

Building Bridges over Barriers in Construction Processes

Dr. ing., Associate Professor Marit Støre Valen¹, NTNU, M. Sc., Research Director Ole Jonny Klakegg, NTNU, Consultant.Hege Bjørke, Norconsult AS and M. Sc. Siri Hustad², Norconsult AS

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How can we build bridges over barriers that affect the construction process both through increased transaction costs, cost due to building defects and high conflict rates? The purpose of this paper is to explore the possibilities to find new ways of increasing the interaction between the stakeholders.

The findings are based on a qualitative study of 4 construction projects and a quantitative survey from more than 326 Norwegian firms: building owners; construction companies; consultants; designers and others. More than 35 % were from the construction sector. The objective of the survey was to identify barriers that hindered effective interaction between people involved in the construction process and hamper the use of new technology (ICT).

Among 326 respondents in the quantitative survey 87 % agreed to a great extent that lack of time or time pressure where the most important barriers against effective interaction. Other main barriers were found to be lack of common understanding of project objective and objective conflicts (79 %), lack of understanding of the user demands (77 %), design and building defects as well as bad change and conflicts management (about 60 %). This affects both economically and humanly costs and the consequences are losses for all involved parties.

We need to build bridges between the different parties to create more clarity around roles and responsibility in the project. In order to get wholeness and common understanding of the aim of the project we must find an arena for communication and bringing people together; getting to know each other in the engineering phase, as well as involving the end user more. Other important issue is to give sufficient time to process the project and develop mutual understanding. Together we believe this will have positive effects like increasing willingness to communicate and cooperate interdisciplinary, based on trust, good communication and openness among the disciplines. One other major effect (that will save a lot of money) is to reveal faults and defects at an early stage.

Many respondents doubt that ICT can be a solution and action for better interaction, some people even see ICT as part of the problem. However, the survey unveiled a great need for more knowledge of how such technology can contribute to solve these challenges. One case study illustrated the challenges and barriers in a traditional building project and another case study exemplifies how new technology increases the quality of the product, increases the interaction between the people involved and the effect of cooperation in interdisciplinary team. There are strong indications that new technology and especially the use of a Building Information Models (BIM) might be a bridge that helps communicating the end product and clarify the aim of the project. There are also indications that this technology leads to increased interaction and interdisciplinary exchange between the stakeholders. This technology makes it possible to reach a common understanding of the project objective at an earlier phase than in traditional building projects.

¹ Department of Civil Engineering and Transportation
Norwegian University of Science and Technology (NTNU)
Høgskoleringen 7A, N-7491 Trondheim, Norway
Phone, E-mail: +47 73 59 46 44 or +47 918 97 967, marit.valen@ntnu.no

² Norconsult AS, Ingvald Ystgaardsv. 3A, N-7047 Trondheim, Norway. Phone,E-mail: +47 45404638, siri.hustad@norconsult.no