

< **Virtual Environment** >

IES INTEGRATES WITH GOOGLE SKETCHUP

IES TOOLBAR ENABLES ENVIRONMENTAL PERFORMANCE ANALYSIS
DIRECTLY FROM SKETCHUP MODEL



WHAT ADVANTAGES DOES THE IES VE SKETCHUP PLUG-IN ACHIEVE FOR YOU?

The plug-in to Google SketchUp™ sits within the SketchUp application and gives direct access to all of IES's tools. For many architects and other professionals in the building design industry, this level of integration is what you have been waiting for - it allows empowering energy, carbon, daylight and solar analysis, and much more to be undertaken at the touch of a few buttons, right from the earliest stages of the design process, where the maximum difference to sustainable design can be achieved.

"Potentially, I think that this development could be as significant for the building design industry as the introduction of AutoCAD in the late 80's."

Stephen Choi, Broadway Malyan

"This new tool means we now have the ability to integrate building performance analysis from early conceptual design using SketchUp, through our entire design process using Revit Architecture. Faster feedback in design affords more opportunity to innovate with sustainability in mind. This means not only can we make the right decisions in the first place; we can make the right decision at every step in the process."

Ken Hall, Gensler

This link is compatible with both Google SketchUp 'Free' and 'Pro'.

Adding IES' powerful performance analysis capabilities to SketchUp functionality, allows the whole design team to collaborate tightly and navigate their way through the myriad of different strategies for improving environmental performance straight to the optimum sustainable design.

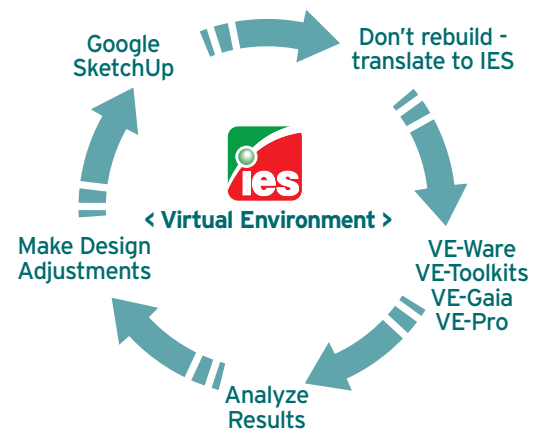
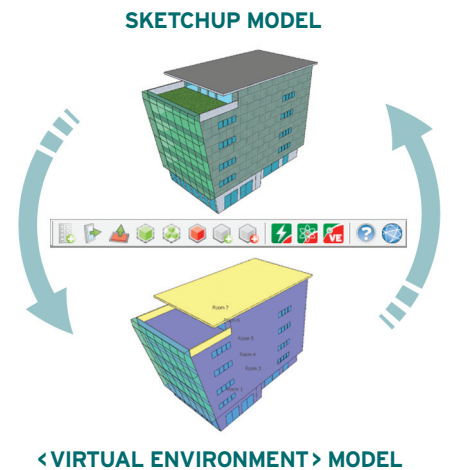
As everything is linked together the whole team can take an integrated approach and gain timely feedback through analysis cycles that would previously have taken substantial effort. There is no need to rebuild any models to undertake performance analysis, integrating its sustainable design advantages directly into the design process.

Architects and other building professionals can use the link to receive performance feedback on multiple design options - enhancing their ability to optimize the design and minimize energy consumption.

The design team can take action right from the initial stages of the design process, quickly and easily, to investigate through analysis:

- > where substantial reductions in energy use can be realized;
- > performance against the Architecture 2030 Challenge;
- > the impact of different strategies on peak loads and yearly energy consumption;
- > the impact of different strategies on occupant comfort;
- > the potential trade-offs between daylighting and cooling energy loads and consumption;
- > how the design process can be streamlined and informed.

The Google SketchUp plug-in can be integrated with IES' four-tier suite of powerful building performance assessment tools. The data generated by IES' software can be used, for example, to demonstrate to the client why different design options have been chosen, quantify the energy savings expected and aid in the design of Building Management Systems. As such, the technical capabilities of IES' software, also offer substantial market differentiation opportunities.



