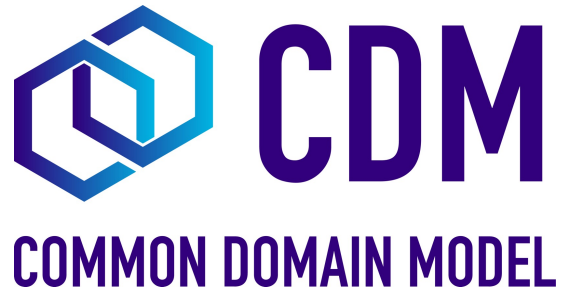
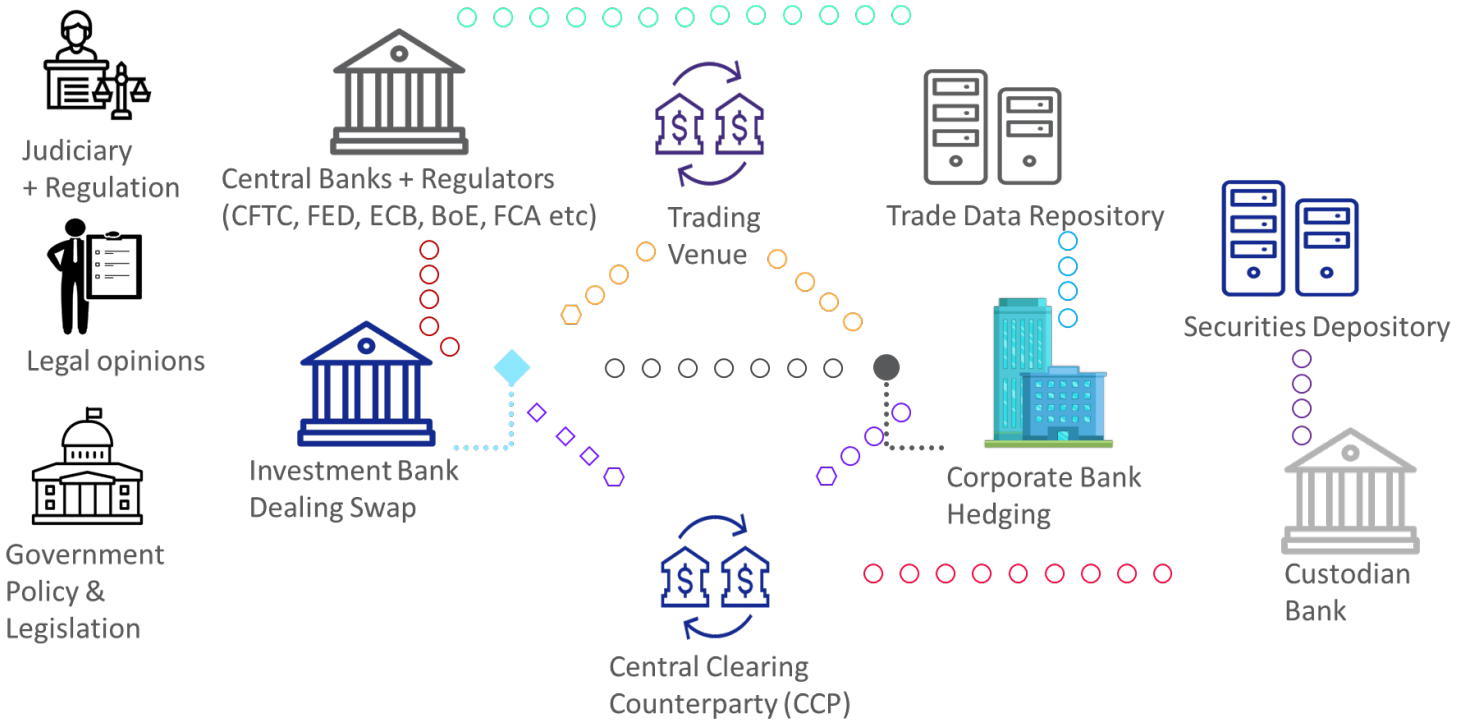
Common Domain Model- An Overview
Sep 2024



Catalyst for Change- Current Market Structure Challenges

CDM
COMMON DOMAIN MODEL

All parties store trade data in different formats & make lifecycle changes to these records inconsistently



What is the true "truth" at any point in time?

Differences in booking models lead to real world events in those models producing different outcomes:

- **Reconciliation breaks**
- **Valuation differences**
- **Collateral disputes**
- **Reporting mismatches**
- **Operational inefficiency**
- **Settlement failures**
- **Barriers to automation**

What is the CDM?

CDM
COMMON DOMAIN MODEL

The Common Domain Model (CDM) is a standardised, machine-readable and machine-executable blueprint for how financial products are traded and managed across the transaction lifecycle.

Dimensions of the CDM:

Product	Definitions of tradeable products qualified by their economic terms
Event	Data structures to represent the lifecycle events of financial transactions
Legal Agreement	Digital representation of the legal agreements that govern transactions
Process	Translates the technical standards that support those industry processes into a standardised machine-readable and machine-executable format
Reference Data	Reference data components that are specifically needed to model the other dimensions
Mapping	Mapped to a set of alternative data representations including FIX, FpML, ISO20022

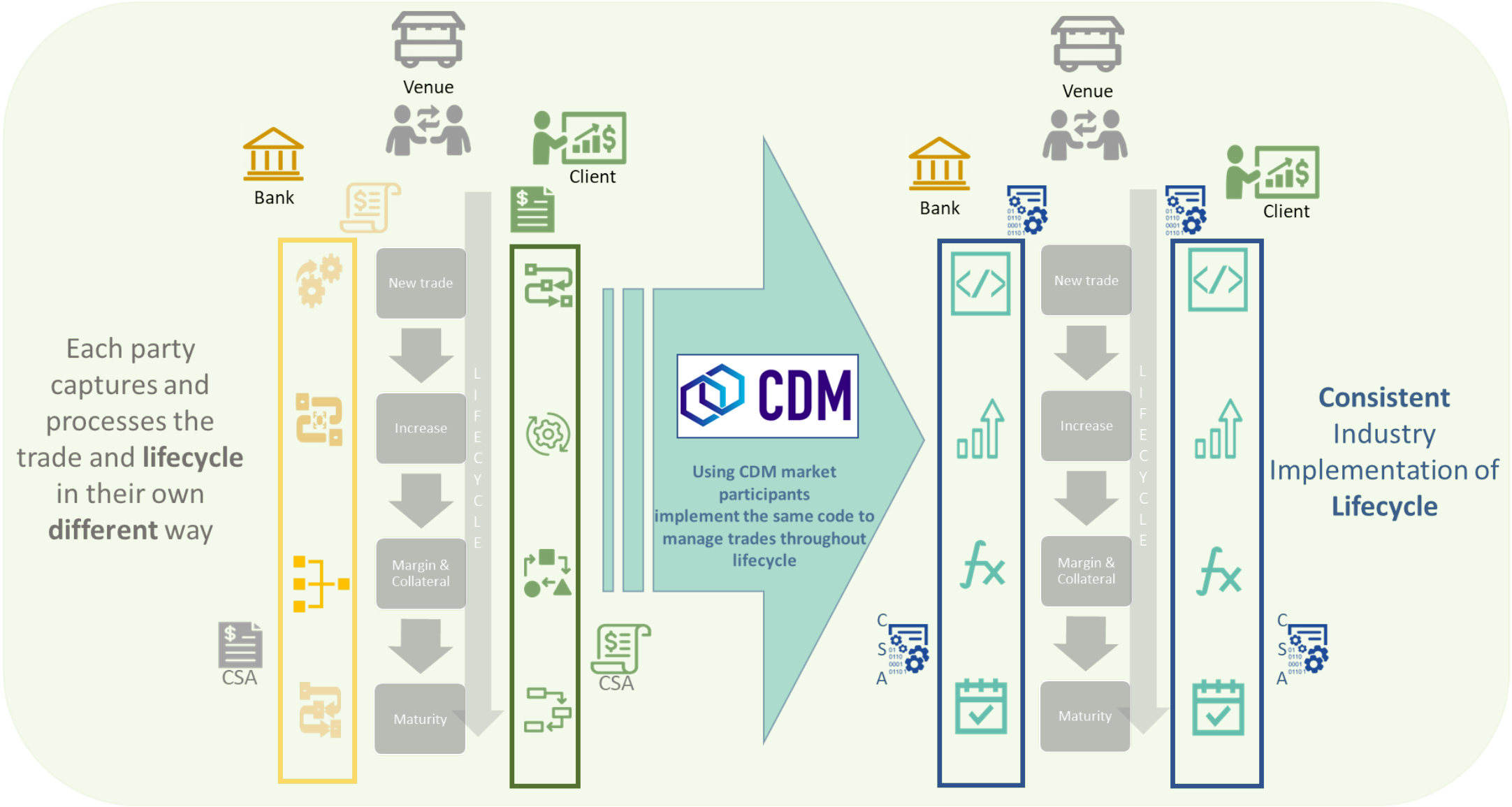
The CDM is **NOT** an application in and of itself, but can be implemented within one
Composability allows for re-use of components for efficiency

CDM vs. FpML

While both CDM & FpML are standards, they can and will co-exist

- CDM is not a data format for messaging or storage, it is a logical model describing relationships between pieces of data
- CDM can be expressed in various forms including XML, JSON and other standard formats such as FpML, FIX & ISO20022 for exchange and storage of information
- FpML does not define standards for event and workflow processing, CDM prescribes the validation logic to express these more specifically

Benefits- Consistency of representation



Core Benefits

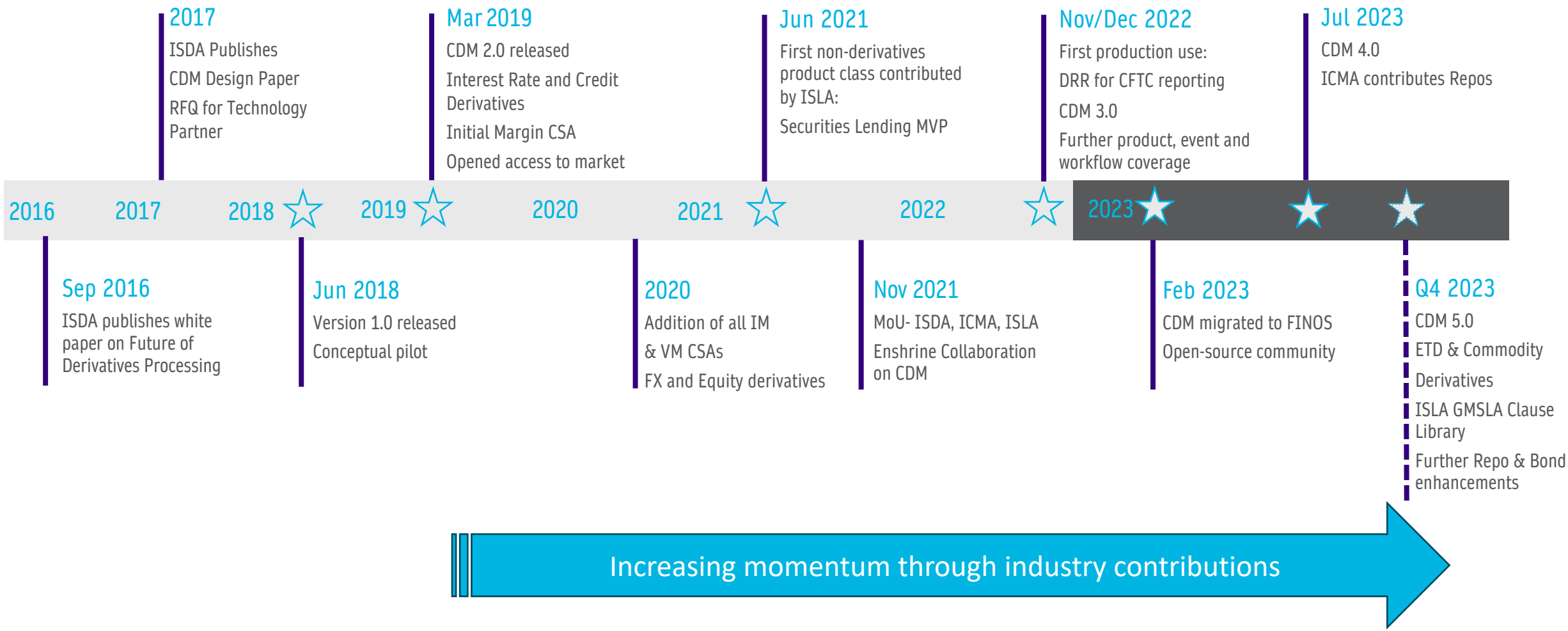
CDM
COMMON DOMAIN MODEL

Efficiency	Transparency	Accelerated Innovation
Enhance interoperability, reduce reconciliations and promote straight-through processing	**Promote transparency and alignment between regulators and market participants**	**Create an environment for innovation in financial markets**

