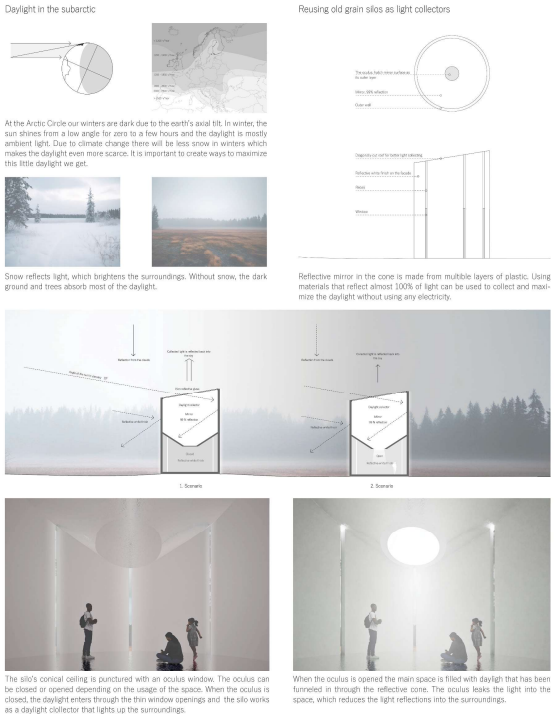
DAYLIGHT IN BUILDINGS

REGION 1 **WESTERN EUROPE**

Project: **Silo of the ambient light**
Students: Anniina Rautakoski

School: Metropolia University of Applied Sciences
Teacher: Janne Järvinen
Country: Finland

As the snow melts in the Arctic Circle, winters are becoming increasingly darker. The project "Silo of the Ambient Light" offers a poetic solution to this issue by repurposing old grain silos as light collectors. These silos function like lanterns, reflecting light back into their surroundings. They can be used as workplaces, social spaces, or simply as places to enjoy extended daylight.

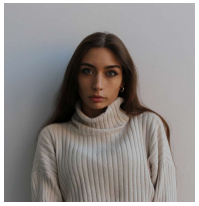


DAYLIGHT IN BUILDINGS

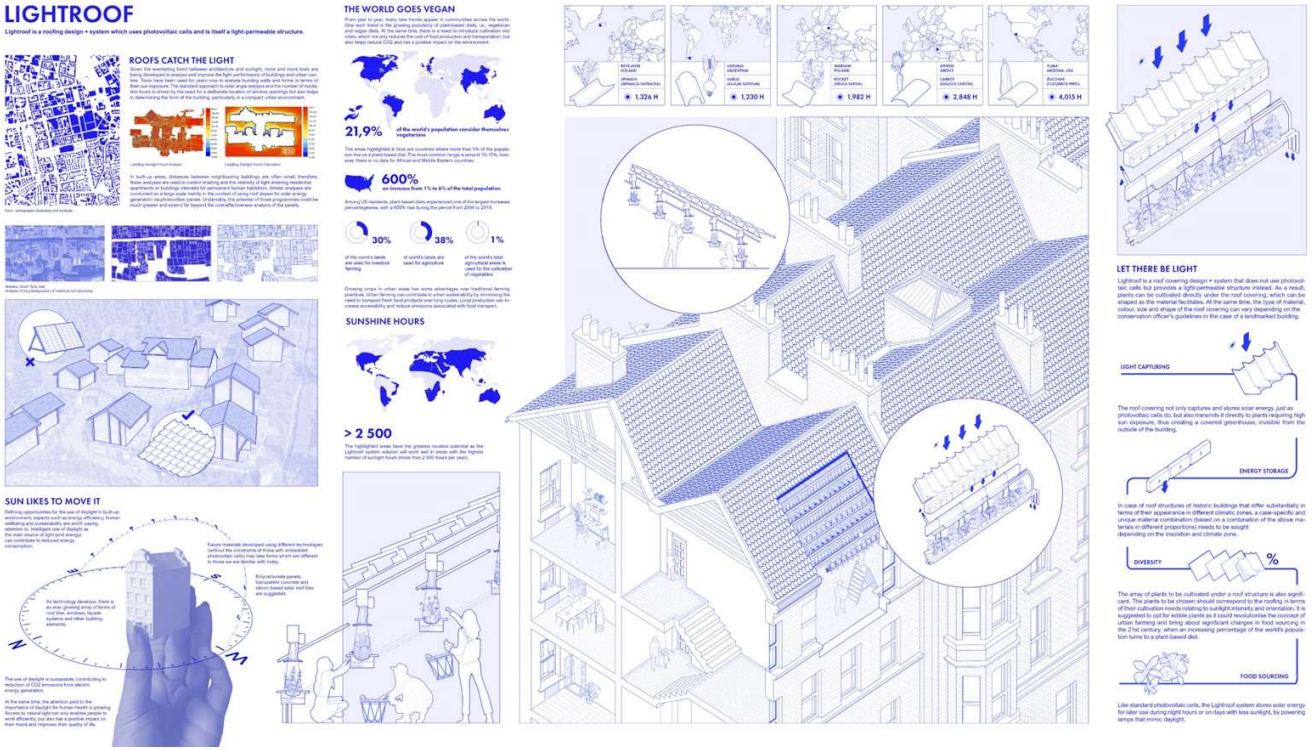
REGION 2 **EASTERN EUROPE & THE MIDDLE EAST**

