



Fedwire[®] Funds Service ISO[®] 20022 Phase 2 & Phase 3 Webinar

April 19, 2018



Audio

Dial-In: 1-888-625-5230

Participant Code: 40987769#

Webinar Link

<https://www.webcaster4.com/Webcast/Page/577/24238>



Agenda

- ISO 20022 – what, why, how and when
- ISO 20022 basics
- Phase 3 enhancements
- ISO 20022 documentation
- Upcoming in-person workshops
- ISO 20022 implementation center

What is ISO?

- International Organization for Standardization – a network of national standards bodies that develop international standards
- ISO publishes standards for a broad range of industries.
- The U.S. is a member of and contributor to ISO standards for the financial industry through Accredited Standards Committee X9–Financial Industry Standards, Inc.

What is ISO 20022?

- The ISO 20022 standards support financial messaging (i.e., payments, securities, trade, card, FX).

- ISO 20022 messages can contain a large amount of information (“rich data”) and are based on a common data dictionary that can support the end-to-end payment message flow as follows:
 - Payment initiation (customer to bank)
 - Interbank settlement (bank to bank)
 - Cash management (bank to customer)

Rationale for adopting ISO 20022 messages for the Fedwire Funds Service

- The ISO 20022 initiative supports strategy 4 of the Federal Reserve's *Strategies for Improving the U.S. Payment System* to achieve greater end-to-end efficiency for domestic and cross-border payments.
- This effort is a **strategic initiative** to replace the proprietary message formats for the Fedwire Funds Service with a message format based on a global standard that can **improve payment processing efficiency and promote interoperability among high-value payment systems around the world.**
- Upon careful analysis of the required changes and engagement with internal and external stakeholders, the Federal Reserve Banks determined that a **three-phased implementation** would be most effective.

ISO 20022 Implementation Scope

- The Federal Reserve Banks plans to implement ISO 20022 messages for all inputs and outputs of the Fedwire Funds Service (i.e., all messages, inquiries, reports).

ISO 2022 Implementation Approach

Phase 1 ISO Preparation (November 23, 2020)

- “Big bang” implementation to accommodate SWIFT® MT changes to originator and beneficiary fields and to prepare for and simplify the migration to ISO 2022 messages.

Phase 2 ISO Like for like (Q1 2022 through Q3 2023)

- Migrate Fedwire Funds Service participants in waves over **18 months** to send and receive ISO 2022 messages that have elements and character lengths that are comparable to the legacy format.
- The Fedwire Funds Service will translate the legacy format to ISO 2022 and vice versa when necessary to accommodate Fedwire senders and receivers that are not using the same format.
- To prepare for Phase 3, Fedwire Funds Service participants will be required to demonstrate their ability in the Federal Reserve Banks’ test environment to receive ISO 2022 messages with the enhancements that will go live in Phase 3.
- The Fed will sunset legacy format at end of this phase.

Phase 3 ISO Enhancements (Q4 2023)

- “Big bang” implementation to enable participants to send optional enhancements.

ISO 20022 Implementation Timeline



October 2017 Press Release:

<https://www.frbservices.org/news/press-releases/101817-iso20022-migration-timeline.html>

Phase 2 Migration Approach

- The Federal Reserve Banks and The Clearing House plan to establish a work group to develop a Phase 2 migration approach for their common customers.
- The Federal Reserve Banks plan to develop a migration approach for all other customers.
- Final migration plan targeted to be shared with customers and vendors in 2019.

Testing Approach

- Fedwire Funds Service participants and service providers that access the service via the FedLine Direct[®] solution and/or that use the import/export feature of the FedPayments[®] Manager–Funds application will be required to complete testing.
- Phase 1 testing will be very similar to how we have done testing in the past.
- An approach for Phase 2 and 3 testing will be discussed at the in-person workshops in May and June.
- Final testing approach will be published on the Fedwire Funds Service ISO 20022 Implementation Center by the end of 2018.

ISO 20022 Basics

- Message identifier
- Business functions
- Terminology
- Syntax
- Business application header
- ISO 20022 messages compared to legacy messages
- Message flows

ISO 20022 Message Identifiers

Naming convention



Business areas

PAIN = *PA*yment *IN*itiation (customer to bank)

PACS = *PA*yments *C*learing & *S*ettlement (interbank)

CAMT = *CA*sh *M*anagement (reporting, exception handling...)

ADMI = *ADM*inistration (system messages, rejects...)

Note: Business Application Header follows the same naming convention.

Business Functions

Description	FAIM 4.0.1		ISO 20022	
	Business Function	Type/Subtype	Local Instrument	ISO Message
Customer transfer	CTR	1000	CTR0	pac.008
Customer transfer return	CTR	1002	CTR0	pac.004
Bank transfer	BTR	1600	BTR6	pac.009
Bank transfer return	BTR	1602	BTR6	pac.004
Cover payment	BTR COVS	1600	COV6	pac.009
Cover payment return	BTR COVS	1602	COV6	pac.004
Customer drawdown request	DRC	1031	DRR0	pac.001
Customer drawdown refusal	DRC	1033	DRR0	pac.002
Customer drawdown transfer	DRW	1032	DRW0	pac.008
Bank drawdown request	DRB	1631	DRR6	pac.001
Bank drawdown refusal	DRB	1633	DRR6	pac.002
Bank drawdown transfer	DRW	1632	DRW6	pac.009
Service message	SVC	1690	SVC6	camt.035
Return request	SVC	1601	SVC6	camt.056

