**Lehigh University Campus Metabolism**

A Student and Staff Empowerment Tool

The Lehigh Campus Metabolism Database currently houses Lehigh University’s electricity usage, gas usage, water usage, and waste creation data. With the goal of becoming a tool for student and staff empowerment, the database provides more than just a platform for research and education. It provides a platform with which students and staff may engage more deeply with the data around them and the choices generating that data.

Summed up, the database:

* Tracks Utilities and Waste Data
* Maps Student Impact
* Empowers Efficiency and Sustainability

Imagine the following scenarios:

* Students provided with their monthly water and energy usage in tangible terms dig into their building’s usage history, engage with educational programs and content to understand why values are the way they are, and become more mindful of their impact on the environment.
* Staff empowered with greater tracking of resources study historical trends, see where on campus and when in time usage lies outside acceptable ranges, perhaps indicating either a maintenance or behavioral issue, and make decisions with greater understanding to increase efficiency.
* Faculty studying the intersection of energy systems and the environment, green energy investment versus impact, etc., have access to information once kept on private office computers, empowering more in-depth research, and leading faculty, staff, and departments to more effectively collaborate with external organizations, increasing investment, grants, and student/faculty opportunities.

These scenarios represent likely real use cases for the Lehigh University Campus Metabolism Database.

As buildings become smarter and smarter, the integration of advanced technology into maintaining, monitoring, and controlling building systems will become more prominent. Having a current, reliable, and updated baseline system in place in which to integrate these systems will prove valuable as monitoring becomes more robust. As Lehigh looks to advance, a reflection on its mission statement: “To advance learning through the integration of teaching, research, and service to others,” and our roles and responsibilities in that advancement.