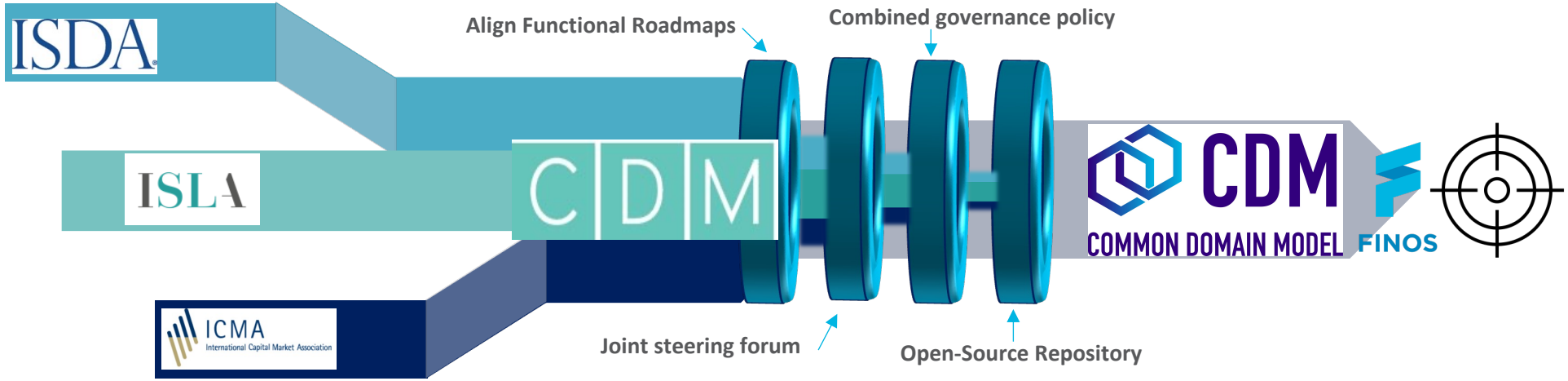
- A **mutualised free open-source standardised digital blueprint** on how to represent financial transactions, performance and business events.
- **Extensible** to compose financial instruments by assembling reusable components. Already covers robustly derivative and securities financial transactions.
- **Scalable** as event-driven model that encapsulates primitive components that will de facto make the fabric of complex business and operational processes.
- **Operational and functional** to codify the contract mechanics and business logic of legal agreements.
- **Unambiguous** in digitising functionally complex business and regulatory logic into code.
- **Directly approachable** as published in both **human readable and machine executable languages.**
- **Implementable across several strategic uses cases** in capital markets for better automation and greater consistency e.g. Trade management systems, clearing, digital documentation, collateral managements, regulatory reporting.

History of the CDM

CDM
COMMON DOMAIN MODEL



Trade Association Collaboration



- Best-practice led Governance
- Open-Source Community of Members

Associations are collaborating towards the same future goal, to benefit the whole industry

- An open-source model mutualises cost of development between TAs and contributing firms while retaining best practice governance
- MoU in 2021 enshrined collaboration publicly
- Working groups were opened to each others' members
- TAs appointed FINOS to provide a repository with a view to fostering the growth of an open-source community for the CDM, with migration completed early 2023

Product Coverage

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The scope of contractual products in the current model are summarized below:

- **Interest rate derivatives**:
  - Interest Rate Swaps (incl. cross-currency swaps, non-deliverable swaps, basis swaps, swaps with non-regular periods, ...)
  - Swaptions
  - Caps/floors
  - FRAs
  - OTC Options on Bonds
- **Credit derivatives**:
  - Credit Default Swaps (incl. baskets, tranche, swaps with mortgage and loans underliers, ...)
  - Options on Credit Default Swaps
- **Equity derivatives**:
  - Equity Swaps (TRS, PRS, single name/index/basket, VarSwap, VolSwap, Dispersion, Correlation, Dividend Swap)
  - Options & Forwards
- **Foreign Exchange derivatives:**
  - FX Swap, Forward, NDF, Options
- **Commodity derivatives**:
  - Swaps, options, swaptions
- **Exchange Traded derivatives**

The use of common elements allow for representation of multiple types of products and events in the trade workflow with minimal incremental work. Thus, this coverage list does not represent an exhaustive list of all possible combinations of elements or events

Product & Event Coverage

CDM
COMMON DOMAIN MODEL

The scope of contractual products and events in the current model are summarized below:

- **Securities Lending**:
  - Single underlier, cash collateralised, open/term security loan
- **Repurchase Agreements**:
  - Open Term, Fixed Term, Fixed Rate, Floating Rate
- **Events**:
  - Allocation, Re-allocation
  - Cash, Security transfers, DVP settlement
  - Clearing events
  - Compression
  - Increase and decreases/returns
  - Novations- full, partial
  - Terminations- full, partial
  - Renegotiation
  - Reset
  - Execution
  - Stock Split
  - Index Transition
  - Determination of corporate action and credit events

The use of common elements allow for representation of multiple types of products and events in the trade workflow with minimal incremental work. Thus, this coverage list does not represent an exhaustive list of all possible combinations of elements or events

Legal Document Coverage

CDM
COMMON DOMAIN MODEL

ISDA Documentation	CDM	ISDACreate	ISDACreate/ CDM Compatible
INITIAL MARGIN			
2016 ISDA IM CSD (English Law)			x
2016 ISDA IM CSA (NY Law)			
2016 ISDA IM CSA (Japanese Law)			x
2018 ISDA IM CSA (NY Law)			
2018 ISDA IM CSD (Eng Law)			
2019 ISDA Bank Custodian CTA			
2019 ISDA Bank Custodian SA (NY Law)			
2019 ISDA Bank Custodian SA (Eng Law)			
2019 ISDA Bank Custodian SA Luxembourg Law			x
2020 ISDA Bank Custodian SA Belgium Law			x
2016 Euroclear SA (Bel Law)			x
2017 Euroclear CTA (NY Law)			x
2017 Euroclear CTA (Eng Law)			x
2018 Euroclear CTA (Eng Law)			x
2018 Euroclear CTA (NY Law)			x
2018 Euroclear SA (Bel Law)			x
2019 Euroclear CTA			
2019 Euroclear SA (Bel Law)			x
2016 Clearstream CTA (Eng Law)			x
2016 Clearstream CTA (NY Law)			x
2017 Clearstream SA (Lux Law)			x
2016 Clearstream SA (Lux Law)			x
2019 Clearstream CTA			
2019 Clearstream SA (Security-provider) (Lux Law)			
2019 Clearstream SA (Security-taker) (Lux Law)			

ISDA Documentation	CDM	ISDACreate	ISDACreate/ CDM Compatible
VARIATION MARGIN			
2016 ISDA CSA (VM) (Loan - Japanese Law)		x	x
2016 ISDA CSA (VM) (Security Interest - New York Law)			x
2016 ISDA CSA (VM) (Title Transfer - English Law)			x
2016 ISDA CSA (VM) (Title Transfer - French law)		x	x
2016 ISDA CSA (VM) (Title Transfer - Irish law)		x	x
1994 ISDA Credit Support Annex VM (Security Interest - New York Law)	In Development		x
1995 ISDA Credit Support Annex VM (Title Transfer - English Law)	In Development		x
1995 ISDA Credit Support Annex (Security Interest - Japanese Law)	x	x	x
1995 ISDA Credit Support Deed (Security Interest - English Law)	In Development		x
ISDA MASTER AGREEMENT			
1992 ISDA Master Agreement	See below		x
2002 ISDA Master Agreement	See below		CP details only
Automatic Early Termination ("AET")			x
Address for Notices			x
Dated as of Date			x
Credit Support Provider			x
Credit Support Document			x
Governing Law			x
Specified Entity			x
Termination Currency			x

ISLA have also contributed their Clause Library and Taxonomy for the GMSLA 2000/2010

Roadmap 2024

CDM
COMMON DOMAIN MODEL

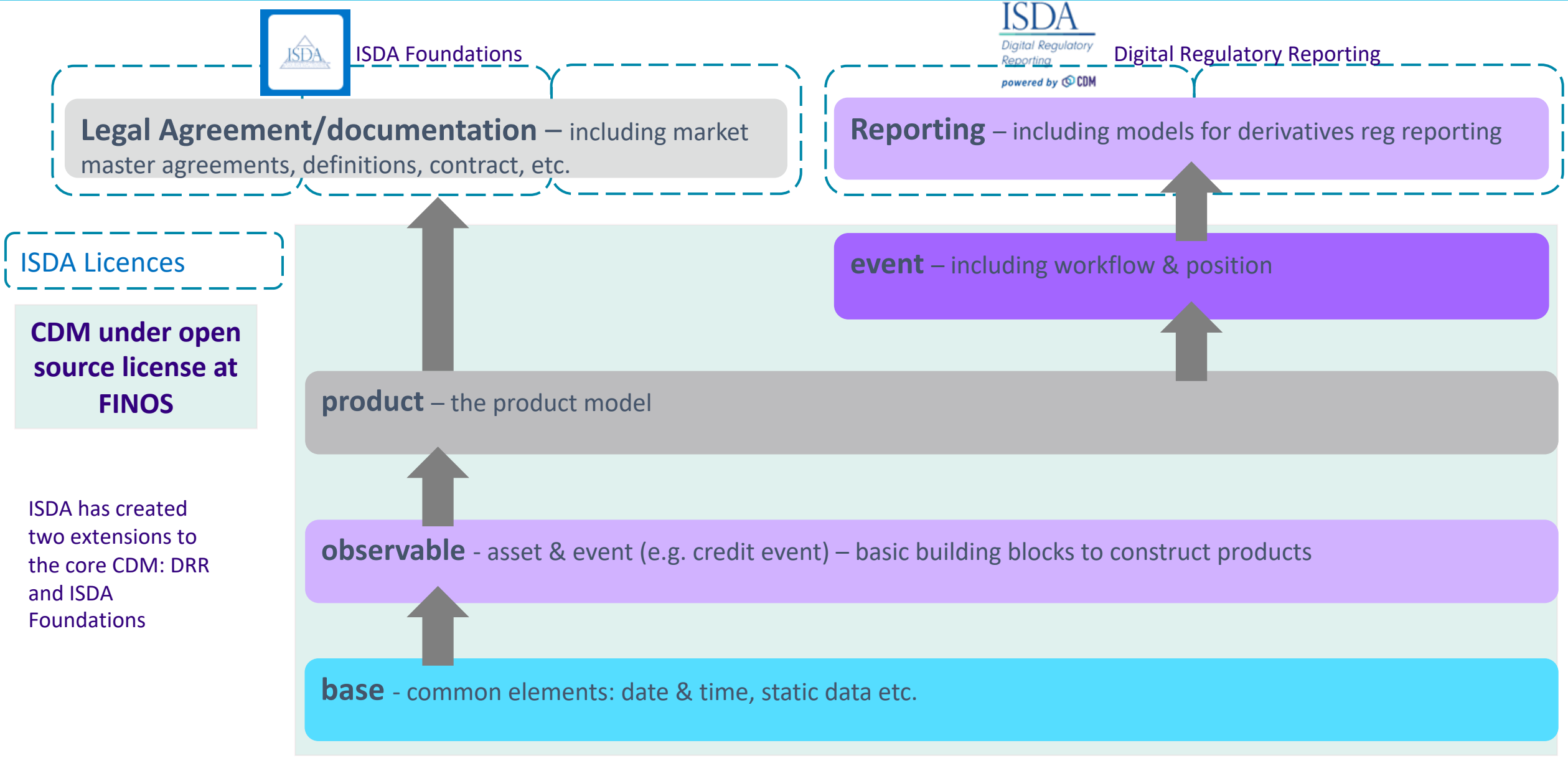
	Title/Topic	Chair	Q1	Q2	Q3	Q4
Working Groups	**Steering WG**	**David Shone, ISDA**	- Complete governance updates	- Annual Review of governance- end June - Establish release schedule and process		
	Technical Architecture WG	**Chris Rayner, ISLA**	- Release build process moves to Github Actions	- Release build process moves to Github Actions -- Redesign Testing Process - Vision Statement - Prioritise initiatives	'- Serialisation Phase 1 begins - Ref data list management phase 1/2- TBC	- Serialisation Phase 1 complete - Ref data list management phase 3 TBC
	Contribution Review WG	**Rotating- trade associations**	- Establish Release management process/bed in resources: Release Manager & Engineer - Release approval & review	- Release approval & review	- Release approval & review	- Release approval & review
	-->Cross-product Modelling	**N/A**	- Product model changes: -- Asset & Observable refactoring [supports structured products and strategic fix for sec finance qualifications] -- Define product with contractdetails -- Redesign Product Qualification to separate economic qualification from product qualification	- Product model changes: -- Asset & Observable refactoring [supports structured products and strategic fix for sec finance qualifications]	'- Product model changes: -- Harmonise date/timestamp	
	Collateral WG	**Vernon Alden-Smith, ISDA**	- Extend ECS model - Repo collateral extension	Ongoing adoption support & WG prioritised items		
	Securities Lending WG	**Chris Rayner, ISLA**	Ongoing adoption support and WG prioritised items			
	Derivatives Product and Business Event WG	**David Shone, ISDA**	- Migrate to FINOS governance umbrella - Option payout refactoring (ETD/OTC) - Product enhancements driven by DRR - Member modelling proposals: Equity Swaps	- Member modelling proposals	- Member modelling proposals	- Member modelling proposals
	Structured Products WG	**Jean-Baptiste Ziade, Fragmos Chain**	Ongoing structured product enhancements & WG prioritised items			
	ICMA Repo/Bonds WG	**Gabriel Callsen, ICMA**	Ongoing adoption support & WG prioritised items			
	Securities Finance Reg Reporting?	**TBC**				
	ISDA Legal Agreement WG	**Vernon Alden-Smith, ISDA** **Ciaran McGonagle, ISDA**	- Analyse and develop framework for remaining 20 clauses of legacy CSA agreements - Model 10 clauses of legacy CSAs analysed in 2023	Analyse and develop framework for remaining 20 clauses of legacy CSA agreements	Complete legacy CSAs in CDM and create test data	Complete legacy CSAs in CDM and create test data
	ISDA DRR	**Eleanor Hsu, ISDA** **Tabish Ahmed, ISDA**	- DRR 4.0 Release: Complete coverage EMIR and JFSA - FCA dev complete target 30th March	- EMIR /JFSA Compliance Dates [1st/29th April] - ASIC & MAS dev complete target	- FCA compliance date- 30th Sept	- ASIC/MAS Compliance date- 21st October

