

Think **Sustainable.**
Design **Sustainable.**

STUDIO GREENAARCH

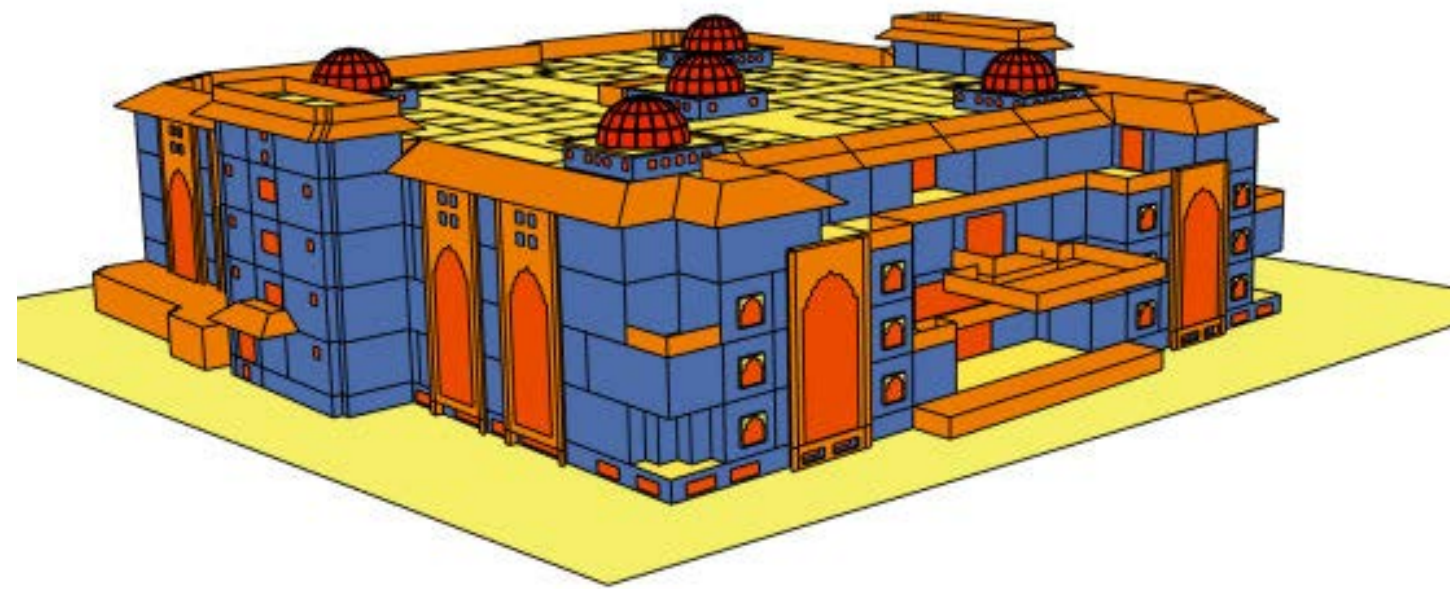
A **Sustainable** Design Consultancy



who we are

Green Building Consultants

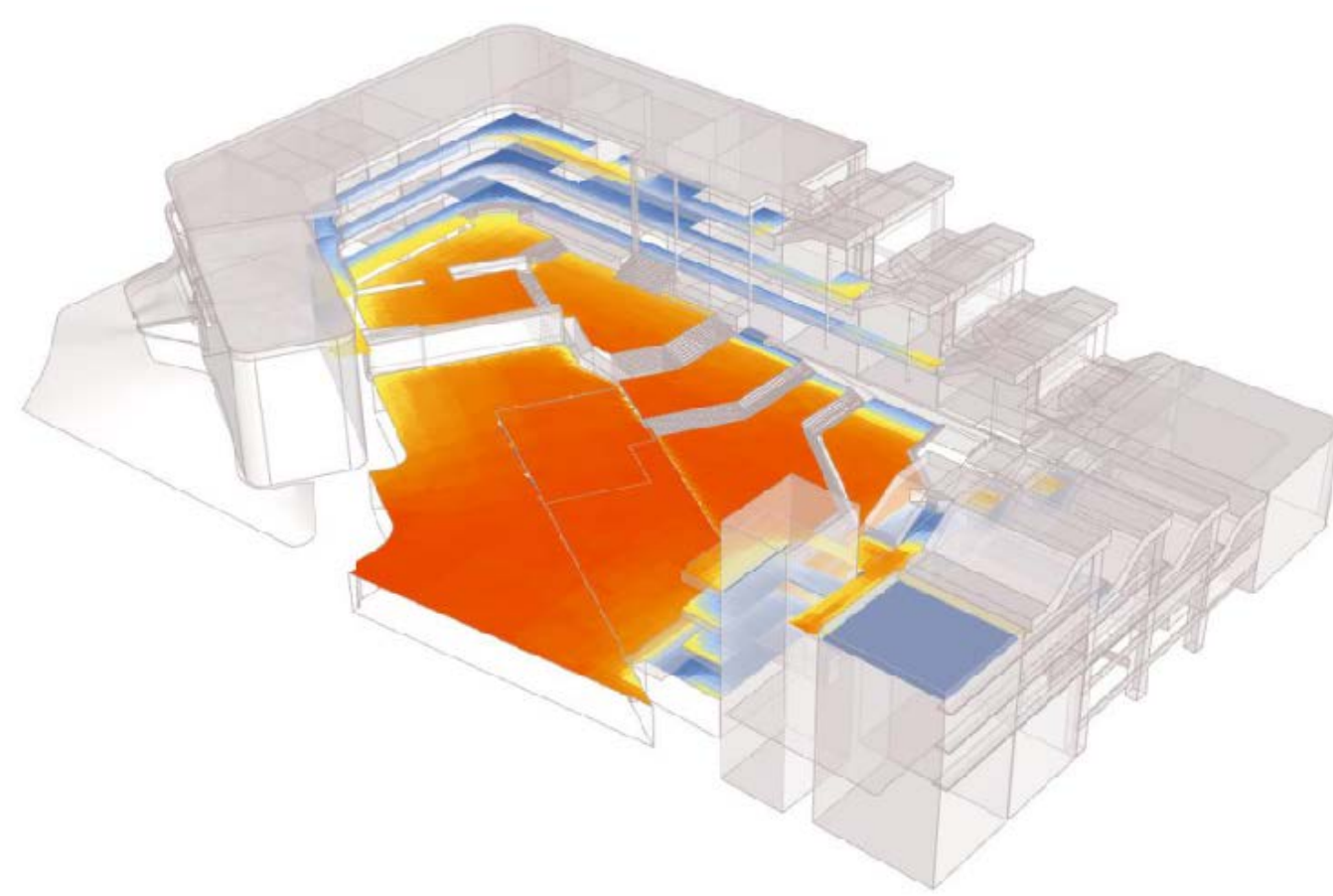
We are Sustainable design consultants who work with Architects, Planners, Environmentalist and Policy makers in Creating High performance Building and there adjacent environment. We design or assist Architects in designs, by providing integrated evidence based design service ranging from site optimization as per microclimate to evidence based passive strategies to high performance systems.



