Tell the World: We Are More than Scan-to-BIM

Opportunities in digital twins, smart buildings, smart infrastructures and smart cities require more than just BIM as data. To benefit from this growing market, the surveying and spatial industry must provide advocacy, leadership and education in BIM.

Building information modelling (BIM) will be a growing opportunity for the surveying and spatial industry, providing we focus more on adding value to BIM and concentrate on what we can offer to other industries thanks to BIM rather than merely preparing it. Opportunities in digital twins, smart buildings, smart infrastructures and smart cities require more than just BIM as data. The surveying and spatial industry will not benefit from this growing market without fully realizing the BIM market opportunity and providing advocacy, leadership and education in BIM.

Scan-to-BIM is promising but even more lies beyond

With the increasing availability of laser scanning technologies, scan-to-BIM has become the major pathway for the surveying and spatial professional to contribute to the digital engineering of buildings and infrastructure. While there is a growing demand for the scan-to-BIM service within the architecture engineering and construction (AEC) industry, it is essential to note that this service – which effectively is a 3D surveying and mapping service – is a small part of the broader BIM economy. Analysis of the various facets of surveying and geospatial market reveals that the growth in surveying and mapping services and survey equipment is marginal. The message from the analysis is clear: the cost of collecting geospatial data will continue to decline and there will be limited growth in services related to surveying and mapping. In contrast, a fast-growing area is GIS and what we can do with the spatial data. We can draw some similarities between BIM and GIS. BIM will be no different to surveying and mapping if we only focus on preparing data and information. If we go beyond modelling building information, however, we can discover a continuum of opportunities.

Adopt the SDI philosophy for buildings and infrastructure

As surveying and spatial professionals, our immediate contribution lies in modelling buildings and infrastructure and this is already being done with considerable success in the AEC industry. However, BIM is about more than merely representing buildings and infrastructure using spatial information; it is also about collaborative data environments (CDEs) and a solution for the fragmented AEC business model. Based on the spatial data infrastructure (SDI) philosophy and our expertise in spatial data management, standards can be adopted in developing CDEs to facilitate the operation of buildings and infrastructure. We have longstanding expertise in generalizing large-scale spatial data to create a small-scale map. BIM provides opportunities to evolve GIS technologies that are focused primarily on outdoor environments into technologies that can be used for indoor spatial analysis. One single building presents all these opportunities for creating BIM, creating CDEs, maintaining and analysing the BIM data and converting it to city models. However, the AEC industry is not yet fully aware of these capacities in the surveying and spatial industry.

Advocate, lead, research and educate in BIM

There are endless opportunities for adding value to BIM and we need to find the niche for the spatial industry. The essential points in the BIM value-add are the need for data integration and information sharing, and for complete digital information about buildings. Our expertise in integrating, sharing and managing spatial information opens a new door and is an opportunity to gain more prominence in AEC. Moreover, we cannot play a more significant role in society and develop business opportunities unless we define and highlight what we can do by advocating BIM to stakeholders of the built environment. Plenty of questions are still unanswered: from integrating BIM with surveying and the spatial coordination of BIM, to translating data between BIM to GIS for our research and development community. Lastly and perhaps most importantly, we need to rethink the surveying and spatial engineering curriculum and to upskill the profession. There is an urgent need to update surveying and spatial training and education so that BIM becomes integrated into our knowledge and its prominence is highlighted to our students and the broader profession.

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