Canadian Payment Industry Chip Trial

CTST – May 6 2009
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Canadian Market Overview

	INTERAC Debit	Credit
Cards in Circulation	36MM	71MM
Total Transactions	3.45B	2.02B
Dollar Volume	$156.8B	$214.7B

- Canada has a national debit scheme, INTERAC, that is PIN-based. Canadians are familiar with the concept of PIN authorization
- Canadian issuers typically issue Interac debit and a credit card. Until very recently, duality has not been an option for Canadian credit issuers
- Monoline issuers issue either MasterCard or Visa branded credit products
- Over 600,000 POS terminals
- Majority of acquirers/payment processors are independently owned
- Over 50,000 ABMs (16,000 bank-owned; 35,000 independently-owned)
- PIN change capability at the ABM is proprietary. Shared PIN change capability was not pursued
- There is no single organization overseeing the implementation of chip and PIN technology in Canada

Source: Nilson Report, February 2008; Canadian Bankers Association; Interac Association

Chip Migration Timeline by Scheme

•October 2010

VISA

2007 | 2010 | 2012 | 2015

MasterCard

•October 2010

Interac

•Key dates for issuers and acquirers are 2010, 2012 and 2015

American Express

•Will support issuer and acquirer migration plans in line with the market

Kitchener-Waterloo Chip Trial

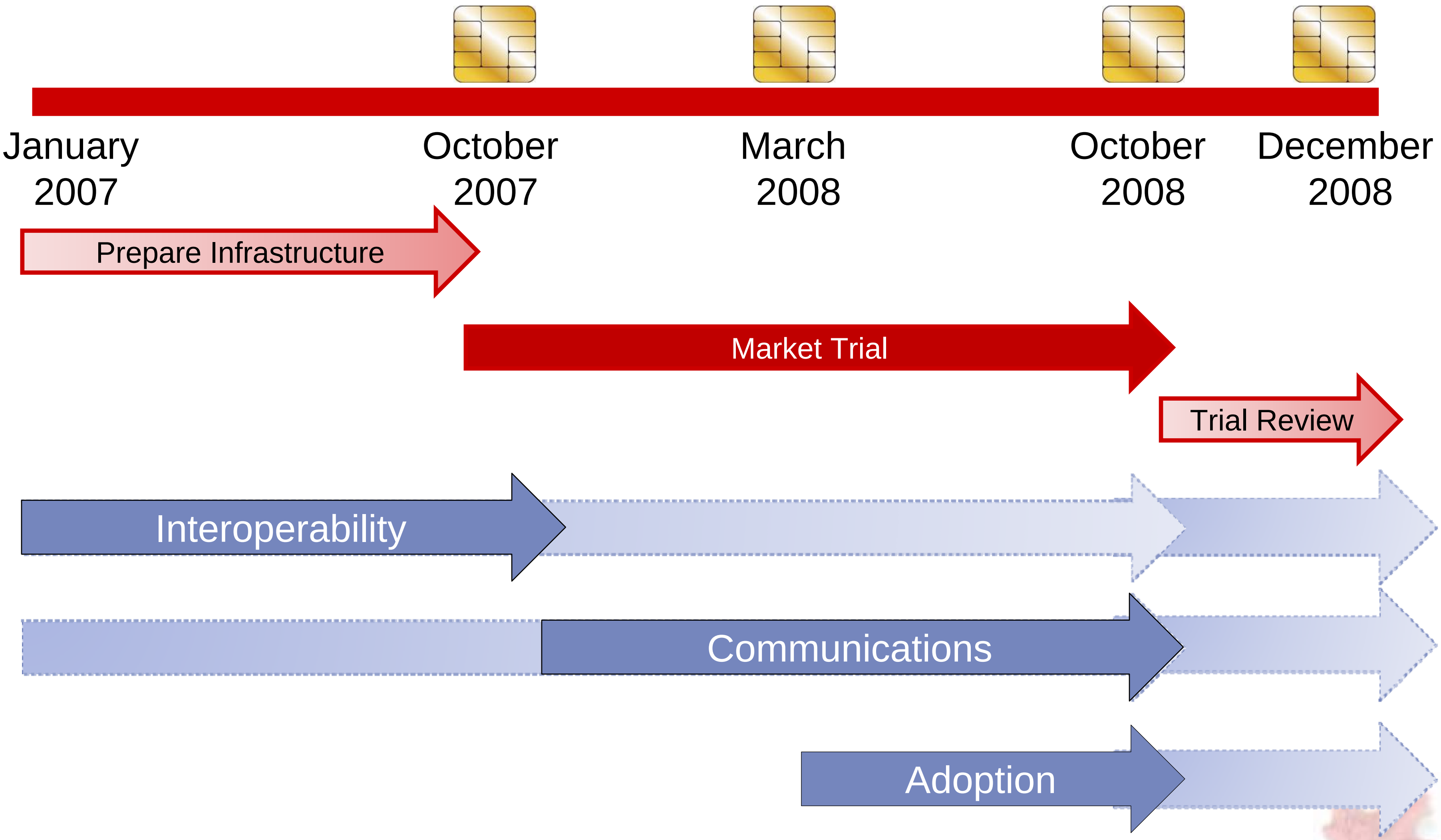
Why Kitchener-Waterloo?