Market Building, Puri - Energy Model

High Performance Based Design

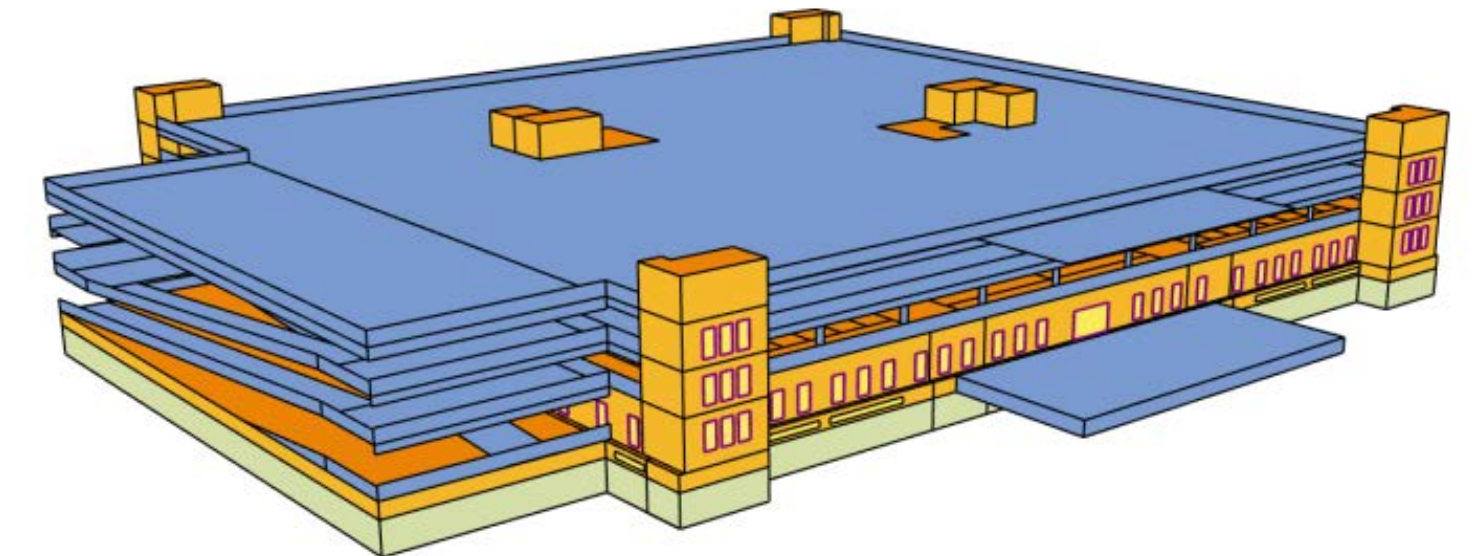
For a high performance design solution we provide industry standard sophisticated simulation services pertaining to Daylight, Building energy optimization, Indoor and outdoor Thermal Comfort, Building Envelope sensitivity analysis, outdoor Indoor CFD, Artificial lighting, Renewable energy etc.



Manipal College, Mangalore - Thermal Comfort

Sustainable Building Code Compliance

We provide Building analysis and optimization through simulation for Code compliance such as ECBC, GRIHA and LEED.



