The Ecological Living Module has an integrated plant wall that acts as a foundation for micro-farming.

The loft bedroom has an air purifying plant wall that provides fresh indoor air.

The ELM contains an Integrated Concentrated Solar System called HeliOptix.

The ELM is constructed primarily from locally-sourced, bio-based renewable materials.

**Solar Energy**
- On-site net zero energy
- Concentrating Solar PV
- Clean on-site energy generation
- Low embodied energy of PV cell

**Radiant Thermal**
- Radiant thermal comfort
- Thermal control

**Indoor Air Purification**
- Provides fresh air from within
- Modular system
- Reduces indoor pollutants and enhances microbiome diversity

**Data & Systems Integration**
- Live Sensor Feed
- System Monitoring of ELM
- Data Collection
- Data Management
- Mechanical Network
- Visual Analytics dashboard
- Heterogeneous data viewing

**Potable Water Collection**
- Humidity capture
- Rain water collection
- On-site potable water collection
- Water filtration

**Micro-Farming Wall**
- Living Systems
- Nutrient dense provisions
- Self-sufficiency
- Fruit & vegetables yields

**SUSTAINABLE DEVELOPMENT GOALS**

1. **Clean Energy**
2. **Clean Water & Sanitation**
3. **Sustainable Cities & Communities**
4. **Responsible Consumption & Production**
5. **Climate Action**

**UN Environment**

**Yale**

**CEA**

**GRAY ORGANSCHI**

**CENTER FOR ECOSYSTEMS IN ARCHITECTURE AT YALE**