Roadmap 2024

CDM
COMMON DOMAIN MODEL

	Title/Topic	Chair	Q1	Q2	Q3	Q4
Adoption Support Framework	Documentation		- Onboard shared documentation resource -Model Documentation: Securities Lending Use Cases	- Model documentation: Pre-trade securities lending user guide	- Model documentation: GMSLA user guide	
	Website		- All agreed governance updated on FINOS website	- Addition of recorded demos	- Consistency and accuracy exercise- website/github	
	Support material		- Consistently branded overviews	- Collateral getting started guide - Training course development - Tiered overviews - Business case templates - Reference implementations	-Expand getting started guides to other use cases - Develop certification/award system?	
Events			- CDM Showcase London Feb 28 - Informa Trade & Transaction reporting Conf- 5th March	- London OSFF - June 26 - ISDA AGM Tokyo 16-18th April - ISLA Annual Conf Geneva 18-20 June	- New York OSFF - Sept 30, Oct 1	- ISLA Post-Trade- Oct TBC

ISDA Extensions to CDM



ISDA has created two extensions to the core CDM: DRR and ISDA Foundations

Use Cases

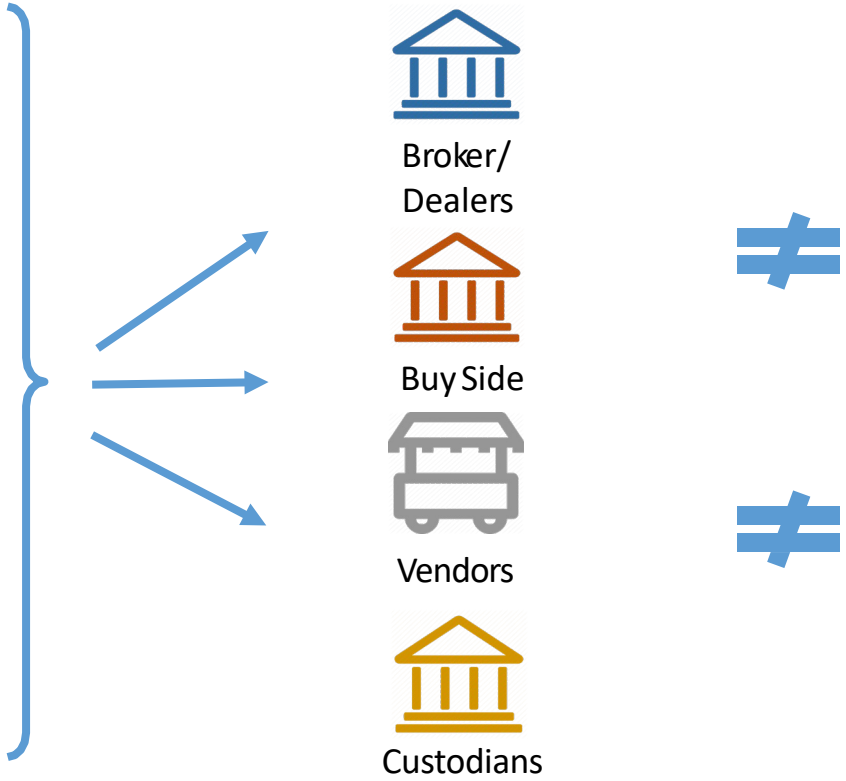
Collateral - Today's Challenge

CDM
COMMON DOMAIN MODEL

Guidelines outlined under BCBS/IOSCO and Basel III were translated by each regulatory regime spearheading collateral management as a key function in capital markets for both bilateral and cleared OTC. Compliance has increased processing volumes significantly and will continue to do so, the need for automation in collateral management processing. The industry is faced with many challenges which has led to fragmented implementations and operational inefficiencies.

INDUSTRY PARTICIPANTS

Calculation Dependencies
Margin Monitoring
Margin Allocation
Documentation
Collateral Segregation
Establishing Custody Accounts
Eligibility Schedules
Risk Control
Optimisation
Regulatory Compliance
Reconciliation
Dispute Management
Efficient Settlement



- Lack of industry standards - Every industry participant left to implement their own version
- Loss of inter-operability between solutions
- Pervasive reconciliation issues and other operational inefficiencies

Collateral- Documentation Model Representation 2020/2021

CDM
COMMON DOMAIN MODEL

ISDA COMMON DOMAIN MODEL (CDM)
COLLATERAL DOCUMENTATION SUPPORTED

Q1/Q2 2020 Modelling of all IM including New Generation documents and elections found to negotiate in ISDA Create.
Request an ISDA Create Demo

Q3 2020 Additional Variation Margin(VM) Documentation

Now CDM offers digital representation of 30 Collateral documents covering over100 unique election structures

Access to the ISDA CDM portal

INITIAL MARGIN DOCUMENTS
Published 2016 – 2019

ISDA X 10
ISDA Clearstream X 7
ISDA Euroclear X 8

- 2016 ISDA IM CSD (English Law)
- 2016 ISDA IM ISDA CSA (NY Law)
- 2016 ISDA IM CSA (Japanese Law)
- 2018 ISDA IM CSA (NY Law)
- 2018 ISDA IM CSD (Eng Law)
- 2019 Euroclear CTA
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- 2016 Clearstream SA (Lux Law)
- 2017 Euroclear CTA (NY Law)
- 2017 Euroclear CTA (Eng Law)
- 2016 Euroclear SA (Bel Law)

VARIATION MARGIN DOCUMENTS
Published 2016
ISDA Publications X 5

- 2016 ISDA CSA for (VM) (Loan - Japanese Law)
- 2016 ISDA CSA for VM) (Security Interest - New YorkLaw)
- 2016 ISDA CSA for (VM) (Title Transfer - English Law)
- 2016 ISDA CSA for (VM) (Title Transfer - French law)
- 2016 ISDA CSA for (VM) (Title Transfer - Irishlaw)

Collateral- Benefits of CDM Standard Documentation

CDM
COMMON DOMAIN MODEL

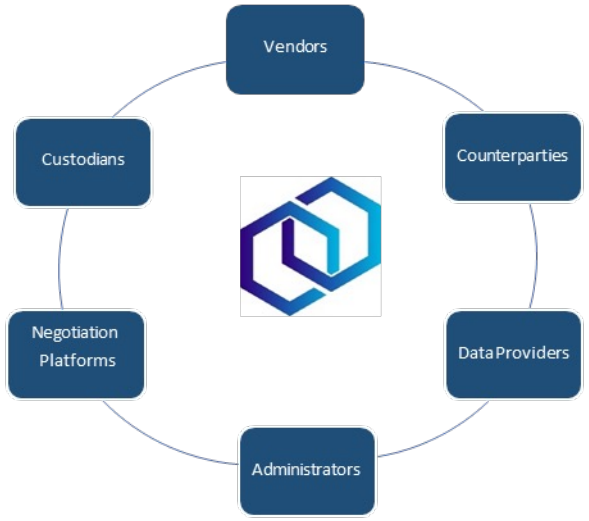
ISDA create

IM CSA Negotiated between parties

Standard CSA data ouput via ISDACreateAPI


```
{
  "agreementDate": {
    "day": 16,
    "month": 7,
    "year": 2020
  },
  "agreementType": {
    "governingLaw": "USNY",
    "name": "CREDIT_SUPPORT_ANNEX",
    "publisher": "ISDA",
    "vintage": 2018
  },
  "contractualParty": [
    {
      "value": {
        "meta": {
          "externalKey": "partyA",
          "globalKey": "65781808"
        },
        "name": {
```


Standard Representation Promotes Interoperability, Transfer of Clean Data and STP



Institutions can exchange CDM Standard for Documents including Eligibility Data to drive Collateral Processes

Use Cases and Benefits

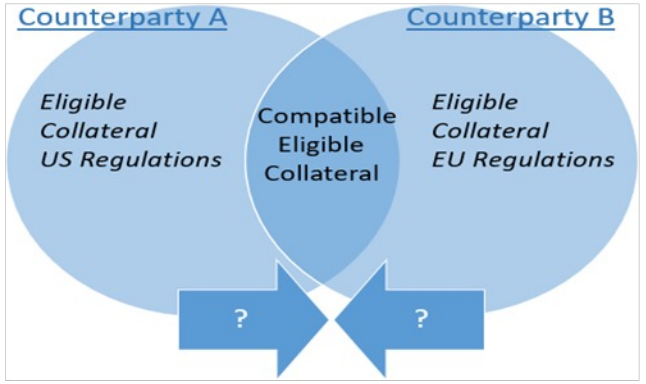
- Fewer Reconciliations, Translations
- Shorter Processes
- Reduced Negotiation Timeframes
- Improved Onboarding
- Decreased Settlement Risks
- Cost Effective
- Secure transfer of information
- Mitigates Margin Disputes
- STP from Negotiation to Settlement
- Produces Clean Auditable data
- Facilitates Digitizing Legacy Data
- Matching counterparty
- Standards for Eligibility Data
- Advance Optimization Processing
- Improved Custodian Services and Interoperability
- Advanced processing of Contract Amendments

Collateral- ECS Challenges – No Standard Data Format

CDM
COMMON DOMAIN MODEL

Challenges are observed today with constructing, negotiating and expressing ECS, many of these originate from lack of common data standards and the inability to connect process events.

- Observation of different regulations, agreeing on compatible eligible assets
- Challenges of collateral identity and categorization
- Understanding Asset economic identity to apply regulatory haircuts and confirm eligibility
- No common standards in place for representation of key features
- Currently no data standard used within documentation to describe the elements for eligible collateral – **many versions observed:**



	Items of Eligible Collateral (IM) and Eligible Currencies	[In respect of Party A's posting obligation]	[In respect of Party B's posting obligation]	[Valuation Percentage]
(A)	[ ]	[ ]	[ ]	[ ]%
(B)	[ ]	[ ]	[ ]	[ ]%
(C)	[ ]	[ ]	[ ]	[ ]%
(D)	[ ]	[ ]	[ ]	[ ]%
[FX Haircut Percentage]		[In respect of Party A's posting obligation: [8]% [, unless the Eligible Collateral (IM) is denominated in the Termination Currency specified with respect to Party B under the Agreement (including, without limitation, pursuant to this Annex), in which case, 0%.]		
		[In respect of Party B's posting obligation: [8]% [, unless the Eligible Collateral (IM) is denominated in the Termination Currency specified with respect to Party A under the Agreement (including, without limitation, pursuant to this Annex), in which case, 0%.]		
[Termination Currency][10]		With respect to Party A: [ ].		
		With respect to Party B: [ ].		
		In relation to a calculation pursuant to Section 6(e)(ii)(2) in respect of an Early Termination Date resulting from a Termination Event where there are two Affected Parties: [ ].		

(ii) **Eligible Collateral**

The following items: (i) will qualify as "Eligible Collateral" for Party A and Party B; and (ii) are identified by the appropriate ICAD codes, as defined in the Collateral Asset Definitions. Percentage shown is the Valuation Percentage applicable to the indicated combination of ICAD and Remaining Maturity.

