Master Thesis

Problem statement : Harnessing the Power of Large Language Models: Framework to Integrate Generative AI into Business Applications.

Framework scouting

6 weeks

LLM development

5 weeks

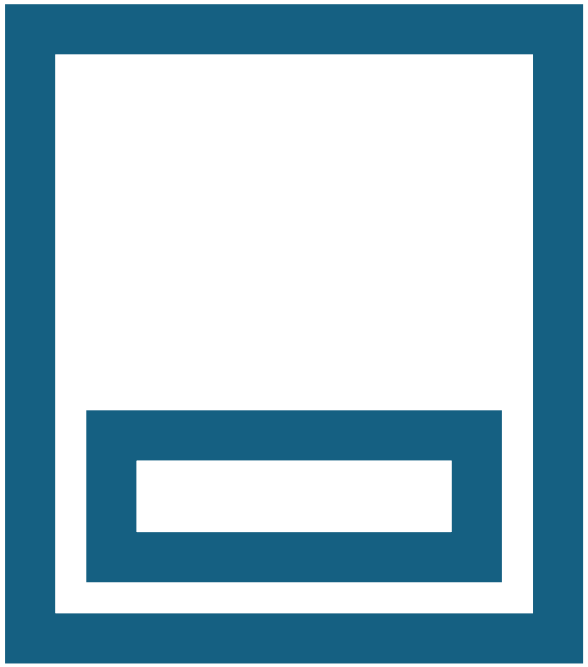
Post-development operations

4 weeks

Writing

3 weeks

Table of contents



1. Introduction and Key Research Questions

Framework to Integrate LLMs in Organization?

01

Which LLM development tools are best suited for specific insurance industry use cases?

02

Post development, continuous Integration?

2. Literature review (Framework scouting)

Framework	Focus Area	Strengths	Limitations
TAM	Individual adoption	Simple, predicts user behaviour	Ignores org/environment factors
TTF	Task-technology alignment	Links tech to tasks, improves efficiency	Static, ignores external pressures
IDT	Market adoption	Explains diffusion trends	Not actionable for org strategy
TOE	**Organizational adoption**	**Holistic (tech+org+env), ideal for regulation**	**Complex, data-intensive**

