ISO 20022

Introduction to ISO 20022 – Universal financial industry message scheme

Agenda

- ISO 20022:
  - The value proposition
  - The standard
  - The actors
  - The registration process
  - The repository
- ISO 20022 registration platform
- Interoperability within the financial industry

Intro to ISO 20022

The ISO 20022 value proposition (1/5)

Objective

To enable communication interoperability between financial institutions , their market infrastructures and their end-user communities

Major obstacle

Numerous overlapping standardization initiatives looking at XML financial messages:

MDDL, FIX, FinXML, VRXML, RIXML, XBRL, FpML, IFX, TWIST,

RosettaNet, OAGi, ACORD, etc.

The ISO 20022 value proposition (2/5)

Proposed solution

A single standardisation approach (methodology, process, repository) to be used by all financial standards initiatives

ISO 20022

The ISO 20022 value proposition (3/5)

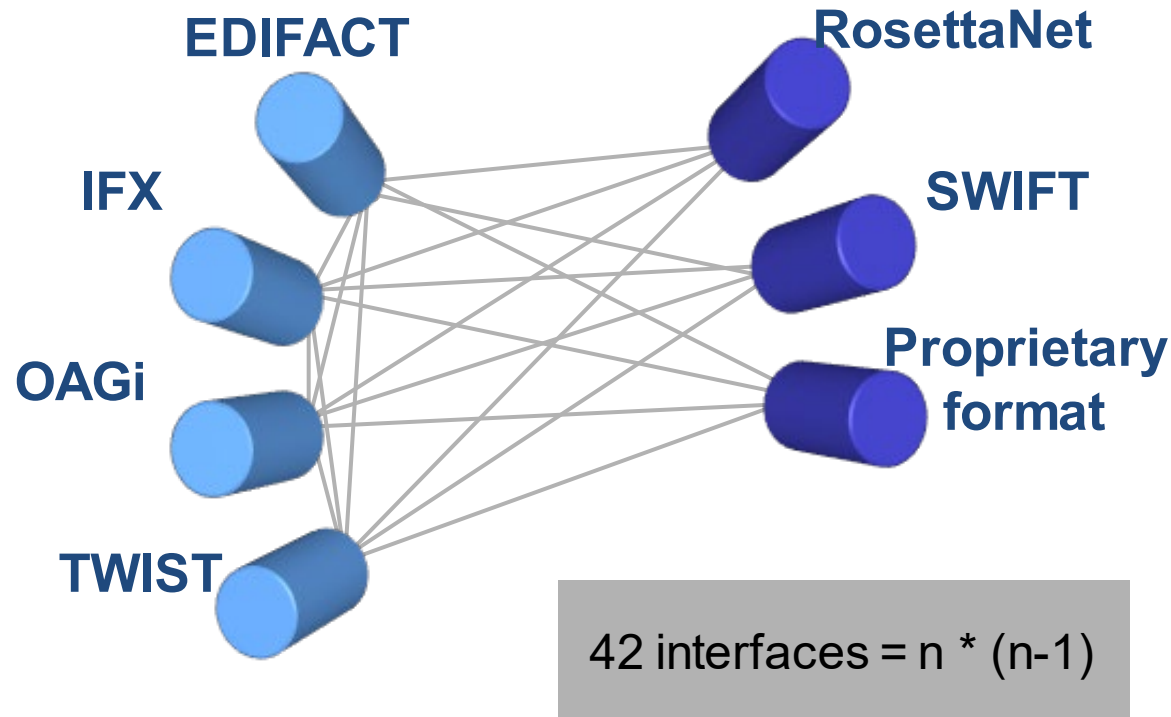**Convergence** into ONE standard is the long term objective…

… but in the interim several standards need to **coexist** to enable quick response to competitive pressures and regulatory demands

The ISO 20022 value proposition (4/5)

