



Accepting EMV Chip Cards at the Fuel Pump

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Introductions



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Agenda

- About U.S. Payments Forum
- About Conexus
- Overview of the C-Store Industry
- EMV Liability Shift
- Overview of EMV
- Sample Implementation Plan
- Resources
- Q&A

About the U.S. Payments Forum

U.S. Payments Forum Mission

Supporting the introduction and implementation of new and emerging technologies that protect the security of, and enhance opportunities for payment transactions within the U.S.

Petro Working Committee and Communications & Education Working Committee

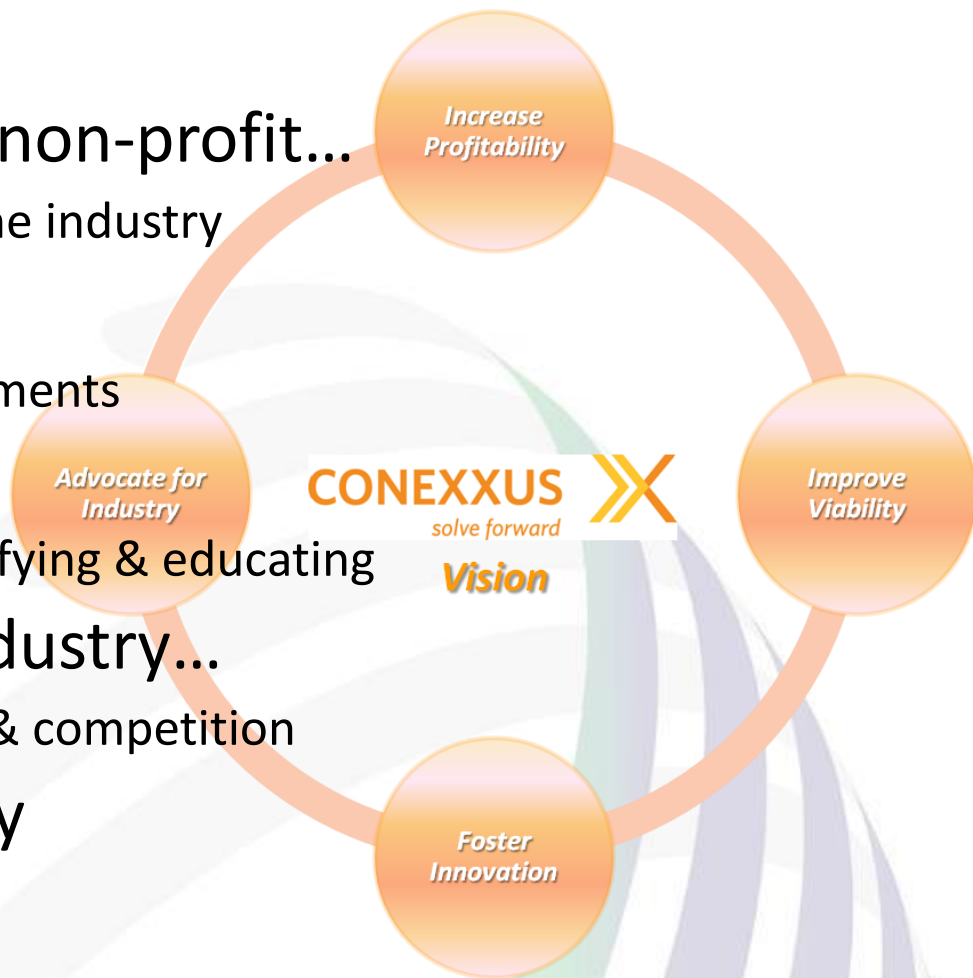
Providing educational resources and forum for industry stakeholders to resolve challenges associated with EMV implementation in the U.S. petroleum and convenience market

Recent Resources

- *EMV Frequently Asked Questions for Petroleum Merchants*
- *Understanding the U.S. EMV Fraud Liability Shifts*
- *Optimizing Transaction Time at the POS*

Who is Conexxus?

