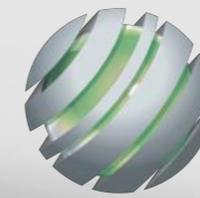


BIMTech
ENGINEERING

3D Laser Scanning



3D Laser Scanning



To compliment its 3D MEP modelling capability, BIMTech now offers an in-house 3D Laser Scanning Service.

This allows the benefits of 3D model production to be applied to refurbishment, retrofit, plant modification projects and accurate records of work-in-progress for any discipline.



As-built environments can be accurately and precisely transferred to a virtual 3D model environment to determine coordination, staging and logistics of planned work scope, well in advance of site works.



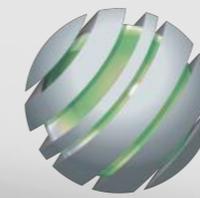
A consistent level of information can be made available to all stakeholders involved in the planned works, ensuring advanced mitigation of risk for both operational and commercial aspects.



Pre-fabrication opportunities can be maximised reducing downtime to live areas, also providing an optimised timeline for project planning, bidding, execution, commissioning and completion.



Surveys of sensitive and critical areas can be carried out once and then the information made available as controlled documents for design proposals, cost plans, tender submission, safe access, risk assessments and method statements, ensuring all involved are working from a uniform and accurate baseline.



Scan to Refurb



The standard process for refurbishment or refit projects all too often involves a procession of contractors being lead around operational areas taking notes and scribbling on dated as built drawings or proposed general arrangement plans.



A generally disruptive process for clients taking time, organisation to access areas, supervision and resulting in a somewhat varied level of enthusiasm from the attendees dependant on who is available from the selected organisation on the day.

The design, pricing and ultimate proposal stage then becomes dependant on the transfer and individual quality of the survey information to the prospective bid teams and in some cases can determine a decision to decline the tender due to lack of information.



Where bids are submitted, the traditional process can also provide significant variance in bid detail scope and value, requiring a higher level of tender adjudication, therefore extending the time taken to on-board a contractor or project team.

Refurb Gains



Time



Cost



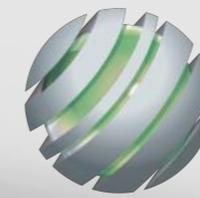
Cost Certainty



Accuracy



Reduced Client Disruption



Progress Images

Interim project scans can capture each stage of an installation to retain records of foundations, rebar setting out, internal partition frames, concealed ducts, first fix service installations providing a virtual 3D x-ray record of a building.



Estate FM Records

A retrospective 3D model can also be produced for critical areas of Managed Estates such as MEP plant-rooms and compounds, by utilising the 3D scanning process.

A model can be populated with Asset Tags and Embedded Data representing the plant operating and maintenance details, along with technical manuals and serviceable part numbers, along with details of replacement frequency details.



Model to Built Variance

Further applications can be applied to utilise the point clouds produced from 3D scans to verify as built information with new build construction models.

This process can allow coordination checks of builders-work holes, structural details and architectural interface on a phased basis throughout the construction timeline.

Ensuring any as built variance to the construction model is identified and communicated to the whole team at an early stage to mitigate risk of delay and disruption to following trades by maximising the design development window.



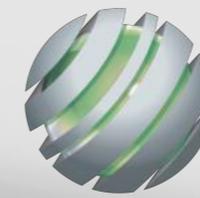
Lifecycle Planning

The model can then be utilised to plan lifecycle plant replacement projects, general maintenance and familiarisation with estates assets without the need for site visits or permit controlled access issues.



Final As-Built

A final scan and point cloud production at project completion can also be utilised to verify the completed project scope with the model intent and produce accurate final as-built models and drawing sheets.



Scan process



Site scans are carried out utilising a tripod mounted laser scanner setup at strategic points around the area to be captured.



Scans will then be registered and arranged to form a seamless point cloud representation of the site or space.



Specific slices or areas of the registered point cloud are isolated for presentation, information or analysis.



Point clouds can also be converted to virtual models at varying levels of detail dependant on application.

Scan Gains



Photo realistic 3D images



Faster and more reliable than conventional methods of measurement



Detailed and Accurate



Reduced field time



Versatile



#ScanTech



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