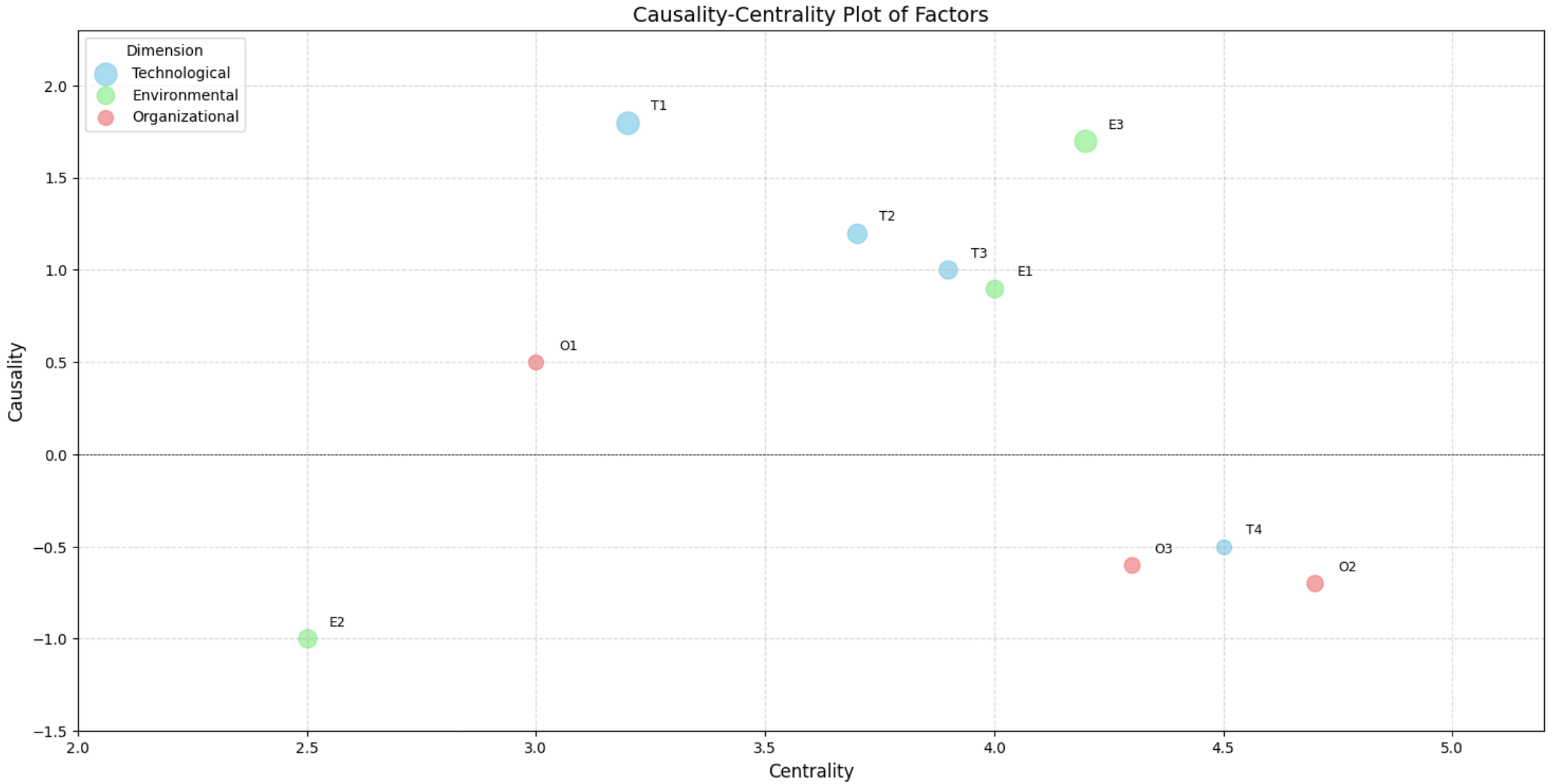
3. Framework Adoption

TOE + DEMATEL (Decision-Making Trial and Evaluation Laboratory) + ISM (Interpretive Structural Modelling)

TOE-based analysis of factors driving LLM adoption and services in the insurance sectors.

Dimensions	Factors	Coding
Technological	Data Security and Privacy	T1
	AI infrastructure synergy	T2
	Model Accuracy and reliability	T3
	AI Explainability	T4
Environmental	Regulatory Compliance	E1
	Competitive pressures	E2
	Lack of customer trust	E3
Organizational	Lack of management leadership support	O1
	Financial costs	O2
	Lack of complex talent	O3