Business Functions – Special Account

Description	FAIM 4.0.1		ISO 2022	
	Business Function	Type/ Subtype	Local Instrument	Message Identifier
Special account customer transfer	CTR	1500	CTR5	pac.008
Special account customer transfer return	CTR	1502	CTR5	pac.004
Special account bank transfer	BTR	1500	BTR5	pac.009
Special account bank transfer return	BTR	1502	BTR5	pac.004
Special account cover payment	BTR COVS	1500	COV5	pac.009
Special account cover payment return	BTR COVS	1502	COV5	pac.004
Special account service message	SVC	1590	SVC5	camt.035
Special account return request	SVC	1501	SVC5	camt.056

Terminology

Persons/Entities Involved in Funds Transfers

Originator	→	Debtor
Beneficiary	→	Creditor

Note: Debtor/Creditor may be sending or receiving funds on behalf of an *Ultimate Debtor* or *Ultimate Creditor**



Financial institutions

Originator FI	→	Debtor Agent
Beneficiary FI	→	Creditor Agent
Intermediary FI	→	Intermediary Agent 1
Instructing FI	→	Previous Instructing Agent 1
Fedwire Sender	→	Instructing Agent
Fedwire Receiver	→	Instructed Agent



*Neither an ultimate debtor nor an ultimate creditor is a party to a funds transfer.

Syntax - Example of Beneficiary/Creditor

Current Fedwire Funds Service Format

{4200}D*666666666*ABC Bank*100 Broadway, Suite 50*New York, NY USA*

ISO 2002 Format

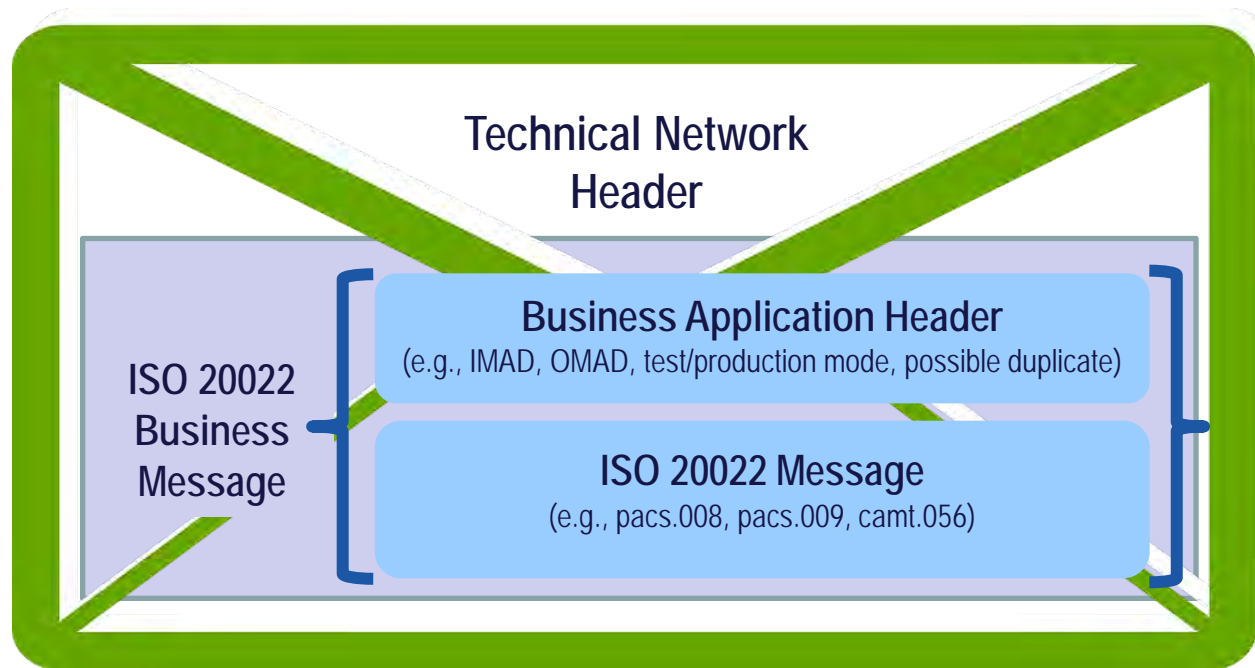
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  <FinInstnId>
    <Nm>ABC Bank</Nm>
    <PstlAdr>
      <StrtNm>Broadway</StrtNm>
      <BldgNb>100, Suite 50</BldgNb>
      <TwnNm>New York</TwnNm>
      <CtrySubDvsn>NY</CtrySubDvsn>
      <Ctry>US</Ctry>
    </PstlAdr>
  </FinInstnId>
</Cdtr>

