



Title: BIM 4D+Risk: an innovative way to manage risks in construction projects

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Summary: Building Information Modelling (BIM) 4D has been recently one of the most common topics discussed across the profession globally to investigate the innovative opportunities in the schedule management of construction projects. The concept of BIM 4D integrates the delivery strategy, schedule and all the activities related to the design, construction and operation into a model developed, implemented and managed within a communication platform. From the point of project planning and scheduling, the area of interest is an integrated risk platform as well as a proactive change management approach based on BIM 4D+Risk.

The presentation aims to explore how the current practices of risk management and its communication processes can be further improved by integration into a BIM 4D platform. The speakers present an example of how the integrated risk and BIM 4D planning platform can be effectively developed and communicated through an innovative augmented reality technology.

Key elements of the presentation:

- BIM 4D+Risk introduction and its required best practices and processes
- Mapping risk register against project schedule activities
- Quantitative schedule risk assessment integration into the BIM 4D+Risk model
- Presentation of risks in a virtual environment as opposed to the traditional tabular risk register
- Effective management and communication of risks, issues and the project schedule in an integrated 4D model through augmented reality
- Virtual walking through the integrated 4D+Risk model in an augmented reality model by utilising the Microsoft HoloLens technology. The augmented reality experience will be shared via the display screen with the attendees.

The speakers aim to provide insight into the current state of knowledge about risk management in construction in terms of 4D implementation, and to explore and demonstrate significant opportunities for the project controls profession to enhance its maturity and capabilities by combining risk management and planning best practices with the use of cutting edge technology.

Keywords: proposed keywords in lower case and separated by commas.