

COMPANY

IDEAL STANDARD INTERNATIONAL

LOCATION

Europe, Middle East and North Africa

SOFTWARE

Autodesk® Inventor**Autodesk® Revit**

“High quality, immersive renders, and our understanding of BIM have been worth their weight in gold to our sales and specification teams already over the past 12 months. We can’t imagine working without them.”

Lee Jones

— BIM Design Manager
Ideal Standard International

Building the bathrooms of tomorrow with immersive design

Ideal Standard soaks up BIM to stay ahead of competitors



High quality bathroom BIM render

BIM and the future of British manufacturing

Using Building Information Modelling (BIM) to 3D model and collect data of a building has long been championed in the construction industry as a way of driving efficiency, boosting sustainability, and minimising waste.

Increasingly, manufacturers are looking to engage in the BIM process and explore ways in which they can add value for both their clients and themselves. Ideal Standard International, leader in innovative and design driven bathroom solutions has been integrating BIM data into its designs since 2014.

Heritage evolution

With nearly 200 years of creating bathrooms, Ideal Standard International is one of the oldest manufacturers in the UK with brands including Ideal Standard, Sottini and Armitage Shanks.

They design and manufacture a wide range of bathroom products from basins and taps; to toilets, bath tubs, shower cubicles and accessories. As well as home owners, the products are used by architects, contractors and developers in a wide range of construction projects in sectors such as healthcare, education and hospitality.

Lee Jones, BIM Design Manager, Ideal Standard International says, “Bathrooms are an untapped space and what excites us is helping people translate their visions into reality, so that a room can evolve from a functional to a living space.

We use the best materials, up-to-date technology and skilled craftsmanship to produce the highest quality products that deliver a total bathroom solution to our customers.”

With more and more construction companies asking for data rich BIM content from their suppliers to improve their builds, Ideal Standard International identified an opportunity to differentiate themselves. The company wanted to understand what product information was needed by each project stakeholder, and why they needed it. They could then work on integrating this data output into their existing design and manufacturing process. Like many manufacturers, Ideal Standard International has worked with digital prototyping, but their real BIM journey began in 2014.

Working on the NHS Procure 21+ Supply Framework provided Ideal Standard International, under their Armitage Shanks brand with the opportunity to engage in a true BIM process. It gave the company experience in linking their data to a client project that required BIM Level 2 engagement. Since then, Ideal Standard has transformed its processes to ensure BIM is now a massive part of its specification workflow across its entire client portfolio, both in the public and private sectors. This experience was crucial in preparing Ideal Standard for the UK Government BIM Mandate, which comes into effect in April 2016.

Adding value and reducing risk

BIM allows Ideal Standard International stakeholders to share details such as product characteristics, installation, warranty, maintenance information, and material and cost data, in formats used by all those involved. COBie deliverables are associated with Autodesk Revit or IFC objects outputted directly from Autodesk Inventor. The close integration between Autodesk Inventor and the BIM process makes it the perfect solution for Ideal Standard. Product data is accessible at anytime and anywhere, so it’s much easier to collaborate and communicate between individuals and teams. Overall, this helps the company speed up approval processes that can traditionally be disruptive to the product lifecycle. Cost and design changes and regulation checks can be carried out quickly, giving Ideal Standard the agility to rapidly respond to bids and deliver quality design.

Working with 3D objects in a virtual environment helps to dramatically reduce the number of clashes and errors traditionally associated with 2D. Ideal Standard International can work with clients to design and visualise the optimal layout of their products to create high quality bathrooms that fit with the project vision, budget, and delivery schedule. Working in the virtual environment also helps project stakeholders identify structural and piping constraints, and design the right layout to reduce risk of site issues and minimise waste.

Working with Autodesk Inventor and Revit allows Ideal Standard International to provide clients with access to product data, making it easier for them to procure materials and also gives greater certainty in every project. Construction companies can easily calculate which products they need to order, the quantity and cost, and when they will be delivered. This greatly reduces the risk for all parties, and makes construction projects much leaner since procurement and logistics can be linked to the project programme. Manufacturers can now help clients address site constraints and reduce waste. This is one example of where manufacturers like Ideal Standard can gain competitive advantage by adding real value to the project, rather than simply providing library objects.

Mike Beckett, director of award-winning UK housebuilding specialist Hill Partnerships comments, "It is crucial that the manufacturers we work with understand BIM and collaborate effectively with us. Ideal Standard's approach to BIM makes them more agile, and gives them a real competitive advantage."

