



Introduction to ISO 20022 – Universal financial industry message scheme

Agenda



- ISO 20022:
 - Value proposition
 - The standard
 - The actors
 - The registration process
 - The Repository
- ISO 20022 registration platform
- Cross industry harmonization
- Interoperability within the financial industry
- Q&A

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...

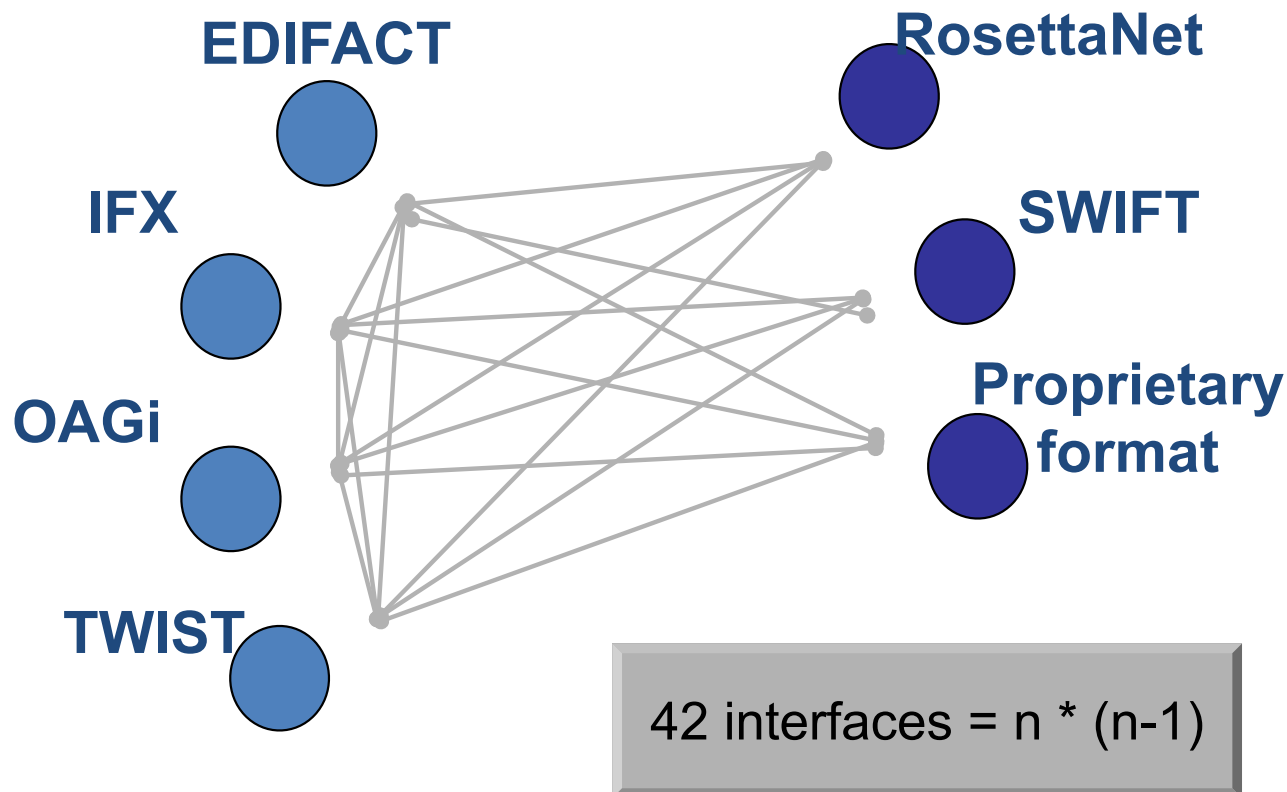


... but in the interim several standards need to **coexist** to enable quick response to competitive pressures and regulatory demands

The ISO 20022 value proposition (4/5)



Growth adds exponential complexity and expense...



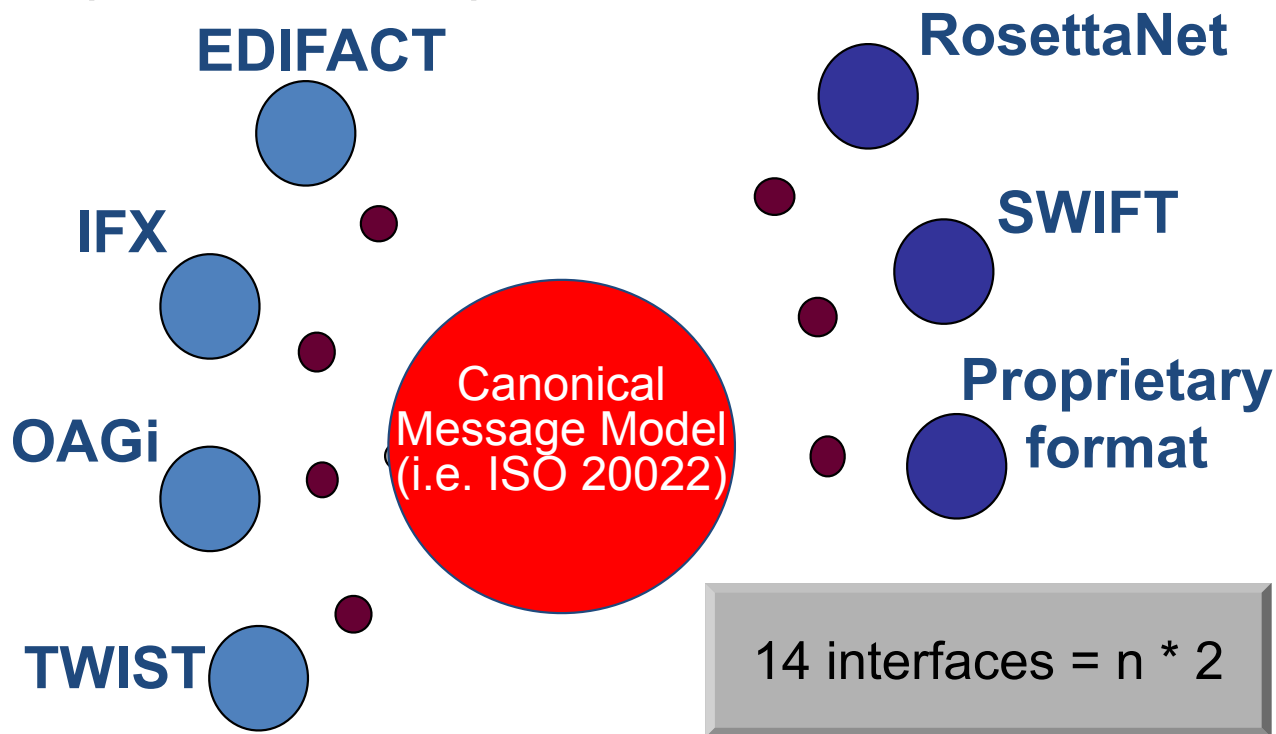
Without common building blocks:

- 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

The ISO 20022 value proposition (5/5)



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



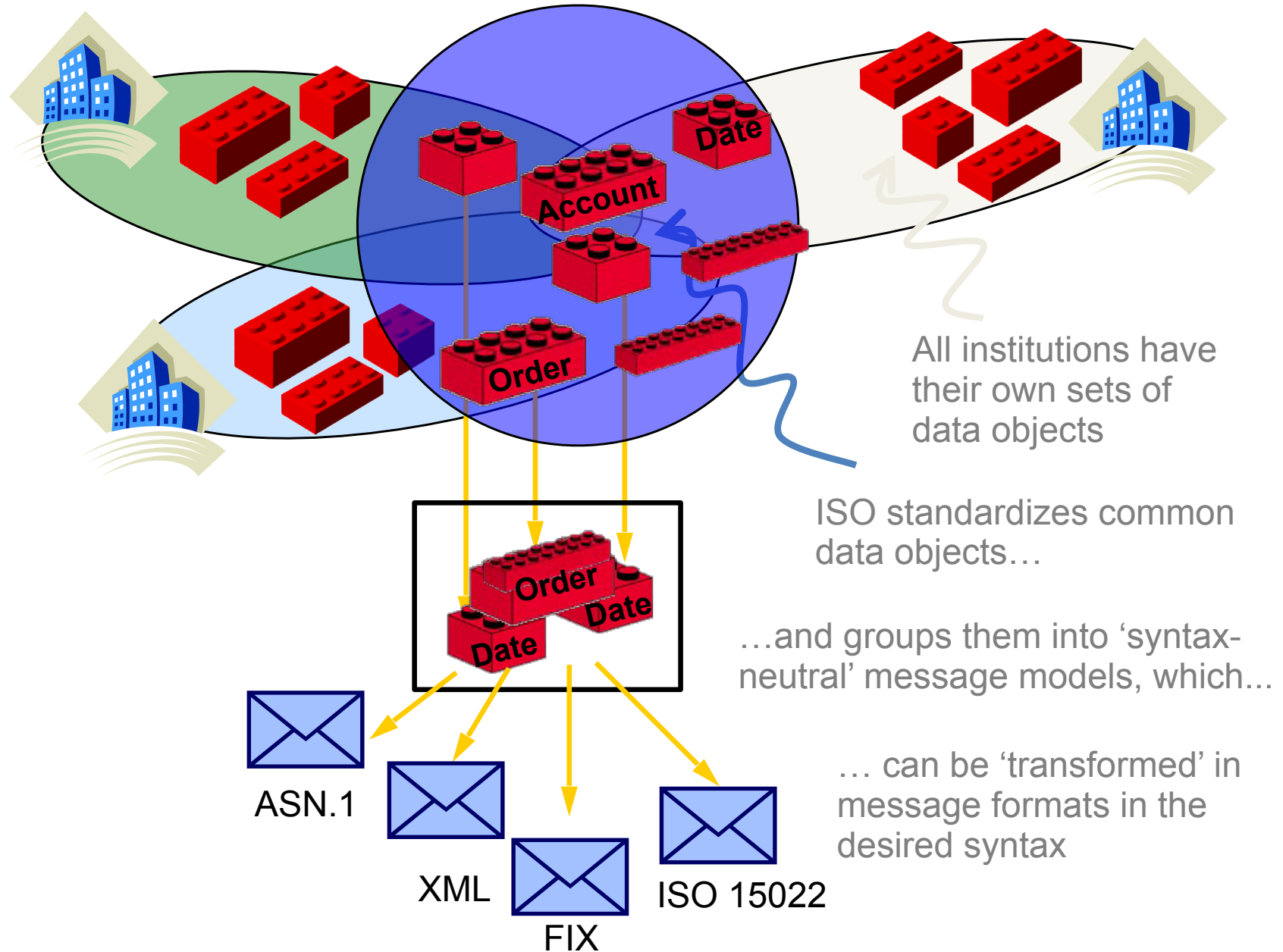
Canonical message model =

- 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



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)

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 (1/3)



Submitting organizations

Communities of users or organizations that want to develop ISO 20022 compliant messages to support their financial transactions
Could be

ANBIMA	Deutsche Bundesbank	Omgeo
ASF	DTCC	Payments UK
ASX	Early Warning Services	PBOC
Banco de España	EPC	RU-CMPG
Bank of England	ESMA	SABS
Banque de France	Euroclear	SMPG
Banca d'Italia	European Central Bank	SPRING
Berlin Group	FED	SWIFT
BIAN	FFI	Target
CBI Consortium	FISD	TC68/SC7/TG1
CFETS	FPL	Tieto Corporation
CFTC	FpML	TWIST
China UnionPay	IFX Forum	T2S
Clearstream	ISITC	UN/CEFACT
CLS	nexo A.I.S.B.L.	etc.
Danish Bankers Association	OAGi	