- We are independent & non-profit...
 - Expert volunteers, shaping the industry
- We set standards...
 - Data exchange, security, payments
- We provide clarity...
 - Emerging tech/trends; identifying & educating
- We advocate for our industry...
 - Open standards, innovation & competition
- We improve profitability



TECH-EDGE

In partnership with CONEXXUS 

At the NACS Show
October 17-20, 2017
Chicago, IL
Booth 4384

- Website: www.conexxus.org
- Email: info@conexxus.org
- LinkedIn Group: [Conexxus Online](#)



U.S. Channel Count Comparison



154,535
Convenience
Stores



51,191
Superettes/Supermarkets/
Supercenters



43,636
Drugstores



28,832
Dollar Stores

Source: NACS
Nielsen TDLinx , NACS State of the Industry
Survey of 2016 Data & CSX, LLC





Overview of the C-Store Industry

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U.S. Convenience Stores

- More than 150,000 stores
- 124,000 sell motor fuels
- 39 million Americans fill up their tank every day
- Americans fuel up four to five times each month
- 160 Million transactions a day²
- Sell an estimated 80% of all gasoline sold
- \$549.9 B / \$316.8 B Sales/Fuel
- 72% of Consumers Pay for Fuel at the Pump with “Plastic”



Source: 2016 NACS Retail Fuels Report, 2016 NACS SOI Report

²Source: http://www.nacsonline.com/Media/Press_Releases/2016

U.S. Convenience Stores

- Did you Know? - Over 60%, that's 97K are single-store operators!!
- Another 11K are chains with less than 10 stores
- You have no IT dept.
- You have no EMV "Task Force"
- You have questions...



While the following information applies to all merchants, the webinar is focused on the independent operator.

2016 NACS SOI Report



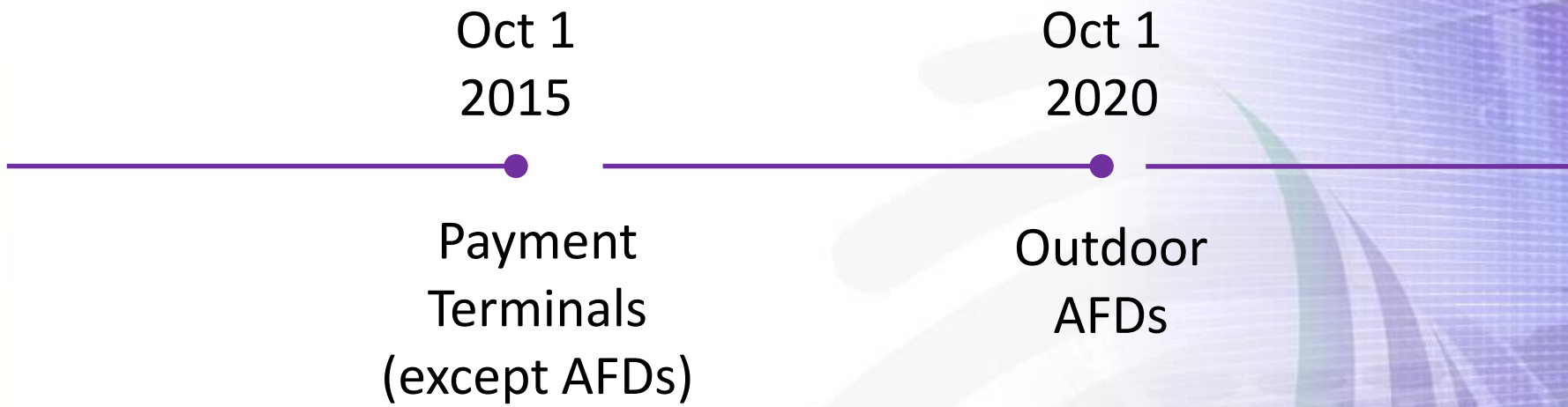


EMV Liability Shift

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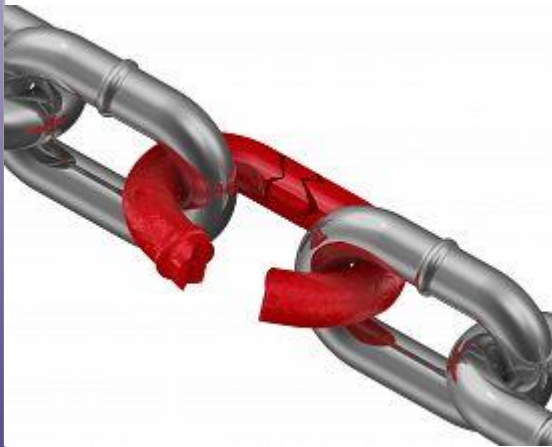
EMV Liability Shift* Dates for Petro