The realistic renders produced in the process facilitate a closer, more immersive engagement with Ideal Standard International clients. Customers can more easily appreciate the quality and aesthetics of the product in context, and this immersive communication brings the design to life. Not only does this give the company a competitive advantage, but their clients can also use the stunning renders as a sales tool for their own bidding and sales process. Jones comments, "High quality, immersive renders, and our understanding of BIM have been worth their weight in gold to our sales and specification teams already over the past 12 months. We can't imagine working without them."

The company realises that BIM is just one of the disruptions impacting manufacturers, and that client demands for customised products and bathrooms also present an opportunity for the business. Using Inventor and Revit to link original specifications and engineering rules to objects will support a faster design process, and meet this demand for customisation and personalisation.

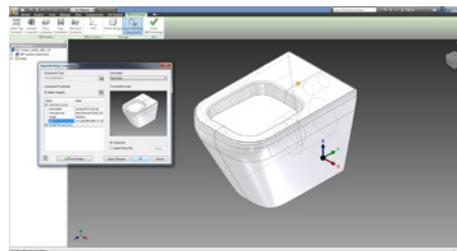
Bringing BIM in-house

Ideal Standard International understands that products and associated data can change, as can client data and collaboration requirements. To ensure they benefit from the real value of BIM, objects and data are created in-house, with simple translation from the manufacturing design. Clients do not require the same detail as the manufacture design, so Ideal Standard use Inventor to simplify this, and translate the

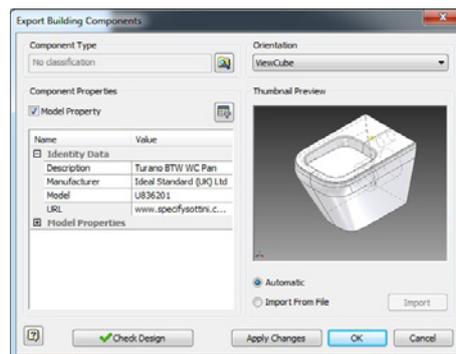
data into a format that their clients can work with (primarily Revit or IFC).

The company initially chose to work with Inventor in bespoke development projects for specific clients, but always had the intention that it could link to Revit, and be used as part of the BIM creation process. Inventor is predominately used by Ideal Standard as a translation tool that can read files created in the different software packages used by its various design teams around the world, and make them BIM ready.

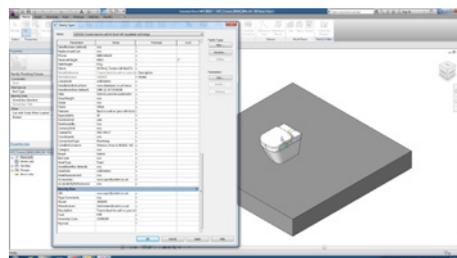
Jones says, "In our experience, Revit is the most widely used BIM software in the country, and the tight integration with Autodesk Inventor makes the solution a no-brainer. As a supplier to the plumbing trade the MEP element of Revit is vital for Ideal Standard as many of its clients use it to map out pipework prior to being on site in order to save time and money. Using Inventor and Revit MEP supports design and testing of all pipework and connections associated with the Ideal Standard products specified, de-risking the project, and speeding up the build.



Linking the latest product data to lightweight BIM objects with Inventor



Inventor outputting Revit and IFC formats to maximise value



Controlling quality and cost by bringing BIM in house with Autodesk Inventor Professional

Technology has been integral to Ideal Standard's BIM journey, with Jones commenting, "Even as industry leaders in this field we are only as capable as the technology allows us to be and Autodesk's software has allowed us to gain this advantage. We have been awarded sole supplier agreements as a result of our BIM capability, and we are also the number one downloaded manufacturer from the national BIM library. The close integration between Inventor and Revit has been critical to this success."

Embracing innovation and the future of making things

For manufacturers intrigued about the value that BIM can bring to their business, Jones offers this advice: "Go for it! The long term value of investing in the technology is already proving to exceed the initial upfront costs for us. Make sure you employ a BIM champion in your business, listen to others who have experience using the technology and ensure you invest in the correct software to aid your journey."

Ideal Standard International is now exploring the opportunities presented by early and extended involvement in the BIM process, providing clients with detailed installation and inspection guidance, capturing information from installation and operations, and feeding this back into the continuous improvement and product development process.

BIM is just the beginning for Ideal Standard International though as it looks to broaden the technology it uses and embrace the disruptions we're seeing in the future of making things. The company is looking to work with Autodesk to further explore BIM and leverage augmented reality to provide clients with a more immersive experience of their products and value. Ideal Standard International is determined to build on the success of its market leading products by further revolutionising its product development using technology to interact and immerse itself in its designs, and using data and technology to drive continuous improvement.

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