ISO 20022: The actors (2/3)

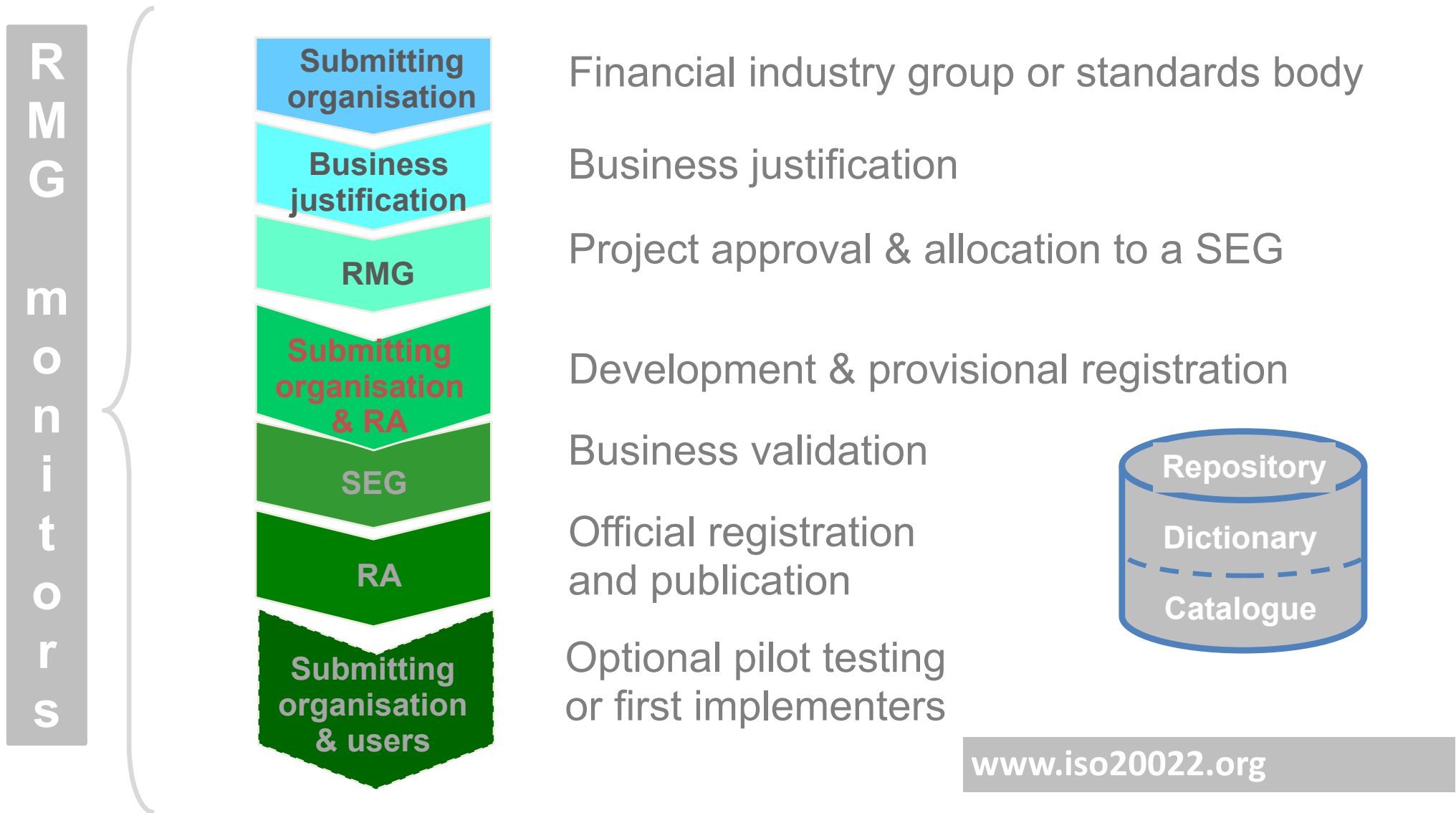
- Registration Management Group, RMG
 - Overall governance, court of appeal
 - Approve business justifications for new message standards
 - Approve new member entities
 - Create Standard Evaluation Groups (SEGs) and SubSEGs
- Standards Evaluation Groups, SEGs and SubSEGs
 - Represent future users in specific financial areas
 - Validate new candidate messages and change requests

ISO 20022: The actors (3/3)

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

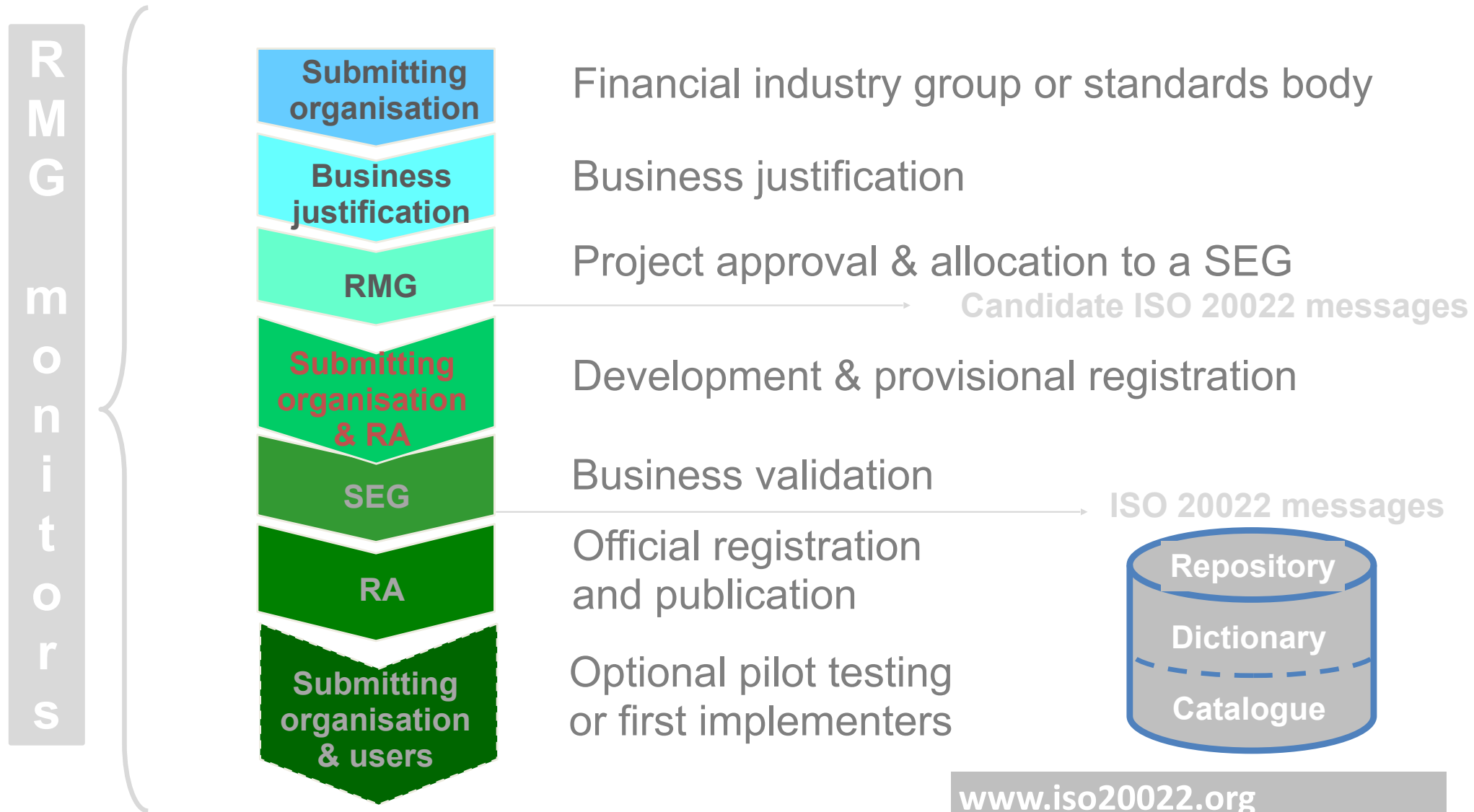
ISO 20022

The registration process (1/3)



ISO 20022

The registration process (2/3)



ISO 20022 registration process (3/3)

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

www.iso20022.org

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

www.iso20022.org

Continuing with today's agenda...



ISO 20022

ISO 20022 Registration Platform

ISO 20022 - The Deployment



- Approval of the international standard ✓
- Selection of the Registration Authority and set-up of the www.iso20022.org ✓
- Creation of Registration Management Group ✓
- Creation of Standards Evaluation Groups ✓
- Registration and publication of first 'ISO 20022 messages' ✓
- Approval of a new edition of the international standard in 2013 ✓

Ongoing: promotion to developers (standardizers, industry bodies)
and users (market infrastructures, end-users, vendors)

Registration Management Group (RMG)

- **Members :**
 - 21 countries: AT, AU, BR, CA, CH, CN, DE, DK, FI, FR, GB, IN, IT, JP, KR, NL, NO, SE, SG, US, ZA.
 - 18 organisations: ACTUS, Bank of England, CFTC, Clearstream, DTCC, ECB, EPC, Euroclear, FPL, ISDA/FpML, ISITC, MasterCard, NACHA/IFX, nexo, OMG, SWIFT, RippleNet, VISA
- **Convenor:** James Whittle (GB); **Vice-convenor:** Mike Tagai (JP);
Secretary: David Heron (GB)
- **Meetings:** twice a year
- **Key decisions:**
 - Creation of six SEGs: Payments and Securities in 2005, Trade Services and Forex in 2006, Cards & Related Retail Financial Services in 2008, Derivatives SubSEG in 2016
 - Approval of ISO 20022 message development projects
 - Approval of new ISO 20022 Member Entities

ISO 20022 – The Payments SEG (1/3)



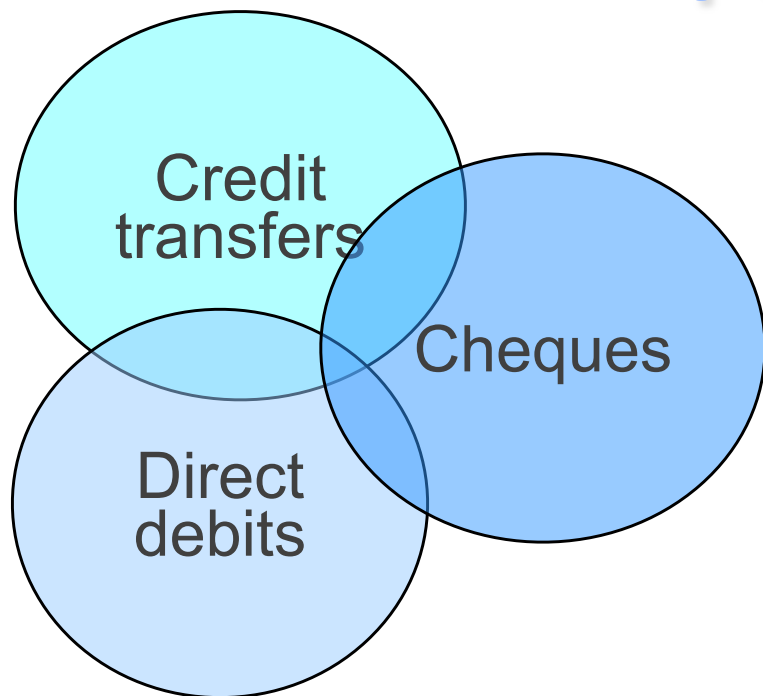
- **Members:**
 - 19 countries: AU, AT, BR, CA, CH, CN, DE, DK, FI, FR, GB, IT, JP, NL, NO, SE, SG, US, ZA
 - 10 organisations: Bank of England, ECB, Euroclear, ISITC, MasterCard, NACHA/IFX, nexo, STET, SWIFT, EBA Clearing
- **Convenor:** Peter Hoogervorst (SG); **Vice-convenors:** Charlie Clarke/Neil Buchan; **Secretary:** Aurelie Steeno, SWIFT
- **Approved:** C2B payment initiation (SWIFT/ISTH), Interbank credit transfers and direct debits (SWIFT, EPC), Exceptions and investigations (SWIFT), B2C cash management (SWIFT/ISTH), Mandates (SWIFT, SABS), Change/verify account identification (GUF), Bank account management (SWIFT), Creditor payment activation request (CBI Consortium), Cash account reporting request and notification (SWIFT), Bank Services Billing (TWIST/SWIFT), Authorities financial investigations (FFI), Stand-alone remittance advice (IFX/OAGi), Cross-border Transactions Currency Control Reporting (RU-CMPG), Account switching (Payments UK), Cash management (SWIFT)
- **Under evaluation:** EIPP (EPC)
- **Next:** Payment pre-authorization (Early Warning Services), Proxy for bank account numbers (SPRING), EMIP (Deutsche Bundesbank, Banca D'Italia & SWIFT), Tracking Business Transactions (SWIFT), Cheques & Charges (SWIFT)

