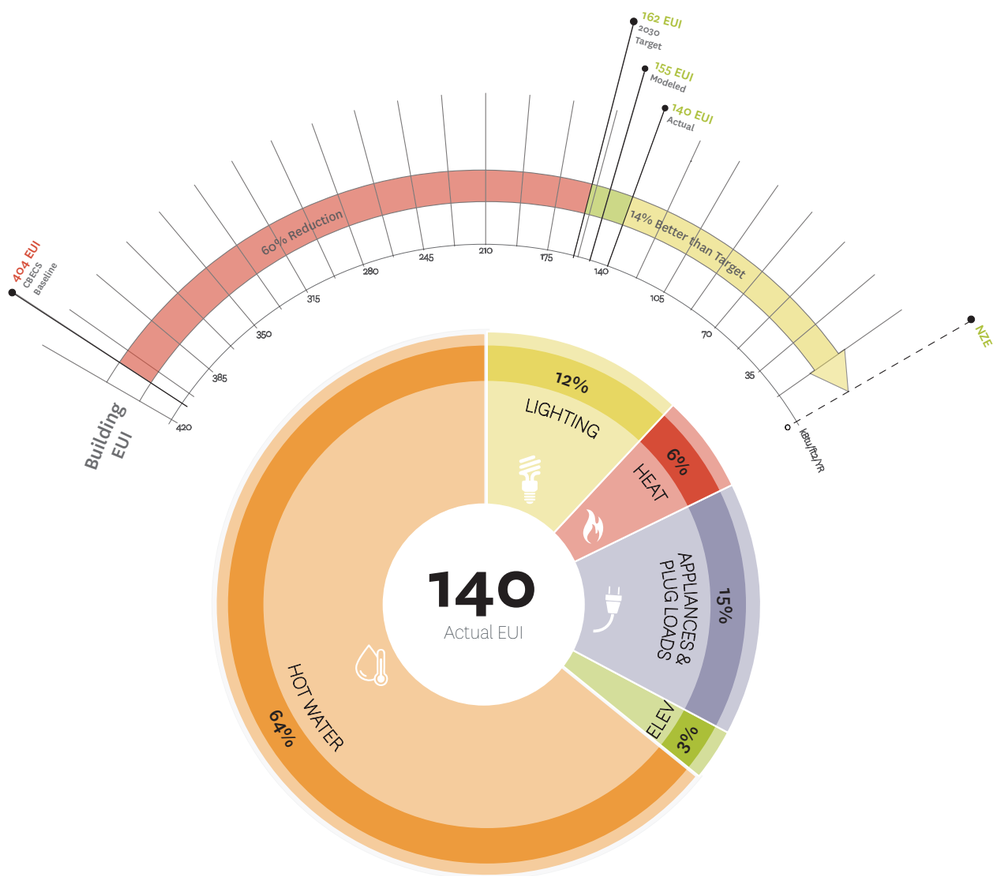
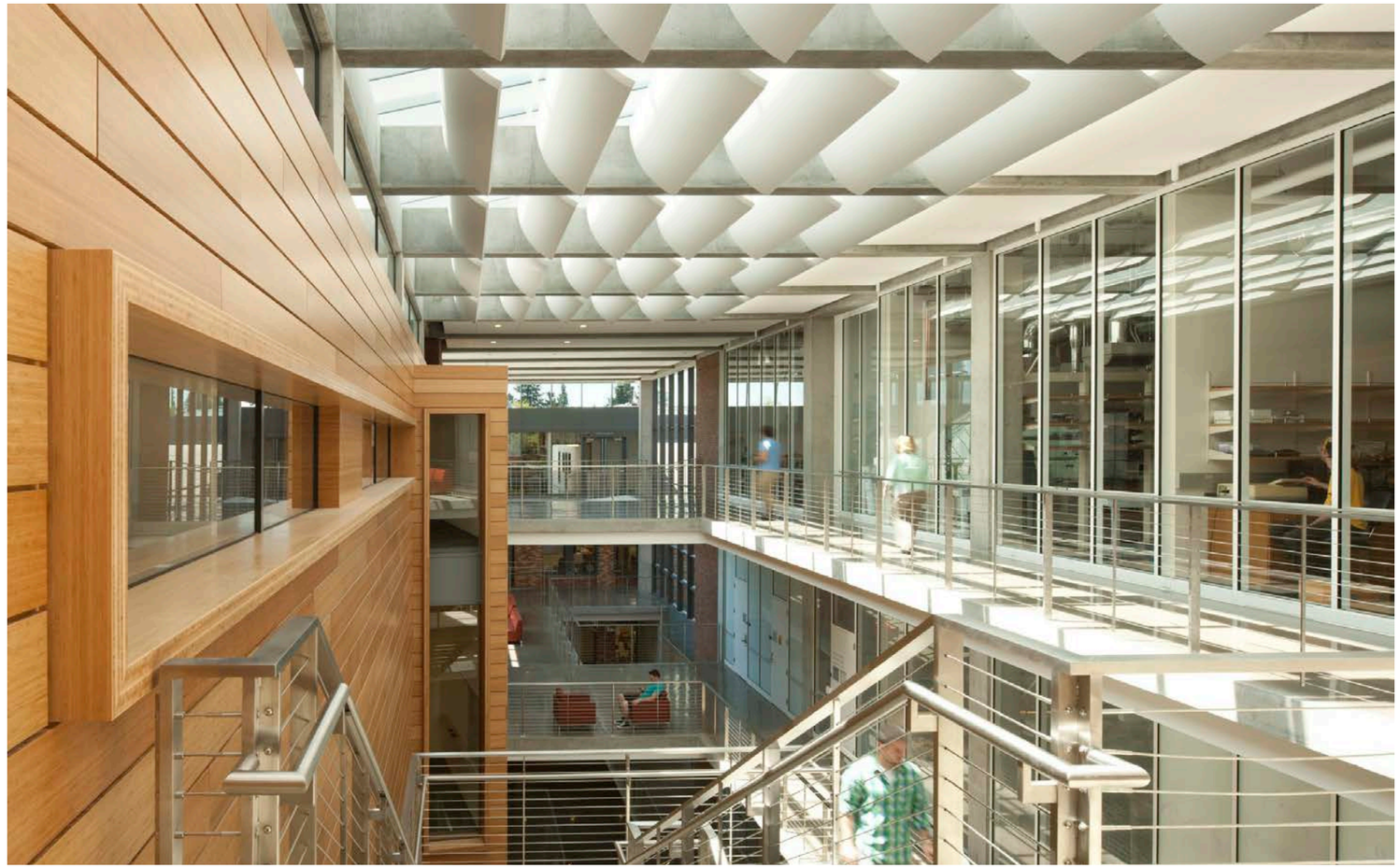
Lewis Integrative Science Building
University of Oregon
Sustainability Summary

