

Parlez vous BIM? - GEO Business 2018 Seminar



Half a day of Geo Business was devoted to a BIM seminar session, with a series of well-attended presentations in the Auditorium.

Anne Kemp delivered the opening keynote address. Her presentation was largely about language. Indeed she defined BIM as 'Better Information Management' – how to manage data to inform better decision making. Thinking about the concept of federated BIM, Kemp thought it could be encouraging the silo mentality rather than encouraging collaboration. The owners of the contributing BIMs represent different disciplines who are protective of their data. She urged the federation to pull together.

She wanted the project managers to feel that data management belongs to them. She viewed the progress of BIM through the asset lifecycle as a shifting disciplinary balance, starting off with the architects, who are very BIM conscious. Their influence fades as the work passes to engineering and construction and that influence fades as it goes forward to the asset managers.

Was the Mandate a Blocker?

Whilst the government's Level 2 BIM mandate clearly concentrated minds, Kemp also viewed it as a potential blocker because companies see it as all that is required, so progression towards Level 3 and 4 BIM, which is well within the industry's capability, has not received the attention it needs even though the benefits of BIM are, we are told, to be gained in the operations phase of the asset.

Kemp referred to the standards and noted that OGC is now co-operating with BuildingSmart International through a digital transformation working group. She wants to see clarity of understanding, lateral thinking and innovation whilst avoiding unintended consequences by asking the right questions. Her example: Should we combat climate change by trying to stop it or by acting to mitigate it?

IFC Bridges the Gap

Bridging the gap between BIM and Survey was the subject of the next talk by Andrej Moccicka from Listech, Australia. His talk was useful because he described a scene which is very familiar to Survey4BIM, of geospatial issues which are being ignored by people lacking survey knowledge. His product, Listech Neo, can import and export BIM as Industry Foundation Class (IFC). The typical scenario is to export a design BIM model to IFC, import IFC to Listech Neo so that it can be used for setting out, then survey as-built data and export from Neo back into BIM using IFC.

The Warner Way

Dipaneeta Das and Rob Hamilton from Warner Land Surveys looked at BIM through the "surveyors' lens". Warner are usually at tier 2 or 3 of the supply chain, acting as consultant to the design or construction lead. They have developed standard 'scan to BIM' specification documents which they see as similar to the Employer's Information Requirements. These are centred around the BIM concept of LoD, which they interpret as level of complexity. The BIM standard has six levels but Warner use four and, where necessary, use different levels for different features in the model. LoD is one of Survey4BIM's big five challenges, not least because, as presently defined, it is an ambiguous term. At this point in the talk, Hamilton described accuracy as the difference between the point cloud and modelled objects. A tighter mesh will produce a more accurate model, yes, but is that what most of us would call accuracy. More evidence that the language barrier is holding us back. Following on from their specification, Warner produce a BIM execution plan, which is rather like a survey method statement.

In the following Q&A, the speakers reckoned that survey skill will be in selecting the right techniques, a thought that was reflected in a completely independent discussion later in the day. There was another question about auditable accuracy. Should an independent technique be used to prove accuracy? Yes was the answer, but the speakers also pointed out that scan registration can already be carried out independently, using targets or cloud to cloud.

Survey4BIM

Survey4BIM was the subject of the next talk by Andy Evans entitled 'It's all about space and time'. However it isn't, it seems, all about BIM. He has noticed (like this commentator) that BIM rarely gets mentioned these days. Is it the elephant in the room? "No", says Evans, "it is the room". Survey4BIM has been working on two of the big five challenges (accuracy and interoperability), and work is about to start on Level of Definition – or is that 'detail'?

He contends that we have an image problem. We deal in detail, errors, acronyms and big words and that is a problem. He took the Shard skyscraper as an example. The public see the building as an iconic landmark to be viewed and viewed from, but the facilities manager is only interested in how it functions, and the surveyor in where it is. We have to communicate at the 'public' level in order to get our message across.

Marco Di Mauro from Leica put forward the view that monitoring should be incorporated into BIM. The idea is to incorporate monitoring data as BIM attributes to show departure of monitoring points in the structure from their baseline positions. That prompts thoughts as to what would be the 'baseline' and whether BIM should be maintained to represent the asset's position at any point in time.

Hello Heating

Adrian Burgess from PCSG spoke about how BIM is implemented by Wienerberger UK. They build homes with a high component of prefabrication and have embraced BIM for the building lifecycle. Burgess focused on two software aspects. 'V3' software assesses the viability of development schemes. It is essentially a GIS which collects and combines open data in one place, including information about demand and selling prices for different types of dwelling, and can test scenarios for profitability.

The Wienerberger product is a configurable house which can be delivered on site within 12 weeks. The houses incorporate energy and water conservation features and the company claims to address the problem that new buildings seldom achieve the BREEM classification that builders claim. Wienerberger also overturns the now traditional 'supply chain' by using a 'configurable supply chain' which seems to have a flatter structure including 'trusted partners' directly associated with Wienerberger rather than operating a chain of subcontractors. They use GeoConnect + as their common data environment. Perhaps most interesting is that Wienerberger homeowners are provided with a digital twin of their new dwelling and the ability to 'talk' to their home appliances. This presentation reflected a similar talk from Circle Healthcare a few years ago, who adopted the same principle of maximising prefabrication in building hospitals. BIM lends itself to this form of construction, but perhaps that should not be surprising, given that BIM has its origins in manufacturing and aims to emulate productivity improvements in that sector.

Grenfell Tower

Session chairman, Martin Penney summarised the morning's proceedings. He urged surveyors to adjust their professional language to address the barriers to community collaboration and understanding because Geospatial is still relatively ill-defined within the BIM process.

The Grenfell Tower tragedy was mentioned several times during the morning and he suggested that the delegates read Chapter 8 of the recent review of building regulations (<https://bit.ly/2Ksl1ik>). The report identifies "... the need for a 'golden thread' of information for all higher risk residential buildings..."

BIM is about more than saving money.

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