<CdtrAcct>
  <Id>
    <Othr>
      <Id>666666666</Id>
    </Othr>
  </Id>
</CdtrAcct>
  
```

Business Application Header (head.001.001.01)

- Required for all ISO 2002 messages sent through the Fedwire Funds Service (i.e. value, nonvalue, system, and reporting messages)
- Carries the processing information supplied by Fedwire Funds Service participants (i.e., tag {1500} and IMAD) and sent by the Fedwire Funds Service application (i.e., tag {1100} and OMAD).



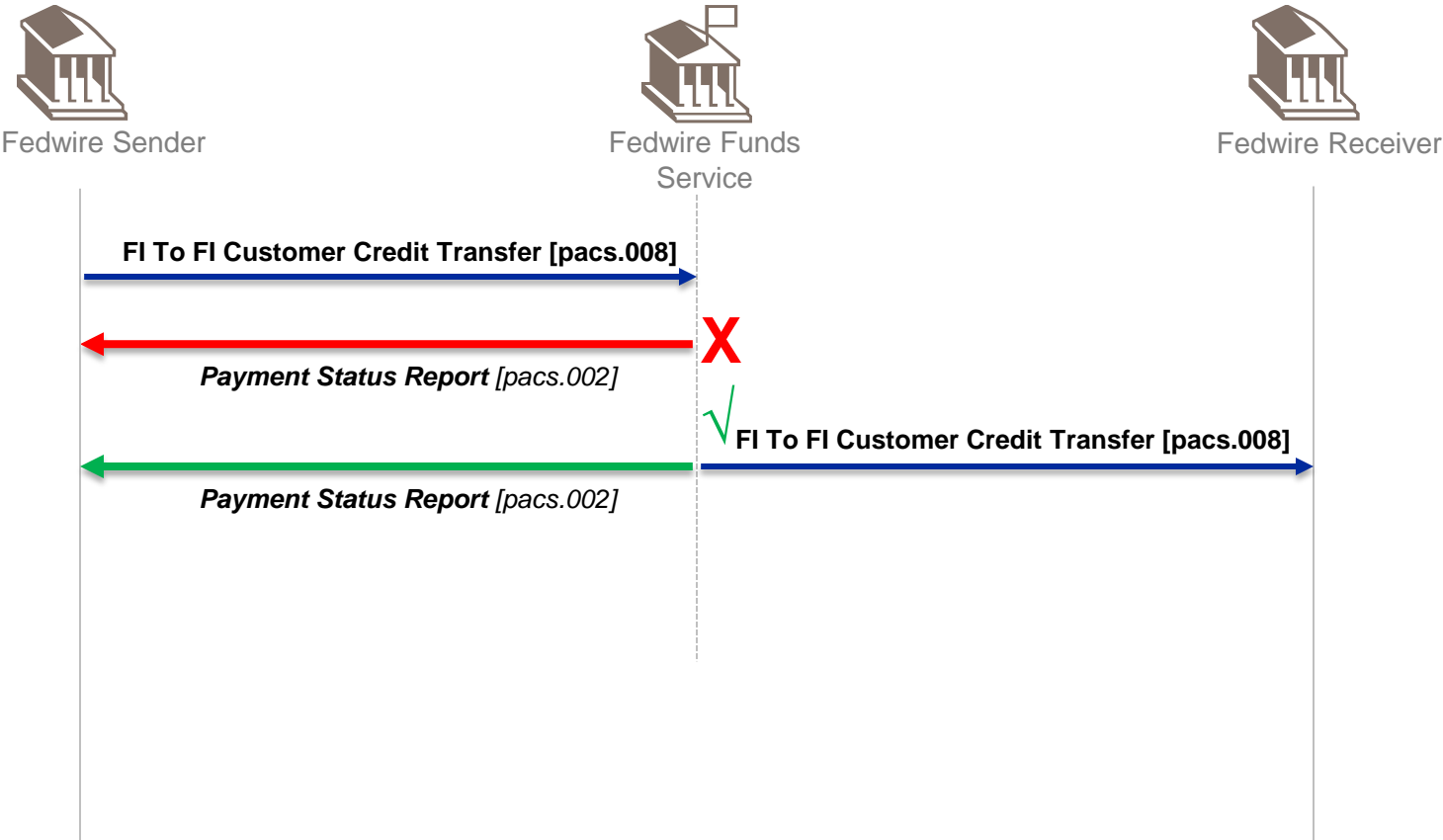
ISO 20022 vs. Legacy Format

Category	Description	ISO 20022 Message	Comparable Message in Legacy Fedwire Format
Value messages	Used by Fedwire Funds Service participants to order the movement of funds	Financial Institution To Financial Institution Customer Credit Transfer (pacs.008.001.07)	Customer transfer
		Financial Institution Credit Transfer (pacs.009.001.07)	Bank transfer
		Payment Return (pacs.004.001.08)	Return
Nonvalue messages	Used by Fedwire Funds Service participants to request that a funds transfer be made, to refuse to honor those requests, or to share free- format information	Customer Credit Transfer Initiation (pain.001.001.08)	Drawdown request
		FIToFI Payment Cancellation Request (camt.056.001.07)	Return request
		FIToFI Payment Status Report (pacs.002.001.09)	Drawdown refusal
		Note: This message will also be used for a Return Refusal, but there is currently no comparable message.	
		Proprietary Format Investigation (camt.035.001.04)	Service message

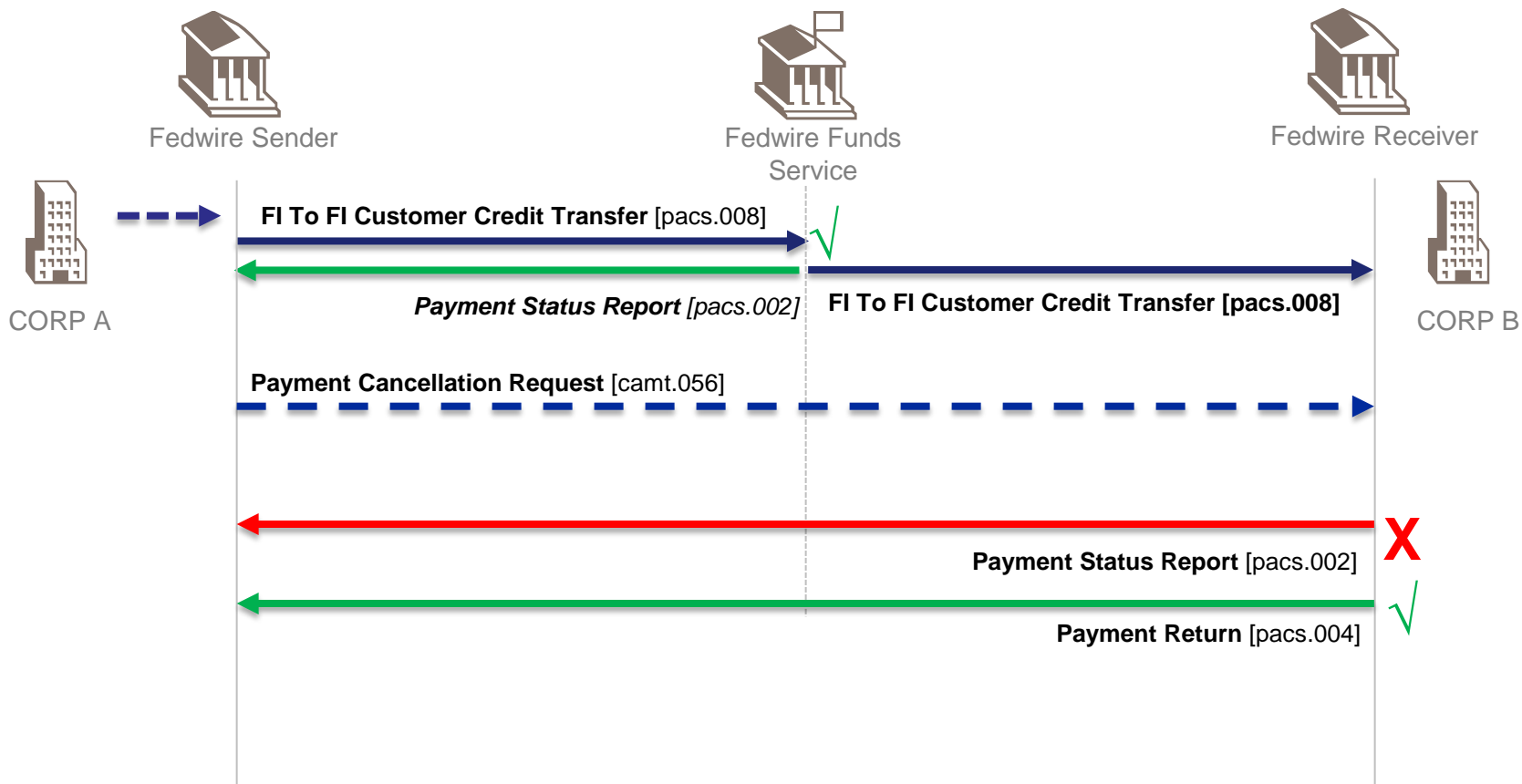
ISO 20022 vs. Legacy Format

Category	Description	ISO 20022 Message	Comparable Message in Legacy Fedwire Format
System messages	Used to communicate about the processing status of messages submitted to the Fedwire Funds Service, to report about Fedwire Funds Service operations, or to request copies of current- or prior-day messages	FIToFI Payment Status Report (pacs.002.001.09)	Acknowledgment Reject Notification
		Message Reject (admi.002.001.01)	Error response to an account report or retrieval request
		System Event Notification (admi.004.001.02)	Broadcast messages (i.e., open, close, extensions)
		Resend Request (admi.006.001.01)	Retrievals (current or prior two business days)
