

XBRL, UML and Databases: State of art



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Summary

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Introduction

XBRL Data Model.

Multidimensional Data Model.

Proposal of Automation

Conclusions

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- XML and Data Warehouse (DW) applications.
- eXtensible Business Reporting Language (XBRL), based on XML.
- XBRL represents business information, and it is multidimensional.
- The target is a "Data Warehouse".
- The objective is to analyze the semantics of taxonomies and instances, and then map this data model to the Multidimensional Data Model (Conceptual Model).

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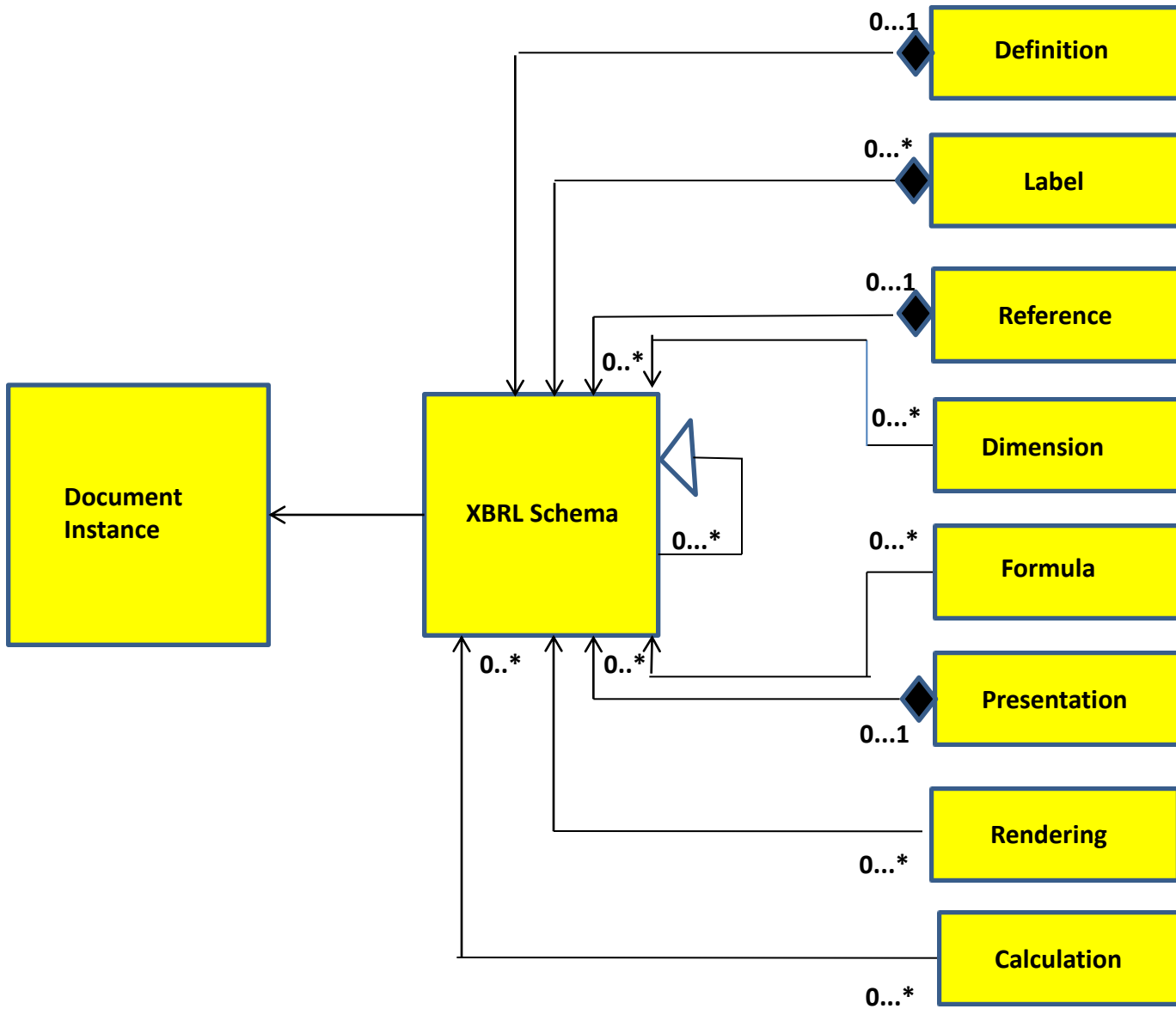


Figure 1.- UML design of XBRL Schemas and linkbases (DTS).

