

Modeling an Information Architecture on Market Data for Data Governance

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1. Introduction

- Problem Description
- Goal

2. Design Science Process

3. System Model

4. Architecture Description Language

5. Market Data

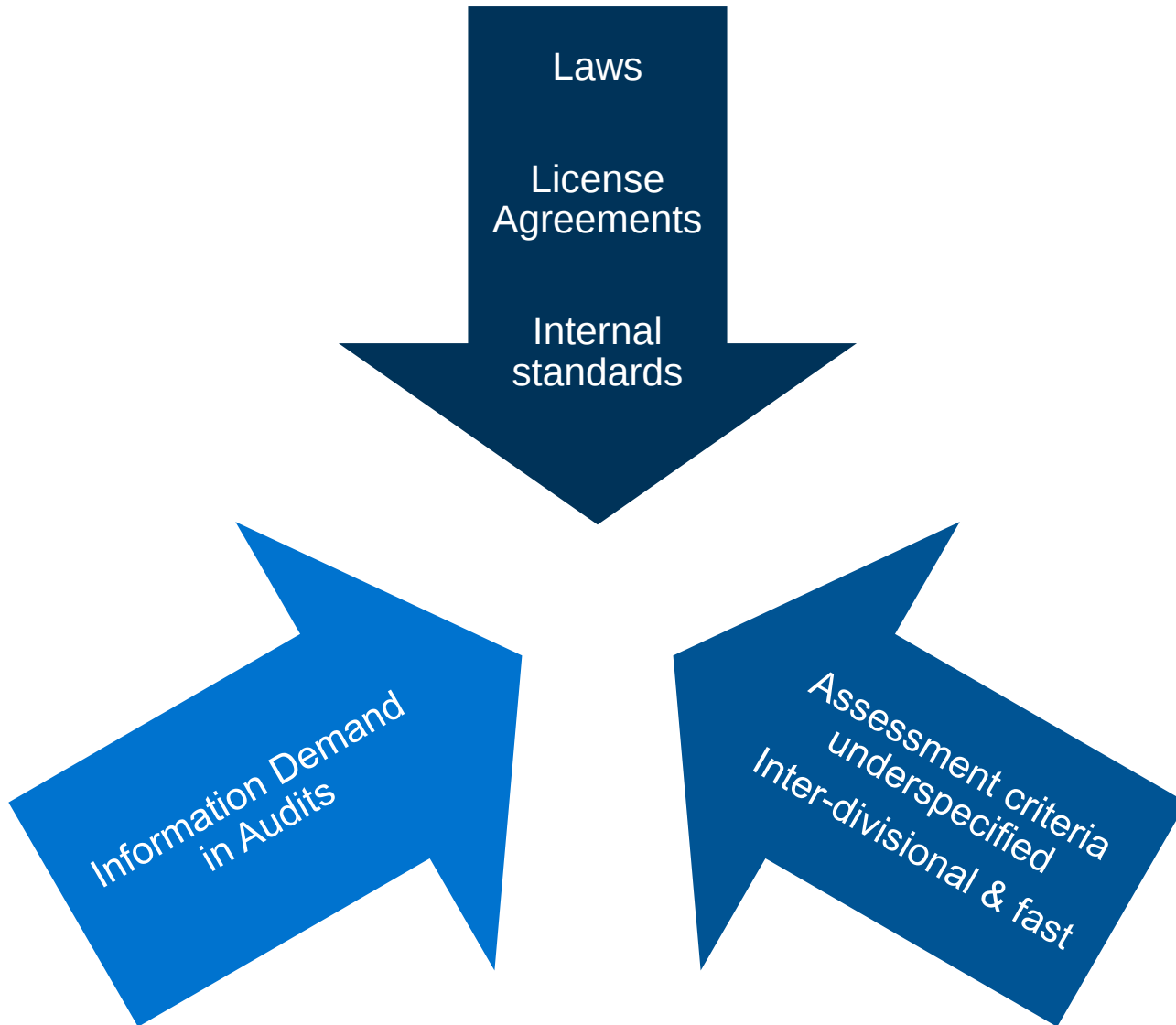
6. Timeline

Sarbanes-Oxley Act (SOX)

