South Africa lags digital construction

MEDIA STATEMENT

The 2016 Building Information Modelling (BIM) Institute survey shows that there is a significant lack of education in terms of digital construction and building information modelling for complex building projects in South Africa.

“A cursory glance at construction projects in our major cities would give the impression that the construction industry is widening its vision and raising its game. Buildings are more innovative, our search for natural resources is becoming more technically advanced and one would therefore think that the pace of change is such that construction projects are keeping abreast with digital technology and processes,” says Vaughan Harris, Executive Director, BIM Institute.

“Few would doubt that technology plays an integral part in helping the industry realise these goals by enabling enhanced design, procurement and construction. But one only needs to scratch the surface to see it is struggling to reap the full benefits of design software, data and analytics, 3D scanning, mobile solutions and automation in South Africa.”

As some construction companies attempt to improve governance, health and safety, project controls and upskilling, the fundamentals of traditional engineering, construction and project management processes still appear stagnant.

“We can all agree that digital technology inevitably brings disruption in its wake, at a speed that is likely to increase, but many architectural companies still remain ignorant when it comes to new and improved digital design technology,” says Harris.

The current downturn in the construction industry also does not encourage investment in upgrading systems and cash strapped businesses continue to use their current software systems.

The survey questioned owners, architects, engineers and construction companies on a number of current issues to understand whether their views on BIM are aligned or whether differences exist.

“The responses reflect the industry’s conservatism towards BIM technologies, with a number of respondents preferring to follow trends rather than to take the lead. Unfortunately many who have adopted a BIM technology strategy have done so in a silo approach.”

The final report is based on 132 completed surveys and 85 incomplete surveys gathered between 12 September and 31 October 2016. The majority of returned questionnaires were from professionals and senior industrywide executives with 39% of them working for organisations with over 200 employees.

Respondents:

Sector response split:

- 1x asset manager
- 4x contract managers
- 4x contractors
- 4x IT services
- 4x planners
- 9x draughtsmen
- 10x government
- 11x engineers
- 11x project managers
- 15x technical experts
- 17x quantity surveyors
- 22x architects
- 22x BIM managers

- construction 66%
- infrastructure 14%
- energy 2%
- residential 0%

“It should therefore be noted that this is not representative survey of the entire industry, but rather a glimpse at how leading organisations in South Africa are using technology in construction and the built environment. The majority of respondents came from Gauteng (45%), followed by Western Cape (31%), KwaZulu-Natal (8%) and ‘other’ (15%).”

The software findings revealed in the survey show that 34% of designers chose to work with AutoCAD, with 28% designing in Revit, 9% ArchiCAD, 4% Trimble, 4% Tekla and 6% Bentley. Despite brand loyalty, the survey found larger firms were more likely to use more than one software package.

Of respondents, 55% said they used cloud-based document management systems (Synergy Docwize and Key360), while some smaller firms were using cloud-based storage tools (Dropbox and Google Drive).

Some 81% of respondents agreed that BIM in South Africa requires a mandate from the National Department of Public Works in order to be successful