

ROOTS OF WISDOM

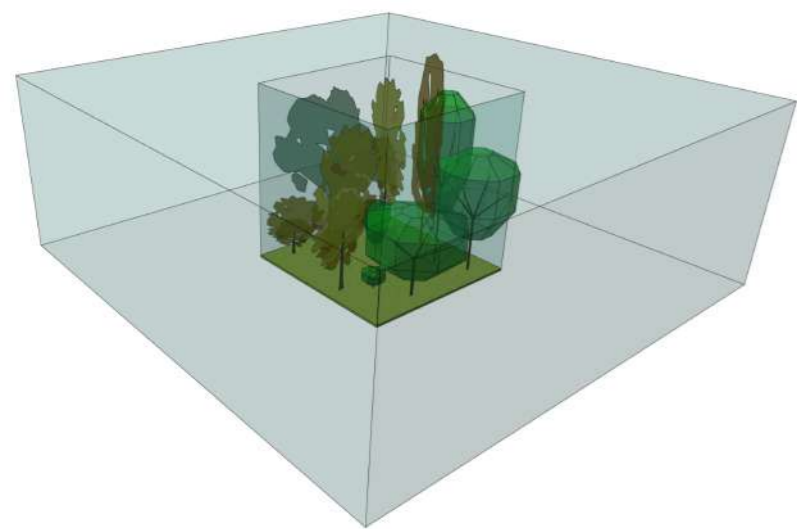
A legacy to teach and learn...

Evoking the legacy of ancient centers of learning, the university concept blends timeless educational principles with innovative, sustainable and interactive design to shape tomorrow's campuses.



A void to breathe...

"The Void" turns absence into presence. Strategically placed courtyards and open spaces bring in light and air, enhance ventilation, and create dynamic, interactive zones. These voids connect the building with its surroundings, improve microclimate, and integrate landscaping as natural air filters, merging architecture and environment into a responsive, living space.



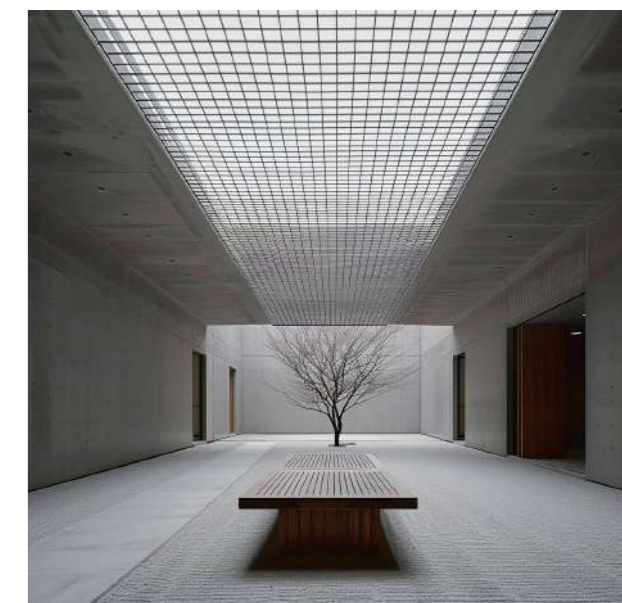
About the surroundings

Every design begins with listening — to the land, the wind, and the light. Nestled at the foothills of the Aravalli range in Pushkar Rajasthan, India, this 3 hectare site unfolds through gentle southeast slopes, rocky terrain, and warm desert air along with hot semi arid climate. The climate, the soil, and the surrounding hills whisper clues that shape our architecture — orienting spaces to the sun's path, breathing through courtyards and openings strategically placed, and grounding each form in local stone and landscape.

Location Co-ordinates : 26.4869° N, 74.5562° E

Sharing a sustainable goal...

A self-sustaining campus where sunlit courtyards, shaded spaces, solar energy, rainwater, and local materials create perfect harmony between architecture, nature, and climate making it truly vernacular.




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“Where the hills inspire the form, and light becomes the language of learning.”

