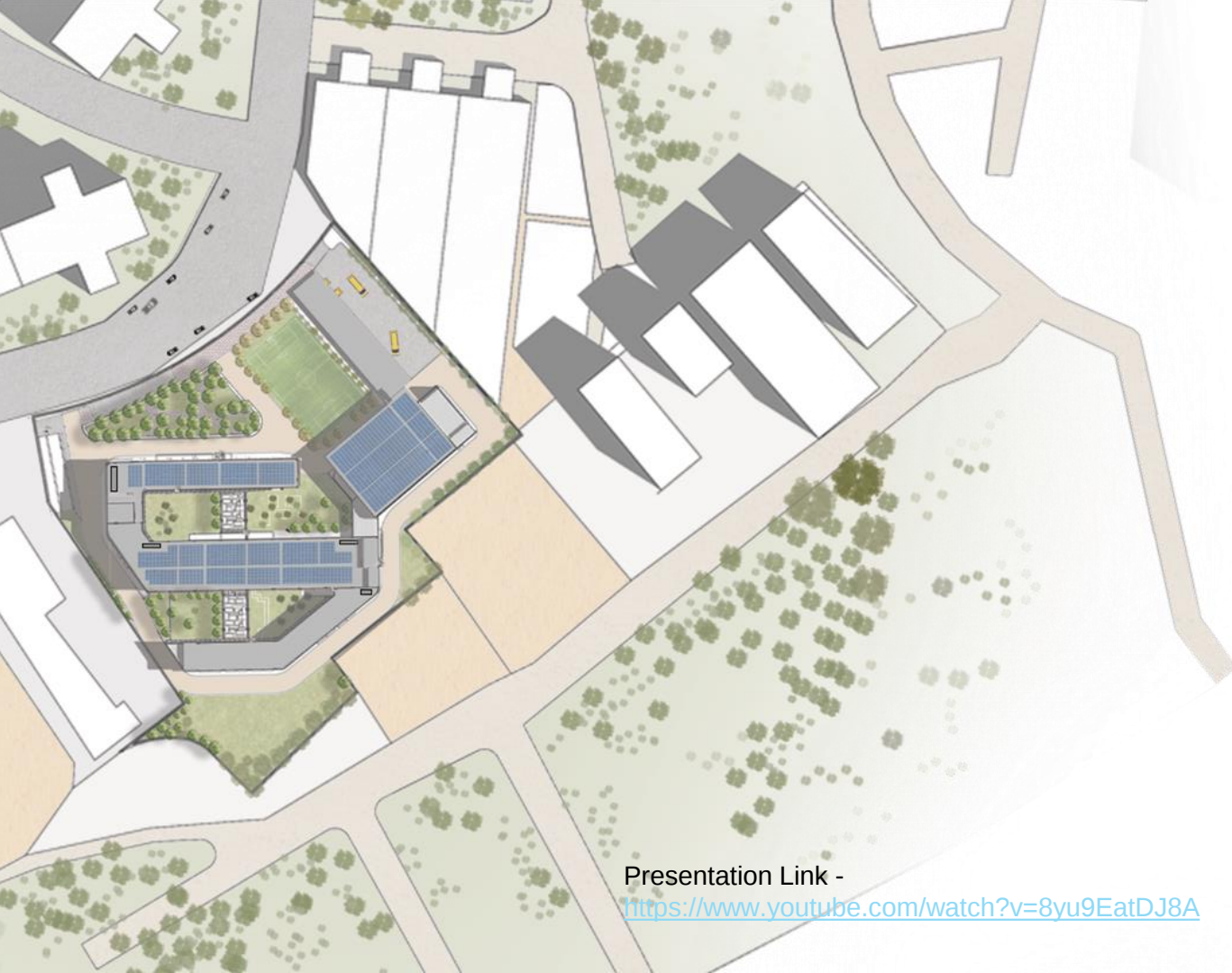




School of Planning and Architecture
New Delhi

Grand Jury Presentation

Presentation Link -

<https://www.youtube.com/watch?v=8yu9EatDJ8A>



Solar™
Decathlon
India



The ARCHONS

The Team



Philosophy

LEARN

NURTURE

EXPLORE

PROTECT

ENGAGE

DEVELOP

innovative
modular
interactive
green
sustainability
eco-friendly
biophilia
adaptive
renewable
daylight
climate
economical
resilient
net-zero
biodegradable
solar
clean
leed
reuse
co-operative
griha
comfort
natural

Universities 'essential' to climate action, says UN chief

Brendan O'Malley 05 December 2020

UN urges universities to be catalysers of sustainability

Brendan O'Malley 18 May 2019

Pupil involvement, inter-school collaboration and sustainable planning can all help in the drive to reduce greenhouse gases, says Ann Finlayson

Are 'green' buildings the solution to Indian cities' pollution woes?

Delhi's deadly dust: how construction sites are choking the city

“

According to new research by construction blog Bimhow, the construction sector contributes to 23% of air pollution, 50% of the climatic change, 40% of drinking water pollution, and 50% of landfill wastes. In separate research by the U.S. Green Building Council (USGBC), the construction industry accounts for 40% of worldwide energy usage, with estimations that by 2030 emissions from commercial buildings will grow by 1.8%.

