

## < 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.

*"Connectivity with Google SketchUp will extend the power of IES's environmental analysis capabilities to a much broader base of our architectural staff which will help us better assure that our designs are being formed for optimal performance in early design."*

**Mark Dietrick, Burt Hill**

*"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 6'.

Adding IES's 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.

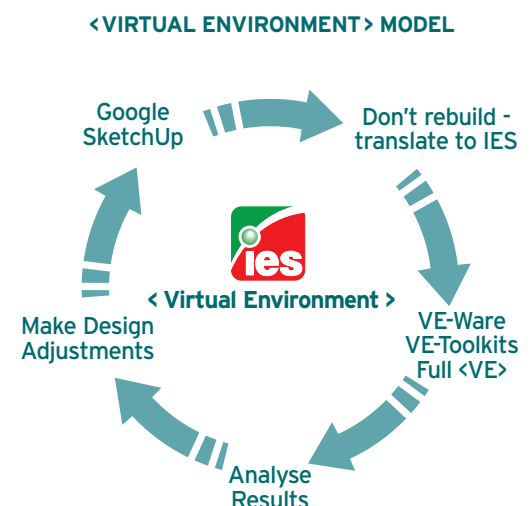
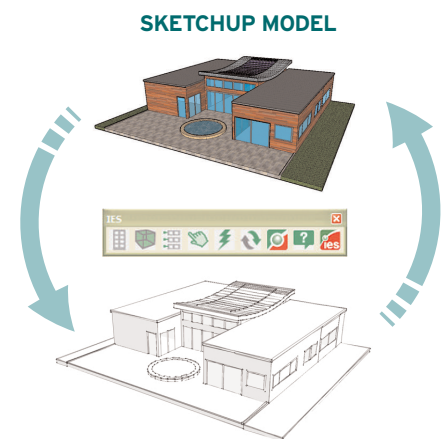
As everything is linked together the whole team can take an integrated approach and gain timely feedback through analysis cycles that would previously have taken substantial effort. There is no need to rebuild any models to undertake performance analysis, integrating its sustainable design advantages 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 optimise the design and minimise 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 realised;
- > 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 data generated by IES's software can also 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's software, also offer substantial market differentiation opportunities.



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**Within the Google SketchUp plug-in, IES offers building designers the choice to engage with its software at the level and in the way which is best for them:**

### VE-WARE

**FREE BUILDING ENERGY AND CARBON ANALYSIS**

VE-Ware gives you limited but incredibly valuable access to our world leading **<Virtual Environment>** Apache thermal analysis software. It gives instant feedback on a buildings energy consumption and carbon emissions, as well as benchmarking it against the Architecture 2030 Challenge if it is located in the USA.

VE-Ware can analyse 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.

### THE VE-TOOLKITS

**GUIDING YOU IN THE MOST 'GREEN' DIRECTION**

The IES VE-Toolkits are ideal for use at the very early stages of the design process, leveraging elements of the full capabilities of the IES **<Virtual Environment>** to provide quick sustainability assessment options for architects and engineers alike. Furthermore, IES uniquely offers the ability to take into account the affect of solar/light penetration on energy and carbon while doing this.

A variety of Toolkits offer different analysis options - automatically running the chosen analysis and generating interactive reports within minutes, and all at the press of a few buttons.

**> SUSTAINABILITY TOOLKIT** (version 2 available now)

Detailed energy, carbon and 2030 Challenge assessment, daylight assessments, solar shading animations, ASHRAE/CIBSE loads calculations.

**> LEED TOOLKIT** (version 2 available now)

LEED NC 2.2 Daylighting Credit 8.1 consideration.

**> BREEAM TOOLKIT** (version 1 available end 2008)

**> GREENSTAR TOOLKIT** (version 1 available end 2008)

At early stages in projects (sometimes as early as week three or four), up to 70% of the design decisions which affect performance have already been made. IES VE-Toolkits are designed to give designers the data and guidance needed at these stages to really make a difference.

Our enhanced report format presents results in an interactive manner - allowing results to be filtered and highlighted based on different thresholds. While a simulation comparison and history, and guidance on best practice, means designers can easily tell if they're heading in the 'green' direction.

IES VE-Toolkits help the design team establish the most appropriate sustainable and energy efficient approach - one that can be finalised in detail using modules from the full IES **<Virtual Environment>**.

### THE FULL <VE>

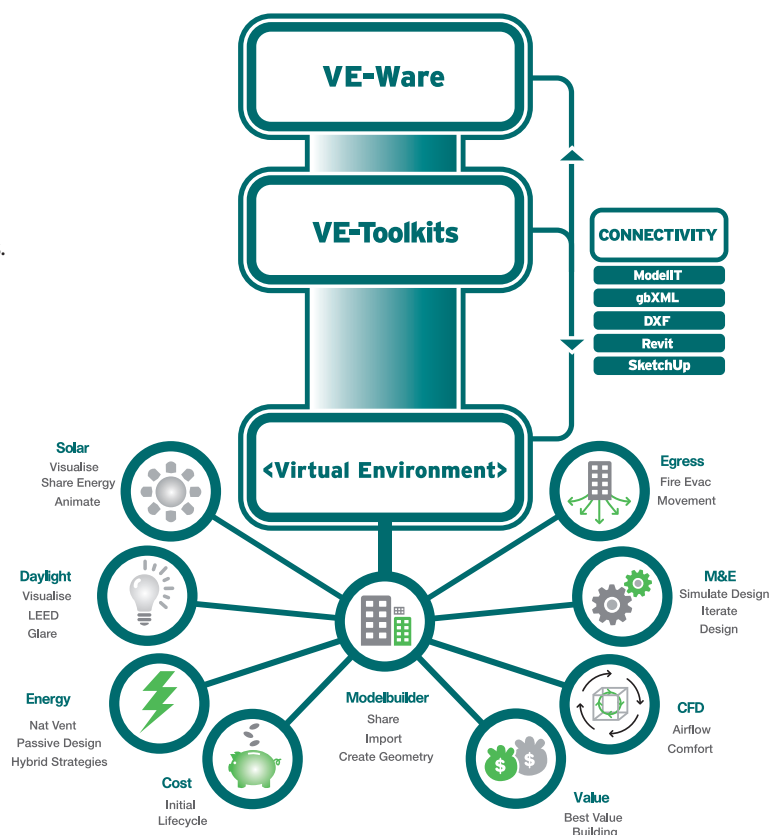
**FINALISING THE OPTIMUM DESIGN IN DETAIL**

The full **<Virtual Environment>** provides the detailed high-end analysis required at later stages of the design process in order to finalise the optimum design. Using a combination of the different modules contained within this integrated suite, elements such as HVAC performance, detailed solar shading, natural ventilation, occupant evacuation, rights to light/sunlight, internal and external airflows and code and regulation compliance can be considered.

Designers can explore these and many more elements within the **<Virtual Environment>** suite and see how they affect each other in incredible detail, with highly graphical outputs and the ability to hone and adjust the energy model within the system.

*"At early design stages, key decisions – usually made by the architect – can greatly influence the subsequent opportunities to reduce building energy use. These include building form, orientation, self-shading, height-to-floor ratio and decisions affecting the opportunities for and the effectiveness of passive ventilation and cooling."*

**IPCC 4th Assessment Report "Climate Change 2007"**



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