



WISCONSIN INSTITUTES FOR DISCOVERY

“When a group functions like ESI has, it’s a pleasure to comment on their performance. They are very responsive and dedicated to meeting deadlines, and they are committed to providing the highest value for the investment.”

— GEORGE AUSTIN, WARF Project Director for Development, Wisconsin Institutes For Discovery

**DETAILS >>**

The Wisconsin Institutes for Discovery (WID) serves as a hub for interdisciplinary research – spanning biotechnology, nanotechnology and information technologies – that will lead to the development of new biomedical treatments and technological applications aimed at improving human health and welfare. From concept to completion, the 300,000-square-foot building, which occupies an entire block, was designed to advance the state of humankind within an environment where things will happen that have never happened before. Much the same can be said of the vast array of talent required to make this visionary facility rise from the earth. ESI was an integral part of making it all happen.

**CHALLENGES >>**

The term ‘evolutionary’ accurately describes the WID research facility on the University of Wisconsin campus. Transformational in vision and desired impact, there were few previous examples or roadmaps for those involved in making the Institutes a reality. As part of an extensive, collaborative team of stakeholders, ESI was charged with creating an intelligent, adaptive building systems architecture to ensure the facility

“ESI proved it could listen to the needs of scientists, project developers and a multitude of other stakeholders. Equally impressive is their ability to translate those big ideas into plans that could be implemented.”

— GEORGE AUSTIN

would evolve to meet the needs of scientific research for the next 100 years.

The extensive nature of this project required the integration of numerous disparate subsystems, allowing for communication across platforms. Regardless of who manufactured the lab temperature monitor or the solar hot water system, all systems needed to be integrated to ensure sustainability and efficiency goals were met. Examples include water reclamation, power usage, and lighting levels, fume hood controls and shades, among many other systems. To achieve WID’s goals of significantly reducing energy and water usage compared to a typical UW-Madison research facility, project planners felt scientists would need ready access to information and energy consumption data.

**SOLUTIONS >>**

With ready access to data across platforms, WID stakeholders are able to unlock islands of information, measure the impact of their actions within the facility and thereby manage its consumption patterns.

The integrated building architecture provided by ESI eliminated redundant user interfaces to reduce or eliminate licensing fees and corresponding training costs. Integrated control strategies were designed to increase energy efficiency and optimize operations. In addition this architecture provides a platform for advanced software applications, such as fault detection diagnostics and energy benchmarking and analysis, which will have a positive impact on facility operations.

**THE BENEFITS**

Creating a building designed to evolve over the next 100 years certainly is unusual. But with ESI’s insight and expertise, the Wisconsin Institutes for Discovery research facility now has a sophisticated, adaptive building systems architecture that integrates various independent subsystems designed to ensure sustainability and energy efficiency goals are met.

According to George Austin, WARF’s Project Director for the development of the Wisconsin Institutes for Discovery, ESI’s flexibility, staffing and technical capacity played a significant role in delivering on their promise of a successful integrated building system.

“ESI understood fundamentally what we were trying to achieve here,” Austin said. “We definitely benefited from having ESI’s expertise at the table during what we called the co-development process, which involved numerous stakeholders’ ideas and needs.”

**From innovative designs and installation to comprehensive management and support, ESI provides integrated, performance-building solutions that generate success stories. Contact us to find out how we can help you improve your building performance.**

ESI-generated impact for WID facility operations include:

- Initial cost avoidance by using an integrated system architecture versus separate systems
- Building life-cycle cost savings through reduced software and system support because of the integrated building system architecture
- Operational savings through a single user interface and integrated information

SUCCESS STORY



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