**Not a payment network mandate (may be mandated by your oil brand)*

EMV Liability Shift

*Liability shifts to the party
in the payment chain
with the **least secure** payment technology*



Who's Liable? – It Depends!

- Type of Fraud
 - Counterfeit
 - Lost & Stolen
- Card Type (Chip, Mag Stripe)
- Payment Network
- Location (Attended, Unattended)
- System (Terminal, POS) Capabilities

Who's Liable?

Merchant is protected if

- ✓ EMV terminal with PIN processing enabled; AND
- ✓ Site system software with EMV processing enabled.



Liability Shift Deferment (*Fine Print)

Several Payment Networks have chargeback threshold limitations relative to the EMV counterfeit liability shift

- Check with your payment processor or oil brand for specific information
- **Limitations:**
 - Excessive fraud-to-sales ratios; and
 - Excessive amounts of chargebacks; or
 - Excessive number of chargebacks
- **Effective: October 1, 2017**
- **Types Affected:**
 - Outdoor EMV Counterfeit Liability Only
 - Indoor and Outdoor, Lost & Stolen, EMV and Non-EMV
- **Effects:**
 - Possible additional fraud management processes
 - Outdoor counterfeit liability (EMV) chargebacks prior to Oct 1, 2020
 - Additional penalties/fines imposed on top of the chargeback
- **Chargeback Timing:**
 - Immediate or remediation period offered depending upon the total volume of the chargebacks

3-year extension
may only apply to
U.S. issued Cards for
some Payment
Networks





Overview of EMV

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EMV What is it?

- EMV is a global standard for terminals and chip cards and devices (debit, credit, and prepaid payments) using microprocessor (chip) technology
- EMV cards contain a “chip” that performs cryptographic functions making counterfeit fraud almost impossible.
- EMV transactions work as Contactless too - either from a card or a mobile device



EMV What it is not!

- Very important for a merchant to understand what EMV is not!
- EMV is not a data encryption standard!
 - Cardholder data read from an EMV chip is in the clear just like a mag-stripe would be.
 - **Card data must still be protected. PCI still applies.**
 - Point-to-Point Encryption, End-to-End Encryption, or tokenization is still recommended for maximum security.



EMV Terms – Sorting Out the Alphabet Soup!

- AID – Application Identifier. The EMV application defines transaction behavior
 - U.S. Common AID
 - Global AID
- Kernel – The software that “talks” to the chip (L2)
 - L1 refers to the hardware
- Contact/Contactless
- CVM – Cardholder Verification Method. There are four Offline PIN, Online PIN, Signature, NoCVM – *Signature is not used outdoors (CDCVM, ODCVM too)*
- PIN Bypass – An alternative to debit/credit prompting
- Be Careful! Fallback (stand-in) and Offline have a different meaning in EMV-speak



EMV Transactions – Simple View

- Pure Credit
 - Single AID
 - All CVMs are possible (no Signature outdoors)
 - Signature and/or NoCVM currently predominates in the U.S.
- Debit
 - In the U.S. there will be two or more AIDs. Facilitates routing choice (Durbin)
 - The AID menus are largely a thing of the past. Most implementations auto-select the AID



The Durbin Amendment

EMV Transactions – Choices

- EMV Full Flow – Card stays in the reader the entire authorization time.
- Quick Chip, M/Chip Fast, Faster EMV
 - All mean the same thing. Card can be removed prior to the authorization.
 - Decrease in transaction times
 - Maintains full EMV fraudulent card protection
 - A “Predetermined Amount” used for Contact or Contactless
 - The final amount is sent up in the Financial Advice.
 - Simplified Testing/Certification
 - In Petro, Faster EMV enables loyalty processing as with MSR. (post payment option)



EMV Transactions – Choices Loyalty

- Speaking of Loyalty....What about my loyalty
- Loyalty works pretty much as it always has. Check with your Vendor.
 - Still always available pre-payment
 - Price per Unit discounting
 - Ticket level or post fueling discounts still available.