	Remaining Maturity			
ICAD Code	One (1) year or under	More than one (1) year up to and including five (5) years	More than five (5) years up to and including ten (10) years	More than ten (10) years
GA-CA-GOV				
CA-TBILL	98%	N/A	N/A	N/A
CA-BOND	97%	97%	95%	93%
CA-RRB	98%	96%	94%	92%
GA-US-GOV				
US-TBILL	98%	N/A	N/A	N/A
US-TNOTE	98%	97%	95%	93%
US-TBOND	98%	97%	95%	93%

Eligibility criteria

Order	Field	Oper	Value	Outcome
1	Security Types	=	Bond, Equity	Accepted
2	Counterparty Own Issue	=	Yes	Not eligible
3	Asset Types	=	Cash	Not eligible
4	Bond Risk Profiles	=	Sovereign, Agency, Structured, Corporate, Convertible bond	Accepted
5	IM asset class. EU IM asset class. US	= =	C, D, E, F, G, H, I, J, K, L, N, Q-NFI, Q-FI 2, 3, 4, 5-a, 5-b, 6, 7, 8-a, 8-b	Eligible
	Final outcome		If none of the above criteria have been met	Not eligible

Haircut criteria

Group	Order	Field	Oper	Value	Outcome
1	1	Security Currency	Not in	EUR	8 %
2	1	IM asset class. EU Time To Maturity Security Applied Rating	= <= =	C, D, E, H, I, J, K 12 Months AAA LT, AA+ LT, AA LT, AA- LT	0.5 %
2	2	IM asset class. EU Time To Maturity Security Time To Maturity Security Applied Rating	= > <= =	C, D, E, H, I, J, K 12 Months 60 Months AAA LT, AA+ LT, AA LT, AA- LT	2 %
2	3	IM asset class. EU Time To Maturity Security Applied Rating	= > =	C, D, E, H, I, J, K 60 Months AAA LT, AA+ LT, AA LT, AA- LT	4 %
2	4	IM asset class. EU Applied Rating Time To Maturity Security	= = <=	C, D, E, H, I, J, K A+ LT, A LT, A- LT, BBB+ LT, BBB LT, BBB- LT 12 Months	1 %

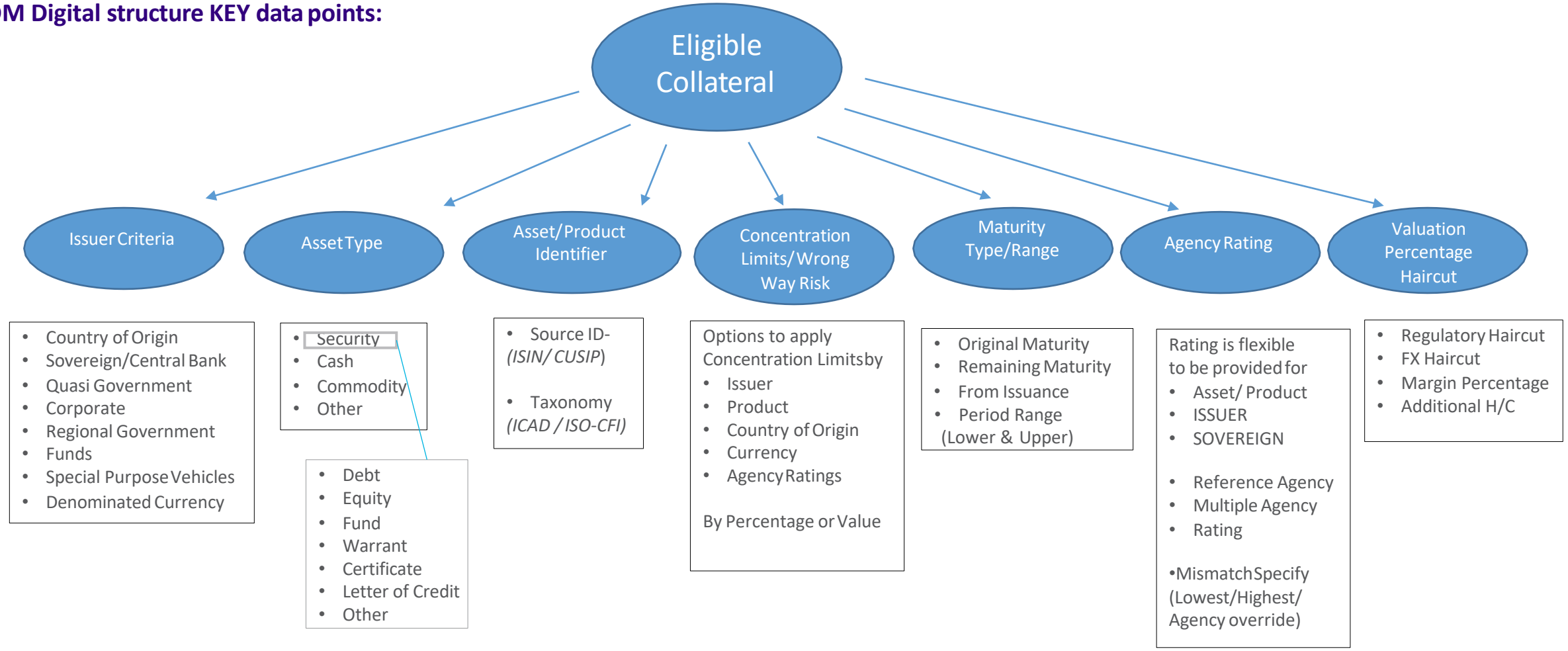
Concentration limits

Limit Type	Limit	Granularity	Field	Oper	Value	Basis
Max	15.00 % 10,000,000.00 EUR	Per UPI	IM asset class. EU	=	F, G, L, N, Q-NFI	Contract Collateral Basis

Collateral- Eligible Collateral Schedules

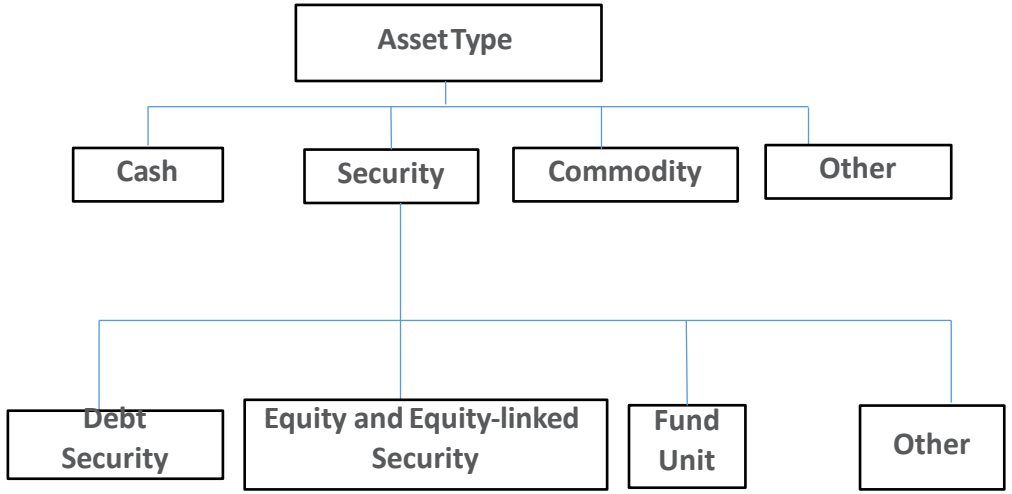
CDM
COMMON DOMAIN MODEL

CDM Digital structure KEY data points:

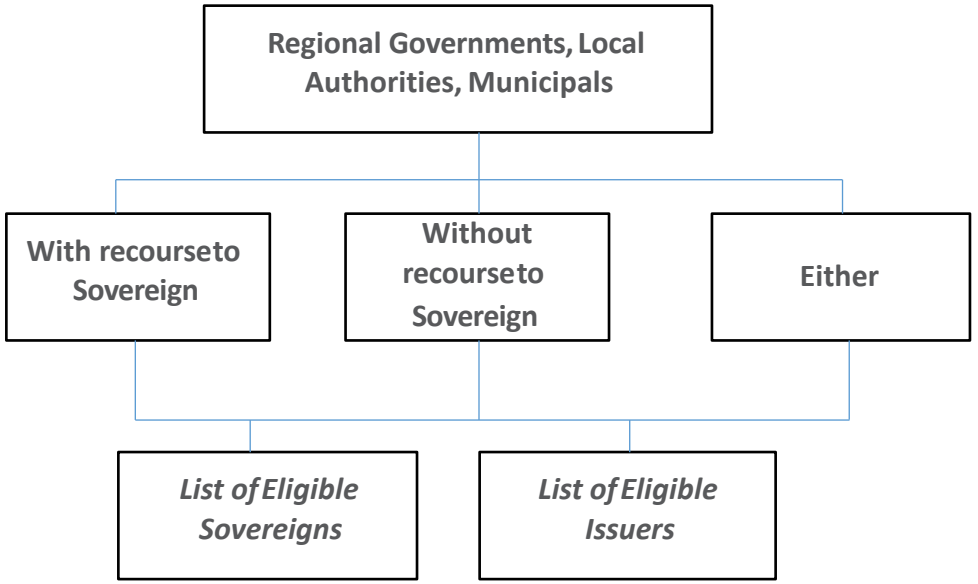


Collateral- Structure to define Asset Types and Identify Issuers

ISDA CDM will offer the flexibility to identify collateral asset types, with particular focus on securities, as most common form found in collateral schedules. However, this can be extended to cover many otherassets.



With the functional flexibility to capture detail of its identity including specific issuer name and use of common identifiers



Other issuer types include:

- Sovereign Central Banks
- Corporate
- Supranational Debt
- SPV and Funds

Collateral- CDM Eligibility Schedules Representation

CDM
COMMON DOMAIN MODEL

CDM offers standard data references points required for many industry forms of ECS. The structure enables consistent expression of data with the ability to apply various include/exclude rules and complex concentration limits. ISDA has demonstrated translation of several ECS provided by members into digital output

CDM Digital Data Representation:

- Collateral Issue Information
- Collateral Asset Type
- Collateral Maturity Range
- Agency Rating
- Valuation Percentage
- Include/ Exclude Rules
- Concentration Limits

CSA Free Format Eligible Collateral Schedule

	Items of Eligible Collateral (IM) and Eligible Currencies	[In respect of Party A's posting obligation]	[In respect of Party B's posting obligation]	[Valuation Percentage]
(A)	[ ]	[ ]	[ ]	[ ]%
(B)	[ ]	[ ]	[ ]	[ ]%
(C)	[ ]	[ ]	[ ]	[ ]%
(D)	[ ]	[ ]	[ ]	[ ]%
[FX Haircut Percentage]		[In respect of Party A's posting obligation: [8]% [, unless the Eligible Collateral (IM) is denominated in the Termination Currency specified with respect to Party B under the Agreement (including, without limitation, pursuant to this Annex), in which case, 0%.]		
		[In respect of Party B's posting obligation: [8]% [, unless the Eligible Collateral (IM) is denominated in the Termination Currency specified with respect to Party A under the Agreement (including, without limitation, pursuant to this Annex), in which case, 0%.]		
[Termination Currency][10]		With respect to Party A: [ ].		
		With respect to Party B: [ ].		
		In relation to a calculation pursuant to Section 6(e)(ii)(2) in respect of an Early Termination Date resulting from a Termination Event where there are two Affected Parties: [ ].		

CDM Digital Data Representation


```
"product" : [ {
  "collateralProductType" : [ {
    "productType" : "CASH"
  } ],
  "denominatedCurrency" : [ {
    "value" : "USD"
  } ]
} ],
"valuationPercentage" : {
  "valuationPercentage" : 1
}
, {
"product" : [ {
  "maturityRange" : {
    "lowerBound" : {
      "inclusive" : true,
      "period" : {
        "period" : "Y",
        "periodMultiplier" : 1
      }
    }
  },
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  "productIdentifier" : [ {
    "productTaxonomy" : [ {
      "taxonomySource" : "ICAD",
      "taxonomyValue" : "US-TBILL"
    } ]
  } ]
} ],
"valuationPercentage" : {
  "valuationPercentage" : 0.995
}
```

Collateral- Eligible Collateral Schedules

CDM
COMMON DOMAIN MODEL

An Eligible Collateral Schedule is represented in the CDM through the specification of criteria that can be used to "filter" whether a piece of collateral is eligible or not.

