

mojaloop

Current progress with Mojaloop and ISO 20022

PI18 Convening: 26th April 2022

mojaloop



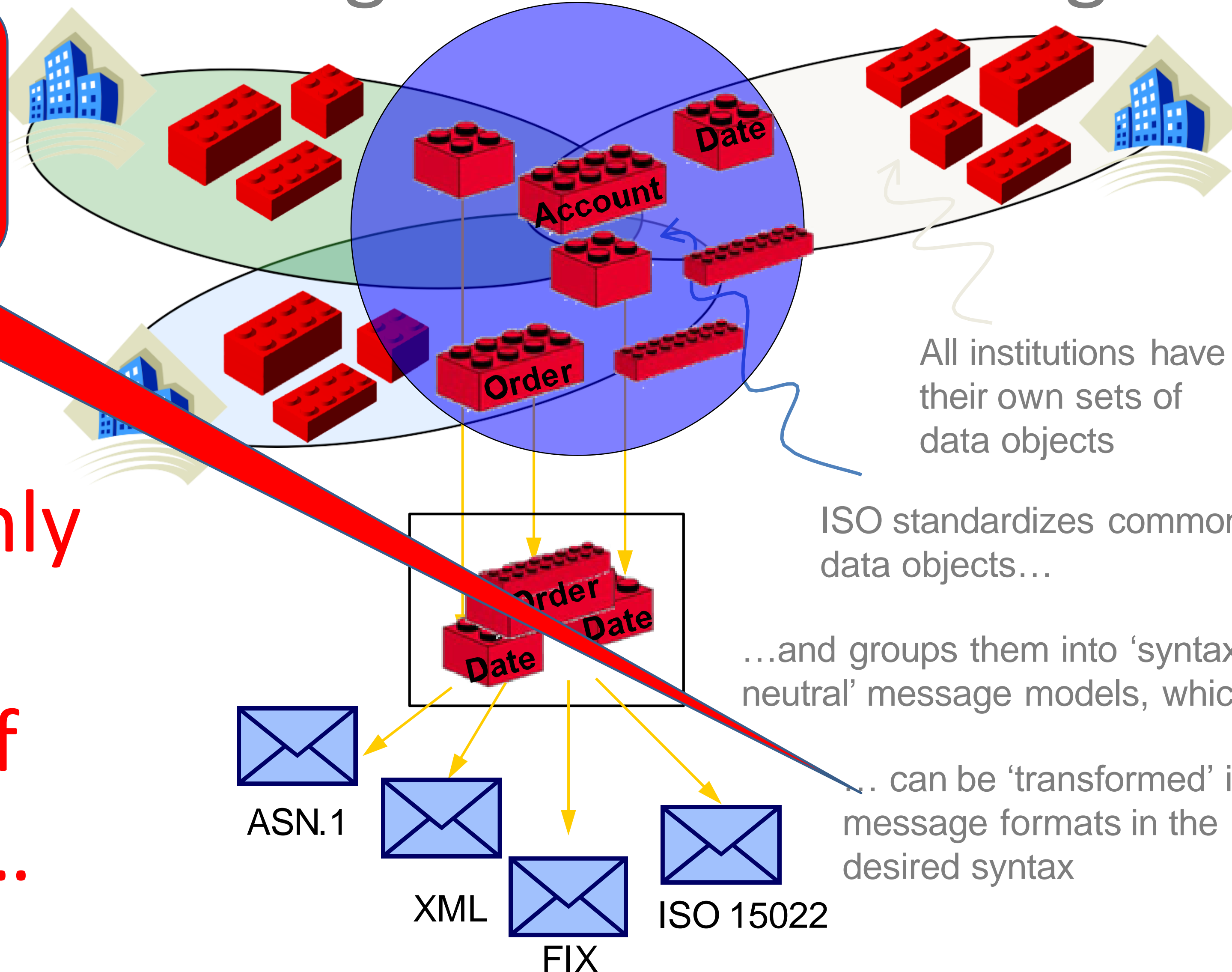
Background

What is ISO 20022?

- The objective of ISO 20022:
 - “To enable communication interoperability between financial institutions, their market infrastructures and their end-user communities.”
 - ... and to offer a “single standardisation approach (methodology, process, repository) to be used by all financial standards initiatives.”

Illustrating business modelling

Note that in this context, “syntax” means the structure of a message, and not the ways in which messages can be articulated with each other



... which only leaves the question of semantics...