- The population of Kitchener-Waterloo is approximately 310,000 people. The demographic profile of K-W is diverse
- Kitchener-Waterloo is located within an hour from downtown Toronto, where the majority of Trial participants were located

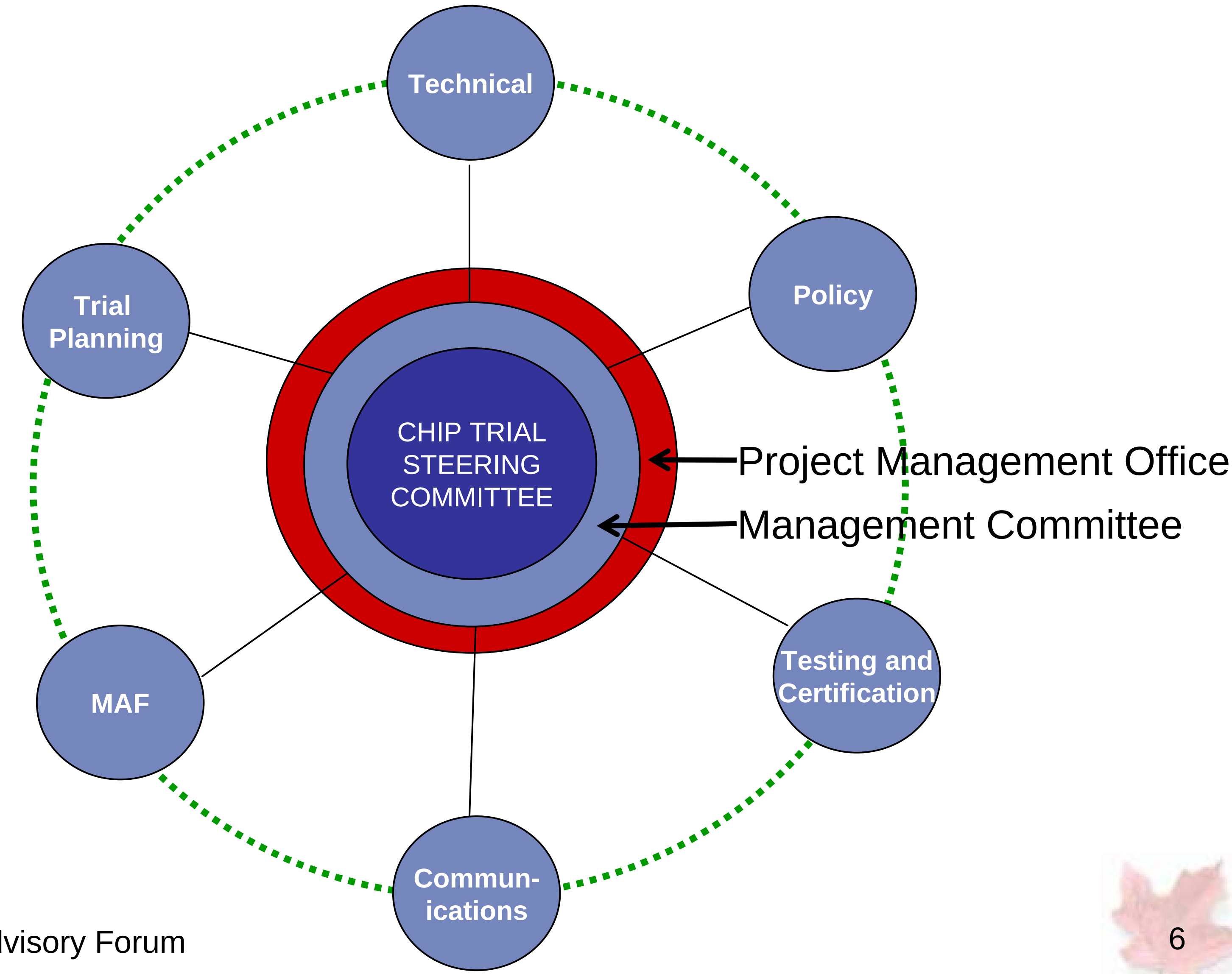
Trial Considerations

- Trial scope was limited to contact EMV technology. Contactless technology was excluded
- Trial start and end dates were firm
- Participation of all stakeholders was voluntary
- Trial participants represent ~640,000 payment cards and ~5,500 POS terminals in K-W
- Significant stakeholder resources were allocated to the execution and monitoring of activities in the Kitchener-Waterloo Trial