Project: **Lightroof**
Students: Aleksandra Cassino

School: Politechnika Warszawska
Teacher: Anna Lorens
Country: Poland



The project "Lightroof" proposes an innovative roofing design that creates a light-permeable structure. This system offers a streamlined solution for urban farming by harnessing natural daylight, thus reducing CO2 emissions associated with electric energy generation. The roof covering captures, stores, and transmits solar energy directly to the plants beneath it. This allows plants to be cultivated directly under the roof, functioning like a covered greenhouse that remains invisible from the outside of the building.



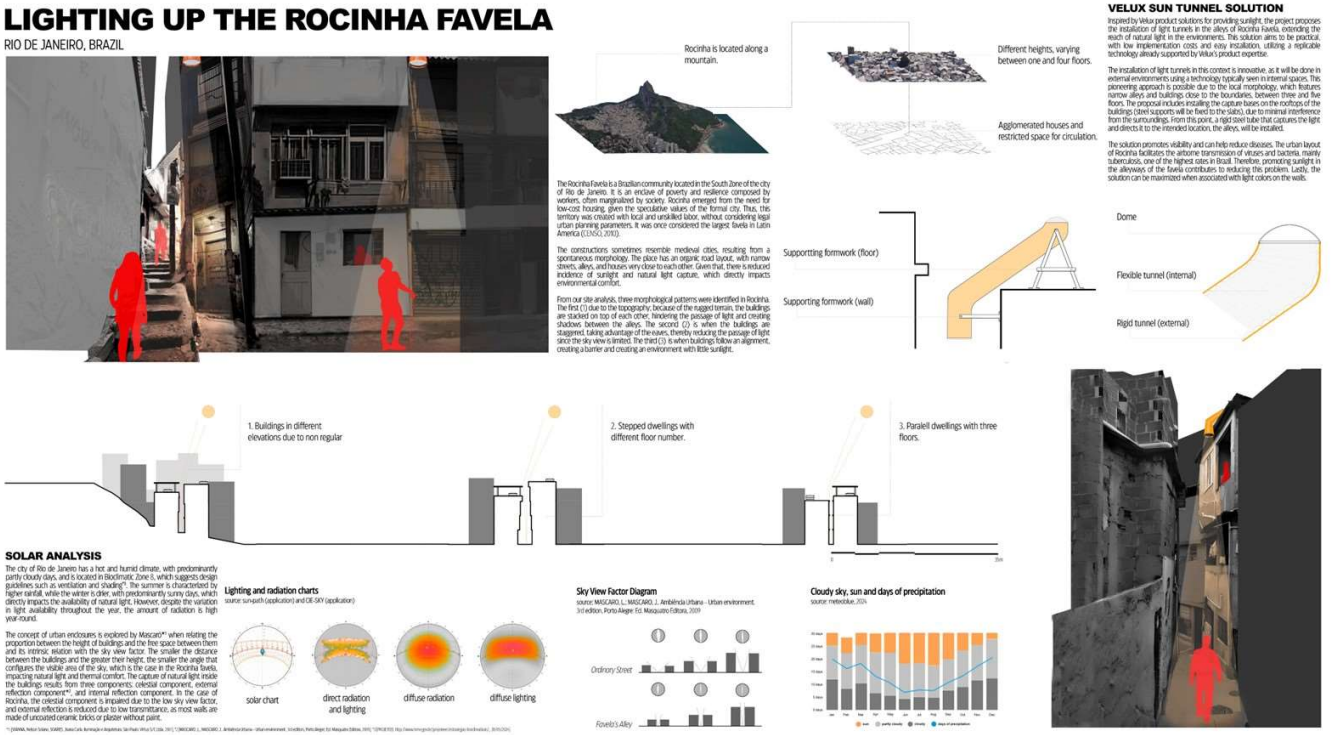
DAYLIGHT IN BUILDINGS

REGION 3 **THE AMERICAS**

Project: **Lighting up the Rocinha favela**
Students: Paulo André Pereira & Mariana Costa do Carmo

School: Universidade Federal do Rio de Janeiro
Teacher: Eliane Silva Barbosa
Country: Brazil

The project "Lighting up the Rocinha Favela" is set in a neighborhood in Brazil, where narrow streets and tightly packed houses limit the reach of natural daylight. To address this, the project proposes installing light tunnels on rooftops to extend natural light into the narrow alleys below. This increase in natural light will enhance visibility and safety while also helping to reduce diseases like tuberculosis by providing more sunlight to the inhabitants.