- I. Data about asset values may contain errors
- II. Companies have to execute IT audits that require risk management

Basel II

Operational risk: Risk of loss resulting from inadequate or failed processes, people, and systems or from external events



Information Architecture (IA):

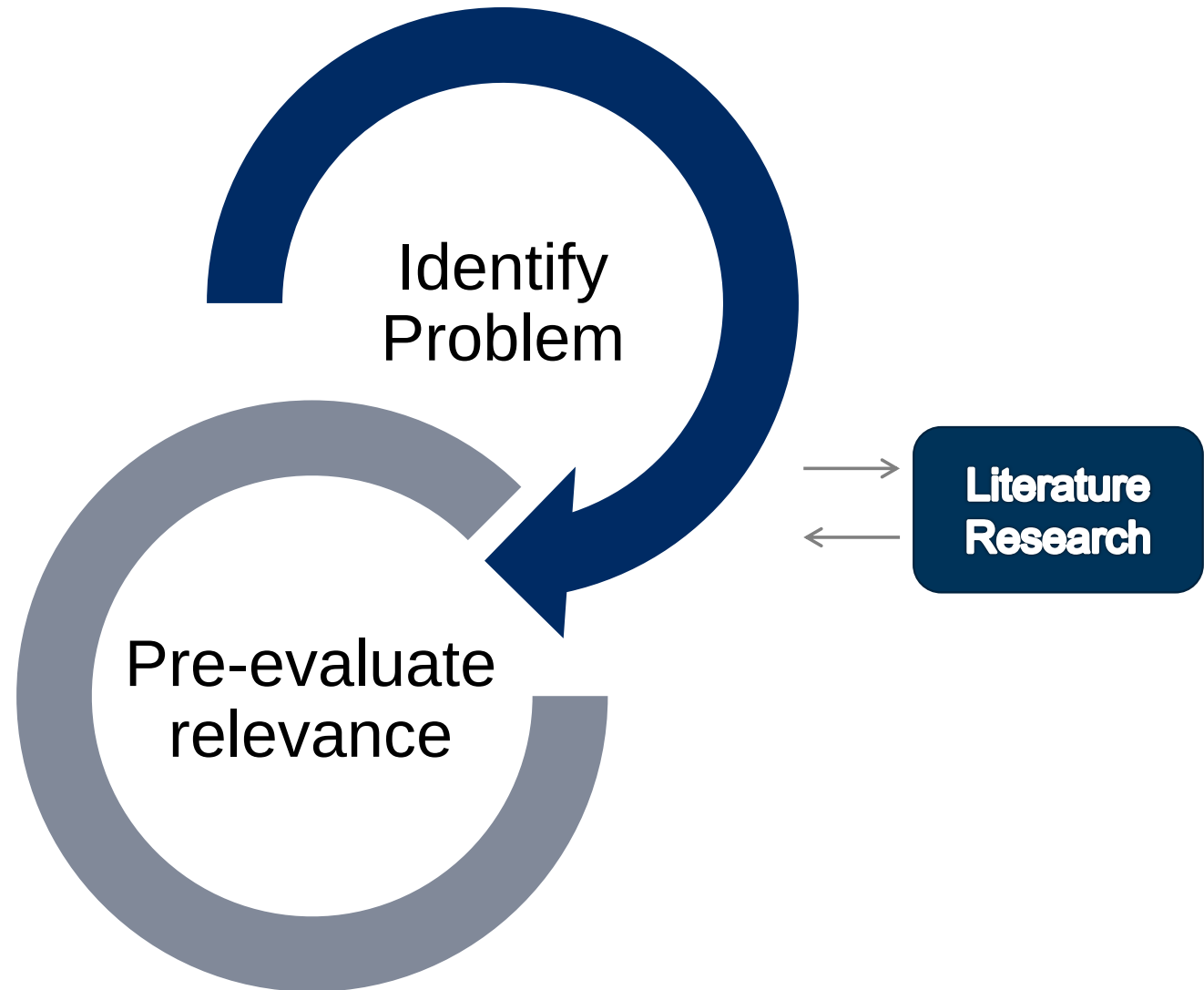
"An information architecture is a high-level map of the information requirements of an organization." - Brancheau et al.