Growth adds exponential complexity and expense…

EDIFACT

IFX

OAGi

TWIST

RosettaNet

SWIFT

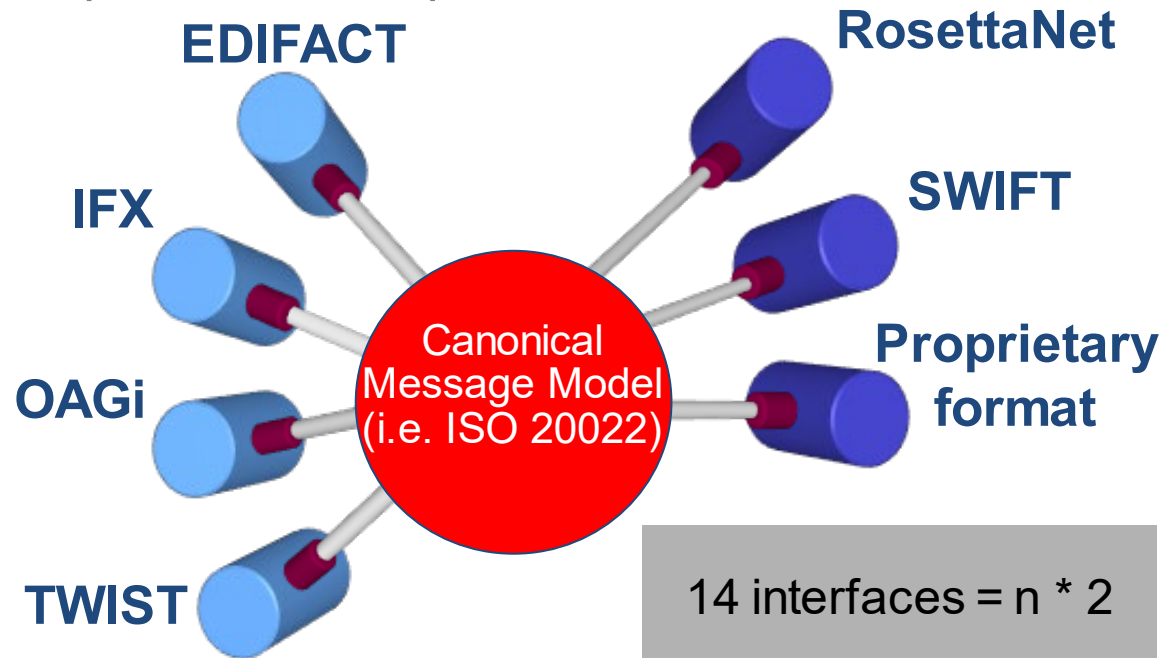**Proprietary format**

42 interfaces = n * (n-1)

Without common building blocks:
- Point-to-point connection
- Data is mapped directly from one application to another
- Costly, unsalable and difficult to implement and maintain
- Process, routing, rules logic needs to be coded to specific message types

Source: John Mersberg, IBM Corporation

The ISO 20022 value proposition (5/5)

Standardized implementation reduces cost, time to effect change and improves overall performance…

EDIFACT

RosettaNet

IFX

SWIFT

Canonical Message Model (i.e. ISO 20022)

OAGi

Proprietary format

TWIST

14 interfaces = n * 2

Canonical message model =
- True process integration
- Reduced brittleness, faster to respond to change
- Shared message services – single/shared parser, message independent rules engine, etc.
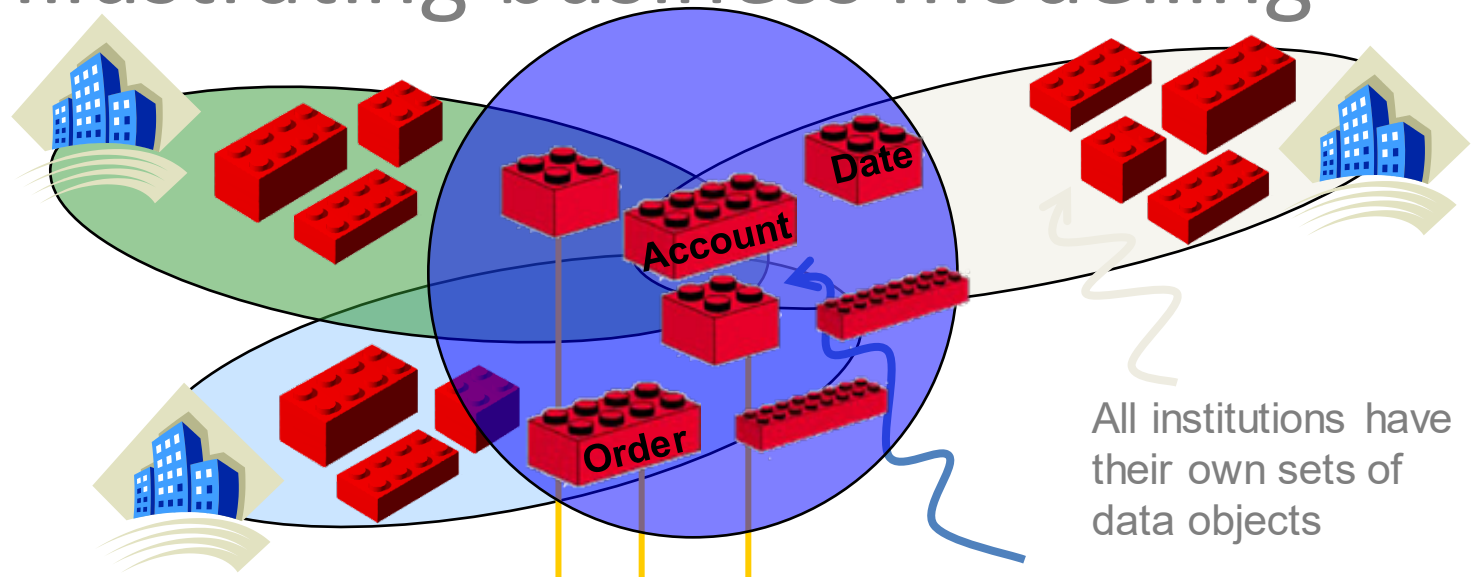- Unified monitoring / audit trail