Reporting messages	Used to request or report on transaction activity or account balance information	Account Reporting Request (camt.060.001.04)	The following requests: <ul style="list-style-type: none"> Account balance Endpoint totals Detailed summary
		Bank To Customer Account Report (camt.052.001.07) <ul style="list-style-type: none"> Account balance report Endpoint totals report Endpoint details report Endpoint gap report Activity report 	The following reports: <ul style="list-style-type: none"> Account balance Endpoint totals Detailed summary DI reconciliation gap report Funds subsidiary statement

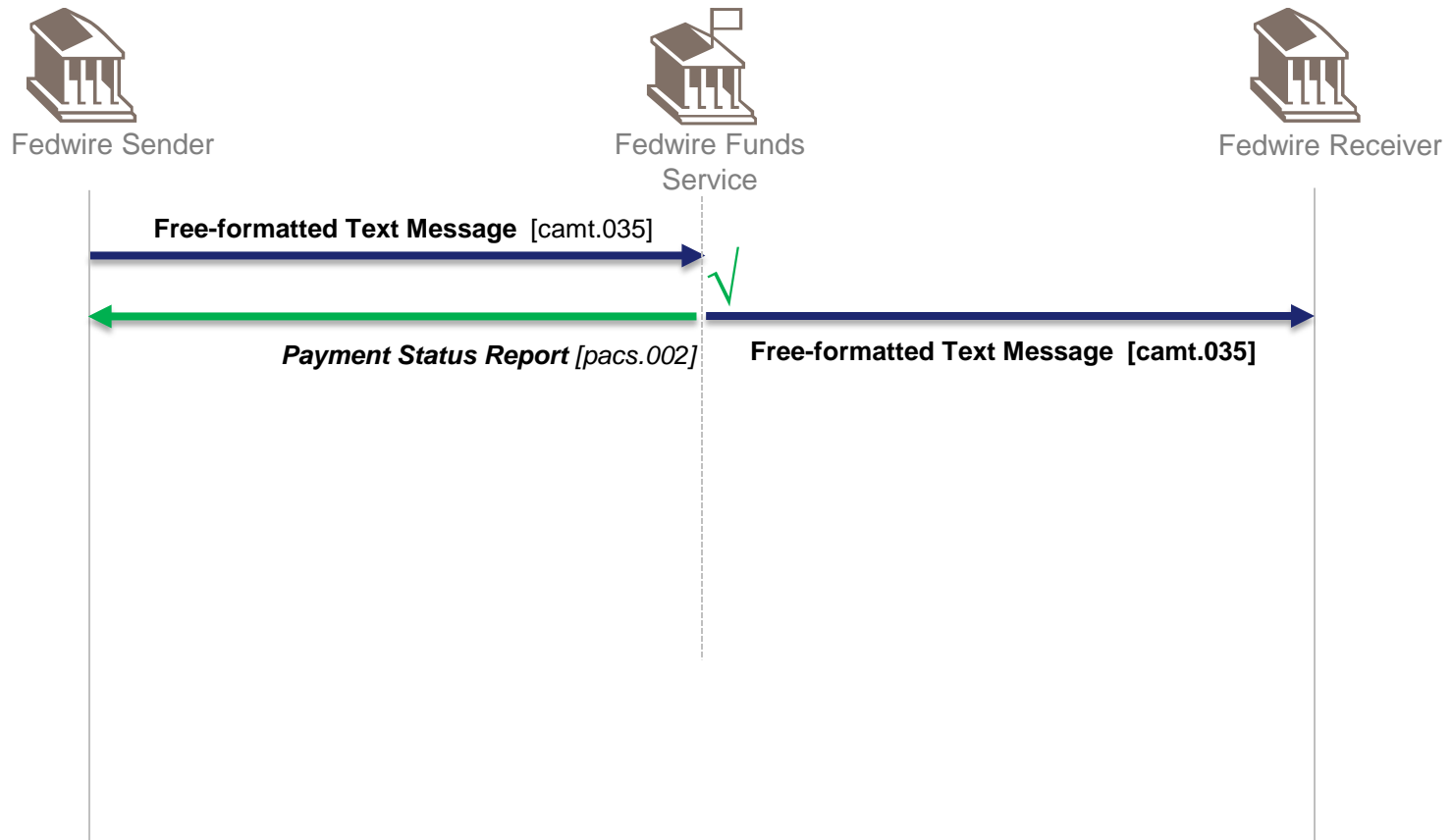
Acknowledgments, Advices & Reject Notifications



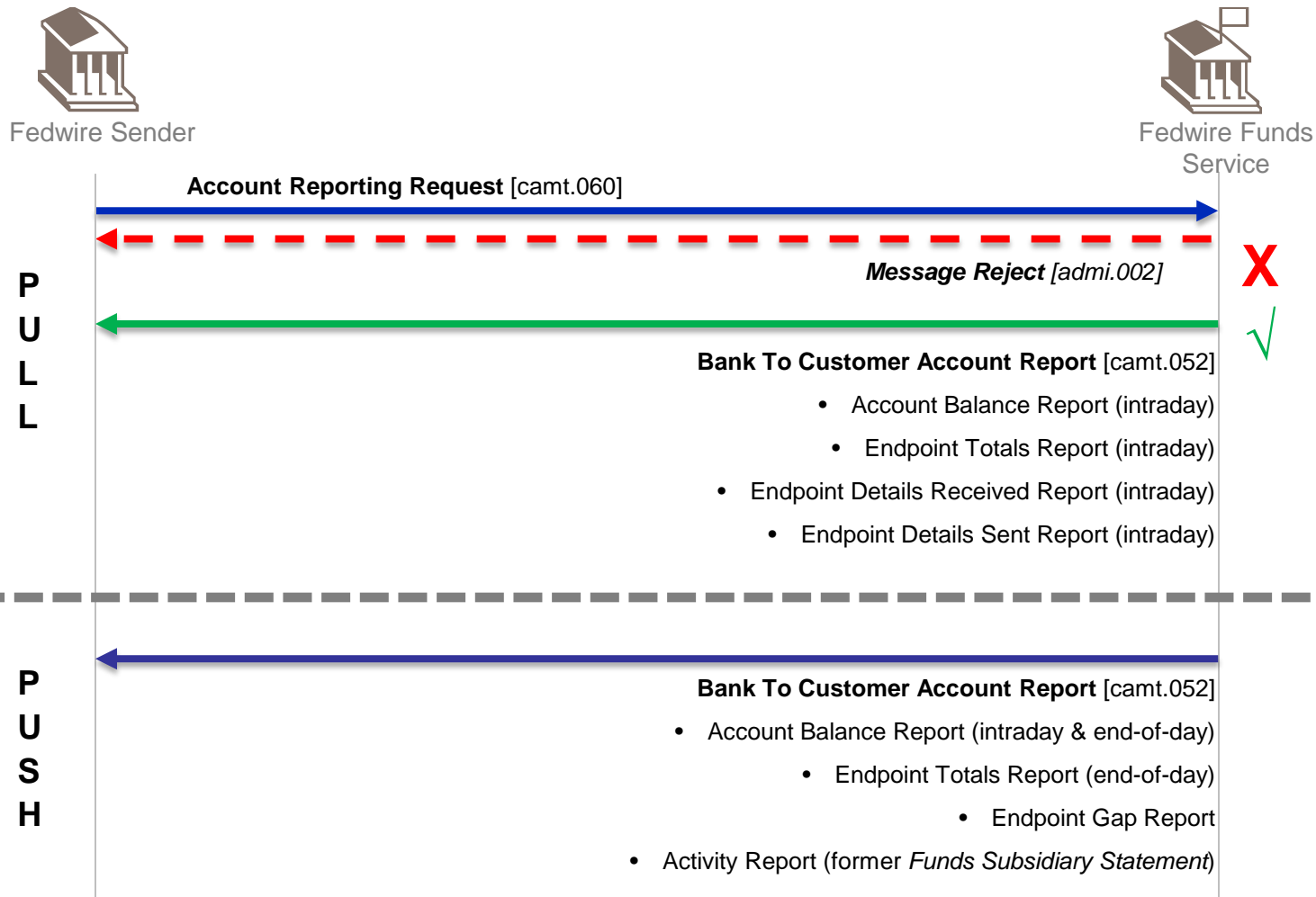
Customer transfer & related messages



Service message



Reporting messages



ISO 20022 Enhancements in Phase 3

- In Phase 3, the following types of enhancements will be optional to send, but mandatory to receive:
 - Increase the maximum length for certain elements (e.g., name can be up to 140 characters)
 - New persons/entities
 - New elements
- In addition, recommended practices will be introduced, including a new message flow to refuse a return request.

ISO 2022 Phase 3 Enhancements

Increased character lengths

Examples:

Current Fedwire Funds Service Format	ISO 2022 Format
Name (up to 35 characters)	Name (up to 140 characters)
Free-text lines for address information: Address Line 1 (up to 35 characters) Address Line 2 (up to 35 characters) Address Line 3 (up to 35 characters)	Discrete fields for specific address information: Postal Address <PstlAdr> <AdrTp> (4 characters) <Dept> (up to 70 characters) <SubDept> (up to 70 characters) <StrtNm> (up to 70 characters) <BldgNb> (up to 16 characters) <PstCd> (up to 16 characters) <TwnNm> (up to 35 characters) <CtrySubDvsn> (up to 35 characters) <Ctry> (2 characters)

ISO 20022 Phase 3 Enhancements

New Persons/Entities

Fedwire Legacy Format Today	ISO 20022 Phase 3
N/A	Ultimate Debtor
Originator	Debtor
N/A	Initiating Party
Originating FI	Debtor Agent
Instructing FI	Previous Instructing Agent 1
N/A	Previous Instructing Agent 2
N/A	Previous Instructing Agent 3
Sender	Instructing Agent
Receiver	Instructed Agent
