

## Introduction to the Draft ISO 19650 and UK Annex document

### Publication of International BIM Standards

In February 2017 the following draft international ISO standards, titled 'Organization of information about construction works - Information management using building information modelling', were published for comment:

- **ISO/DIS 19650-1** - *Concepts and principles*
- **ISO/DIS 19650-2** - *Delivery phase of assets*

Following a comments period which ran until May 2017, the final versions of these two ISO standards are currently due to be published at the end of 2018.

The development of these ISO standards highlight the recognition that BIM is receiving on the international stage, where organisations and asset owners are realising the benefits brought about by the adoption of BIM's principles.

### ISO/DIS 19650 Contents & Structure

*Note: The following comments are based on the contents of the DIS/ISO 19650 standards which may change within the final ISO standards as a result of the comment period.*

The content of these ISO standards are in alignment with BS 1192 and PAS 1192-2 respectively:

- **ISO/DIS 19650-1** provides recommendations for a framework to manage information for all actors; from the project client and design-construction team to the asset management supply chain and asset users, across the entire lifecycle of the asset.
- **ISO/DIS 19650-2** then provides specific requirements for information management during the delivery phase (design and construction) of built assets for a project team.

Both parts 1 and 2 have been developed to work in alignment with the already established business management system standard ISO 9001, incorporating the plan-do-check-act principle, as well as ISO 55000 on asset management.

The UK-familiar "Level 2" BIM, which the BS/PAS 1192 standards help define, is now referred to as "Stage 2" BIM in order to resolve some ambiguity across certain regions already using the concept of levels within the sector.

Those familiar with PAS 1192-2 will know that the PAS's structure follows the 'information delivery cycle' process. ISO/DIS 19650 also follows this cycle, presenting its requirements in a logical flow, mirroring the timeline of the requirements in practice as much as possible from tendering activities through to mobilization and delivery.

## Comparisons to PAS 1192-2 and BS 1192

When examining the contents of the ISO/DIS 19650 standards against the requirements of the BS 1192 and PAS 1192-2 some key (non-exhaustive) similarities and difference can be made.

The first comparison of the two sets of standards is the common focus on the CDE (common data environment). ISO/DIS 19650 re-establishes the importance of the CDE and outlines its principles and core working processes. These include the familiar WIP (work in progress), Shared, Published and Archive areas.

BIM, as defined by the BS/PAS 1192 series of standards, has brought with it much new terminology; some re-defining familiar terminology used widely within the sector and others, defining new concepts introduced when working using BIM principles. Familiar terminology and concepts found in the ISO/DIS 19650 standards include: BEP (BIM execution plan), MIDP/TIDP (master/task information delivery plan), PIM/AIM (project/asset information model), OIR (organisational information requirements) and AIR (asset information requirements). The principal project-EIR remains but has had a clarification changing from "employer's" information requirements to "exchange" information requirements.

Recognising the importance of specifier engagement from the outset of a project in defining BIM requirements, ISO/DIS 19650 has put more clarification and guidance onto how information (management) should be specified at the outset of a project within the EIR and how information should be used to inform progression through subsequent project stages. This is done with the help of a PIR (projects information requirements), replacing the familiar PLQs (plain language questions), which help the project client to make informed decisions at each stage of the project.

LOI/LOD (level of information/detail) are now collectively referred to as 'level of information need'. The PIP (project implementation plan) is now referred to as the 'delivery team mobilization plan' and provides a more flexible means of ensuring competency and capability of the project delivery team.

New definitions include 'project information protocol' which defined the terms and clauses of appointment specifically relating to the exchange of information between appointing and appointed parties.

It is important to understand that these definitions are just useful "shortcuts" to define BIM principles, processes and outputs. When applying BIM in practice, it is always paramount to focus on the fundamental delivery/process rather than its "name".

Finally, ISO/DIS 19650 defines the areas that need to have clearly appointed roles, divided into two groups; those involved in the management of information and those involved in production of information. The appointment of these roles, the names of which reflect those in PAS 1192-2 e.g. interface manager, should reflect the nature and complexity of the project and examples of specific tasks are given within an informative (non-mandated) annex.

## UK Nation Annex to ISO/DIS 19650-2

In August this year, BSI published online a draft BS EN ISO 19650-2 National Annex open for comment until 29<sup>th</sup> August. The role of a National Annex is to clarify implementation within country. With the strength of the BS/PAS 1192 series of standards, this National Annex serves to bridge how ISO 19650-2 can be applied to an established system working in accordance with those processes defined within BS 1192 and PAS 1192-2.

ISO/DIS 19650-2 states that files should have a unique ID, based on upon an agreed and documented convention. The UK Annex aligns this requirements to the naming convention defined within BS 1192.

ISO/DIS 19650-2 states that the CDE shall enable each "container" (e.g. file) to have the attributes (meta-data) 'status', 'revision' and classification. Similar to the above, the UK Annex aligns this requirements to the naming convention defined within BS 1192.

Finally, the annex adds to the activities required for containers moving across different areas (e.g. WIP to Shared) of the CDE.

### **Keeping You Informed**

In summary, it is encouraging to see that the contents of ISO/DIS 19650 are clearly based on that of BS/PAS 1192 which reflects the fact that those processes outlined within these UK-published standards are still considered relevant and reflect best practice of BIM adoption. Those changes serve as clarifications, improvements and ensuring that the requirements are truly international, removing any UK-specific references such as Uniclass 2015 (outside of the UK National Annex) and COBie-UK.

This means that ISO/DIS 19650 is a more flexible standard, and in many respects less prescriptive than its BS/PAS 1192 counterparts ensuring that those organisations already adopting the BS/PAS 1192 standards can apply ISO/DIS 19650 to its framework.

In addition to this, there is a focus on the customer and the engagement of people and the encouragement of appropriate behaviours is central to the delivery of consistent outputs. These principles are currently reflected in the PAS 1192-2 Kitemark.

BSI will ensure that all of our BIM clients are informed of the latest developments in the publication of these 2 new ISO standards, as well as future BIM-ISO standards that are in development.