

Redefining Water Systems : Howern Wasser's 3D Design Transformation



Company Background

Howern Wasser, founded in 2014, is a Malaysian engineering company specialising in pure water systems. Serving industries where precision and reliability are paramount—including pharmaceuticals, medical devices, semiconductors, solar, oil and gas, and petrochemicals—the company goes beyond designing high-quality water systems to support wastewater treatment and reclamation, helping clients reuse and recycle water efficiently.

Operating from Selangor and Penang with a growing presence across Asia, Howern Wasser has earned a reputation as a trusted regional leader, combining sustainable design practices with innovative technologies to meet the evolving needs of its clients.



Scaling Up with Complexity

As projects grew larger and more complex, traditional 2D drawings—while long serving the team well—offered a limited perspective for clients, particularly those without engineering backgrounds. Visualising how systems would fit into real spaces became increasingly important.

Efficiency was another critical factor. Without 3D design, projects often required up to 30% spare capacity in fabrication to accommodate adjustments, adding both time and cost. With multi-million-pound projects becoming the norm, and the demands for precision, optimised resources, and faster delivery on the rise, upgrading to 3D modelling emerged as a natural and necessary step.

Turning Drawings into 3D

To meet these evolving demands and continue delivering precise solutions, Howern Wasser adopted SOLIDWORKS 3D modelling. The shift enabled the creation of highly detailed, accurate models that clients could easily visualise and explore, providing a clearer understanding of system layouts than traditional 2D drawings.

By presenting systems in a three-dimensional format, the team could demonstrate how each component fit into the overall space, highlight key design features, and identify potential adjustments before fabrication. This approach allowed engineers to anticipate design clashes, optimise space usage, and make modifications earlier in the process, reducing rework. Discussions with clients became more interactive, alignment on expectations improved, and project planning and execution became more streamlined, ensuring projects progressed more smoothly from concept to installation.



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Mr. Regis Bernard



Smarter Design, Faster Results

Even in a brief period, the move to 3D design delivered measurable gains—reducing errors by **30–40%** through precise modelling and accurate bills of materials, and cutting fabrication costs by around **20%** by eliminating excess spare parts. Project timelines also improved by **20–25%**, enabling systems to be fabricated and delivered more efficiently. Clients now benefit from clearer visualisations, enhancing communication and strengthening trust in the company's capabilities. By embracing 3D modelling early, Howern Wasser is well-positioned to take on both SME and large-scale projects, where 3D design is rapidly becoming the industry standard.