ISO aims at long term convergence, while facilitating short term coexistence…

ISO 20022
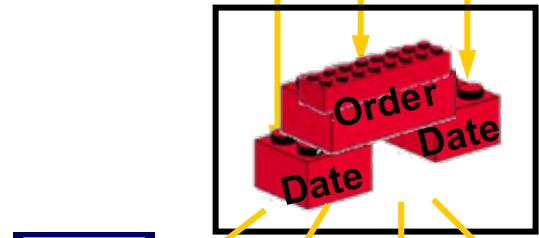# Illustrating business modelling
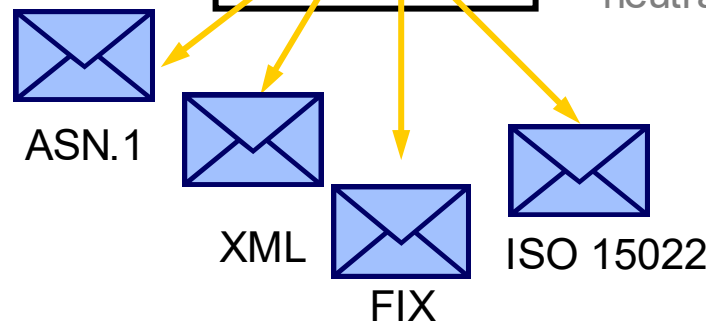
All institutions have their own sets of data objects

ISO standardizes common data objects…

…and groups them into 'syntax-neutral' message models, which...

… can be 'transformed' in message formats in the desired syntax

ASN.1

XML

FIX

ISO 15022

The ISO 20022 recipe
Main ingredients (1/2)

- Modelling-based standards development
  - Syntax-independent business standard
  - Validated by the industry

- Syntax-specific design rules for XML and ASN.1
  - Predictable and 'automatable'
  - Protect standard from technology evolution

- Reverse engineering approach
  - Protect industry investment and ease interoperability
  - Prepare for future migration

The ISO 20022 recipe
Main ingredients (2/2)

- Development / registration process
    - Clearly identified activities and roles
    - Business experts and future users involved upfront
    - Technical experts involved when required
- Repository on the ISO 20022 website
    - Business Process Catalogue & Data Dictionary
    - Outside of official standard (maintained by registration bodies)

www.iso20022.org

The eight parts of ISO 20022

Part 1: Metamodel

Part 2: UML profile

Part 3: Modelling

Part 4: XML schema generation

Part 5: Reverse engineering

Part 6: Message transport characteristics

Part 7: Registration

Part 8: ASN.1 generation

Copies can be obtained from www.iso.org

ISO 20022: The actors (1/2)

- Registration Management Group, RMG
  - Approve business justifications for new message standards
  - Approve new member entities
  - Create Standard Evaluation Groups (SEGs)
- Standards Evaluation Groups, SEGs
  - Represent users in specific financial areas
  - Validate new candidate messages and change requests
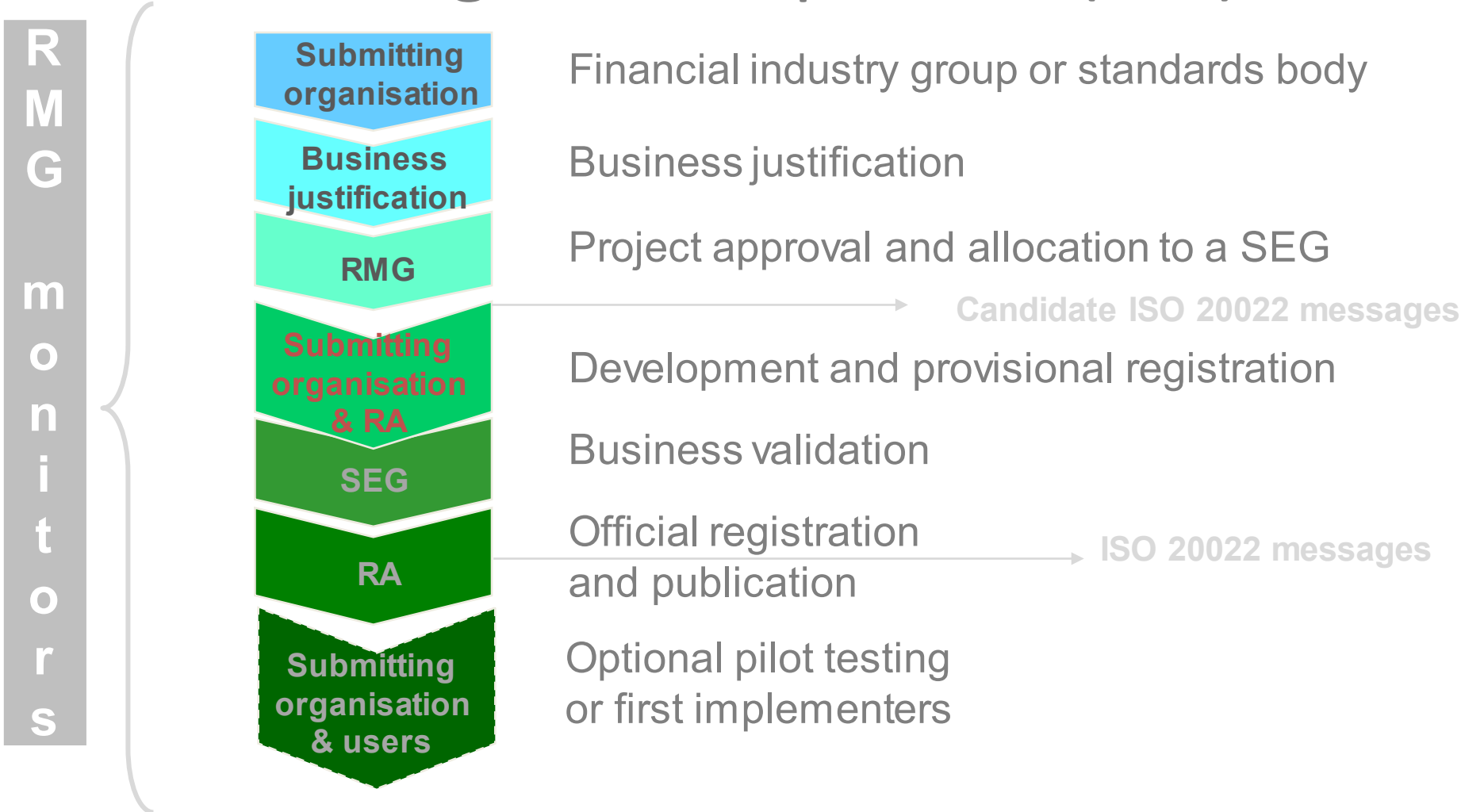
ISO 20022: The actors (2/2)

