ISLA CDM Initiatives

Apr 2023

CDM- The Case for Standardisation

Market Developments - Agenda for Change

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8) TERMINATION
- Penalties for settlement failure under CSDR
- Details in GMSLA/loan
- Redelivery/repayment upon termination of loan

7) ENFORCEMENT
- Effectiveness of enforcement mechanism
- Value of securities/collateral
- Events of default

6) PERFORMANCE
- Reporting under SFTR
- Details of GMSLA/loan
- Occurrence of life cycle events including collateral management and corporate actions

5) COMMENCEMENT
- Penalties for settlement failure under CSDR
- Details of GMSLA/loan
- Delivery/payment on commencement of loan

1) PRE-CONTRACTUAL
- KYC / AML / Onboarding
- Counterparty information
- Reporting under SFTR

2) CONTRACTUAL – MASTER AGREEMENT
- Counterparty information
- Details of GMSLA
- Provisions included to comply with regulation req.
- Consideration of registration of security interest
- SFTR disclosure

3) CONTRACTUAL - LOAN
- Negotiation and execution of loan/trading
- Recording of loan data in internal systems
- Details of loan
- Reconciliation of loan details between parties
- Reporting under SFTR
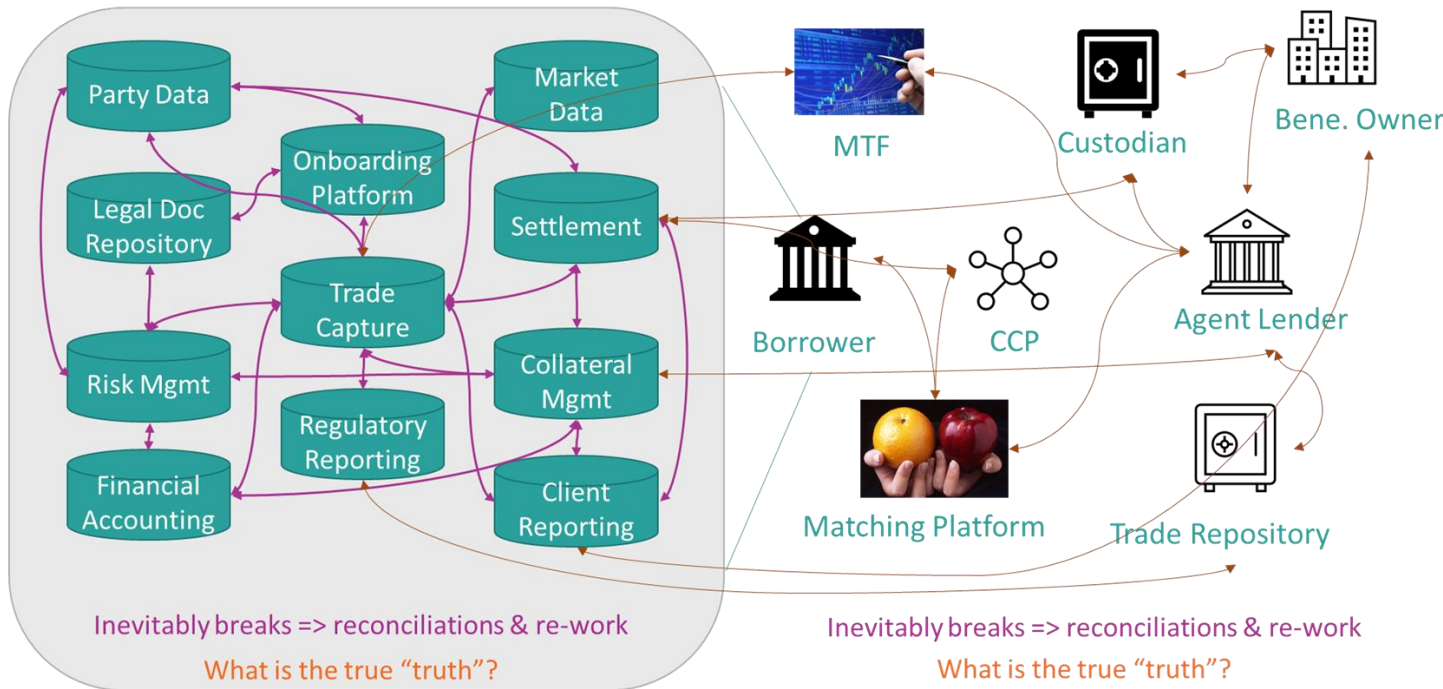- Short selling regulation

4) ALLOCATION
Allocation of loan to underlying principals
Counterparty identity
Reporting under SFTR
Compliance with internal credit limits

THE FUTURE OF THE SECURITIES LENDING MARKET

TERMINATION · PRE-CONTRACTUAL · CONTRACTUAL (MASTER AGREEMENT) · FORMATION · CONTRACTUAL (LOAN) · ALLOCATION · COMMENCEMENT · PERFORMANCE · ENFORCEMENT

Current State of The Market:
The Data Model Mess & Booking Model Debacle

Miasma of internal systems with different data models

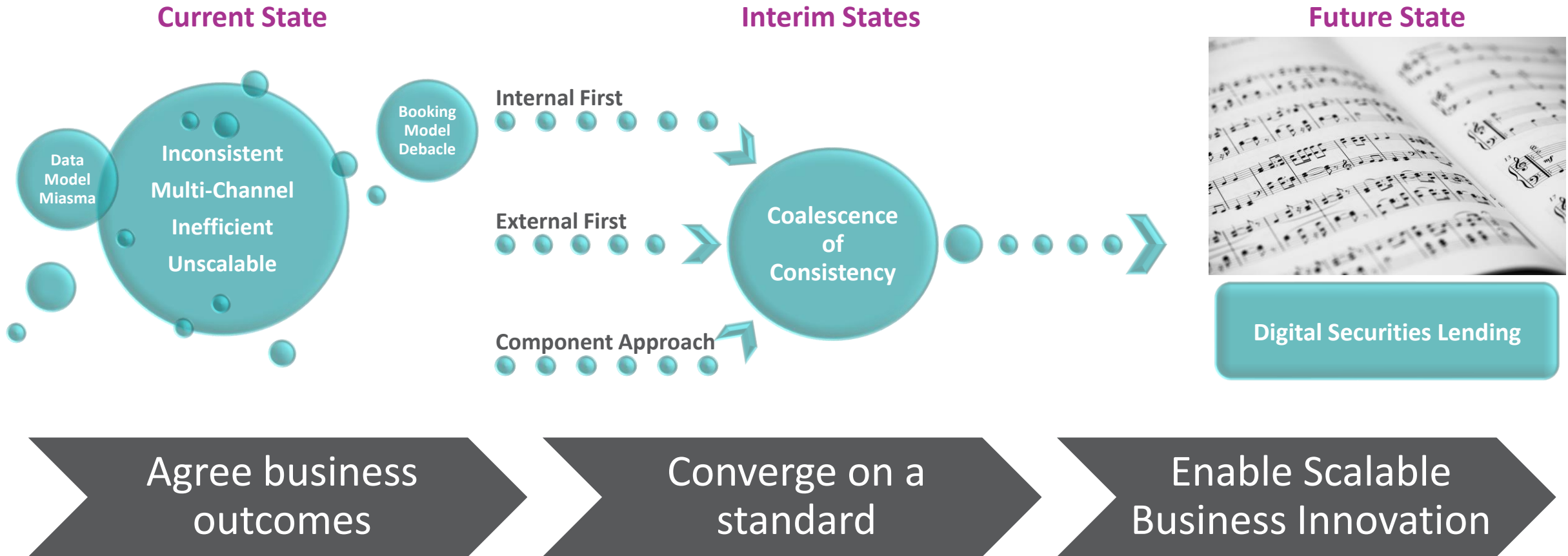Miasma of external parties with different data models

