How can we make our data work better for us?

Ark 51 – turning documents to data with Al



Exporting that data into the CDM format

The problem

- Financial entities will enter into a whole array of legal contracts with counterparties for trading.
- These contracts on their own are complicated enough.
- But with enough contracts, the information contained within begins to have an interdependent life of its own.

The problem

- What happens if a countries credit rating from a specific agency goes from AAA to A+?
- What if my Net Asset Value drops 15%, how many contracts am I in breach of?
- Are any of my contracts under Russian Jurisdiction? What happens now?
- Can't answer the question without the requisite data.

The problem - (the real one!)

- Everyone knows that the data inside documents is massively valuable in risk tolerance assessment, future planning, collateral management.
- Extracting the data contained within the contracts into a digital format to ask those questions takes time and money.
- In most cases too much time or too much money to make it a justifiable business venture.

(Multicurrency — Cross Border)

ISDA

International Swap Dealers Association, Inc.

MASTER AGREEMENT

dated as of 1 April 2014

Banco Bradesco S.A.

Pottery Pots B.V.

have entered and/or anticipate entering into one or more transactions (each a "Transaction") that are or will be governed by this Master Agreement, which includes the schedule (the "Schedule"), and the documents and other confirming evidence (each a "Confirmation") exchanged between the parties confirming those Transactions.

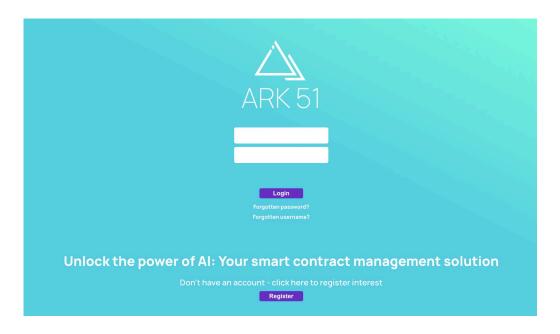
Accordingly, the parties agree as follows: -

- 1. Interpretation
- (a) Definitions. The terms defined in Section 14 and in the Schedule will have the meanings therein specified for the purpose of this Master Agreement.
- (b) Inconsistency. In the event of any inconsistency between the provisions of the Schedule and the other provisions of this Master Agreement, the Schedule will prevail. In the event of any inconsistency between the provisions of any Confirmation and this Master Agreement (including the Schedule), such Confirmation will prevail for the purpose of the relevant Transaction.
- (c) Single Agreement. All Transactions are entered into in reliance on the fact that this Master Agreement and all Confirmations form a single agreement between the parties (collectively referred to as this "Agreement"), and the parties would not otherwise enter into any Transactions.
- Obligations
- (a) General Conditions.
 - Each party will make each payment or delivery specified in each Confirmation to be made by it, subject to the other provisions of this Agreement.

(ii) Darmonte under this Associant will be made on the due date for value on that date in the alone

How can Ark 51 help?

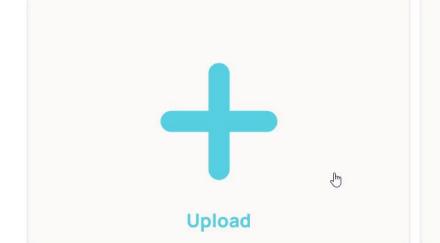
- (This is not a sales pitch!)
- Ark 51 has been designed to take a contract, and run it through a bespoke AI pipeline, built by cutting edge software developers working with in house legal experts, to take a contract, and quickly digitise the important questions contained within.





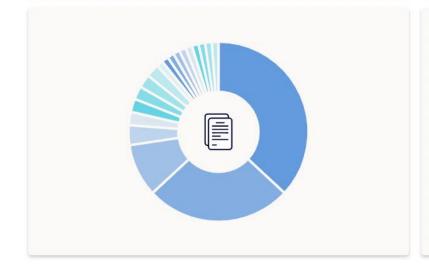
















Where does the CDM fit in?

- The CDM is the way to get systems to easily talk to one another.
- Once we all speak the same language, we inspire greater collaboration (and competition!)

```
baseAndEligibleCurrency": {
 "baseCurrency": "EUR",
 "baseCurrencyTerminationCurrency": false,
  eligibleCurrency": [
  eligibleCurrencyInclBaseCurrency": true
creditSupportObligations":
    partyElection": [
            currency":
        party": "Party1"
          arty": "Party2"
```

Technical (don't fall asleep!)

- Our mapping is written in typescript in a node service hosted on AWS
- Strong typing of the CSA Elections went nicely hand in hand with the strong typing of the typescript language.
- Native mapper, built from scratch

```
export const csaToCdmMapper = (ark51Data: SystemDatasetIdentifierWithValue[], isVMCSA = false, isIMCSA = false, contractualPa
    // First we need to extract some data for parties identifiers
    const [partyAWithMeta, partyBWithMeta] = contractualParty;
    const partyAIdentifierInfo = constructCDMCSAPartyFromContractualParty(partyAWithMeta);
    const partyBIdentifierInfo = constructCDMCSAPartyFromContractualParty(partyBWithMeta);
   // Generic function to extract data based on systemId
    const findSystemIdValue = (id: string) => ark51Data.find(({ systemId }) => systemId === id)?.value;
   // Generic function to extract multiple data based on an array of systemIds
    const findAllInTable = (idArray: string[]) => ark51Data.filter(({ systemId }) => (idArray.includes(systemId)));
   const creditSupportOffsetsFromDataset = findSystemIdValue('creditSupportOffsets');
    let creditSupportOffsets = false;
   if (creditSupportOffsetsFromDataset) {
        if ((creditSupportOffsetsFromDataset as string[])[0] === 'Applicable') {
           creditSupportOffsets = true;
    // Retrieve the holding and using posted collateral (this must be present, but only applies to NY CSA types)
    let holdingAndUsingPostedCollateral: CDMHoldingAndUsingPostedCollateral = {
        partyElection: [
                party: CDMCounterpartyType.Party1,
                useOfPostedCollateral: false,
                eligibilityToHoldCollateral: {
                   eligibleCountry: [],
                   partyTerms: CDMHoldingPostedCollateralEnum.AcceptableCustodian
               party: CDMCounterpartyType.Party1,
                useOfPostedCollateral: false,
                eligibilityToHoldCollateral:
                   eligibleCountry: [],
```

What next?

- 2025 plans include adding legacy CSAs once finalised
- We've already helped and contributed to the CDM, we plan on continuing to do this and to continue advocating for as strong a typing per agreement type as possible
- Already have the AI capacity for GMRA, GMSLA and ISDA master agreement as well as a plethora of other contracts, ready to map to CDM as effortlessly as the CSA!



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Happy to answer any questions or queries, please get in touch!