AIR

CO2 emissions from building sector highest in 2019: UNEP

The sector's decarbonisation progress also slowing down, notes report

Carbon Emission



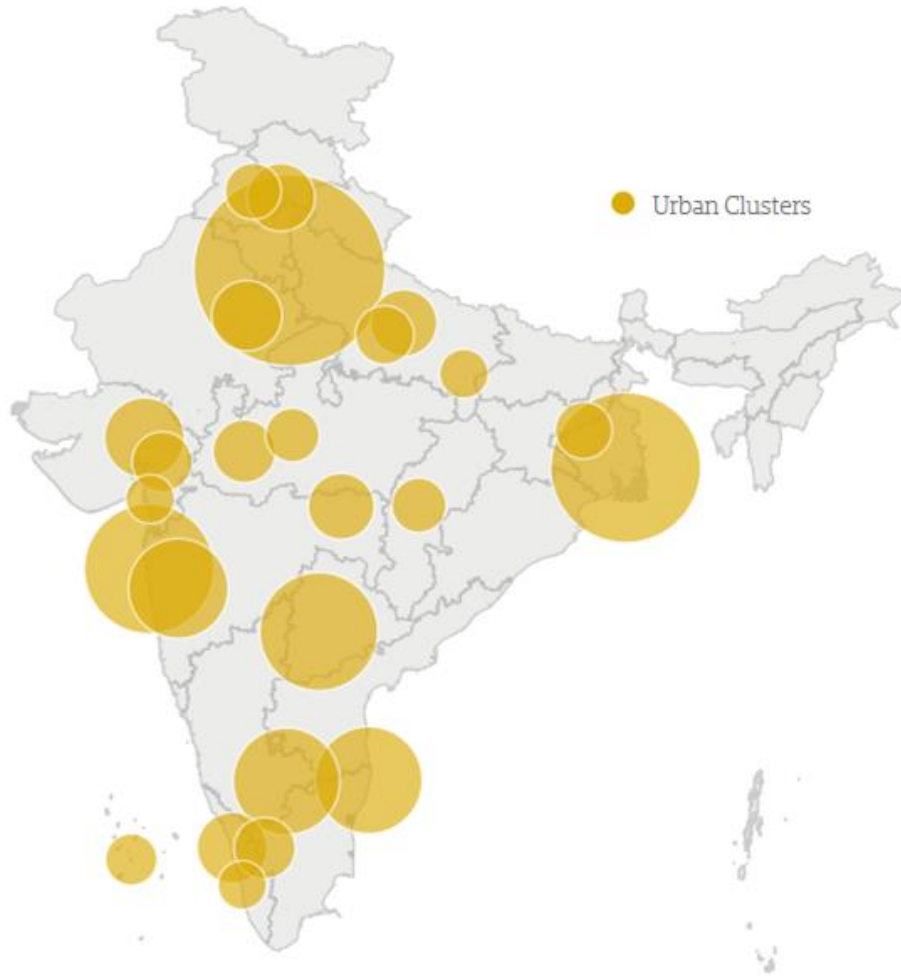
From FUELS



1041 %

Increase since 1971

Carbon Emission



New Delhi

Total CO2 Emission: **69,645,290**
tonnes

Data source: **Carbon footprints of 13,000 cities, June 2018**
<http://citycarbonfootprints.info/>





Can educating children help in
mitigating climate change?

