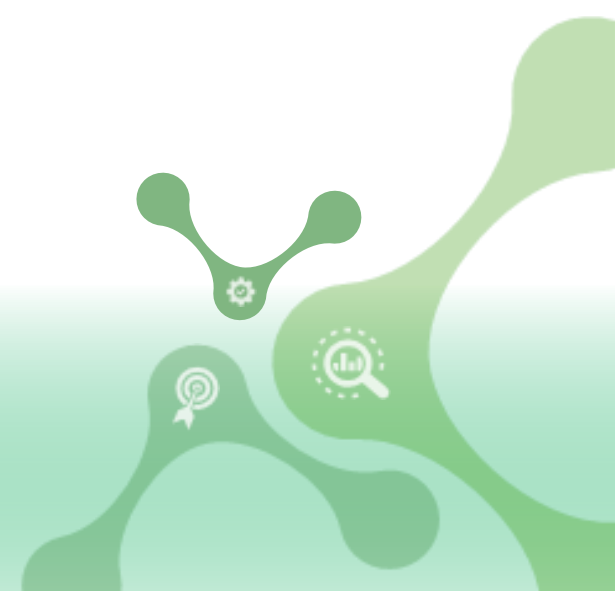


TED Data Quality Auditing and Improvement Solution

TEDDQAIS

George Vernardos & Anoop Kumar

Publications Office of the European Union

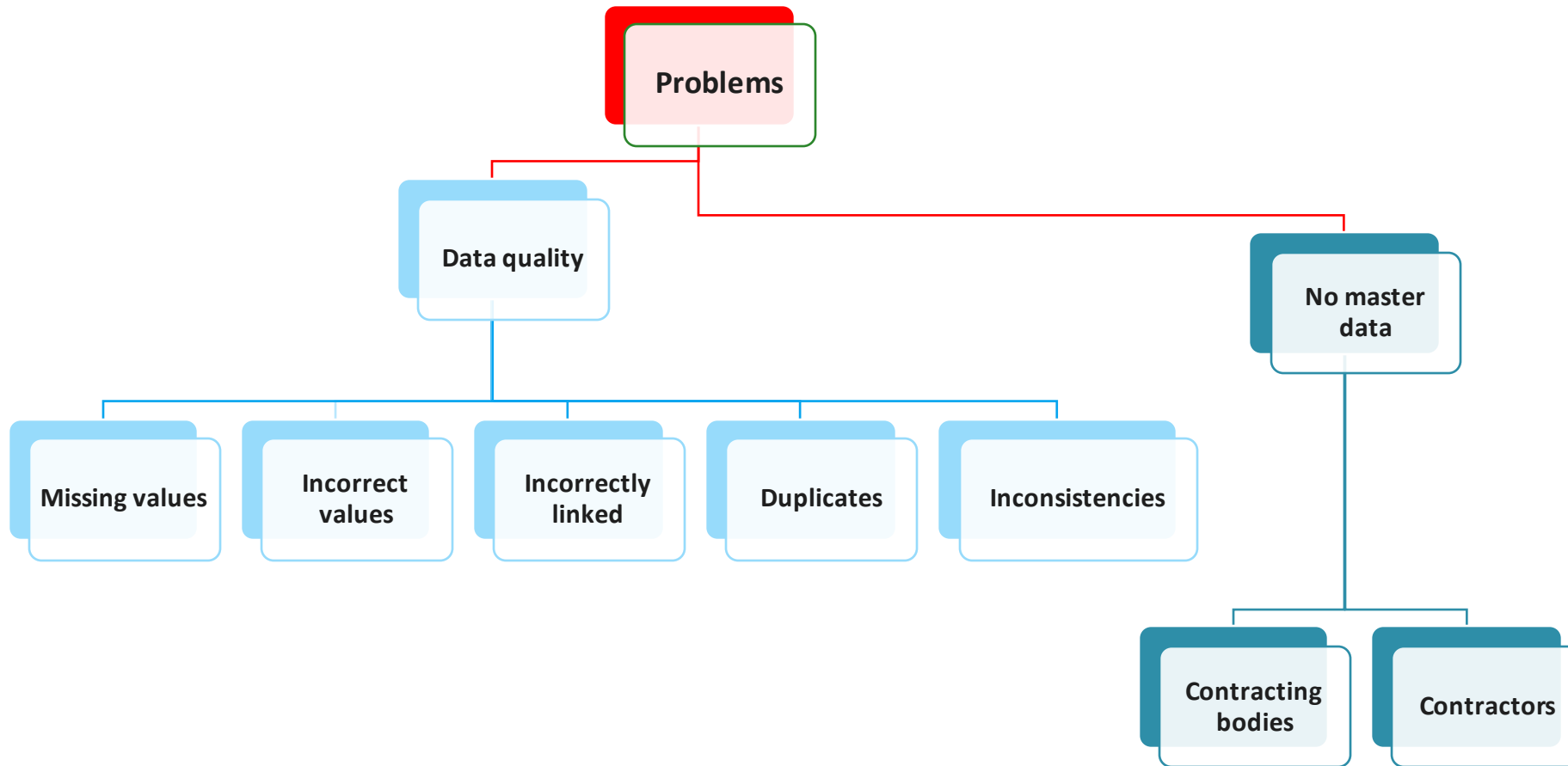


Start of the journey

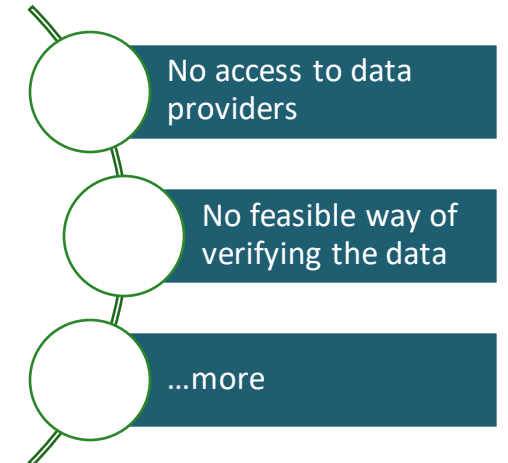
Who (Contracting bodies/Buyers)
bought ***what*** (CPV*)
from ***whom*** (Contractors/Suppliers)
for ***how much*** (Financials)
and ***when*** (Dates)

*CPV: Common procurement vocabulary

Issues we faced



And these constraints



Examples

6. Results

6.1. Result lot Identifier: LOT-0001
At least one winner was chosen.

6.1.4. Statistical information:
Received tenders or requests to participate:
Type of received submissions: Tenders submitted electronically
Number of tenders or requests to participate received: 1

No contract award amount
And no contractor info

Section V: Award of contract

Contract No: 1

Title:

Vergabe der Verwertung von Altpapier für den

A contract/lot is awarded: yes

V.2. Award of contract

V.2.1. Date of conclusion of the contract
17/10/2023

V.2.2. Information about tenders
Number of tenders received: 999
The contract has been awarded to a group of economic operators: no

V.2.3. Name and address of the contractor
Official name: [REDACTED]
Postal address: [REDACTED]
Town: Kaiserslautern
NUTS code: DEB32 Kaiserslautern, Kreisfreie Stadt
Postal code: 67657
Country: Germany
The contractor is an SME: yes