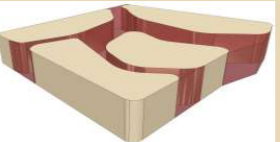




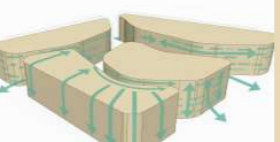
BASE MASSING
The design process begins with a simple block, symbolizing the core building mass and serves as the foundation of layout



DIVISION
The block is strategically divided into functional zones, enabling spatial distinction between academic, social, and interactive learning areas



CRAVING AND CONNECTIONS
The central portion is carved out to create open circulation paths, encouraging interaction and natural flow

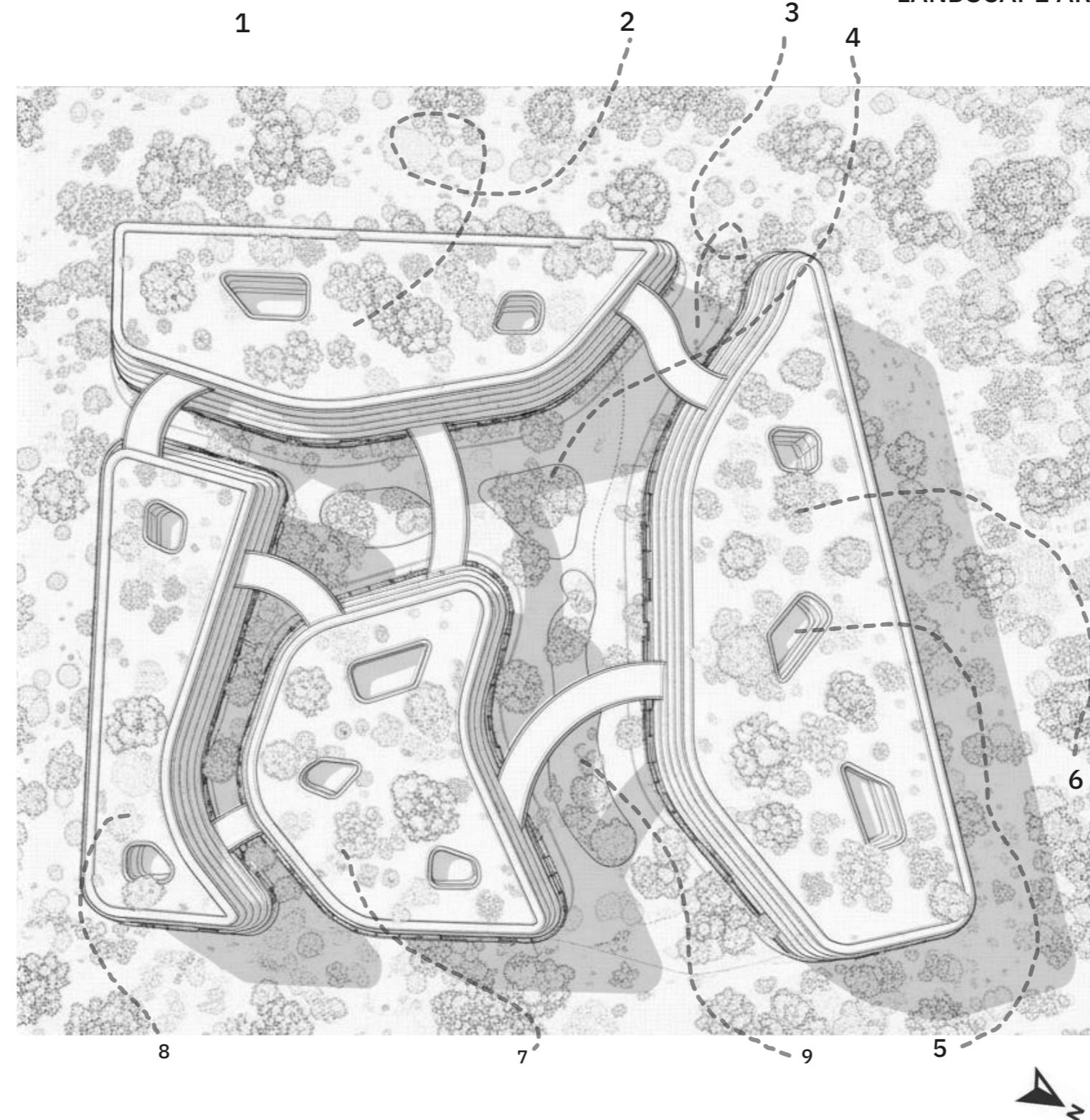


INTEGRATION WITH CONTEXT
The final form responds to site context by integrating landscape, movement, and built mass symbolizing a blend of openness, learning, and community.

