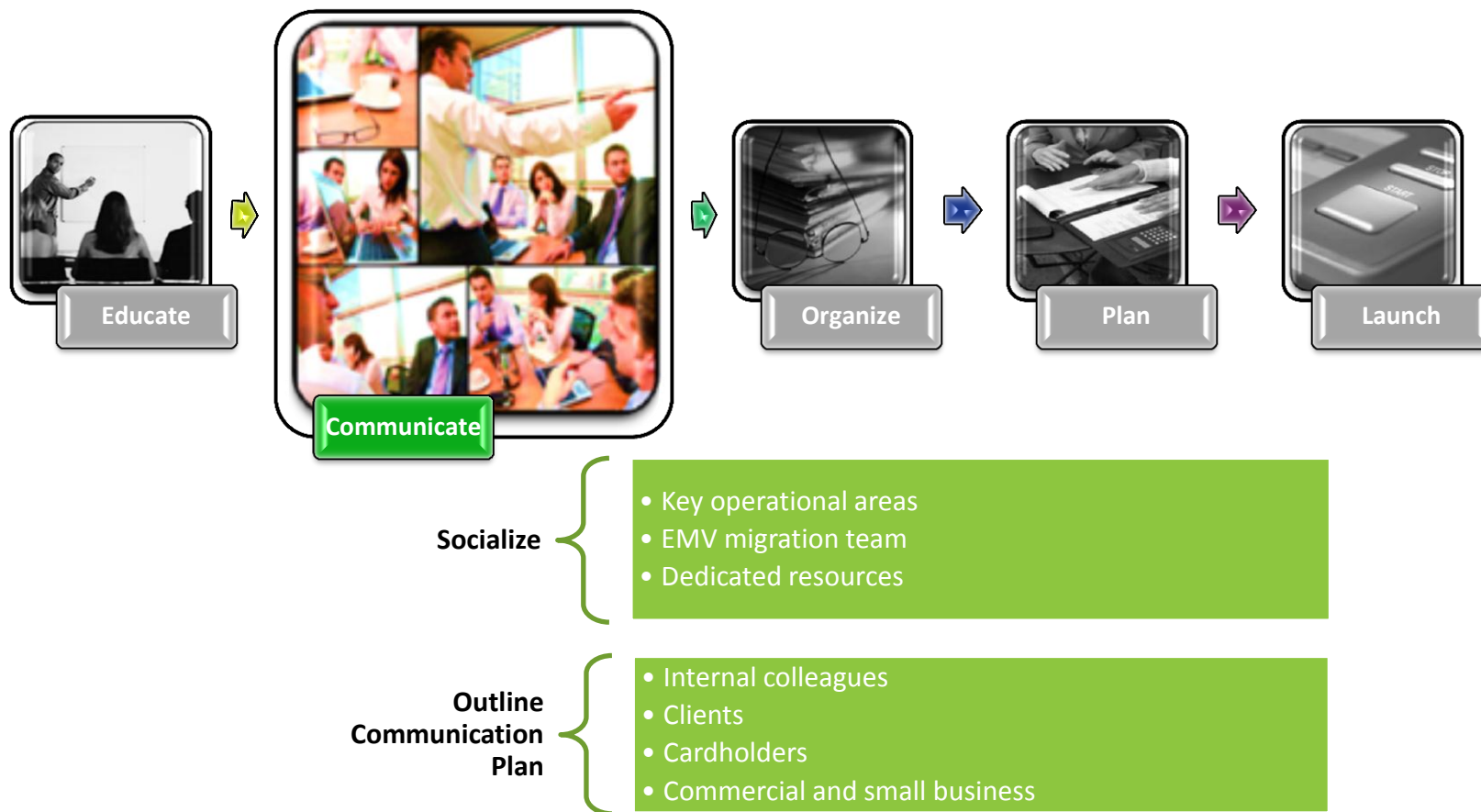
- Processors
- Payment networks
- Consultants