Intermediary FI	Intermediary Agent 1
N/A	Intermediary Agent 2
N/A	Intermediary Agent 3
Beneficiary FI	Creditor Agent
Beneficiary	Creditor
N/A	Ultimate Creditor

ISO 20022 Phase 3 Enhancements

Address Information

- The Address Information component is always optional, but if used, the following applies:

ISO 20022 Message	Structured Address	Unstructured Address (free text)
Customer & Bank Transfers (pacs.008 & pacs.009)	Preferred option for all entities, but the only option for new entities referenced on the prior slide. When used, the country code is mandatory for all entities; the town name is also mandatory for new entities.	Permitted for existing entities referenced on the prior slide. <u>For customer transfers only:</u> When used for the debtor or creditor, the country code is mandatory.
Drawdown Request (pain.001)	Only option for debtor and creditor. When used, the town name and country code are mandatory.	Not permitted

ISO 20022 Phase 3 Enhancements

New elements – Customer and Bank Transfers

New Element	Fedwire ISO 20022 Implementation
<p>Payment Type Information</p> <ul style="list-style-type: none"> <p>▪ Service Level (i.e., information about a service level provided by the market infrastructure)</p> <ul style="list-style-type: none"> ○ This element will be introduced in Phase 2 to support Federal Reserve Banks' Payment Notification User Group and SWIFT gpi service ○ This element will be expanded to permit additional service levels as part of Phase 3 <p>▪ Category Purpose (i.e., information for banks in the funds transfer to trigger specific processing)</p> 	<p>Predefined codes only¹</p> <p>Predefined codes¹ & proprietary codes</p>
<p>Purpose (i.e., information to explain the reason of the payment to the beneficiary)</p>	<p>Predefined codes¹ & proprietary codes</p>

¹Predefined codes from ISO 20022 External Code List:
https://www.iso20022.org/external_code_list.page

ISO 20022 Phase 3 Enhancements

New elements – Customer Transfers Only

- Contact Details for debtor, creditor, ultimate debtor, and ultimate creditor
- Regulatory Reporting (e.g., OFAC license)
- An additional occurrence of Related Remittance Information
- Two new components within Structured Remittance Information
