Architecting Ambient Knowledge in Enterprises

Problem
- From a systems perspective, large projects and enterprises have difficulty with communication and effective project design over the system life cycle.
- From a technical perspective, data harmonization across software systems remains an open challenge.

Hypothesis
1. High semantic distance between people/groups of people across the enterprise results in sluggish project performance.
2. Through the use of information technology, we can actively manage the semantic distance of an enterprise to make it more agile, efficient, and resilient.

Semantic Distance
- Semantic distance is the measure of the difference in meaning, context, and representation of mental models between individuals, organizations, and software models.

Organizational Culture
- For this analysis, we take a predictive view of culture, i.e., culture is used to define the emergent behavior of a group of individuals. Each individual can belong to multiple cultures that manifest themselves in different situations. A culture is defined as a group of people who have a low semantic distance, common beliefs, and a shared set of default actions.

Benefits to Industry
- Knowledge about the implicit value of individuals in the enterprise.
- Tools for analyzing enterprise and inter-enterprise interaction.
- Tools for actively managing fundamental properties of the enterprise, and their resulting emergent behavior.

Research Methodology
- Phase I: Preliminary literature review
- Phase II: Social networks/network science & organizational culture literature review
- Phase III: Tool construction & case study
- Phase IV: Tool refinement & thesis

Interested In Participating?
Would your organization be willing to host a case study? I am looking for organizations wishing to better understand the fundamental dynamics of projects from the semantic distance perspective.