Party Data
Market Data
Onboarding Platform
Legal Doc Repository
Settlement
Trade Capture
Risk Mgmt
Collateral Mgmt
Regulatory Reporting
Financial Accounting
Client Reporting

Inevitably breaks => reconciliations & re-work
What is the true "truth"?

MTF
Custodian
Bene. Owner
Borrower
CCP
Agent Lender
Matching Platform
Trade Repository

Inevitably breaks => reconciliations & re-work
What is the true "truth"?

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**

Industry Initiatives – Where we are going

Current State

Interim States

Future State

Data Model Miasma

Inconsistent
Multi-Channel
Inefficient
Unscalable

Booking Model Debacle

Internal First

External First

Component Approach

Coalescence of Consistency

Digital Securities Lending

Agree business outcomes → **Converge on a standard** → **Enable Scalable Business Innovation**

In order to compete in the digitised future the industry needs to find its way to consistency on the business fundamentals, from which, future innovation can spring, grow and adapt sustainably

Consistency Depends on a <u>Common</u> Domain Model

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> ### Single, common digital representation of trade events and actions
> Enhance consistency and facilitate interoperability across firms and platforms

- There are six modelling dimensions to the CDM
  - Product
  - Event
  - Legal Agreement
  - Process
  - Reference Data
  - Mapping (Synonym)

> ### Model design based on composability and reusability of all components

A CDM is not
- a specific application or product- it is the basis on which apps and products can be built
- just another data model- it also encodes the functional operations
- a smart contract or distributed ledger- though it will build the foundation for these
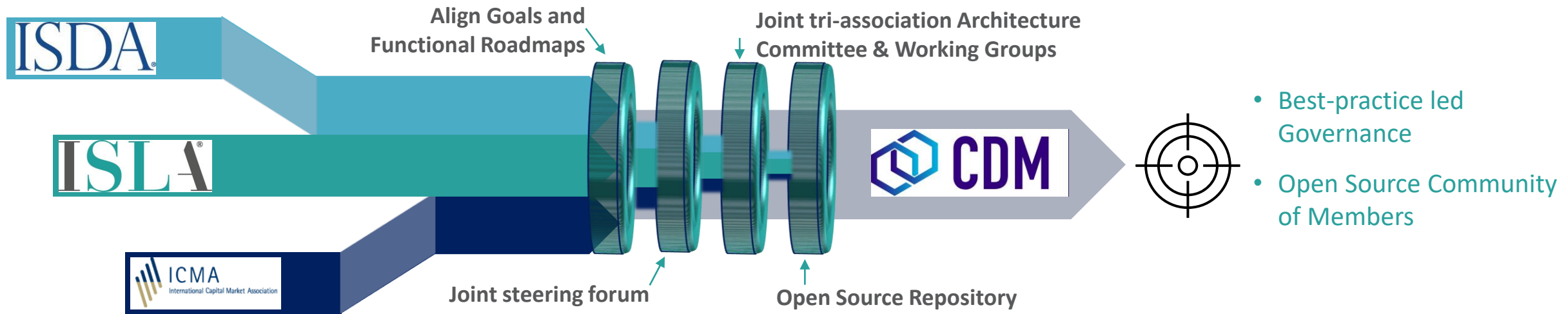
Associations collaborating towards the same future goal, to benefit the whole industry.
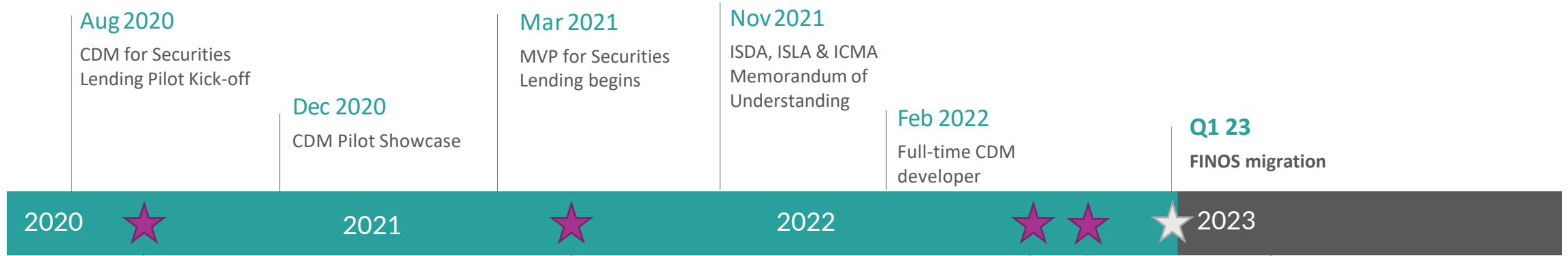
A Common Domain for the market, built by the market.

Thursday 8 September 2022

ISLA, ICMA & ISDA Appoint FINOS for CDM Repository

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CDM- The Journey

CDM For Securities Lending – The Journey to Date

Aug 2020
CDM for Securities Lending Pilot Kick-off

Dec 2020
CDM Pilot Showcase

Mar 2021
MVP for Securities Lending begins

Nov 2021
ISDA, ISLA & ICMA Memorandum of Understanding

Feb 2022
Full-time CDM developer

Q1 23
FINOS migration

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2020          2021              2022                          2023
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Oct 2020
Completion of Pilot:
Cash DVP execution & allocation