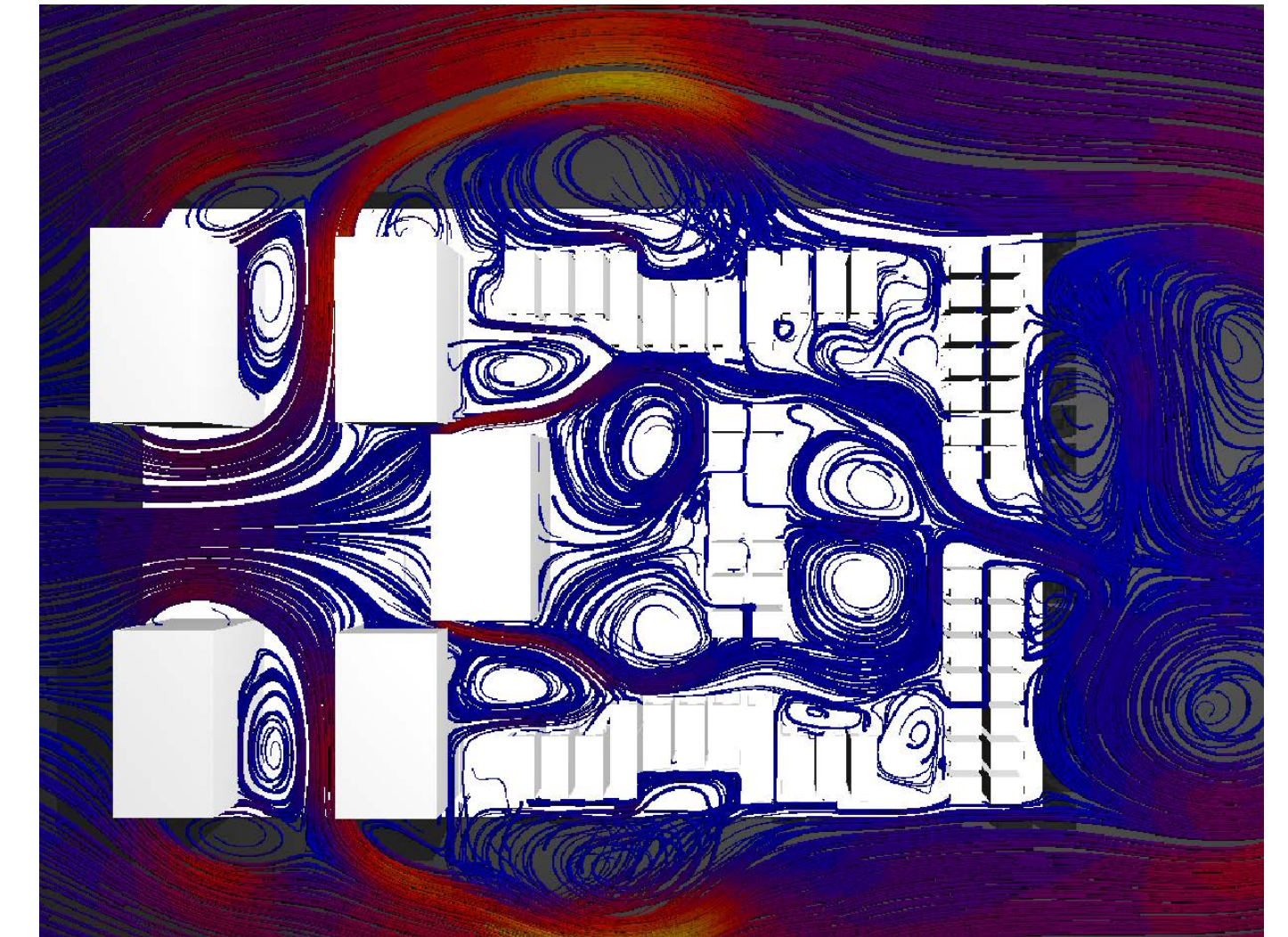
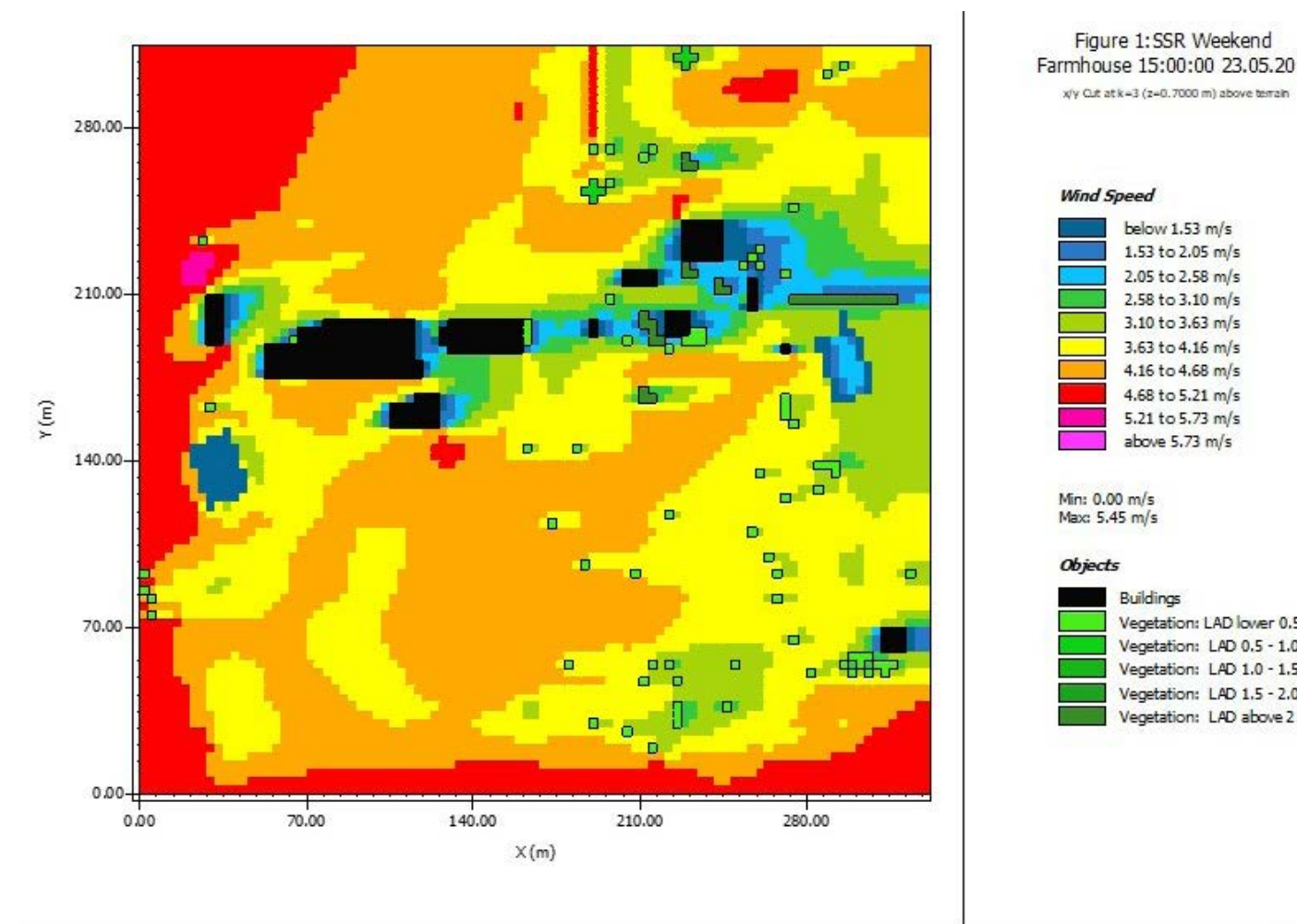
MLCP, Puri - Daylight Model Griha