ISO 20022 – The Payments SEG (2/3)

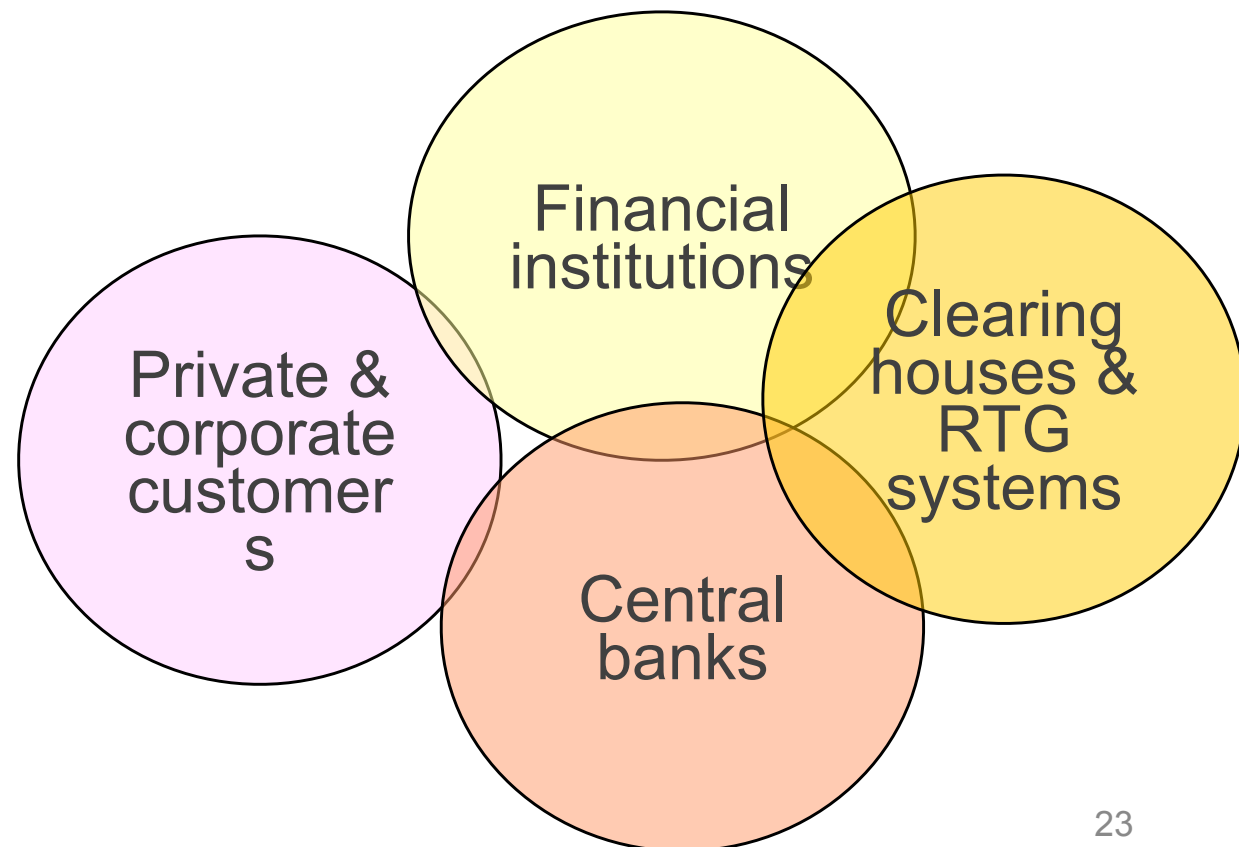


Covering instruments such as:

Payments



Covering actors such as:



ISO 20022 – The Payments SEG (3/3)



Clearing & settlement

Including business areas such as:

Payment initiation

Communications between the ordering customer and its bank, etc.

Payments

Interbank transfers via correspondent banking or ACHs, high value payments, low value bulk payments, RTGS, etc.

Cash Management between various actors:

Account opening, standing orders, transaction and account information, advices & statements from ...

...the account servicing institutions to account owners, including reporting from the financial institution...

...to the ordering & beneficiary customers, reconciliation, exceptions & investigations handling.

ISO 20022 – The Securities SEG (1/3)



■ **Members:**

- 17 countries: AU, BR, CH, DE, DK, FI, FR, GB, IE, IT, JP, NL, NO, SE, SG, US, ZA
- 10 organisations: ACTUS, CFTC, Clearstream, DTCC, ECB, Euroclear, FPL, ISITC, SWIFT

■ **Convenor:** Axelle Wurmser (FR); **Vice-convenor:** Charles-Raymond Boniver, SWIFT; **Secretary:** Benoit Vandaele, SWIFT

■ **Approved:** Investment funds (SWIFT), Proxy voting (SWIFT), Issuer's agents communication (Euroclear), Corporate actions (SWIFT), Settlement & reconciliation (SWIFT), Post-trade (SWIFT/Omgeo), Total portfolio valuation report (ISITC, SWIFT), CCP Clearing (FPL, SWIFT), Collateral Management (FPL, FpML, ISITC, SWIFT), Money Market Statistical Reporting (ECB/3CB), Transparency of Holdings (Clearstream), SSI for Securities, Payments & FX (ISITC, Omgeo, FPL), Financial instruments and transactions regulatory reporting - MiFID II/MiFIR v1 and v2 (ESMA), CSDR-Settlement Internaliser Report (ESMA), Target2-Securities (SWIFT/4CB), Securities Markets Regulatory Reporting – Benchmark Reporting (ESMA), Shareholder Identity Disclosure (SMPG/SWIFT), CCP supervisory reporting (BoE), Securities Financing Transactions Regulatory Reporting – SFTR (ESMA), CSDR (ESMA), Target2-Securities (SWIFT/4CB), MiFID II/MiFIR Fast-track (ESMA)

■ **Under evaluation:** CSDR Buy In Reporting (KDPW/SWIFT)

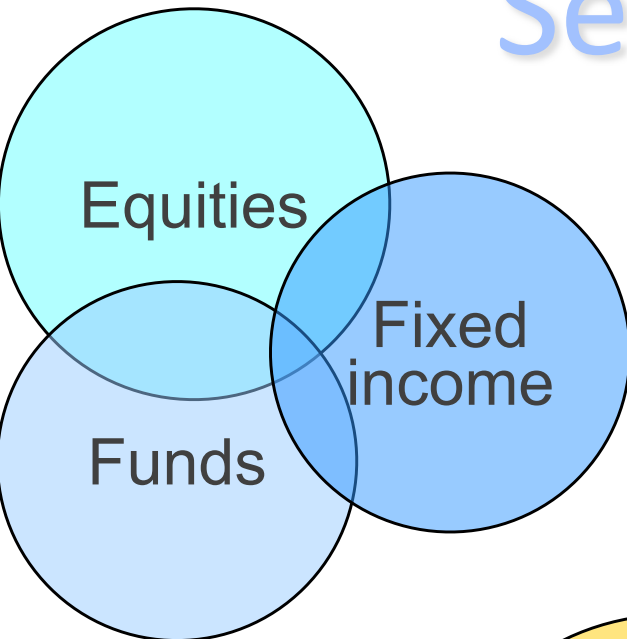
■ **Next:** ASX CHESS Replacement (ASX), Triparty Collateral Management (Banco de Espana/SWIFT), Market Claims (SMPG/SWIFT)

ISO 20022 – The Securities SEG (2/3)

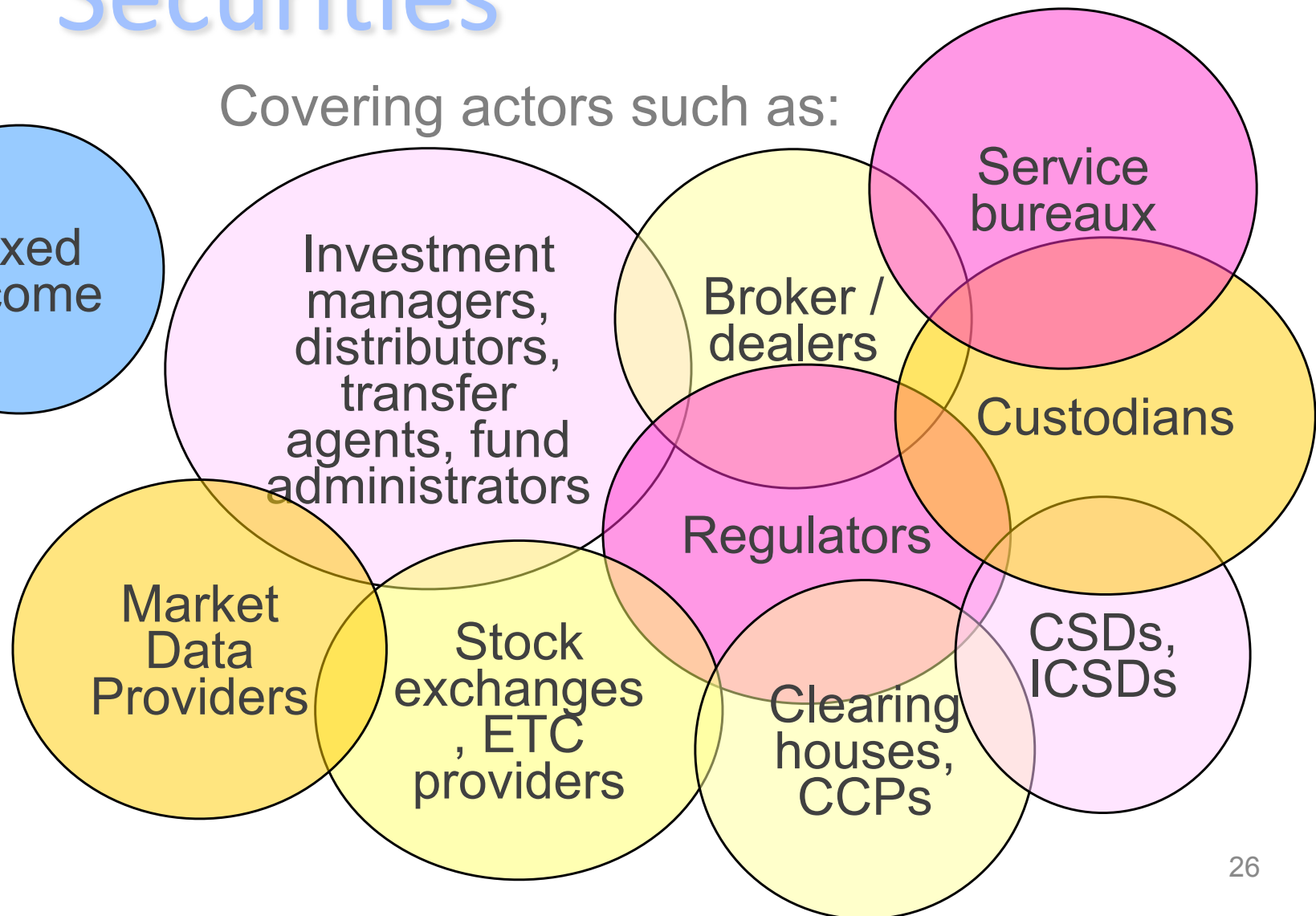


Covering instruments such as:

Securities



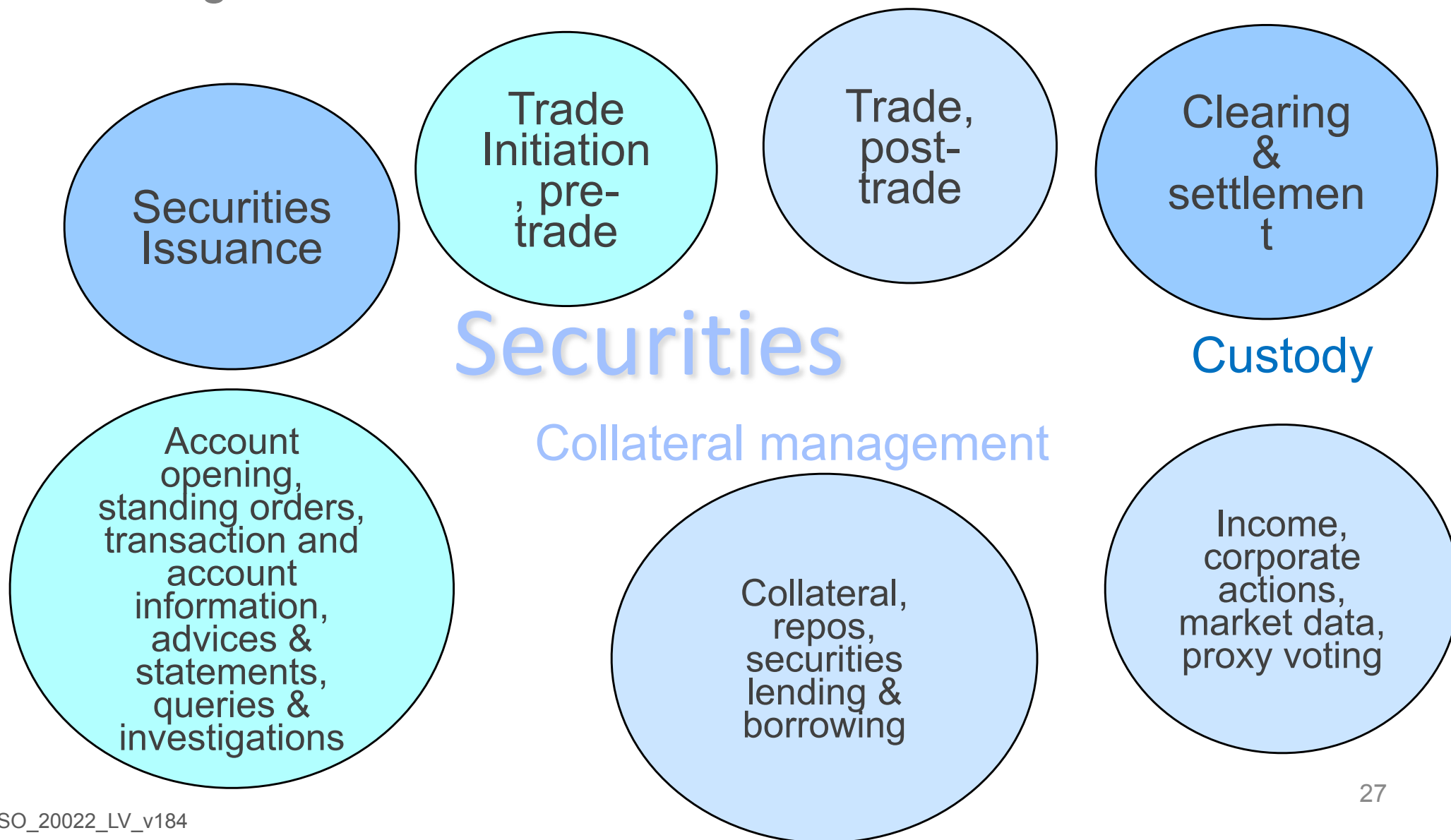
Covering actors such as:



ISO 20022 – The Securities SEG (3/3)



Including business areas such as:



Looking at the advantages ISO 20022 brings over ISO 15022



ISO 20022:

- Builds on the ISO 15022 data dictionary concept and registration infrastructure, but strengthens the monitoring by the industry
- Uses a more robust, syntax independent development methodology based on modelling of business processes and transactions
- Uses XML or ASN.1 as the syntax for the actual physical messages
- Has a wider scope than ISO 15022, which is only for securities messages

**Syntax independent business modelling
is key to the ISO 20022 standard !**

ISO 20022 – Derivatives SubSEG (1/3)



- **Members:**
 - 8 countries: BR, CN, DE, DK, FR, GB, JP, US
 - 10 organisations: ACTUS, CFTC, Clearstream, DTCC, ECB, Euroclear, FPL, ISDA/FpML, ISITC, SWIFT
- **Convenor:** Karel Engelen, ISDA/FpML; **Vice-convenor:** Joe Halberstadt, SWIFT; **Secretary:** Courtney McGuinn, FPL
- **Approved:** Financial instruments and transactions regulatory reporting – Trade Repository Reporting (ESMA)
- **Under evaluation:** none

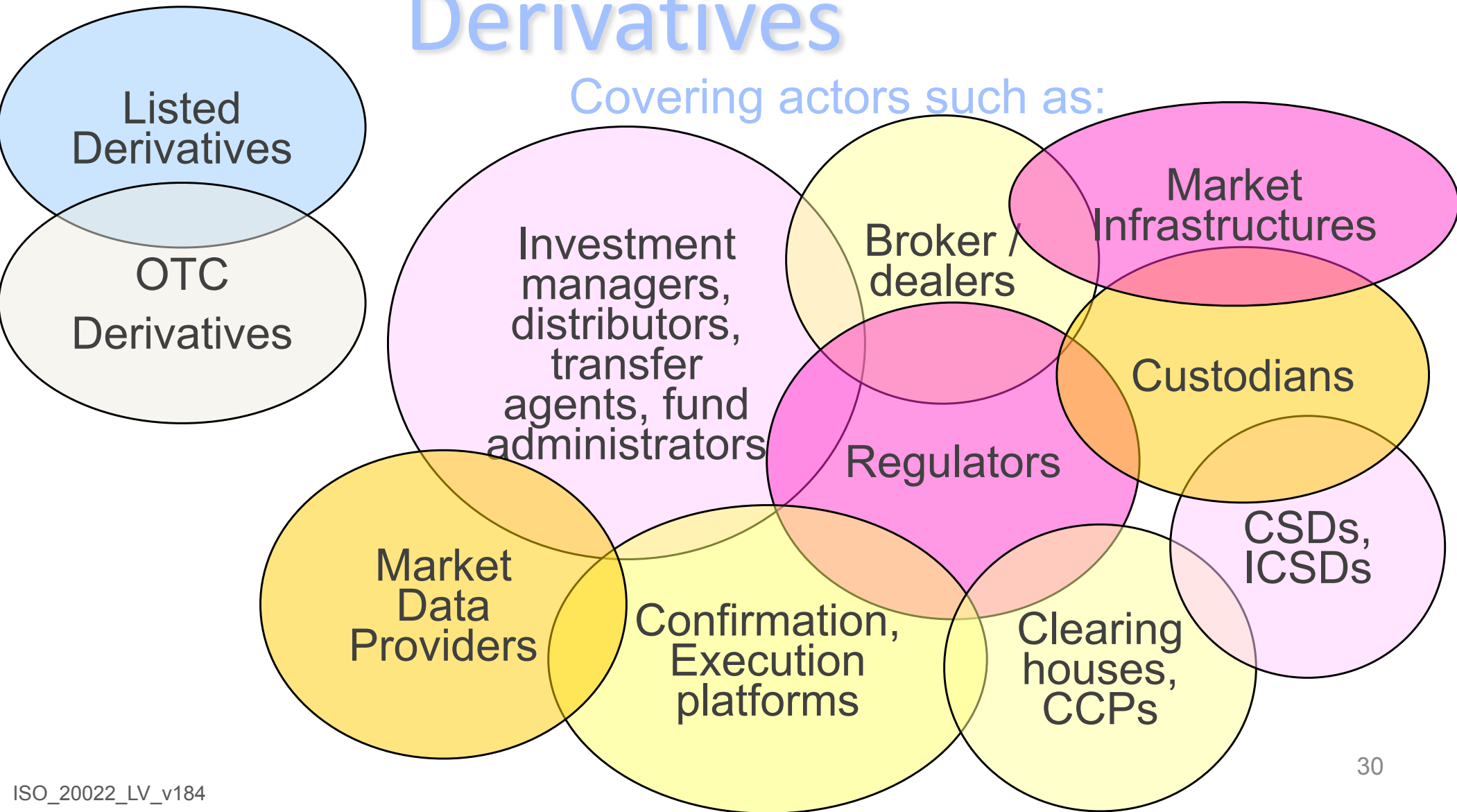
ISO 20022 – Derivatives SubSEG (2/3)



Covering instruments such as:

Derivatives

Covering actors such as:



ISO 20022 – Derivatives SubSEG (3/3)



Including business areas such as:

Initiation, pre-trade
including RFQ and
credit limit check,
clearing eligibility,
margin quote

Trade, post-trade, including
post-trade events such as
novation, termination,
increase, amendment, option
events, and external events
such as index and basket
changes.