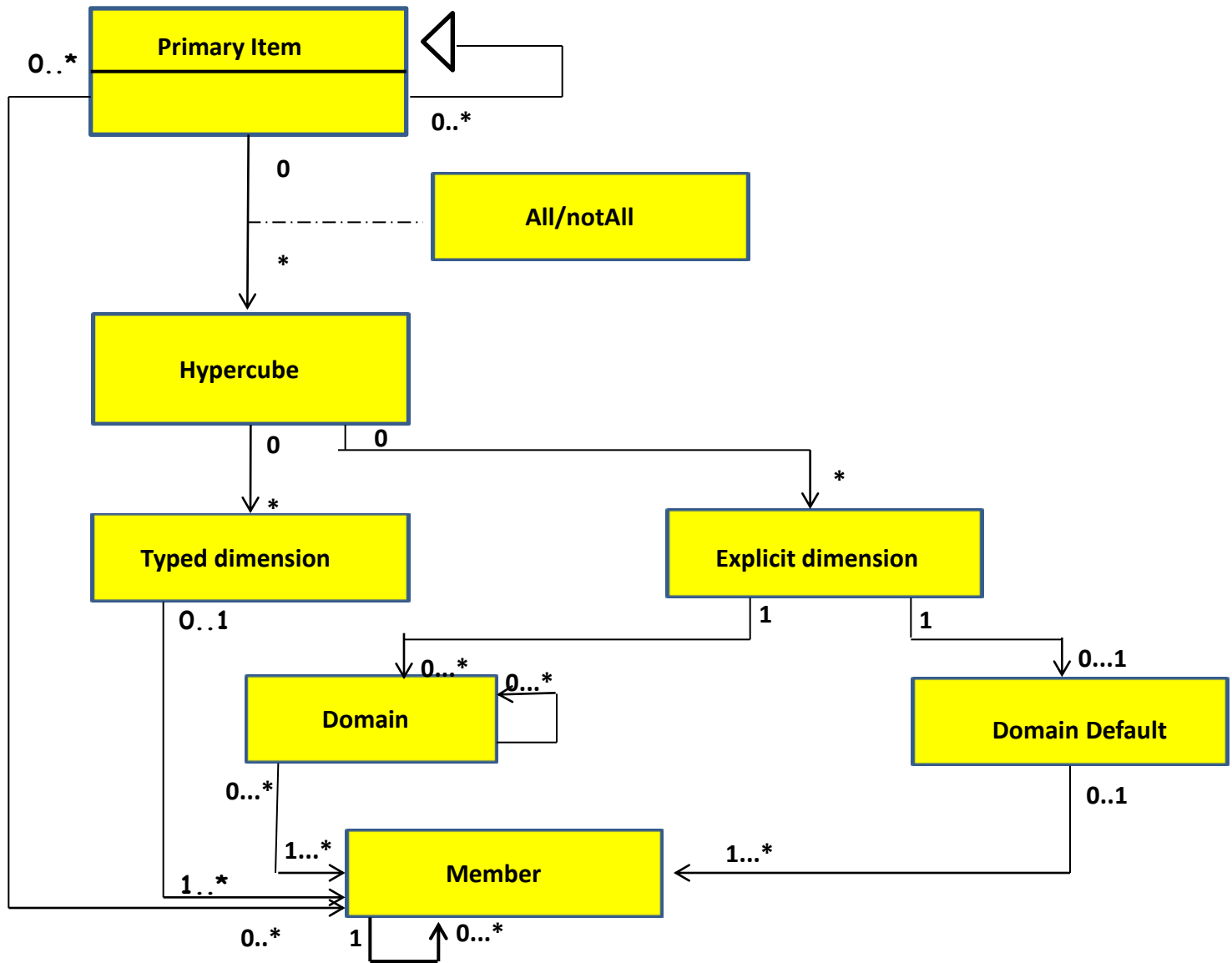


Figure 2.- Design the XDT model with UML.