CONCEPT DEVELOPMENT
The design reimagines the square site as a network of building clusters carefully oriented to capture prevailing winds and maximize natural ventilation. The primary block is rotated by 15° to optimize cross-ventilation, allowing breezes to flow through courtyards and circulation spaces, while perimeter corners are softened into curves to enhance aerodynamic performance and pedestrian comfort. Connectivity is established through elevated walkways, pedestrian bridges, and meandering pathways that seamlessly link all clusters, encouraging movement and interaction across the campus. Extensive landscaping and tree planting serve as bio-filters and natural air buffers, improving microclimate, air quality, and user comfort. Sustainability drives the design, with integrated water and waste systems creating a self-sufficient, low-impact campus where architecture and landscape coexist, fostering ecological balance and a strong sense of place.

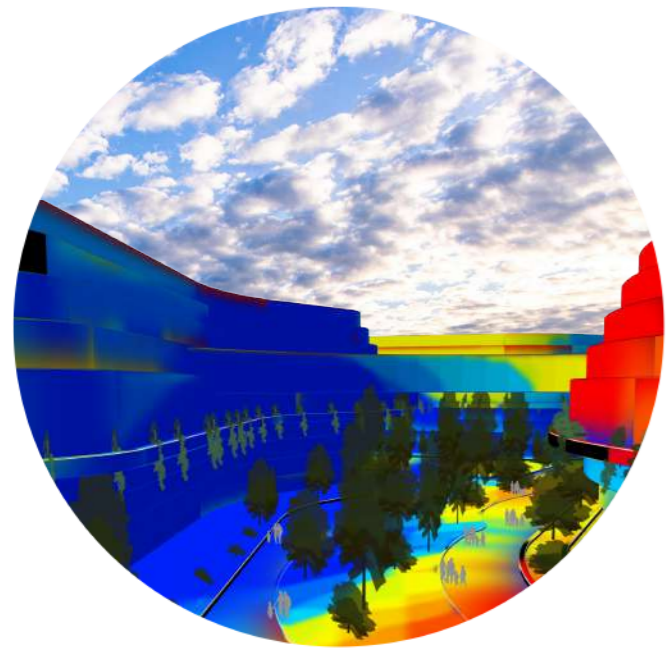
MASTER LAYOUT

- | | | |
|-------------------------|-------------------------|----------------------------------|
| 1. SKYWALK | 4. LANDSCAPE | 7. RECREATIONAL BLOCK |
| 2. ADMINISTRATION BLOCK | 5. GREAT ACADEMIC BLOCK | 8. HOSTEL BLOCK |
| 3. PATHWAYS | 6. ACADEMIC BLOCK | 9. ACADEMIC BLOCK LANDSCAPE AREA |



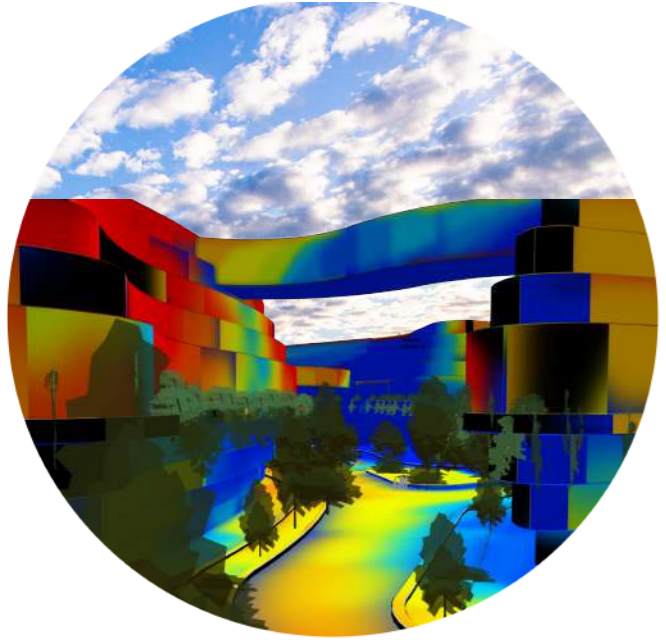
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The inner sanctum

is enveloped in the shadows cast by surrounding buildings, creating a comfortable and shaded retreat for dwellers to relax during the day.