what we provide

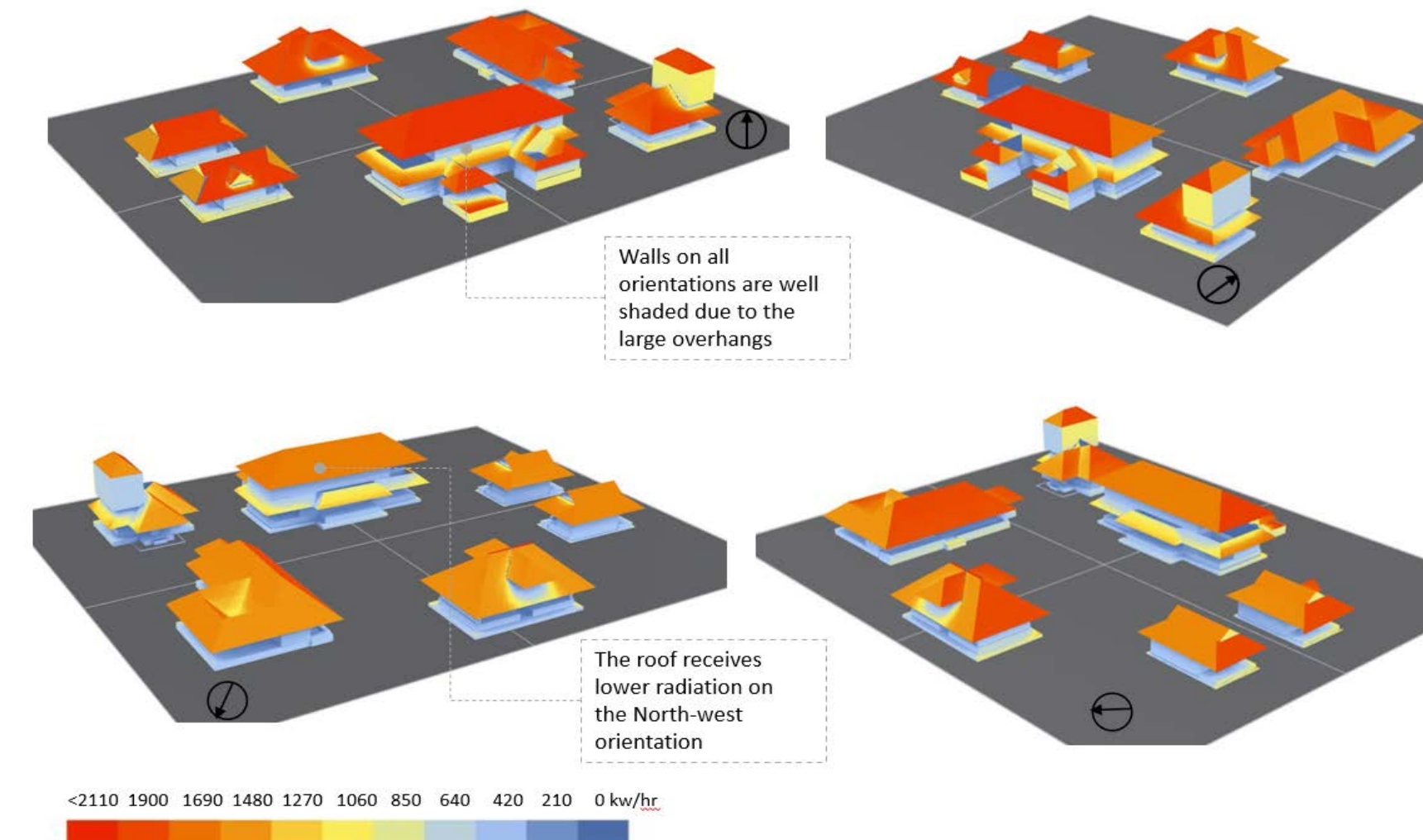
Sustainable Building Design and Masterplanning

- Decoding Climate data & formulating design guidelines
- Site Planning to minimise environmental impact such as Heat Island
- Micro-Climate based form development and orientation study
- Building envelope optimization
- Natural and Mixed mode ventilation strategies
- Maximising natural daylight and reduction in Glare
- Heat ingress reduction through envelope optimization
- Shading design strategies to reduce heat gain through windows
- Cooling Load and Artificial lighting load optimization
- Water Efficiency study
- Life cycle of Building study to reduce embodied carbon of materials
- Sensitivity study of different alternate building materials
- Renewable energy generation capability of given area
- Neighbourhood design through Daylight and energy optimization
- District cooling optimization for neighbourhood



