5 THINGS TO LOOK FOR IN A HIGH PERFORMANCE FACADE

HOW FACADE IMPACTS US:
Façade is the single most important factor in certain building types that can completely transform the occupant experience and the energy performance of the building. The Whole Building Design Guide highlights that facades can have up to a 40% impact on the total energy use of the building. This drops down to approx. 5-10% for internally driven building like laboratories or hospitals. In addition to the energy use, facades also significantly impact the occupant productivity within a building.

CARBON FOOTPRINT

Also known as the climate-change metric, carbon footprint is the amount of greenhouse gases emitted during a human prompted process, and is expressed as the equivalent tons of CO2 (Carbon Dioxide) generated.

Pro Tip: Cove.tool can help understand the impact of energy and energy cost which is a good indicator of the carbon impact of the element.

IMPACT ON EXTERIOR SPACE

Facades not only impact the energy use of the buildings they belong to, but depending on the material reflectivity, they also add a burden to the exterior world by creating hot spots. An extreme example of this is the Walkie Talkie in London, whose bulge and mirrored surface microwaves nearby buildings and public spaces which resulted in a number of lawsuits and other urban issues.
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**ENERGY USE**

A building’s energy use refers to the energy required to operate and sustain it. Depending on the facade design, the active and passive strategies implemented, the energy use of the building can drastically vary. This leads to a much high Energy Cost, making the building expensive to operate.

Pro Tip: Cove.tool can help understand the impact of energy and energy cost of specific facade decisions. A user can study the impact of varying glazing percentage, adding overhang, fins or other facade elements on energy use and cost.

**COMFORT**

Occupant comfort is the final test of the success or failure of a project. Doing Daylight and Glare studies during the early stages of the design process can create a better design.

**ACOUSTIC COMFORT**

Acoustic comfort is the well being perceived by a building occupant in regards to the acoustic quality of their environment. Acoustics have the ability to significantly reduce occupant productivity. Despite its impact, this metric is typically considered only when the project type is a theater or auditorium. One great factor of acoustic comfort is facade materiality. Providing noise reducing insulation or materials with similar properties can minimize noises and enable higher productivity levels in the building users.

*Cove.tool* is the automated building consultant that parametrically optimizes design options for energy and cost performance in the early stages of the design process. Cove.tool is unique automated energy modeling software that integrates design, cost and performance. It's validated results, unique features, and robust web app interface gives every project team the edge to make the best decisions sooner and more often. Try cove.tool to save energy, time, money, and the environment.