Site Plan



Strategies



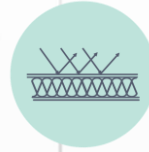
Wind Tower



PV Panel



Optimum
Shading



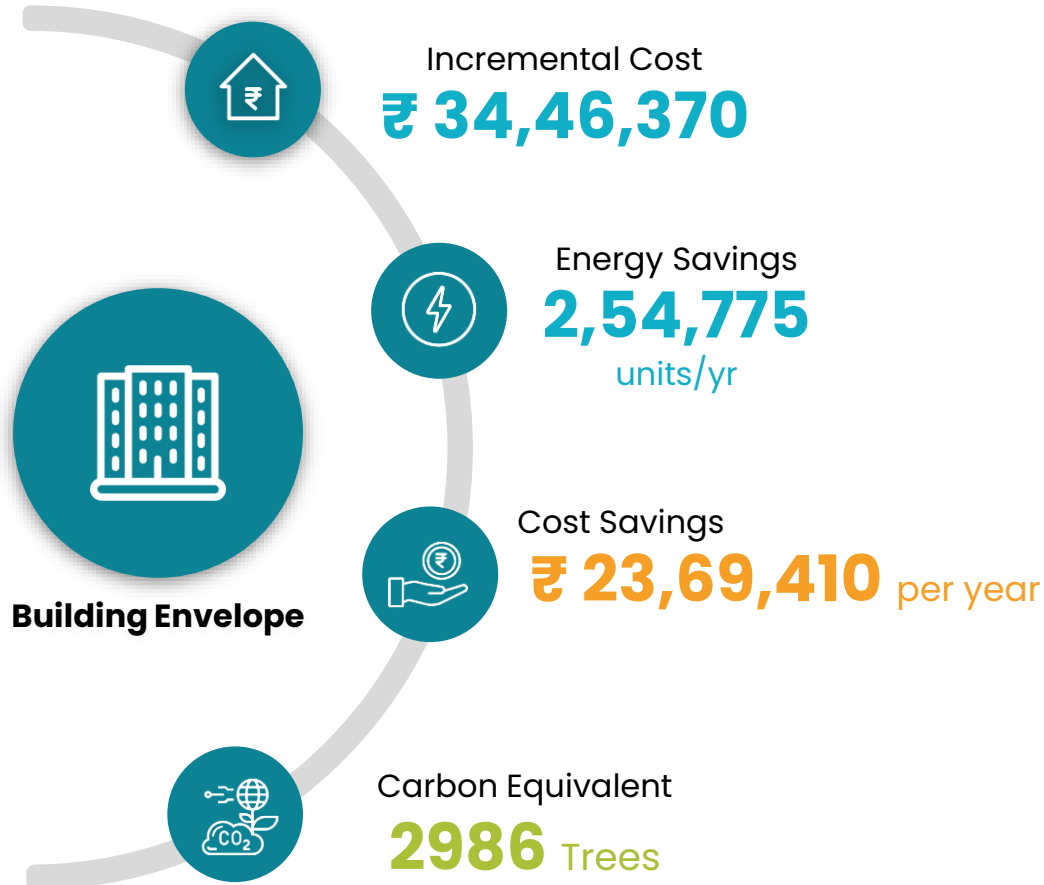
Insulation