Microclimate Temp. Variation - Farmhouse

CFD Analysis - Apartment Complex



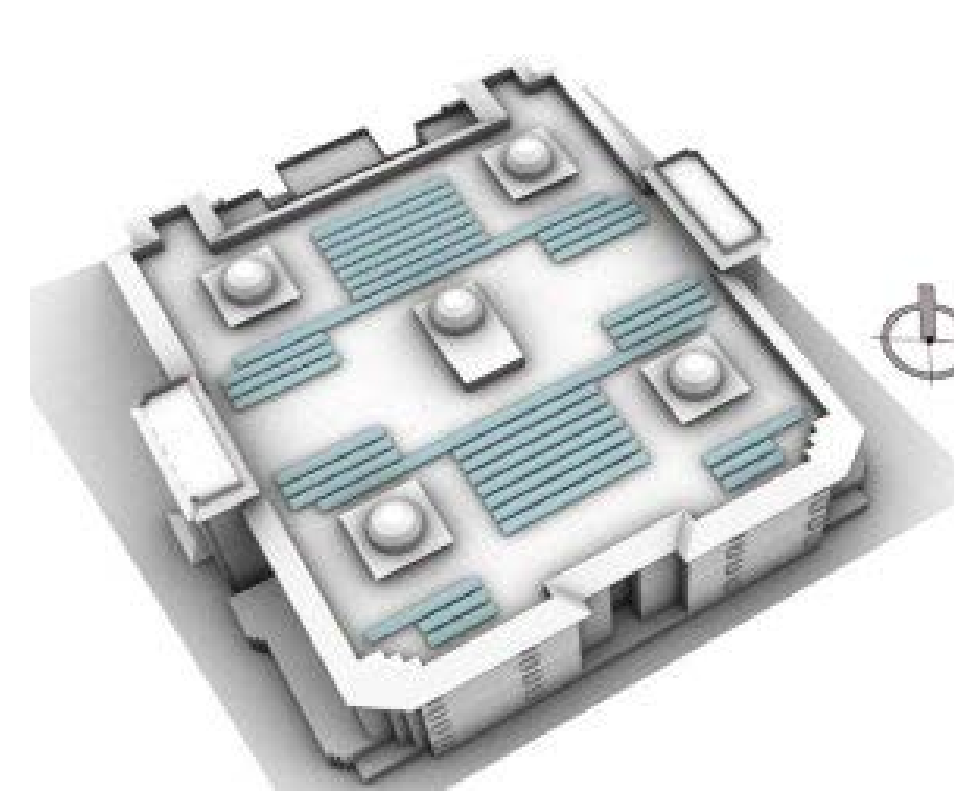
Modulating Roofs as per Irradiation Studies



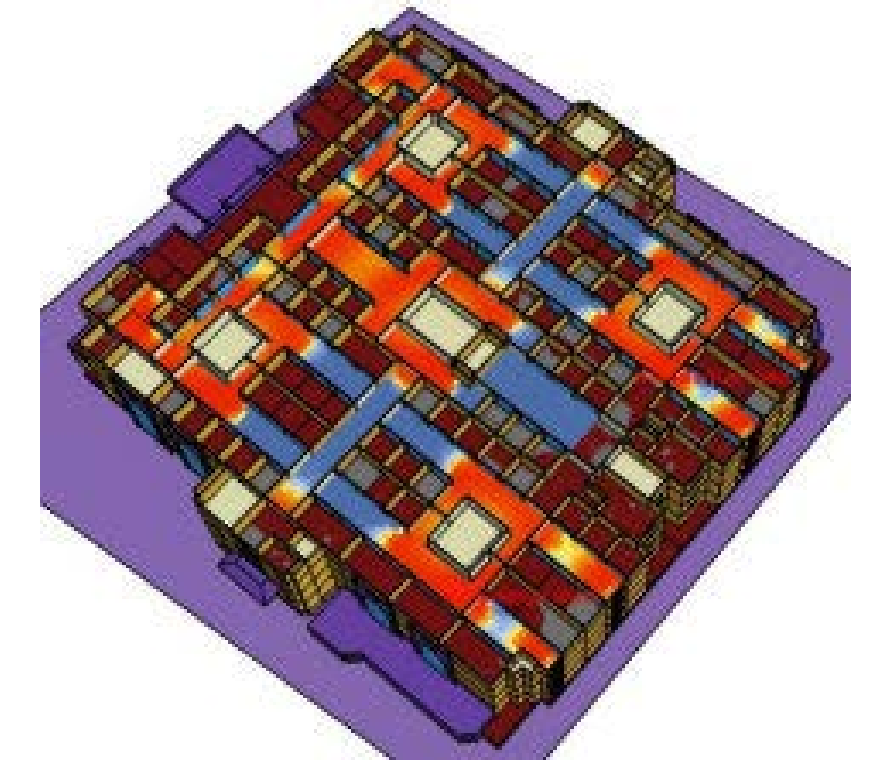
what we provide

Building Performance Analysis with advanced Computer Simulations

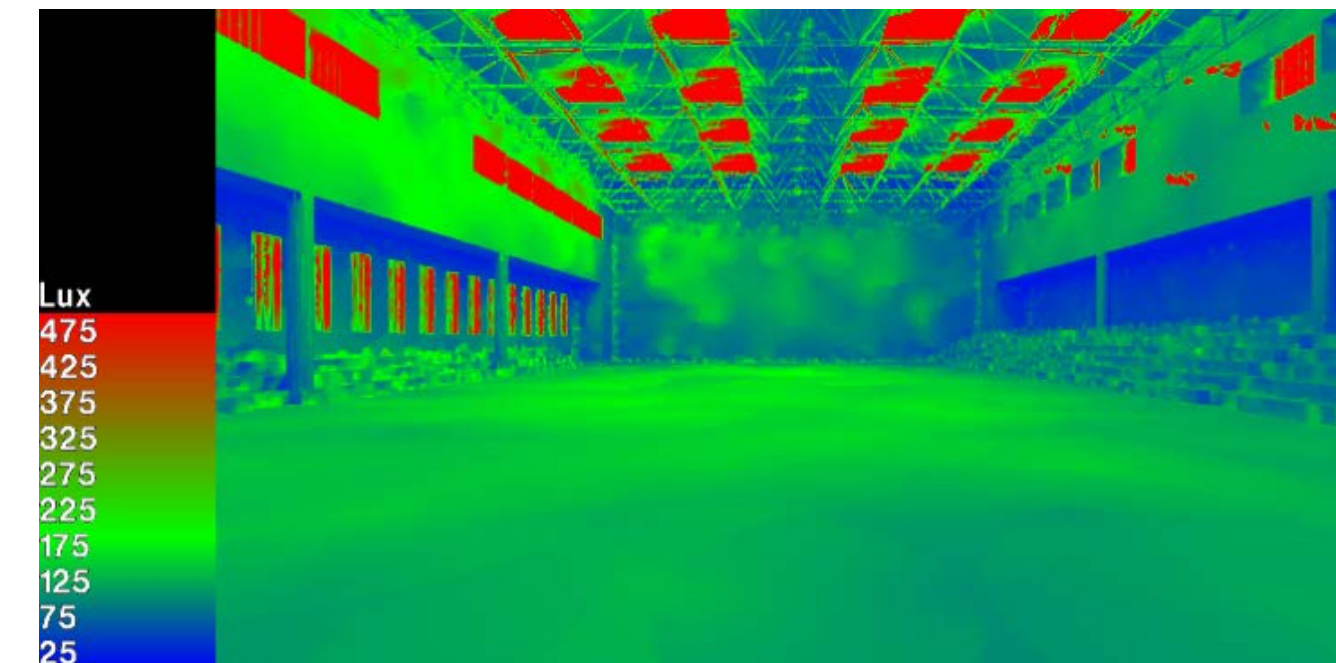
- Climate analysis and design intervention study at preliminary design phase
- Sensitivity of Building envelope (Energyplus Simulation) using Shoebox model in preliminary design phase
- Shading strategies including analysis of shading angles using Solar protractor concept
- Outdoor and Indoor airflow simulations using validated CFD tools
- Building Irradiation study to reduce heat gain
- View analysis (a part of LEED criteria) from inside habitable rooms
- Annual Sun exposure study for Griha and LEED codes
- Climate based daylight simulation (CBDM)
- Glare mitigation simulation (preferably for institutions and offices)
- Electrical lighting simulation for optimal light distribution ratio
- Energy simulation for naturally ventilated, mixed mode and air conditioned buildings
- Energy use Intensity reduction through energy simulation
- Adaptive thermal comfort and PMV simulation for naturally ventilated building and Air conditioned building respectively
- HVAC optimization through energy simulation
- Solar PV simulation integrated with energy consumption
- Simulations related to criteria of GRIHA, LEED and IGBC



