

# UMCI Sustainability Goals

## Project Overview

UMCI will be an **all-electric building**, with renewable energy offsets purchased by the university.

The **energy efficient system design** has a unique hybrid water-to-water heat pump and air-to-water heat pump system and ice thermal storage tanks maximizing energy recovery.

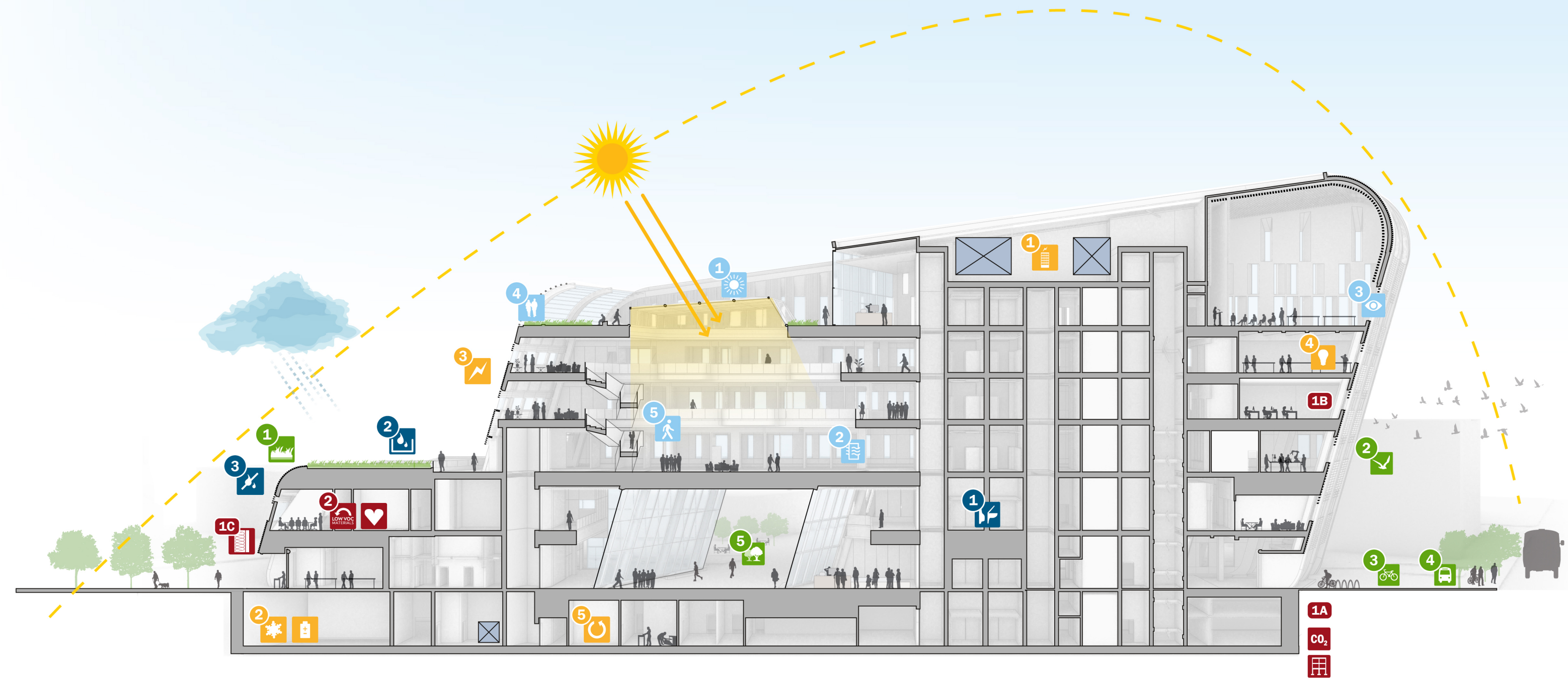
The design **reduces embodied carbon** by utilizing optimized concrete mixes, structural steel with recycled content, and low-carbon insulation to lower the building's overall global warming potential.

The design prioritizes **daylight and connection to the urban landscape** with views and exterior occupiable spaces.

**Healthy interior material selection** will promote the health and wellbeing of students, staff and community.

Low-flow plumbing fixtures, based on distinct user groups, will significantly **reduce annual indoor water consumption**.

Potential **ecological impacts** of the development are addressed through **native and adaptive, irrigation-free landscape design**, site lighting design to reduce light pollution, and **strategic bird-safe glass** with frit along the building's facade.



### ENERGY AND OPERATIONAL CARBON

- 1 Electric heating from air source and water source heat pumps
- 2 Thermal storage for expanded energy recovery and peak load shifting
- 3 Purchasing off-site renewable energy for building energy use
- 4 Efficient LED-only indoor and outdoor lighting
- 5 Building exhaust air energy recovery

### MATERIALS AND EMBODIED CARBON

- 1 Low carbon materials
  - 1A Concrete
  - 1B Structural steel
  - 1C Insulation
- 2 Low-VOC indoor materials and material ingredient transparency

### HEALTH, WELLNESS, AND OCCUPANT COMFORT

- 1 Daylit atrium
- 2 Healthy indoor air quality
- 3 Quality views to the outdoors
- 4 Outdoor open space
- 5 Feature stairs for an active design

### SITE, LANDSCAPE AND ENVIRONMENT

- 1 Green roof with native and adaptive plants
- 2 Strategic bird-safe glazing
- 3 Bicycle parking
- 4 Access to transit
- 5 Publicly accessible plaza

### WATER EFFICIENCY AND MANAGEMENT

- 1 Efficient, low-flow plumbing fixtures
- 2 Stormwater retention at green roof
- 3 No permanent irrigation needed for native and adaptive plants