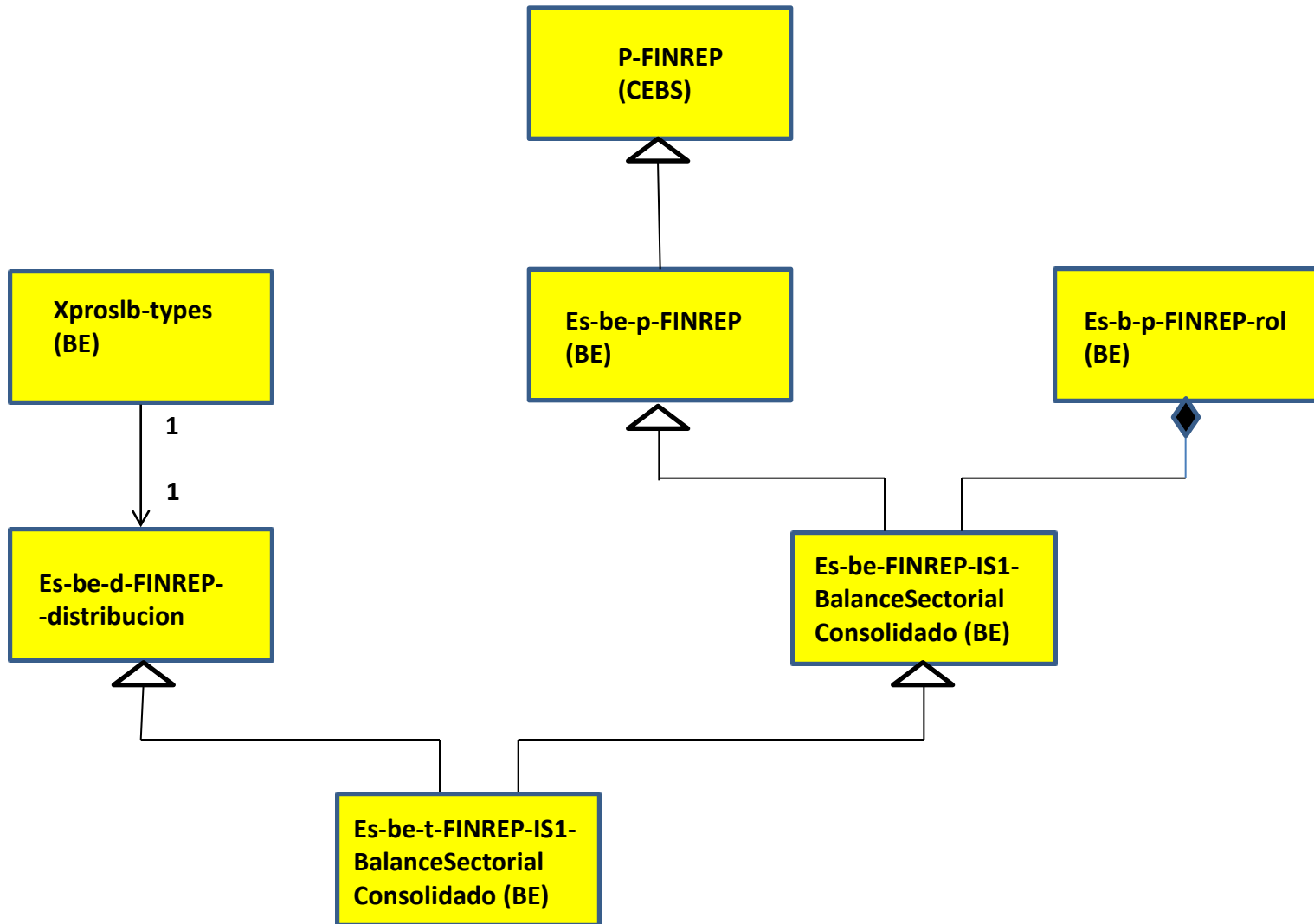


Figure 3.- Simplified UML diagram of the taxonomies of the 6610 report.