K-W Trial Timeline



K-W Trial Program Structure



MAF – Merchant Advisory Forum

Key Trial Principles and Objectives

Interoperability

•Confirm that the chip payments infrastructure works together as expected: all chip cards work at all chip-enabled terminals (POS, ABM)
•Validate industry-level chip-related policies and processes,

Communication

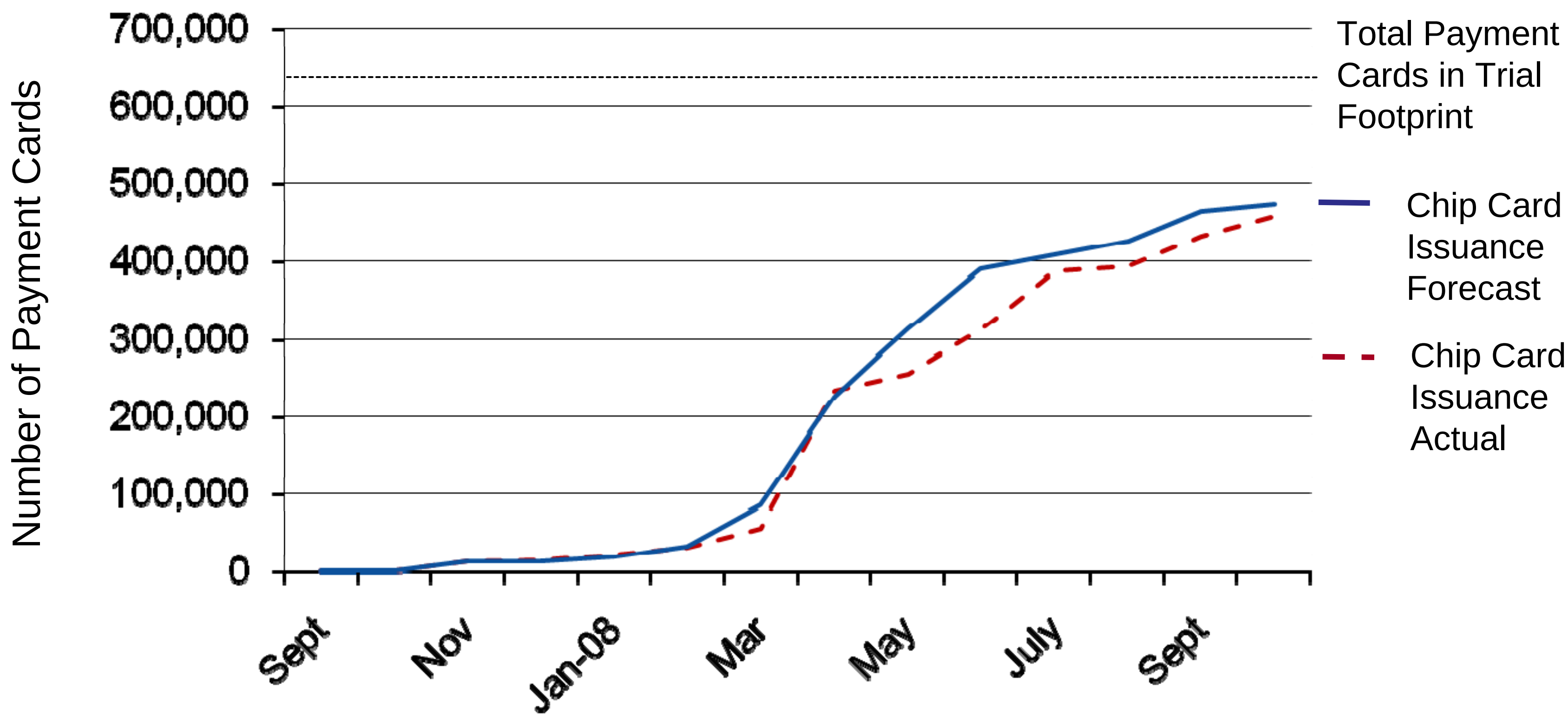
•Industry Communications focused on the K-W Chip Trial consisting of PR communication at key points of the Trial. PMO acting as the 'industry voice'
•Opportunity for individual participants to validate communications with customers

