

MEDIUM-SIZED NOT-FOR-PROFIT BUILDS BUSINESS CASE FOR THE ADOPTION OF ISO 20022



**PAYMENTS
CANADA**

Key themes explored in this case study

- 1 What are the potential opportunities that Canadian Companies can take advantage of as a result of payments Modernization?
- 2 How are Canadian companies preparing for payments Modernization?
- 3 What key learnings can Canadian companies derive from Payments Modernization efforts outside of Canada?

The organization in this case study is a medium-sized not-for-profit. The organization's payments include supplier payments, employee expense reimbursement payments along with employee payroll and benefit payments. Its major payments pain points revolve around insufficient data accompanying Automated Funds Transfer (Direct Credit) payments and connecting payments information with its other enterprise systems (e.g. suppliers, payroll). It has mixed but maturing payments capabilities and is bolstering its evolving payment processes with new use cases that can be enabled as a result of a modernized payments infrastructure. As the study shows, the organization exemplifies the benefits of adoption of ISO 20022 — the emerging international standard for payments messaging that allows relevant data to accompany electronic payments, with other system, process and operational improvements rather than considering them independently. Real-time payments use cases are contemplated and the impact of implementation of Automated Funds Transfer (AFT) enhancements to the organization's operational areas is evaluated.

This case study was developed through in-depth interviews with individuals responsible for accounts payable, receivable, payroll and treasury processes as well as major project leaders within the organization.

EXECUTIVE SUMMARY

DRIVERS OF CHANGE



- Need to improve efficiency by reducing manual processing and high error-potential activities such as data entry
- Increased visibility into cash position

POTENTIAL BENEFITS



- Over \$96K annually in cost savings and other benefits associated with internal process improvements, enhanced corporate-to-bank messaging and straight-through processing
- The organization will accrue over \$475K in potential savings over five years

SOURCE OF BENEFITS



- Efficiency gains associated with improved invoice auto-matching and reduced supplier inquiries delivered by ISO 20022-enabled payments
- Reduction in errors, rejects and required manual adjustments on accounts and cash position
- Improved accuracy of cash forecasting
- Enhanced analytics on proprietary payments from data-rich ISO 20022 remittances
- Reduced auditing costs and reduced risk through stronger internal controls over transactions

PROJECTED EFFORT



- Modest system upgrade costs implemented over a period of several months as well as associated training and process migration estimated at approximately \$59K

ACCELERATORS



- Awareness of changes to payments systems associated with the implementation of support for ISO 20022
- Complementary alignment with initiatives already underway

LESSONS LEARNED



- Importance of early engagement with banking partners to take full advantage of ISO 20022 capabilities for payment initiation and to develop opportunities for straight-through payments processing
- Need to develop integrated strategy for process improvements, ISO 20022 support and legacy system upgrades

Table 1. Estimated benefits, savings and costs of finance and payments-related activities

BENEFITS	
ACCOUNTS RECEIVABLE	<ul style="list-style-type: none"> ● Moving away from paper cheques to digitized payments ● Improved rates of straight-through processing through automated ERP item entry and invoice matching
ACCOUNTS PAYABLE	<ul style="list-style-type: none"> ● Moving away from paper cheques to digitized payments ● Reduced supplier payment inquiries ● Outgoing payment type flexibility in ERP ● Payment confirmation ● Greater visibility into international payments ● Eliminating wire costs
TREASURY	<ul style="list-style-type: none"> ● Automated Treasury reporting ● Eliminated overdue invoice cost ● Free float from shorter payroll latency
AUDITING	<ul style="list-style-type: none"> ● Reduced production time of samples for external audit
SAVINGS	
Process improvements Enhanced corporate-to-bank messaging Straight-through processing	Over \$96K in annual cost savings Over \$475K accrued cost savings over five years
COSTS	
TECHNOLOGY	<ul style="list-style-type: none"> ● ERP system upgrade to ISO 20022
PEOPLE	<ul style="list-style-type: none"> ● Training
PROCESS MAPPING	<ul style="list-style-type: none"> ● Accounts payable and treasury process mapping
Technology upgrades Training Process migration	Estimated at \$59K