2024 Regional winners

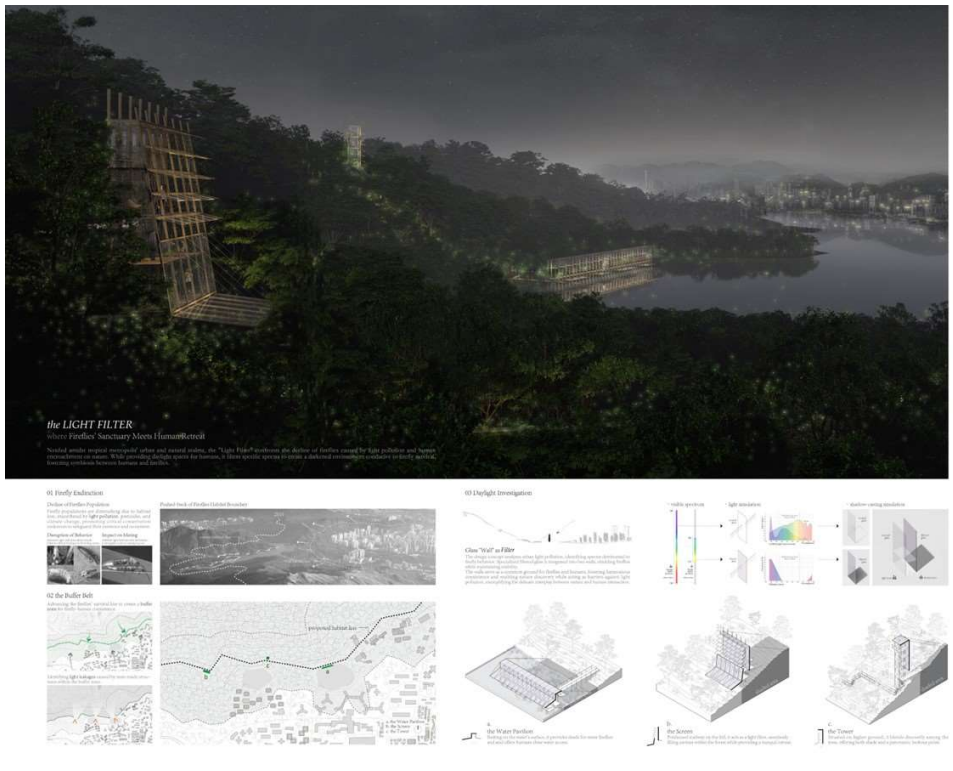
DAYLIGHT IN BUILDINGS

REGION 4 **ASIA & OCEANIA**

Project: **The light filter**
Students: Wan Zilin, Poon Gin Yong & Zang Jiayou

School: Tsinghua University
Teacher: Li Xiaodong
Country: China

The project "The Light Filter" addresses the decline of fireflies due to light pollution and human encroachment on nature. This project creates daylight spaces and viewpoints for humans while using specialized filtered glass to block specific light spectra, creating a darkened environment conducive to firefly survival.