Sky Walks

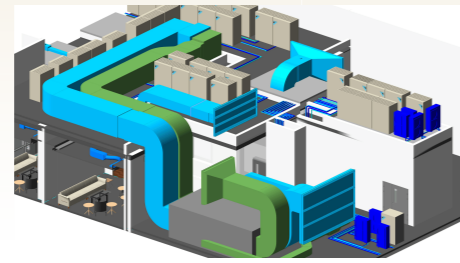
offer serene views of the surroundings while enhancing thermal comfort by diffusing harsh sunlight across parts of the building.



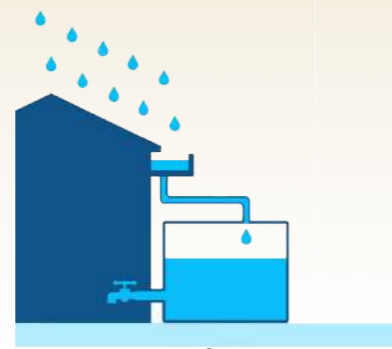
Angled Incision

The tapered cut extends as a cantilevered projection, harnessing natural light, ventilation, and shade to create comfort while reducing reliance on mechanical cooling.

MEP and HVAC
By minimizing direct sun glare on the facade, the design effectively lowers heat gain, thereby reducing the HVAC load and improving system efficiency.



Rainwater Harvesting
Rainwater flows through sculpted channels and courtyards, collected and reborn to nurture the landscape symbolizing a continuous cycle of renewal.



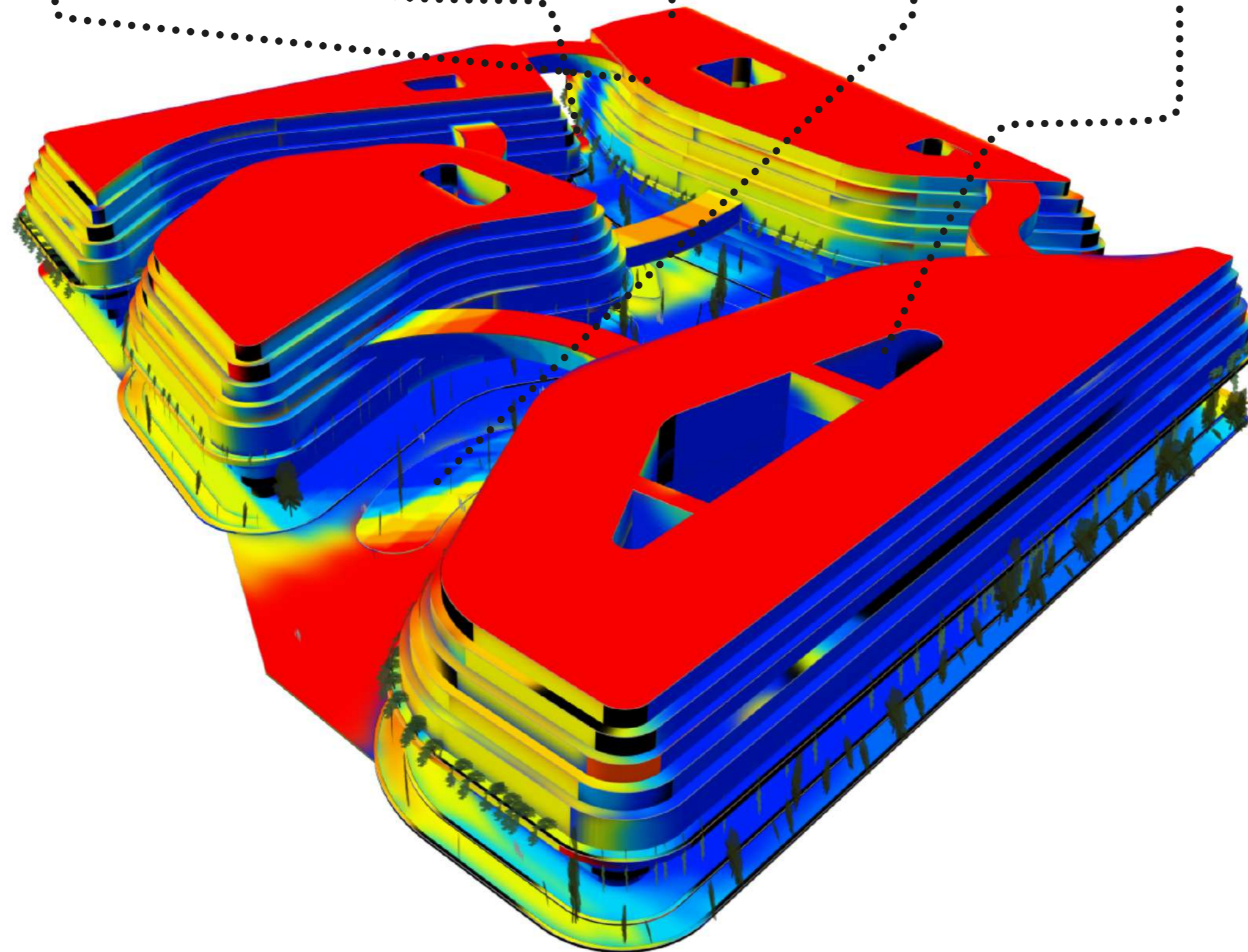
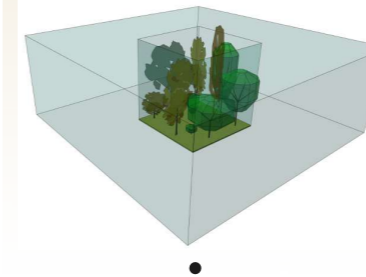
Solar Panels
Strategically placed solar panels harness maximum solar gain, generating abundant clean energy while maintaining structural efficiency.