Jun 2021
MVP: full loan representation inc. non-cash
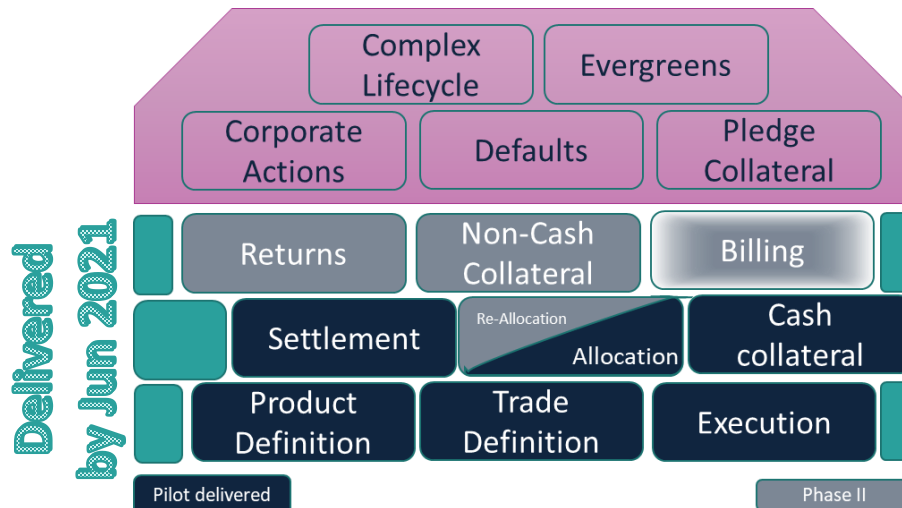
Oct 2022
Evergreen & extendible product

Nov 2022
**RFQ Workflow Dev complete**

2023 Book of Work

- Lifecycle events: Re-rates
- Trading workflows
- Availability feeds
- Support for DLT- CDM as-a-service
- Member contributions via FINOS
- Document digitisation-integration of ISLA Clause Library

Complex Lifecycle | Evergreens
Corporate Actions | Defaults | Pledge Collateral
Returns | Non-Cash Collateral | Billing
Settlement | Re-Allocation / Allocation | Cash collateral
Product Definition | Trade Definition | Execution

Delivered by Jun 2021

Pilot delivered | Phase II

Look ahead to 2023 – CDM

- **Open Source Community**
  - Complete migration- COMPLETED FEB 23
  - Begin FINOS WGs & community contributions
  - Collateral group & other cross-product opportunities

- **Trading Sub-group**
  - Availability files
  - RFQ- multiple lenders
  - Integrate allocation functionality

- **Document Digitisation**
  - Complete modelling principles
  - Complete model for ISLA Clause Library to date and contribute to CDM

- **CDM WG- H1 priorities**
  - Evergreen & extendible events- COMPLETED JAN 2023
  - Enhancements and further lifecycle- DLT readiness, re-rates
  - Support member use cases to aid adoption

CDM Detail

CDM - Data <u>AND</u> Function
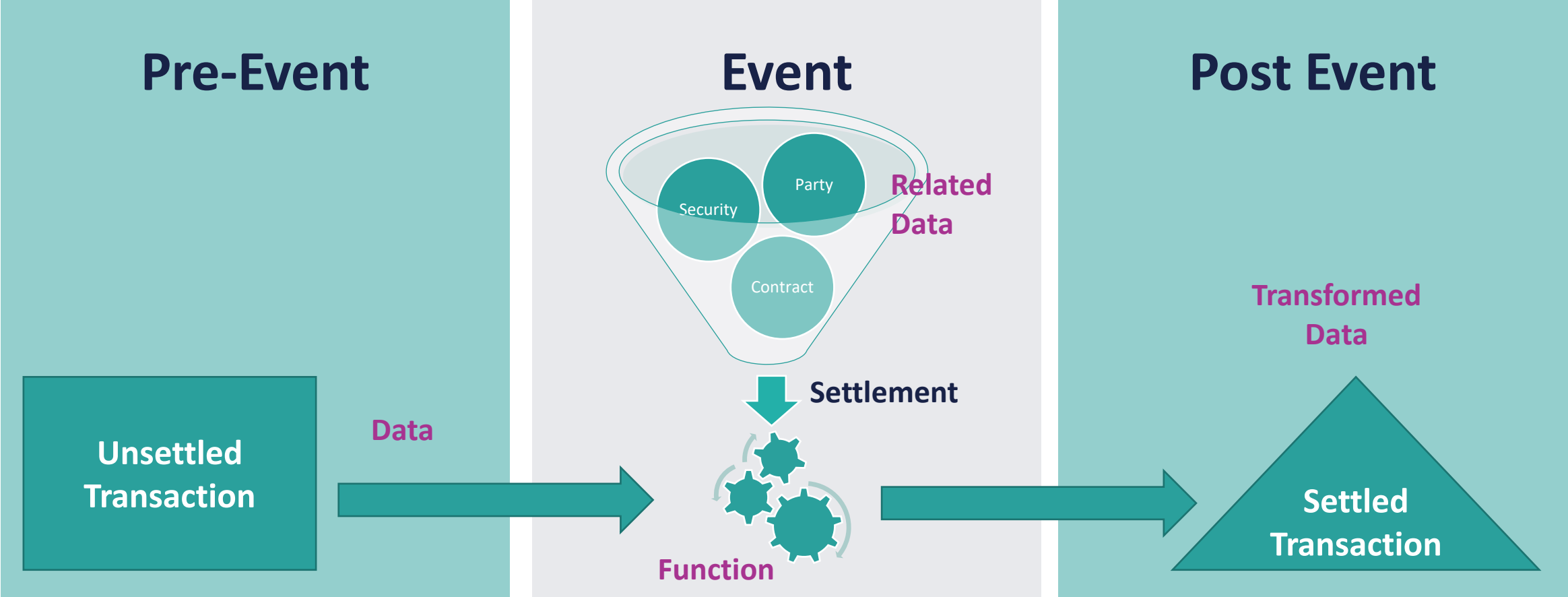
A CDM consistently codifies **all** of the pieces **(purple text)**

Use cases- CDM benefits an organisation F2B

Candy- Sales/CRM

- Onboarding clients can take a long time due to efforts required to connect their systems to ours
- My clients often want consistent reporting across multiple products but I cannot provide that due to different underlying models

Omar- Technology

- Every time the business buy a new system I have to spend a large amount of effort just mapping fields and message protocols
- A large part of my budget is spent on keeping legacy systems compatible with each other

Timon- Credit Risk

- I often have to wait a number of days to understand who my firm actually has credit risk against
- We often see under-collateralisation due to valuation disputes and settlement mismatches

A CDM enables/creates

- Reduction of breaks, mismatches and calculation disputes between systems and parties
- Plug & play connectivity
- Free to use data model
- Foundation for strategic use of future technologies
- Pull model for Regulatory and other reporting
- Cross-asset interoperability

Ana- Regulator

- The data I receive from two firms about the same trade often differs in the details
- Much of the data I receive meets validation rules but is populated incorrectly
- I am pushed so much data, that finding what I want exactly is a challenge

Lisa- Operations

- I spend hours reconciling our own systems to ensure they're in line
- My counterparts never agree my positions after a corporate action
- 10% of my settlement fails are due to instruction mismatches

Sally- Finance

- Each month we see large increases in accounts receivable due to billing arrears caused by mismatching valuations
- I have to manually combine funding costs and hedged risk across multiple business lines

Jed- Business Head

- I desperately want to trade new digital assets and take advantage of new technology but each integration attempt costs so much time and effort
- My margins are being squeezed by technical and operational inefficiencies

Adoption Barrier - the Lazy User Model

Lazy User Model (LUM)- Users will select from a range of solutions based on the amount of effort required from the user. Firms behave the same way.