Adoption

•Confirm positive consumer and merchant awareness and perception of, and experience with chip and PIN supported by no decline in payment card usage
•Chip cards and terminals are rolled out in the Trial footprint and chip-to-chip transactions are occurring between chip-enabled cards and chip-enabled terminals

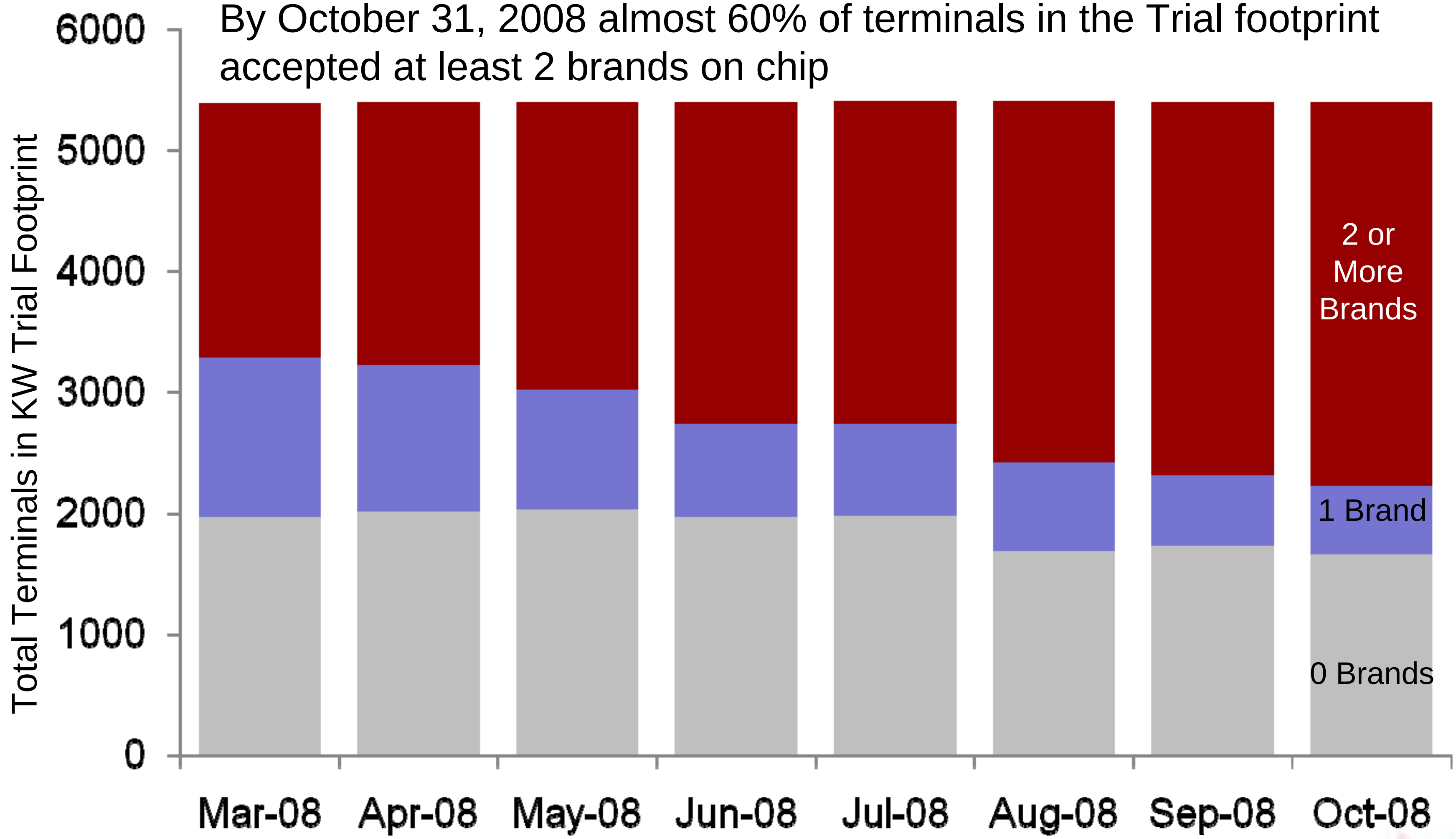
