Facilities Management
The University of Iowa
Dedicated, Innovative, Responsible

Abstract - University of Iowa Fault Detection & Diagnostics Program

In 2014, University of Iowa (UI) Facilities Management began an exhaustive study of a growing evolution in building systems management - Fault Detection and Diagnostics technology (FDD). After visiting Microsoft's Redmond Campus and seeing the substantial impact FDD had on their facilities operation, the UI embarked on a groundbreaking and large-scale effort to implement FDD in a campus environment. Thoughtful study and a methodical approach generated unique insight and innovative best practices, resulting in the successful implementation of FDD in 20 buildings across campus by March 2017.

UI's FDD program at a glance:

- Twenty buildings onboarded including academic, lab, recreational and office spaces.
- All major HVAC equipment monitored with FDD.
- Four different Building Automation Systems (BAS) integrated.
- Time to onboard 20 buildings: three months.
- Work order integration with FDD software for performance tracking and transparent adoption.

UI's major FDD program achievements in first six months:

- Realized $600,000 in energy savings.
- Shifted to 24 percent predictive quarterly work orders versus reactive
- Addressed issues related to energy: 117, occupant comfort: 171, maintenance: 304.
- Leveraged FDD for commissioning of two newly constructed buildings and warranty punch lists.
- Exploring FDD for use in measurement and verification and performance-based incentives with utilities.

University of Iowa FDD Campus Monitoring