## The Surprising Emergence of 10-Year Buildings for Long-Term Campus Planning

By Rusty Williams

onventional wisdom says that there are two kinds of buildings: permanent and temporary. Most construction is considered permanent - designed to last 100 years or more. Temporary structures have typically served a more tactical purpose such as "swingspace" used during construction or in the event of a flood, fire, or other unforeseen circumstance. But, increasingly, schools are seeking facilities that combine the aesthetic characteristics of permanent buildings with the option to expand, contract or remove the building entirely within a relatively short timeframe.

At first this may seem odd. Why invest in a building that is designed to be moved or removed? The answer is flexibility. It's more cost effective to plan for change in advance, than to tear down or "gut" buildings after a decade of use. In many ways, this new approach is a response to the rapid changes in technology – the skills, staffing, and facilities required ten years

from now are impossible to predict, but it's certain that they will be different.

The up-front planning required to enable Lego-like assembly of multiple modules manufactured offsite also provides the flexibility to more easily expand or remove the building after several years. With significant advances in the quality and design of modular construction, an increasing number of top-tier institutions and universities are embracing modular.

## CHOOSING MODULAR CONSTRUCTION

For example, Harvard University recently opened a new "Life Lab" in the innovation district of their



Harvard's Pagliuca Life Lab.

Allston campus. The existing i-Lab has been used for five years as an incubator for dozens of startups and entrepreneurs. Harvard wanted to offer a similar facility with state-of-the-art wet lab space nearby to support research and development of new biotech, pharma and other life-science technologies. Flexibility, along with speed-to-occupancy, were the primary reasons that Harvard chose modular construction.

Harvard engaged several special-use building consultants to assist with the design, scope of work development, and fabrication of a 15,000 square foot wet lab facility including complex lab-specific MEP systems, ductwork and equipment. Through modular construction, time to occupancy was accelerated by approximately 12 months, allowing the building to be ready for occupancy after just seven months of construction. Within a few weeks of opening, the new Life Lab was home to more than 20 start-ups.

Although the building was assembled from 32 modules and transported from Pennsylvania, the building bears no resemblance to a trailer or a tem-

porary structure. It features a glass atrium stairway, multiple conference rooms, a kitchenette, and highend refrigeration and ventilations systems required to support the highly-specialized research.

## THE NEW NORM: AN ADAPTABLE, CONFIGURABLE CAMPUS

As surprising as that may sound, planning for

reconfiguration or relocation after a relatively short period may become the norm for new buildings. Facilities need to support rapidly changing technology and encourage cross-department collaboration so it's almost certain that modifications will be necessary within a decade.

Google presents a similar vision for the future of buildings in their planning for a new campus in Mountain View California. In the company's overview video, David Radcliff, Google's Director of Real Estate perfectly summarizes the challenge facilities planners face when noting Google's approach to design a development - "How will we work 15 or 20 years from now? We don't know exactly what it's going to be, but we know that it needs to be incredibly flexible space."

The emergence of a 10-year building doesn't mean that schools and companies won't continue to build 100+ year buildings, but it's certain that they will be supplemented with facilities designed to expand and contract around these central buildings in response to changing needs. This concept of adaptable, configurable campus is a natural response to the rapidly changing world that we live in. (5)

Rusty Williams manages the development of special-use and educational buildings for Triumph Modular, a specialty building contractor creating highquality customizable modular buildings for world-class universities in Littleton, MA. He can be reached at *rwilliams@ triumphmodular.com*.

## Hot water for less money for a very, very long time.

Science nerds might even call it "the perfect fusion of heat transfer and corrosion engineering."





Tank and heat exchanger are fabricated entirely of AquaPLEX duplex stainless steel. Fully pickle-passivated, it requires no linings or anodes of any type.

- 95.5% to 95.8% thermal efficiency
- Full burner modulation enables precise temperature control under varying flow conditions and improves efficiency to 99%
- 500,000 750,000 and 1,000,000 Btuh models
- Moderately sized tank provides hot water during low demand with minimal burner cycling. Extremely low standby losses
- Electronic, touch-screen operating control with Modbus. Includes plain-text status, diagnostics, firing rate indication and history. Protocol gateways available

www.pvi.com