 - Tax Remittance (e.g., IRS tax payments)
 - Garnishment Remittance (e.g., child support)

ISO 20022 Enhancements

Extended Remittance Information (ERI)

ERI Type	Today (FAIM 3.0.4)	Phase 1 (FAIM 4.0.1) & Phase 2	Phase 3
Unstructured	9,000 characters	140 characters	140 characters
Related	One occurrence	One occurrence	Two occurrences
Structured	<p>9,000 characters for data and tags</p> <p>If used, four tags are mandatory and some are repeatable.</p>	<p>9,000 characters for data only (excludes tags)</p> <p>If used, only one tag will be mandatory and some tags will be repeatable.</p>	<p>9,000 characters for data only (excludes tags)</p> <p>Will introduce new components for Tax Remittance & Garnishment Remittance.</p>

ISO 20022 Phase 3 Enhancements

Recommended Practices

The ISO 20022 implementation guide will include the following recommended practices, but the Fedwire Funds Service will not perform any edits to enforce these practices.

Type of Message Received by Fedwire Participant	Recommended Practice
Drawdown request (pain.001)	Respond to the drawdown request <u>by the end of the current business day</u> with one of the following: <ul style="list-style-type: none"> ▪ Drawdown transfer (pacs.008 or pacs.009) ▪ Drawdown refusal (pacs.002)
Return request (camt.056)	Respond to the return request with one of the following once you determine the resolution (which may or may not be within the current business day): <ul style="list-style-type: none"> ▪ Return payment (pacs.004) ▪ Return refusal (pacs.002) (NEW)
Customer transfer message (pacs.008) that contains ERI	Make the ERI available to next party, if requested.

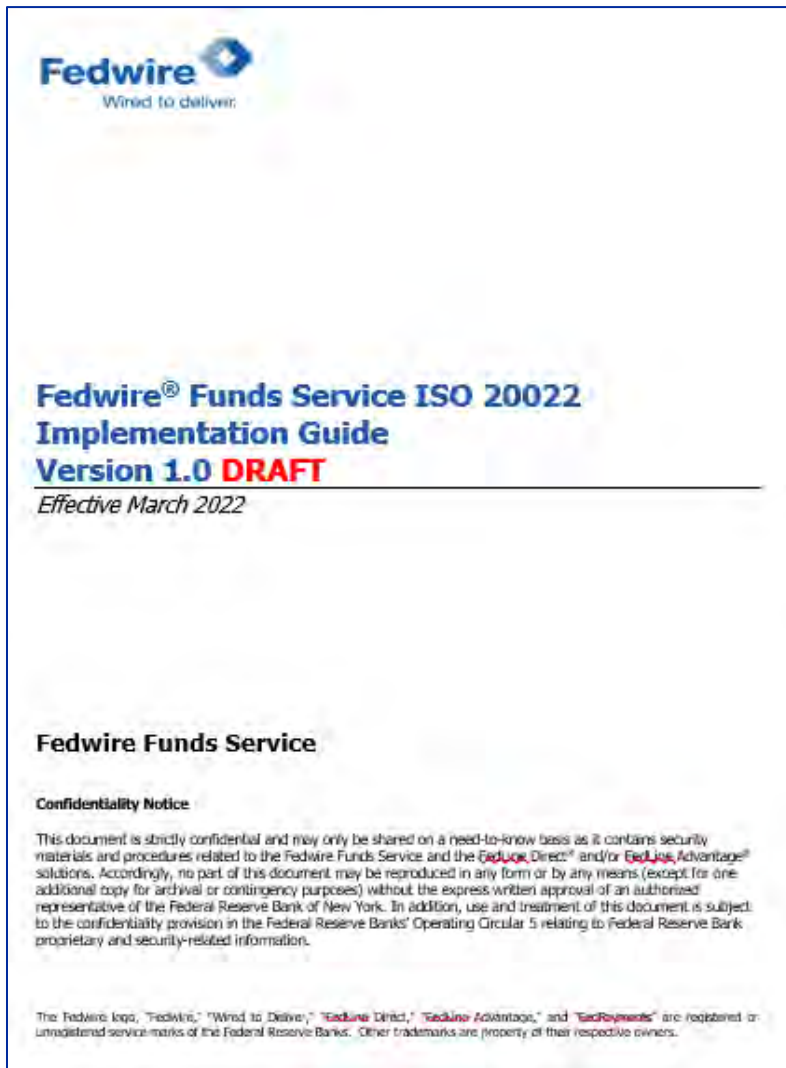
Distribution of Fedwire Funds Service Format Documents

	Historically	Now
Distribution method	“Push” – Federal Reserve Banks would send the Fedwire Application Interface Manual (FAIM) document to customers and service providers via secure email.	“Pull” – Federal Reserve Banks will publish format documents on MyStandards® website for customers and service providers to download.
