

BASiX AUTOMATION INTEGRATORS
CASE STUDY: Worcester Polytechnic Institute

Technology College's 80-Acre Campus Provided With Direct Digital Control System For Increased Efficiency, Energy Savings

Challenge

Founded in Worcester, Massachusetts in 1865, Worcester Polytechnic Institute was one of the nation's earliest technological universities. WPI's eighteen academic departments offer more than 50 undergraduate and graduate degree programs in science, engineering, technology, management, the social sciences, and the humanities and arts. Graduates of WPI include Dean Kamen '73, inventor of the first wearable infusion pump and the Segway Human Transporter; Carl Clark '45, the inventor of the automobile airbag restraint system; and Henry P. Davis, class of 1880, who developed the first commercial radio system.

WPI is located about a mile from downtown Worcester, Massachusetts, which is New England's third largest city. The campus comprises 33 major buildings spread out over the Institute's 80-acre campus. As the campus infrastructure grew, WPI faced excessive energy costs, limited centralized energy management, poor monitoring capability, and critical environmental control needs for laboratories. WPI's end users, who have a high level of technical expertise, needed a company that provided the most advanced technology at the lowest possible cost, and also gave them the capability to manage their own system.

Solution

After a comprehensive analysis by BASiX engineers in collaboration with WPI facilities staff and administration, a multifaceted plan was developed that included installation of a campus-wide Direct Digital Control System for HVAC, lighting systems, utility metering, and replacement of pneumatic controls. The BASiX plan also included mechanical upgrades, lighting upgrades, campus-wide DDC system for 22 buildings, 15,000 points of control, and utility rebates and financing for a campus-wide energy retrofit.

Benefits

As a result of its partnership with BASiX Automation Integrators, Worcester Polytechnic Institute has realized lower energy costs. Centralized control allows plant personnel to execute their jobs more efficiently, and BASiX systems provide precise control of multiple critical laboratory environments. Thanks to 100% user-programmable controls, WPI end users can customize controls to their own facility, and WPI has the ability to configure all aspects of software and hardware. Consistent, long-term results are enhanced with continuous training, provided through BASiX training lab and onsite personnel.