Architects 61 Sdn Bhd

Customer Success Story
Malaysia

Autodesk® Revit® Architecture
Autodesk® Revit® Structure
Autodesk® BIM solutions
Autodesk® Ecotect® Analysis

Using Autodesk Revit helped the team spend significantly less time communicating design ideas and implementing changes. Being able to visualise and simulate ideas accurately has been a great push to help clients understand the proposed designs, as well as the sustainability and cost impacts for better decision making.

- Jeffrey Ling
Director
Architects 61 Sdn Bhd

Autodesk® Revit® Enables Malaysia's First LEED Gold Building in Cyberjaya.

Architects 61 Sdn Bhd uses Autodesk BIM solutions to develop Bangunan Lestari Kumpulan Emkay's (Wisma Shell) green office building.

Image courtesy of Architects 61 Sdn Bhd

About Architects 61 Sdn Bhd

Architects 61 Sdn Bhd was formed in 1995 and has since established offices in Kuala Lumpur and Penang with an associate office in Singapore, specialising in Architectural Master Planning and Architectural Design Consultancy Services. Over the years the firm has been recognised as a leading practice in Malaysia, winning the BCI Asia Top 10 Awards, two FIABCI International Prix d' Excellence Property Awards, three FIABCI Malaysia Property Awards, the FuturArc Green Leadership Award, and numerous PAM Design Excellence Awards. Some notable buildings they have worked on are Wisma Great Eastern, Stonor Park, Springtide Residences and Infinity. Architects 61 Sdn Bhd has obtained certifications in ISO 9001:2008, 14001:2004, and OSHAS 18001:2007 and embraces Building Information Modeling (BIM) and sustainable design as part of its core business practices.

Sustainability gains momentum in Malaysia's architectural and construction industry

Architects 61 Sdn Bhd was awarded the design and project management of Wisma Shell (Bangunan Lestari Kumpulan Emkay) in Cyberjaya. With 4.83 acres site area, the building encompasses two office blocks with five levels of offices, three levels of naturally ventilated sub-basement car park and landscaping with a roof garden. To achieve its green and sustainability goals, the client Emkay Group required that the building attain a Leadership in Energy and Environmental Design (LEED) Gold sustainable design certification. LEED is an internationally recognised green building rating system. Adherence to health, safety, security, and environment (HSSE) standards, as well as technical and operational efficiency, were also mandated by Emkay Group.

Environmental-friendly from design to construction

Architect 61 Sdn Bhd used Autodesk BIM solutions, based on the Autodesk Revit® software platform. With this toolset, the team was able to capture and analyse sustainability concepts, maintain their vision for green design and the visualisation process during planning and extend it through to construction.

The first building in Malaysia to be certified LEED Gold, the building design has achieved its target of over 50% reduction for its overall energy usage as compared to the average energy consumption

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of office buildings in Malaysia. 34% of the building materials used by cost for the building development were from recycled content and 47% of the materials by cost were sourced locally and regionally to reduce environmental impact from transportation. In addition, as much as 75% of construction waste was diverted from landfill.

Better decisions with Autodesk Revit

From the early stages of the design process, the team examined climatic conditions, seeking ways to take advantage of solar penetration into the building. Data from the model was exported to a variety of analysis software applications, including Autodesk® Ecotect® Analysis, and was used to compare performance of the lighting layout against the team's goals. These value-added services were conducted in collaboration with Synoedge Sdn Bhd, an Autodesk partner.

The building was also designed to comply with low-emitting volatile organic compound (VOC) materials to ensure that the base building provides a healthy indoor environment for its tenants. More than 50% of the building's energy requirements were reduced through air-tightness, high-performance glazing, sub-metering and highly efficient equipment. Using the BIM process, which was based on models created with Autodesk® Revit® Architecture and Autodesk® Revit® Structure, allowed the team to capture, explore, and refine their ideas using intelligent models from the earliest stages of the conceptual design process. "BIM is not only about visualising an idea. It helps turn good concepts into better, more constructible designs," said Mr. Jeffrey Ling, Director, Architects 61 Sdn Bhd. For example, energy analysis tools in Autodesk Revit Architecture helped the team design and simulate a more effective sunshade, maximising open space and its landscaped roof garden while minimising heat gain.

"Using BIM with Autodesk Revit really helped us refine and optimise all of the building's green features. For this particular project, BIM helped us avoid cost over-runs, and increase efficiencies in energy, water, waste management, storm water, and other sustainability requirements," added Ling.

Improve Work Efficiency

"Every potential design change has numerous implications. We need to be quick to examine and evaluate multiple design scenarios. Autodesk Revit enabled us to adjust changes seamlessly and effectively so that we were able to be more time and cost efficient," said Ling.

Using Autodesk Revit helped the team spend significantly less time communicating design ideas and implementing changes. Being able to visualise and simulate ideas accurately has been a great push to help clients understand the proposed designs, as well as the sustainability and cost impacts for better decision making.

"At the end of the day, we are happy to be able to meet the objectives to lower operational cost by approximately 20% through energy efficiency and 45% reduction in water consumption, 75% reduction on waste to landfills and about 20% carbon emission reduction through innovative building design – all made possible using Autodesk Revit," said Ling.

The Autodesk Building Information Modelling (BIM) software based on the Autodesk Revit® platform helped the team capture and analyze the sustainability concepts, maintain their vision for green design, and initiate the visualisation process even during planning and extend it through to construction.

- Jeffrey Ling
  Director
  Architects 61 Sdn Bhd

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