Energy efficient
equipments

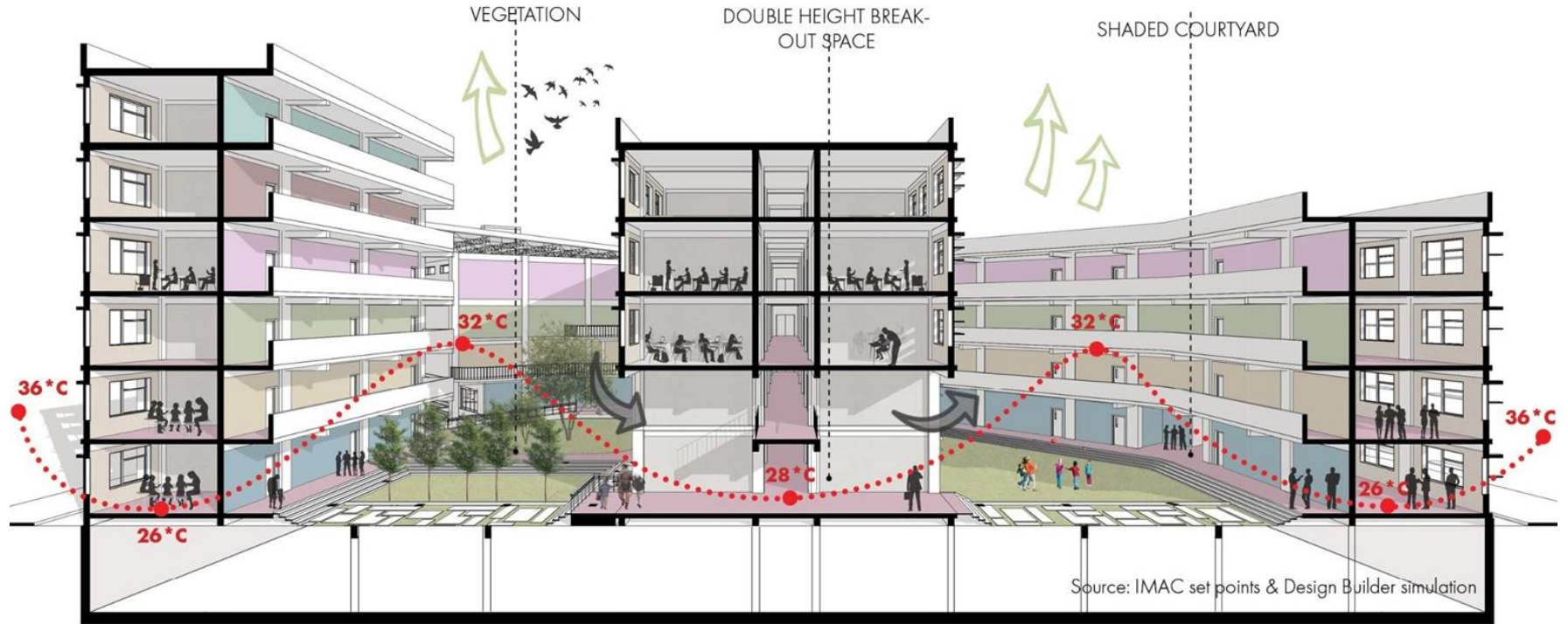


Savings

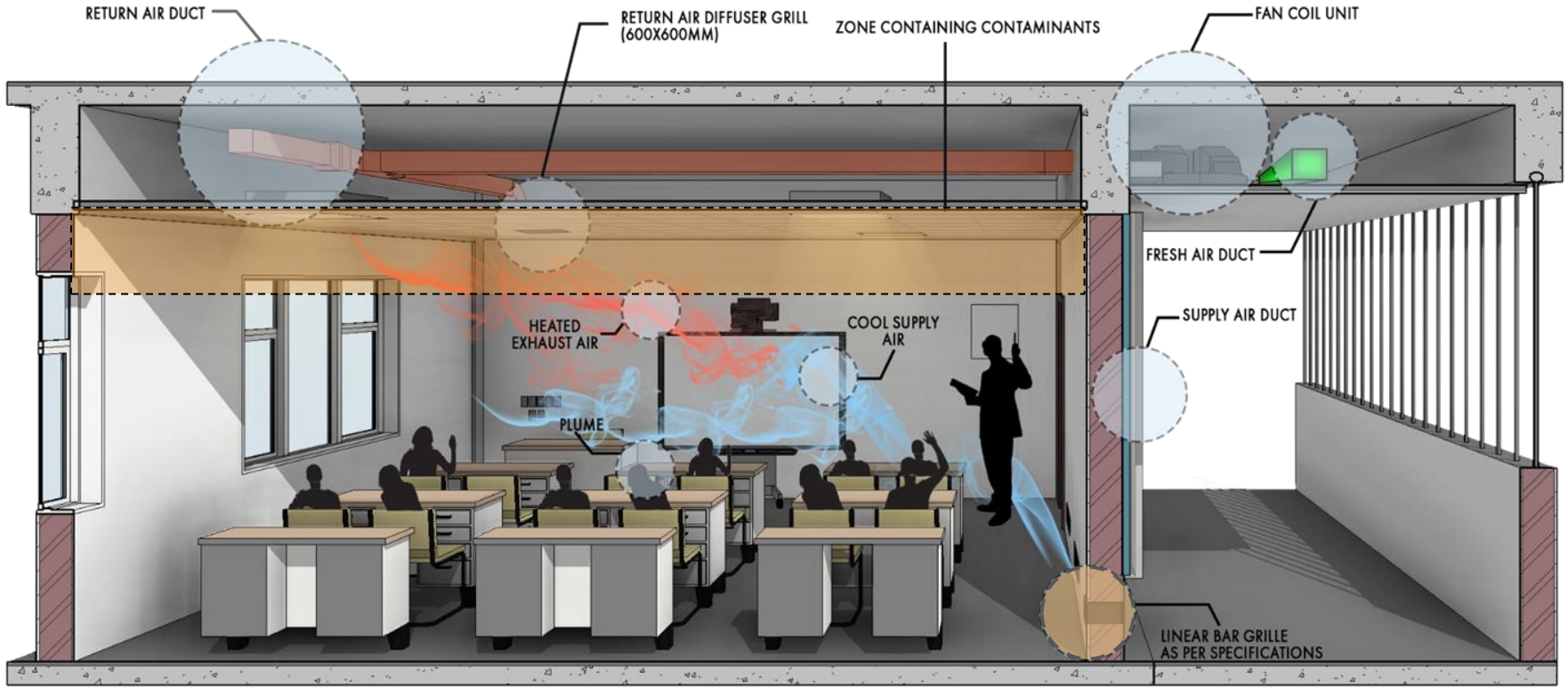


Per Student Cost Savings
₹ 1500 per year