Asset Type – is used to specify criteria related to the nature of the asset, such as its type (cash, equity, debt, etc), country of origin or denominated currency

Issuer Type – is used to specify criteria related to the issuer of the asset, such the type of issuer (government, corporate, etc), specific issuer name, or agency rating

Treatment – is used to specify the valuation percentage, any concentration limits and whether the criteria specify inclusion or exclusion conditions

The combination of these terms allows a wide variety of eligible collateral types to be represented and can be applied across industry use cases for OTC, Securities Lending, Repo, Cleared and ETD. s

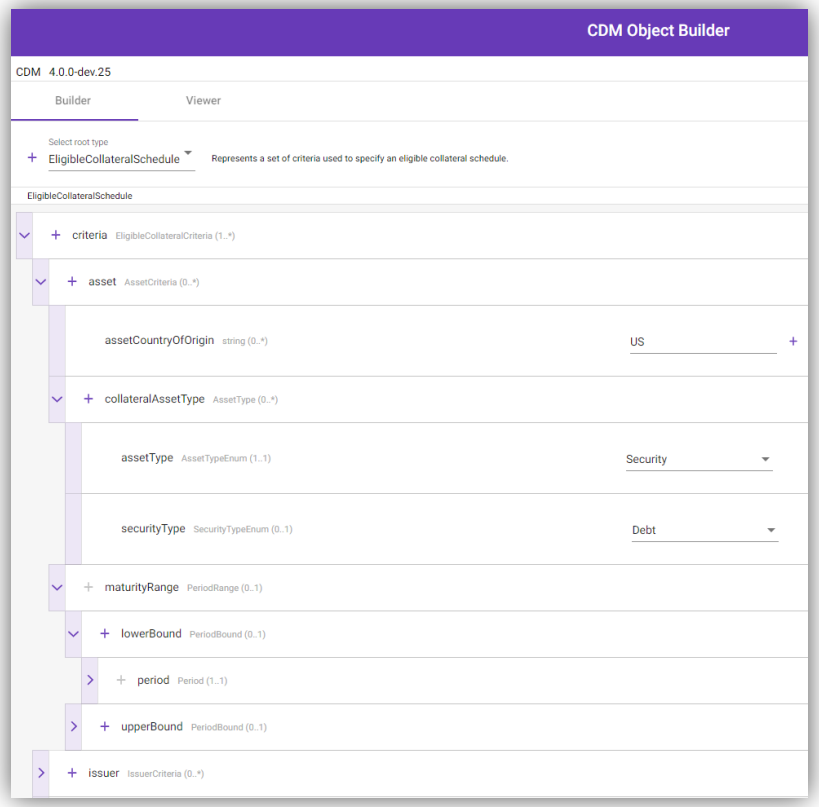
Solving problems for Global Banks, Custodians, Data Providers, Vendors and connecting solutions.

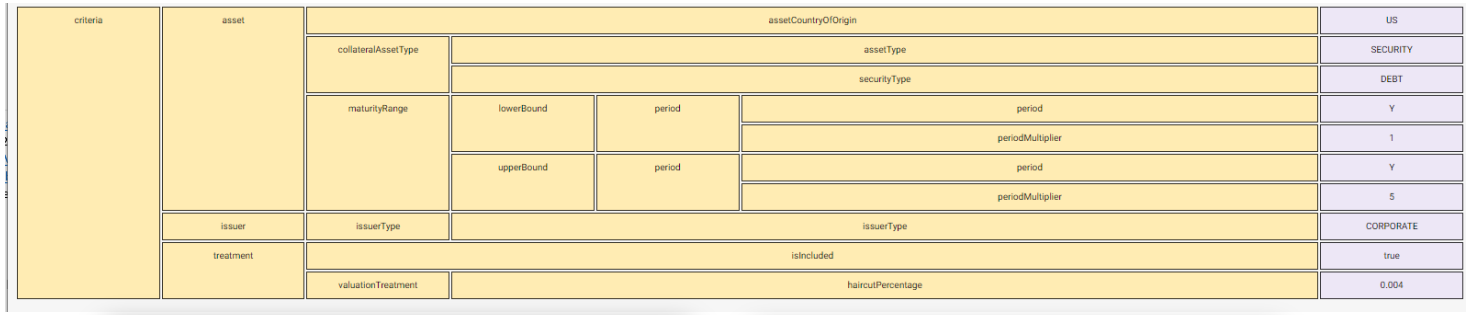
Standard data for Eligible Collateral information facilitates DLT, Smart Contract and technology to be built to add further efficiencies to processes

Collateral- CDM Object Builder

CDM
COMMON DOMAIN MODEL

REGnosys on behalf of ISDA have developed a user interface (UI) this allows you to create CDM Eligible Collateral schedule information using drop down functions. The user can create, import, share or inspect in CDM JSON and view in a tabular format. The Object Builder will be contributed to FINOS in 2023





criteria	asset	assetCountryOfOrigin				US
		collateralAssetType	assetType			SECURITY
			securityType			DEBT
		maturityRange	lowerBound	period	period	Y
					periodMultiplier	1
			upperBound	period	period	Y
					periodMultiplier	5
	issuer	issuerType	issuerType			CORPORATE
	treatment	isIncluded				true
		valuationTreatment	haircutPercentage			0.004

```
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```
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        "valuationTreatment": {
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        }
      }
    }
  ]
}
```

The UI can be used for predefined common eligibility profiles to import and edit and producing industry compatible consumable data output. The current UI gives the user the ability to also validate and construct many version of eligible collateral as CDM data and has the scope to be development further and built into services for use cases beyond collateral

Commitment to CDM Integration: Digital Documentation SLIDE 1

2021/22 – Technical Integration work with ISDA Create completed, and CDM standard format IM documentation available via Create API

2019- 2023 – Continued support and input on CDM Collateral related representations
Focus – VM & IM CSA, CSD and IM CTA, ISDA Master. Support CDM build for Legacy VM CSA
Q3 2024 – Analysis phase

2021/22 – Workshops to assess compatibility, first-stage mapping and analysis for IM CSA
H2 2023 – Development in COBRA for CDM IM CSA ingestion to COLLINE
Q1 2024 – CDM connector (IM CSA) released to production in COLLINE ready for client use
Q2 2024 - Ongoing discussions with clients to deploy connector into production.

For Calypso Solution:
2022 – Mapping to CDM IM CSA representation completed and validated using test data
2023 – Testing import/export using data uploader tool; version 1 competed
2024 – Extend document coverage to Legacy VM

2023 - Representation mapping and analysis for supporting selected CSA types feed in CDM format completed. Focus shifted to ECS for H1 2024
H2 2024 – Continue analysis and mapping to prepare for ingestion status. Potential to connect to service providers able to support CDM

2023 – Mapping for CDM IM CSA coverage completed to deliver integration into Murex (CDM vs MX.3) First version of CDM agreement import available (without eligibility schedule and legacy fields)
2024 – Extend upon IM CSA CDM availability with mapping for Legacy CSAs once delivered to CDM

Focus – CDM for representing IM, VM, Legacy CSA and Master Agreement data
2022/23 – Investigation into ability to round trip CDM data between Lyncs and ISDA Create for IM CSA
2024 – Ensure compatibility of CDM with internal model for Legacy VM CSA inc complex clauses. Production status/ timeline dependent on clients interested in using CDM

Focus –Exporting data models of CSA, ISDA master agreements, GMSLAs and GMRAs to the CDM
2024 – VM CSA finalised and in production, IM and legacy CSA in pipeline.
2025 – Continue working with WG to ensure representations capture relevant data, begin work on other agreements

For more questions on CDM and Collateral related initiatives, please reach out to: valdensmith@isda.org.

Commitment to CDM Integration: Digital Documentation SLIDE 2

TOKENOVATE

Focus – using CDM standards to link the library of composable contracts into an asset class agnostic automated lifecycle platform.

2023/24 - for Interest Rate Swaps and Verified Carbon Credits.

2025 - creating a golden record of high-fidelity trade data to reduce operational pain points on reconciliation and streamline back-office processes.

SMARTSTREAM

Focus – CDM mappings for an adapter for collateral agreement data.

2024 – Review and update current mappings for IM, VM and Legacy CSA agreements

For more questions on CDM and Collateral related initiatives, please reach out to: valdensmith@isda.org.

Commitment to CDM Integration: Eligible Collateral Representation SLIDE 1

acadia

2019- 2023 – Continued support and input on CDM Collateral related representations
Focus – Eligible Collateral and concentration attributes (in legacy/regulatory CSA/CTA docs and Triparty ECS. Ability to compare and reconcile eligible collateral and concentration representations from any CMS or Collateral service providers
Q3 2024 – Analysis phase

clearstream | DEUTSCHE BÖRSE GROUP

Focus – Build CDM translator for Eligible Collateral terms for 2- way client transfer via API
2021/2 – Phase1 ECS representation mapping analysis completed
2022/23 – Stage 2 technical mapping into application import/export functionality
2023/24 – Functionality release pending launch; dependent on connecting firms to support CDM

BNY

2022/2 3 – Continued support, input to workshops and contribution to CDM Eligible Collateral terms/conditions
2024 – Analysis for integration and model mapping of collateral eligibility terms, and pilot test with connecting client for POC.

Nasdaq

For Calypso Solution:
Focus – Redesign eligibility framework to extend clients options to include a CDM compliant version
2024 - Analysis for CDM Eligible Collateral model started

CLOUDMARGIN

Focus – Delivery of an ingestion mechanism for all Eligibility terms in CDM format
H2 2023 / 2024 – Integration analysis completed in 2023, including workshops held with CDM. ECS mapping exercise in progress, to enable complex eligibility terms ingestion into CloudMargin in CDM format

MUREX

2024 – Extension for Eligible Collateral in 2024, internal effort to re-build eligibility model leveraging CDM foundational structure

Logical Construct

2024 – As part of the full representation of legal agreement, the CDM Eligible Collateral schedule use case would be in scope for clients wishing to connect using CDM. Logical Construct will continue to support through CDM working groups

VERMEG

2024 – Focus on Collateral Eligibility Schedules and continued support through CDM working groups with model development

For more questions on CDM and Collateral related initiatives, please reach out to: valdensmith@isda.org,

Commitment to CDM Integration: Eligible Collateral Representation SLIDE 2

Focus –Export collateral representation data from Ark51 to the CDM, continue with WG to ensure data is captured correctly.

2025 – Expand AI capacity of our application to extract collateral information automatically for exporting to CDM

Focus – Established linkage between CDM collateral model and FIA Tech's Eligible Collateral schema, allowing interoperability for end users to evaluate eligible collateral assets on a range of global CCPs supported within FIA Tech's ETD focused data set. Continued interest in further building out mappings for a production feed for end user consumption but seeking support and feedback from subscribers to prioritize resource for the build out.

Focus – combining CDM standards, to build composable contracts, with tokenisation of real-world assets enabling near real time eligible collateral mobility within an automated lifecycle platform.

2023/24 - for Interest Rate Swaps and Verified Carbon Credits.

2025 - expand scope to cover derivatives in other asset classes including repo trades and using CDM to deliver a golden record of high-fidelity trade data to reduce operational pain points on reconciliation

Focus –CDM collateral eligibility and concentration mappings.

2024 – - Analysis of current structure and mappings ongoing.

For more questions on CDM and Collateral related initiatives, please reach out to: valdensmith@isda.org.

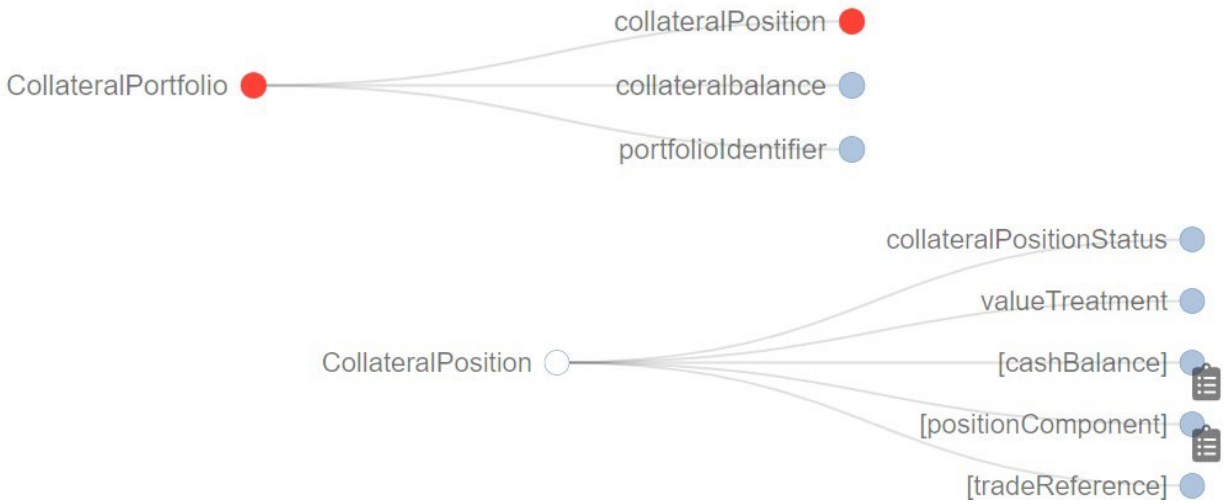
Collateral- CDM Margin Call / Positions / Balances and Exposure

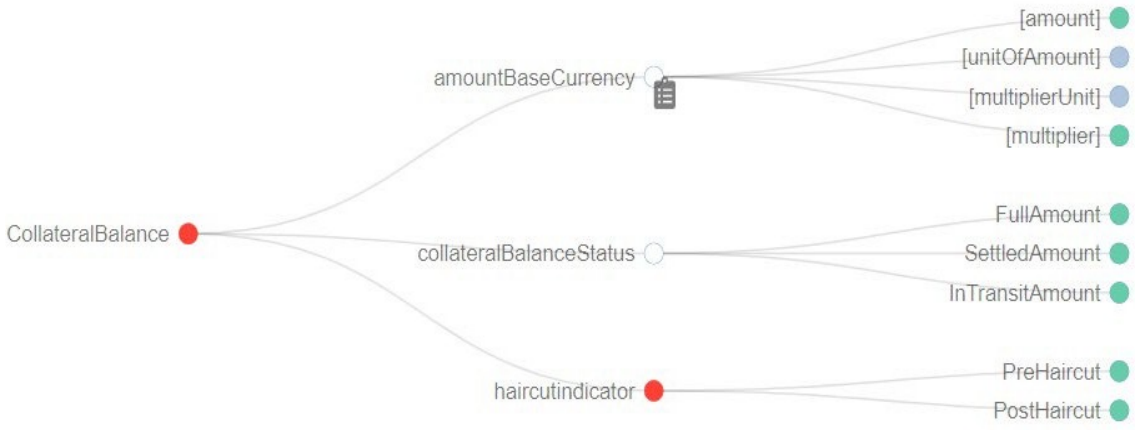
CDM
COMMON DOMAIN MODEL

Data to support the Collateral Margin Call process and its related components for Collateral Balance , Collateral Positions and Exposure are now represented in the CDM.

