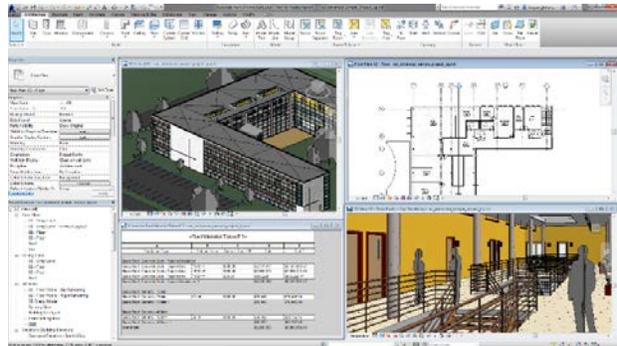


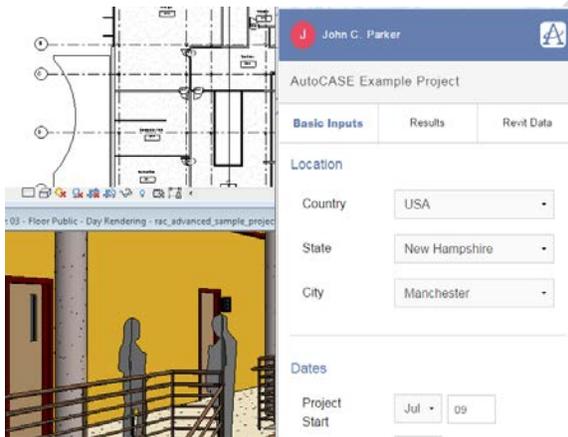
# AutoCASE for Revit

Impact Infrastructure is developing a Triple Bottom Line analysis tool for buildings as part of its AutoCASE software suite. AutoCASE gives architects and designers access to real-time Sustainable Return on Investment (SROI) decision support as part of their design workflow inside Revit.



Cost, quantity and energy analysis in Revit help designers deliver a financially successful project. But,

- Will the design be sustainable and meet triple bottom line objectives?
- Will the building meet other stakeholders' objectives, such as occupants and the public?
  - Will the design incorporate the elements of sustainability that maximize benefits for every dollar spent and prioritize only the most compelling design elements?
  - Is the design based on sustainable elements that are the most contextually specific and based on local conditions?
  - Are you effectively communicating the measurable value of the sustainable design elements to stakeholders?, And,
  - Have you created an objective, transparent, and defensible triple bottom line business case for your design?



These are questions that require Impact Infrastructure's AutoCASE plug-in for Revit.

AutoCASE harvests data from Revit and performs a cloud-based cost benefit and risk analysis of the building design and alternatives.

AutoCASE produces location-specific results, considering elements such as the social value of water on the building's site and the social cost of regional electricity generation.

And AutoCASE is mapped to LEED credits. In addition, an AutoCASE analysis of a building project can be used to obtain LEED innovation credits.

## AutoCASE for the Triple Bottom Line of Design Alternatives

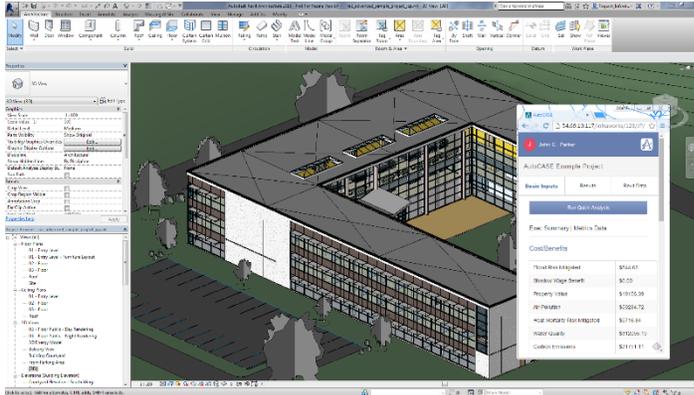
AutoCASE can evaluate and rank design alternatives with different