Stay Informed

- Internet research
- Industry journals
- Google alerts

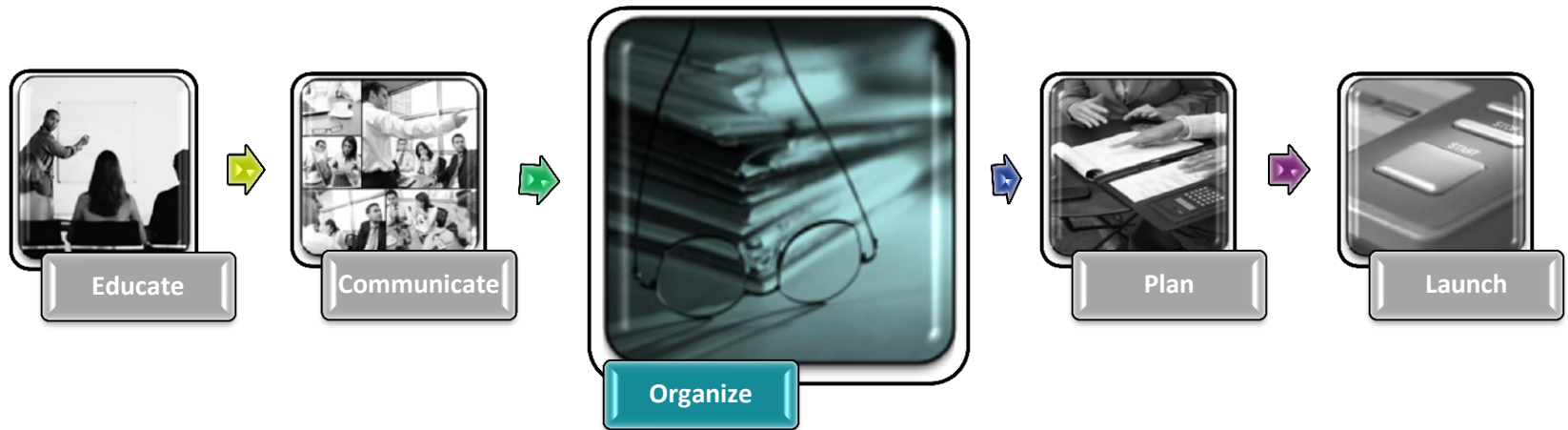
What You Need To Do

Communicate



What You Need To Do

Organize



Develop Budget

- ATM hardware/software and testing
- Internal systems development
- Education and training
- Brand set-up/implementation and testing fees
- Card personalization implementation fees
- Processor implementation fees
- Chip card design and plastics procurement
- Ongoing fees

Project Coordination

- Payment Network
- Association
- Processor
- Vendor

Perform Analysis

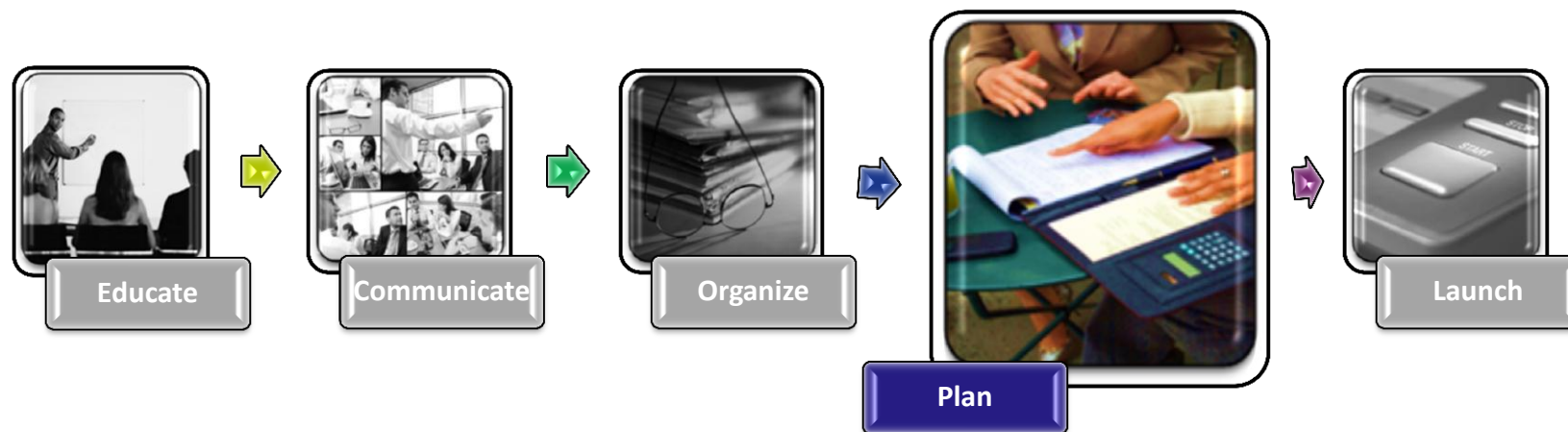
- International transactions
- Fraud
- Interchange income
- System/processor capabilities