V.2.4. Information on value of the contract/lot
Total value of the contract/lot: 9 999 999 999 999,99 EUR

Dummy value of >9 trillion euros

Section I: Contracting authority

I.1. Name and addresses

Official name: [REDACTED] ES
National registration number: [REDACTED]
Postal address: [REDACTED]
Town: Charleroi
NUTS code: BE32B Arr. Charleroi
Postal code: 6061
Country: Belgium

Section V: Award of contract

A contract/lot is awarded: yes

V.2. Award of contract

V.2.1. Date of conclusion of the contract
27/07/2023

V.2.2. Information about tenders
Number of tenders received: 4
The contract has been awarded to a group of economic operators: no

V.2.3. Name and address of the contractor
Official name: Ag
Town: Charleroi
NUTS code: BE32B Arr. Charleroi
Country: Belgium
The contractor is an SME: no

V.2.4. Information on value of the contract/lot
Total value of the contract/lot: 175 972,00 EUR

Buyer and contractor is the same

Appears as a joint procurement but it is not

Buyer

Buyer: [REDACTED]
Sweden, Värmlands län (SE311), ARVIKA

Buyer

Buyer: [REDACTED]
Sweden, Västmanlands län (SE125), Arvika

Buyer

Buyer: [REDACTED]
Sweden, Västmanlands län (SE125), Arvika

LOT-0000: Generell del

Architectural, construction, engineering and inspection services

- Result

France – Refuse and waste related services – Point de rupture charge-quai de transfert pour emballages ménagers et point de rupture de charge-quai de transfert, conditionnement et papier