A foundational structure to support the data required for the margin call process including:

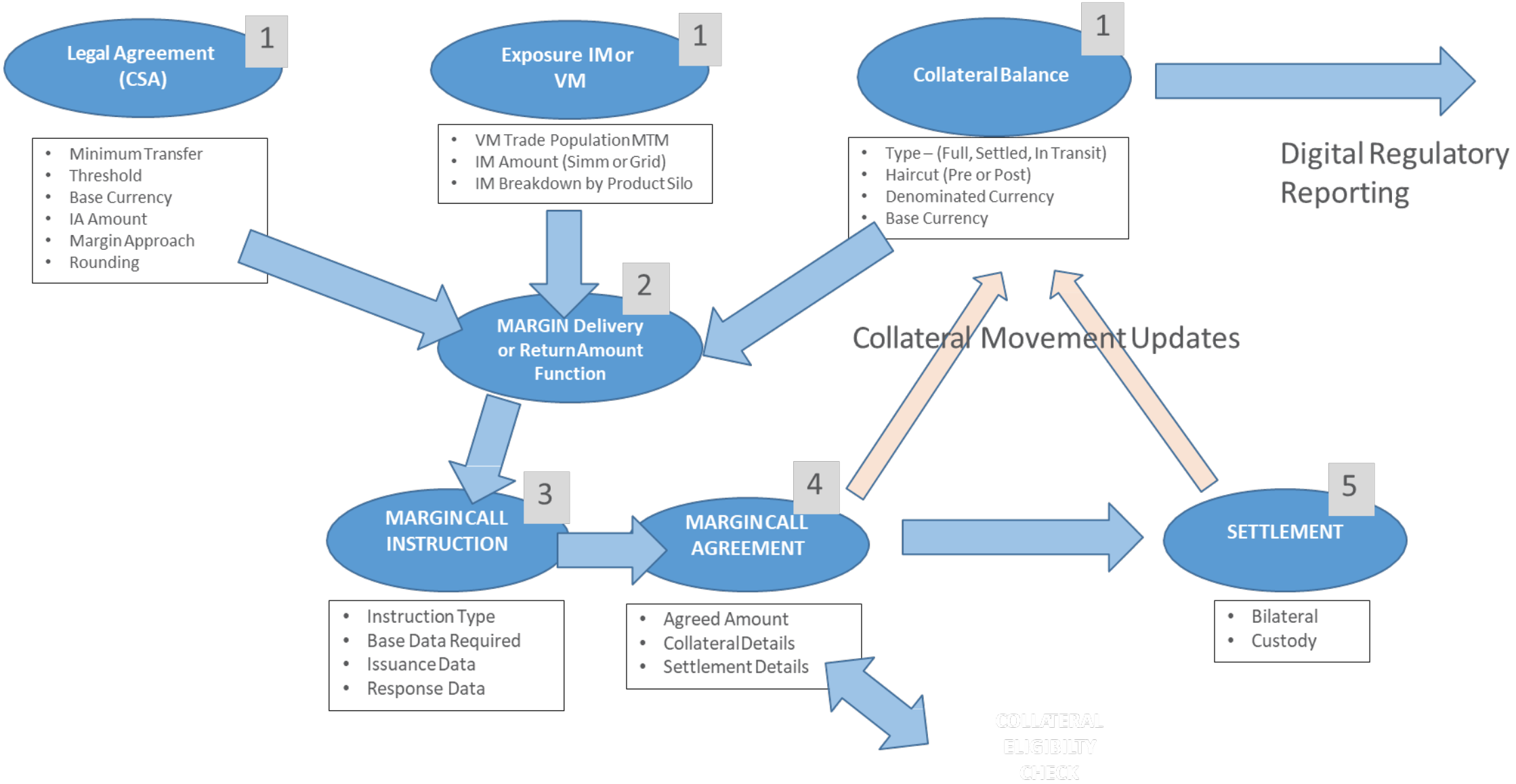
- **Standard margin call action labels**
- **Base details for margin call data types and attributes to support unique features for issuance and response**
- **Collateral positions and ability to list collateral assets for responding to margin demands and for information purposes**
- **Collateral balance data requirements and aggregate values for margin call data and reporting**





Collateral- Margin Call connection to other CDM components

CDM
COMMON DOMAIN MODEL



Collateral- Processing Standards in CDM- What next?

CDM
COMMON DOMAIN MODEL

2023/2024 - CDM Collateral Initiatives

Objectives:

Documentation Extensions:

1995 VM CSA

ISDA Master Agreement

Amendment Agreements

Support Adoption of CDM Documentation and ECS into Production Environments of External Platforms

Validate CDM Data Structure for Margin Call Issuance and Response Standards

Engage with Members for Support and Adoption

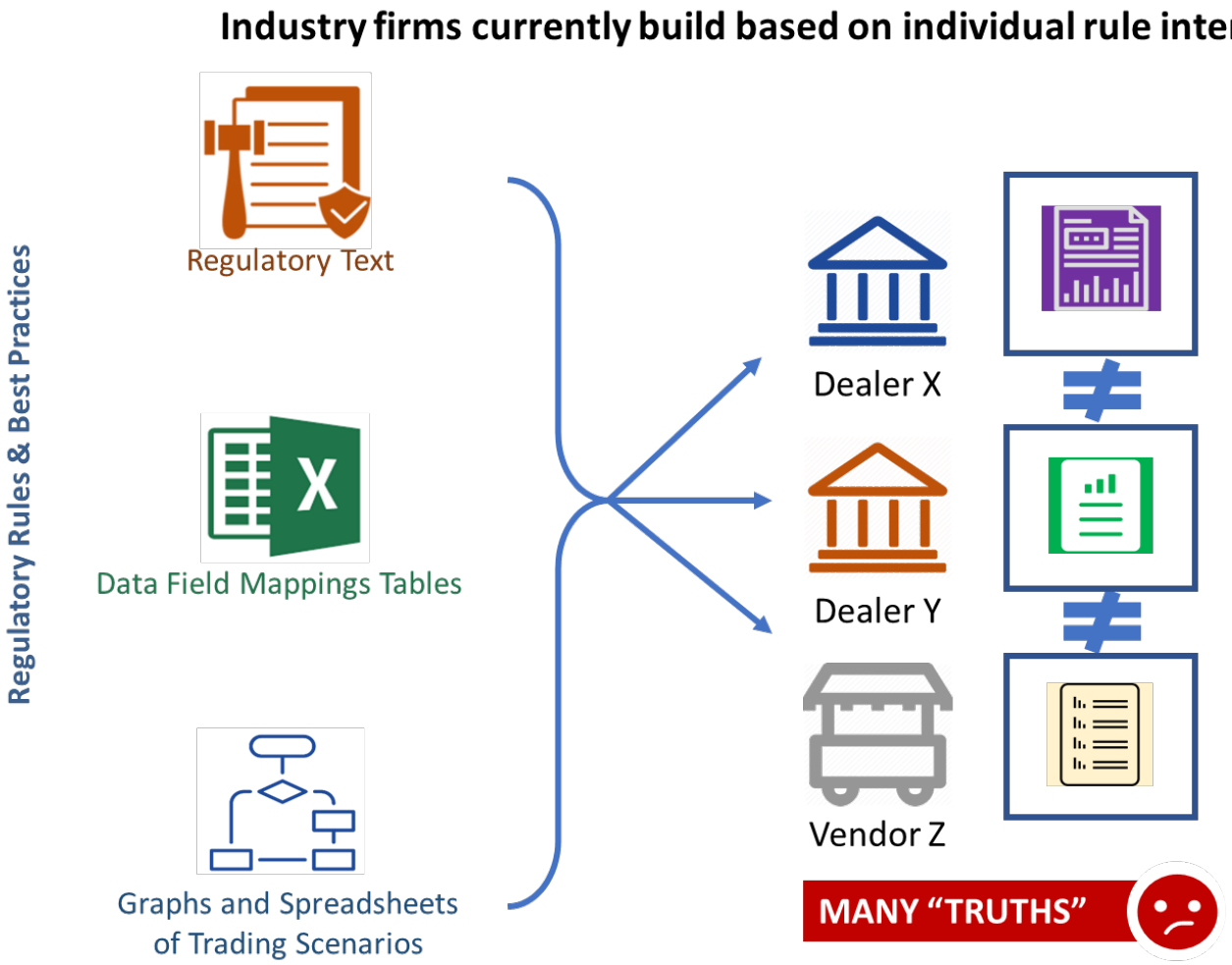
Collaboration with other Trade Associations to extend CDM

Repo and Securities Lending Collateral Process

Digital Regulatory Reporting

CDM
COMMON DOMAIN MODEL

Trade Reporting Rule Implementation Today



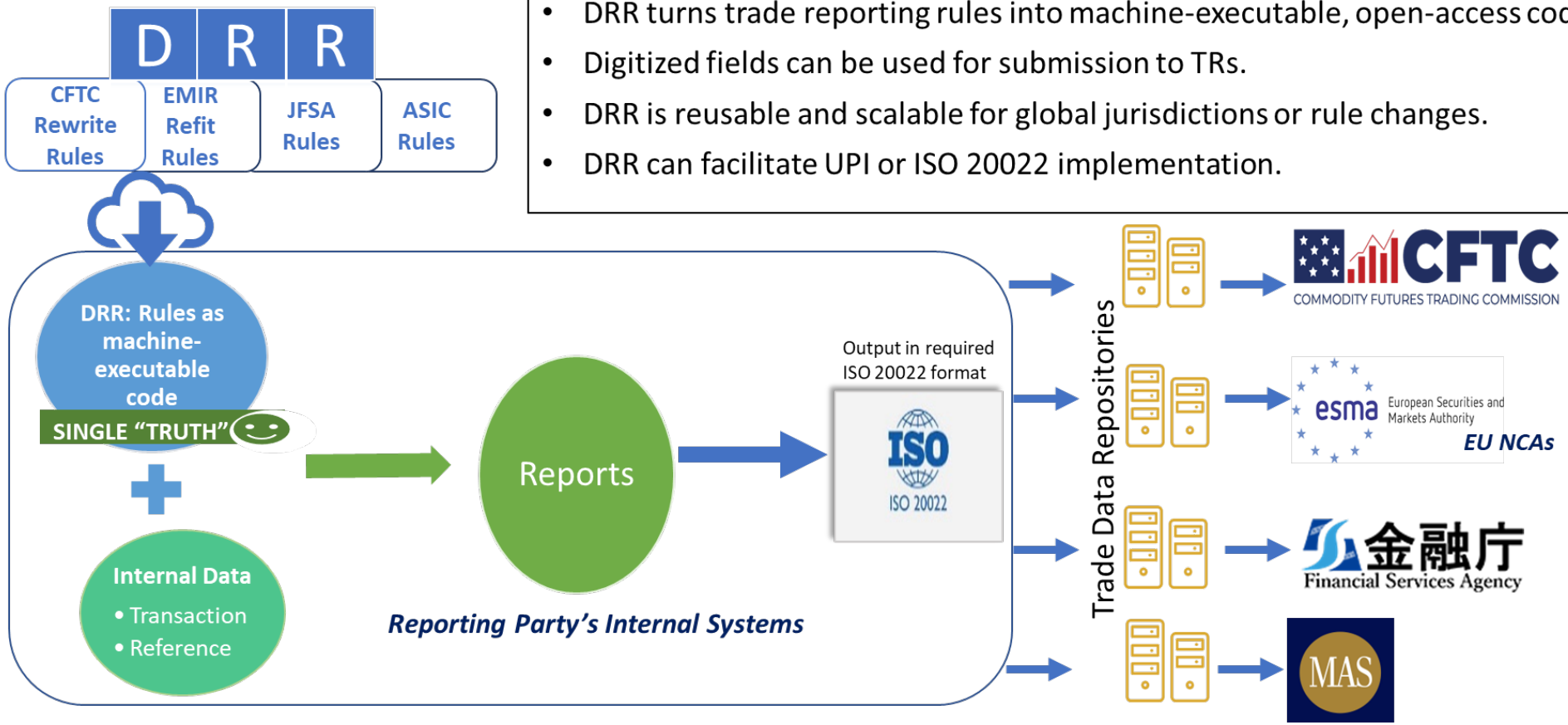
- **Inconsistent** & **Inefficient** implementations
  - Each industry participant implements based on individual interpretation of rules and guidance.
  - Loss of inter-operability between solutions
  - Reconciliation issues
  - Operational inefficiencies

Digital Regulatory Reporting

CDM
COMMON DOMAIN MODEL

Trade Reporting Rule Implementation Using the DRR

- A digitized representation of trade reporting rules and industry practices based on a mutualized industry interpretation.
- DRR turns trade reporting rules into machine-executable, open-access code.
- Digitized fields can be used for submission to TRs.
- DRR is reusable and scalable for global jurisdictions or rule changes.
- DRR can facilitate UPI or ISO 20022 implementation.



