

BIM guidelines to help users

BIM is being used all around the world – but approaches vary greatly. How is BIM best deployed? What procedures should be adopted at the start of a project? There are plenty of guidelines out there: can a common wisdom be distilled from them?

The NBIMS-US organisation – which sets standards and guidance for best practice – has made a start in comparing and analysing BIM guidelines from around the world through its Product Development Subcommittee (PDS). Now buildingSMART is moving forward with this guidelines work in a project that was adopted by the Process Room during Munich BIM week 2013.

‘We are pleased to secure an international dimension to the guidelines topic,’ says Chris Moor, chair of NBIMS-US and a member of the bS working group. Susan Keenlside, from bS Canada, is chair of the PDS, where the idea was first developed. A further idea to use a wiki platform took hold during Process Room meetings and is led by Sylvain Marie of VTREEM in France. The group has members in North America, Europe and Australia who meet weekly via the web.

The first step is to evaluate existing BIM guidelines, and the group is using a methodology that derives from the work of NBIMS-US PDS. The group is comparing and categorising current guidelines from a multiplicity of sources. ‘The end goal is to achieve an international framework based on these real-world procedures and requirements from industry,’ says Jan Karlshøj, who leads the Process Room.

A large number of guidelines are being reviewed in these early stages of the project – indeed, the number has swelled since the start of the project. A template has been developed against which the various guidelines are assessed. A secondary project goal is to solicit input on which guides end-users actually use, either because they are required to do so or through preference.

‘Our short-term goal is to create an editable, searchable list of the BIM guidelines that are available at present,’ says Jan. ‘By Stockholm week in March we hope to prove the concept of being able compare the contents of the different guidelines. Some 10–20 guidelines will be fully reviewed before Stockholm.’

BIM guidelines: project participants

Current members

Neil Greenstreet (Australia)
Susan Keenlside (Canada)
Ingo Kittel (Canada)
Jan Karlshøj (Denmark)
Sylvain Marie (France)
Sven-Eric Schapke (Germany)
Steen Sunesen (Norway)
Mark Baldwin (Switzerland)
Chris Moor (US)
Dana Smith (US)

Former member

Zane Ulhaq (UK)

BIM project execution with BIM
guidelines BIM standard for users
project phases
BIM specification project requirements

Common elements of BIM guidelines

Any set of guidelines is likely to cover the following themes and methodology

Definitions

- BIM functions
- BIM specification
- BIM roles
- Project phases
- Model element definition (IFD)
- LOD
- BIM maturity

Technical specifications

- Building/element classification systems
- Modelling requirements
- File formats
- Model progression
- IDM/Information exchanges

Implementation guidance

- Project scope and deliverables
- BIM management (or execution) planning
- Process maps and workflows
- Collaboration procedures
- QA/QC protocols
- Handovers

Supporting tools

- Software selection
- Hardware selection
- File storage and management

Legal aspects

- Fee structure
- Contracts
- Procurement strategies
- Intellectual property
- Liability, risk and insurances

References (standards, regulations, other documents, projects)

Mark Baldwin (Switzerland), on what the project is doing...

The project works on three fundamental levels. First, we have a compendium of major BIM guides that is searchable and interactive. Secondly, we can distil commonalities across the guides, identifying consistent methodologies and major concepts. Finally, and on a more subtle level, we are able to gather discrete information on the differences between the guides and the searches made on them.

This provides both a 'cultural perspective' as to how guide structures or concepts may differ from region to region and a continually updated source on the interests of the users – what topics are most searched and which guides are most referenced. The information that we post serves the users while the searches done by users show us what is of interest to them – all this without our direct interaction. It is a reciprocal and auto-enriching process.

Stockholm will be a key moment for the project. The Process Room will decide if and how the project will continue. Crucially, should bS go on to develop international guidelines? 'Providing an international framework for planning and executing BIM projects, under the banner of buildingSMART would be a fantastic help to building project teams around the world,' says Chris Moor. 'This is an area where we can offer the industry much-needed process advice, without being overly prescriptive in its use.'

Sylvain Marie concludes: 'This is a great case of technology connecting the dots: we decided from the start to base this BIM processes repository on a wiki platform. Soon, anyone will be able to take part in this initiative and enrich the knowledge base. We're already envisaging innovative ways to create BIM process mash-ups, and with a sufficient coverage of use cases, we could even provide turnkey BIM procedures tailored for specific user profiles.'

To find out more, visit <http://bimguides.vtreem.com> or contact: Sylvain Marie (sylvain.marie@vtreem.com).

Jan Karlshøj leads the Process Room (jan@karlshoej.com).

A shorter version of this story appeared in buildingSMART News 15.

Sylvain Marie (France), on creating the wiki platform...

How do we qualify and capitalise on information scattered in various places and in various layouts? The idea behind this initiative is to create structured data from unstructured data.

We have progressively refined a collaborative 'review template' which defines a set of common attributes, such as 'does this BIM guide address legal aspects?' and 'Does it target MEP engineers?'

First-generation wikis used to store static and textual information only. We can go one step further with second-generation wikis. The BIM guidelines data can now be sorted, filtered and scouted using the search engine, and statistics on the most common traits in BIM guidelines can be compiled. Since the application logic is also stored in wiki pages, we could even change and tweak queries in real time during the weekly meetings of the project team. Collaboration at its best!

Neil Greenstreet (Australia), on the value of the wiki...

The immediate value of the BIM guidelines wiki will be to provide a repository of reviews which give its users an insight into the content of a large number of BIM guides without having to download and read each of them. Reviews based on a template makes comparisons easier and search and filtering functions allow information to be pinpointed quickly.

Being able to search common topics of guides from a number of perspectives will also save significant amounts of time and duplication of effort when it comes to authoring or customising BIM guidelines. In the longer term, the wiki could accelerate the development and convergence of BIM standards – one of the keys to unlocking the power of collaborative BIM practice internationally.

template

framework

wiki database insight

BIM interactive processes
guidelines

resource searchable

procedures compendium

Susan Keenlside (Canada), on the future of the project...

The project was developed with the end-user in mind. At every stage of the process we seek to engage the end user. Every contribution to the site, be it a review, comment or search, enriches the database and ultimately makes the whole project more valuable. It is an evolving, open, public resource. Our role, therefore, is that of a curator and our hope is that it will have a lasting influence on future development of BIM guides around the globe.