

# THE RAPID EVOLUTION OF PAYMENTS IN CANADA

By Jan Pilbauer, Executive Director of Modernization and CIO, Payments Canada

**Canada and many other countries are responding to customers' expectations for instant, always-on experiences. The new norm is as simple and convenient as 'one click' on a mobile device. Keeping pace with these customer demands in payments is not only good for business and commerce –it's an essential part of safeguarding the secure, efficient operation of a national payments system—one of the pillars of a well-functioning economy**

## Setting the pace for global change

Canada is proactively addressing the external forces reshaping the global payments ecosystem. Our payments infrastructure is widely recognized as one of the most secure in the world and we need to accommodate the changing requirements of Canadians with modern systems that support the long-term growth of Canada's economy. We are fortunate for having been able to learn from those who have gone before us, paving the way with new systems and standards, including ISO 20022, the global payment message standard that enables economies to work seamlessly with each other and transmit smarter, data-rich payments, a key element of payments modernization in Canada.

Payments Canada's modernization initiative began in 2015. We have now reached the third stage of the four-stage journey, which consists of building a vision for the Canadian payments ecosystem, creating a roadmap and high-level plan for modern systems, compiling requirements for the target end state and moving to implementation. The end state we are aiming for is ambitious. What we want is a fast, flexible and secure payment system that is efficient, convenient and interoperable—one that will promote innovation and strengthen Canada's competitive position.

## Looking at what came before

As Canada is not the first country to embark on a modernization journey, we sought to learn from others. The UK and many European players undertook major modernization campaigns in the 2000s before mobility was ubiquitous. We have learned from those early movers, who are now turning to Canada as a central player in the "second wave" of payments modernization as they look once again to enhance their programs.

This shared learning is important, since payments transcend borders, demanding uniformly sophisticated, secure and rapid interoperable systems.

During our deep dive into international research, we performed a qualitative analysis of clearing and settlement systems from around the world. It quickly became clear that the 27 modernized payments systems shared the same basic drivers and delivered a common set of features to their customers. Differing public policies shaped modernization efforts in unique ways, but all adopted a holistic, multi-system approach that put user needs at the forefront, resulting in virtually the same end results:

- Addition of a new real-time retail system
- Enhancement or creation of a batch retail system
- Upgrades to large-value payment systems
- Widened access to core payment systems
- Increased functionality offered through centralized systems
- Greater interoperability between financial market infrastructures
- Real or near-real time access to funds
- Strengthened risk management and cyber resilience

## Towards implementation

Of the four stages of our journey, Vision, Roadmap, Requirements and Implementation, we have completed the Vision and the Roadmap, which outlines how the Canadian financial sector can begin to deliver on the needs identified in the

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Vision: replace the core high-value clearing and settlement system, enhance batch retail payments; implement a new real-time payments capability; meet global regulatory requirements; and modernize the policy framework and rules underpinning payments in Canada, including the implementation of ISO 20022.

Since December 2016, Payments Canada has made great strides in putting these items into action. We are now on the verge of publishing a target state document, which will detail specific requirements. This detailed view of the program will include comprehensive descriptions of modernized systems and their fundamental support structures, such as risk and regulatory considerations, access models, and technology platforms. It will also show us the target end state: the way modern systems will integrate, the expected migration of payment types, and the anticipated benefits for Canadian businesses and households. But our work doesn't end there - we are looking ahead to implementation mode.

#### **A consultative process**

We have arrived at this point through research, consultation and learnings from our procurement initiatives. Working alongside our regulators, member financial institutions and key stakeholders is a central tenet of our success to date. While this consultation infuses the day-to-day of the program, there are also examples of a larger scale, including our experimental work on blockchain, involving the central Bank of Canada, Canadian commercial banks, and R3, a consortium of global financial institutions.