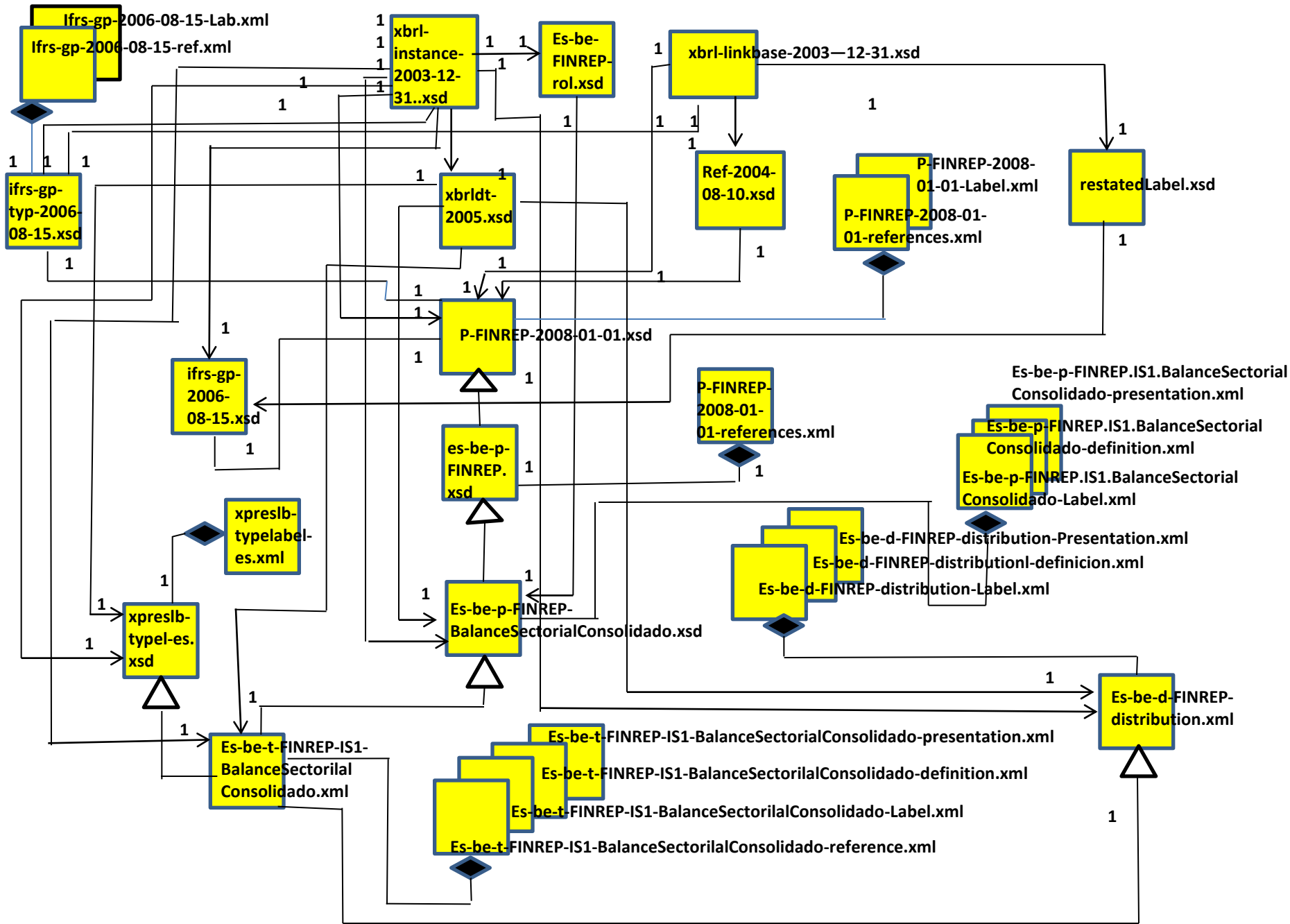


Figure 4.- UML Complete model design of the 6610 report taxonomies.