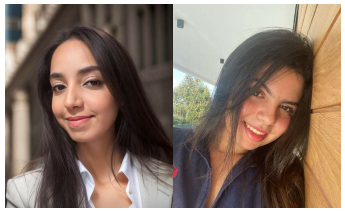


DAYLIGHT IN BUILDINGS

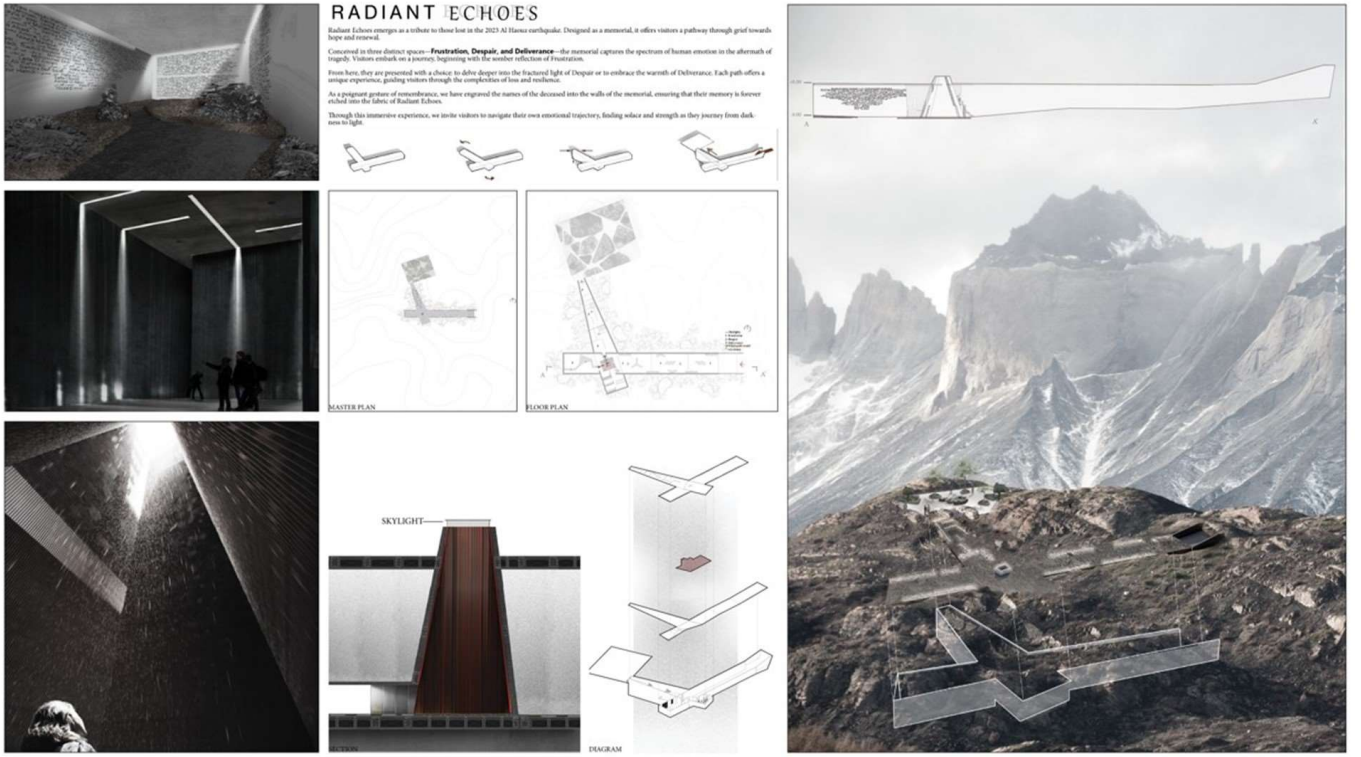
REGION 5 **AFRICA**

Project: **Radiant echoes**
Students: Kenza Kettani & Bouchra Rah

School: International university of Rabat
Teacher: Yassir Aziz
Country: Morocco



"Radiant Echoes" serves as a tribute to the victims of the 2023 Al Haouz earthquake. This project features an underground memorial building with roof openings that create an immersive experience for visitors, offering a poignant understanding of the victims' experiences before they passed away.