How do we reduce each of these elements?

Mental Effort- CDM is a complex concept

    a.   Awareness & Repetition

    b.   Visuals, Diagrams, Demonstrations

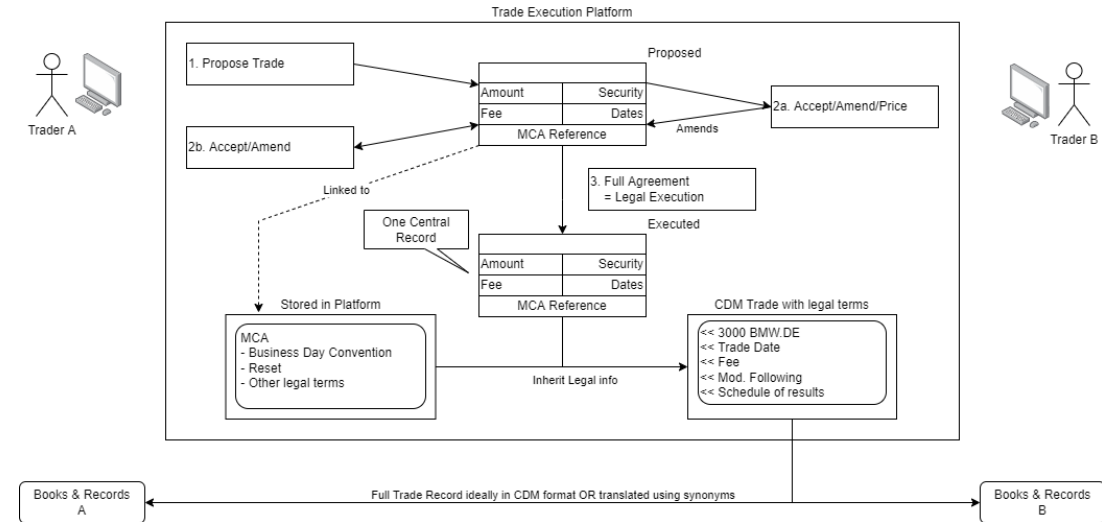**Monetary Costs- Adapting data models, use of IT resources**

    a.   External vendor based approach- low delta

    b.   Incorporate in strategic tech goals

    c.   Open source code is free

Time- Transition period may involve bifurcated models

    a.   Component based approach spreads cost over time

    b.   Increased efficiency within components converted

Collan, M. & Tetard, F. (2007). Lazy User Theory of Solution Selection. Proceedings or the CELDA 2007 Conference. Algarve, Portugal, 7–9, December, 2007. pp. 273–278.

Member group looking at a standardised execution workflows

- Building on MVP model
- Incorporate new legal standard MCA
- First securities lending process to be standardised in CDM
- Goal to produce an actual implementation; kickstart adoption
- Reach out for more information
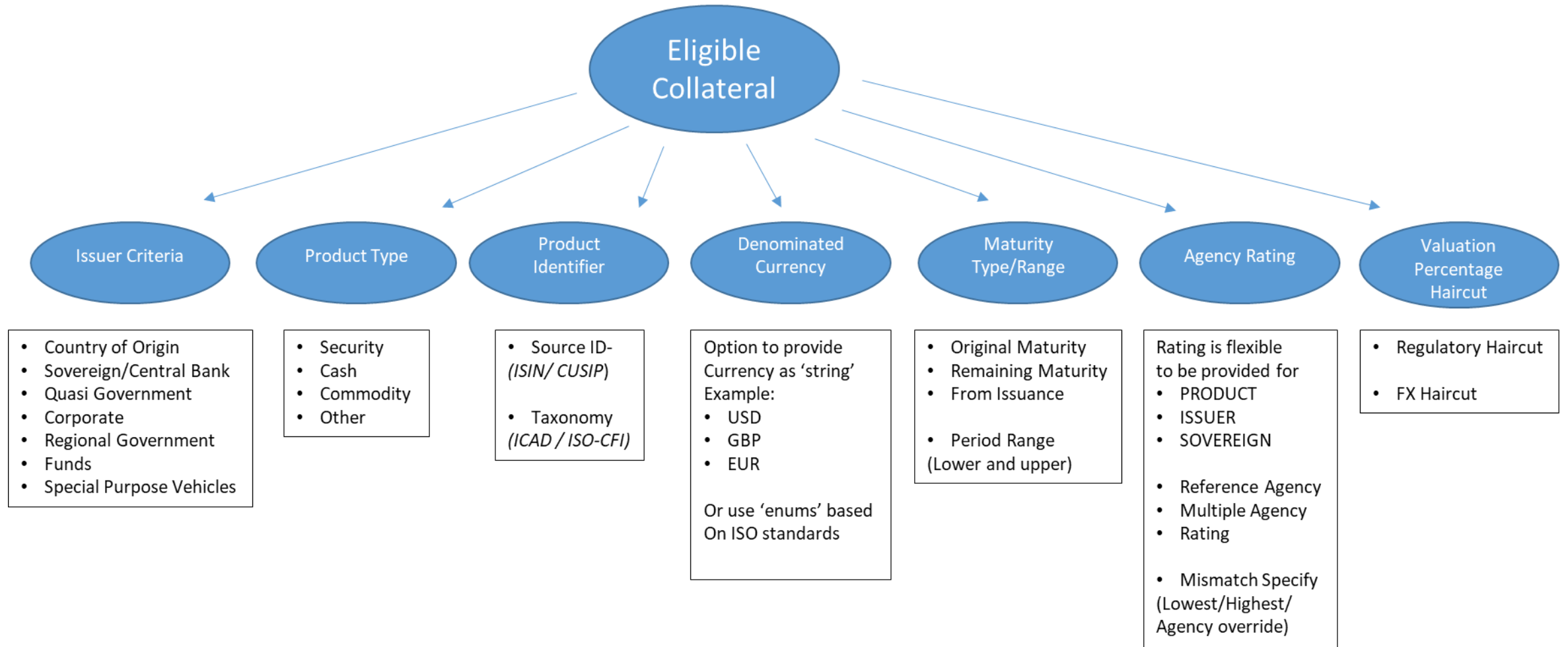
Collateral Representation for Security Loans

Eligible Collateral

- **Issuer Criteria**
  - Country of Origin
  - Sovereign/Central Bank
  - Quasi Government
  - Corporate
  - Regional Government
  - Funds
  - Special Purpose Vehicles

- **Product Type**
  - Security
  - Cash
  - Commodity
  - Other

- **Product Identifier**
  - Source ID- *(ISIN/ CUSIP)*
  - Taxonomy *(ICAD / ISO-CFI)*

- **Denominated Currency**
  - Option to provide Currency as 'string'
  - Example:
    - USD
    - GBP
    - EUR
  - Or use 'enums' based On ISO standards

- **Maturity Type/Range**
  - Original Maturity
  - Remaining Maturity
  - From Issuance
  - Period Range (Lower and upper)

