

## **CONSTRUCTION ENGINEERING MASTERS DISSERTATION ABSTRACT**

### **BIM as a Concept to Overcome Corruption in the CIS Region Construction Industry**

An estimated \$300 billion dollars is lost every year in Russia alone due to corruption. If we add to it the time overruns, the inferior quality of the design, materials and installation, the loss of life and property as a result of building and structures collapsing particularly noticeable after natural disasters due to corrupt design and building practices compounded with the legal cost companies have to incur to defend themselves at the tribunals. We have a serious challenge for any western design and construction company operating or trying to operate in the CIS construction market.

A comprehensive literature review has revealed that the problem although not new, is very complex and multi-layered. It is magnified in this region due to the scale and value of projects. The multiple drivers of corruption in this area have also been identified in the study from cultural, technical, financial, supply chain and organisational as well as the different types of it, bill fraud, bid/contract rigging, bribery, change order manipulation, money laundering and tax evasion.

The author advances the thesis that as engineers and builders we cannot effectively combat corruption in the construction industry particularly in the CIS region with legislation only, if anything the tendency has been that the harsher the law has been against corrupt practices and individuals the more prevalent in range and magnitude corruption has been.

This view is shared also by the participants of this study according to the analysis of their responses as well as it is the perception that new tools are needed in combating this malaise.

This paper has connected the correlation that exists between lack of transparency and increased corruption and the correlation that exists between the use of BIM and increasing transparency to advance the hypothesis that employing Building Information Modelling (BIM) as a tool could be the answer in the fight against corruption, as a collaborative instrument that improves transparency in construction projects and could arguably reduce the level of corruption at the project level.

A mixed research method was utilized to provide qualitative and quantitative data obtained via an online questionnaire which was issued to 50 participants with relevant experience and exposure to the CIS design construction industry .An analysis of the results is provided in chapter four.

The findings of the study are presented in chapter four, shedding a different perspective from the point of view of participants with experience in the CIS construction industry region, with the majority stating that corruption is nigh impossible to eliminate. However, it can be substantially reduced at the project level by implementing new collaborative (BIM) technologies increasing transparency and accountability, thus, supporting the hypothesis that the author was advancing.

**Jose Perez**  
**December 2016**