WORKING THROUGH UNFORSEEN UNCERTAINITES USING THE OODA LOOP: AN APPROACH FOR SELF-MANAGED CONSTRUCTION TEAMS

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ABSTRACT

Construction operations are dynamic and time sensitive. The management response to issues on site is typically a consequence of and the response to an event that has already taken place. Decisions and actions that are delayed are often rendered ineffective because of the constantly changing site conditions. The sudden emergence of the situation and the dynamic nature of its evolution needs to be addressed with flexibility and fluidity based on an appropriate assessment of the issues at hand. The need to increase the effectiveness with which self-managed teams perform under such conditions cannot be overstated and clearly requires a theoretical framework that can provide an interpretation of the underlying cognitive processes and selected responses in the face of dynamically evolving environments, and the intricate interrelationships among all constituents of the process. This paper presents the Observe-Orient-Decide-Act (OODA) loop as the theoretical interpretation by which to understand, influence, and predict the performance of self-managed construction teams. The paper begins by introducing the constructs of the OODA loop, followed by exploring its application to understand and evaluate the performance of self-managed teams in construction. The paper then posits that the effectiveness of self-managed teams found in construction is a function of the collective OODA loop speed of the group. The paper concludes with research possibilities associated with the OODA Loop, and develops guidelines for embracing uncertainty in the project, and production management phases.

KEY WORDS

Lean construction, OODA loop, last planner system, self-organizing teams.

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