- **Agency Rating**
  - Rating is flexible to be provided for
    - PRODUCT
    - ISSUER
    - SOVEREIGN
    - Reference Agency
    - Multiple Agency
    - Rating
    - Mismatch Specify (Lowest/Highest/ Agency override)

- **Valuation Percentage Haircut**
  - Regulatory Haircut
  - FX Haircut

Image courtesy:
International Swaps and
Derivatives Association, Inc
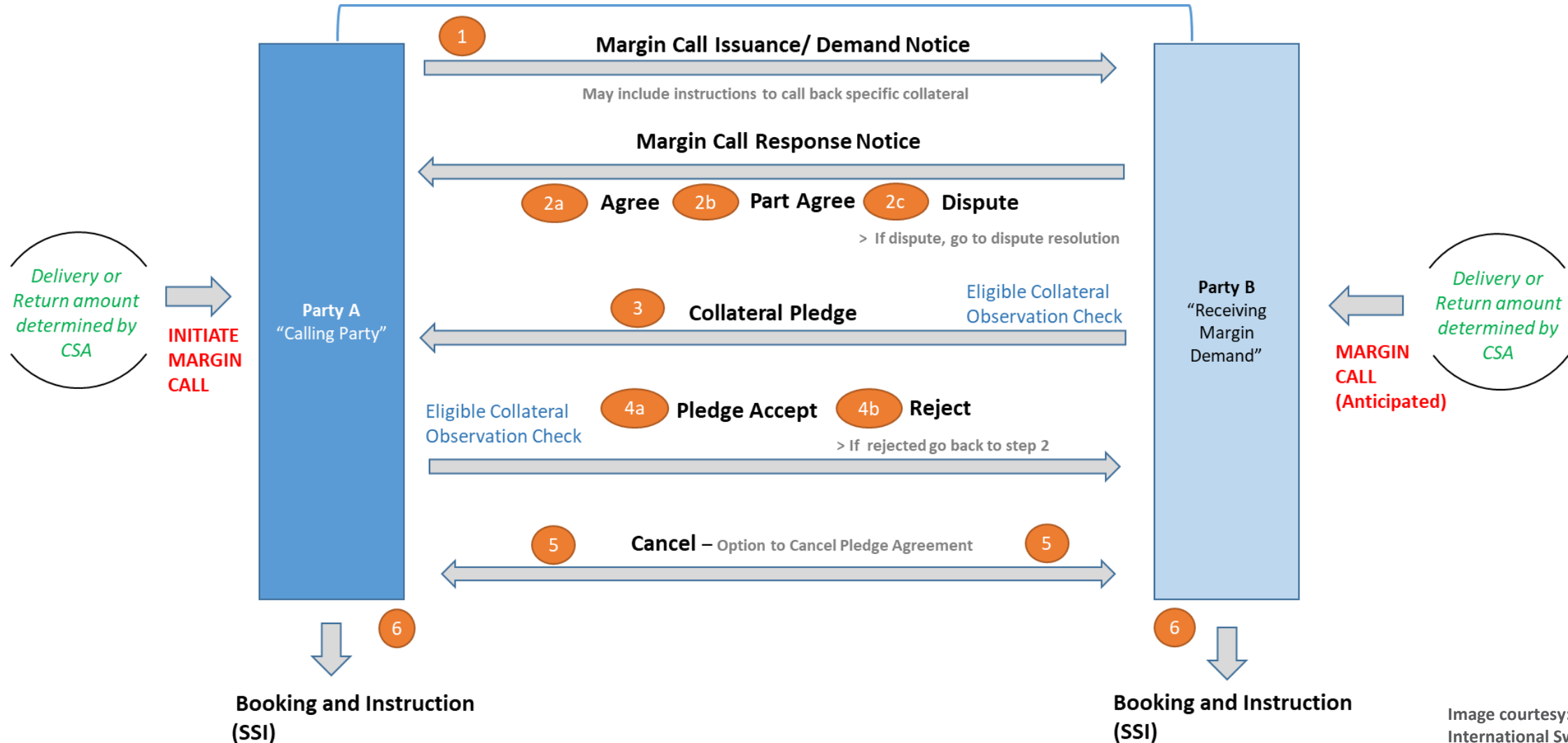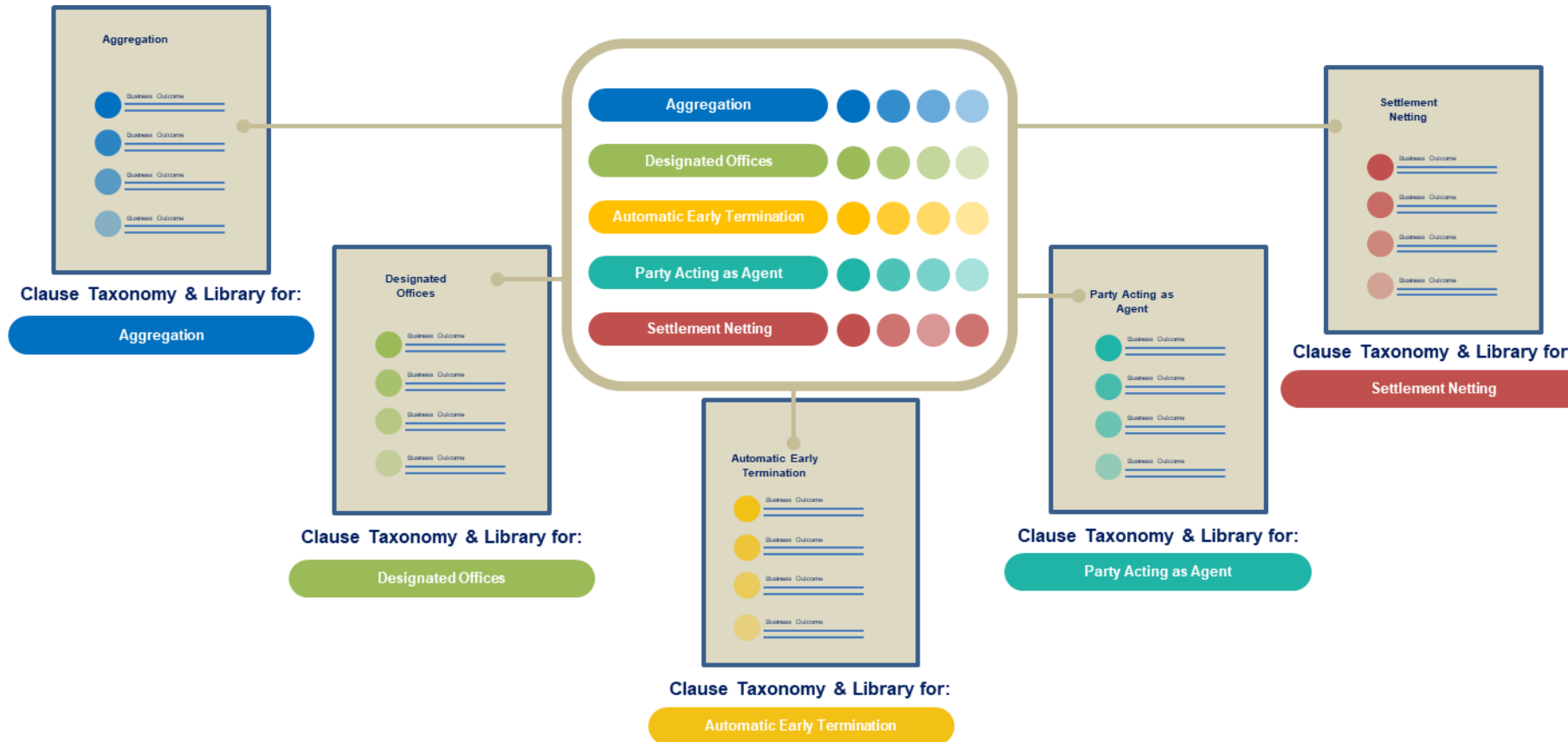
Margin Call Issuance and Response – Business Workflow

