

# LIGHTING THE GLOBAL WORKSPACE



## Project: Unseen Energy

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### UNSEEN ENERGY

An Illuminative Study in Perception

Immersive Lighting for Active Workspaces

*Ilaw:* [ I-lau ] Filipino, n., light

**Immersive Lighting for Active Workspaces (ILAW)** is a hyper-intelligent lighting system, which re-imagines the essence of structure, surfaces and material - resulting in space that dissolves existing boundaries. Materials erode and lend space to light, in order to highlight design's innate relationship with nature. The Immersive Lighting Grid upon which **ILAW** operates is a three dimensional matrix wherein workspace users can sculpt their optimal lighting universe. It allows for the use of light in its very special capacity as a medium that can fill, dwell and inhabit space and profoundly reconfigure one's experience of that space. This revolutionary lighting allows for a fully integrated response to a flexible range of workspace conditions. **ILAW** dematerializes workspaces, as they are currently understood, as surfaces become multilayered, experiential fields. This evolutionary approach to lighting yields creative workspaces, energy savings, and improvements to health and productivity.



Smokey Mountain garbage dump site, Manila, Philippines

#### THE COMMUNITY

Many families residing in the Smokey Mountain dump area struggle every day to survive by collecting recyclable items from the trash that surrounds them. Glass, metal, paper and plastic are collected on a daily basis by both adult and child scavengers who sell these items to middle men, who in turn sell them at a higher price to recycling factories. This meager daily income is often the family's only source of revenue. As the family comes to depend on the additional income generated from their children scavenging, these children are subsequently denied the opportunity to attend school. The deterrent to educational access is compounded by the fact that, although public schools are tuition-free, many families are still unable to provide for the cost of their children's basic school supplies, uniforms, books, food and transportation.



#### YOUNG FOCUS

Young Focus for Education and Development (YFED) is a not-for-profit organization that provides services to various local communities in order to alleviate poverty in the Philippines. It's vision: to improve the mental, physical and social well-being of young people in poor communities by means of education, healthcare and personal support.

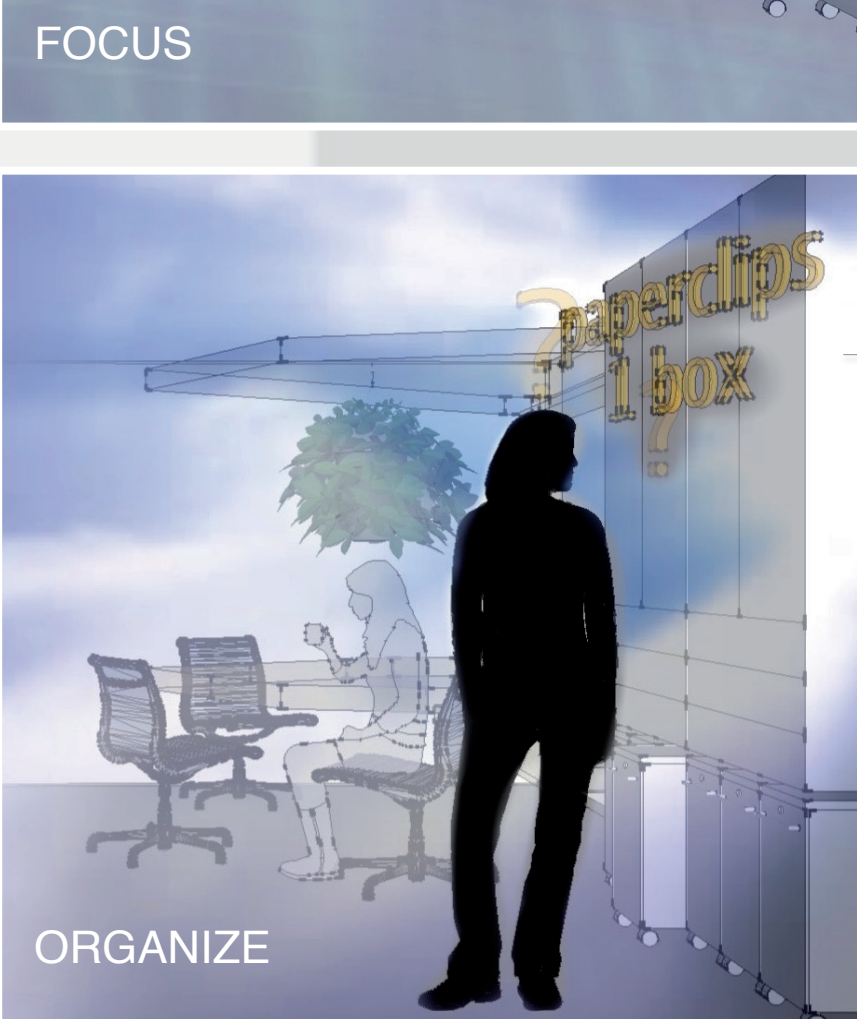
YFED's vision: to improve the mental, physical and social well-being of young people in poor communities by means of education, healthcare and personal support.