An example: accounts and identifiers

- ISO 20022 thinks in terms of *accounts*
 - A standardised representation
 - ... as it appears to the account-holding institution
 - ... in a world where private information can be exchanged freely
 - ... between institutions which are very similar to each other
- Mojaloop thinks in terms of *identifiers*
 - A polymorphic representation
 - ... as it appears to a customer
 - ... in a world where privacy is expensive
 - ... and institutions may be very different from each other

The fundamental difference:

- ISO 20022 data modelling assumes that institutions will interact with images of themselves.
- Mojaloop wants to provide services which alleviate the burdens of interacting with very different types of institution.



Progress to date

Mojaloop's ISO journey (1)

- Mojaloop has been accepted as an active member of the ISO 20022 community.
- We have undertaken an initial analysis of the current ISO 20022 message catalogue in the context of Mojaloop's requirements
- The results:
 - Some message types are missing entirely.
 - Other message types are superficially appropriate, but have a very different semantic context, which rules them out for our purposes.
 - Other message types provide part of the functionality which Mojaloop requires in a particular area, but are deficient overall.
 - Finally, there are message types where we would like to align, but which present semantic problems.

Mojaloop's ISO Journey (2)

- We decided to propose a set of messages which were closely aligned with the existing FSPIOP API (and its family):
 - Address resolution
 - Payment execution
 - Bulk payment execution
 - Currency conversion
 - Support for third party payment initiations
- We submitted this as a Business Justification at the end of PI17.
- We gave presentations and answered questions on our proposal to the Payments SEG and the RMG.

Excursus on terminology

- An ISO 20022 Business Justification
 - Provides the business context for a proposed change.
 - Does not (or should not) define how the requirements will eventually be met in terms of messages.
 - Typically covers a relatively restricted business area.
- If accepted, it is followed by an Evaluation Period
 - Business area SMEs and ISO 20022 SMEs make the detailed decisions on how to implement the changes.
 - They make a proposal (or a set of proposals) for the implementation plan
- The results of the evaluation are reviewed and (hopefully) approved by the appropriate Standards Evaluation Group(s) and by the Registration Management Group.
- The messages can then be implemented and tested.
- None of this process affects questions like:
 - Whether XML or JSON (or some other kind of) messages will be used.
 - How individual markets or schemes will implement the message sets. This is defined by a Market Practice Document.

Market practice document

- A self-published document
- Describes how to execute use cases in an ISO 20022 Mojaloop
 - Which messages to use
 - Which fields to use/not to use
 - ...and what it means to use them
 - Needs to be *complete*
- Eventually, the situation will be like that of scheme rules
 - There will be a template Mojaloop Market Practice Document.
 - This will give an exhaustive statement of usage.
 - It will give indications of the decisions schemes will be able to take...
 - ... and advice on how to implement those decisions.
 - Individual schemes will use it as a template for a document which reflects their own requirements and practice.

Mojaloop's ISO Journey (3)

- We received a list of comments on the initial draft of the Business Justification.
- Reviewers included:
 - Central banks.
 - Large commercial banks.
 - A card company.
- The comments may be divided into the following categories:
 - Some reviewers were concerned that there might be difficulties in obtaining the expertise to conduct a proper evaluation of the proposal
 - Some reviewers were concerned that new messages were being proposed when existing messages could be used, or extended.
 - Some reviewers were concerned that the existing message catalogue had not been sufficiently canvassed for potential candidates.

The question of evaluation

- Business justifications are evaluated by the RMG and the appropriate Standards Evaluation Groups (SEG).
 - ... which delegates the task to a group of SMEs.
- We had assumed that the relevant SEG for our proposal would be the Payments SEG.
- But the RMG raised three questions:
 - Does the Payments SEG have the right expertise for this evaluation?
 - Are there other SEGs which should be involved?
 - How is the ISO organisation to manage innovation in messages?

A more general ISO 20022 problem

- The existing ISO 20022 message set is based around:
 - A subset of the financial institutions of the world
 - The definition of messages to represent:
 1. The procedures that they already use.
 2. (Slowly) evolving extensions based on (a subset of) interoperability requirements.
- The existing ISO 20022 organisation represents:
 - Institutions with a direct financial interest in solving *just those* problems.
- The RMG is clear that our requirement represents a new set of requirements.
 - Though we may still, of course, need to improve our statement of exactly what those requirements are

The question of expertise

- Although the Payments SEG seems like the natural home for our proposal, there are other possible interested SMEs.
 - Our revised proposal will be circulated to other SEGs who may be interested.
- Our assertion is that this is a set of requirements which is:
 - Real
 - Not properly covered by the existing message set
- ... and therefore it is likely *a priori* that the groups which discussed and approved the existing message set(s) will lack the expertise properly to evaluate our proposal
- If there isn't sufficient expertise to evaluate our proposal in the existing ISO 20022 organisation, where is it to come from?