Documentation type	The FAIM document was one PDF document.	<p>Phase 1:</p> <ul style="list-style-type: none"> Single FAIM document (PDF) <p>Phases 2 & 3:</p> <ul style="list-style-type: none"> Single Implementation Guide (PDF) Usage guideline for <u>each</u> ISO 20022 message (can be downloaded in PDF, Excel, or XML schema)

ISO 2022 Documentation

Phase	Documents	MyStandards Publication Status
Phase 1	<ul style="list-style-type: none"> ▪ Fedwire Application Interface Manual (FAIM) version 4.0.1 ▪ Phase 1 Scope of Changes 	Published FINAL documents March 2018
Phase 2 & Phase 3	<ul style="list-style-type: none"> ▪ 2 mapping documents ▪ 24 ISO 2022 usage guidelines, which explain the elements permitted in each ISO 2022 message and outline other requirements (e.g., allowable codes, field lengths, allowable characters). <ul style="list-style-type: none"> • Each phase has a total of 20 usage guidelines, 4 of which will have a different version between Phase 2 and Phase 3. ▪ Implementation Guide 	Published DRAFT documents March 2018 Comments due from industry June 15, 2018 Publish FINAL documents June 30, 2018

ISO 20022 Implementation Guide



1. ABOUT THIS DOCUMENT

Purpose, Target audience, Scope, Other resources, and Change history

2. FEDWIRE FUNDS SERVICE

Overview, System Design and Operations, Operating Hours and Cutoff Times, and Daily Cycle

3. ROADMAP FOR IMPLEMENTING ISO 20022 MESSAGES

Approach and Timeline, Scope, and Message Usage Guidelines

4. ISO 20022 CONCEPTS

Business Application Header, Character Sets, and Message Length

5. HOW THE FEDWIRE FUNDS SERVICE WILL USE ISO 20022 MESSAGES

A. END-TO-END MESSAGE FLOW

Credit Transfers, Drawdowns, and Free-formatted text messages

B. ACKNOWLEDGMENTS, ADVICES, AND REJECT NOTIFICATIONS

C. VALUE MESSAGES

Customer Credit Transfers (pacs.008), Bank Credit Transfers (pacs.009), and Payment Return (pacs.004)

D. NONVALUE MESSAGES

Drawdown Requests (pain.001), Return Requests, Payment Status Report (pacs.002), and Free-formatted Text Message (camt.035)

E. SYSTEM MESSAGES

Fedwire Funds Service Status Report (pacs.002), Message Reject (admi.002), Broadcast (admi.004), and Resend Requests (admi.006)

F. REPORTING MESSAGES

Account Reporting Request (camt.060), Account Balance Report – Master (camt.052), Account Balance Report – Self (camt.052), Endpoint Totals Report (camt.052), Endpoint Details Report (camt.052), Activity Report (camt.052), and Endpoint Gap Report (camt.052)