KEY:

- Internal upgrade
- Corporate-to-bank enhancements (ISO 20022)
- Modernization (bank-to-bank)

ABOUT THE ORGANIZATION

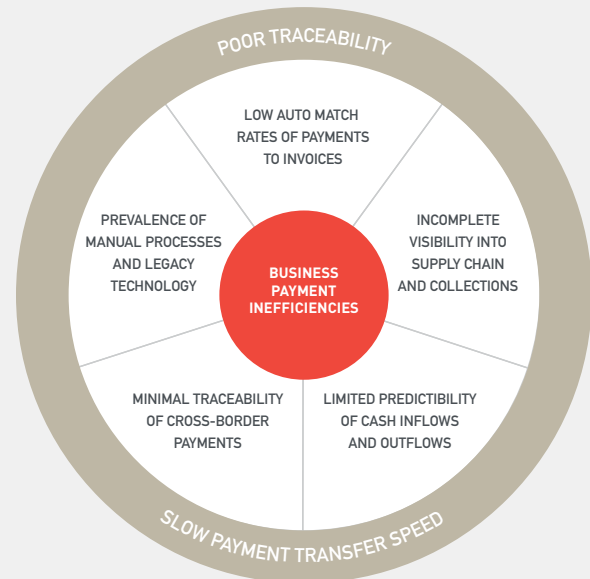
The organization is a medium-sized, not-for-profit. Revenues are generated by fees paid by members, from industry events and other services. The organization’s expenses were approximately \$60 million in 2017 and generated approximately 5,000 payment transactions. Almost all of the organization’s payments activities are Canadian-based and most payments are sent and received to counterparties in Central and Western Canada.

To date the organization has not invested directly in ISO 20022 capability although it has explored the feasibility and costs of migrating its Enterprise Resource Planning (ERP) system to incorporate the new standard in its payments activities. The organization has already made substantial efforts to digitize and automate its payment processes and has all but eliminated the use of cheques. It is currently planning an accounts payable upgrade project to digitize the capture of all invoices into its enterprise accounting system.

Finance and treasury activities could achieve greater efficiencies in several key areas identified by the 2018 EY and Payment Canada study “Evaluating the costs of payments processing” (see figure). For example:

- Invoice matching requires manual intervention to reconcile direct deposits to the corporate account with open invoices and remittance advice from the payor. The lack of straight-through processing of payments means that upstream suppliers must also manually reconcile payments from the organization. These frictions result in delinquent accounts activities.
- Treasury management is constrained by limited cash position reporting which must be downloaded at intervals and manually rekeyed into the ERP.
- Cross-border payments, although making up a small proportion of the organization’s payments profile, are mainly sent by wire and payment status cannot be tracked between initiation and receipt.
- The organization is integrating its digitization efforts with legacy technology — both proprietary as well as systems supplied by vendors and banking services.

Figure 1.



Accounts payable, treasury and accounts receivable processes stand to benefit tangibly from ISO 20022 enablement and other upgrades.

Estimated benefits could exceed \$96K annually and would be derived from activities in three areas:

- Internal system and process upgrades to move incoming and outgoing payments from cheque to electronic payments, and streamline manual processes associated with cash position monitoring;
- System upgrades to allow the organization to use ISO 20022 messaging for corporate-to-bank payment initiation and cash management reporting;
- Eventual adoption of ISO 20022 messaging in the bank-to-bank space which will yield the most significant savings associated with straight-through processing, as well as payment request and other rich data capabilities.

Costs associated with the upgrades are estimated at approximately \$59K for ERP switch to ISO 20022 messaging, as well as associated training and process updates.