- Registration Authority, RA
  - Ensure compliance
  - Maintain and publish ISO 20022 Repository
- Technical Support Group, TSG
  - Assist RMG, SEGs, RA and submitting organisations

ISO 20022
The registration process (1/2)

R M G   m o n i t o r s

Step	Description
Submitting organisation	Financial industry group or standards body
Business justification	Business justification
RMG	Project approval and allocation to a SEG
Submitting organisation & RA	Development and provisional registration
SEG	Business validation
RA	Official registration and publication
Submitting organisation & users	Optional pilot testing or first implementers

Candidate ISO 20022 messages

ISO 20022 messages

ISO 20022 registration process (2/2)
Yearly maintenance process

Timing

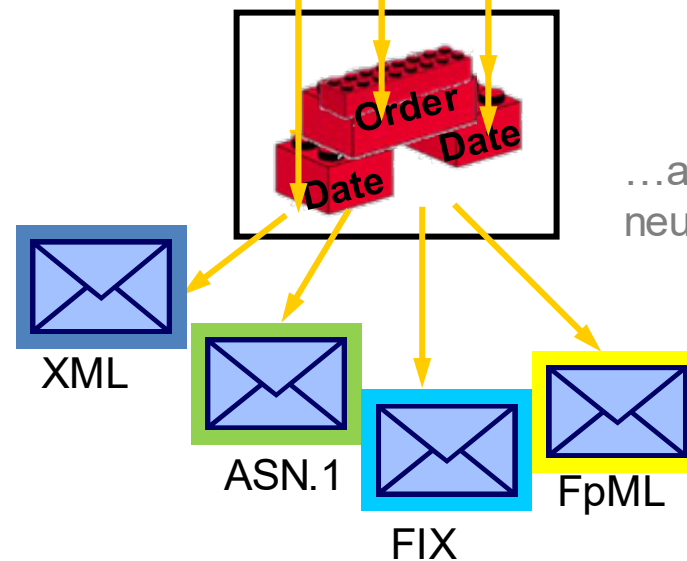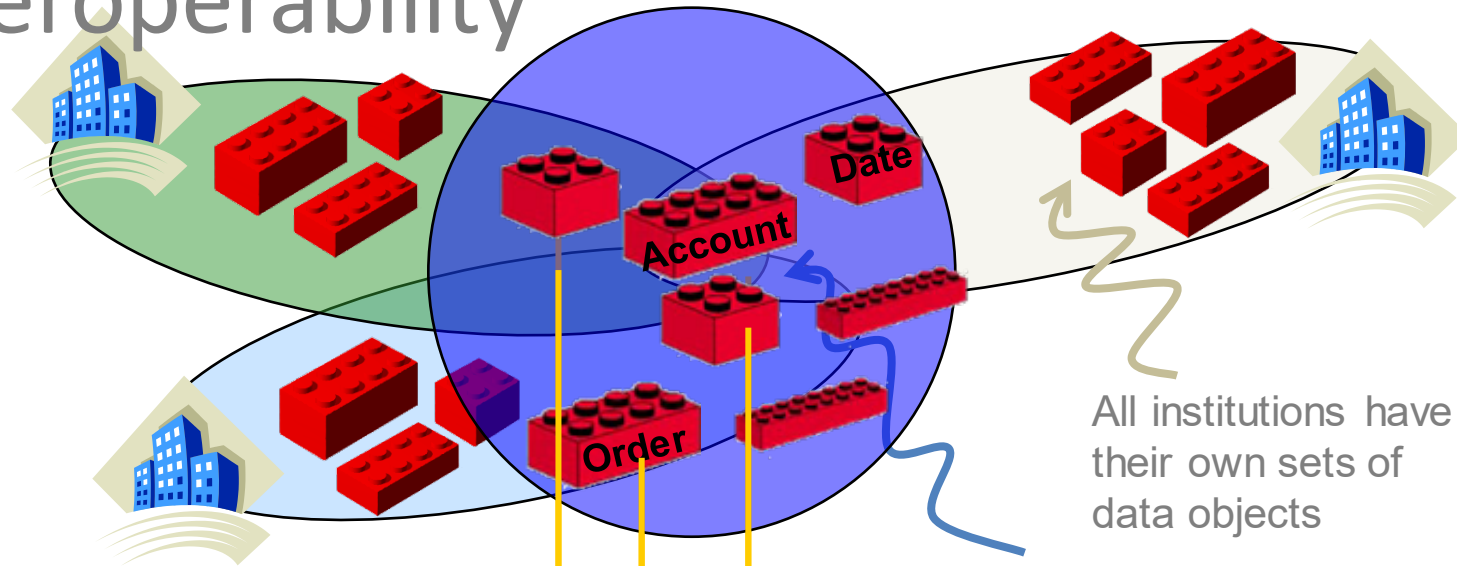|		
By June 1	Users CRs	Users introduce Change Requests to the RA
By July 7	SEG	SEG screens Change Requests (CRs)
By August 21	Submitting organisation	Submitting organisation prepares 'Maintenance Change Request' with each CR implementation
By October 1	SEG	SEG approval/rejection
By December 1	Submitting organisation & RA	Development of candidate new versions Provisional publication
By February 1	SEG	Validation of new versions
By February - May	RA	Registration and publication
	Submitting organisation & users	First implementers