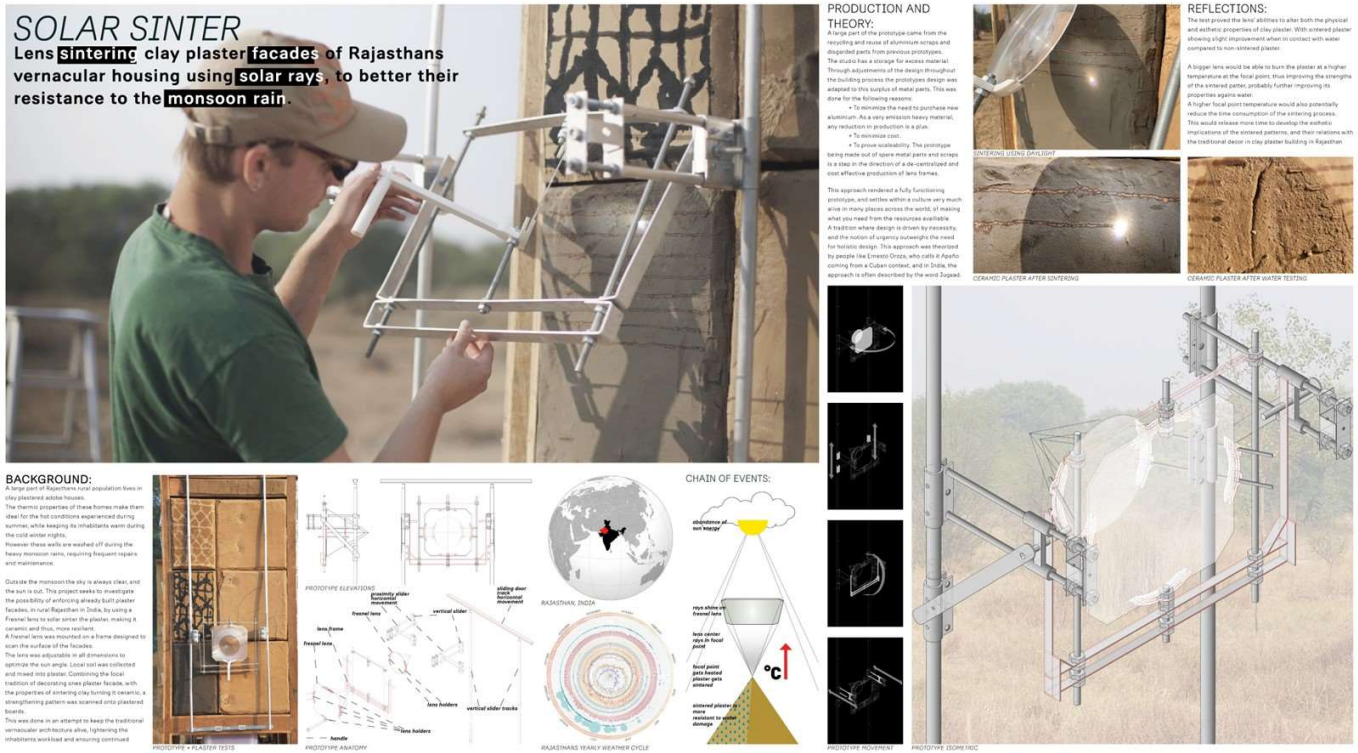
DAYLIGHT INVESTIGATIONS

REGION 1 **WESTERN EUROPE**

Project: **Solar Sinter**
Students: Anders Eugen Lund

School: Royal Danish Academy
Teacher: Runa Johannesen
Country: Denmark

Inspired by Rajasthan's rural population, who live in clay-plastered adobe houses, the project addresses a common problem: monsoon rains washing away the clay walls, necessitating frequent repairs and maintenance. "Solar