The office is located on the second floor of the Sandigan Youth Center, 1 km away from the Smokey Mountain dump site in Manila.

#### PRIMARY ILAW FUNCTIONS:

##### AMBIENT ILLUMINATION

modulated lighting of scenes with adjustability in intensity, color, location, and additional multi-sensory application in aromatherapy, climate control through temperature and airflow strength plus direction etc.; this allows the users to create their favorite settings; regulated by artificial and enhanced natural lighting systems



##### WORKSPACE ILLUMINATION

task lighting; adjusts according to targeted needs and requirements of space and occupants; regulated by artificial and enhanced natural lighting systems



##### NAVIGATION + COMMUNICATION ILLUMINATION

guidance system which enables easy navigation within workspace and equipment; communicates identity, location, quantity, and other relevant data for occupants, office equipment, office supplies etc.

#### SPECIALIZED ILAW FUNCTIONS:

##### TELEPRESENCE

enables true to life virtual office presence through light



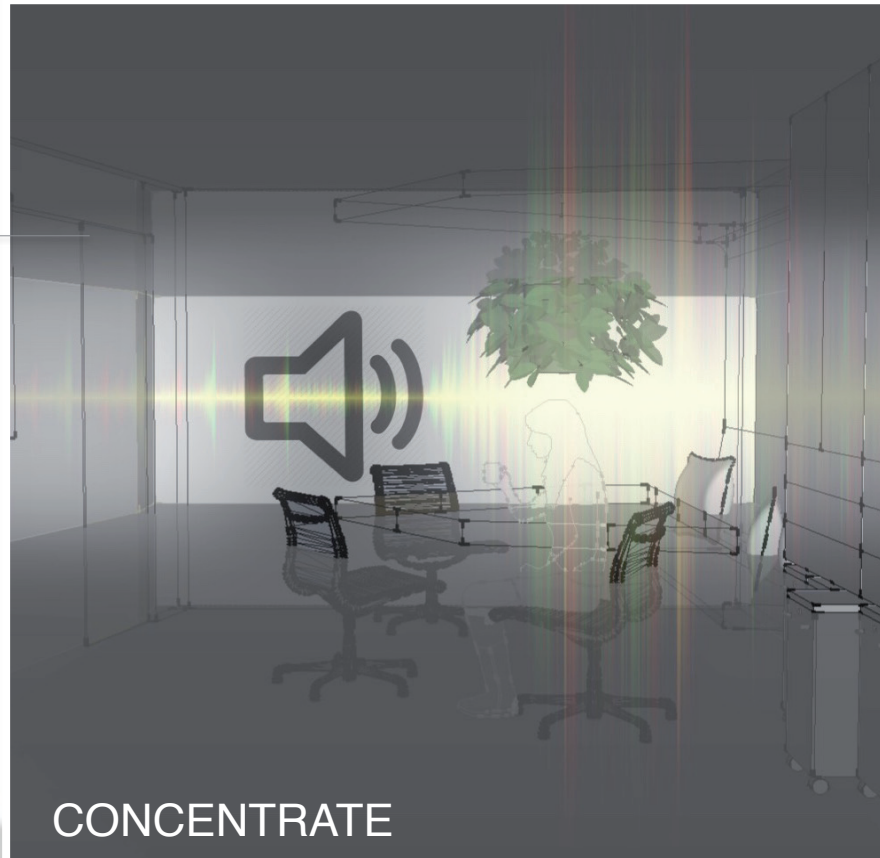
##### BIO-FILTER LIGHTING

filtration lighting system, installed by entry and pass-through window; destroys harmful bacteria (particularly those brought in from the visits to and from the garbage dumpsite); maintains a clean, healthy and balanced office environment