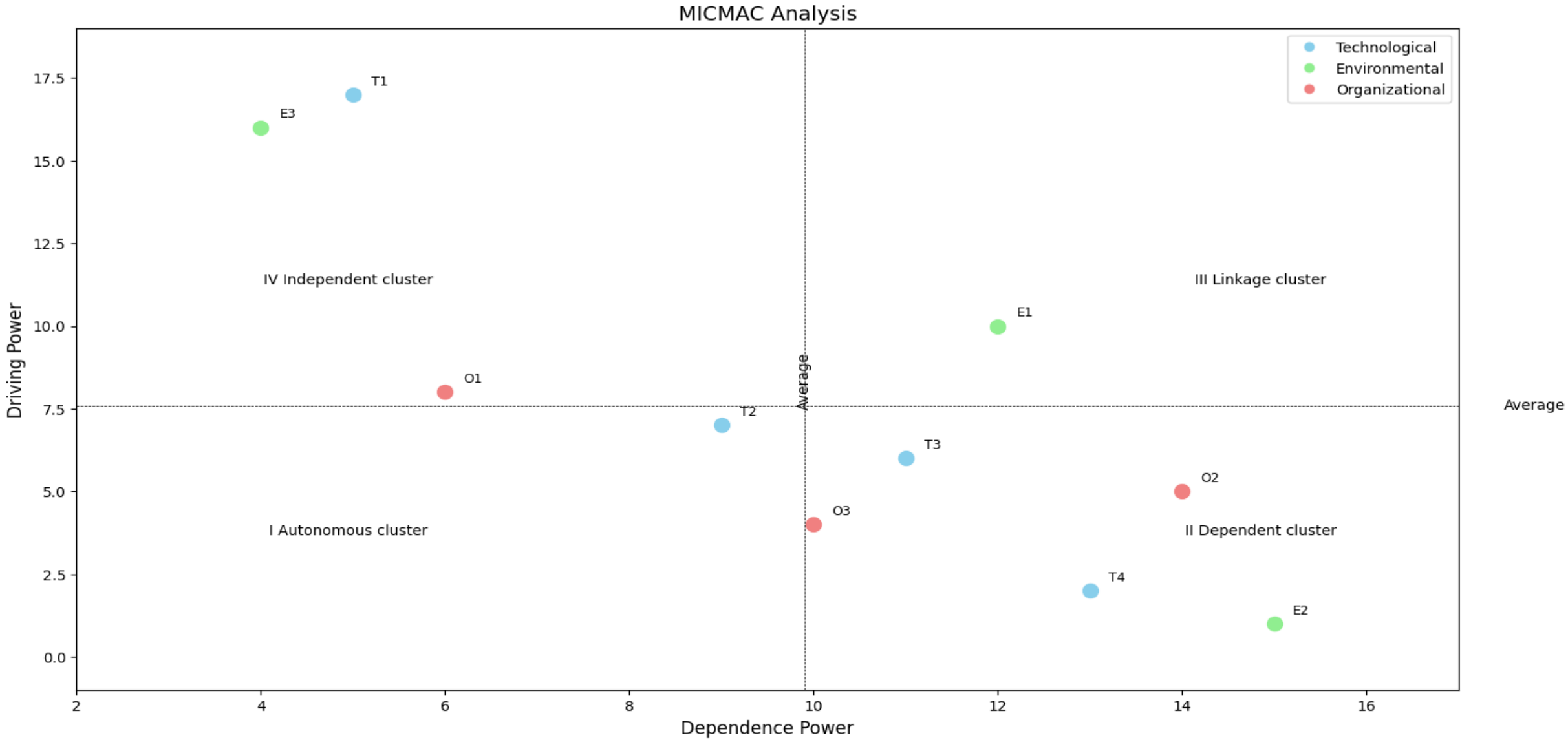
Analysis of Dimensions using DEMATEL Methodology



Scatter Plot Overview:

- Centrality : X-axis.
- Causality : Y-axis.

Analysis of Dimensions using ISM and MICMAC Analysis

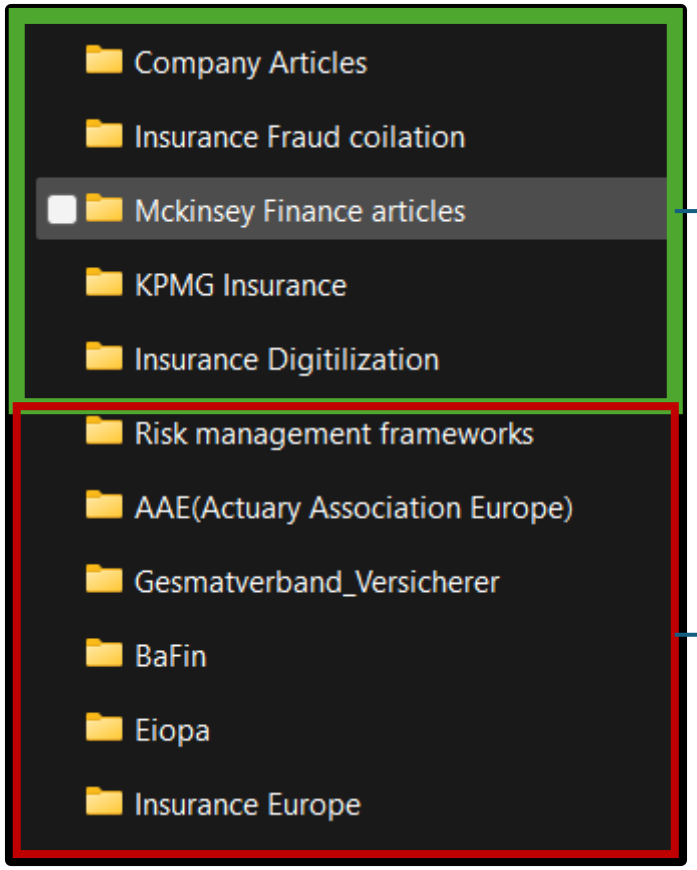


Scatter Plot Overview:

- Dependence Power: X-axis.
- Driving Power: Y-axis.