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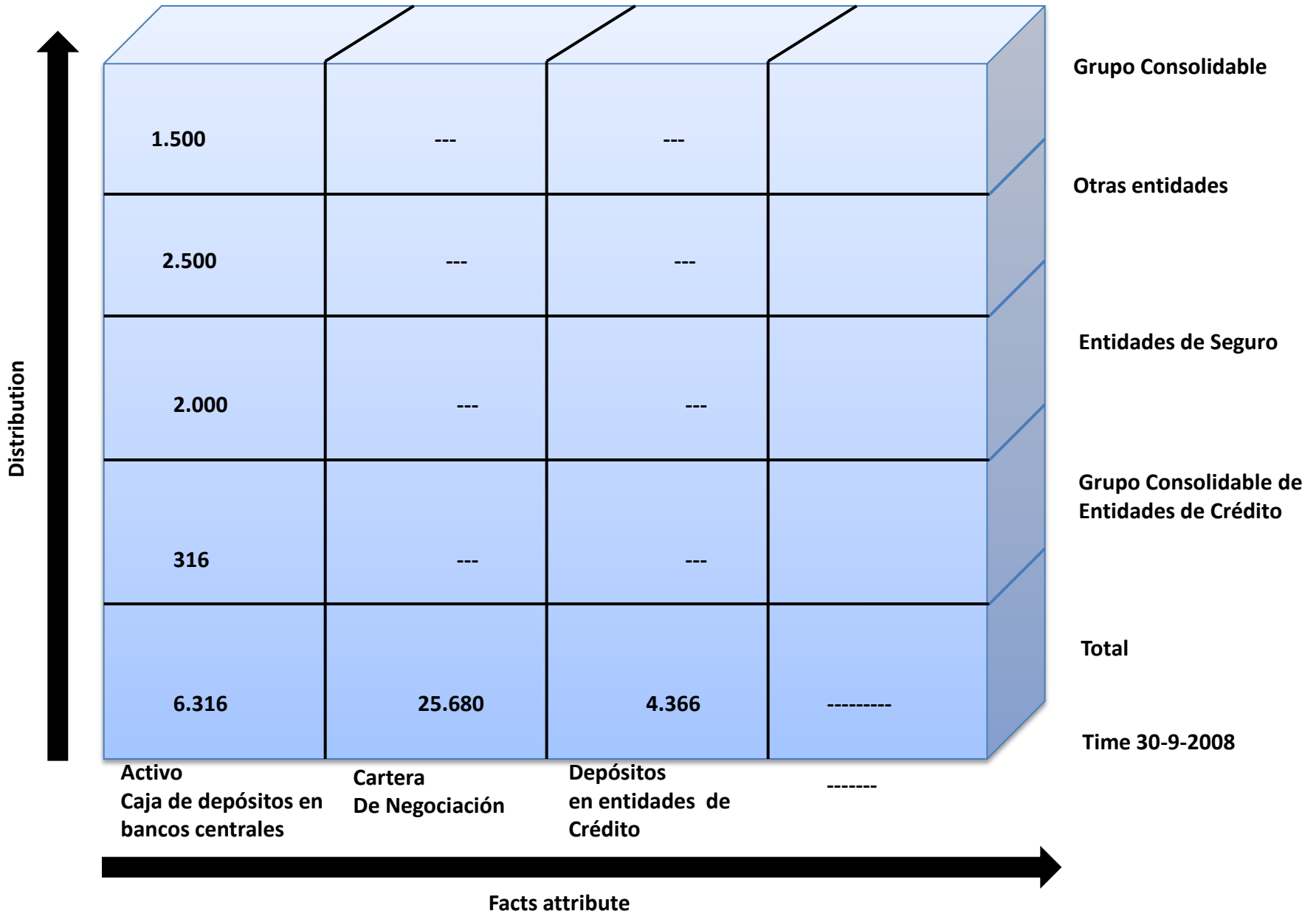


Figure 6.- Dimensional graphic of the example 6610 report («Balance Público Consolidado»).