Evaluation: next steps

- Let's ask: what would a group which is well placed to evaluate current and future message standards proposals in our payments space look like?
- How different should that group be from the Mojaloop Foundation?
 - This is not a rhetorical question...
- If it should be different:
 - What should it look like?
 - Who might belong to it?
 - How different would it be from an ISO 20022 SEG for our payments space?

An ask

- If there is anyone in this audience who would be interested in taking part in the evaluation process for this business area (which we're currently defining as "Instant Payments for Financial Inclusion"), then please get in touch with me (Michael.Richards@ModusBox.com)
- If you want a copy of the Business Justification, then let me know.

Response from the RMG (and others)

- This can all be done with existing messages
 - This is a general judgement without specific examples
 - Which might, of course, simply mean that we have been insufficiently clear in our expression of our requirements.

Nothing new under the sun

- This is the same as the thought process we originally went through.
- We believe that it will issue in the same set of problems:
 - Identifiers vs. identities.
 - Two-phase transfers.
- But it's important to work through this process with the ISO community.
- We'll be working in detail through mapping Mojaloop requirements onto an existing ISO 20022 message to highlight similarities and differences.
- ... and there is a real problem relating to interactions between institutions which use current ISO and institutions using an IPFI version of ISO

ISO interactions: our ideal

- There are two issues to consider here:
 - A message set for an individual Mojaloop scheme which uses ISO 20022 messages.
 - Using ISO 20022 messages as a medium for executing payments between participants in Mojaloop schemes and other institutions.
- I should be able to use an ISO 20022 message set to transfer funds from my bank in Los Angeles to my aunt in Mbuye, Rwanda.
- My bank shouldn't need to know what kind of institution holds my aunt's account (actually, it's MTN)
- ... or that it will be communicating with MTN via a Mojaloop scheme.

Obviously, this leaves out of account:

- Address resolution
- Settlement
- Routing

It's solely a question of request content

The core difference

- Existing ISO 20022 payment messages are *isolated* from each other
 - Additional stages are added by expanding the content of the message
- Mojaloop messages are *connected* with each other
 - It's one of our principles that each message should contain all the information the recipient needs to act on it...
 - ... but our messages contain references to related messages from other parties (for instance, quote and transfer)...
 - ... and we require those messages to follow a sequence
- ISO messages are a *monologue*; Mojaloop messages are a *dialogue*.

ISO interactions: our ideal

- I should be able to use an ISO 20022 message set to transfer funds from my bank in Los Angeles to my aunt in Mbuye, Rwanda.
- My bank shouldn't need to know what kind of institution holds my aunt's account (actually, it's MTN)
- ... or that it will be communicating with MTN via a Mojaloop scheme.
- But it *does* need to know how to participate in a Mojaloop dialogue.
- So we're not trying to make my bank immediately capable of interacting with a Mojaloop system.
- We're trying to make it *as easy as possible* for my bank to interact with a Mojaloop system...
- And that means: as far as possible, extend the Mojaloop level playing field.



Using existing messages

How ISO 20022 supports message modification

What sort of changes could we make?

- Changes to the data model
- Using the Supplementary Data structure
- The Market Practice Document

Changes to the data model

- Require RMG approval
- Are implemented in the main message catalogue
- Are available for use by all ISO 20022 users
- Can be distinguished by versioning

The Supplementary Data Structure

- A component of all ISO 20022 messages.
- Can be used to define any type of extension to any part of the message.
- Cannot be used to modify existing data components (e.g. identifier lengths)
- Requires ISO 20022 approval
- Is not part of the ISO 20022 message catalogue
- Is only available to institutions who want that particular flavour of ISO 20022

The Market Practice Document

- Does not require external approval.
- Does not support extensions to, or modifications of, the data definitions published by ISO 20022.



Next steps

In the mean time...

- We have re-submitted our Business Justification.
- We have done some work to show how Mojaloop has already solved problems which institutions in developed economies will also have to solve in the near future:
 - Greater transparency around costs and fees.
 - Reductions in average transaction size which will squeeze the cost of remediating failed transfers.
 - Opening financial networks to other types of participant.
- We are reaching out to other potentially interested parties to talk about what a IPFI standards evaluation group might look like.
- We will evaluate what a Mojaloop message based on an existing ISO message might look like.

But still...

- It's possible that we may not be able to obtain the message definitions that we want...
- If we can't, what should we do?
 - Split the Business Justification into different areas (RMG suggestion)
 - Adapt existing messages and create new ones where there clearly aren't any at the moment?
 - Adapt existing messages and keep the FSPIOP ones where there clearly aren't any at the moment?
 - Just stick to FSPIOP?
 - Apply to the Chinese repository?
 - Use a CNP to interact with ISO 20022 networks?



Discussion and questions

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