The Greens
are integrated along the façade and within the inner sanctum to enhance microclimate, reduce heat gain, and create a soothing visual experience.



The Voids
breathe through the facade and inner sanctum, inviting light, air, and movement to animate the built form



Sunlight hours per day analysis

This Sun Hour Analysis validates the building's complex form as a high-performance **passive solar control mechanism**:

- **Reduced Cooling Load via Self-Shading (Blue Zones)**
 - The complex, layered, and recessed geometry creates large surfaces (the **blue** areas, particularly on lower facades) that receive **less than 3 hours of direct sunlight** per day.
 - **Benefit:** This inherent self-shading drastically **minimizes solar heat gain** through the windows and walls, resulting in a significantly **lower cooling load** and reduced energy consumption for HVAC systems.
- **Strategic Energy Generation (Red Zones)**
 - The areas receiving the most intense sunlight (the **red** areas, 9 hours) are predominantly located on the **unobstructed roof surfaces** and upper massing.
 - **Benefit:** These locations are optimally positioned for the integration of **Photovoltaic (PV) panels** or solar thermal collectors, turning high solar exposure into an **active energy generation asset** that offsets the building's operational energy demand.
- **Informed Glazing and Material Selection**
 - The data allows for the strategic specification of materials. Highly exposed facades (yellow/red zones) will utilize **high-performance, low-emissivity (low-e) glass** to block unwanted heat, while shaded areas (blue zones) can employ more transparent glass to maximize **daylighting** and views.
 - **Benefit:** This targeted approach ensures that thermal envelope upgrades are deployed only where necessary, providing both **cost-efficiency** and **maximum heat control**.
- **Enhanced Thermal Comfort**
 - By reducing direct solar penetration into interior occupied spaces (the blue areas on the facades), the design prevents overheating near windows and maintains stable internal temperatures.
 - **Benefit:** This directly contributes to a **higher quality interior environment** and **greater thermal comfort** for occupants without reliance on excessive mechanical cooling.

