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FACILITIES manager

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Using FPI to Improve FM Performance

Impact of Facilities on Student Retention

Benefits of Biophilic Design

New Technologies

Serving the Mission

Case Studies in FM Technologies

From geographic information system (GIS) applications to climate sensors for library collections, from innovative HVAC and greenhouse gas (GHG) upgrades to space management tools and the use of gaming software and artificial intelligence, the breadth and depth of technologies available to educational facilities professionals has grown exponentially in recent years. APPA members are applying incredible technology and ingenuity to address facilities issues both old and new, and they are evolving to find the best solutions to serve their institutions' mission and goals.

Following are just a few case studies related to the use of technology in the campus or school setting. These pieces have been submitted by campus innovators as well as our leading business partners in technology, and they barely scratch the surface of the innovation and creativity occurring right now within the education enterprise.

Compiled by Steve Glazner

CLINTON PRAIRIE SCHOOL

Frankfort, Indiana

Submitted by Jennifer Payne, Performance Infrastructure Account Executive, Johnson Controls
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CREATING A BETTER LEARNING ENVIRONMENT WITH DISTRICT-WIDE TRANSFORMATION

Like many school districts, the Clinton Prairie School Corporation (CPSC) recently faced the daunting task of addressing aging infrastructure on a limited budget. To address necessary district-wide exterior and interior building updates that would provide a more efficient, productive, and comfortable environment for students and staff, CPSC turned to Johnson Controls. Improvements totaling $4.7 million included the installation of LED lighting, building control optimization, and a new energy dashboard monitor, among other upgrades. These upgrades were enabled by an energy performance contract, allowing the district to utilize the guaranteed savings realized through the energy and building efficiency updates to offset the cost of the projects. With final project components completed in March 2019, CPSC can make an immediate, positive impact on their environment and bottom line. Implementing energy-efficient and connected building systems ensures that the district will continue on a successful path far into the future.

LIBERTY UNIVERSITY

Lynchburg, Virginia

Submitted by Andrew Pack, Vice President, Athletics and Education Practice Leader, Woolpert
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USING GAMING SOFTWARE FOR STADIUM RENOVATION

Woolpert used gaming software to create visualizations to help the client better understand the firm's 2017 renovation of Liberty University's Williams Stadium. The software allowed stakeholders to experience design options, make informed decisions, and reach a consensus on the proposed $32 million project. The visualizations provided a sense of realistically moving through the finished space by enabling the client to judge the widths of the concourse and plazas. Architects for the project said they used three types of software to illustrate how design changes impacted sightlines and circulation, two crucial aspects of stadium design. Lumion provided fast and intuitive animations as well as 360-degree panoramas, which could be easily sent to the client. Fuzor created an avatar to walk through spaces and visualize what it would be like to sit in any seat. Revizto allowed the client to click on a drawing or detail for a 3D view. Because the software resembled a video game, the design process was accessible to the client and contractors. The format also allowed collaboration through the Internet in real time, enabling the client to virtually walk with engineers and the construction manager through the building rendering.