Intro to ISO 20022
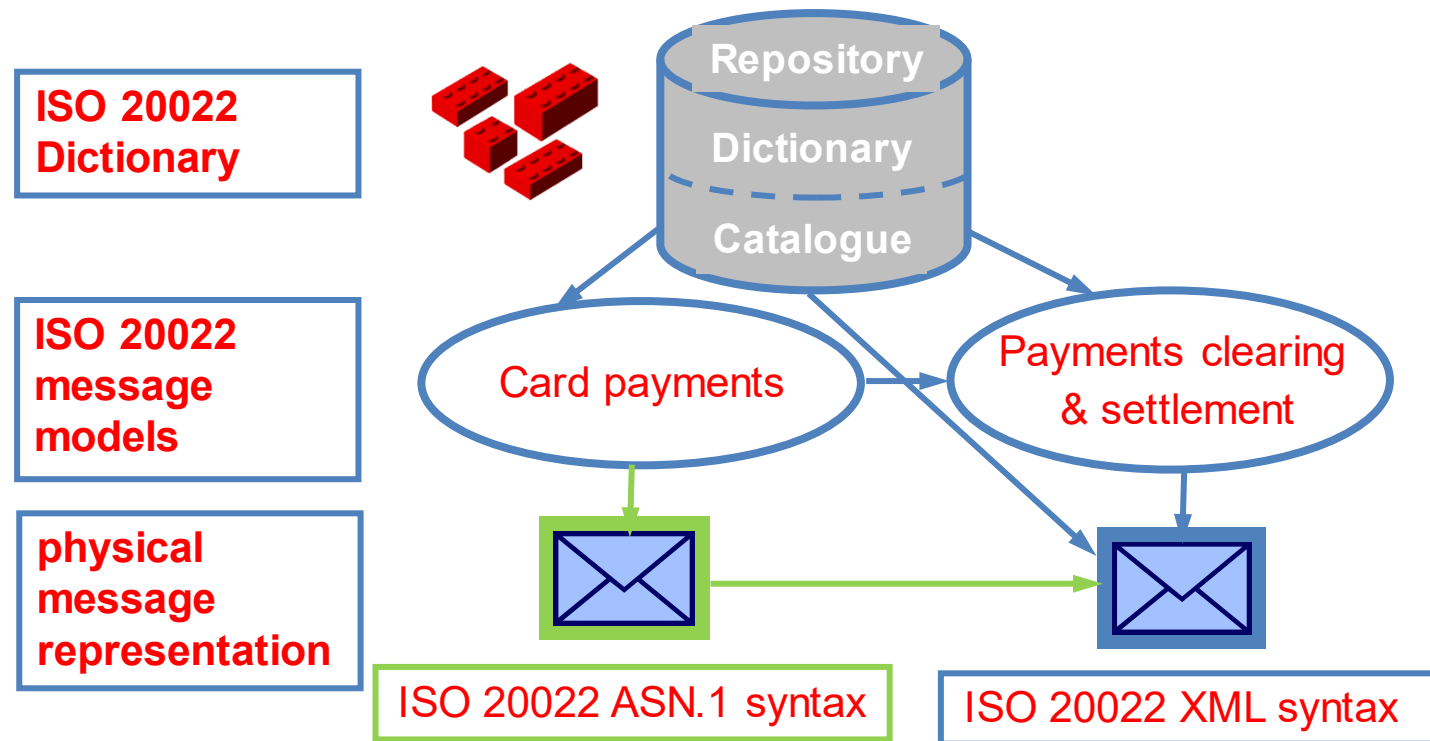
ISO 20022 - The Financial Repository

- **Data Dictionary**
  - Business Concepts
  - Message Concepts
  - Data Types
- **Business Process Catalogue**
  - Financial business process models
  - Financial business transactions, including messages
  - XML or ASN.1 message schemas