Sinter" proposes using a Fresnel lens to solar sinter the plaster, transforming the clay into ceramic, and making it more resilient. This innovation reduces the inhabitants' workload while preserving the traditional vernacular architecture.



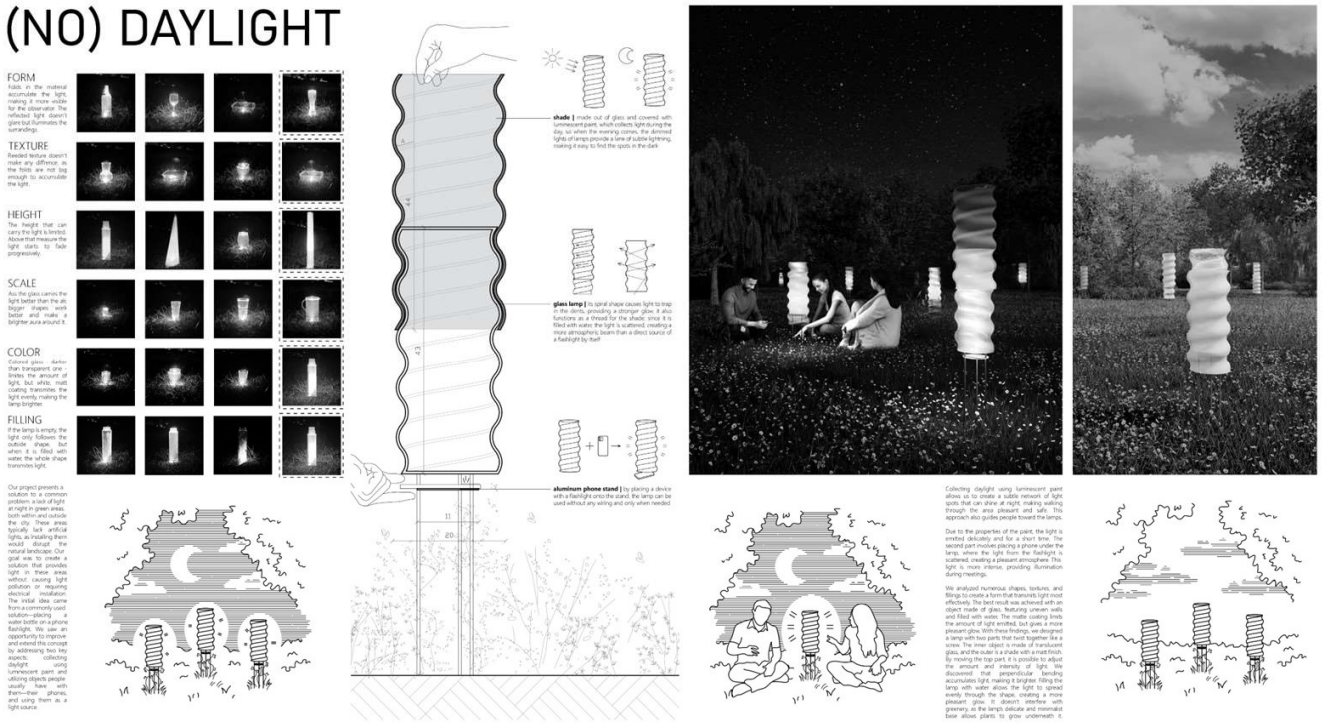
DAYLIGHT INVESTIGATIONS

REGION 2 **EASTERN EUROPE & THE MIDDLE EAST**

Project: **(No) daylight**
Students: Iwona Kin, Alicja Smoczyk, Agata Czugała & Paweł Mordeja