EMV Transactions – Fleet and Prompting

- Currently mixed bag with Fleet
 - There are specs that account for EMV
 - Today, Vendors can support the Prompting and Product restrictions via the track equivalent data
- EMV Fleet standards are currently under development
 - P2P causes problems
 - Conexus with U.S. Payments Forum participation creating standard. Vendors, Brands, Fleet providers, and Acquirers



EMV Transactions – It's Different Outdoors

- Two Part transactions (auth/advice)
- The card DOES NOT have to stay in the reader all the way through fueling, only for the authorization.
- Card readers may or may not “clamp” cards.
- The U.S. auths for max amounts.
- No signature CVM.
- Several kernel options can complicate certifications for vendors.



Outdoor EMV – What's it Look Like?

What happens when card is removed too soon?



Outdoor EMV – What's it Look Like?

When it all comes together...





Sample Implementation Plan

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Benefits to upgrading early

- Receive next generation hardware & software
 - Upgraded Communications
 - Contactless
 - Secure Dispenser Access
- Better availability
 - Equipment
 - Technicians
- Image Refresh
- Consumer perception
- Don't be the “last man standing”
- Avoid excessive chargebacks



Planning Outdoor EMV Timeline

AUTOMATED FUEL DISPENSER (“AFD”) UPGRADES

Determine
Availability
of POS
Software
Outdoor
EMV

Assess
Fuel
Dispenser
Age &
Operability

Site
Survey

Order
Upgraded
Fuel
Dispensers

Install
Upgraded
Fuel
Dispensers
& Upgrade
POS
software

Projecting Outdoor EMV Timeline

AUTOMATED FUEL DISPENSER (“AFD”) UPGRADES

Determine
Availability
of POS
Software
Outdoor
EMV

Obtain availability date for Point of Sale
Software for Outdoor EMV acceptance

Consult with your Vendors (POS, Processor)
or Oil Brand

Projecting Outdoor EMV Timeline

AUTOMATED FUEL DISPENSER (“AFD”) UPGRADES

Upgrade Options

- ✓ Replace
- ✓ Retrofit Kit
- ✓ New PIN Pads

Assess
Fuel
Dispenser
Age &
Operability

10+ Years

Replace

0-9 Years

Replace or Retrofit Kit?

Assess Operability

Consult with AFD Distributor or Manufacturer

Projecting Outdoor EMV Timeline

AUTOMATED FUEL DISPENSER (“AFD”) UPGRADES

- ✓ EMV = more data & requires more bandwidth
- ✓ Assess the need to upgrade Communication lines
- ✓ Add extra time if rewiring and/or breaking concrete

Site Survey

Build in extra time to break concrete and remediate soil contamination

NOTE: If re-plumbing wiring, separate Communication & Payments from Electrical Lines by using two separate conduits

Survey the site with the AFD Distributor or Manufacturer

Planning Outdoor EMV Timeline

AUTOMATED FUEL DISPENSER (“AFD”) UPGRADES

Consider AFD Options:

- ✓ Video Monitors
- ✓ 2D Scanners
- ✓ Tamper Alarms
- ✓ Near Field Communications (“NFC”)

Order
Upgraded
Fuel
Dispensers



Planning Outdoor EMV Timeline

AUTOMATED FUEL DISPENSER (“AFD”) UPGRADES

- ✓ Allow 4-8 weeks from order to delivery*
- ✓ Allow 2-4 weeks for scheduling certified technicians*
- ✓ Allow 1-2 weeks installation if new AFD’s
 - OR-
- ✓ Allow 1-4 days installation if retrofit kits or PIN Pads