Review Documentation

- Terms and conditions
- Vendor agreements
- Process documentations

What You Need To Do

Plan



Define Criteria

- International travelers
- Geographic areas
- Demographics
- EMV POS usage

Determine Desired Capability

- Signature authentication
- PIN authentication
- Offline capabilities

Establish internal training plan

- Customer facing areas
- Operational areas
- Coordination with Payment Network Brands
- Timing

Build Business Case

- Market Research
- Competitive analysis
- Cost/benefit study
- Impact to organization and other projects

What You Need To Do

Initiate and launch!



Launch

- Employee and friends pilot
- Traveler pilot
- Geographic area pilot
- Location of EMV-enabled terminals and ATMs

Suggested Project Timeline for EMV Migration

Issuer example

Initiation and Planning

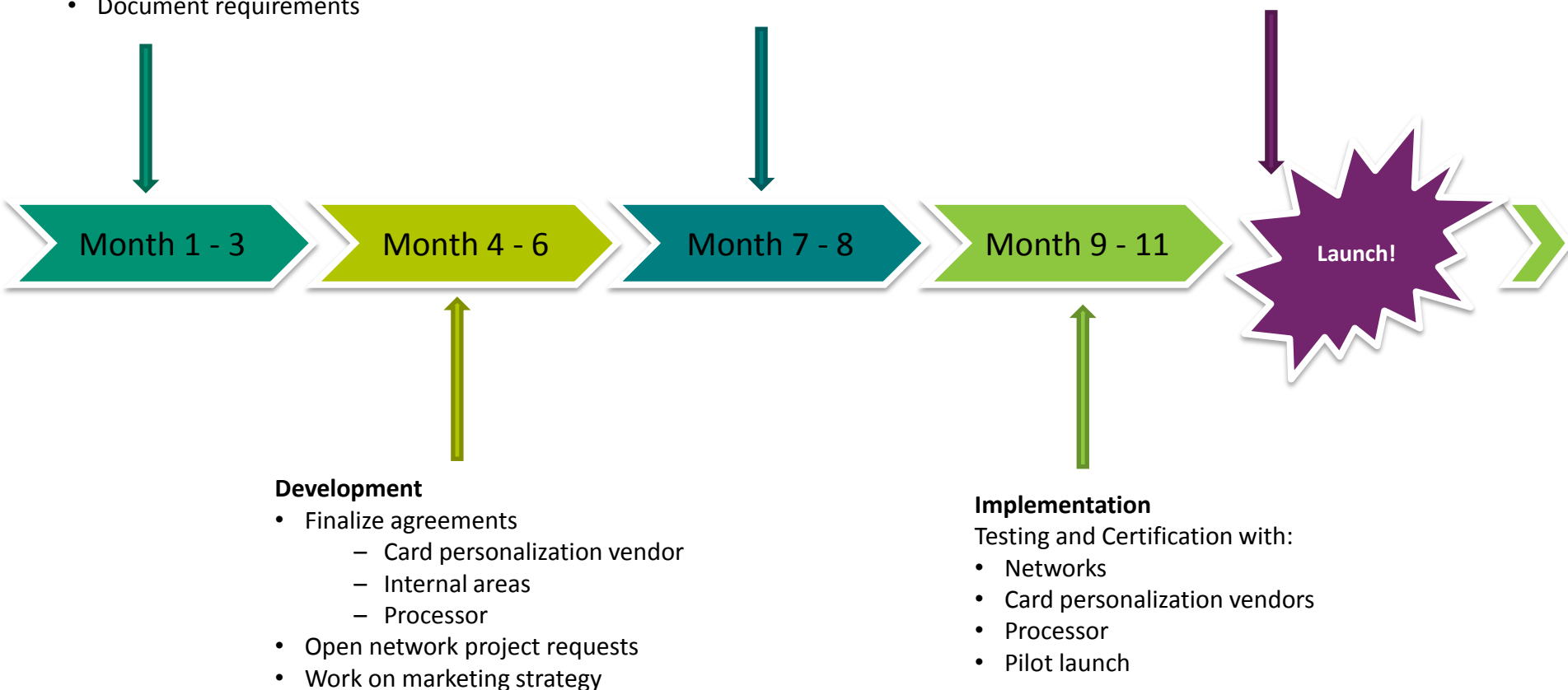
- Understanding all the options
- Select profile
- Develop card issuance strategy
- Organize cross-departmental project team
- Document requirements