This group conducted applied research into distributed ledger technology (DLT) to determine how it could be applied to payment systems, specifically for bank-to-bank settlement and exchange. A notable project

output was an innovative attempt to introduce liquidity savings mechanisms; a queuing process that enables institutions to net some of their payments. We found that while DLT systems cannot currently meet all international principles for financial market infrastructure, they could satisfy the existing principle of settlement finality without introducing additional credit risk, as well as enabling savings by lowering back-office reconciliation costs. These are important insights to shape our planning for future systems and, importantly, the effort showed how valuable public-private sector collaboration can be to enhancing perspectives on the entire financial sector.

#### **Focussing on five key changes**

The Roadmap phase of our modernization initiative identified five key areas of focus, summarized below. The detailed specifications and work plans are currently being refined and will be shared in greater detail in the forthcoming target state document.

##### **1. New core clearing & settlement system**

In order to provide a sound foundation for future changes, Canada needs new core clearing and settlement infrastructure that meets international standards for managing risk in both high value and retail payments. The new system, called Lynx, will replace the Large Value Transfer System (LVTS) and work closely with the replacement of the retail-batch Automated Clearing Settlement System (ACSS). It will be based on the ISO 20022 data standard and employ the most recent liquidity savings mechanisms.

##### **2. Faster payment capability in the form of a real-time payment rail**

We will introduce a real-time rail utility that will serve as a platform for innovation in the Canadian ecosystem. Payments Canada

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will determine access criteria, set the legal and rules framework, determine pricing to participants and set the future development roadmap of the rail. Its capabilities will satisfy the key elements of the Vision – including near real-time clearing and funds availability, rich remittance information through ISO 20022, as well as enhanced functionality to support overlay services that serve consumers as well as small and medium sized businesses.

### 3. Enhancements to the batch Automated Funds Transfer (AFT) stream

AFT batch payments will be ISO 20022-enabled and operate along with any new real time rail. These will facilitate faster funds availability for beneficiaries and add additional clearing exchange windows to better serve all Canadians.

### 4. Aligning with global regulatory standards

To meet the standards of a Prominent Payment system, changes must be made to the existing batch-retail system (ACSS) in the near-term including the introduction of an ex ante collateral pool. Other requirements will be met when the retail system is replaced by the new retail-batch system (SOE). That's just one piece of the regulatory pillar - all new systems will align with global regulatory standards to ensure continued safety and security for all users.

### 5. Modernization of the Policy Framework & Rules

The development of a modern policy framework and a rule set for wholesale and retail payments will enable Payments Canada's to remain relevant, reflect current market practices, achieve the appropriate balance between flexibility and compliance to facilitate innovation.

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### A host of benefits

Like any initiative of this magnitude, Payments Canada's modernization efforts will yield increasing benefits as the rollout continues, from faster, more convenient and data-rich payments to ease across borders and transparency in transaction tracking. Over the past nine months alone, we have made great strides, including building requirements, writing new rules, exploring key issues like access and data and beginning the assessment and procurement process for new systems.

That is just the beginning. There is much to look forward to on the road ahead, including continued collaboration and consultation with our domestic and international partners. Some of this will take place at Sibos, hosted in Toronto, Canada this year and I look forward to seeing you there.

**Readers are invited to learn more about payments modernization around the world at a Sibos breakfast session hosted by Payments Canada. On Wednesday, October 18 senior leaders from financial institutions across the globe will share their modernization experiences and lessons learned. [Register now](#) for this first come, first serve event.**

#### Editor

Dominic Hobson  
dominichobson@dominichobson.com

#### Head of Market Infrastructures, SWIFT

Carlo Palmers  
Carlo.Palmers@swift.com

#### Design

Bim Hjortronsteen  
bimhjortronsteen@gmail.com

#### Publisher

SWIFT  
Avenue Adèle 1  
B-1310 La Hulpe  
Tel: +32 2 655 31 11  
Fax: +32 2 655 32 26  
SWIFT BIC: SWHQ BE BB  
<http://www.swift.com/>

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