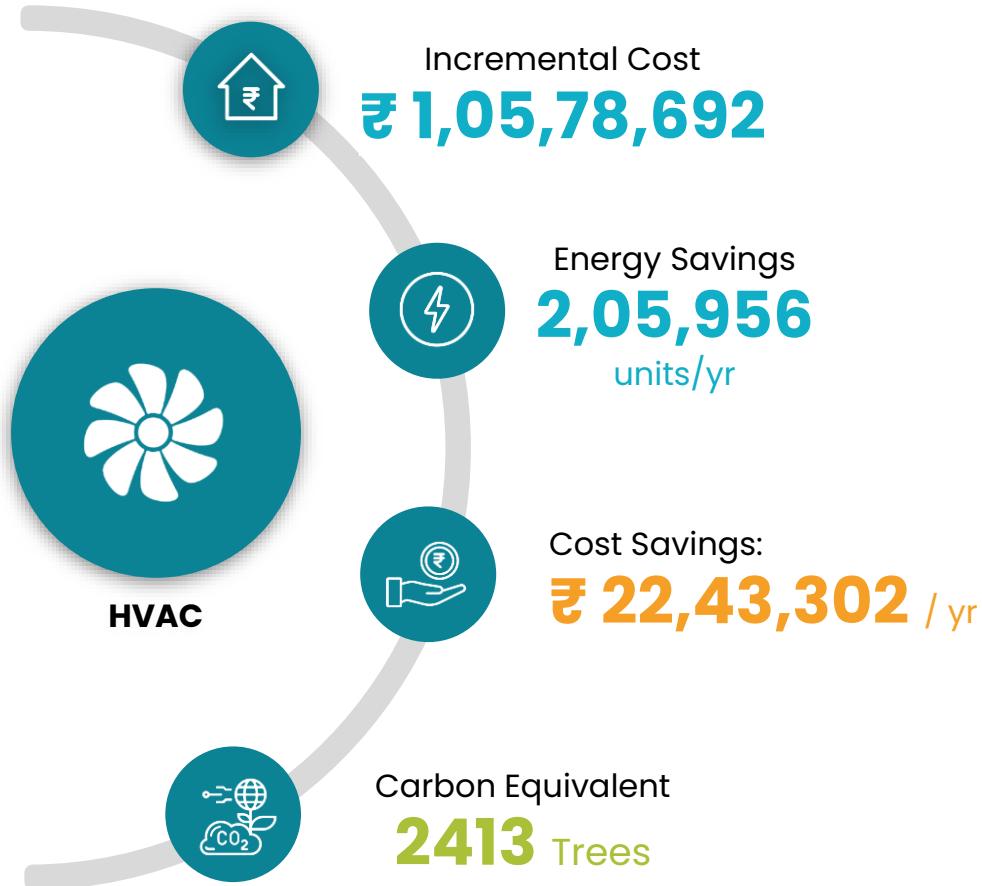
Climate Control



Ventilation



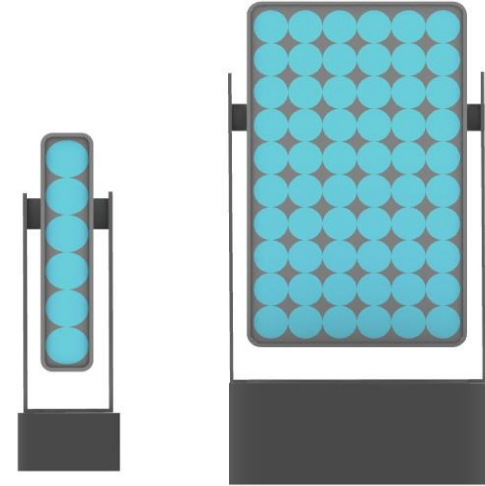
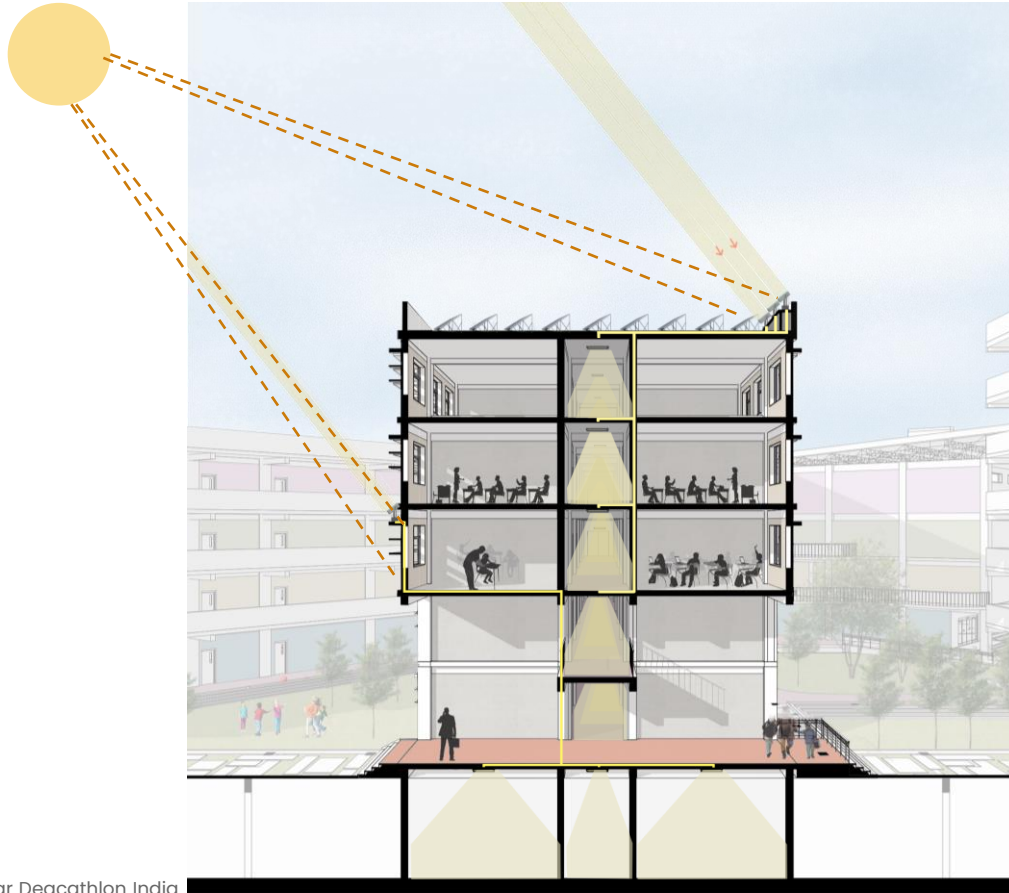
Savings