Family and Type	Material Area	Material Cost / SF	Calc	Cost 2
Basic Roof: Concrete Deck - Tapered Insulation				
Basic Roof: Concrete Deck - Tapered Ins	1593 m²	\$200.00	\$3,424,914	\$3,424,913.87
Basic Roof: Concrete Deck - Tapered Ins	1592 m²	\$150.00	\$2,388,000	\$2,388,000.19
Basic Roof: Concrete Deck - Tapered Ins	1593 m²	\$50.00	\$856,225	\$856,225.47
Basic Roof: Concrete Deck - Tapered Insulation: 3			\$8,849,366	\$8,849,365.53
Basic Roof: Generic - 75mm				
Basic Roof: Generic - 75mm	71 m²	\$100.00	\$7,045	\$7,045.14
Basic Roof: Generic - 75mm: 1			\$7,045	\$7,045.14
Basic Roof: Generic - 400mm				
Basic Roof: Generic - 400mm	56 m²	\$100.00	\$5,572	\$5,572.46
Basic Roof: Generic - 400mm: 1			\$5,572	\$5,572.46
Grand total			\$8,985,593	\$8,985,593.13

capital and operating costs that offer differing benefits for the environment, building owner, and building occupants.

AutoCASE assesses sustainable design technology alternatives using SROI to monetize, or convert to monetary terms, all relevant incremental social, environmental, and financial impacts.

Some of the benefits calculated in AutoCASE for Revit are:

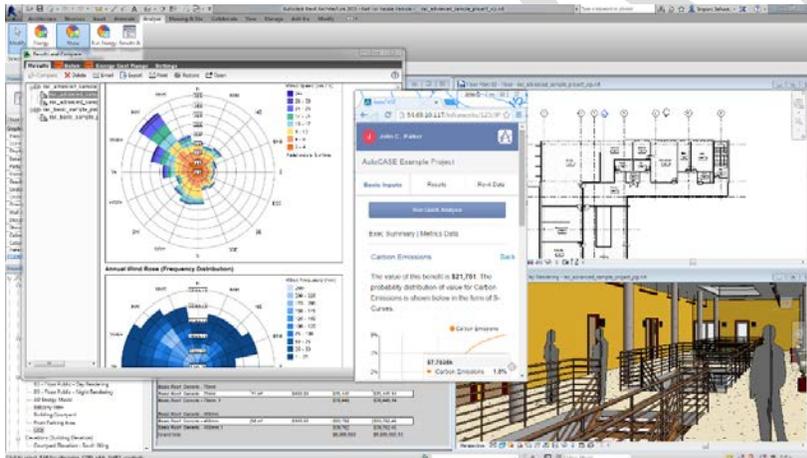


- The value of air quality improvements
- The Impact on water quality
- The benefits of waste reduction
- The effects on human health

With AutoCASE, sustainable design alternatives can be ranked and prioritized, in real-time, from within Revit.

### AutoCASE for the TBL of Material Selection and Green Buildings

The Building Design Suite allows users to create more energy-efficient designs. The Energy Analysis tool allows architects and designers to use local weather conditions and building type to consider the CO<sub>2</sub> emissions of design changes.



- But how does an architect make the decision about whether reduced CO<sub>2</sub> emissions are worth the expense of the increased capital costs?
- And how do the changes in embodied energy due to changes in material choice compare with the building energy results?

AutoCASE builds on the Green Building Studio outputs to show, for example, the value of low

carbon high cost and high carbon low cost alternatives in dollars.

### AutoCASE - the Bottom Line for Sustainable Building Design

The AutoCASE SROI methodology has already been proven in multi-billion dollar building projects. But SROI has until now been done as a custom economic consulting project for each building and design alternative.

Automating economic, social and environmental analysis and integrating SROI into Revit will provide building designers the same rigour at a fraction of the cost of custom SROI studies.

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