Digital Regulatory Reporting

CDM
COMMON DOMAIN MODEL

Trade Reporting Rule Implementation Using the DRR

Mutualize regulatory reporting compliance effort

- Rule interpretations and compliance effort is spread across the industry

Gives you an unambiguous rule interpretation

- Reflects rules, guidance and industry best practices in an unambiguous way within the DRR model

DRR is open-access and increases transparency

- The DRR will be accessible to regulators and market participants

Defines core regulatory reporting ruleset only once

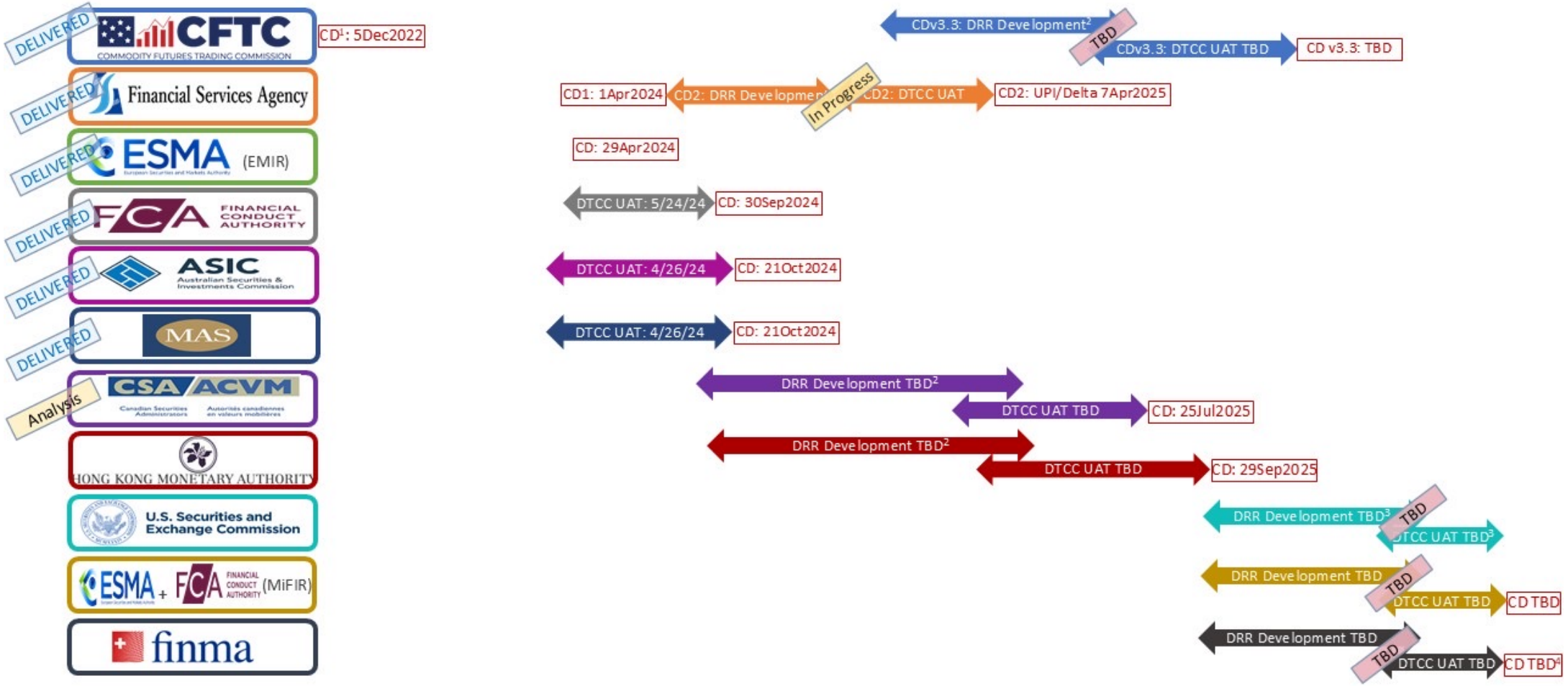
- Thereafter, only incremental efforts are required to extend the DRR model to other jurisdictions and future changes to reporting rules
- And such updates will be delivered through centralized DRR model changes

Significant resource and cost savings

- Through the mutualized effort, firms leveraging DRR using the CDM will reap significant compliance, reporting and implementation project savings

Digital Regulatory Reporting Delivery: Progress and Roadmap

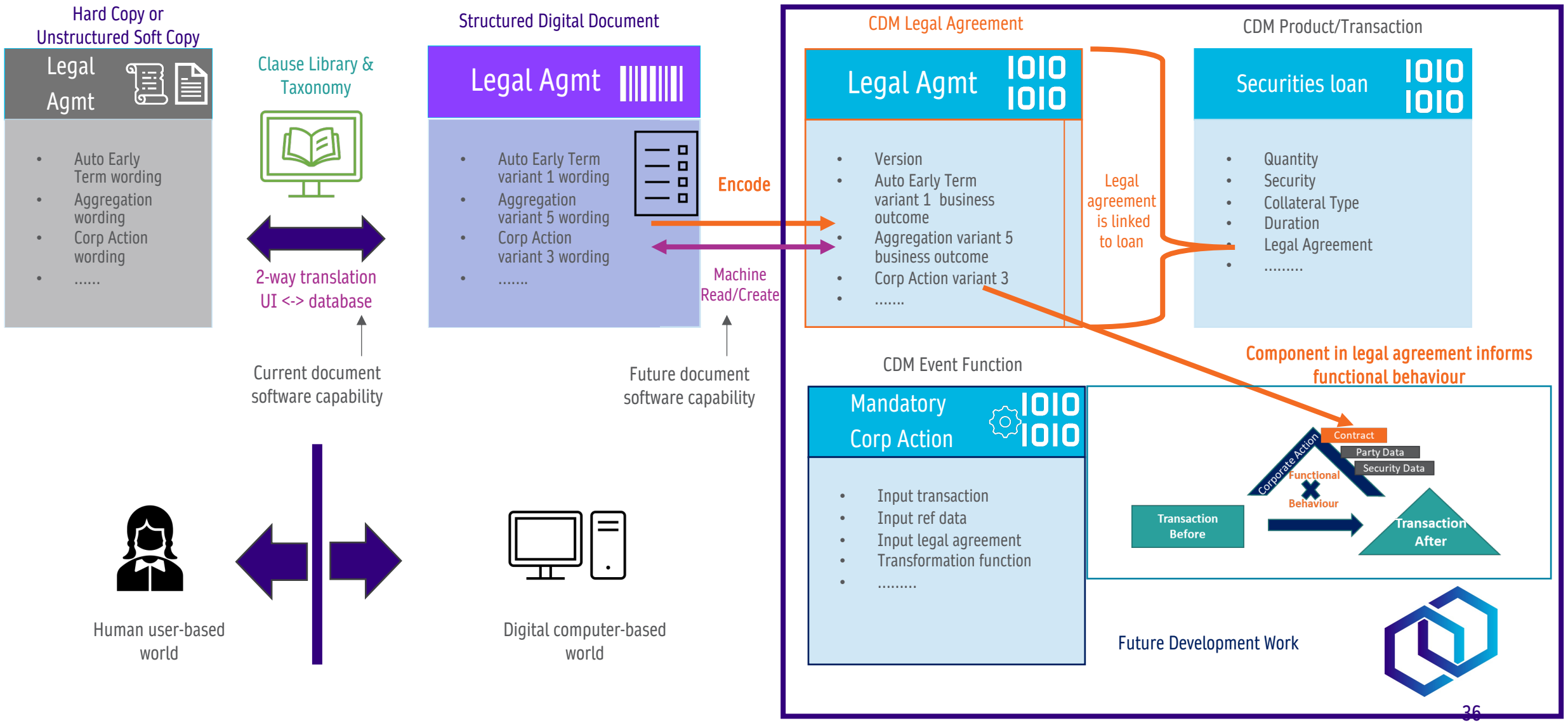
ISDA Digital Regulatory Reporting powered by CDM



1) CD=Compliance Date. 2) Timing dependency on timing of potential DRR refactoring. 3) DRR timing & need for UAT dependent on SEC action re: Nov2025 relief expiry. 4) expected 2027 (subject to change).

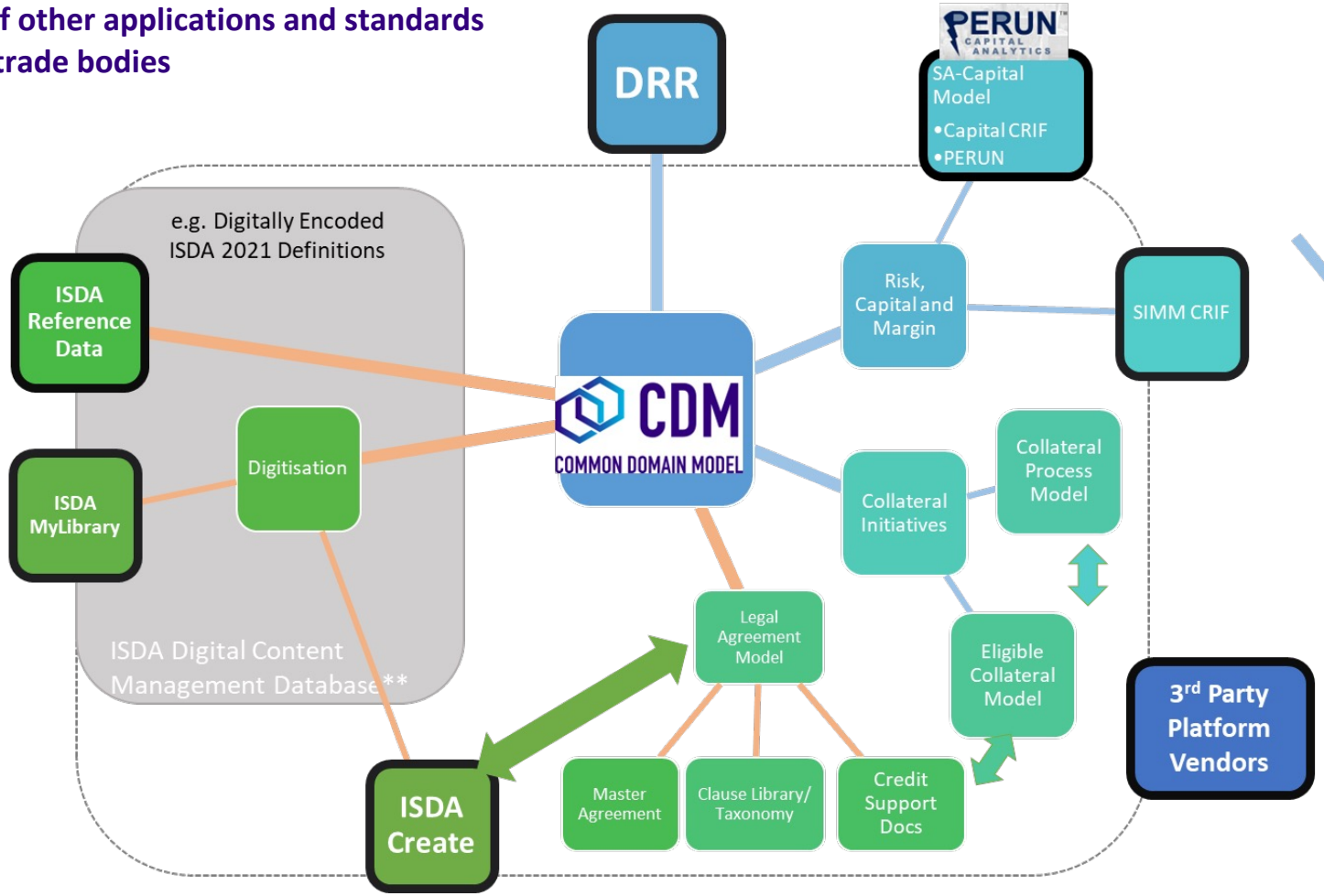
Integrating CDM and Legal Agreements

CDM
COMMON DOMAIN MODEL



Further Use Cases: Ecosystem

CDM presents opportunities to interact with entire eco system of other applications and standards provided by trade bodies