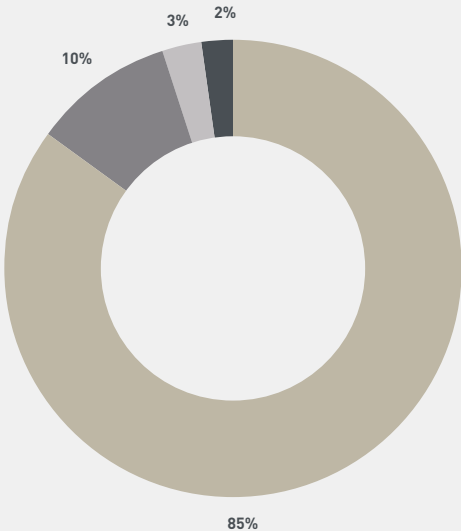
AT A GLANCE: FINANCE AND TREASURY PROFILE

Accounts Receivable

- A corporate Enterprise Resource Planning (ERP) system that tracks accounts and treasury activities is used to create and distribute PDF invoices.
- 200 customers (debtors) paid 1,100 invoices in 2017.
- 85 per cent of payments are received via Automated Fund Transfer (AFT) credit and a majority of the remainder by wire transfer.
- Credit card payments are used for the majority of registrations at periodic industry events sponsored by the organization.
- Payment information is downloaded from a bank website then manually re-keyed into the ERP system.
- Average invoice life cycle is 38 days. Unpaid and overdue receivables account for 1.5 per cent of receivable dollars and are handled manually.

Accounts Receivable — value by payment type

KEY: ● AFT Direct Credit ● Wire ● Credit Card ● Cheque or other



Treasury

- Liquidity is derived from deposits and loan utilization.
- There is an acknowledged opportunity to mature the cash management and treasury function with more regular reporting and closer management of balances.

Accounts Payable, Payroll and Expense Claims

- 90 per cent of invoices are received as PDF documents via a central email inbox. The rest are by mail.
- 580 suppliers (creditors) generated over 3,266 invoices in 2017.
- 93 per cent of payouts are by AFT credit to vendor accounts through the ERP. Remittance information is automatically generated and sent by email.
- 6.4 per cent of payouts are by wire transfer (mainly cross-border) or online payment (mainly utilities). Cheques are negligible.
- Payroll processing is handled by a payroll software provider. The bulk payment to the provider is made via AFT credit.
- Insurance and pension benefits are paid directly to providers via AFT pre-authorized debit (PAD).
- Employee expense claims are managed with a software solution that preserves rich data (e.g. receipts). They are paid via AFT credit through the ERP. Some manual reconciliation is required.

How is the organization preparing for the change?

The organization is well positioned for implementation of ISO 20022 in Canada. It understands the nature and scope of process improvements, ERP upgrades and support of ISO 20022. It has taken significant steps to mature its payments and treasury processes, which has already yielded savings of over \$10K annually, and has established an implementation strategy for migrating its ERP and other systems to become ISO 20022 compatible.

ISO 2022

What can ISO 2022 offer?

ISO 2022 is the emerging international standard for payments messaging. The ISO standard features structured and unstructured data to provide rich remittance information (i.e. what the payment is for) and facilitate straight-through processing (the payment travels from sender to receiver without manual intervention). The standard was developed by the International Standards Organization and has been adopted by the Society for Worldwide Interbank Financial Telecommunications (SWIFT) — the primary global provider of secure financial messaging services. In Canada, Payments Canada is promoting the standard and providing support for implementation as part of its larger modernization initiative. ISO 2022 will replace the Payments Canada Standard 005 messaging currently being used for AFT payments. Additionally, new real-time payments and enhanced high-value systems will support ISO 2022 at launch.