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VE-WARE

FREE ENERGY, CARBON AND 2030 CHALLENGE ANALYSIS

VE-Ware is a free tool which uses the 3D model, a choice of typical building properties and real climate data to assess the annual energy and carbon usage of a building using a sophisticated dynamic thermal simulation. In North America it compares the results to Architecture 2030 Challenge targets, while UK users can access VE-SBEM for UK compliance and EPC creation generation.

VE-Ware can analyze both new and existing buildings of all types and across all global locations, allowing anyone involved in building design or refurbishment to compare at the click of a few buttons how different designs, layouts and system options affect energy performance. At IES, we believe passionately about sustainability and released VE-Ware as a way for everyone to have the capability to understand “how well does my building perform?”

VE-TOOLKITS

EARLY STAGE ANALYSIS FOR QUICK, ITERATIVE ASSESSMENTS

“At early design stages, key decisions – usually made by the architect – can greatly influence the subsequent opportunities to reduce building energy use,”

(IPCC Climate Change Report, 2007)

The IES VE-Toolkits are ideal for use at the very early stages of the design process, when time is short, and feedback needs to be rapid. A variety of VE-Toolkits offer different capabilities – automatically running the chosen analysis and generating interactive visual and rich-text reports within minutes, and all at the press of a few buttons.

➤ **SUSTAINABILITY VE-TOOLKIT** Detailed energy, carbon and daylight assessments, solar shading animations, climate, water, LZCT (Low & Zero Carbon Technologies) and ASHRAE/CIBSE loads calculations

➤ **VE-TOOLKIT FOR LEED** Automated indicative LEED capability that covers daylighting, comfort, water and renewables across NC 3.0 and 2.2, LEED Schools, LEED Core and Shell

➤ **VE-TOOLKIT FOR LEED-INDIA** Automated indicative LEED-India capability that covers daylighting, comfort, water and renewables across LEED India New Construction V1.0, Core and Shell V1.0

➤ **GREEN STAR VE-TOOLKIT (beta)** Automated indicative Green Star™ capability that covers daylighting, comfort and water across Office Design v3, Office As-Built v3, Office interiors v1.1, Education v1, Healthcare v1 and Retail Centre v1

VE-GAIA

STEP-BY-STEP SMART NAVIGATION WORKFLOWS

A revolution in building performance analysis, VE-Gaia offers a complete analysis workflow environment from modeling to reportage, which defines different processes and weaves a clear route through the IES <Virtual Environment>. Thus, enabling designers to undertake complex advanced simulation easily and with significantly less performance analysis familiarity.

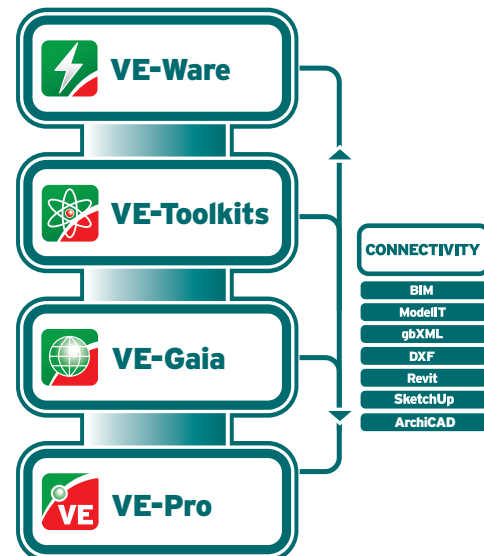
The smart navigation takes users through a range of different analysis tasks with the ability to input and manipulate exact building data within an integrated central data model. Designers can track progress, control quality, iterate workflows, trigger simulations, filter results and produce automated visual reports. The baseline VE-Gaia can be enhanced by the addition of extra navigator functionality, such as for LEED and sustainability analysis.

VE-PRO

IES' MOST POWERFUL, FLEXIBLE AND IN-DEPTH SUITE OF INTEGRATED TOOLS

VE-Pro provides the detailed high-end analysis required at later stages of the design process in order to finalize the optimum design. However, the variety of different interconnected modules and capabilities available can be used at any stage of the design process so users can build the suite to meet their needs. The central data model allows all analysis to be undertaken in an integrated manner, so results can be easily shared amongst applications to further inform and refine simulations.

Modules are available within energy, light/daylighting, solar, value/cost, CFD, egress and mechanical categories. ‘VE-Gaia’ style workflow navigator functionality is also available, offering additional capabilities and guidance.



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