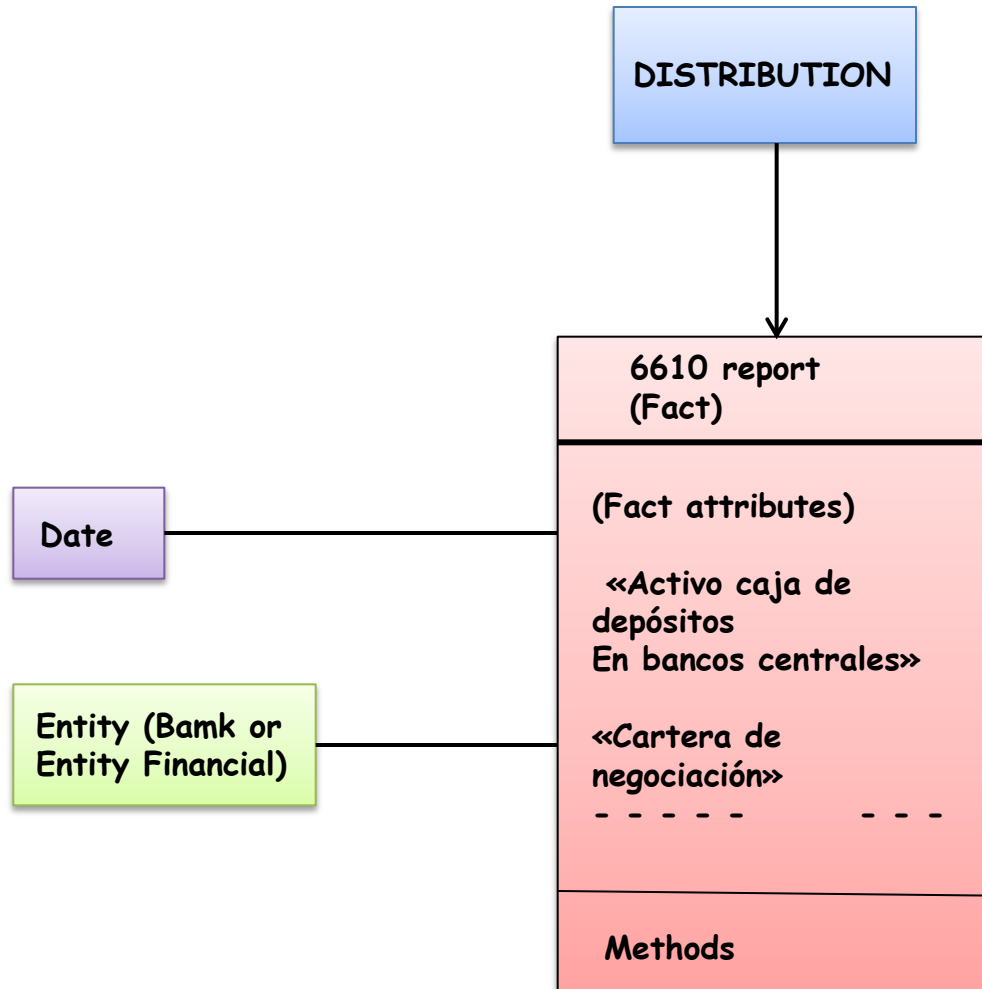


Figure 7.- Multidimensional Data Model of the 6610 report

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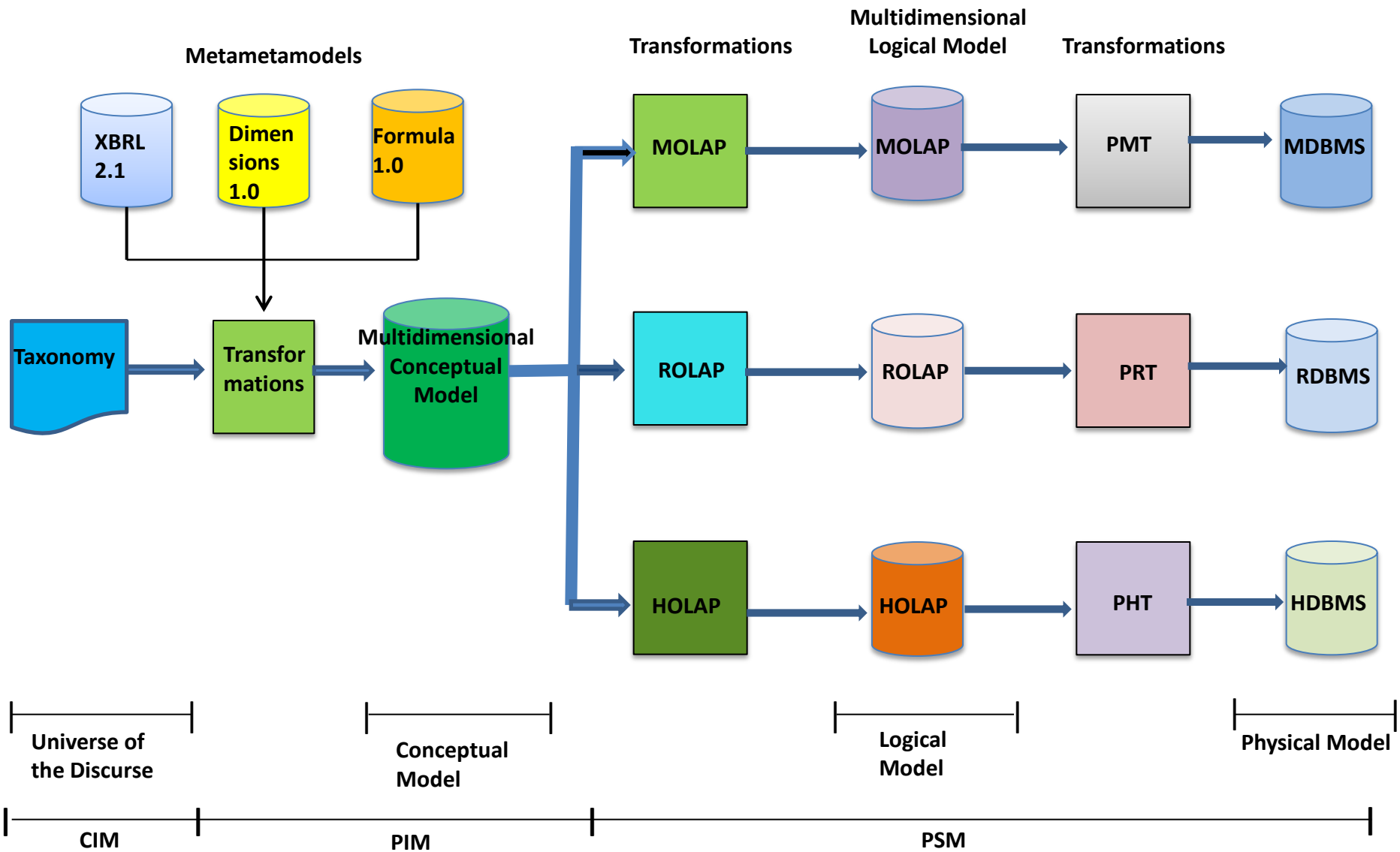