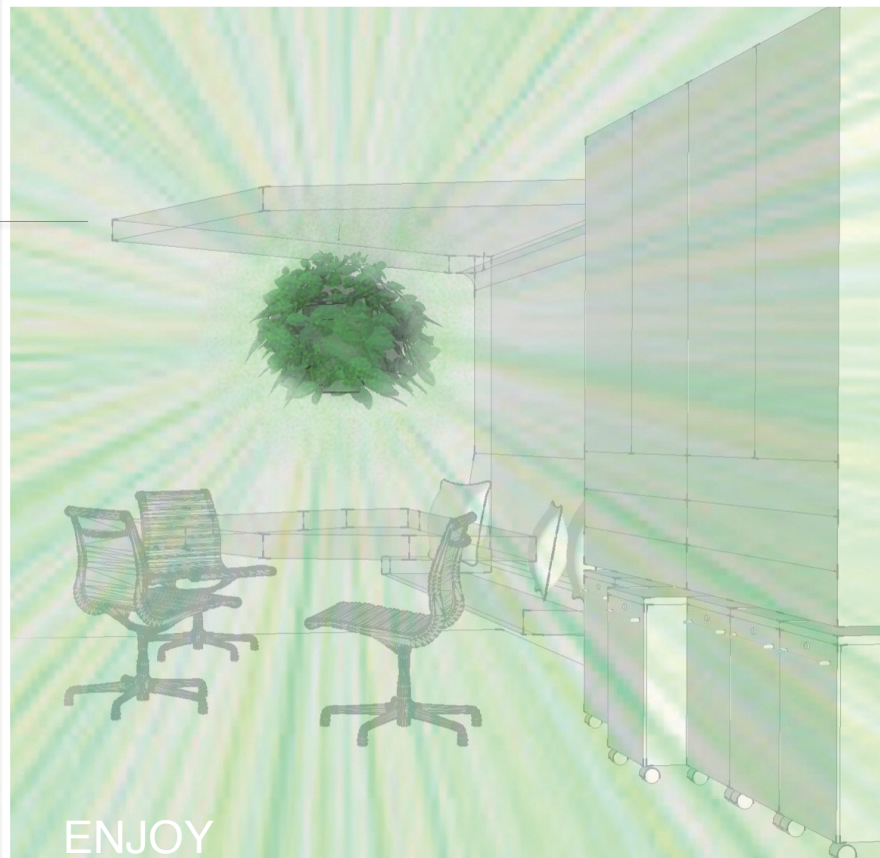
##### SMART SECURITY + SOUND SYSTEM

security system that encompasses motion detection, security lighting, security alarms, notifications etc.; system detects authorized presence and tracks attendance and occupants' personalized settings; provides privacy or grants access to spaces; controls lighting, privacy settings and climate + multi-sensory systems; additionally, provides noise cancellation for improved working conditions