Chip-Enabled Cards Issued

There were ~460,000 chip-enabled payment cards in the Trial footprint as of October 31, 2008 (Trial conclusion)



Chip-Enabled POS Devices Deployed

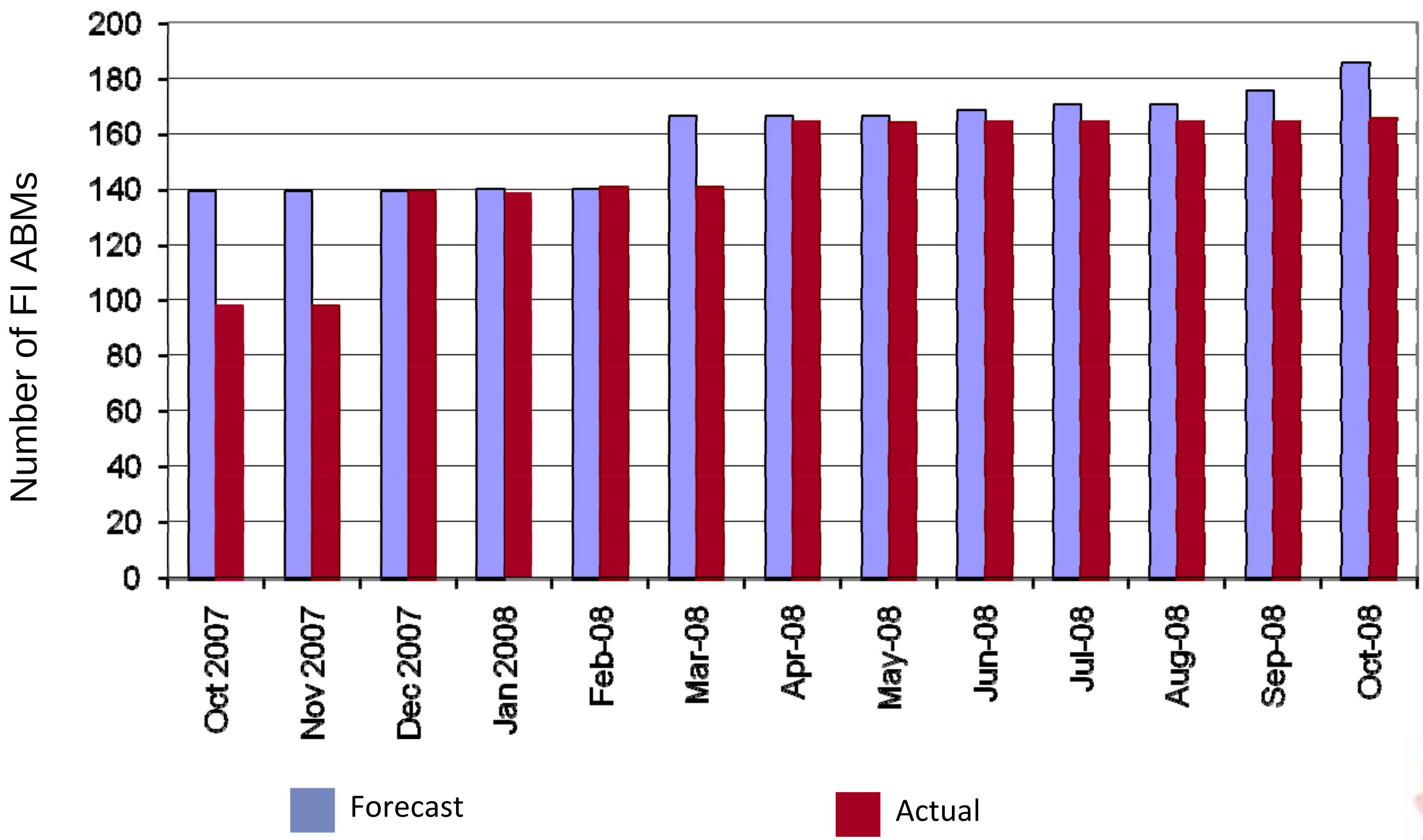
By October 31, 2008 almost 60% of terminals in the Trial footprint accepted at least 2 brands on chip



