

Private Research University

A Turnkey approach to
Airflow Optimization & energy
projects in the data age



AT A GLANCE

Goals

- Transform a traditional capital expense into a utility rebate-funded energy efficiency project with measurable ROI.
- Address deferred maintenance and end-of-life equipment while modernizing lab infrastructure.
- Implement advanced controls to improve safety, comfort, and energy efficiency.

Results

- Phase 1 energy savings exceeded targets by 20%
- Approx. annual energy savings 1.2 million kWh
- Approx. annual energy savings of 64,000 therms
- \$500,000 utility rebate
- Full controls retrofit

A private research college in the Boston area partnered with Thrive Buildings to revitalize their science building and turn what would typically be a capital expense project into a utility rebate funded energy efficiency project with a real ROI. The \$3.8 million project includes a full Phoenix and Johnson Controls retrofit along with a new Aircuity system and is receiving a \$500,000 rebate from the local electric and gas utility.

The project is demonstrative of a new way of doing optimization and controls projects – one that focuses on embracing complexity instead of shying away from it. Through an integrated design-build process built around outcomes and data, Phase 1 energy savings at the zone level have exceeded targets by over 20%. The project expects to save 1.2 million kWh and 64,000 therms after Phase 2 has completed.

The Project

The project is addressing deferred maintenance and end-of-life equipment through a utility incentivized energy efficiency project with a real payback, all while providing an optimized building management system and safer laboratories.

Through the marriage of new Johnson and Phoenix Controls technology and an Aircuity system, advanced controls sequences like demand control ventilation, fume hood setbacks, and temperature setbacks were able to be implemented.

Utility Rebate: Risk and Alignment

Thrive is taking the risk on the \$500,000 rebate, allowing for a reduced upfront capital cost to the college. The financial burden on Thrive ensures the focus is on delivering promised savings, not checklists.

Turnkey Design and Construction Delivery

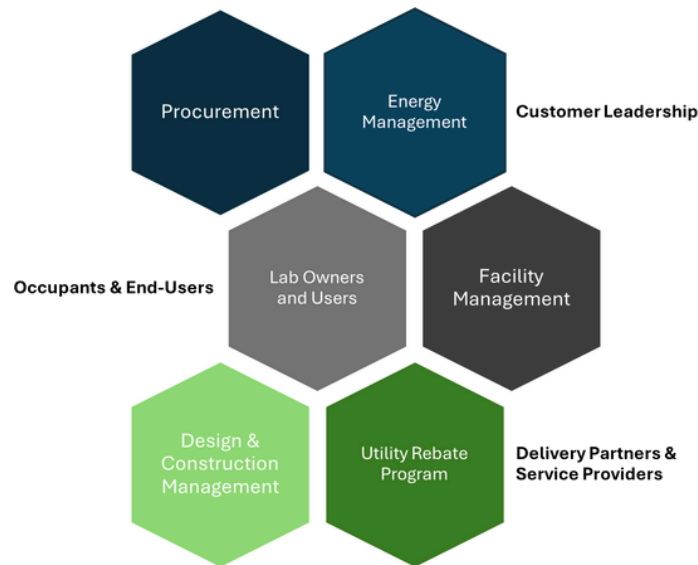
Navigating different internal stakeholders and effectively managing highly specialized vendors requires a project delivery team that understands the nitty-gritty of each trade and how they each contribute to project outcomes.

3rd Party Controls Design

Thrive partnered with Sanitas Controls and Commissioning to do a comprehensive controls design built off existing field conditions. The design laid the foundation for fixing problems and addressing questions before they happened in the field, drastically reducing re-work and the execution timeline.

Stakeholder Engagement

Lab owners, lab operations, facilities, energy management, and procurement all have different needs, budgets, and schedules. Working with these stakeholders, and not around them, was essential to a smooth construction process with minimal downtime.



Analytics-based Commissioning

Acceptance criteria were laid out on day one in the design and were tracked in real-time using SkySpark. The project team was able to troubleshoot problems with root cause in mind instead of taking a band aid approach.

