

Understanding Building Information Modelling (BIM) and CESABIM™



- BIM Information
- Software
- Technical requirements
- Cost
- Commercial advantage
- CESABIM

The implications for the catering equipment industry

As part of its role in providing information and guidance for the catering equipment industry CESA has prepared this explanatory document.

What is BIM?

- BIM is a process that enables the effective exchange of data and illustrations for construction projects.
- In the UK from 2016 it will be an essential requirement for all public sector projects to be modeled in BIM. The European Public Procurement Directive has also mandated the use of BIM from 2016.
- CESABIM is the catering equipment industry's central database of equipment information from catering equipment manufacturers and importers.

Why?

- To reduce construction costs through more effective planning and control. To manage the utilities and provide a full inventory of a building.
- BIM is the next evolutionary stage from CAD. Rather than the products being shown as a series of 2D lines, BIM will mean that images and representations of products will be shown in 3D with supplementary product specific technical data.
- The models are images of equipment in 3D with data attached to it; such as dimensions, product description and services information.
- CESABIM is, a service provided to the industry. It delivers commercial advantage for participants from by having their models hosted in a well catalogued format. This ensures that CESA members products loaded onto CESABIM gain a specification and sales advantage with products that consultants and distributors will want and need to use in order that they meet BIM requirements. The industry approved parameters used in CESABIM have the full support from CESA, CEDA and FCSI.
- CESABIM is cost effective – and it is free to upload and download information and it will remain so.

Technical information

Manufacturers can generate their IFC files wherever they wish.

IFC (Industry Foundation Classes) files are the UK government's preferred solution because of their interoperability and because they are also agnostic. All other file types are proprietary and therefore will not work on other systems.

Again to make it easy, CESA has a preferred supplier, Schematic, the CESABIM Consultants, that members can use to ensure that models meet the UK requirements. Alternatively models can be sourced from any supplier and presented to CESABIM. (A validation service is available at a separate cost to help ensure that the models meet the requirements).

Software

What about the software that uses BIM?

Many architects and specifiers use proprietary software such as Revit, ArchiCAD, Bentley..... but there are over 150 more software platforms that are BIM systems.

Native Revit Files will only work in Revit software – they are not interoperable with other software. Companies with Revit files made to the North American standards do not have the relevant information for UK use. e.g. voltage and measurements or parameter format.

IFC (Industry Foundation Classes) files are agnostic and will work with all proprietary software, yes all 150+. This is why IFC is so popular and being used extensively. A CEDA/CESA/FCSI working group has agreed the UK parameters to ensure the files are relevant to the needs of UK designers and specifiers.

The EU has stated that BIM systems should be used under the EU Public Procurement Directive. IFC format files will provide the interoperability required and the EU suggests looking to the UK to see how BIM is being implemented. Member States that have published a mandate so far have opted for IFC because it is the only open BIM format.

Services that claim to provide BIM hosting.

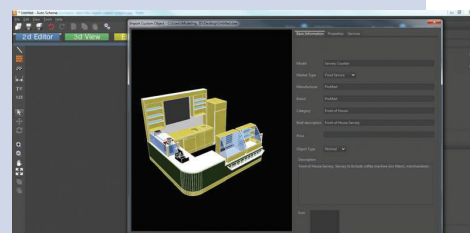
Manufacturers Beware! Claims are being made as companies try to make short cuts to developing their BIM modelling services.

Most of the problems relate to file sizes, these need to be kept as small as possible in order to ensure that computers don't get overloaded in trying to process the whole building model. Files should be no more than 1.3mb for the most complex model with all accessories included, a small table top item may be no more than 150kb. These files are typically 10% of the size of derived files making them ideal for use.

Derived BIM models from manufacturers' Solidworks, Inventor or 3D AutoCAD files will be far too big for specifiers and designers to use meaning that the models are and will continue to be rejected by design teams. The use of 2nd 3rd and 4th generation BIM derived conversions through any file type should be avoided at all costs. Clean BIM models and data is an essential part of the implementation strategy required for BIM. Manufacturers will not want to spend money producing models that run the risk of being unusable.