Detail: Document Digitalisation

Clause Library & Taxonomy Formation

Institutions have historically negotiated GMSLA's adopting their "house style". Accordingly, language has diverged and yet in many cases the intended business outcome is intended to be identical. This programme is evaluating variants by reference to their business outcome.
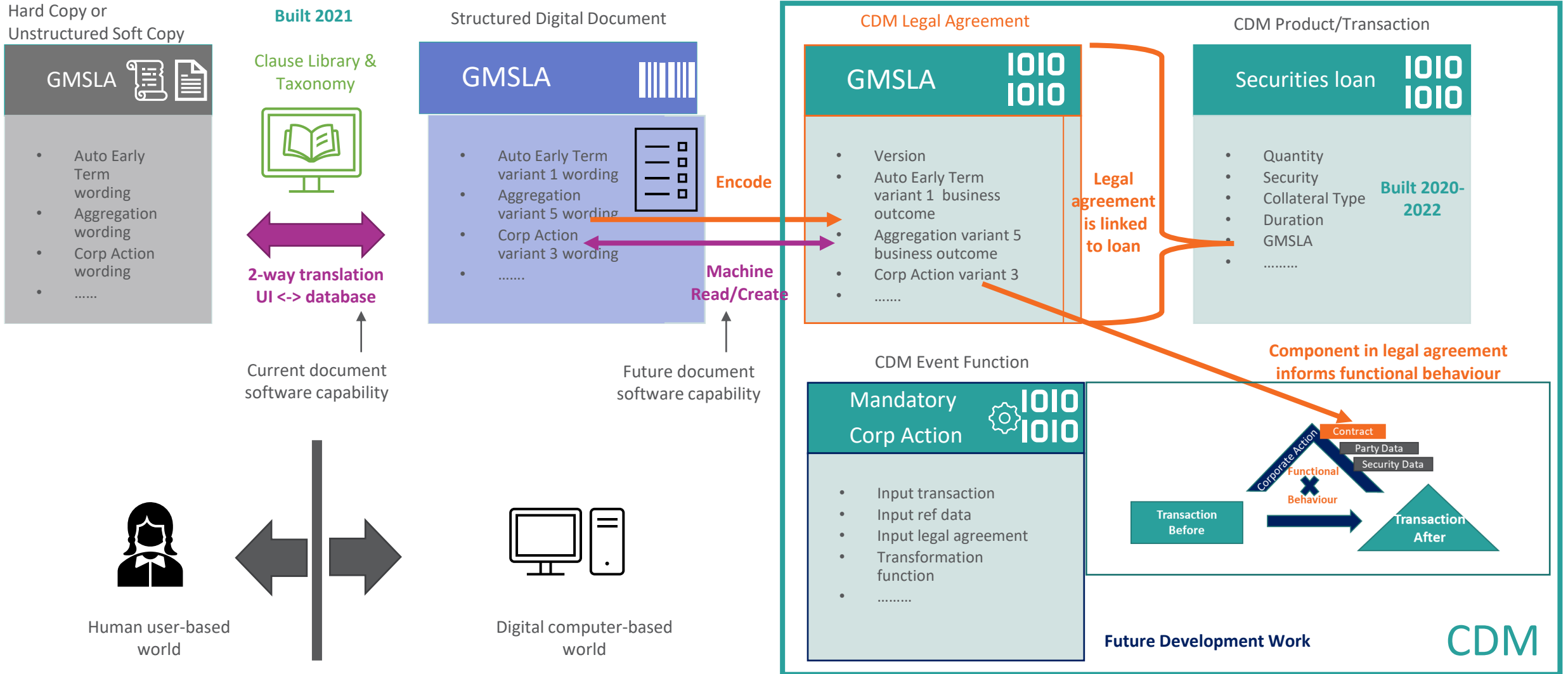
Image courtesy:
D2 Legal Technology

Clause Library & Taxonomy Formation
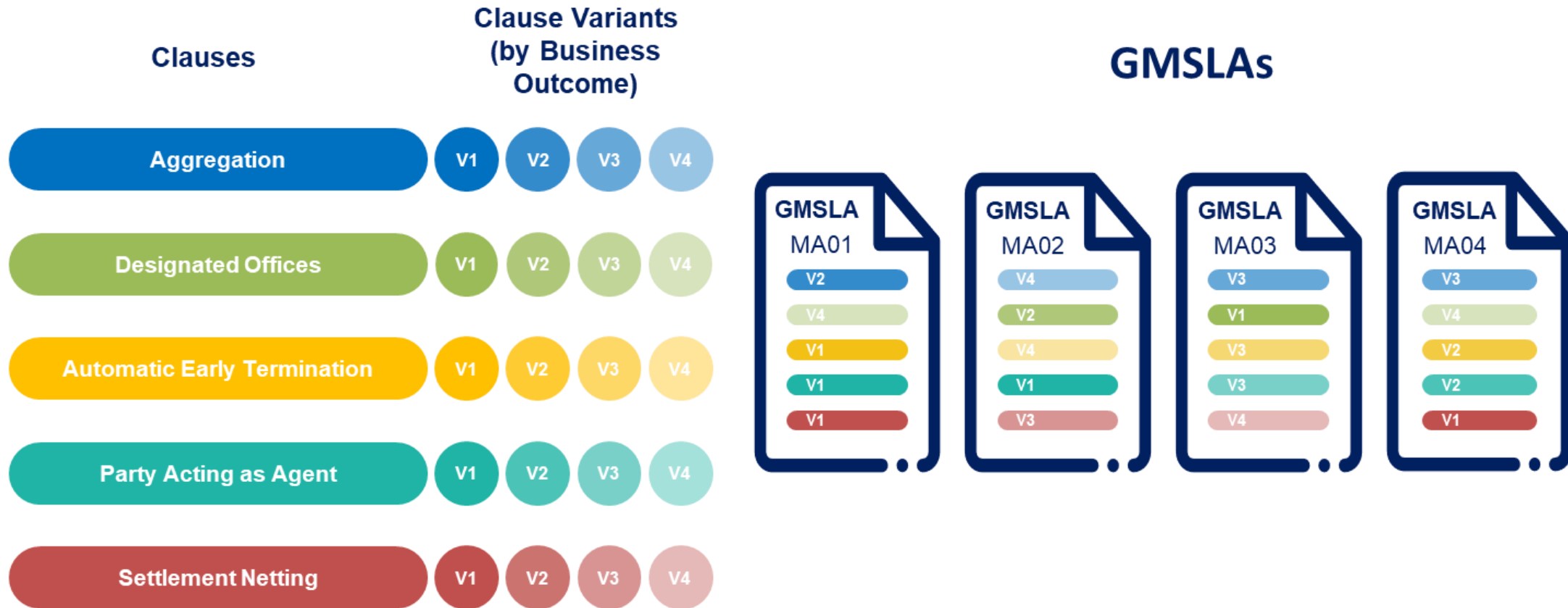
- This process should enable members to derive the component parts of the GMSLA.
- V1 Aggregation + V2 Designated Offices + V3 Automatic Early Termination, etc