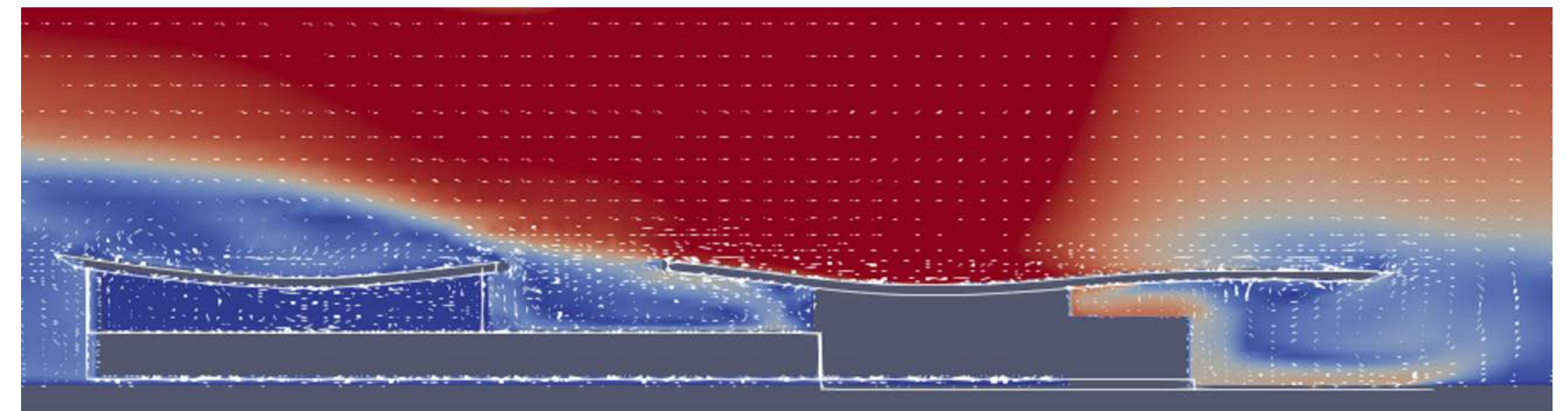
Solar Panel optimization



Natural daylight study analysis



False color image - Aga Khan Academy



CFD Study - TCS Pune



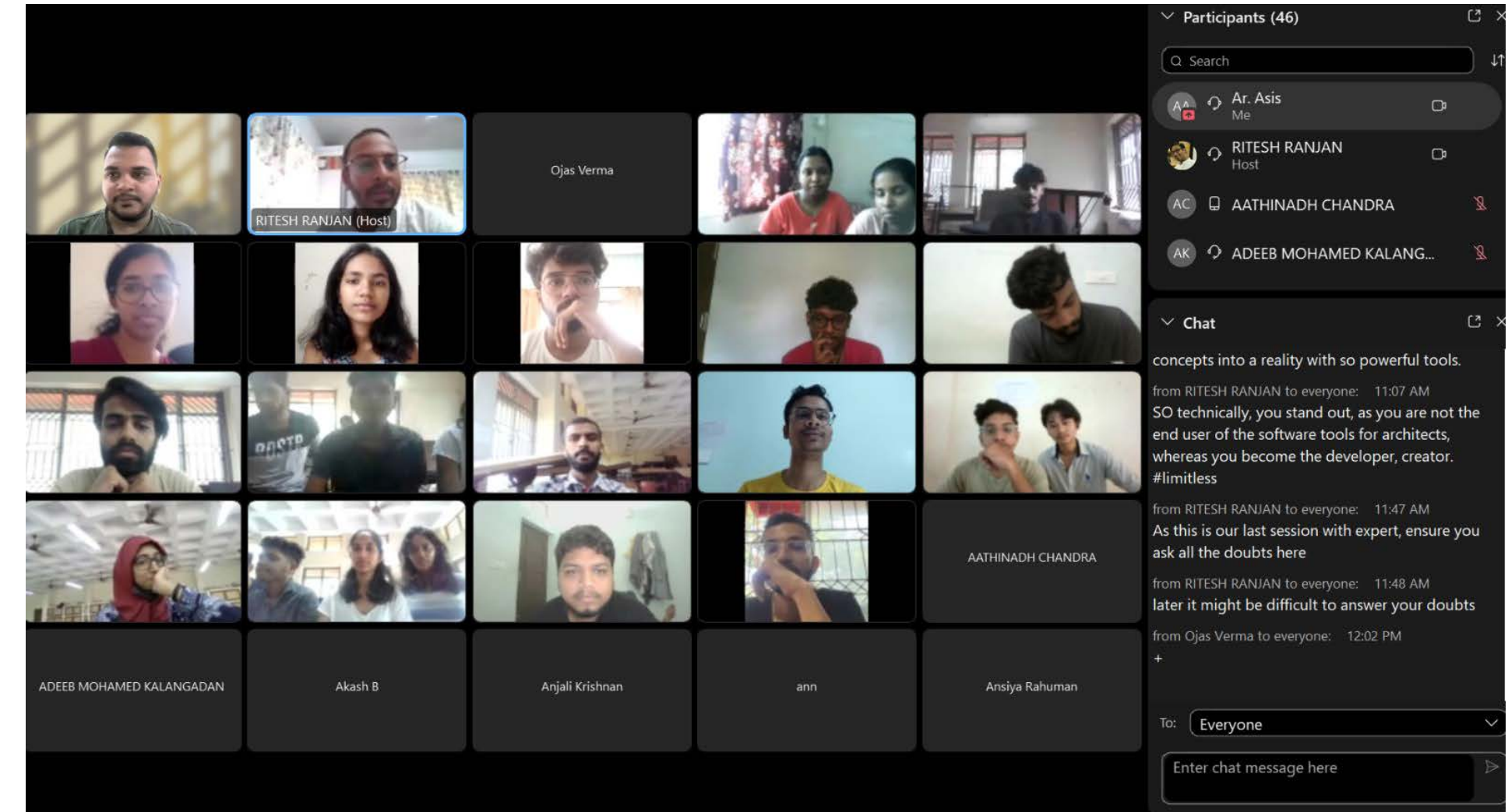
