

IIT-ROPAR

MMTTP FDP - Capacity Building Programme in Artificial Intelligence - A Faculty Voyage Into AI April 1st, 2025

Final Project

LITERATURE MAPPING

Overview

- **Total Papers Analyzed:** 50
- **Core Themes Identified:**
 - **Design** and **Thinking** are the most prominent, suggesting strong alignment with the "Design Thinking" framework.
 - **Human-centered** elements (e.g. *human*, *creativity*) feature frequently, reinforcing the user-focused nature of design thinking.
 - Traditional management themes like **process**, **risk**, **system**, and **innovation** are also well-represented.

These patterns suggest that the literature spans across **innovation management**, **risk mitigation**, and **human-system integration**, with a focus on **decision-making processes** enhanced through **design thinking principles**.

Now I'll create a **visual map** to show how these themes cluster or interconnect.

Here's the **visual map** of the literature themes:

- Nodes represent **key concepts** (like *design*, *thinking*, *risk*, etc.).
- Edges show **co-occurrence** of keywords in the same paper — the **thicker** the line, the more frequently the pair appears together.

This network reveals:

- **"Design"** is strongly connected to **"thinking"**, **"human"**, and **"process"**, highlighting a focus on human-centered, structured innovation.
- Clusters suggest **risk management**, **system integration**, and **creative problem-solving** as emerging subthemes in design thinking applied to management.

SUMMARY

The reviewed literature spans 50 scholarly articles that collectively offer rich insights into how **Design Thinking** principles are being integrated into various dimensions of **management decision-making**. A frequent and dominant theme across the corpus is the emphasis on

"design" and **"thinking"**, both of which appear prominently, underscoring the centrality of creative and structured problem-solving frameworks in modern managerial practices. These terms often co-occur with **"human"**, reflecting a consistent orientation toward **human-centered design approaches**, which prioritize empathy, user needs, and participatory ideation in shaping decisions.

The term **"management"** itself appears with considerable frequency, suggesting that design thinking is not viewed as peripheral but rather as a **core strategic tool** across managerial domains. The abstracts and titles reveal that design thinking is being applied to **systemic challenges**, with frequent mentions of **"process"**, **"system"**, and **"integration"**. This implies that scholars are not just treating design thinking as a method for generating ideas, but as a **framework for integrating innovation into organizational systems** and decision-making pipelines.

Furthermore, the keywords **"innovation"**, **"creativity"**, and **"problem"** reflect how design thinking is leveraged to foster novel solutions in the face of uncertainty, change, and complexity. Interestingly, **"risk"** also emerges as a significant keyword, indicating a growing interest in how design thinking can be used not only to spur innovation but also to manage **strategic and operational risks**—a concern that is highly relevant in today's volatile business environments.

The **visual thematic map** constructed from the analysis shows strong interconnections between the major keywords. "Design" is at the center of the network, tightly linked to "thinking", "process", and "human", which highlights how closely these ideas are tied in scholarly discourse. Clusters in the visual also suggest that research is branching into specific sub-themes such as **human-systems integration**, **risk-aware design**, and **creative decision modeling**. These themes represent a **multidisciplinary fusion** of concepts from design, engineering, behavioral science, and strategic management.

Overall, the literature reveals a mature and evolving body of work that positions design thinking as a **transformational approach to management**, particularly valuable for navigating complex, ambiguous, and fast-changing environments. It encourages organizations to move away from linear decision-making models toward **iterative, user-driven, and experiment-based approaches** that align more closely with contemporary business needs.