OJ [REDACTED]
Contract or concession award notice – standard regime
Services

1. Buyer

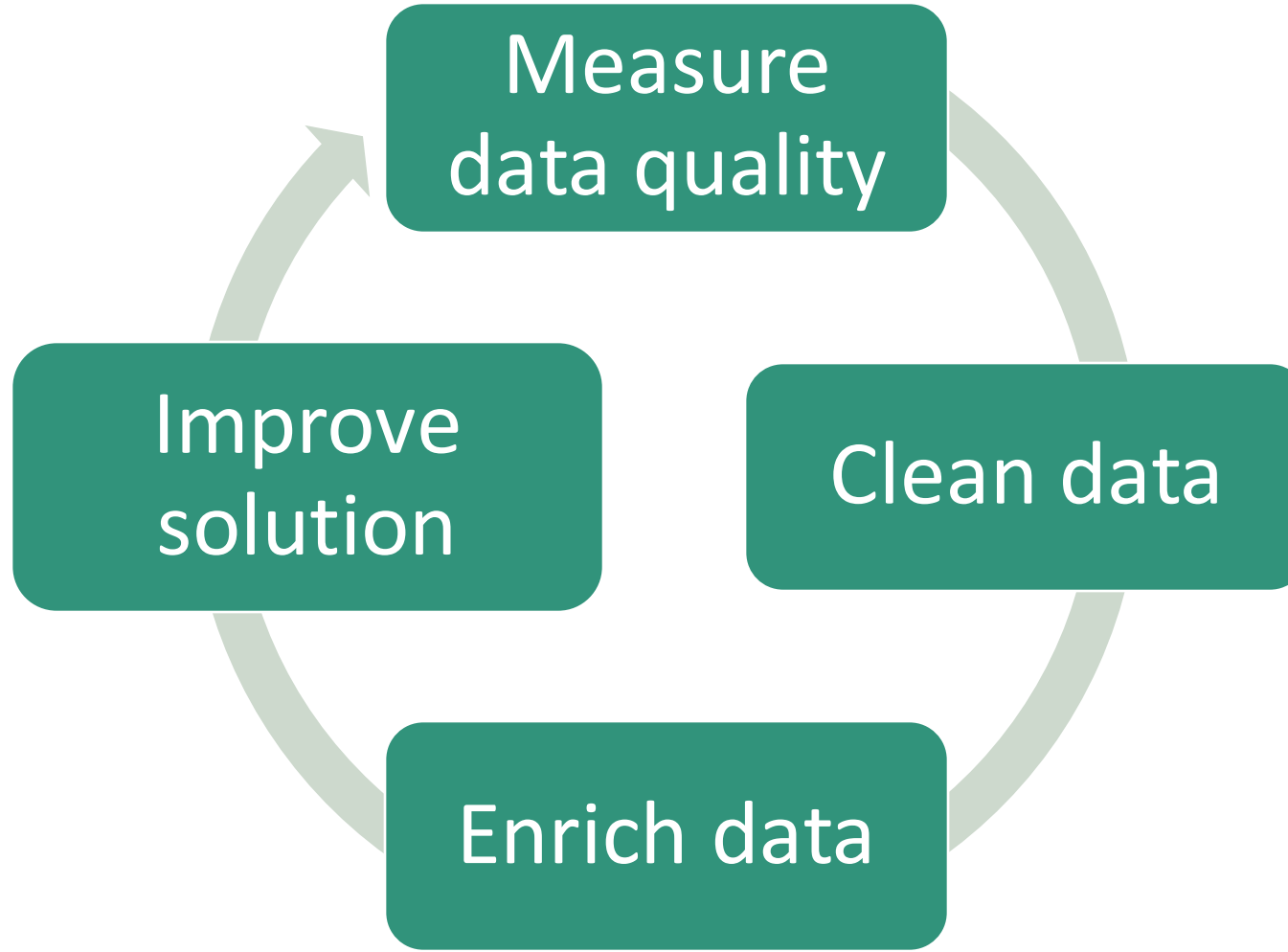
1.1. Buyer

Official name: [REDACTED]
Legal type of the buyer: Body governed by public law
Activity of the contracting authority: General public services