Image courtesy:
D2 Legal Technology

Integrating the CDM and ISLA Clause Library

Hard Copy or Unstructured Soft Copy

GMSLA
- Auto Early Term wording
- Aggregation wording
- Corp Action wording
- ......

Built 2021

Clause Library & Taxonomy

2-way translation UI <-> database

Current document software capability

Human user-based world

Structured Digital Document

GMSLA
- Auto Early Term variant 1 wording
- Aggregation variant 5 wording
- Corp Action variant 3 wording
- ....

Encode

Machine Read/Create

Future document software capability

Digital computer-based world

CDM Legal Agreement

GMSLA
- Version
- Auto Early Term variant 1 business outcome
- Aggregation variant 5 business outcome
- Corp Action variant 3
- ....

Legal agreement is linked to loan

CDM Product/Transaction

Securities loan
- Quantity
- Security
- Collateral Type
- Duration
- GMSLA
- ....

Built 2020-2022

Component in legal agreement informs functional behaviour

CDM Event Function

Mandatory Corp Action
- Input transaction
- Input ref data
- Input legal agreement
- Transformation function
- ....

Corporate Action

Contract
Party Data
Security Data

Functional × Behaviour

Transaction Before → Transaction After

Future Development Work

CDM

Future State - Smart Contracts

Smart contracts are digital representations of transactions that encode their behaviours under certain conditions digitally and consistently. This includes legal as well as economic terms.

They can be placed on Distributed Ledgers and thus all parties to the contract experience the **same outcomes for the same event at the same time.**

In order to achieve this efficiently there needs to be a recognised standardisation of terms, representations and event outcomes: **a CDM**
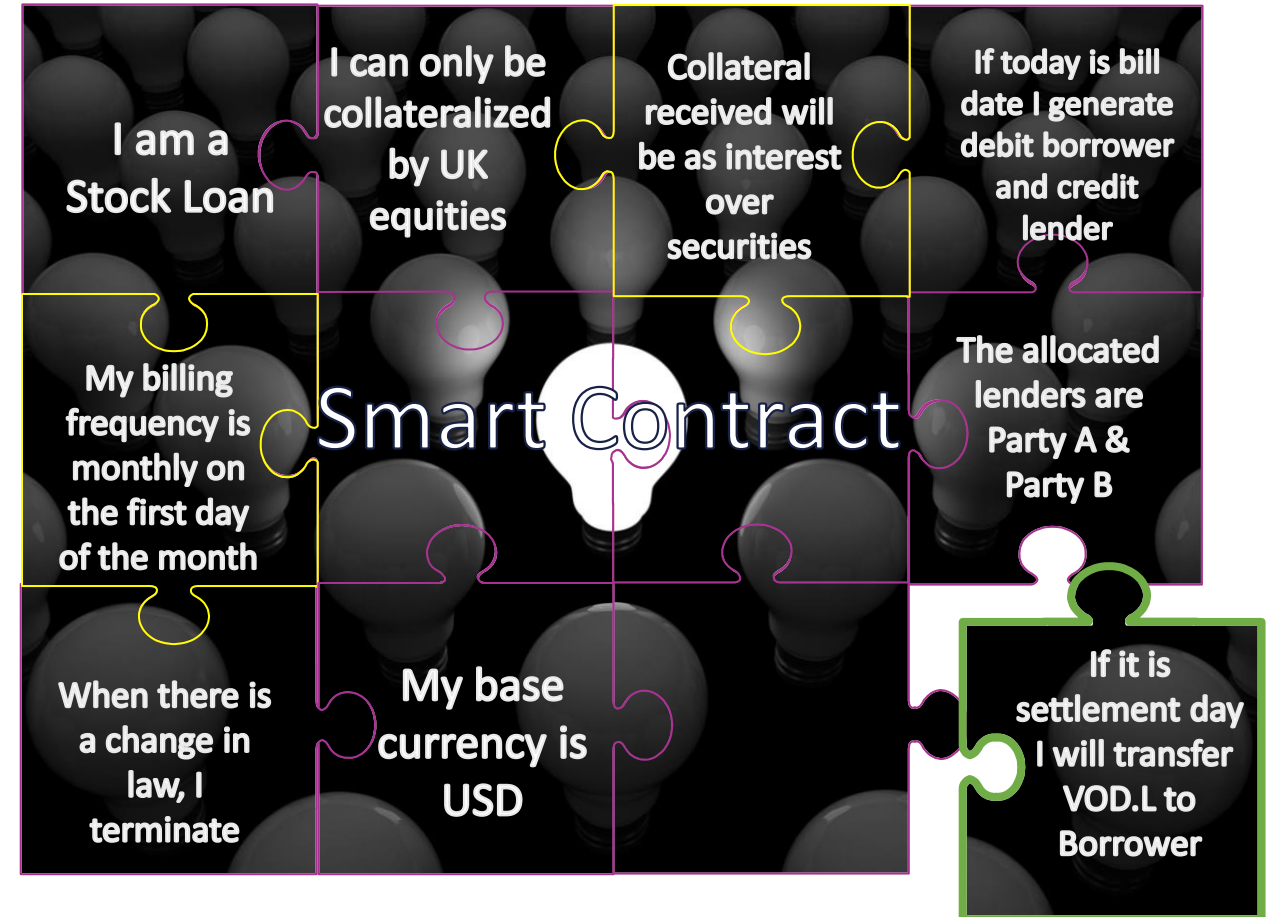
With legal negotiation and execution applications built upon a CDM, it is easy for parties to select the components they want, to make up the smart contract from a set of standard values; ensuring consistent behaviour and removing chance of different real-world outcomes