'Spend it wisely and spend it once' an IFC file that meets the CESABIM parameters and companies will be assured of :-

- greater use in getting specified on drawings because of the usability, relevance and accuracy of the file.
- compatibility with over 150 BIM software platforms in use in the UK and globally, including; Revit, ArchiCAD, Bentley, Allplan and AutoScheme.





Cost

The only cost to manufacturers and prime importers is to develop their IFC models. CESA has negotiated preferential prices with Schematic for CESA members:-

- To develop and produce a product model and to upload the data associated with the product. £100 per product.
- To produce a 3D product model. £50.
- To evolve a product model from another software format (i.e. Revit family model to FCSI specification) £25 per product.

Each product model can incorporate optional extras such as castors, feet, splash backs etc meaning that a separate model is not required for each variant which reduces the overall cost in comparison to native file types. Volume discounts are also available for manufacturers with large product portfolios.

Commercial Advantage

What will my company, brands and products gain from having the right BIM models?

Simple – Increased specification opportunities – If the model and the file is not right it will not be used, because it cannot be used. CESABIM provides an independent, non-commercial platform for products, brands and companies to be profiled. This makes it easier to access rather than trying to find a file on a whole host of manufacturer web sites and then downloading them.

What will CESABIM do for my business and its sales and marketing?

CESA will be marketing CESABIM at industry events and exhibitions, on behalf of its members. As CESABIM is a catalogued database of models with UK relevant information CESABIM will be the hub of the catering equipment library. If a company and its products are not on CESABIM it is less likely that products will be specified as designers will have to produce their own model at their own cost with a risk of being out of alignment of the industry approved standards and parameters.

Being on CESABIM is a sales and marketing advantage for companies. The models can be downloaded free of charge by any user, anywhere. CESABIM will save time money and resources for designers.

About CESABIM

It is a non-commercial library of models and data for the catering equipment industry. The initiative has been developed by the Catering Equipment Suppliers Association (UK). In short, it has been developed by our industry for use in our industry. This is in order to make the specification and design of kitchens easier using BIM models prepared to a standardised format structure and level of detail.

Free Upload - for manufacturers and prime importers

CESA member companies who have models and data can upload data onto CESABIM. Models must be originated to native IFC format and a standard specification to ensure consistency. There is not a charge for hosting the models on CESABIM. A model checking fee applies for companies who wish to ensure compatibility with CESABIM.

Free Download- for kitchen designers and specifiers

Users can download BIM models and data free of charge making CESABIM an industry relevant free delivery programme that is a tool to make equipment specification quicker and easier.

CESA has invested in the project on behalf of the industry, for the benefit of the industry and there are no hosting or download charges.

Promoting your business and your products

- Only CESA full members will have their products featured on CESABIM.
- CESA will promote CESABIM at industry events and exhibitions. This will include encouraging the design community to use CESABIM.
- **'See us on CESABIM'** badges and branding will be provided to companies.
- Companies who have their products on CESABIM will have the advantage of the industry recognised branding and profile.
- CESA will develop the services offered by CESABIM on behalf of the whole industry and not for commercial advantage to CESA.
- Your competitive advantage as a member of CESA – CESABIM will not contain information from non-CESA members.

What to do next

Contact **CESA** or the **CESABIM** Consultant to get involved or to find out more.

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More information can be found at the FAQ page
<http://www.cesabim.com/faq.php>

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Wikipedia definition

"Building information modeling (BIM) is a process involving the generation and management of digital representations of physical and functional characteristics of a facility. The resulting building information models become shared knowledge resources to support decision-making about a facility from earliest conceptual stages, through design and construction, through its operational life and eventual demolition."

EU votes 'yes' to BIM-friendly procurement shake-up

"The European Parliament voted to support a package of reforms to the EU Public Procurement Directive, which includes clauses designed to encourage all European countries to recommend the use of electronic tools, including BIM, on public works contracts."

"Reforms included in the Directive cover all aspects of procurement and must be implemented into national law within two years of their publication in the OJEU."

Construction Manager, the magazine of the Chartered Institute of Building