Project Type: Higher Education
Location: Eugene, Oregon
Built Area: 103,000 SF
Scope: New Building, completed 2012
Certification: LEED Platinum, 2030 Compliant

Architect: Hacker with HDR
Energy Consultant: Glumac
Sustainability Consultant: HDR





Design Summary
Lewis Integrative Science Building (LISB) facilitates the University of Oregon's mission to create new synergies across diverse academic disciplines. This cutting-edge facility aims to unite the sciences, bringing together biologists, chemists, psychologists, neurologists, computer scientists, and other researchers to work alongside one another as they tackle some of society's greatest challenges.

LISB enables advanced research through its uniquely configured laboratories and large-scale scientific equipment. The interior architecture is rooted in the idea of connectivity: from the basement to the fourth floor, the design supports the premise of science as an open, collaborative process rather than an isolated exercise conducted behind closed doors.

Key Sustainability Concepts
Designed for high energy performance, LISB was modeled to achieve an energy savings of 60% above CBECS' baseline for conventional science buildings of similar size and function. Post-occupancy energy bills show that the building in fact surpasses its modeled targets, consuming 65% less energy than similar buildings and performing nearly 14% better than the 2030 Challenge target.

LISB's high-performance can be attributed to several significant sustainable design strategies. The passive ventilation is achieved via operable windows with a built-in notification system that prompts occupants to open windows when appropriate. LISB's carefully calibrated solar orientation, plus the incorporation of interior light shelves and an expansive atrium skylight achieve optimal daylighting, reduce the demand on electric lighting. The most dramatic energy savings can be attributed to a progressive heat recovery system which extracts waste heat from an existing utility tunnel below the site and uses it to control the temperature in laboratories and office spaces. The building is also equipped with 28 rooftop photovoltaic solar panels that generate energy for preheating water.

While water consumption does not have a baseline for actual comparison similar to energy consumption, the design team implemented three sustainability strategies that aid in the reduced demand on the water supply: the building uses an inventive system of reclaiming waste water from a neighboring zebrafish facility for use in flushing toilets and urinals; storm water planters retain and filter rainwater on-site; and native, draught-resistant plants flourish throughout the landscape while requiring little to no irrigation.