School: Politechnika Wrocławska
Teacher: Tomasz Broma
Country: Poland

The project "(No) Daylight" focuses on illuminating green areas without electricity and without contributing to light pollution. The project features what appears to be a lamp, with a shade covered in luminescent paint that collects daylight during the day and emits a soft glow in the evening. The glass lamp beneath the shade is filled with water and has a spiral shape that traps light in its contours. Users can place a phone with the flashlight on underneath the lamp, creating a more atmospheric, diffused beam of light instead of a direct flashlight source.



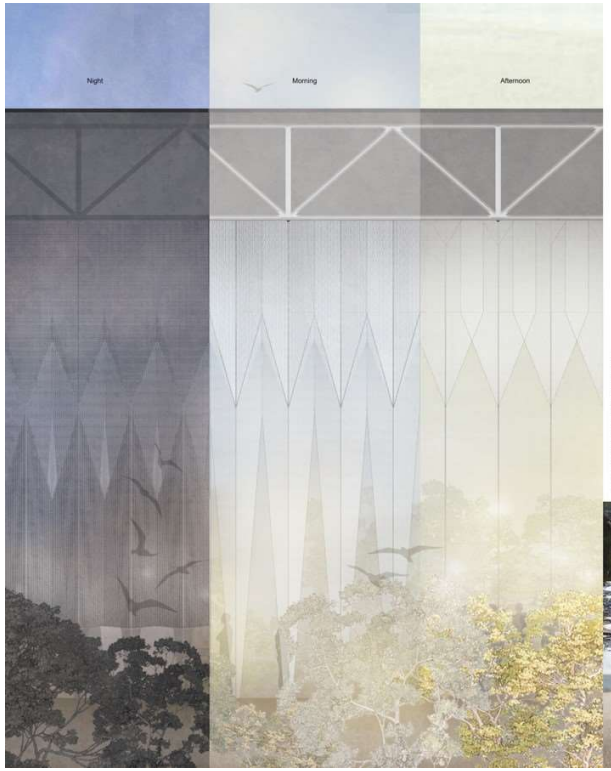
DAYLIGHT INVESTIGATIONS

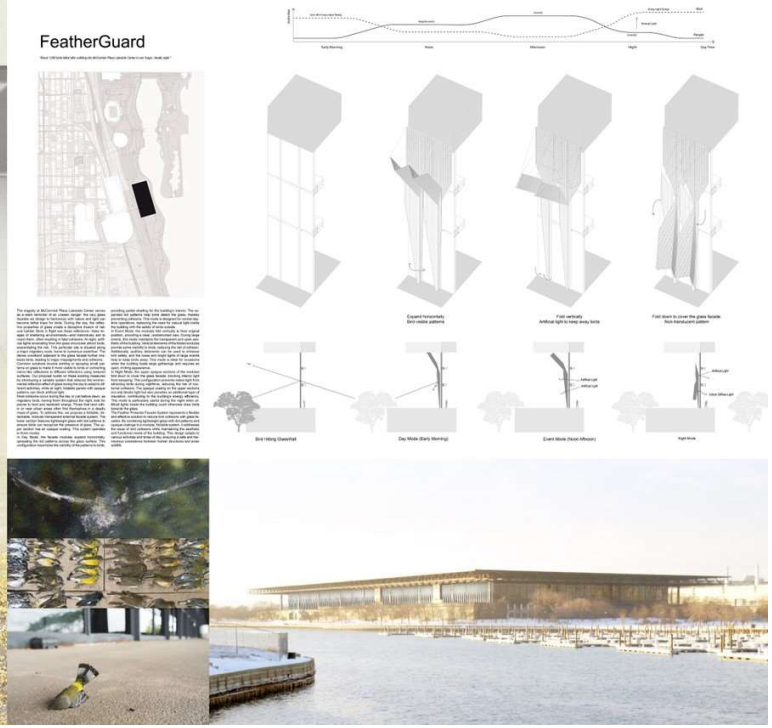
REGION 3 **THE AMERICAS**

Project: **FeatherGuard**
Students: Yining Ma

School: University of California, Berkeley
Teacher: Myrna Ayoub
Country: United States