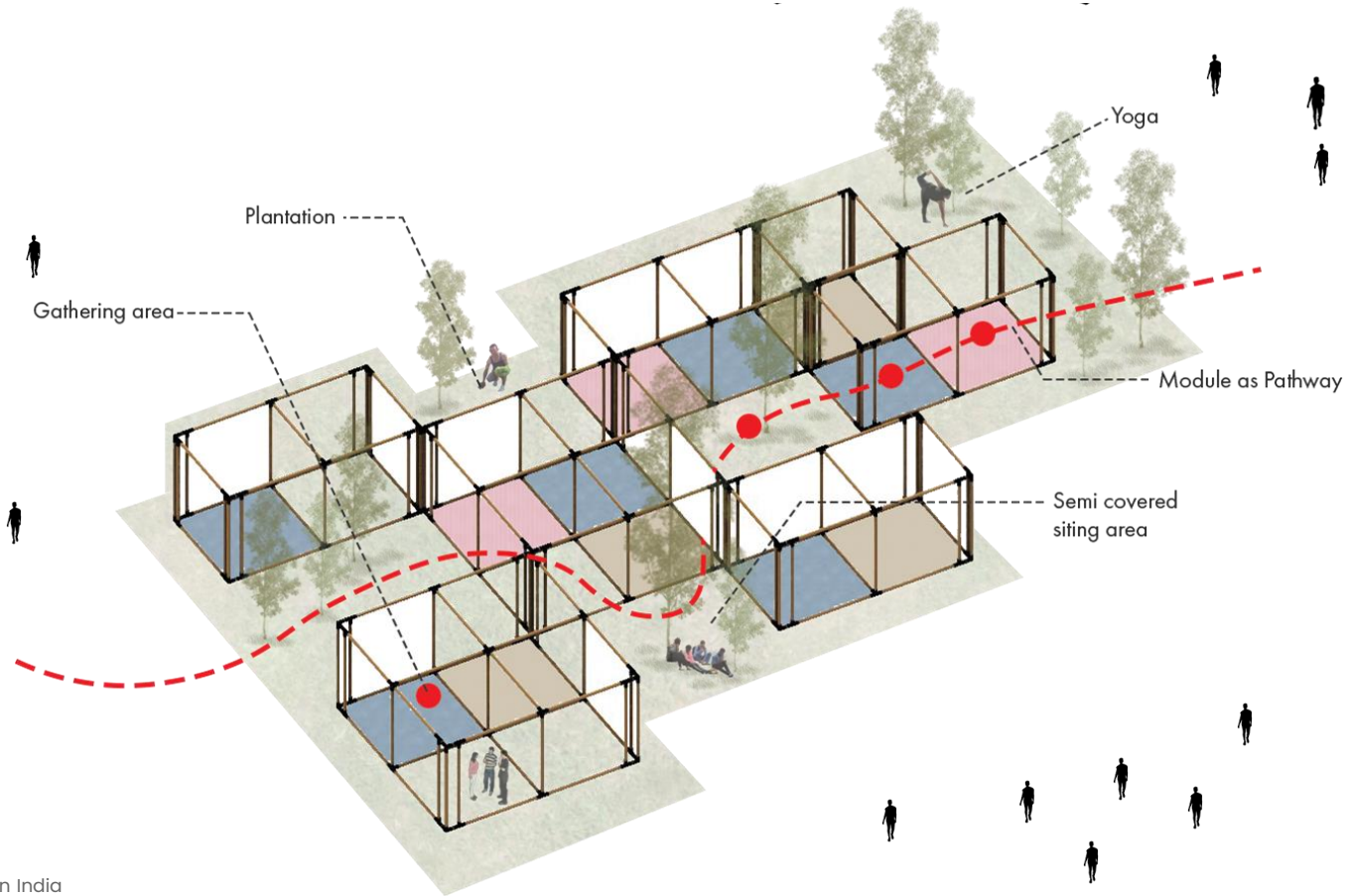
Per Student Cost Savings

₹ 2300 per yr

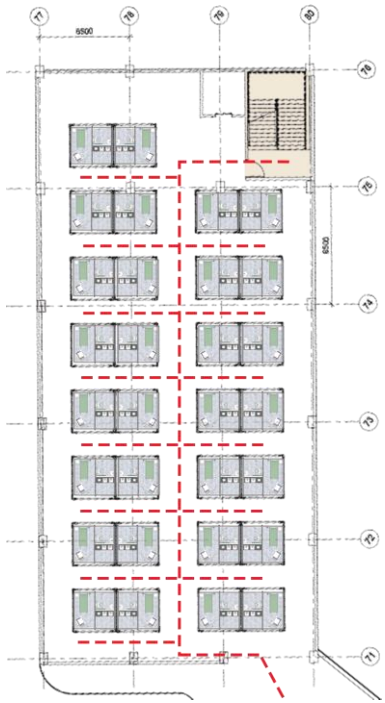
Optical Lamp



Modular Pods



Modular Pods



Plan



Multipurpose Hall



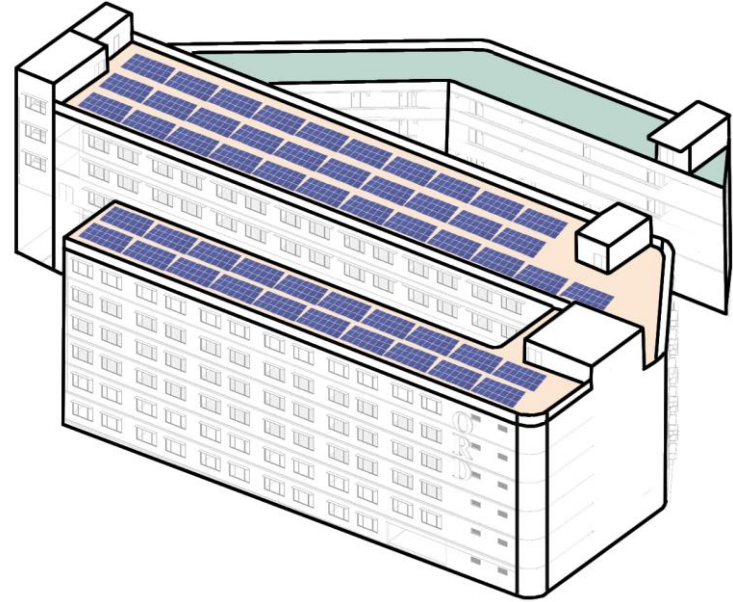
Renewable Energy