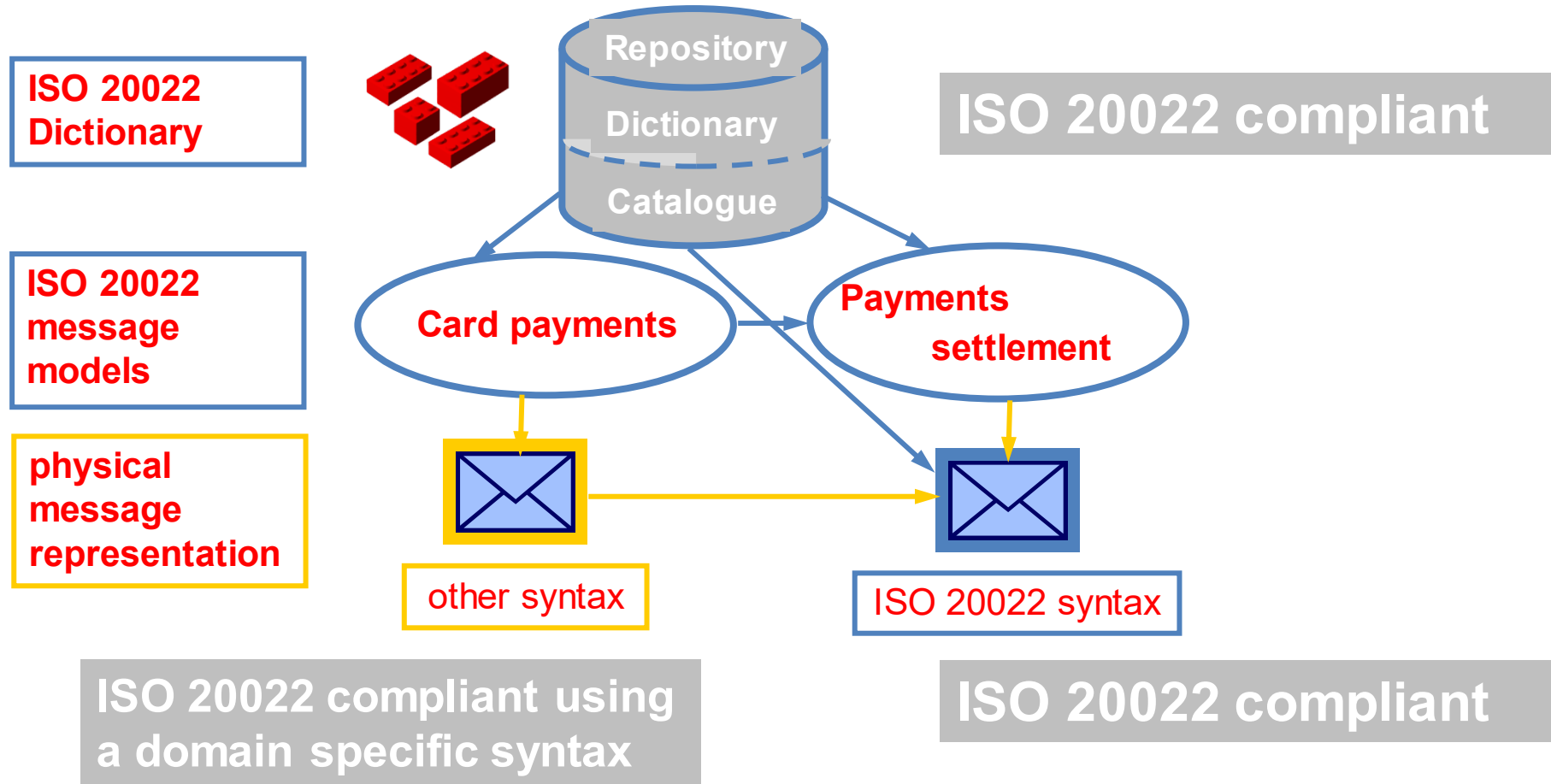# Using ISO 20022 modelling to reach interoperability

All institutions have their own sets of data objects

ISO standardizes common data objects…

…and groups them into 'syntax-neutral' message models, which...

… can be 'transformed' in message formats in the desired syntax

XML

ASN.1

FIX

FpML

ISO 20022 compliance at model level

ISO 20022 Dictionary

ISO 20022 message models

physical message representation

Repository

Dictionary

Catalogue

Card payments

Payments clearing & settlement

ISO 20022 ASN.1 syntax

ISO 20022 XML syntax

ISO 20022 compliance at model level

ISO 20022 Dictionary

ISO 20022 message models

physical message representation

Repository

Dictionary

Catalogue

ISO 20022 compliant

Card payments

Payments settlement

other syntax

ISO 20022 syntax

ISO 20022 compliant using a domain specific syntax

ISO 20022 compliant

Interoperability in the customer-to-bank payment domain

Customer A

IFX format → Bank A

Proprietary format → Bank B

SWIFT MT 101 → Bank C

Let us look at a concrete example from payments area:
a customer may need to adapt to the format of the banks…