Differentiating aspects of ISO 2022

It is important to differentiate the various aspects of the ISO 2022 transaction message set when considering corporate adoption and benefits of ISO 2022 messages. Specifically, messages may pertain mainly to the corporate-to-corporate space or the bank-to-bank space, where Payments Canada's Modernization efforts are concentrated. In the corporate-to-bank space, a corporate end user may work with their financial institution to transmit payment initiation messages (called "pain" messages in ISO 2022) and cash management ("camt") messages. Bank-to-bank exchange is enabled by payment clearing and settlement ("pacs").

In a typical end-to-end payment flow, the sending corporate might initiate payment with a "pain" message that contains detailed remittance information. The sender's Financial Institution (FI) receives the message and exchanges it with the receiving FI using a "pacs" message that retains the remittance "payload". The receiving corporate end user can then be notified by its FI and query the payment using "camt" messages.

Accounts payable

ISO 2022 messaging for AFTs will allow for inclusion of remittance information with payment and simplify the process for suppliers to match payments with corresponding invoices. In addition to costs savings associated with reduced supplier inquiries, intangible benefits may be generated through improved supplier relationships. Companies seeking to leverage ISO 2022 and convert AFT credit payments will need to invest in system enhancements. Based on other jurisdictions, a payback on investment can be expected in two and a half years. However, because straight-through processing depends on widespread network adoption, customers and their financial institutions would also need to be able to transmit and receive payments in the ISO 2022 format to receive the full benefit of invoice data.

The organization makes wire payments, usually for international transfers. These payments could also be initiated using ISO 2022 messaging and would allow for greater funds traceability in conjunction with emerging global messaging enhancements, for instance through the

new SWIFT gpi suite of services. Again, this capability relies on adoption of the standard in the bank-to-bank space.

Accounts receivable, cash management and auditing

The analysis suggests that some of the costs of ISO 20022 adoption could be offset by upgrading accounts receivable and automating cash management processes. It is estimated that these process improvements changes and migration to ISO 20022 and associated automatic invoice matching would result in labour savings of about three to five per cent annually in finance and treasury operations. Beyond cost savings associated with process improvement, accepting richer payments and straight-through processing would present new opportunities for using proprietary data for analytical and auditing process purposes, including deeper vendor analysis techniques, more effective exception reporting and treasury monitoring and control processes.

ISO 20022 Cash Application Management (CAMT) reports could also provide better visibility into balances and upcoming payables, and more reliable collections of

outstanding accounts receivable by integrating CAMT messages directly into enterprise resource planning or accounting software.

Implementation planning

As the organization begins the incorporation of ISO 20022 messaging standards into its planned ERP upgrade, it will work with its bank to explore ways to use the standard for payment initiation and cash management reporting. At the same time, it will pursue the development and integration of the ISO 20022 payment messaging standard within its accounting system.

The aforementioned process improvements coupled with improved payment data as a result of the ISO 20022 messaging standard is expected to result in significant benefits to the organization's finance and treasury functions by way of increased use of electronic payments, better reconciliation of incoming and outgoing payments as well as improved analytics (e.g. payment or vendor analysis).



Degree of change required (Minimal – Moderate – Substantial)

The following table shows the impact of implementation of the ISO 20022 standard across key operational areas:

PEOPLE – MODERATE ●●○



- Implementation will require moderate effort from finance and treasury personnel to become acquainted with the messaging standard, its capabilities and associated processes.
- Enhanced remittance and cash management information will free up resources currently dedicated to manual processes and allow the organization to take advantage of advanced analytics that can be realized with richer data.
- IT and security staff will also be implicated in the build and ongoing maintenance of the new systems.

PROCESS – MODERATE ●●○



- Processes will have to be modified to ensure that data entry is supported through the ERP and automatically inserted in outgoing payment messaging and cash management activities.
- New processes will need to be developed to direct outgoing payments processes in a flexible ISO 20022 environment.
- Automation of invoice matching in the context of bank-to-bank ISO 20022 adoption will yield significant benefits associated with processing incoming payments.