Consumption 21.06 kWh/sqm/yr

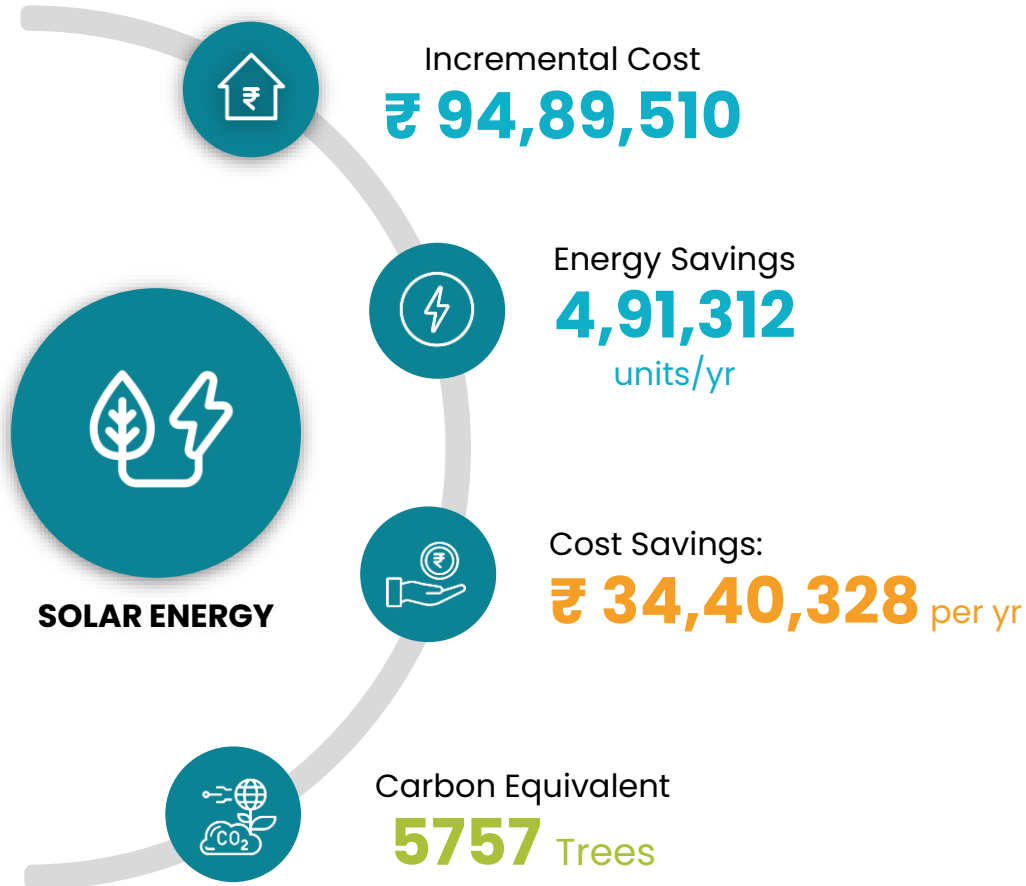
Generation 32.21 kWh/sqm/yr

Net Energy -11.16 kWh/sqm/yr

NET-POSITIVE



Savings



Per Student Cost Savings

₹ 2300 per yr

Scalability

CASE 1

Built-up Area
15131
sqm.