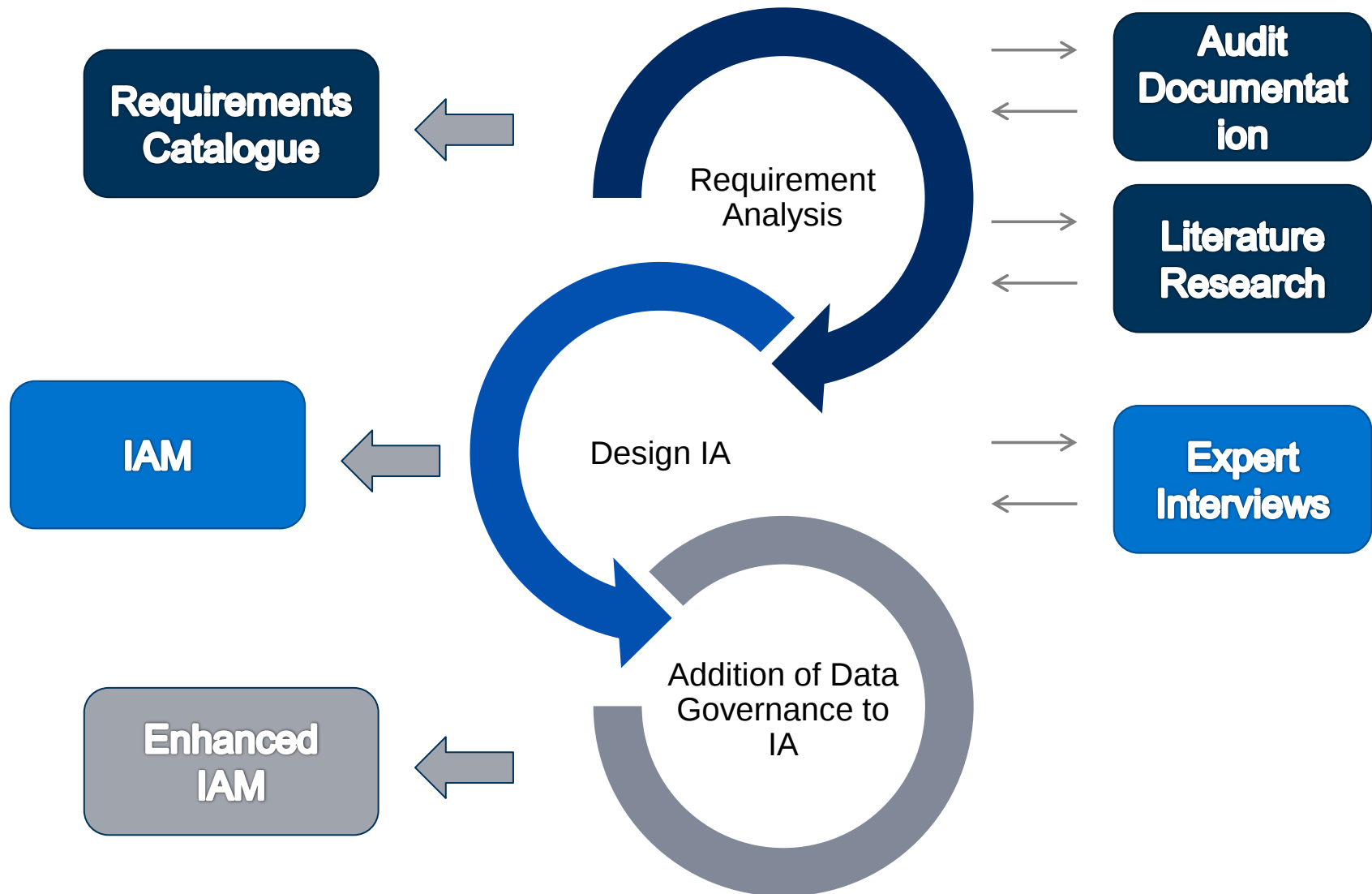
- External (& internal) information demands regarding processing & distribution of Market data
- Reduces complexity of system & offers a reference artefact for audit report generation