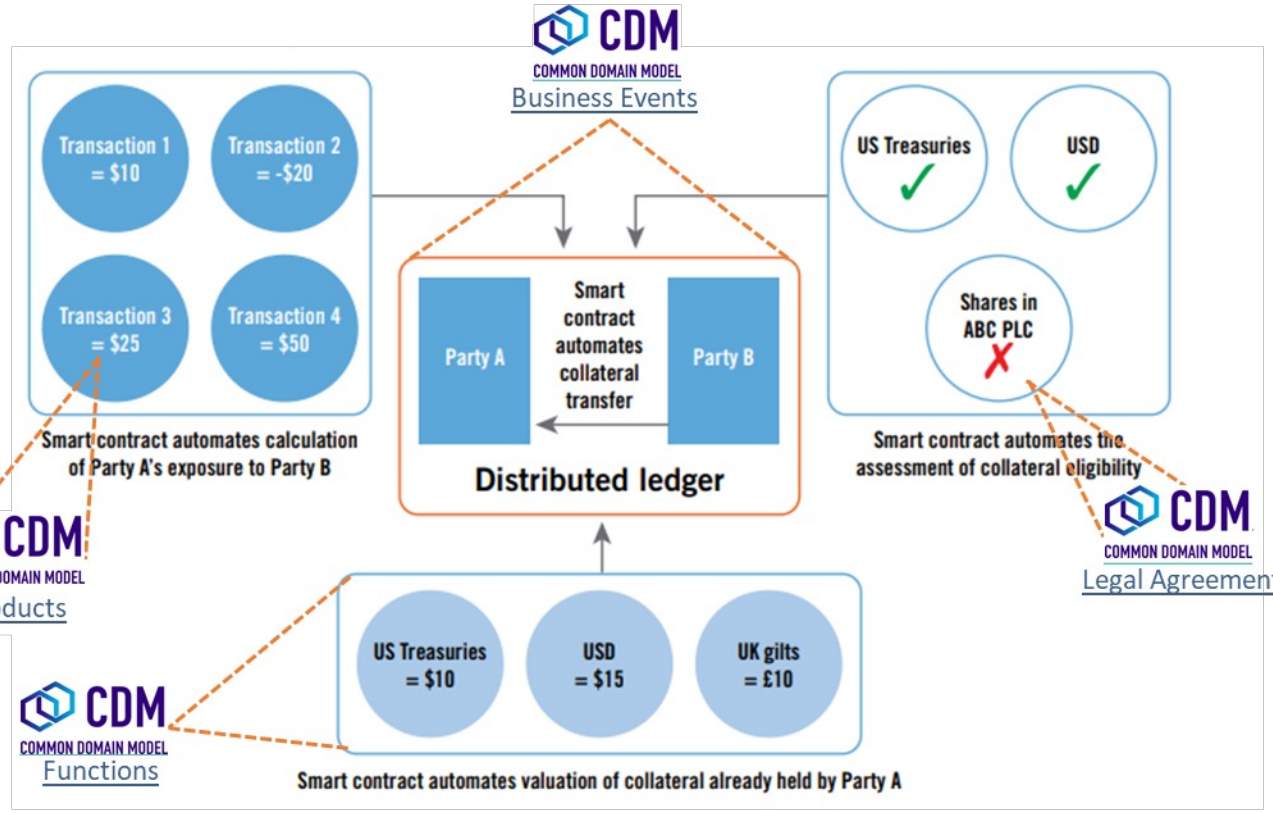


CDM provides framework to model data + processes and delivers standards as code for implementation

CDM provides framework for content and data model for standard representation

Further Use Cases: Smart contract technology support

Use case: Aid the consistent and robust implementation of smart derivatives contracts applications and related upcoming technologies



- Many collateral processes such as:
  - The valuation of exposure and margin requirements;
  - Assessing collateral eligibility;
  - Exchange and return of collateral assets,
  - use conditional logic and could benefit from increased automation.

- This example provides an illustration of a potential smart derivatives contract construct that is designed to automate certain aspects of the collateral management process.

**Illustrative*

Further Use Cases

CDM
COMMON DOMAIN MODEL

Integration with CRIF standard for FRTB, SIMM, and SA-CVA reporting

Transcribe legally prescribed functional clauses from ISDA Def into machine readable and human readable codified functions

Facilitate more efficient re-use of data e.g. data template for large volume of increases of an Equity portfolio swap

Set a standard for the efficient digitalisation of collateral related margin process

Assert and mutualise the standardised encoding and capacity for implementation of legal clauses supporting the life cycle events of derivative transactions.

Express the CCP clearing handbook book that regulates the registration and clearing of a transaction into a machine readable and executable code that can be automatically generated.

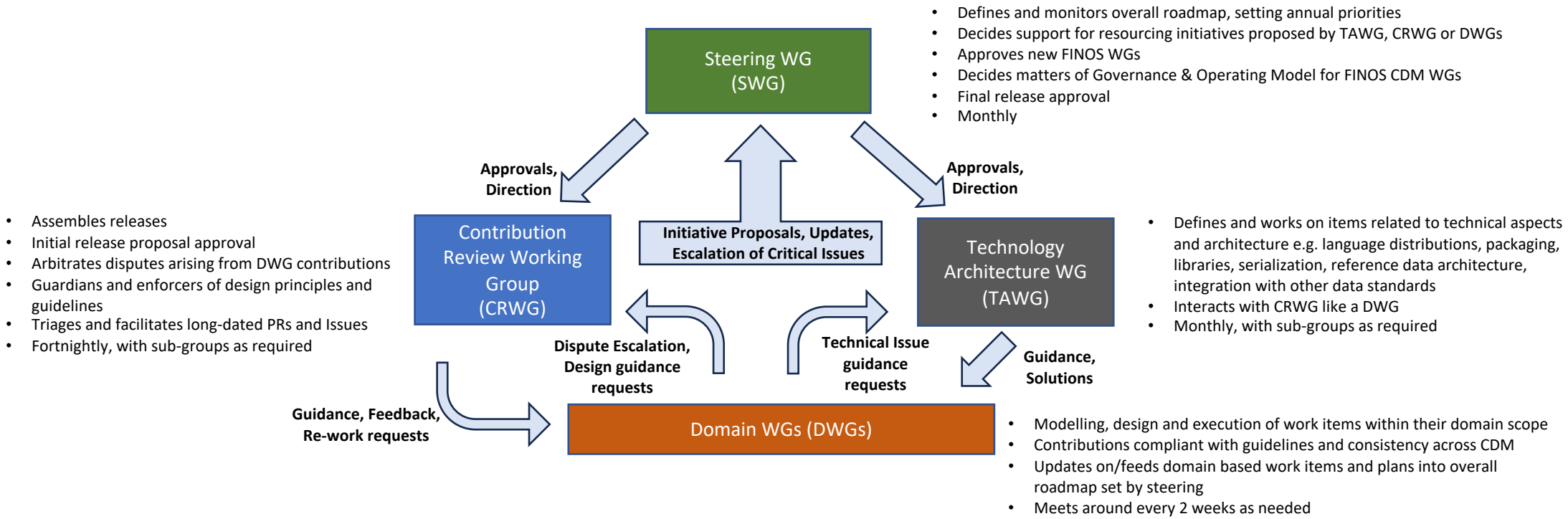
Support more consistent implementation of market infrastructures processes such as clearing in tally with upcoming new innovative technologies (DLT, Cloud, Smart Contract, etc)

Match and store consistent trade representations that feed in “real time” FO trading systems using DLT and detect inconsistencies if any.

Aid the standardized representation of SSIs

Get Involved

How to get involved- Community Structure



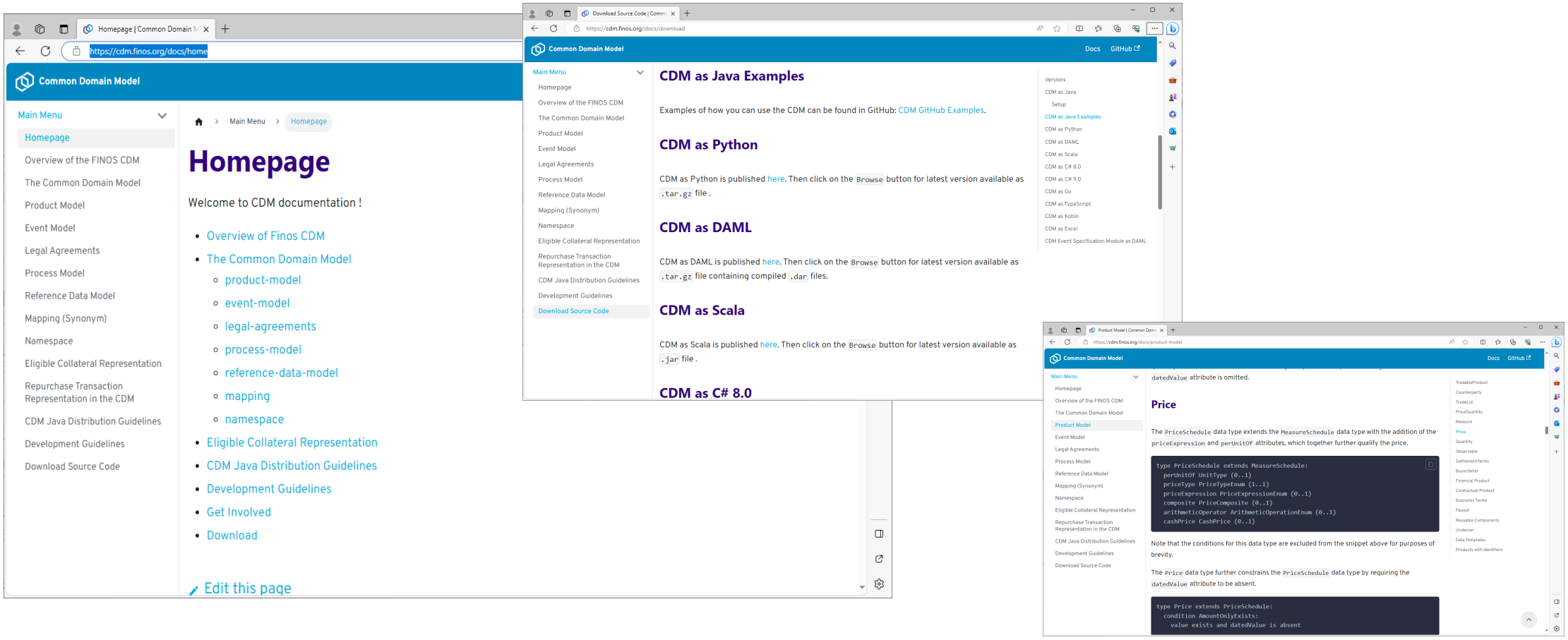
List of DWGs & their Scope as at Mar 24:

- Collateral- *Collateral schedules & processes*
- Repo & Bonds- *Repo & bond products*
- Securities Lending- *Securities Lending*
- Derivatives Products and Business Events (DBPE)- *Derivatives products of a non-structured/exotic nature*
- Structured Products- *Structured & Exotic Derivatives*
- DRR Peer Review- *Digital Regulatory Reporting (Derivatives regimes)*
- ISDA Legal Agreements- *ISDA Legal Agreement modelling*

FINOS groups
ISDA WGs
ISLA WGs
ICMA WGs

How to get involved

Info hub for FINOS including user documentation downloadable distributions: [Homepage | Common Domain Model (finos.org)]



COMMON DOMAIN MODEL

The Common Domain Model is brought to you by:

FINOS

ISDA Safe, Efficient Markets

ICMA International Capital Market Association

ISLA INTERNATIONAL SECURITIES LENDING ASSOCIATION