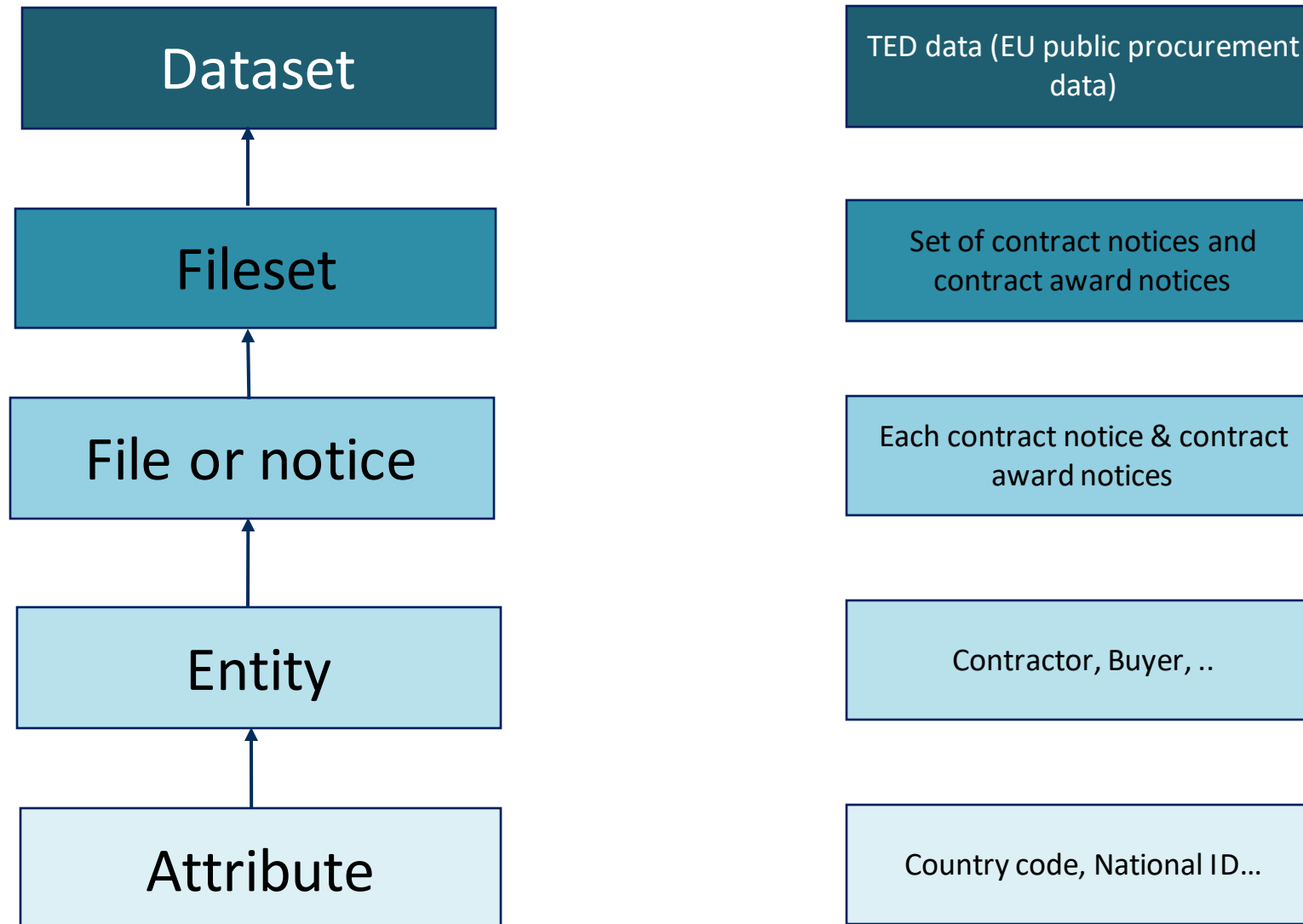
1.1. Buyer

Official name: [REDACTED]
Legal type of the buyer: Body governed by public law
Activity of the contracting authority: General public services