# Interoperability in the customer-to-bank payment domain

Customer A

IFX format

Proprietary format

Bank A

Customer B

SWIFT
MT 101
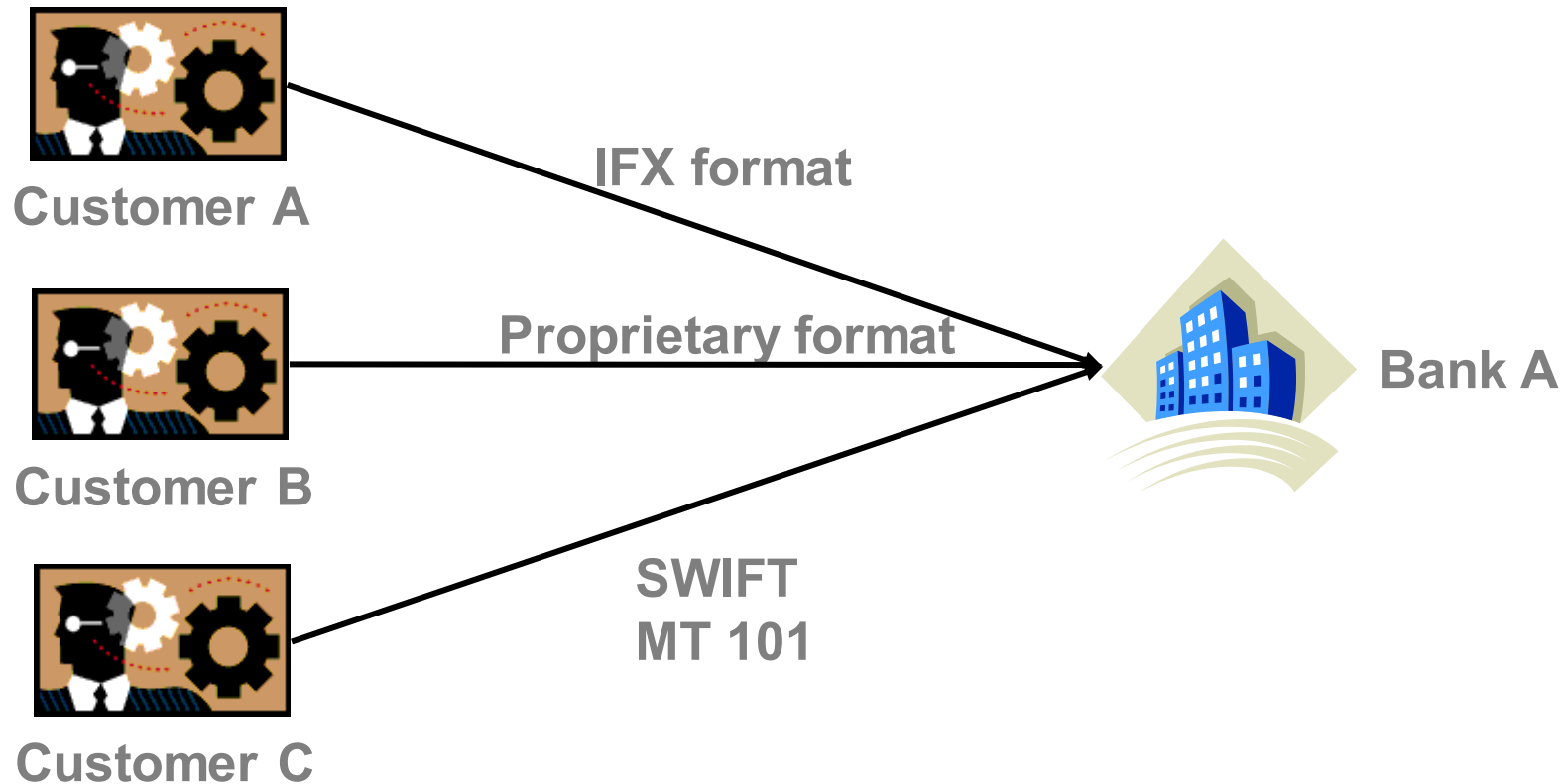
Customer C

…or banks may need to accept many formats…

Intro to ISO 20022

Interoperability in the customer-to-bank payment domain
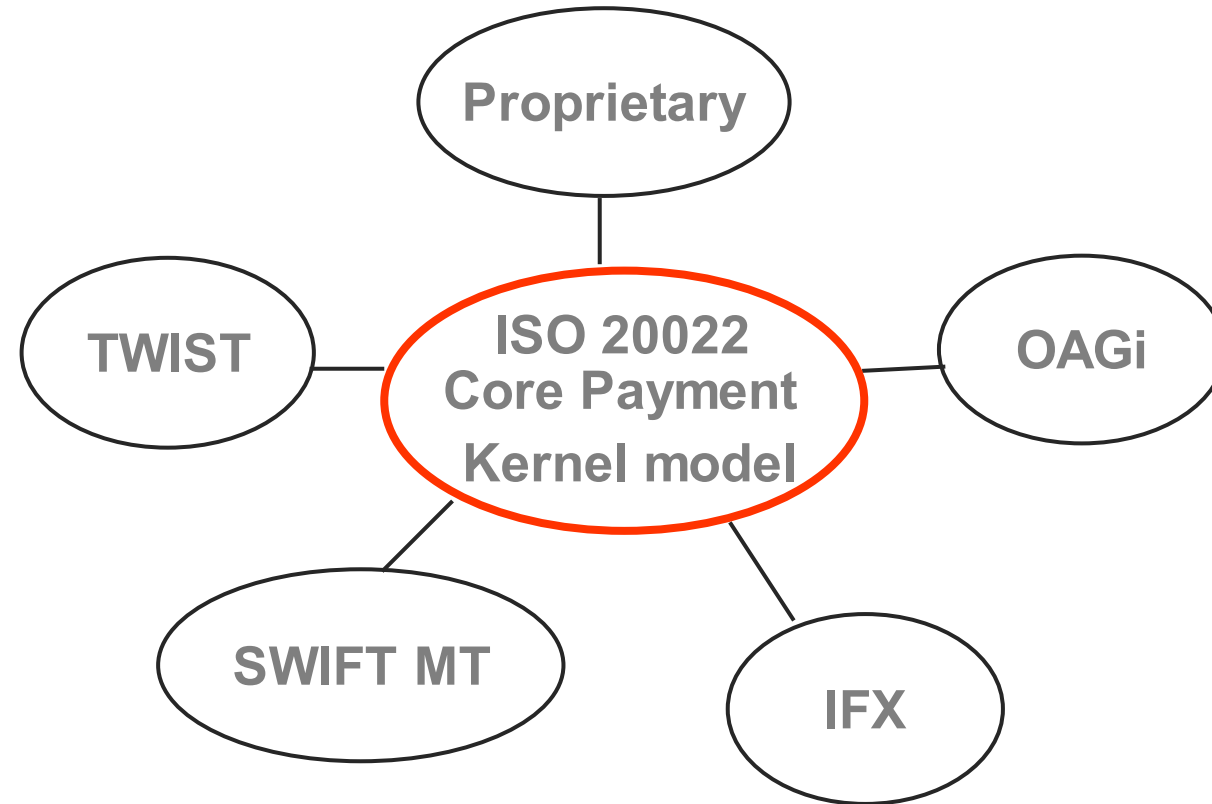
The reverse engineering produces a canonical ISO 20022 message model