Derivatives

Clearing
&
settlement

Collateral
management

Regulatory
reporting
including
real-time and
snapshot
reporting

ISO 20022 – The FX SEG (1/3)



- **Members:**
 - 8 countries: CA, CH, CN, FR, GB, NO, US, ZA
 - 3 organisations: FPL, ISITC, SWIFT
- **Convenor:** Zaiye XU (CN); **Vice-convenor:** Howard Middleton (UK); **Secretary:** Joe Halberstadt (SWIFT)
- **Kick-off meeting:** in September 2006
- **Approved:** Forex notifications (CLS), Post Trade Foreign Exchange Messages (CLS), FX Post-Trade Trade Capture and FX Post-Trade Confirmation (CFETS)
- **Under evaluation:** none
 - **Next:** none

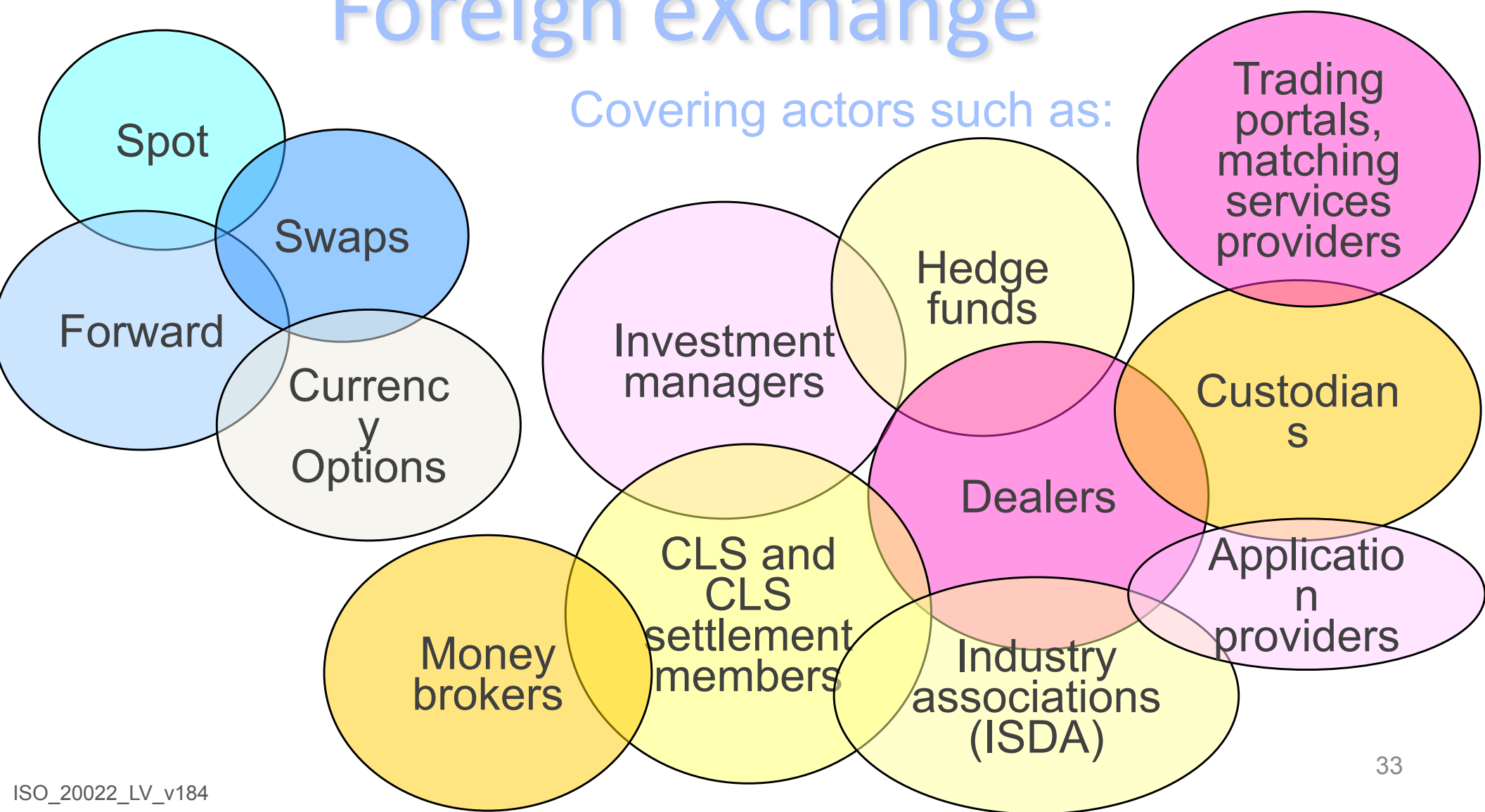
ISO 20022 – The FX SEG (2/3)



Covering instruments such as:

Foreign eXchange

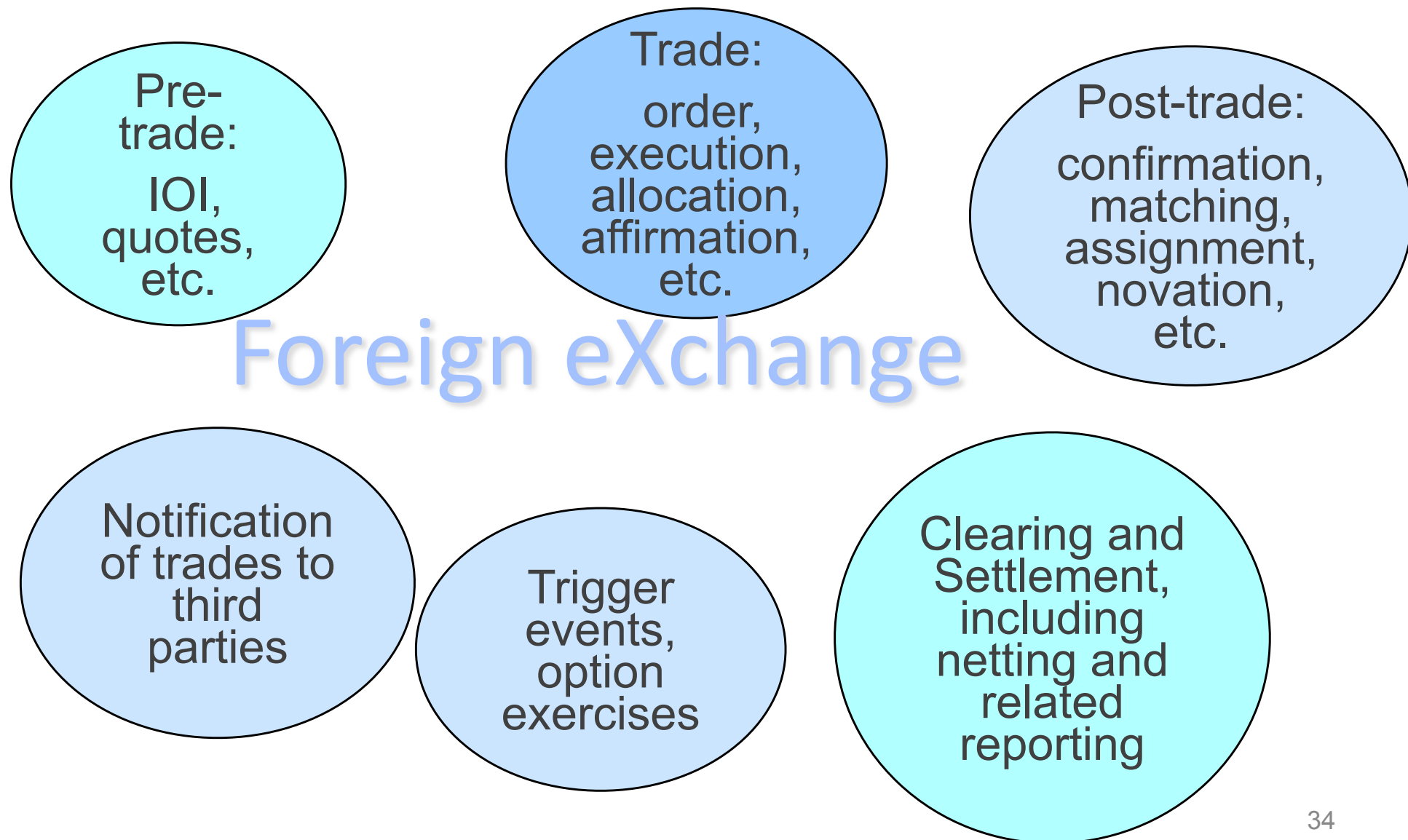
Covering actors such as:



ISO 20022 – The FX SEG (3/3)



Including business areas such as:



ISO 20022 - The Trade Services SEG (1/3)



- **Members:**
 - 10 countries: CA, CH, DE, DK, FR, IS, IT, JP, NL, US
 - 1 organisation: SWIFT
- **Convenor:** Open **Vice-convenor:** Open **Secretary:** David Dobbing (SWIFT)
- **Kick-off meeting:** in September 2006
- **Approved:** Invoice Financing Request (CBI Consortium), Trade Services Management (SWIFT), Demand Guarantees and Standby Letters of Credit (SWIFT), Factoring Services (ASF), Invoice Tax Report (FFI & Tieto)
- **Under evaluation:** none
- **Next:** none

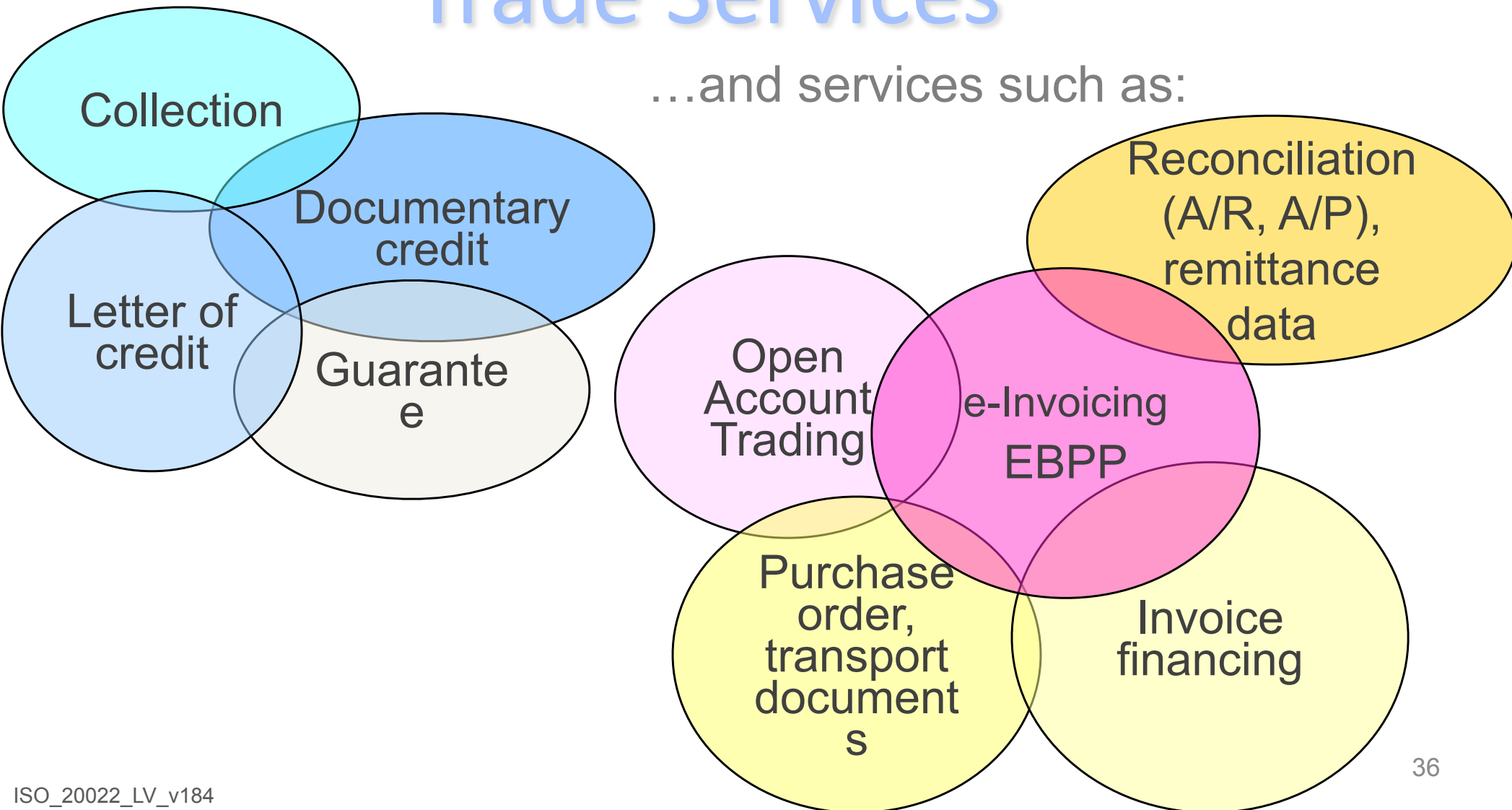
ISO 20022 - The Trade Services SEG (2/3)



Covering products...