I. Problem Identification

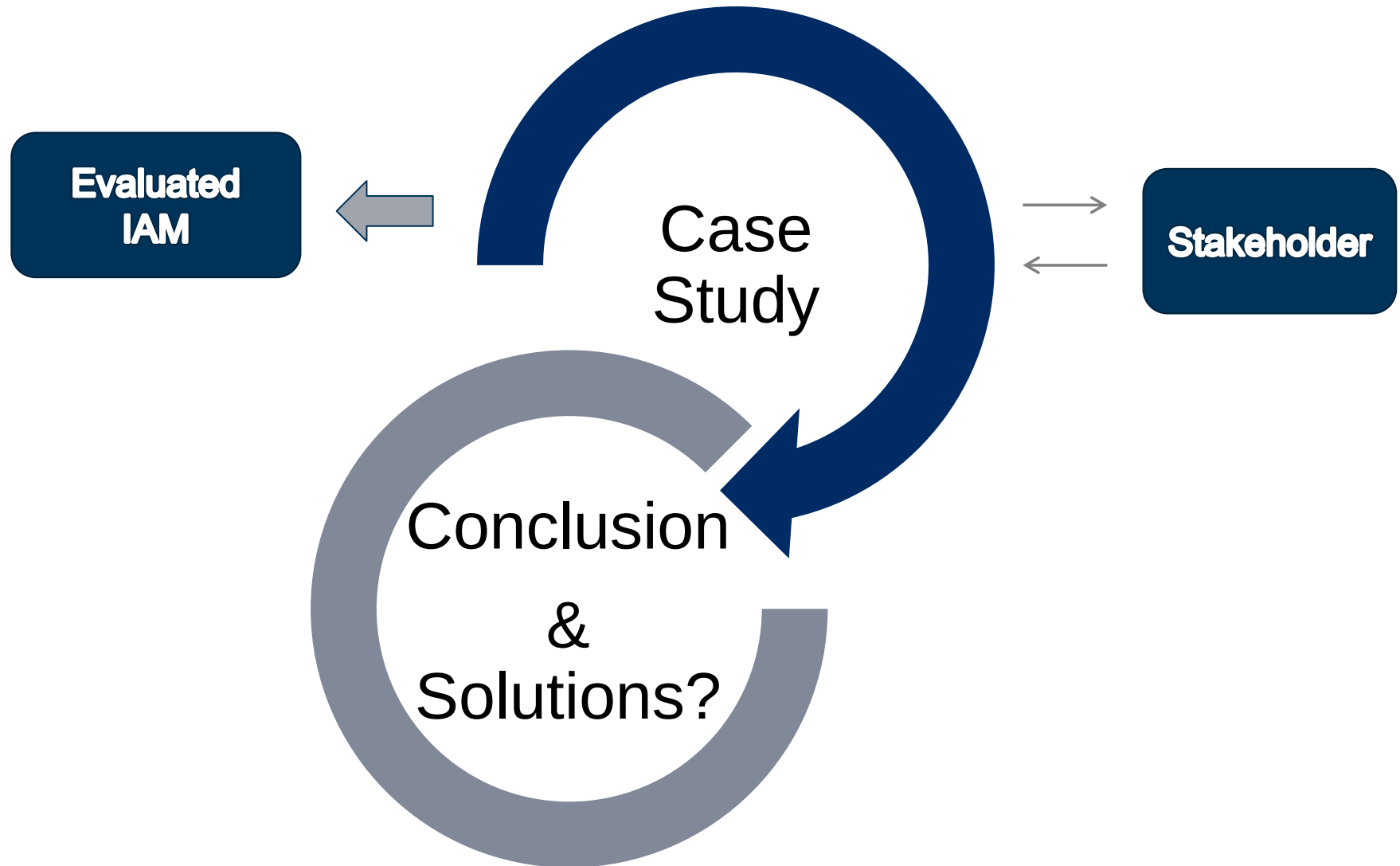
I. Solution Design

I. Evaluation





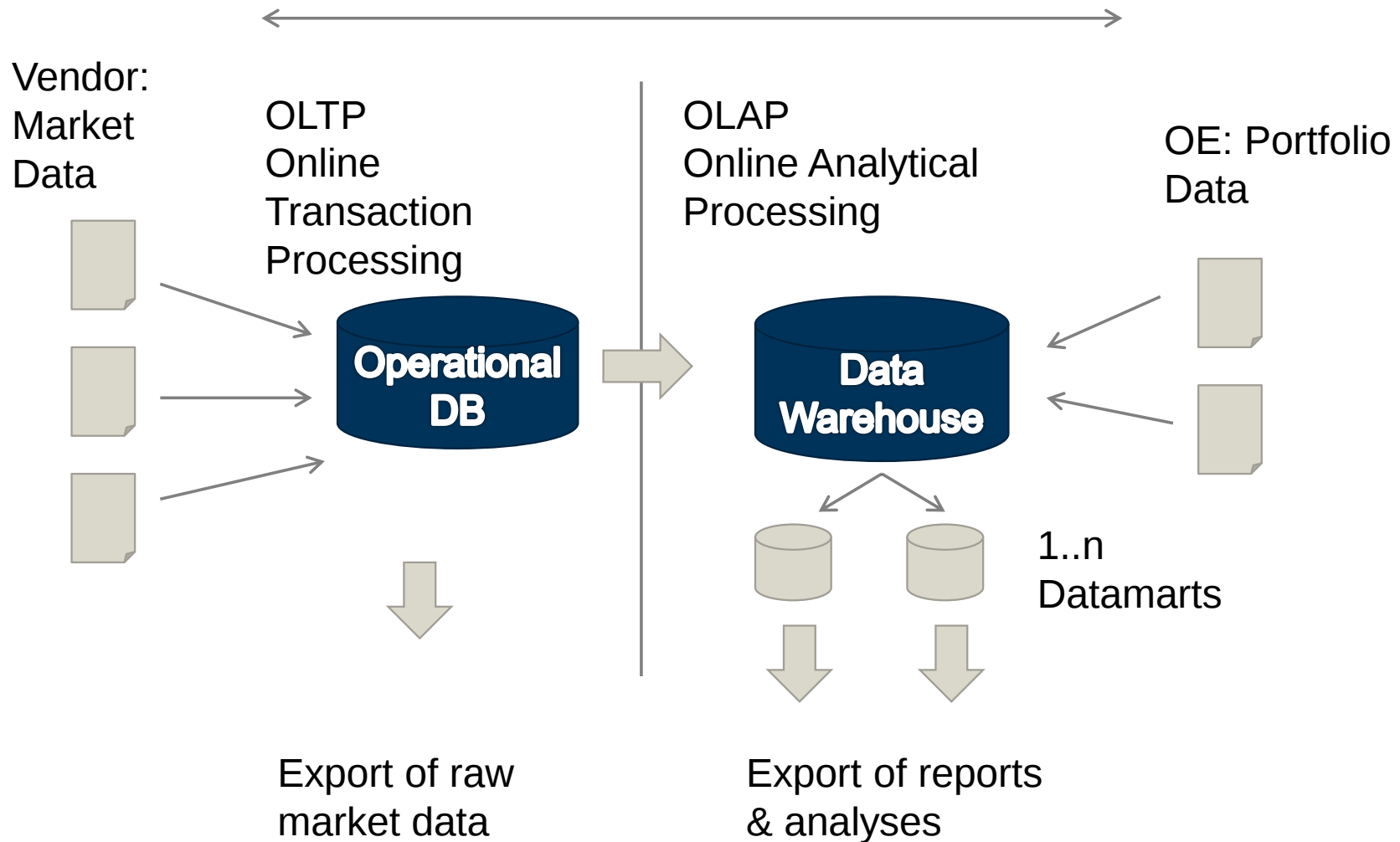
[Of09] Offerman, P., Levina, O., Schönherr, M., Bub, U.: Outline of a Design Science Research Process



[Of09] Offerman, P., Levina, O., Schönherr, M., Bub, U.: Outline of a Design Science Research Process

- Reference character
- Approach: Top-down, decomposition based

ETL – Extract Transform Load



Problem:

Viewpoint purpose: Informing vs.

