

4BIM

4Projects by Viewpoint adds 4BIM to its Cloud-based Enterprise Collaboration solutions, providing the prospect of real savings within the construction industry, says David Chadwick

The Government's Construction Strategy has served its purpose admirably, focusing people's minds on BIM, whether they are directly involved through participation in a public sector construction project, where they have to be utilising collaborative BIM to Level 2 standard on the BIM maturity index by 2016, or in private sector collaboration, where the concept promises to deliver efficiency savings without Government coercion. If the Government's intention was to inject purpose into an industry struggling through a deep recession at the time the policy was introduced then it has certainly succeeded.

If its aim was to save money on public construction projects then it has to be said that it has succeeded there as well as, besides the BIM process enhancing the practice and spirit of collaboration between all members of a project team, it has introduced a high degree of inspection and visibility to construction projects, which has ironed out wasteful and costly practices.

The other benefit has been the drawing-in of all other members of a project team - including those outside the design and construction process itself, who still need the information held within the model to send out tenders for construction, organise suppliers and material deliveries, schedule the construction process, ensure legal obligations are met and safety standards maintained. And, of course, to manage the property after construction, a process that is said to comprise up to 70% of the total cost of the life of a building. It is in these areas where savings can now be made.

Access to information held within the Building Information Model and associated documents, therefore, has switched from CAD software developers to companies

like 4Projects by Viewpoint, Cloud-collaboration specialists who deliver enterprise collaboration tools to the whole industry, using SaaS (Software as a Service) tools to manage and share information on every aspect of a construction project. It is their experience that will enable construction projects to meet the savings that the Government is demanding.

GETTING TO GRIPS WITH IFC

Hence the launch of 4BIM by 4Projects, a BIM delivery tool that uses the same cloud-based technology to provide collaborative BIM services which deliver access to all levels of BIM data, held either in the 3D model, and associated documents from different project teams, using open standard IFC file formats for maximum accessibility.

The principal feature of 4BIM is a browser based Viewer that provides access to IFC model data to anyone on the team, whether they have CAD training or not, and without requiring them to have the originating CAD software installed on their system. This, of course, is a fundamental principle of COBie, the delivery system being developed by the BIM Task Group subsequent to the handing over of projects to Facilities Management after their construction.

Where the IFC data is deficient in information (the conversion of model data into standard IFC format varying quite considerably depending on the originating software) 4BIM provides a Review system, enabling different specialities within a project team to review and tag IFC model elements with the data they and others will subsequently require - specifications, supplier details, energy needs - linking data and documents to the model.

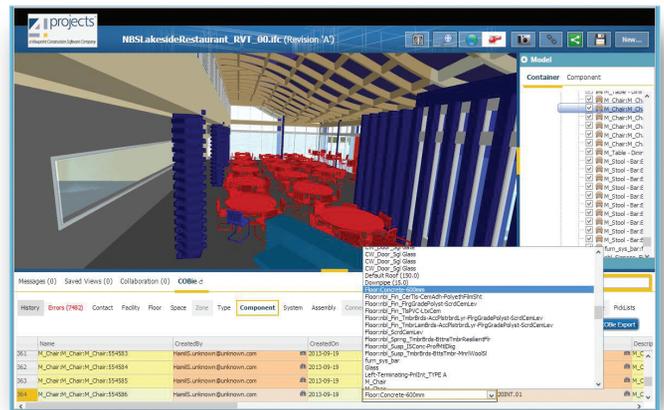
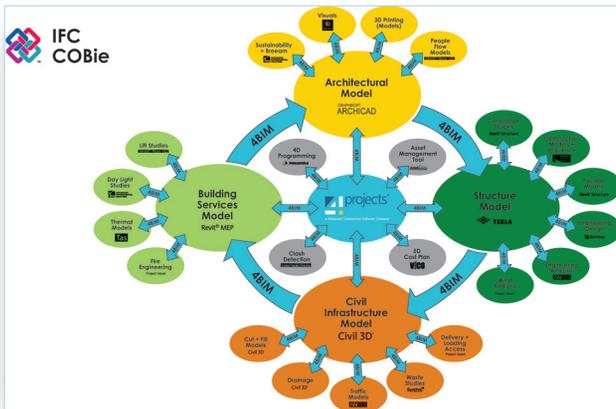
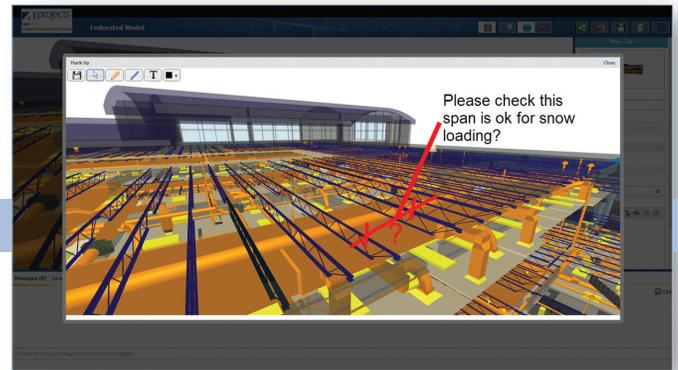
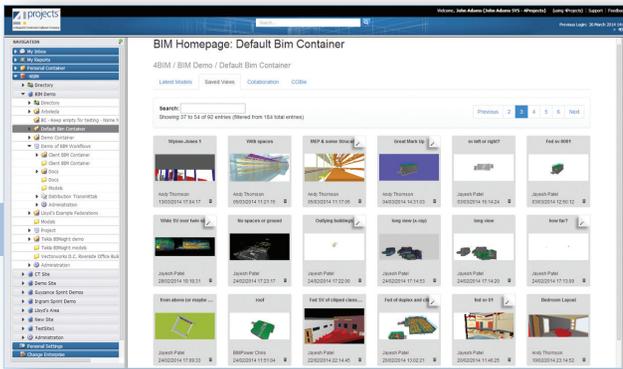
4BIM also comes with an integrated Model Server which allows BIM models and files to be brought together from all construction disciplines and merged for full collaborative review and markup.