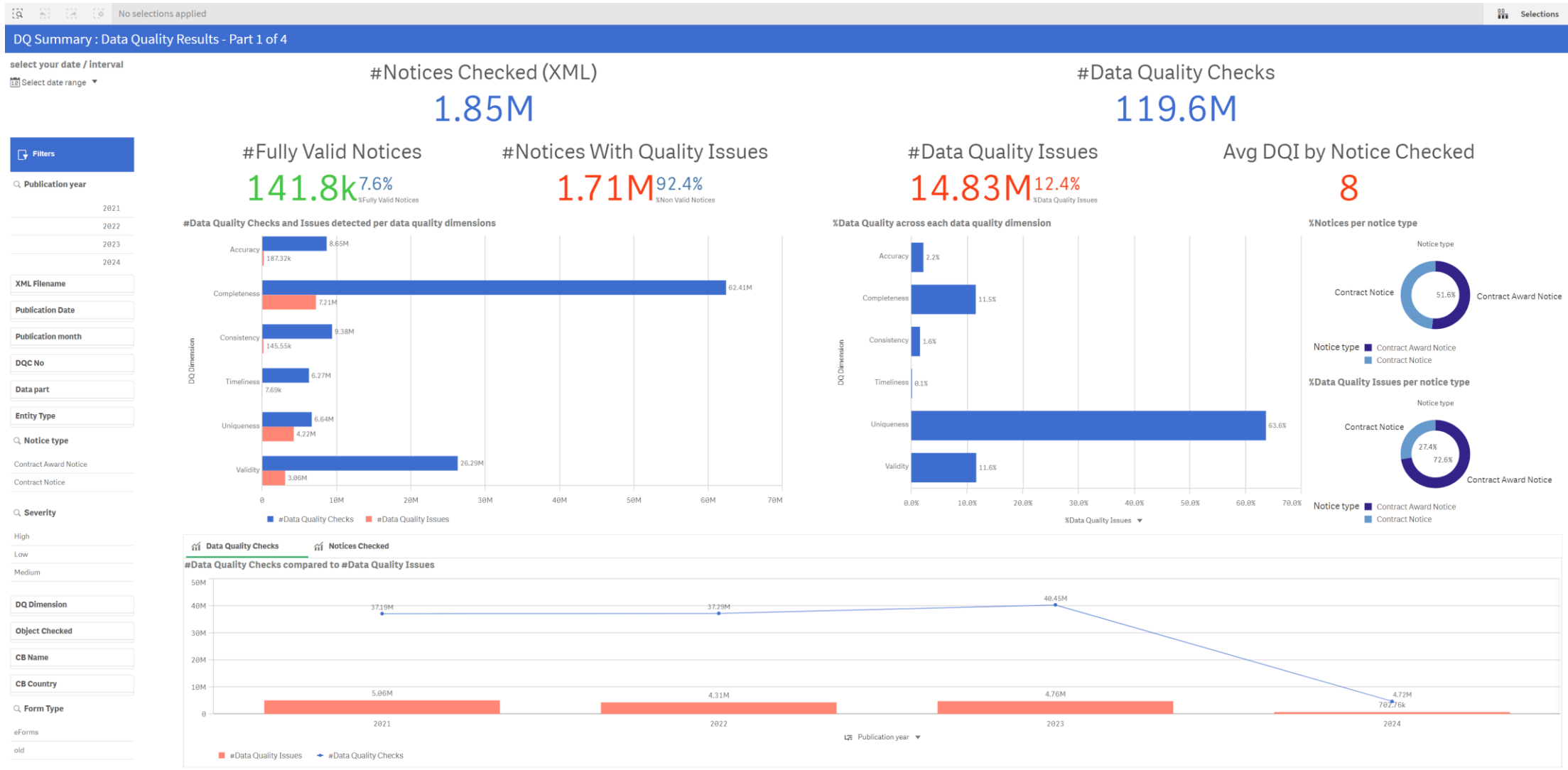
Our approach



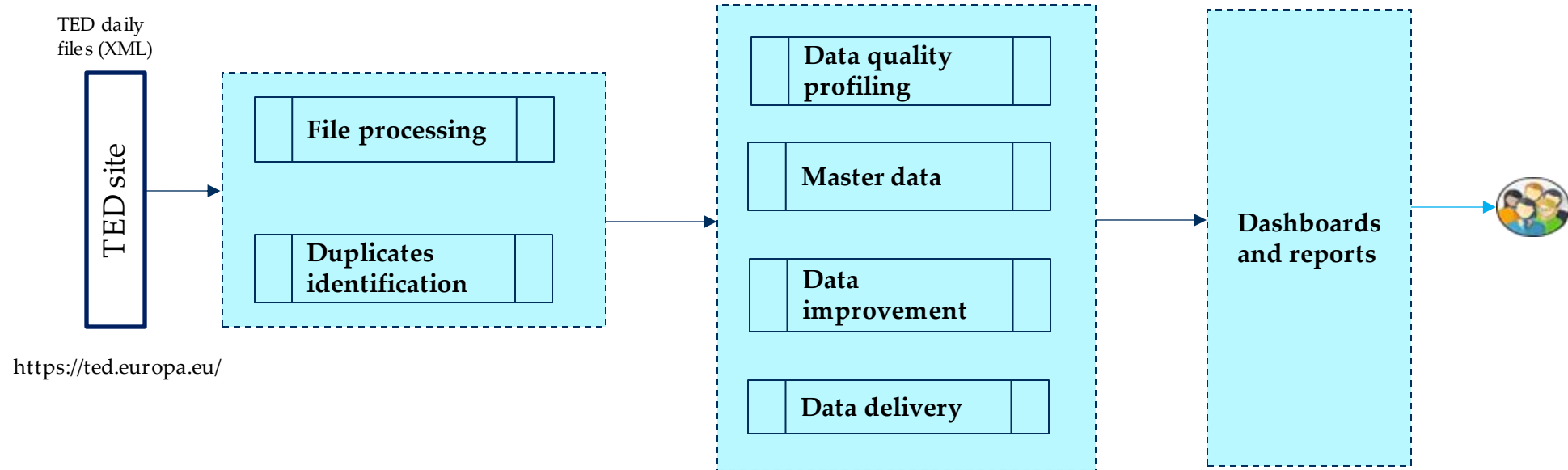
Levels of data quality checks



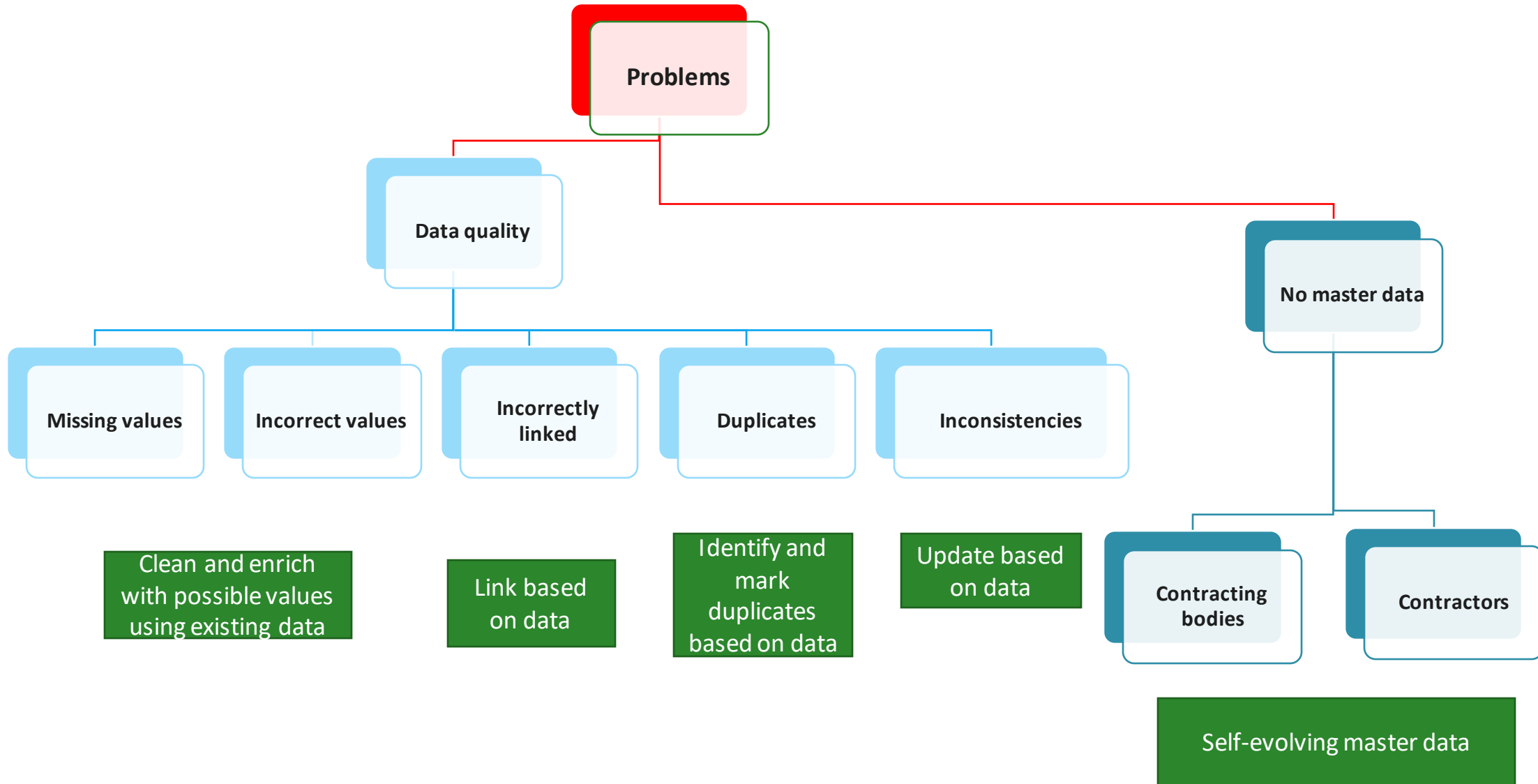
TEDDQAIS - Data Quality Results



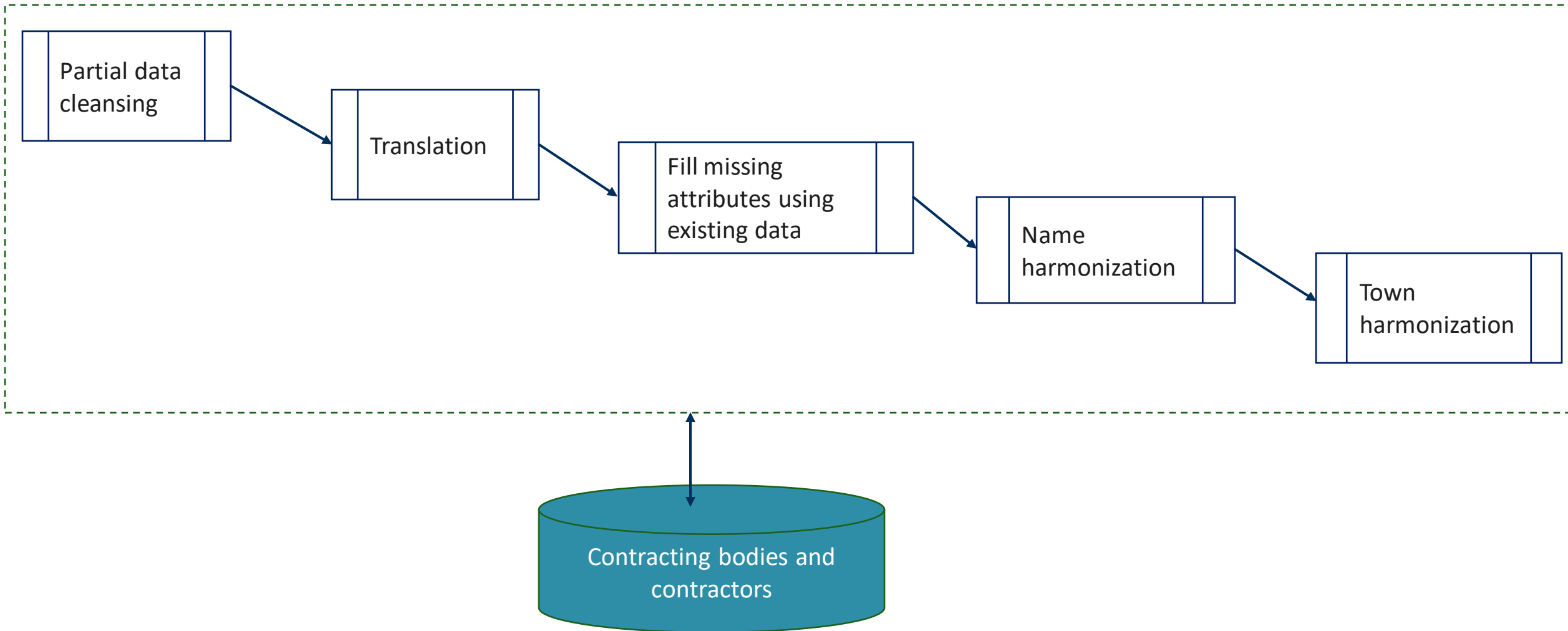
TEDDQAIS – High level processes



Use available data to solve



Self-evolving master data



Enriching data

Data imputation

- Find most probable value for missing or incorrect values using a series of rules in a specific order and existing set of data

Duplicate detection

- Duplicates at notice and contract award levels are not removed but marked

Reclassification

- Joint procurement to not joint procurement or vice versa based on data
- Type of contract (e.g. works, supplies, services) based on CPV
