



FPS GUIDANCE NOTE 5: SOFTWARE GUIDANCE FOR BIM



Guidance Note 5: BIM Software

This note has been written as a general guidance and to assist in the software selection process which will support the smooth transition and implementation of BIM (Building Information Modelling).

Each BIM project will have different characteristics such as size, shape, procedures for data exchange, primary BIM functions, compatibility and most importantly, **Interoperability** and because of these characteristics software will be chosen differently.

Interoperability (the transfer of files without the loss of information) is the ability of 2 separate computer systems or programs to communicate with each other and exchange data in the form of CAD models and other types of data.

There is a vast array of software choice available that will offer a BIM solution and for this reason have not been listed due to the expanding market, but it is important to understand that one package alone may not solve all aspects and the underlining challenges of BIM implementation.

One aspect that will need addressing is the process of data-sharing and delivery requirements of BIM projects which is a key element for any BIM project to run smoothly throughout its life cycle. This should be and is required to be accomplished within what is known as the **CDE (Common Data Environment)**. The CDE, as defined in the document PAS 1192-2:2013 as:

“A single-source of information for any given project, used to collect, manage and disseminate all relevant approved project documents for multidisciplinary teams in a managed process”

The CDE could be in the form of a project server, a file based retrieval system, an extranet or any other suitable toolset which may mean the purchase of additional software, unless the chosen BIM solution package has the capabilities of setting up a CDE.

In a lot of cases the client will already have established a BEP (BIM Execution Plan) which will include a detailed description of software requirements for the project and it is then the contractor's responsibility for the continuation of the project to have their BEP put in place with the flexibility to allow an interoperable solution to the project.

A successful BIM Execution Plan will inevitably result in an efficient BIM working environment or a good BIM workflow. An illustration showing a typical BIM Workflow is shown in 'FPS Guidance Note 2: BIM Introduction and Workflow'.

It is important to remember that the upgrade of BIM software during the course of a project should be avoided unless all necessary risks are mitigated ensuring transition is smooth and error free.

Two important factors to recognise in the selection process are:

Research

- A reasonable amount of time should be spent on researching the needs and requirements for interoperability within your company as well as with external stakeholders.
- Types of software, flexibility of software and costs should also be researched in detail.
- Checking what software clients, competitors and the wider industry are using.
- Conducting research will also help to recognise and understand the current level of BIM your company is at and how much more is required to achieve the desired level.

Training

- With BIM being introduced as a new concept to many companies, the introduction of new software will necessitate the need for training.
- The costs of training will vary between the complexities of the software.
- There may also in some cases be the requirement of hiring new staff in order to operate the newly purchased software.

Here are 5 Key Points to consider in the software selection process:

1. Create a strategy

- Who will be dealing with assessing the organisational needs and evaluating the possible solutions? Responsibility's and authority should be clearly defined.
- What is the budget?
Look beyond the price of software and think about the overall financial impact introducing new software will have as doing this will help budget for things like staff training etc.
- What is the timeline?
Before committing to a project in which BIM would be implemented, be aware that elements like software delivery times, hardware upgrades and possible training will take time to put into place.

2. Prioritising Software Needs

- Buying a software suite/package may not necessarily have everything that is needed to start and complete a project which means that in some cases multiple solutions may be required. If this is the case then prioritising specific features by way of importance may help in the overall decision.

3. Create a vendor short list

- Through research involving internet searches, technical forums and talking to different people within the construction industry, a list can be compiled of software vendors that can provide the services and software required.

4. Compare and Validate the Short List

- At this stage the list of vendors should be shortlisted to 2 or 3. Several questions to ask that could help in the assistance of the final decision could be:
 - What are the options and prices available for training and is there an element of training included in the overall price of the software.
 - Will there be a discounted cost if a rolling subscription was taken out? (It is important to buy the software on a subscription basis where a fee is paid every year which will include all upgrades to the latest version and any technical help that may be required)
 - Is the company reputable, are there any customer reviews.

5. Making the Purchase

- Before the purchase is made, fully evaluate the product within the company environment and make sure it meets both current and future needs.