AUTODESK Forma

Design a better future

With Autodesk Forma's data-driven insights at your fingertips, make fast, smart decisions that enhance sustainability outcomes.





Operational Energy

Explore the impacts of building design choices on energy consumption of HVAC, lighting, and plug-loads while you're designing



Microclimate

Improve urban site design and outdoor thermal comfort through microclimate analysis



Solar Energy

Assess solar energy potential for your building facades and roofs, and estimate output from photovoltaic panel systems



Sun Hours

Analyse the percentage of hours of direct sunlight on building façades and ground surfaces







Daylight Potential

Visualize daylight potential in context with the surrounding buildings and environment

Wind

Wind analysis illustrates building and site-influences on localized air flow patterns

Noise

Understand how noise impacts external surrounding conditions to evaluate potential risk of acoustic discomfort

Todays' building design and real estate professionals need best-in-class solutions to deliver new environments, advancing a sustainable world for today's communities and future generations.



Analysis you can trust

Forma's analyses enable you to accurately test and understand your proposals in greater detail than ever before, especially when it comes to livability, sustainability, and compliance. Analyze different criteria simultaneously in real-time and instantly see the impact of the design changes. Make better informed data-driven decisions from day one; easily identify and correct for various design issues during early-stage planning.

Predict operational energy

Understanding the impacts of early design decisions on energy consumption is key to reducing operational energy use, and creating smart, sustainable cities.

With Forma's Rapid Operational Energy Analysis feature you can now visualize the impacts of four key parameters; window to wall ratio, and the U-value of wall, roof, and window construction to give you a quick and accurate picture of predicted energy consumption of design options.

Model microclimate

Microclimate analysis combines the integrated effects of environmental conditions (sun, weather & wind) with climate data on a site and analyzes the impact on human experience as measured by perceived outdoor thermal comfort conditions. Quickly, easily, and accurately evaluate the thermal comfort of outdoor spaces, detect problematic areas, and simulate optimal solutions that are more efficient and sustainable, from day one.





At CRTKL, we believe sustainable design is a necessity, not an option. Forma's

operational energy analysis tool makes this easier as it allows our designers to better understand the implications of their design decisions at the onset of projects. Tools like this help make sustainable design more accessible and enable us to further CRTKL's vision of People, Planet, Positive Design.

Pablo La Roche

Principal and Performance-Driven Design Lead at CallisonRTKL

Estimate solar energy

Visualize sun and shading conditions on buildings and bring solar-powered renewable energy planning into the earliest stages of your design. Forma's Solar Energy analysis evaluates solar radiation data on the building to predict both the annual solar energy potential and the estimated energy from PV systems quickly and accurately. Forma automatically incorporates contextual building massing and environmental formation to provide insights for renewable energy generation potential of project areas.

Optimize daylight potential

A key element of sustainable building design is optimizing the areas of natural light to be accessed by occupants. Forma's Vertical Sky Component analysis enables you to explore site conditions for daylight potential in seconds.

Follow the sun

By considering shading caused by buildings or other surrounding context, Forma can accurately calculate the percentage of sun hours received on your building façade and adjacent environment at different times throughout the year. With the ability to analyze specific dates and display the sun and shade information in an intuitive heatmap on your project, you can explore, test, and iterate design options quickly.





The benefits of using data is to create better buildings. Buildings that fit into our cities better. Buildings that are more sustainable. And the final result of the architecture is a much more positive experience for the building user.

Richard Hogan Project Lead and Architect, ARCO Architecture Company

Minimal noise

The presence of exterior environmental noise, or lack thereof, is a crucial factor contributing to the well-being of urban inhabitants. While the traditional process of noise simulation and calculation can be costly and time-consuming, Forma's fast and continuously updated noise simulations empower architects and urban planners to visualize the impact of design decisions on projected noise levels around their project site.

Assess air flow

As cities grow, it becomes ever more likely that unwanted wind effects will impact your site or its neighbors. Forma's easy-to-use, state-of-the-art analysis assesses pedestrian comfort due to wind and sitespecific air-flow conditions in urban areas. The analysis automatically adapts to your location, and gives you access to the insights you need with just the click of a button.

Forma's suite of sustainability solutions empower architects, real estate developers and urban planners.

The ability to use data-driven insights and visualize impacts of design decisions in real time, on a host of environmental factors, enables teams to deliver smarter, more sustainable projects.

Start free trial now

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