Viewpoint abstraction level: Details

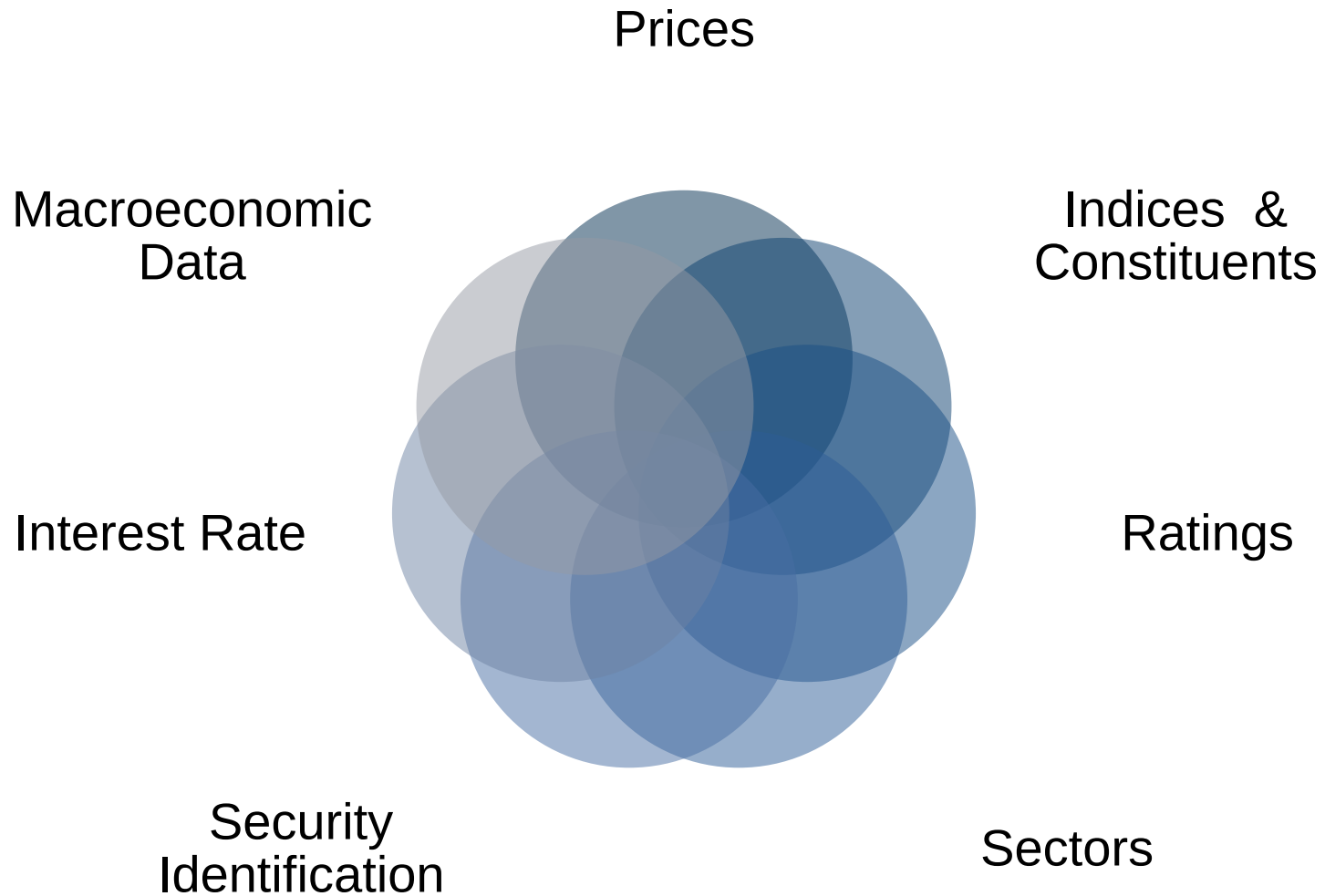
UML 2.5

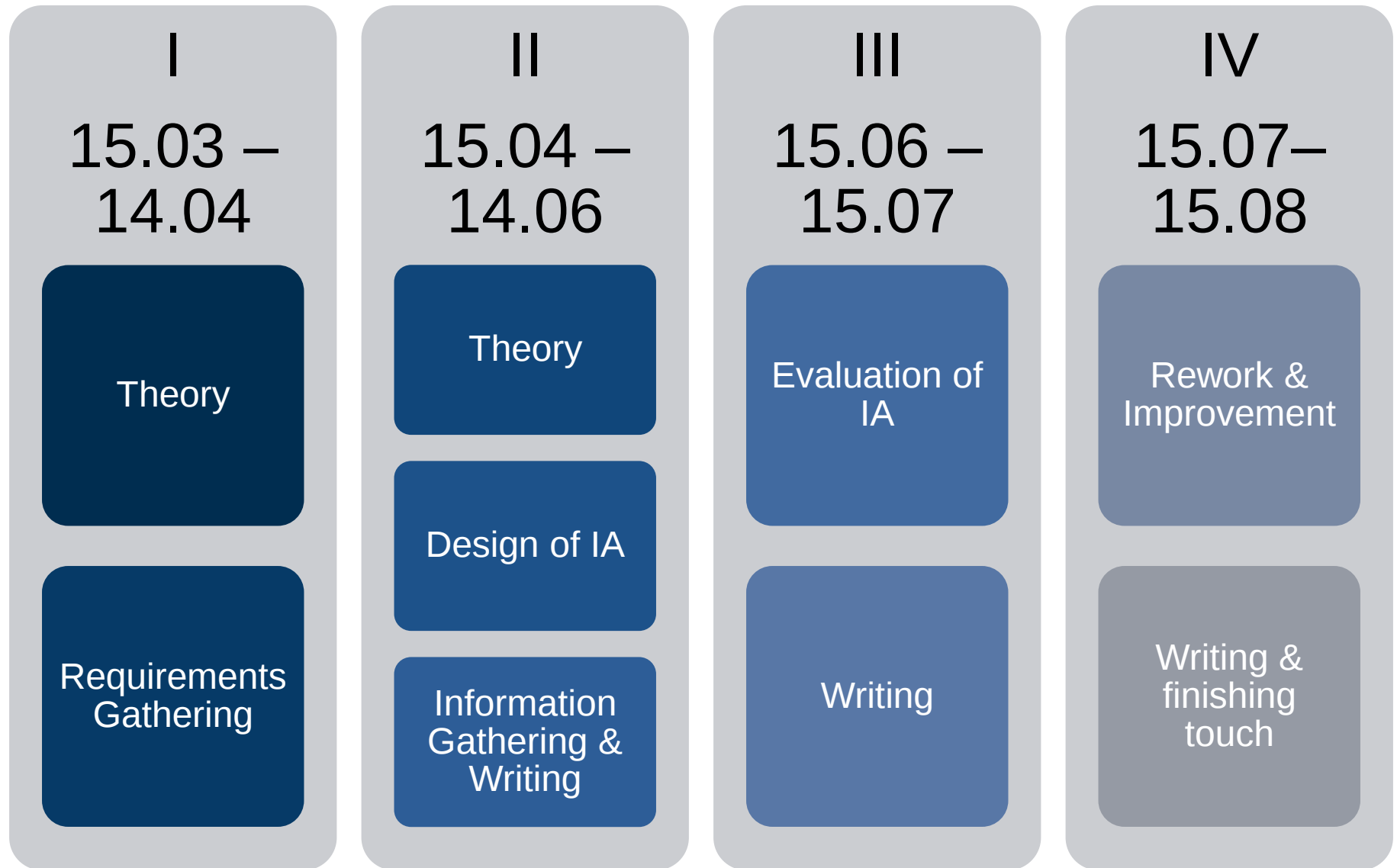
- Maxim of Quantity:
 - Informative as necessary
- Maxim of Quality:
 - Model evidence based and believe to be correct
- Maxim of Relevance:
 - Relevant related to modeling goal
- Maxim of Manner:
 - Avoid ambiguity

Data reflecting information about a financial instrument or investment.

All data, which are purchased from data providers (Vendors) and/or stock exchanges (third-parties)

- Time-series
- Static Data





Questions & Feedback



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