Trade Services

...and services such as:



The Trade Services SEG (3/3)

Including actors such as:

Private and
corporate
customers
(treasurers)

Financial
Institutions

Associations
providing rules
and master
agreements
(eg IFSA,
ICC)

Trade Services

Risk
management
entities

Applicatio
n
providers

Trade facilitators:
chambers of
commerce, insurance
co, freight
forwarders, carriers,
customs, factoring co

ISO 20022 – The Cards & Related Retail Financial Services SEG (1/3)



- **Members:**
 - 16 countries: AT, CA, CH, CN, DE, DK, FI, FR, GB, JP, KR, NL, SE, SG, US, ZA
 - 5 organisations: Mastercard, NACHA, nexo, SWIFT, VISA
- **Convenor:** William Vanobberghen (FR); **Vice-convenor:** Ian Groves (GB); **Secretary:** Reinhard Herwig (DE)
- **Kick-off meeting:** on 23-24 October 2008
- **Approved:** CAPE – Acceptor to Acquirer and Terminal Management (nexo), ATM interface for transaction processing and ATM management (IFX Forum/nexo), Acquirer to Issuer Card Messages – version 1 (TC68/SC7/TG1), Card Sale to POI ISO20022 Protocol, Acquirer to Issuer Card Messages – version 2 (TC68/SC7/TG1)
- **Under evaluation:** None
- **Next:** Payment Tokens Management Exchanges (nexo,TC68/SC7/TG1)

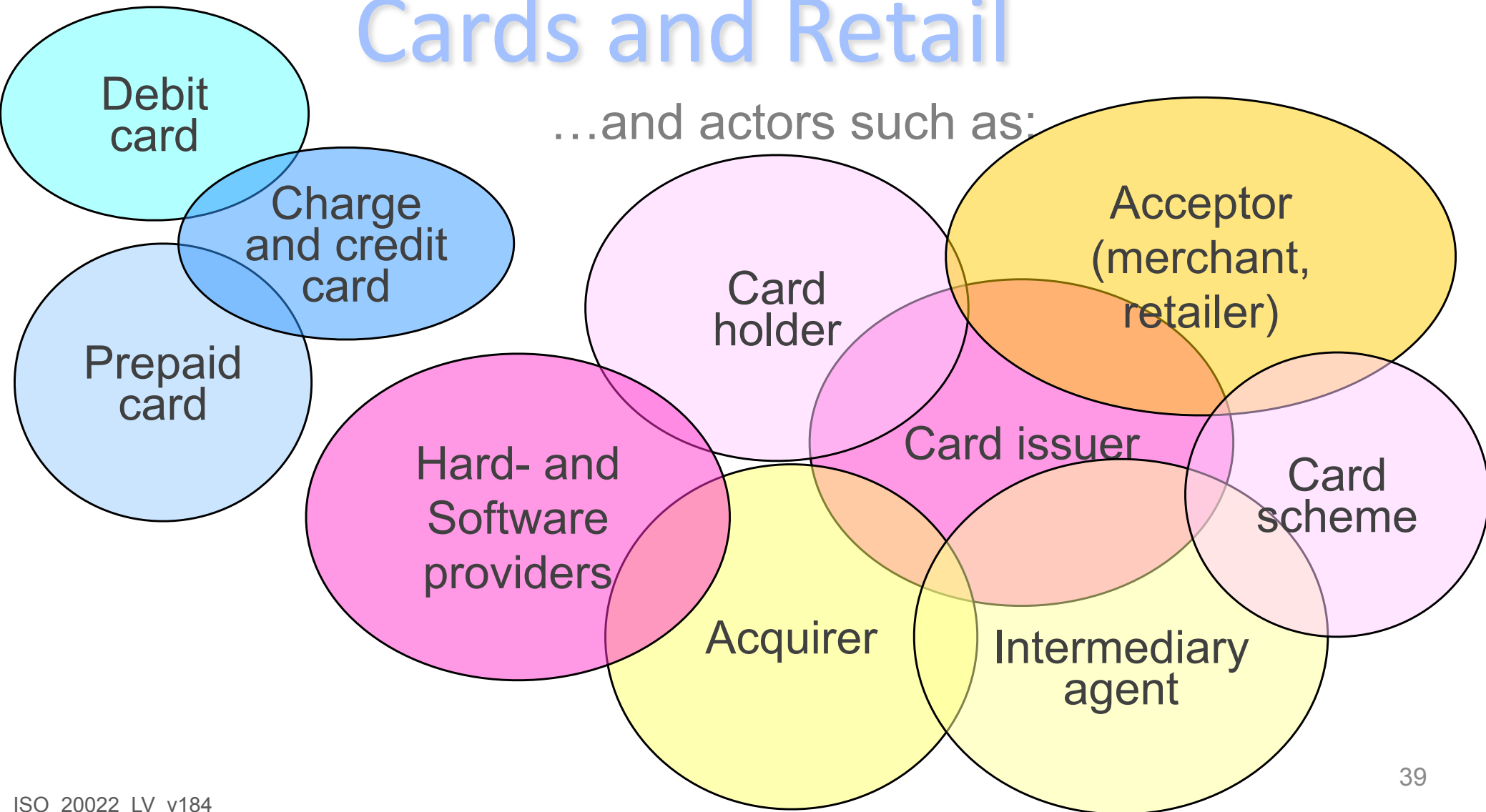
ISO 20022 – The Cards & Related Retail Financial Services SEG (2/3)



Covering instruments...

Cards and Retail

...and actors such as:



ISO 20022 – The Cards & Related Retail Financial Services SEG (3/3)



Including business areas such as:

Transactions
between
acquirers and
card issuers

Transactions between
merchants and acquirers,
and cardholders and issuers
that support authorization,
clearing, reversal,
chargeback, dispute
processing, etc.

ATM processes
such as
authorization,
processing,
ATM
management
and inventory

Similar messages
transacted on
internet or from
mobiles or other
personal devices

POI
messages
for
payments,
administrativ
e and device
related
services

ISO 20022 – Technical Support Group



- **Members:**
 - 8 countries: BR, CA, CN, CH, DK, GB, JP, KR
 - 10 organisations: ACTUS, CFTC, DTCC, Euroclear, FPL, ISITC, NACHA, nexo, SWIFT, VISA
- **Convenor:** Martin Walder (CH); **Vice-convenor:** Jason Polis; **Secretary:** Li Jie, SWIFT
- **Kick-off meeting:** on 23-24 October 2008
- **Mission:** help RMG, RA, SEGs and Submitting Organisations with technical matters

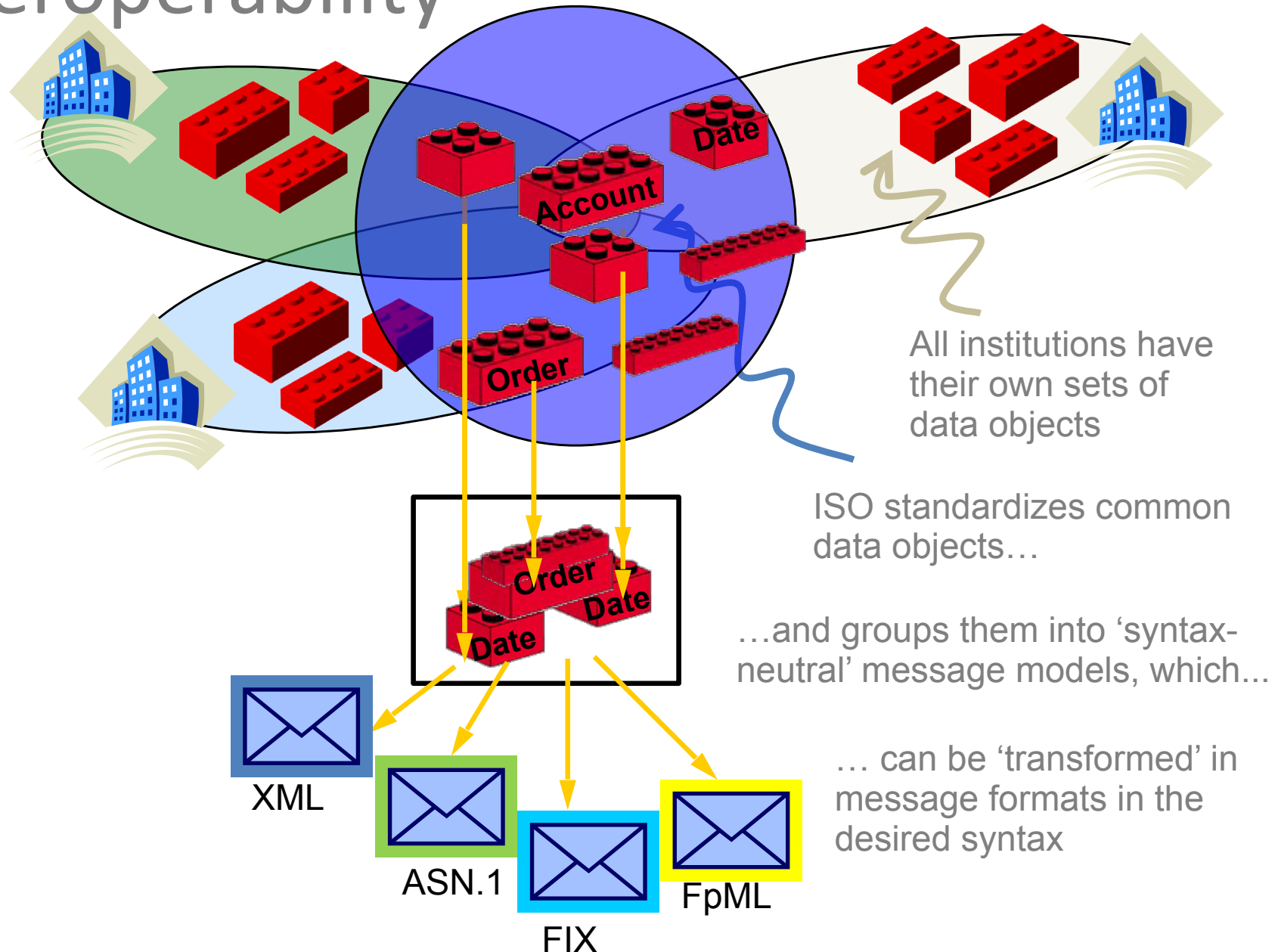
Continuing with today's agenda...