"FeatherGuard" addresses the widespread issue of birds colliding with glass facades. The project offers a flexible and effective solution by combining lightweight glass with dot patterns and opaque coatings in a modular, foldable system. This system reduces the environmental reflections on glass during the day, adapting to various activities, while at night, foldable panels with opaque patterns block artificial light, further protecting birds.





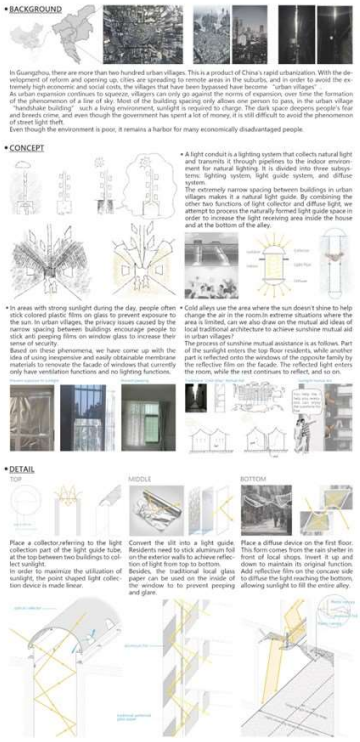
DAYLIGHT INVESTIGATIONS

REGION 4 **ASIA & OCEANIA**

Project: **Gaplight Collective**
Students: Zehong Zhang, Ruotong Luo, Jiaxun Song, Dasen Li & Xinyue Dong

School: South China University of Technology
Teacher: Zhenghao Lin
Country: China

The "Gaplight Collective" system utilizes the narrow gaps between buildings in urban villages in China as natural light guides. Atop these buildings, light collectors gather natural light, which is then transmitted through pipelines. Reflective surfaces on walls and windows enhance light reflection, while a diffuser device above pedestrian walkways spreads natural light downwards between buildings.



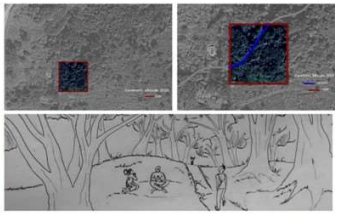
DAYLIGHT INVESTIGATIONS

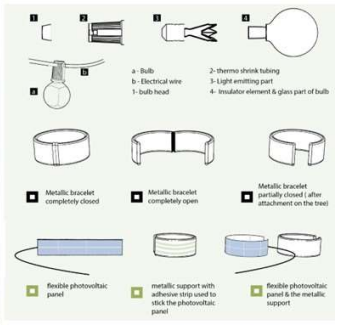
REGION 5 **AFRICA**

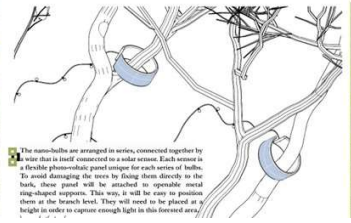
Project: **Sparkling souls**
Students: Bidzan Pout Fabrice Emmanuel, Abega Ebanga Rosalie Valentine, Tambe Mcwilfried Masoda, Ndibatchou Alexis Junior & Fopa Jerry Karmel

School: École Nationale Supérieure des Travaux
Teacher: Aba Nkasse Alain
Country: Cameroon

The project "Sparkling Souls" aims to make African funerary traditions more sustainable while creating a natural environment conducive to fireflies. Instead of traditional bonfires, the project proposes using solar-powered bracelets hung in trees and low-heat nano-LED bulbs that can be reused and recycled. These bulbs mimic the natural light emission and twinkling of fireflies, attracting fireflies to the area and enhancing the poetic scenery of the funerary traditions.







2024 Regional winners

ALL REGIONAL WINNERS