Managing Complexity in Project Teams

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Abstract

The traditional approach to the management of projects in the construction industry is constantly challenged, in particular the implementation of processes and the application of the project management knowledge base in complex projects. These challenges require a non-linear approach, a transformation from the control to the behavioural paradigm and a better understanding of how complexity in projects can be managed.

Interconnections between the various project parties, from individuals to companies, have always been identified as an area which requires attention. Indeed, project management sub-processes that have to consider interconnections, such as selection of project team members, structuring the project teams as well as the management style adopted, are either not implemented or the execution remains subjective, despite the existence of appropriate techniques. Considering that complexity occurs in non-linear systems and interconnections, the lack of appropriate means affects the implementation of such sub-processes and consequently performance. Investigating the complexity of the interconnections for the two sub-processes and the management style adopted and enabling the management of its effects must enhance implementation and thus project outcome. Therefore, the development of a framework is proposed which, by using existing knowledge and complexity characteristics, will allow project management (PM) practitioners the multiple implementation of actions for the management of the effects of the complexity of interconnections on construction projects through the two sub-processes and the management style adopted.

The rationale of this investigation is that interconnections, formed between and affected by social entities in projects, give rise to complexity, which can be managed by improving the project organisation and the management style followed. A research strategy was established which encompassed a survey, interviews and case studies with both UK client and construction PM practitioners. The survey results confirmed previous findings and indicated that, although PM practitioners are aware of techniques and are given guidance, these are neither implemented nor considered. Consequently, project management outcome remains only at acceptable levels. Interviews confirmed that the complexity of interconnections is not considered and very limited actions are taken to manage its effects when organising project teams or considering the management style to be followed. Indeed the effect of complexity of interconnections on project performance is dramatic as established through the case studies.

Therefore, consideration should be given to means for managing complexity of interconnections when selecting team members, structuring the project teams and when deciding on the management style to be adopted. Awareness and guidance on processes currently given to PMs has to materialise, and this can be achieved through the use of the framework for managing the complexity of interconnections.

Key Words: Complexity, Interconnections, Project Management, Selecting Team Members, Structuring Teams, Management Style