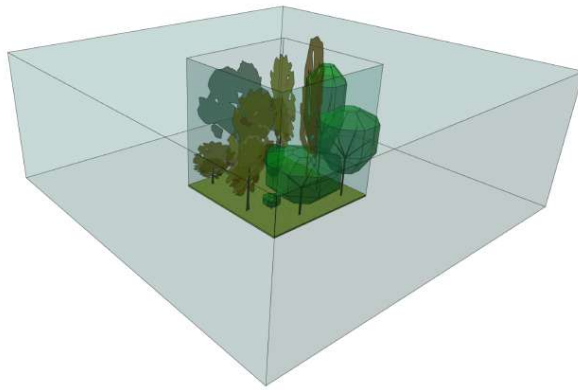
Average Direct Sunlight Hours per day

< 1 1 2 3 4 5 6 7 8 9 > 9

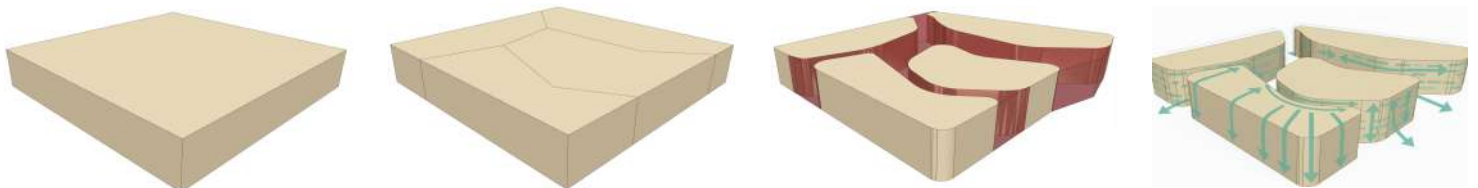
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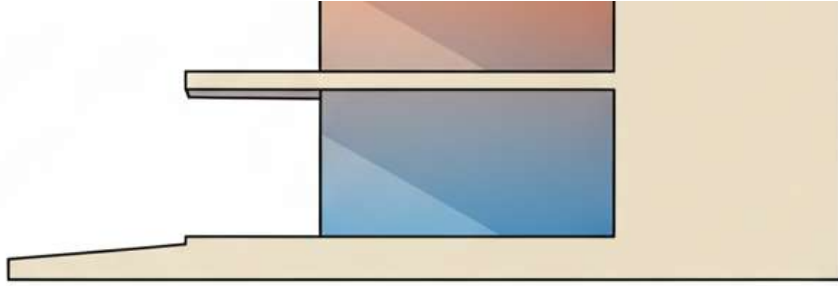
Creating the model on entirely using only Snaptrude was an immersive and highly rewarding experience for the team. The platform allowed us to explore architectural modeling from conceptual massing to detailed sheets and presentation-ready views, all directly in present mode. Its intuitive tools made experimentation seamless—carving building shapes for optimal design to become both efficient and enjoyable. Features like Nano Banana transformed the model from a rough conceptual “9” to a refined “900,” drastically reducing the iterative back-and-forth typical of early design stages. Even unanticipated tools, like offset mode, made detailing lobbies, pathways, and skywalks precise and intuitive keeping it intuitive.

At the heart of the design is “The Void,” a concept that turns absence into presence. Snaptrude enabled us to experiment freely with voids, positioning courtyards, terraces, and open spaces to enhance light, ventilation, and connectivity. These voids act as the building’s lungs, creating interactive zones that merge architecture with the environment. Boolean union and difference tools helped explore complex forms responsive to climate, region, and site context, crafting spaces that are functional, adaptable, and poetic.

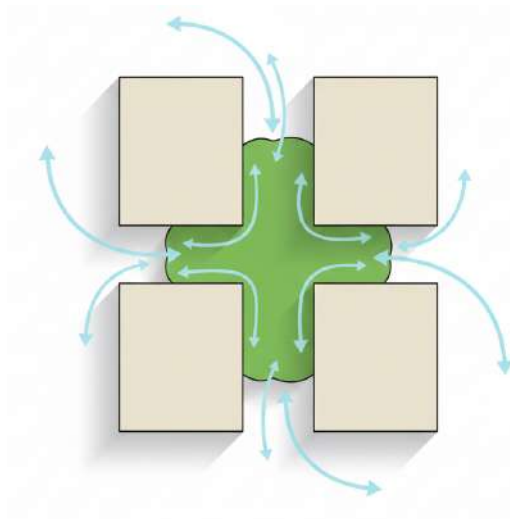


The building mass follows the terrain, forming gentle, flowing forms that respect the site. Orienting toward the mountains, the architecture guides visitors through a curated sequence of open and enclosed spaces, creating an experiential journey. Real-time modeling helped refine light, shadow, and airflow within these sequences.





Functional zoning—academic, social, and interactive learning areas—is clearly defined yet unified through voids and circulation paths. Clustering buildings with landscape belts improves connectivity, ventilation, and creates a naturally cooled microclimate. Tapered façades, cantilevered forms, and large openings were iteratively tested to optimize daylighting, airflow, and shading, reducing reliance on HVAC systems.



Ultimately, Snaptrude was more than a modeling tool—it was a creative partner. It allowed rapid experimentation, visualization, and validation, transforming sketches into a responsive, contextually integrated campus. The resulting design harmonizes terrain, light, air, and human interaction, embodying openness, learning, and community.