TECHNOLOGY – MODERATE ●●○



- ERP systems and data structures will require some modification to switch to the richer data standard and to integrate across enterprise systems.
- Outsourced payroll, benefits and insurance providers will have to update solutions to allow for full realization of benefits of accounts payable capabilities associated with richer data.

ORGANIZATION – MODERATE ●●○



- Many of the potential advantages of ISO 20022 implementation result from automation of manual activities which are not currently visible to the larger organization.
- Change management exercise for financial groups will be significant.
- New analytics may drive innovation in the organization's revenue model, expense management capabilities and planning process.

Innovation opportunity

The organization is looking for opportunities to leverage its proprietary enhanced remittance data to explore advanced analytics, in house and through payroll, expense and benefit delivery partnerships. Additionally, it is exploring potential ideas to harness rich data in outgoing payments (e.g. by embedding URL links in ISO 20022 messaging) to reduce supplier and employee inquiries and allow for downstream automation and reconciliation.

AFT ENHANCEMENTS

What can the AFT enhancements offer?

Automated Funds Transfers (AFT) are a critical component of the payments landscape for business-to-business (B2B), business-to-consumer (B2C) and consumer-to-business (C2B) transactions. AFT direct credit payments are used primarily for B2B and are familiar to consumers as payroll and benefit payments to individuals. Pre-Authorized debit (PAD) payments tend to be used for regular C2B bill and housing payments. AFT offers a very cost-effective and secure channel and is typically processed in batches using the Payments Canada Standard 005 data structure which offers limited room for remittance data. This problem is compounded by inconsistent application of that standard across financial institutions resulting in inconsistent message transmission between end users.

How will this organization accommodate AFT enhancements and harness its benefits?

Payments Canada has recently introduced enhancements to AFT batch processing including a third exchange window and two-hour funds availability to end users of direct exchange FIs. A third exchange window will better align AFT payments with business hours in western time zones and two-hour funds availability will allow for the possibility of AFT payments to be processed more quickly for time-sensitive transfers. However, the liquidity requirements associated with flexible AFT payments underscore the importance of access to real-time treasury monitoring.

Further, the organization could work with its payroll provider to harness AFT enhancements, such as two-hour funds availability, to shorten the interval between funding the payroll and the payroll date which is currently based on historic AFT settlement periods. Doing so would reduce the payroll latency and associated foregone interest revenue. It is estimated this could result in additional interest revenue of \$5K over the course of the year.



Degree of change required (Minimal – Moderate – Substantial)

The following table shows the impact of implementation of AFT enhancements across key operational areas. The changes and associated benefits are able to be realized in a “business-as-usual” model.

PEOPLE – MINIMAL ●○○○



- Some additional treasury monitoring will occur but processes and staff activities will not be significantly altered by the AFT changes.

PROCESS – MINIMAL ●○○○



- Flexibility around processing same-day payments in western time zone. Incoming payments may be deposited one day earlier.

TECHNOLOGY – MINIMAL ●○○○



- Current systems and planned upgrades are compatible with enhancements.

ORGANIZATION – MINIMAL ●○○○



- Beyond finance activities, there is minimal impact on the organization.

REAL-TIME RAIL

How is this organization considering its approach to real-time payments?

The Real-time Rail describes a financial infrastructure project that Payments Canada is currently undertaking as part of its modernization effort. The rail will provide the security and data structures to allow credit push payments between deposit accounts which are irrevocably settled in seconds. The user experience for real-time payments will be provided by overlay service providers that can tailor the interface and application capabilities to meet consumer and business end-user needs. The overlay service will 'ride' on the rail infrastructure to exchange and settle payment items. Real-time payment systems exist or are being introduced around the world for use in a variety of P2P, P2B and B2B use cases, often in conjunction with useful features like request-for-payment or open banking applications. ISO 20022 will be the payment messaging standard for the rail.

How will this organization use real-time payments?

