Abstract:
This research reports on the application in the Architecture-Engineering-Construction (AEC) industry of the Multiple-Domain Matrix (MDM) methodology, originally established for product development processes. AEC project delivery features significant organizational complexity. Our use of the MDM methodology aims at characterizing and managing such complexity while following the Lean Construction philosophy. Lean Construction refers to using lean thinking principles that stem from the Toyota Production System (TPS) and new ones that address challenges particularly prominent in the AEC industry. We conducted a case study in the Design Phase of a healthcare facility’s delivery to examine applicability of the methodology. We linked those involved in the project to the processes they followed to prepare a design for review by the building permitting agency. Our MDM analysis of the organizational interactions resulted in identifying highly correlated groups of individuals from different companies. This result encourages further use of MDMs to manage AEC Design.