what we provide

Training and Development

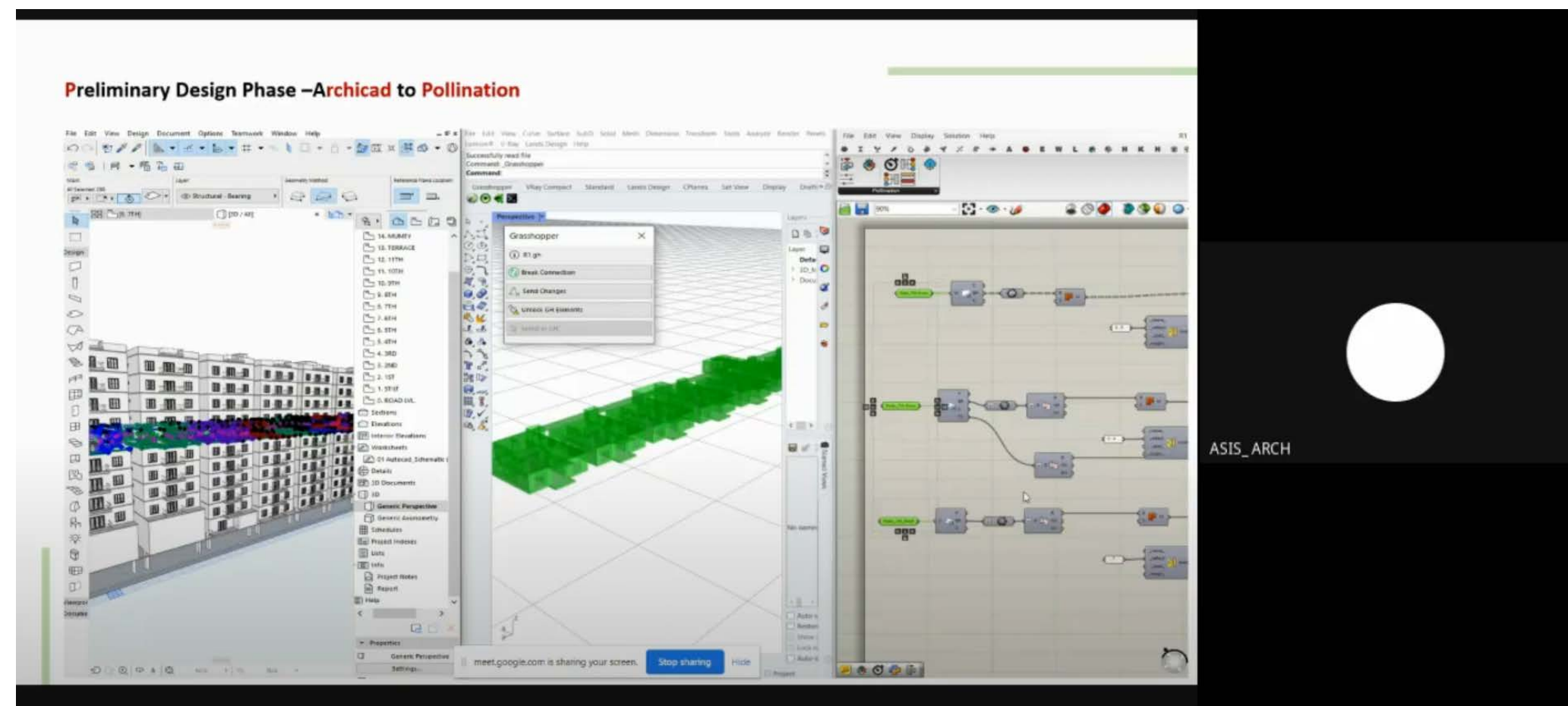
We also provide training and workshops to various institution like SPA Vijayawada, SPA Bhopal, NIT Calicut etc.