6. ANNEXES

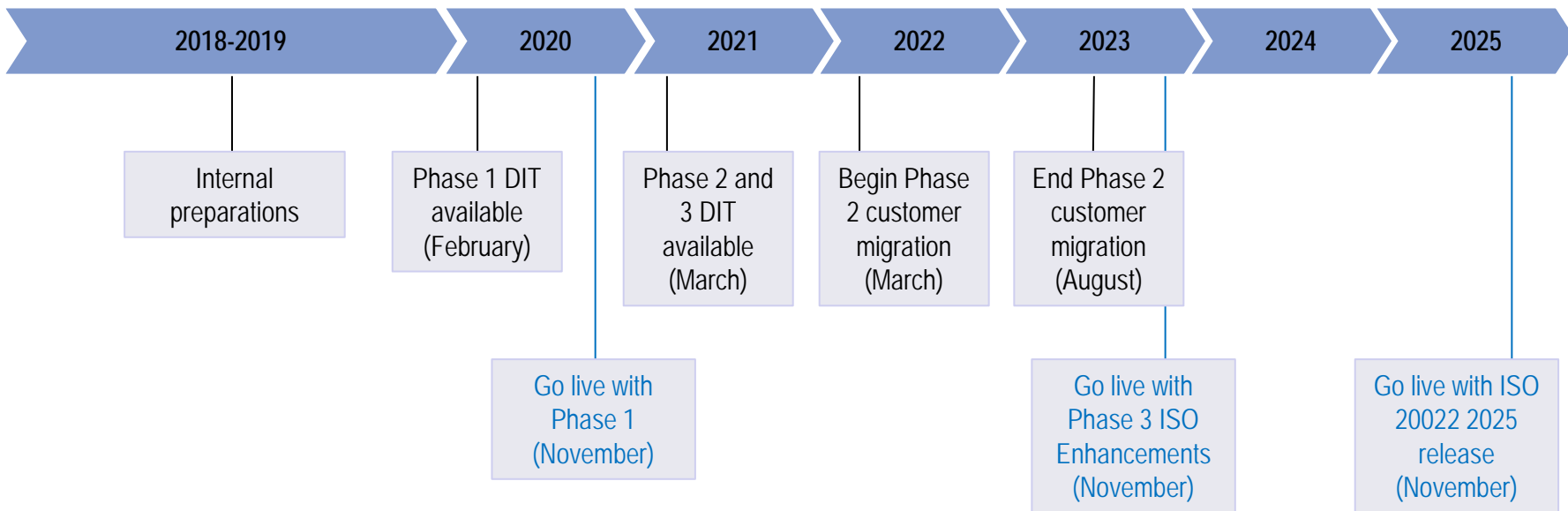
ISO 20022 business terms, How to Read a Message Usage Guideline, ISO 20022 data types, Fedwire Funds Service data types, and MyStandards onboarding procedures

Planned Schedule for Releases through 2025

ISO 20022 Release

2018	2019	2020	2021-2024	2025
Final usage guidelines in June 2018	Update usage guidelines with any changes	Update usage guidelines with any changes	No changes to usage guidelines; remain on 2020 release	Update usage guidelines with any changes

Fedwire Funds Service



Upcoming In-Person Workshops

Workshop Date & Location	Description	Target Audience
<p>Wednesday, May 2 Federal Reserve Bank of New York</p>	<ul style="list-style-type: none"> High-level overview of content covered in the prior webinars for Phases 1, 2, and 3 	<ul style="list-style-type: none"> Business analysts that will document the business/system process
<p>Wednesday, May 23 Federal Reserve Bank of Chicago</p>	<ul style="list-style-type: none"> Detailed walk-through of some Phase 2 & 3 ISO 20022 usage guidelines 	<ul style="list-style-type: none"> Technical staff that will make programming changes and conduct testing
<p>Tuesday, June 5 Federal Reserve Bank of San Francisco</p> <p>Note: All workshops are 9 a.m. to 5 p.m. local time.</p>		<ul style="list-style-type: none"> Product management staff to plan for testing and implementation

Registration Link:

<https://information.frbcommunications.org/ISO20022RSRegister>

Fedwire Funds Service

ISO 2022 Implementation Center

- [Available at https://www.frbservices.org/resources/financial-services/wires/iso-2022-implementation-center.html](https://www.frbservices.org/resources/financial-services/wires/iso-2022-implementation-center.html)

- Includes access to:
 - ISO 2022 educational opportunities
 - Educational event summaries and recordings
 - Software vendors that offer products that interface with the Fedwire Funds Service
 - ISO 2022 implementation frequently asked questions
 - MyStandards onboarding procedures webinar

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