

Project 2.33

New Project Management Structures: Infrastructure Modelling (BIM) and Location (GIS)

RESEARCH PROGRAM 2: PEOPLE, PROCESSES AND PROCUREMENT

At a very broad level, productivity measures are often used to indicate the capacity of a nation to harness its human and physical resources to generate economic growth. Capacity is mostly considered to be a human activity, however, the rapid integration of digital technology into all business activity, requires a rethink of productivity within the construction sector. The McKinsey Global Institute May 2013 report *Disruptive Technologies: Advances that will transform life, business and the global economy* outlines the implications for the successive challenges new technologies will have for individuals, established businesses and governments. Because the construction sector intersects will all three categories research targeting industry identified disruptive technologies affecting the sector is paramount.

The findings from SBEnc Project 2.21 *New Project Management Models for Productivity Improvement of Infrastructure* indicate that individual projects and individual companies may be attempting to improve productivity by using available digital solutions. However, problems with capability, capacity and lack of interoperability between systems continue to limit the use and effectiveness of the common solutions: Location Based Management (LBM), Building Information Modelling (BIM) and Lean or Agile Construction Management.

Objective

The project aims to support productivity process capacity within the infrastructure construction sector for both vertical and horizontal infrastructure projects such as hospitals, schools, freeways, railways, transport interchanges, or bridges and their associated project management systems and data needs. This construction sector research aims to provide new project and portfolio data management process solutions. Focusing on location and proximity will utilise emerging BIM and GIS digital tools to enable process interventions concentrated on administrative waste to provide added Value For Money for infrastructure.

- Streamlining data-handling for infrastructure projects.
The aim is to improve project and portfolio management productivity by reducing data-handling waste (cost is added without the addition of commensurate value). More effective processes for data-handling can reduce data-overload and thus administrative transaction costs for all types of digital data.
- Reducing portfolio data management waste.
The portfolio focused research will explore the problem of distributed locations across a portfolio (programs of projects) of projects (from small to large capital maintenance projects). The aim is to identify process to support integration from design information models with the requirements of maintenance of infrastructure assets to ensure best practice service provision of users.



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