Interoperability in the customer-to-bank payment domain
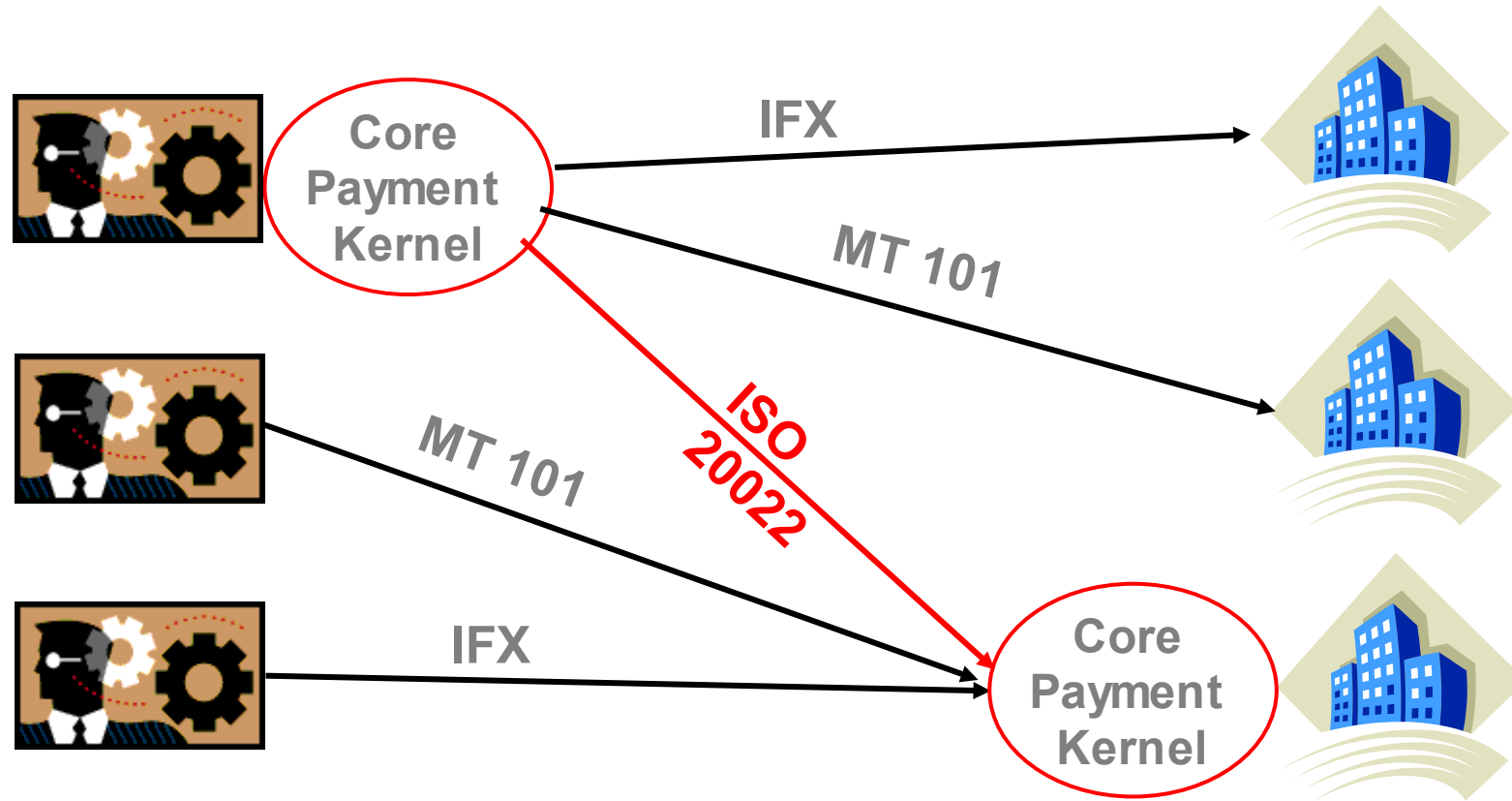
Adopting ISO 20022 facilitates convergence and co-existence

Additional information available from
www.iso20022.org