Faster payments have been identified by the organization as being potentially useful for specific uses cases such as, paying one-time vendors and customers, making transfers where banking details are not known (i.e. alias addressing) or avoiding late payment fees. The initial release of RTR will feature the ISO 20022 message standard which may make the payment option more attractive until straight-through processing is adopted with ISO 20022 enablement for AFT.

Additionally, future releases may have features (e.g. request-to-pay) that may recommend the channel. The organization will need to consider the value proposition differentiators between real-time and near real-time solutions to evaluate its likely use of the method.



Degree of change required (Minimal – Moderate – Substantial)

The following table shows the impact of the use of the Real-Time Rail across key operational areas. Because the use cases for the rail are limited in the near term, the projected impact is minimal across the organization.

PEOPLE – MINIMAL ● ○ ○ ○



- Some training will be required to initiate payments through real-time overlay services.

PROCESS – MODERATE ● ● ○ ○



- Processes would have to be established as to how and when a real-time transfer would be used.
- Processes to initiate payments through outsourced services (e.g. payroll, expenses) would need to be established.

TECHNOLOGY – MODERATE ● ● ○ ○



- For an integrated payment solution using a real-time service, ERP system enhancements would need to be compatible with overlay service.

ORGANIZATION – MINIMAL ● ○ ○ ○



- Real-time payments may be visible to recipients for specific use cases (e.g. alias payments and interview expenses).

TAKEAWAYS

By implementing the ISO 20022 payment messaging standard the organization believes that it will gain better insight into treasury and cash management, reduce manual and resource intensive processes and improve visibility into the value chain.

Modernizing payment processes through adoption of richer messaging, adapting to changes for AFT enhancements, and looking for opportunities and use cases with real-time payments may yield significant cost savings going forward and free resources for more productive purposes.

The organization believes payments Modernization can enable numerous benefits including:

- **Productivity improvement:** Finance and treasury activities may see cost savings through improved integration of payment information with enterprise accounting and other primary software services.
- **Value-chain benefits:** Straight-through processing and greater visibility into value-chain activities may reduce

unnecessary queries and matching of invoices and payments across the value chain, saving time and costs for the organization as well as its vendors and customers.

- **Related system and process improvements:** The implementation of new infrastructure to manage modernized payments offers an opportunity to align with—and reveal—other system upgrades to improve productivity, efficiency and reduce errors and delays.

The organization believes that the implementation cost for ISO 20022, real-time payments and AFT batch enhancements will be a modest investment, a one-time upgrade estimated at about \$59K, and will be aligned with other planned enhancements over a period of several months. Through process efficiencies and improved treasury management the organization is predicted to reduce costs by approximately \$96K annually from its upgrade efforts, amounting to over \$475K in potential cost savings over a five year period.



For more information on payments Modernization or to understand how ISO 20022 can benefit your organization, please email Payments Canada at modernization@payments.ca

Payments Modernization and ISO 20022

ISO 20022 is the foundation for payment messaging across all modernized systems. The transition to ISO 20022 will support interoperability with global payment ecosystems, and will also enable new opportunities for financial products and services, and bring new levels of efficiency to the Canadian economy. To learn more, visit our ISO 20022 Resource Centre at payments.ca.

Want to share your experience?

If you would like to share your organization's ISO 20022 journey, we want to hear from you. Email us at modernization@payments.ca



About Payments Canada

Payments Canada ensures that financial transactions in Canada are carried out safely and securely each day. The organization underpins the Canadian financial system and economy by owning and operating Canada's payment clearing and settlement infrastructure, including associated systems, bylaws, rules and standards. The value of payments cleared and settled by Payments Canada in 2018 was \$53 trillion or \$209.7 billion each business day. These encompass a wide range of payments made by Canadians and businesses involving inter-bank transactions, including those made with debit cards, pre-authorized debits, direct deposits, bill payments, wire payments and cheques. Payments Canada is a proud supporter of the Catalyst Accord and the 30% Club. For more information about Payments Canada, please visit payments.ca.