Figure 8.-Global transformation of the XBRL metamodel.

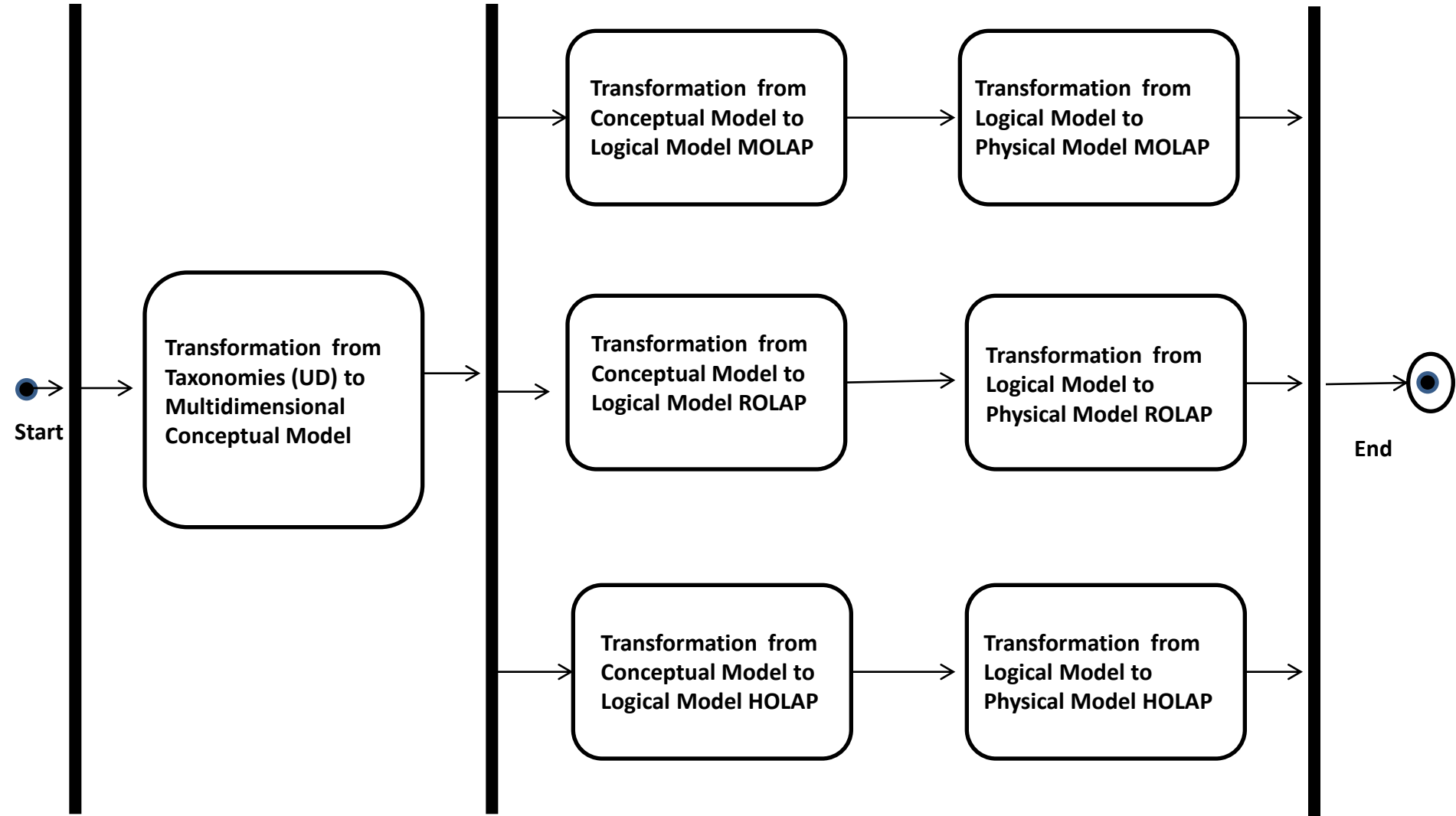


Figure 9.- Activity Diagram of the transformation of XBRL Data Model to Multidimensional Data Modeling