- Contract awarded to group to not awarded to group based on duplicate contractor
- Lots to no lots based on data (i.e. there is only one)

Derived fields

- No of lots based on records
- Reason for update of the record based on DQ checks
- Financial value source – From which field / how the enriched value is derived

Link data

- Identify wrong and missing links and link notices based on data

Data harmonization

- Currency conversions
- Translations

Currently using
rules-based logic
to make the data
AI ready (reliable
data)

Before data improvement

State of data
RAW

Duplicates
Only non duplicates

Selections

Contracts Awarded - Summary

Data Quality

Buyer

Business sector

Contract award date period

Contractor

Place of Performance

Value of the Procurement

Procedure

State of data

Name

Type of contract

Year

Contractor Name

Place

Range Values (€)

Framework

Duplicates

Country

CPV

Month

Contractor Country

00 |

00 | AT13 |

00 | DE |

00 | DE | DK |

00 | DE | FR | ES | IT |

A: > 1 billion €

B: > 500 million to 1 billion €

C: > 200 million to 500 million €

D: > 100 million to 200 million €

E: > 10 million to 100 million €

Dynamic Purchasing

Form Type

Type

Object

Select date range

Contractor SME ?

Total Buyers
188.7k

Total Contractors
1.04M

Total Awarded Contracts
6.08M

Contract Awarded Value (€)
786.4T

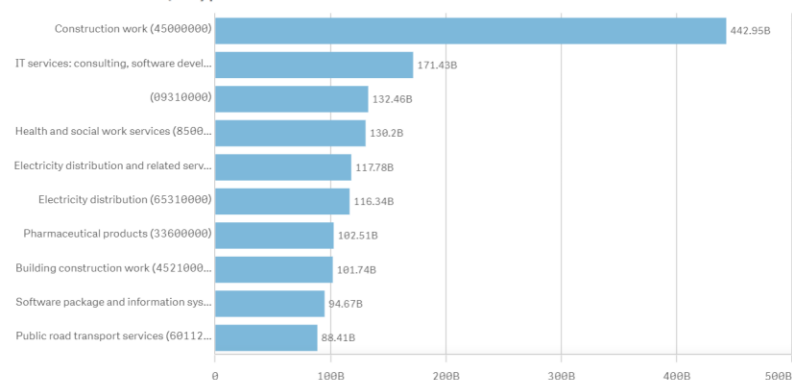
Number of contract awards per Year and Type of Contract



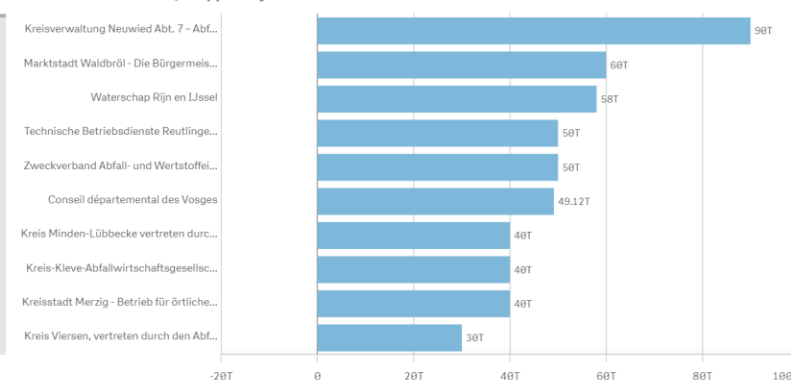
Value (EUR) of contract awards per Year and Type of Contract