Consult with AFD Distributor or Manufacturer

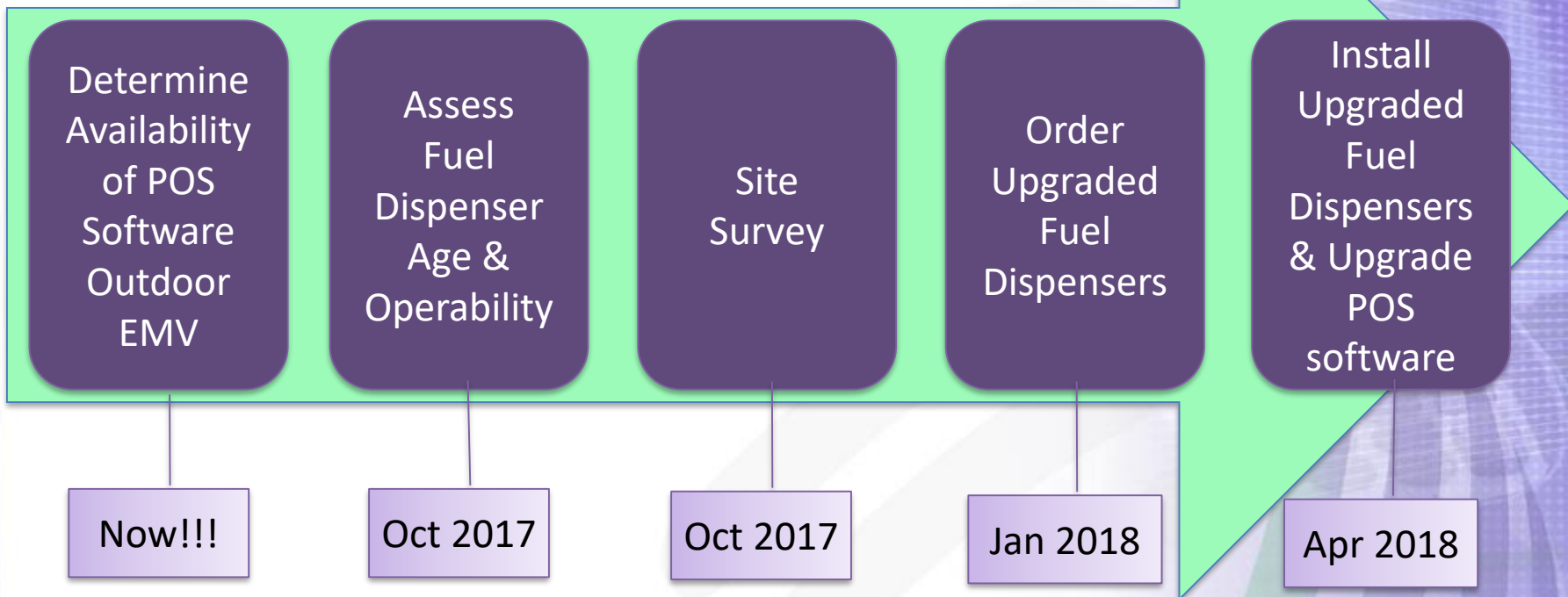
Install
Upgraded
Fuel
Dispensers
& Upgrade
POS
software

*Times will vary by manufacturer/distributor

Demand for equipment & technicians may increase exponentially as we approach 2020