We provide training for Students and faculties on -

- Climate study and interpretation through parametric analysis
- Solar Passive Design
- Daylight simulation with shading and window optimization
- Energy simulation for understanding cooling and heating load
- Solar PV potential study
- Integrated Design workflows using architecture and simulation tools



Online workshop at NIT Calicut



Pollination User Meetup: Collaboration with Pollination Developers

DAYLIGHT SIMULATION & ADVANCEMENT IN CURRENT DAYLIGHT SIMULATION TOOLS

Ar. ASIS NATH
M.Arch (S.A, SPA-V) | GRIHA CP |
LBT-Patron



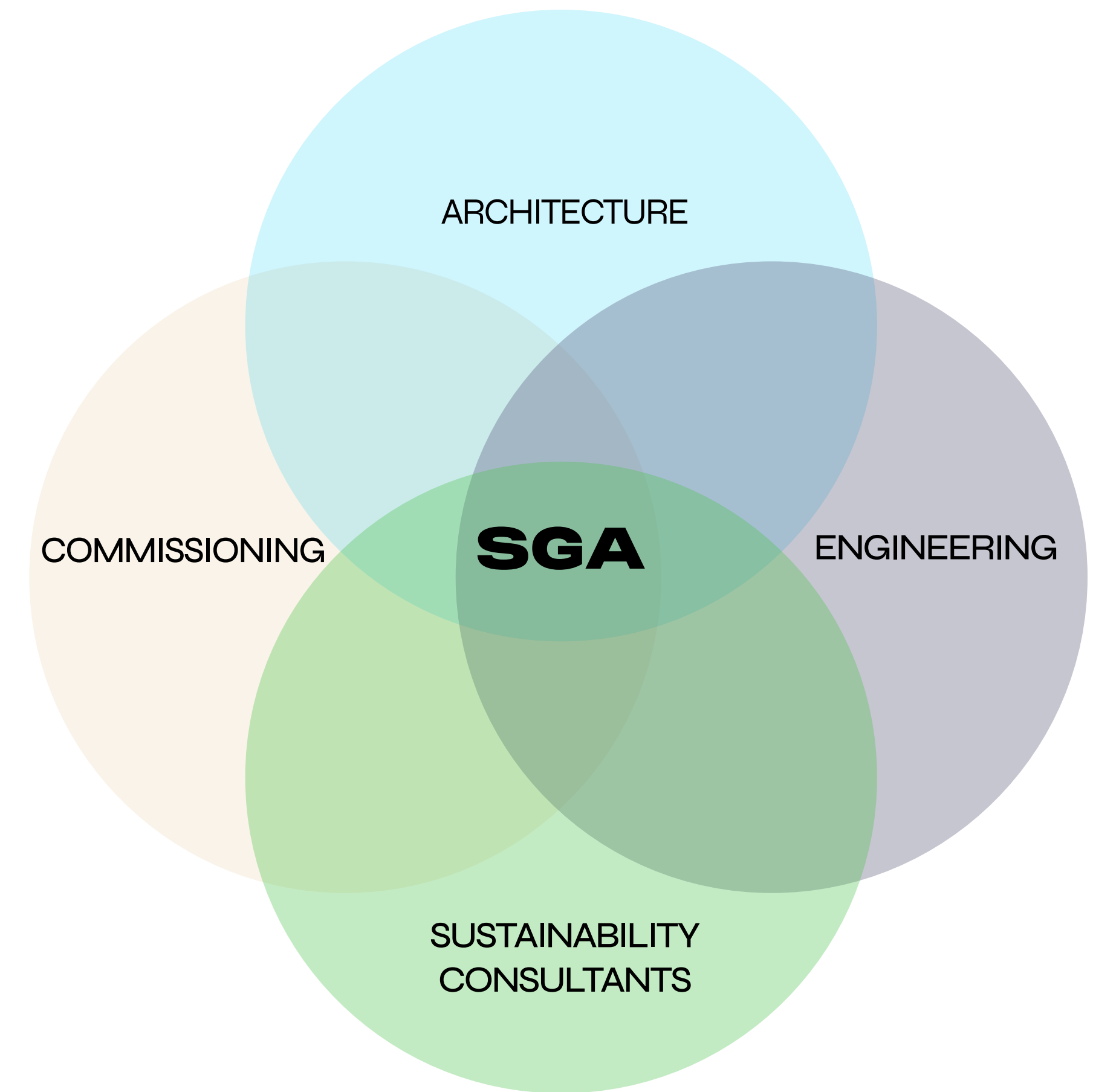
Online workshop at SPA Bhopal



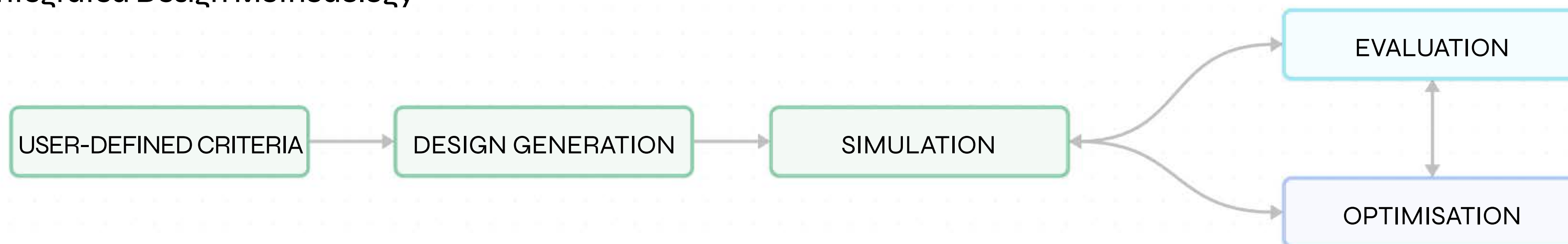
how we design

- Step 1 - Climate variables study and interpretations
- Step 2 - Optimization of building through orientation and irradiation study
- Step 3 - Reduce demand through Passive Design
- Step 4 - Optimise active systems like HVAC, Artificial lights etc.
- Step 5 - Integration of Renewable and alternative solutions

The primary aim is to provide environmental consultancy to architects or designers for an integrated design workflow. Optimization of building starts from initial design phase till the execution part. We use advanced complex computer aided simulation and optimization software as techniques to formulate design problem and generate an optimum solution. We accept BIM models as well as cad to speed up our workflow process.



Integrated Design Methodology



Think Sustainable.
Design Sustainable.

STUDIO GREENAARCH

A Sustainable Design Consultancy

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