



Integrated project teams in early design stages – Key variables influencing cost effectiveness in bridge building

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Abstract

The construction industry is usually regarded as a complex, multidisciplinary and project focused environment. It is also regularly identified as a one-of-a-kind nature, hence focus is on the uniqueness of projects rather than in similarities. The results presented in this article are based on questionnaire addressed to clients, contractors, and designers, mainly active within the Swedish infrastructure sector. The purpose is to highlight key-variables influencing cost effectiveness for the organization of integrated project teams, designing of projects, and construction at site. The results indicate that more attention needs to be paid to the actual project setting if to fully gain the benefits from integrated project teams. Further, the results indicates that it is mainly project culture; collaboration and social relationships, and project competence, the ability to solve mutual issues, that needs to be developed.

Keywords: IPT, bridge design, project performance, integrated design.

1 Introduction

The lack of productivity in the construction industry comes out off several different areas/factors. E.g. owners have not been focusing on productivity and quality when procuring, more focus has been on standard compliance [1], contractors most often miss the important step of experience feedback, resulting in making the same mistakes in many repeating projects, also within the industry focus is on projects rather than processes, making the inefficiencies of design and construction left un challenged [2]. Moreover, owners have come to accept industry pricing, which responds to market place forces, and hence,

further cements the low productivity. Contradictory, manufacturing activities becomes cheaper and cheaper over time [1].

Long term relationship within project teams including experience feedback over time is scarce today. In the project setting there are several interfaces where experience feedback and knowledge transformation is possible and a very important step in order to create cost-effectiveness over time. Nevertheless, this is seldom or never utilized systematically, e.g. [3]. How to benefit from an increased collaboration between companies during long term relationships has been a discussion in literature for