

BIM Goes The Architect

John Gelder

As built-environment information modelling (BIM) matures, both technologically and culturally, traditional professional and other roles will be increasingly challenged, most obviously those built around computation. Attaching rates data sets allows computers to calculate beam sizes and column spacing, the cost of concrete or installed hospital beds and the environmental impact of design decisions. Less obviously, roles that haven't been computational, but which now are, are also being given to the computer. Examples include the perspective, proximity planning of spaces, and clash checking.

Project data sets (silos) that have hitherto been separate are now being integrated. Well-known is the use of a neutral file format (IFC) to allow exchange of data between different disciplines using different software. Newer is the increasing integration of specification and geometry, and of project data and manufacturer data. This will extend into integration with standards, regulations and contracts, and of time-based data (with the development of the 'Digital Plan of Work' in the UK). The last will enable BIM to deal with progressing and payment. BIM is also beginning to involve the integration of the Model with the 'real', and will run along the entire project timeline, from inception to end-of-life, and across all scales, from products to nations. This is not the construction industry as we know it.

Some architects see BIM as an opportunity for their profession to reclaim the central position it once enjoyed. Some quantity surveyors are scrambling around for new roles. So what is the future of the current professions? What has already changed? What will be the roles of humans working with ever-maturing BIM? Are the various professions likely to be replaced by new design and construction professions, in the same way that the design role of the medieval master builder was replaced by the dilettante architect in the Renaissance?

Contributors include Tim Bailey, architect; Martin Bissell, services engineer; Casey Rutland, architect; Dave Monswhite, quantity surveyor; Anna Dekker, landscape architect; Gio Vettori, architect; Michael Conroy Harris, lawyer; and Alistair Kell, architect.

Biography:

An architect and Lecturer in Construction at the University of South Australia, John Gelder has been engaged in the past, present and future of construction documentation for 20 years. While at NBS he

initiated and developed new documentation tools such as NBS Create (2011) and Uniclass2 (2012), both supporting BIM.