##### EVOLVED BIO-LUMINAIRE

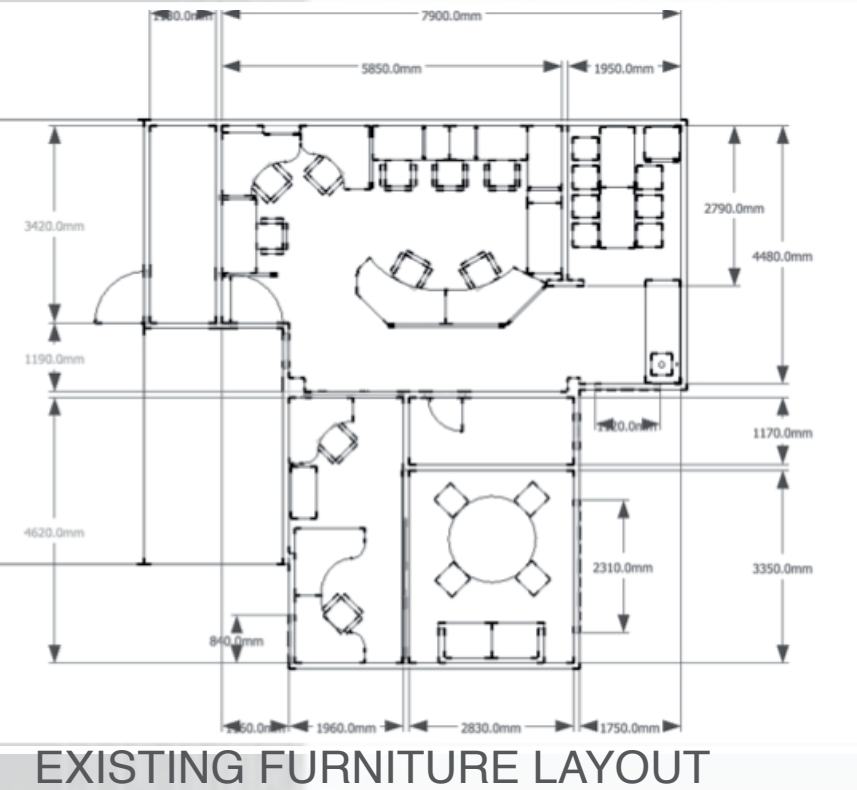
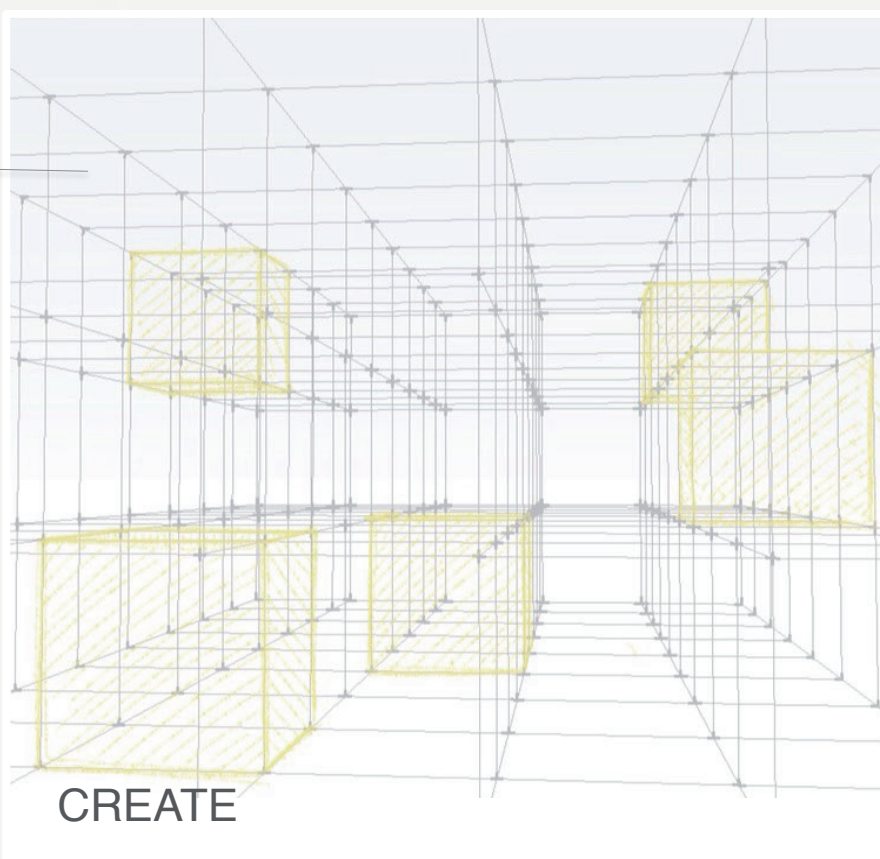
luminaire of primarily bioluminescent flora, complemented by regulated artificial or enhanced natural lighting; natural lumens varies by time of day