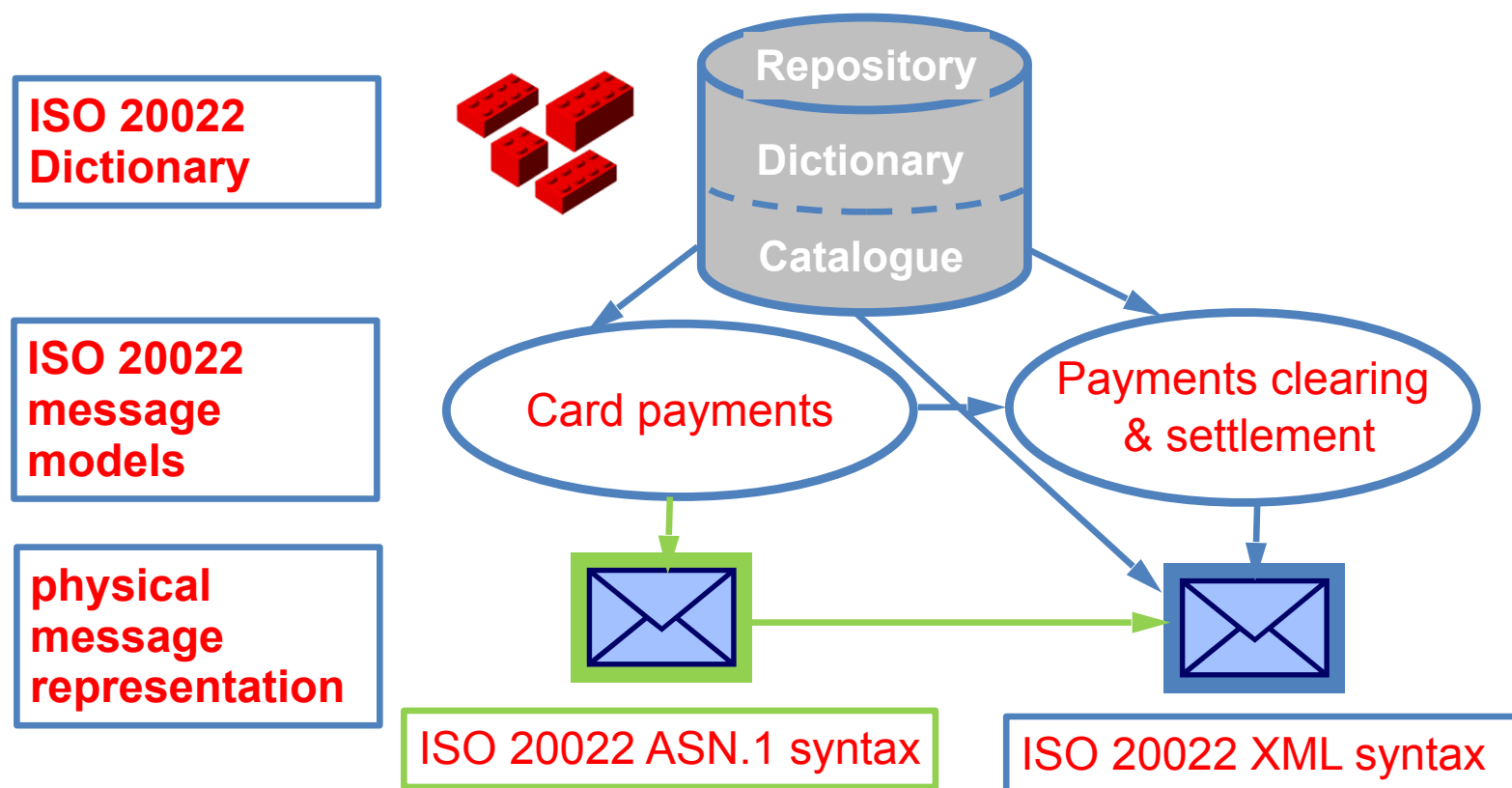
ISO 20022

Interoperability within the financial industry

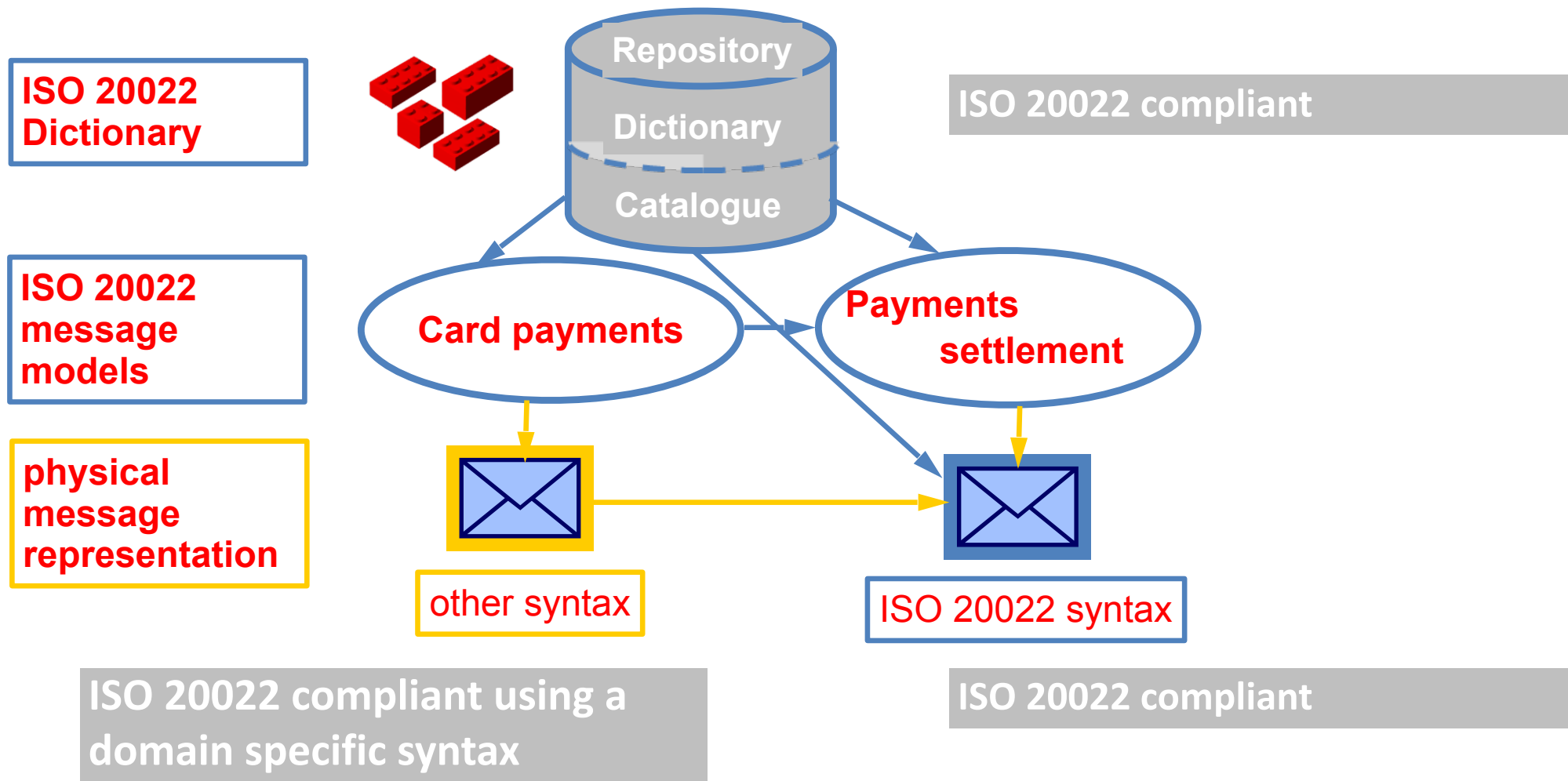
Using ISO 20022 modelling to reach interoperability



ISO 20022 compliance at model level



ISO 20022 compliance at model level



“Investment Roadmap” for ISO, FIX, XBRL and FpML syntaxes

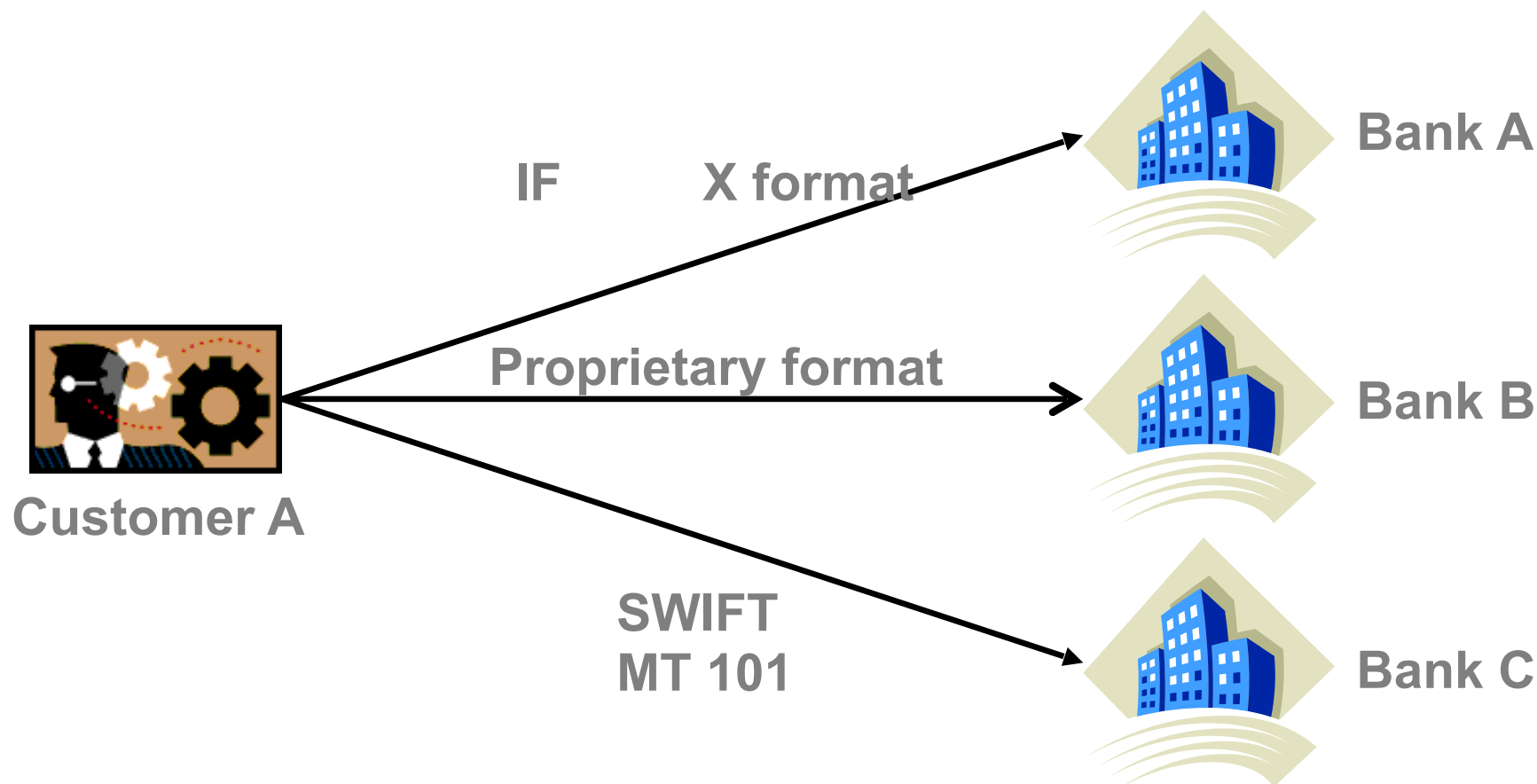


The Investment Roadmap is maintained by the Standards Coordination Group including the following organisations:



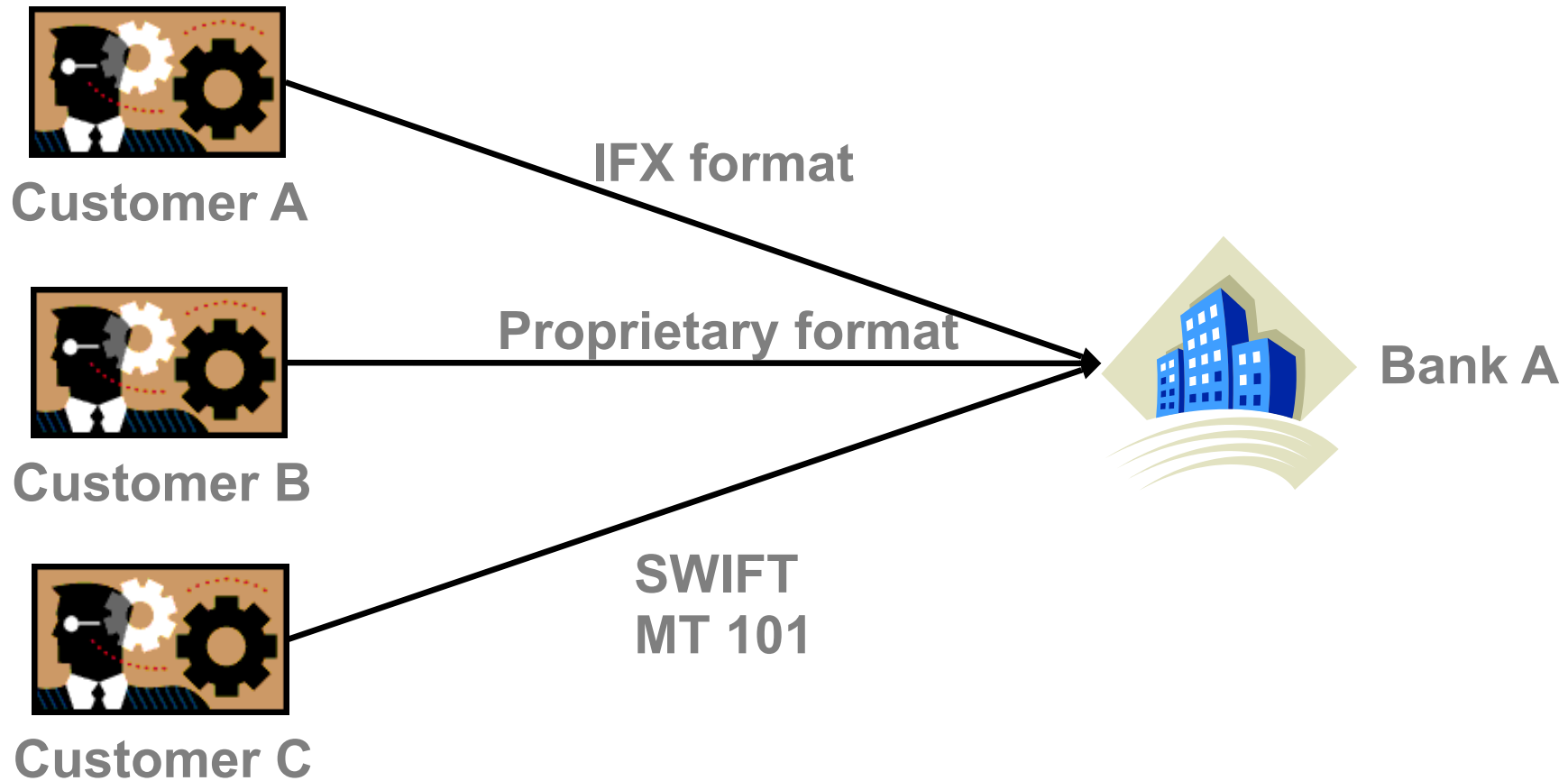
Download the [Investment Roadmap](#) and related [FAQ](#)

Interoperability in the customer-to-bank payment domain



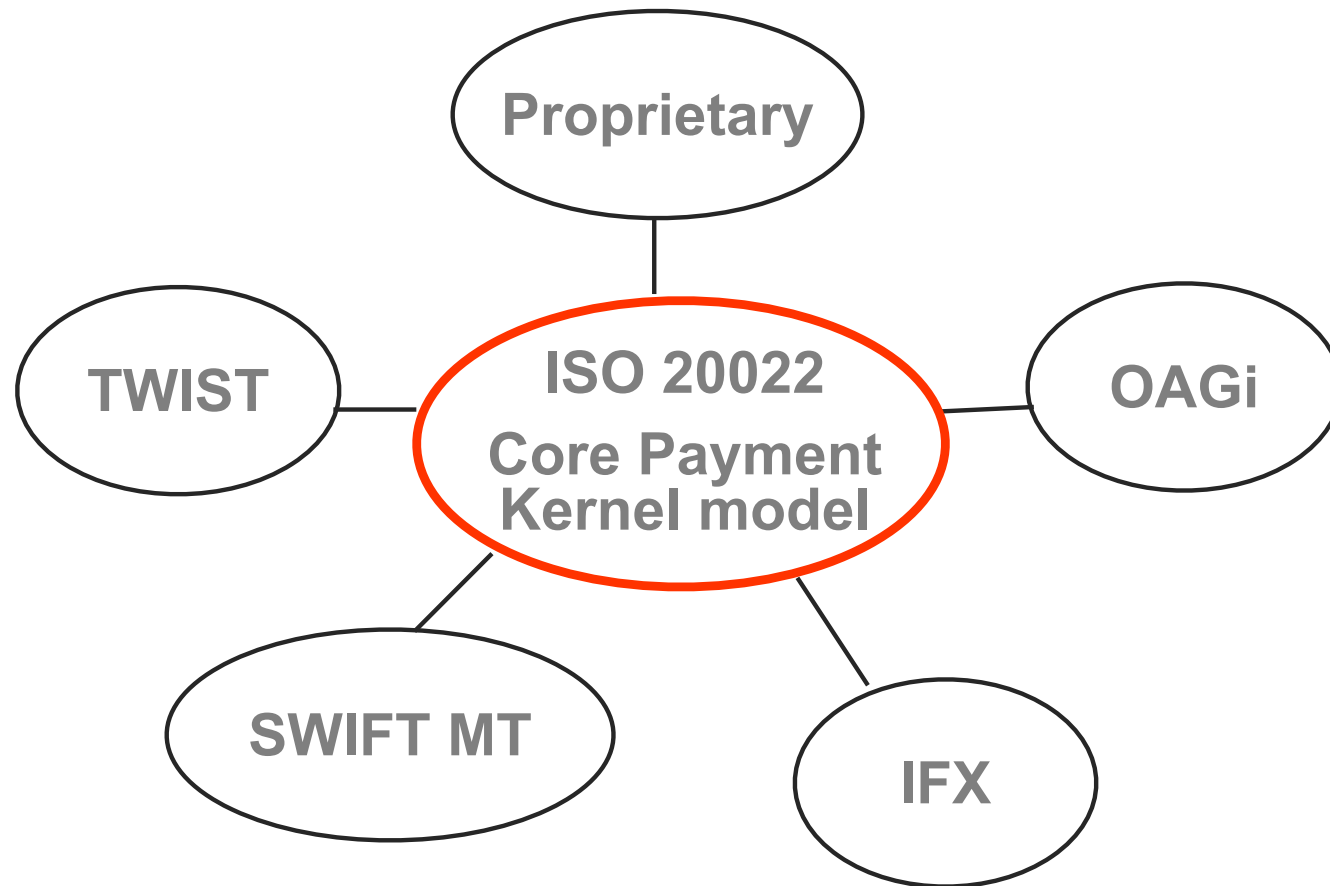
Let us look at a concrete example from payments area:
a customer may need to adapt to the format of the banks...

Interoperability in the
customer-to-bank payment domain



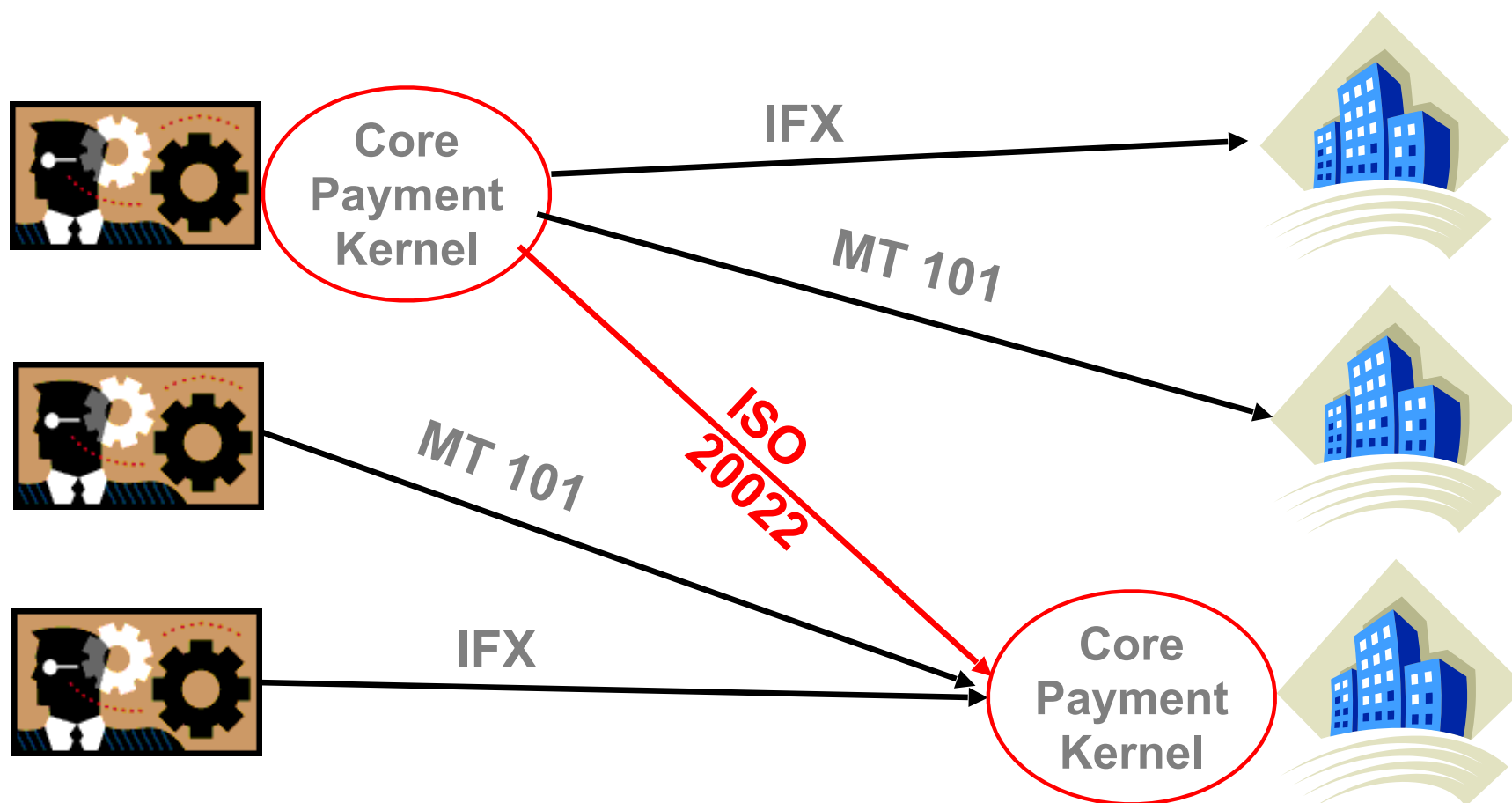
...or banks may need to accept many formats...

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

www.iso20022.org

Questions & Answers

iso20022ra@iso20022