3. LLM Development & Operations

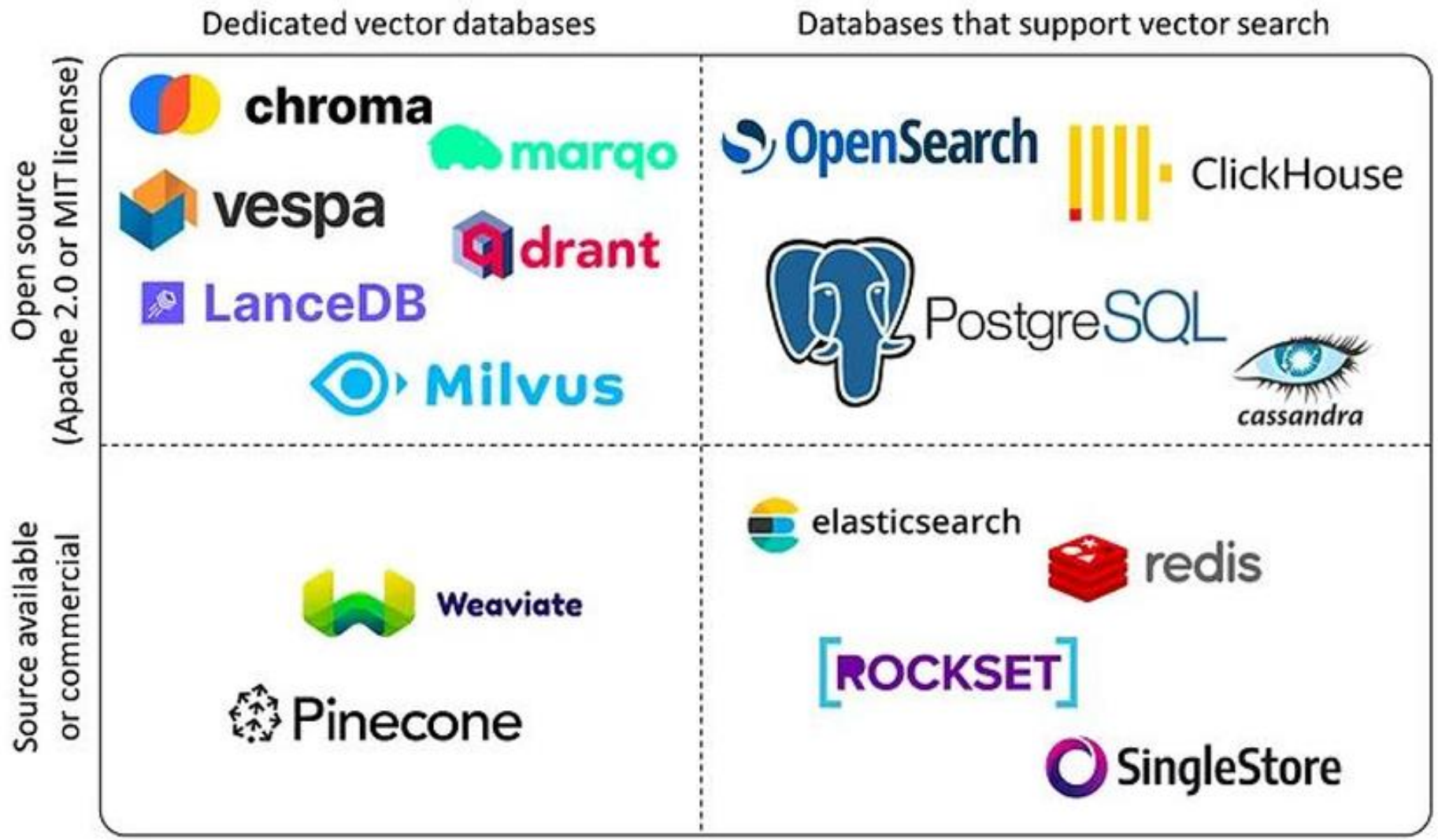
Training Data



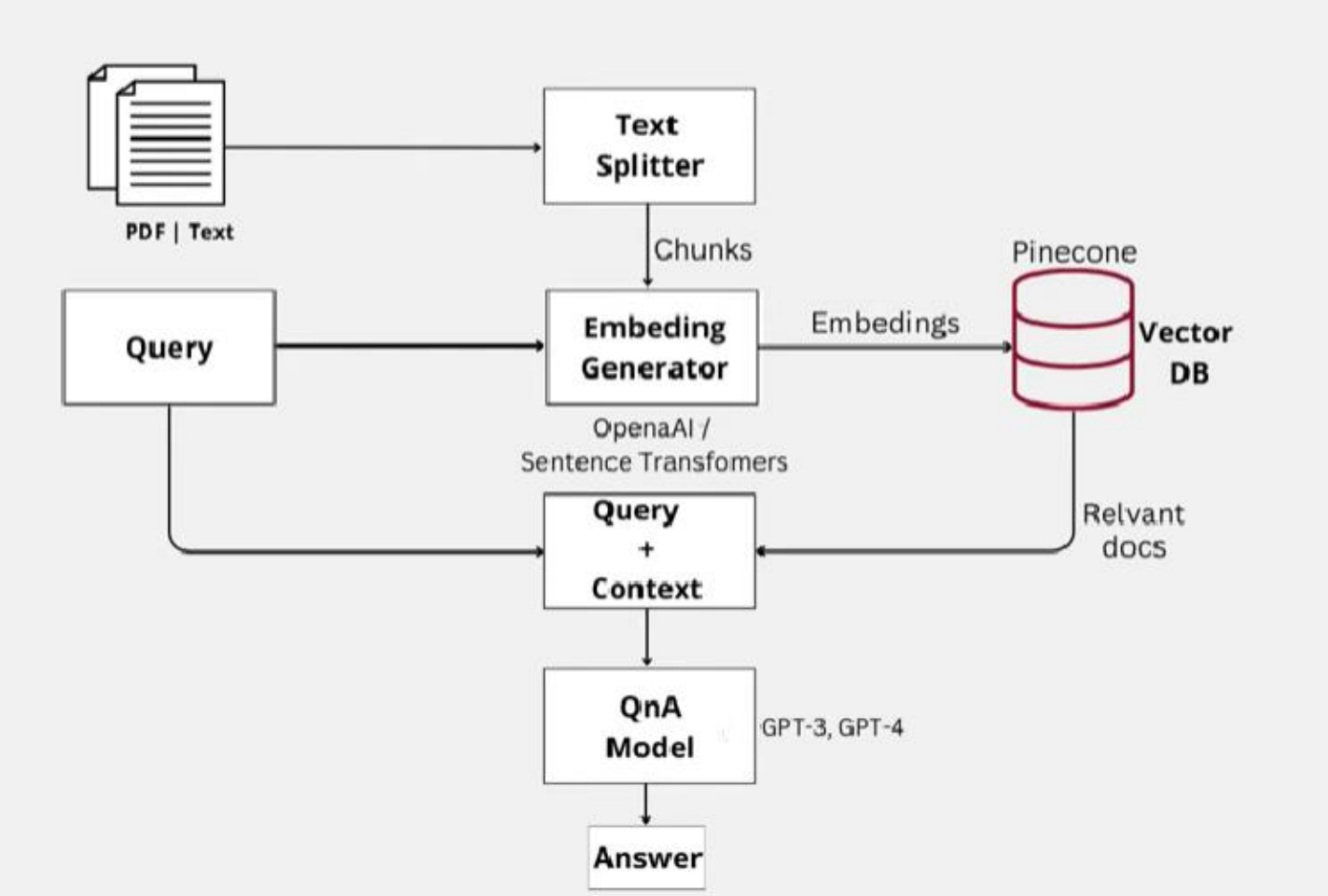
Corporate Insights

Regulatory Frameworks

Market Overview: Tools for LLM Development



Chatbot Architecture



5. Follow up Methodology

Please rate the importance of the following factors on a scale of 1 to 5?

How frequently do you experience dependencies between these factors?

Please specify any additional factors influencing the system?.