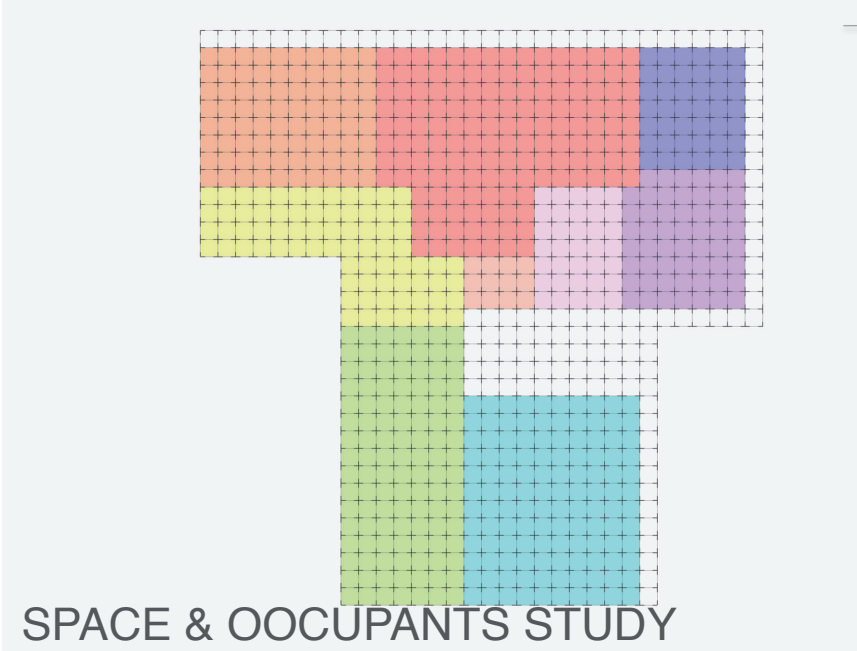
##### IMMERSIVE LIGHTING GRID

A multi-dimensional matrix wherein workspace users can sculpt their optimal lighting universe

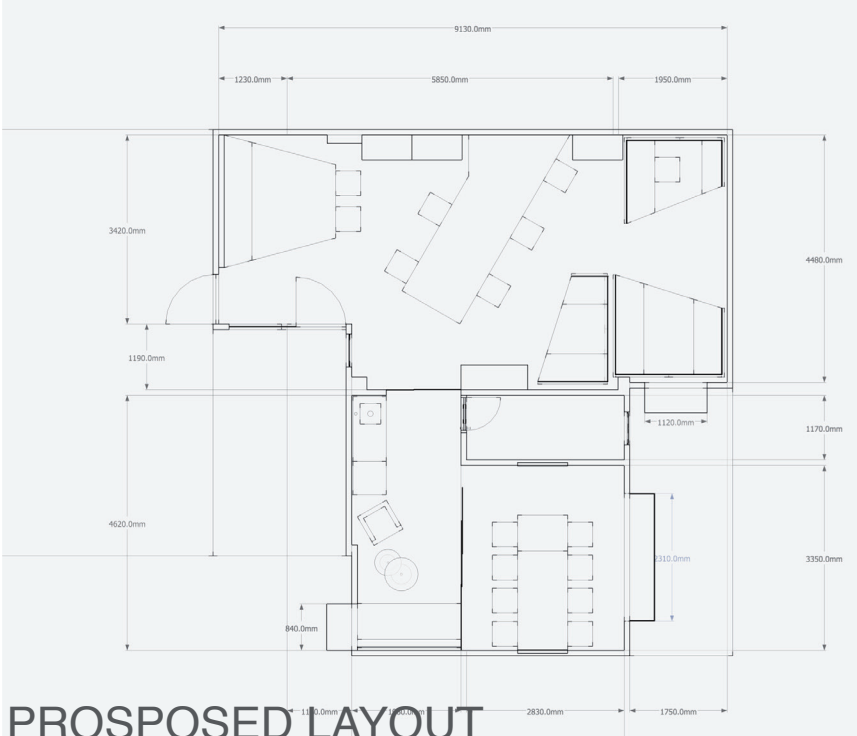
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EXISTING FURNITURE LAYOUT



SPACE & OCCUPANTS' STUDY



PROPOSED LAYOUT

##### PROPOSED WORKSPACE

redesigned workspace for maximum benefits to users; redesign allows for optimal integration with the Immersive Lighting Grid

A Research Project by:

**ANCB** THE AEDES METROPOLITAN LABORATORY

**ZUMTOBEL**