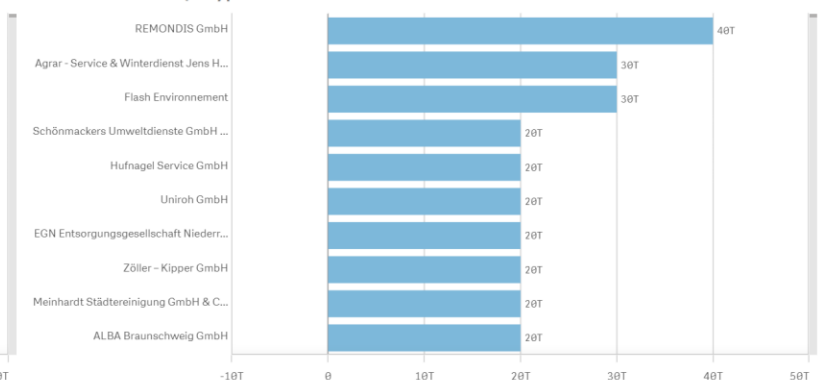
Contract awards value (EUR) per CPV



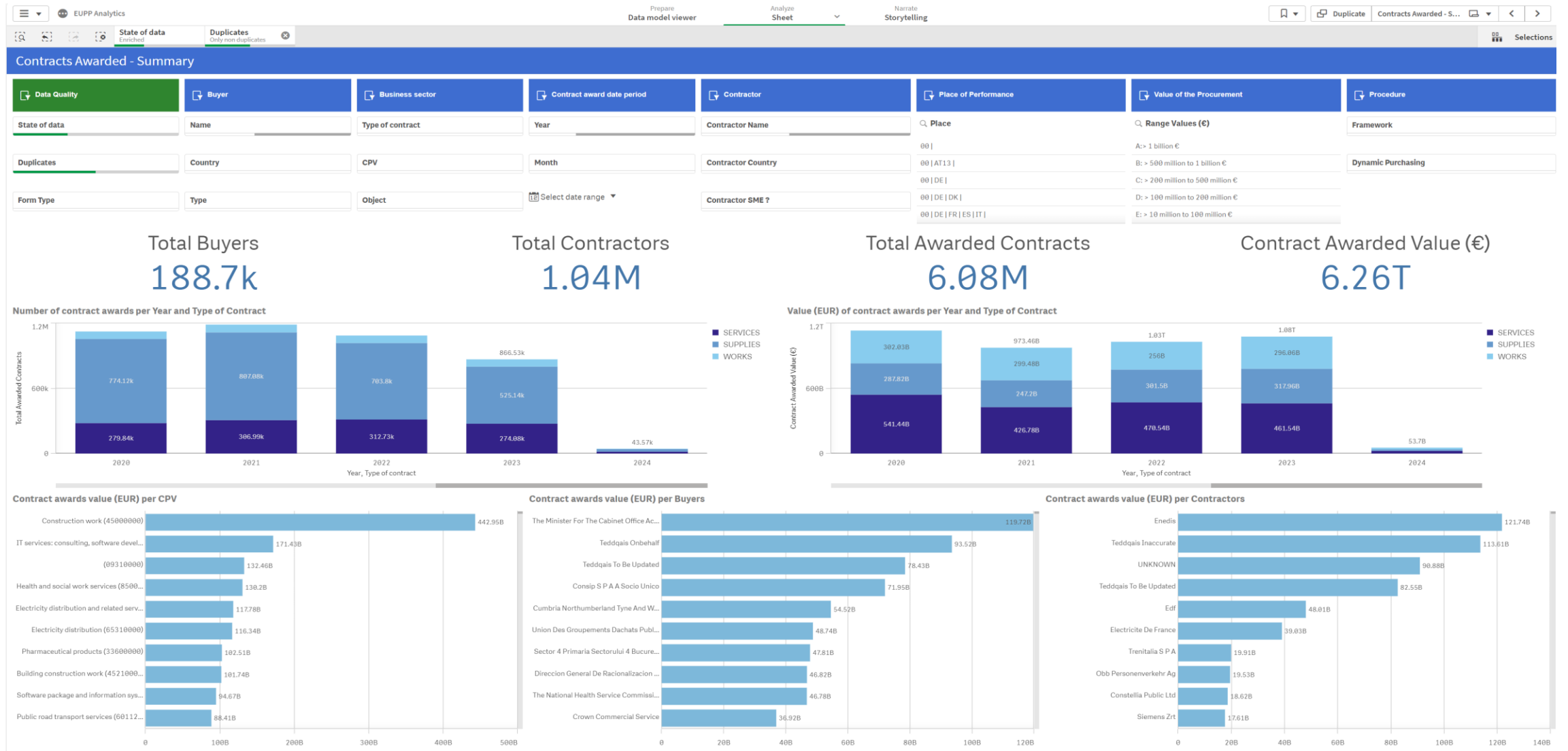
Contract awards value (EUR) per Buyers



Contract awards value (EUR) per Contractors



After data improvement



Next Steps

Solution improvements

- Functional
- Technical

Predictive analytics

Data Analysis and data mining

Q&A



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