Execution

- Order chip cards
- Train internal resources
- Begin consumer education

Monitor program

- Customer experience
- Card performance
- Fraud trends



Polling Question – Audience Participation

My bank wants to issue EMV cards in the next:

- a. 0 – 6 months
- b. 6 – 12 months
- c. 12 – 18 months
- d. 18 – 24 months
- e. No plans to implement EMV at this time



Resources Available

EMV Resources

- **FIS information and resources**

- FIS Global and General Information
 - <http://www.fisglobal.com/solutions-fortheinternationaltraveler>
- FIS EMV 101: What You Need to Know – Webinar Replay
 - <https://fisglobalinfo.webex.com/ec0606l/eventcenter/enroll/register.do?siteurl=fisglobalinfo&formId=6377357&confId=6377357&BU=&formType=1&loadFlag=1&eventType=1&accessType=downloadRecording>
- FIS EMV 101: What You Need to Know – Presentation
 - <https://fisglobalinfo.webex.com/ec0606l/eventcenter/enroll/register.do?siteurl=fisglobalinfo&formId=6377357&confId=6377357&BU=&formType=1&loadFlag=1&eventType=1&accessType=viewRecording>
- FIS Lessons From the Canadian Experience – Webinar Replay
 - <https://fisglobalinfo.webex.com/ec0606l/eventcenter/enroll/register.do?siteurl=fisglobalinfo&formId=6377357&confId=6377357&BU=&formType=1&loadFlag=1&eventType=1&accessType=downloadRecording>
- FIS Lessons Learned From the Canadian Experience – Presentation
 - <https://fisglobalinfo.webex.com/ec0606l/eventcenter/enroll/register.do?siteurl=fisglobalinfo&formId=8779282&confId=8779282&BU=&formType=1&loadFlag=1&eventType=1&accessType=viewRecording>
- FIS Travel EMV Prepaid Card:
 - www.fisglobal.com/prepaid or moreinfo@fisglobal.com

EMV RESOURCES

- **General EMV Chip Card Information**

- EMVCo
 - <http://www.emvco.com/>
- Smart Card Alliance EMV Connection
 - <http://www.emv-connection.com>

- **Visa® and MasterCard® Information**

- Visa Announcement
 - <http://corporate.visa.com/newsroom/press-releases/press1142.jsp>
- MasterCard Announcement
 - <http://newsroom.mastercard.com/press-releases/mastercard-introduces-u-s-roadmap-to-enable-next-generation-of-electronic-payments/>
- MasterCard U.S. Roadmap
 - <http://www.mastercard.us/mchip-emv.html>
- MasterCard Timeline
 - http://www.mastercard.us/_assets/docs/MasterCard_EMV_Timeline.pdf



Questions?



Thank you

Fred Csaky – CSCIP/P, PMC II, Credit Product Manager, FIS NACS

Bret Berta – EMV Product Manager, FIS Card Personalization

Cindy Knowles – VP Business Development & Market
Integration, FIS NACS