4BIM accompanies the collaborative review process with extensive revision level tracking, accountability of use and audit trails that keep track of the latest versions of both models and documents. It also highlights and informs project team members of any revisions, introductions or changes made that they need to be aware of through its active messaging system.

4BIM users also have access to the wealth of other collaborative tools that 4Projects has developed for its clients: Information and Document Management; Communications Management; Forms; Process and Workflow Management; Organisation and Reporting, Integration and Asset Management; KPI and Financial Control; Change Management, and so on. These are supplied using predefined templates, or customised to suit your own requirements.

All of this is backed up by Team Directories and Calendars, providing contact details of everyone working on a project or across an entire enterprise, supplemented by a Dashboard for project teams to visualise tasks and activities that require action. Discussion Forums can be integrated with email to provide a simple way for teams to collaborate on points of discussion. eForms enables users to create bespoke online form templates, which are simple to distribute and complete. GeoView integration provides yet another feature, the dynamic and interactive GeoTag tool, for tagging and geolocating projects, assets, and folders for an enhanced 'dashboard' perspective.

4Explorer and 4Outlook, optional Windows applications, integrate Personal Container (another 4Project feature) with the popular desktop applications, and, in order to accommodate the rapid growth of



mobile technology, the 4Projects Mobile app allows users to stay connected.

THE 4BIM CONCEPT

4Projects introduced the concept of 4BIM last year, aptly described as 'BIM in a Browser'. It is now a total construction information gathering and viewing system that links 4Projects' comprehensive range of management applications to the construction process.

The software uses xBIM (eXtensible BIM), an open source toolkit developed by Northumbria University, assisted by the 4BIM Technology Strategy Board, which 4Projects helped establish, together with the BIM Academy, AEC3, Vinci Construction and, interestingly, Kingspan - a well known construction material supplier.

The hope is that, by making xBIM freely available, other software developers like Kingspan will be encouraged to build their own BIM applications, widening the appeal of the technology. With 90% of the top UK contractors using 4Projects services and with architects and engineering contractors on board as well, the company has the clout to deliver a solidly supported standard - with help, once more, from the Government, which has stipulated the

subset of IFC, COBie, to be the preferred information delivery method.

WHERE DOES THIS TAKE US?

I said earlier on that 4BIM, the cloud-based collaboration solution, offers the prospect of real savings within the industry. It's not just about money, though. 4BIM can be used to help project teams work closer together, widening communication, bringing in more people into the decision making process, armed with up-to-date and far more relevant information about the project. With early warning of potential problems errors can be reduced, changes implemented and alternative solutions explored, helping to maintain schedules and eliminate litigation and penalties rising from deadline overruns.

It can work at an even more basic level, as well. By accessing project construction schedules, material requirements and human resources, tagged to different elements of a building model and delivered as Work Packages, managers can organise workforces and deliveries to ensure that expensive craftsmen are not hanging around idle on site, waiting for materials to be delivered or to gain access to their section of the project, and that

materials are not delivered late or too early, causing disruption on site. The added value to that is enhanced efficiency on site and improved morale in the workforce.

Where else does 4BIM score? SaaS solutions are a growing trend, as they require no special technology for implementation, can be used on all browsers and platforms, are generally easy to use and have few staff training requirements. This enables companies to match costs to usage, and they can be maintained to the latest level of sophistication by the developing company - no expensive upgrades or downtime whilst the latest version is installed.

There are also no limits to its use. It can be used by a small provincial company on local projects or globally by the largest international contractors, with no limits to the information that can be held and shared instantly by any project member. And, of course, it demands the highest levels of security. Conforming to ISO27001, it provides a secure environment for handling projects, giving users the means to maintain the security of global projects whilst enjoying the fruits of total collaborative control.

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