Per Student savings
₹ 5300

Total yearly Savings
₹ 1,05,60,000

Occupants
2400



Client Profit
25-35%

Per Student savings
₹ 4200

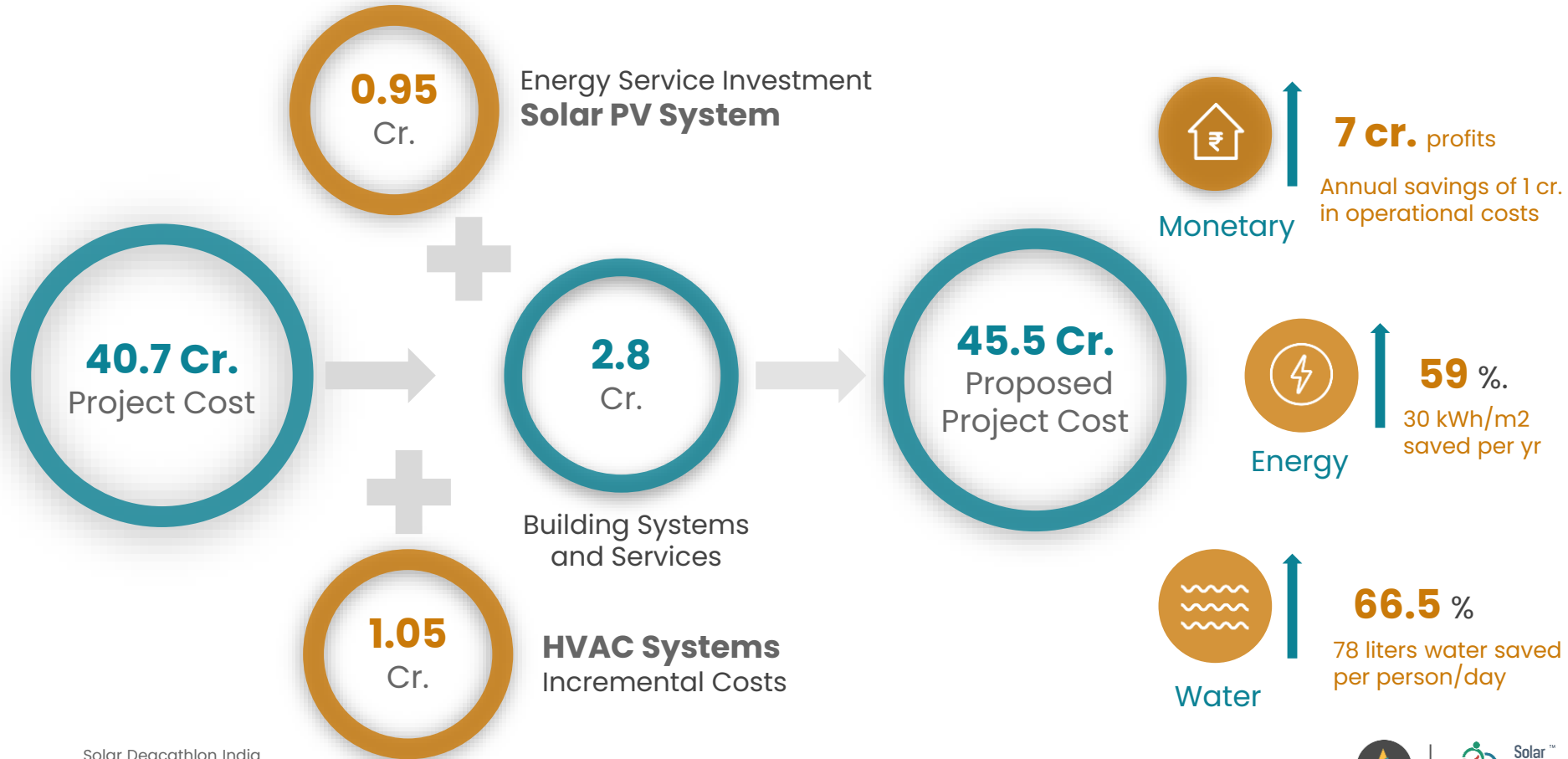
Total yearly Savings
₹ 40,60,000

Built-up Area
6500
sqm.

Occupants
1100

CASE 2

Benefits



Certifications



LEED Platinum



WELL

An architectural rendering of a modern school courtyard. In the foreground, a woman with a yellow backpack walks away from the viewer, holding the hands of two young girls. To the left, two children sit on a low concrete bench. The courtyard features a central green area with trees and a paved path. A large, semi-transparent dark rectangle is centered over the image, containing the text. The background shows a multi-story school building with a covered walkway.

**How does a sustainable school provide better
learning opportunities?**



An architectural rendering of a modern school building. The main building is a multi-story structure with a series of balconies, each featuring a lush green wall of plants. A wide, paved skybridge with a black metal railing runs along the side of the building. Four male students are walking across the skybridge, engaged in conversation. They are wearing casual clothing, including hoodies and jackets, some with school-related text like 'CATHEDRAL'. In the background, there are trees and a colorful mural on a wall. To the right, another part of the building is visible, featuring a large mural of a basketball player with the text 'BALL IS LIFE' and 'STAIRS' written vertically. Other students are seen walking on a lower level of the skybridge.

Higher Test Scores

Increased Student Attendance

**Enhanced Teacher
Performance and Satisfaction**