Wider Digital Landscape

Digital Pillars

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Asset Optimisation

Resource Optimisation

Automation

Scalability

Standardisation

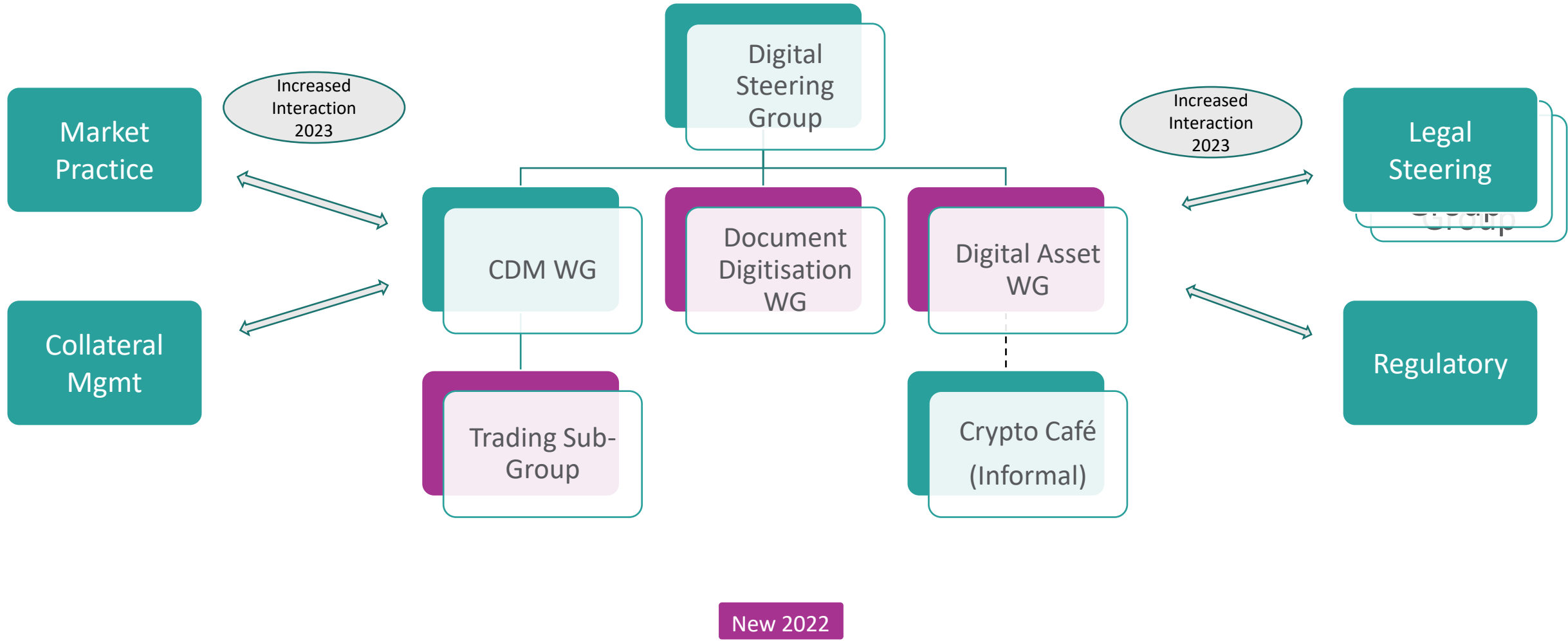| CDM	Doc Digitisation	Digital Assets	Digital Regulation	Advocacy
- Development of standard data, process and workflow representations - Education, adoption and promotion of using those standards - Cross-product collaboration with other trade associations	- Incorporate existing market standard legal documentation into CDM - Digitise GMSLA - Creation of business outcome driven Clause Library & Taxonomy - Advocate for use of technology to aid negotiation and onboarding	- Expand market standard legal framework (GMSLA) to cater for digital asset classes - Education and awareness for members - Assess asset impacts to traditional lifecycle and produce guides	- Respond to regulation impacting infrastructure, new technology use and digital assets as directed by membership - Collaborate jointly with other trade associations where appropriate	- Advocate for standardisation, collaboration and digital progress for the future of the market - Regulator awareness and education of industry intiiatives - Member engagement

Delivering the Pillars: Working Group Structure

Digital Steering Group

Market Practice

Increased Interaction 2023

Collateral Mgmt

CDM WG

Document Digitisation WG

Digital Asset WG

Increased Interaction 2023

Legal Steering Group

Regulatory

Trading Sub-Group

Crypto Café (Informal)

New 2022

Digital Pillars & Achievements 2022

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CDM

Goals
- Further model dev
- Adoption use cases
- Education & training
- 3 TA open-source efforts

Achievements
- In-house development capability
- Evergreen & Extendible product models contributed to CDM
- Trading WG – Bilateral workflow dev complete
- Positions use case work begun with two members
- FINOS appointed to take on repository; migration due to complete January
- Design group with ICMA/ISDA

Stats
- 15 + 6 WG sessions
- 10 active member firms; 100 WG output recipients

Doc Digitisation

Goals
- Digitise GMSLA
- Clause Library adoption
- GMSLA/CL into CDM

Achievements
- New working group created Nov 2022
- Draft modelling principles created

Stats
- 3 WG sessions
- 10 member firms engaged; 4 pending licenses

Digital Assets

Goals
- Education and awareness
- Assess asset impacts to traditional lifecycle
- Expand GMSLA to new asset class

Achievements
- New working group created Jun 2022
- BCBS Crypto Asset Consultation response
- UK Law commission consultation response
- Whitepaper: Preparing the Global Master Securities Lending Agreement (GMSLA) for an Evolving Digital Asset Landscape
- Digital Asset Technology in Brief x 3

Stats
- 8 sessions inc. sub-grp
- 72 member firms
- 7 crypto cafes; avg. 20 attendees

Advocacy

Goals
- Advocate for standardisation & collaboration
- Raise awareness of ISLA digital efforts
- Relationship development

Achievements
- Whitepaper: The Future of the Securities Lending Market | On the Cusp of Transformation
- Re-election to BoE/FCA Data Standards Committee
- ESMA PTSC presentation
- 6 new members due to digital WGs, topics or interaction

Stats
- 15 events, panels, webinars
- 45+ member engagement meetings/visits

Digital Regulation

Goals
- Monitor relevant regulation and alert DSG
- Respond as directed by DSG

Achievements
- Updated members on:
  - MiCA
  - DORA
- See also Digital Assets

DSG Stats
- 86 member firms
- 7 DSG Guest speaker sessions

Look ahead to 2023 (non-CDM)

- **Digital Assets**
  - GMSLA expansion prioritisation and subsequent work [in conjunction with Legal Steering]
  - Practical impact guides- document 1: Tokenisation
  - Expand Digital Asset Technology in Brief
  - Respond to Regulatory consultations and proposals as prioritised by WG

- **Advocacy**
  - Showcase event with ICMA, ISDA- Feb 21st London
  - Continued global event presence
  - Increased conversation with global regulators on CDM, Digital Assets
  - Increased collaboration with other trade associations, particularly in Digital Assets sphere

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