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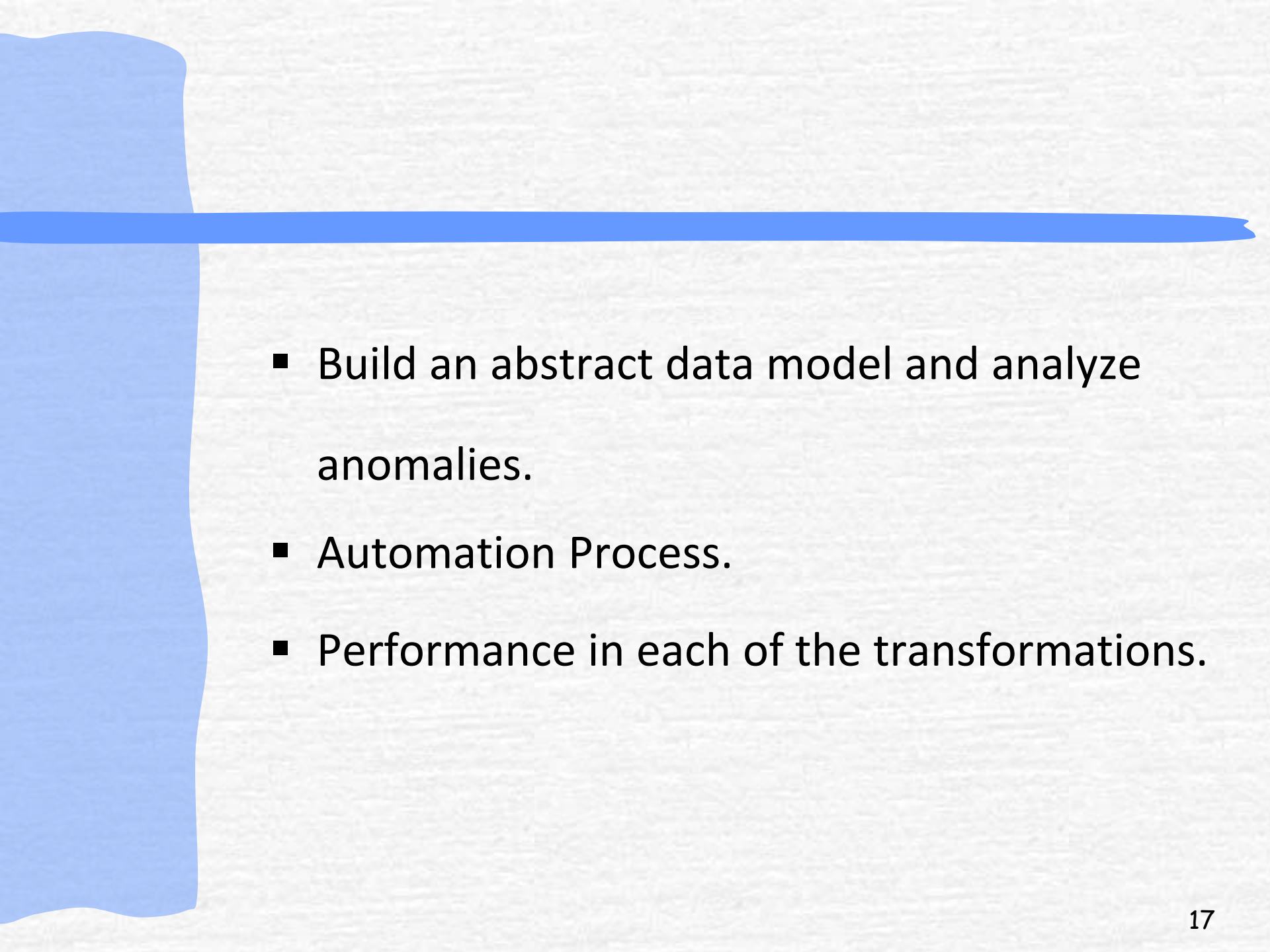
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- Build an abstract data model and analyze anomalies.
 - Automation Process.
 - Performance in each of the transformations.

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