	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08
2 or More Brands	39%	40%	46%	49%	49%	55%	57%	59%

Chip-Enabled ABMs Deployed

Over 65% of ABMs in the Trial footprint were converted to accept chip cards



Interoperability Summary

- Very few interoperability issues were discovered in the Trial
  - All known interoperability issues were remediated prior to conclusion of the Trial
- Interoperability metrics were at acceptable levels
  - Manually entered transactions as percent of total transactions
  - Fallback transactions as a percent of total transactions
- Interoperability metrics are also indicative of non-interoperability “experience” issues relating to PIN awareness and training
- Confirmation of device configuration best practices - Acquirers
- Confirmation of card issuance best practices - Issuers
- Existing issue identification, management and resolution processes required revision to discern between interoperability vs. experience issues
  - Data monitoring to predict and identify issues
  - Chip-related training for customer-facing staff

Communications Summary

- Industry communications consisted of:
  - Press releases at key points in the Trial
  - Key Messages in English and French shared with all industry stakeholders to support consistent communication
  - Media portal to support industry communication (www.chipmigration.ca)
  - “Voice of the Trial” – one neutral organization (PMO) to support industry communications and provide a consistent message
  - Documents to support merchant awareness and knowledge of chip shared with key retail associations

Chip credit and debit cards are coming— making a secure payment system even more secure.

Consumer Awareness of Chip Cards

Survey Wave	Date	Aware	Not Aware
Wave 1 (N=602)	April 2008	78%	22%
Wave 2 (N=597)	July 2008	91% ⬆	9%
Wave 3 (N=567)	October 2008	93%	7%

Are you aware of a new type of debit or credit card that contains an embedded computer chip in the card? These new cards require people to leave their card inserted in the terminal for the duration of the payment process and enter a PIN number when making purchases rather than swiping the card.

Consumers in the 'Not Aware' category tended to be under the age of 25, with household income of less than $25,000.

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⬆ = significantly higher/lower compared to Wave 1 at 95% level confidence.

Adoption Summary

- Chip card and terminal deployment forecasts were revised mid-Trial based on learnings
- Chip to chip transactions occurred between chip-enabled cards and chip-enabled terminals
- Adoption metrics improved over the course of the Trial
- No decline in payment card usage was reported
- Key messages regarding chip technology appear to have been clearly communicated and understood
- Two significant challenges were identified that will be monitored during national rollout:
  - Consumer awareness/knowledge of PIN
  - Merchant training

Survey Summary - Consumers

- Consumers perceive the main advantage of chip and PIN technology to be security
- 80% of cardholders believe their issuer has provided them with enough information about chip cards and how to use them
- Over three quarters of cardholders believe that non-chip cards are still a secure method of payment
- Cardholders perceived that staff in stores became significantly more knowledgeable about chip and PIN over the course of the Trial
- Over 70% of cardholders believe that chip card payment terminals have screens and instructions that are easy to follow
- Over 65% of cardholders would rather enter a PIN when using a credit card than sign for the purchase
- Over one third of cardholders remain concerned about the information that is stored on the chip