Planning Outdoor EMV Timeline - Beta

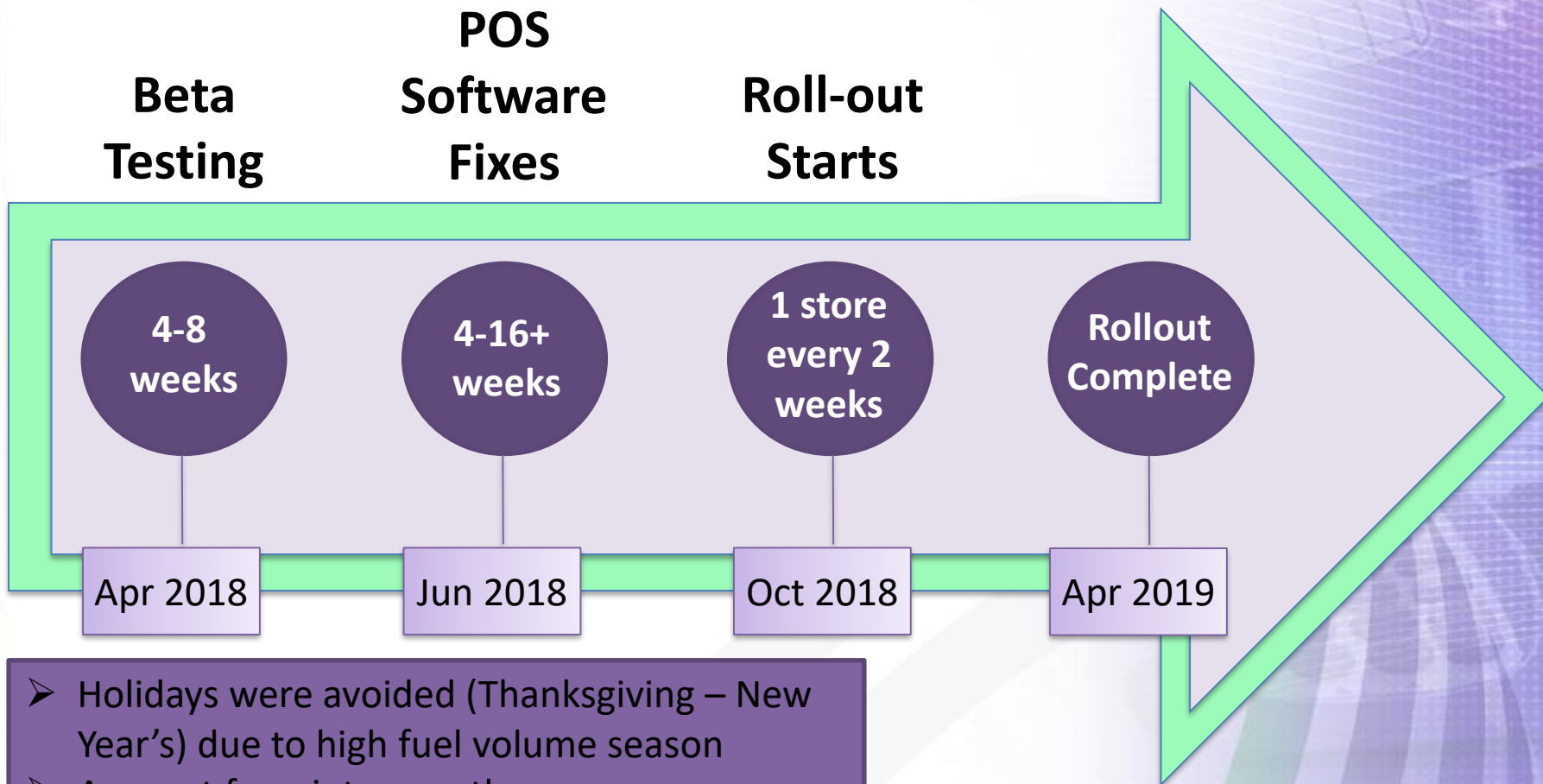
AUTOMATED FUEL DISPENSER (“AFD”) UPGRADES



These are example dates, actual timelines will vary depending upon the individual site's needs

Planning Outdoor EMV Timeline – Roll-Out

Roll-out timeline based on 10 store chain – 1 store per 2 weeks



- Holidays were avoided (Thanksgiving – New Year’s) due to high fuel volume season
- Account for winter weather



Resources

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Resources

- U.S. Payments Forum
 - Petroleum Working Committee
- Conexus
 - Data Security Standards Committee
 - Retail Financial Transactions Committee
- Each Payment Network's Website

Website Resources

- www.uspaymentsforum.org
- www.emv-connection.com
- www.emvco.com
- www.conexus.org
- www.nacsonline.com

new Petroleum FAQs

<http://www.uspaymentsforum.org/petroleum-industry-emv-faq/>



Q&A



www.uspaymentsforum.org



www.conexxus.org



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