Survey Summary - Merchants

- Three-in-four merchants feel that chip cards are the same as or better than magnetic stripe cards
  – Greater security
  – No need for signature
- About one third of merchants believe that a chip transaction takes longer than a magnetic stripe transaction because:
  – Cardholders aren’t familiar with the process
  – Cardholders don’t know their PIN
  – The actual processing is perceived to take longer
- Over 80% of merchants felt the installation of the chip-enabled POS devices went smoothly
- Approximately one third of merchants would like to receive more training about chip POS procedures
- Close to one third of merchants would like to receive more information to properly address customers’ questions

Trial Key Success Factors

- Clearly defining the non-competitive elements that were necessary to support the introduction of chip and PIN at the outset prepared the industry up for success. The presence of independent legal counsel at key Trial-related meetings ensured that all dimensions of competition were respected
- The revision of the governance structure to include the Management Committee and a Project Management Office supported the execution of a successful industry Trial
- As a result of significant up-front efforts focused on technical specifications and policies, the implementation of chip and PIN infrastructure (networks, terminals, cards) went very smoothly
- Clear, consistent communication from the industry, supported by industry-developed Key Messages, Q&A and a dedicated spokesperson supported high awareness of chip and PIN technology in the Trial footprint
- Significant resources were invested in the Trial. The same level of support will be difficult to maintain during national rollout

Trial Challenges

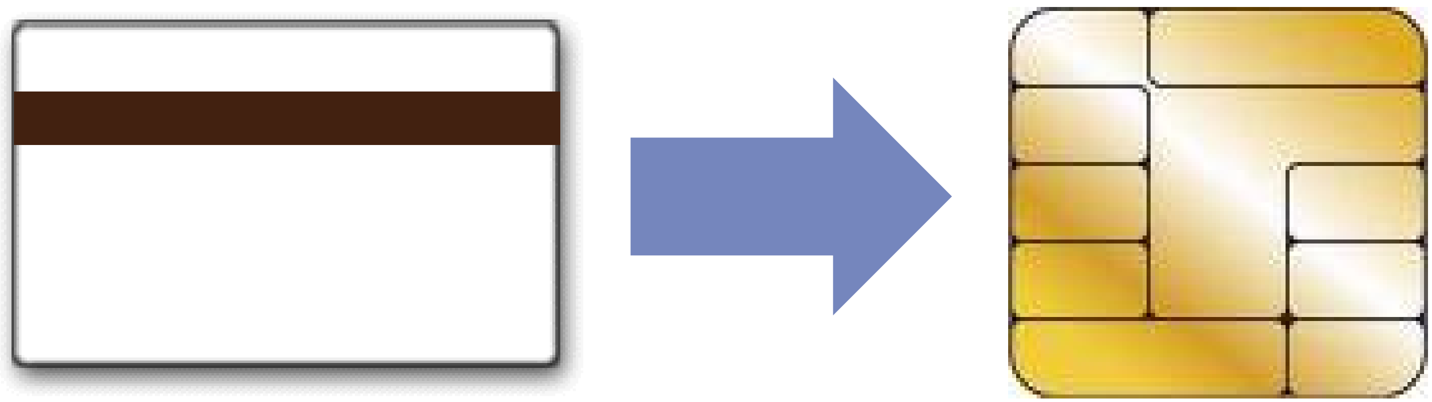
- Varying payment brand timelines made alignment of issuing and acquiring deployment activities challenging in the first half of the Trial

- The fixed Trial time period of only one year excluded some Issuers and Acquirers from participating, and limited the ability of integrated merchants and VARs to participate

Conclusion

- The Kitchener-Waterloo Chip Trial provided an excellent opportunity for participants to validate chip and PIN infrastructure, proprietary communication strategies and to confirm cardholder and merchant adoption of chip and PIN technology
- Card issuance and terminal deployment activities exceeded expectations
- The number of chip-to-chip transactions was impacted by the lack of integrated merchant participation
- Consumer and Merchant surveys at key points in the Trial indicated that the implementation strategies followed in K-W were successful
- The two most significant issues identified in the Trial (cardholder awareness of PIN; merchant training) may provide challenges during National Rollout, but should resolve themselves as the penetration of chip-enabled cards and terminals increases and chip-to-chip transactions become ‘business as usual’

Canada is Migrating to EMV Chip



Thank You

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