

This 3D computer rendering of DorschnerAssociates, Inc.'s renovation of and addition to the UW - Madison School of Human Ecology shows the existing historic building on the right, and the addition on the left. Construction began in March 2010 on this \$36 million project aiming for LEED Silver certification.

IMAGE COURTESY OF DORSCHNERASSOCIATES/SASAKI ASSOCIATES



FROM THE INSIDE OUT

If Your Business's Space Needs Have Changed and You'd Rather Not Buy or Build, or If You'd Just Like To Upgrade, Maybe Renovation Is The Way To Go.

BY JUDY DAHL

Although the economy is still challenging, now is the time to make needed renovations to your facility, indicates Lisa Smith, marketing manager at engineering firm BT Squared, Inc.

"There are more skills, services and grant money available than ever before—there's money sitting in some programs and they can't find people to take it," she says. "If you take the long view and retool now, you'll be so much further ahead when the economy comes back."

To start, determine what you're trying to achieve and how much you want to spend. "The scope can vary greatly. Is it a simple façade renovation to upgrade the look of the building? Do you need to meet ADA regulations? Is it for appearance or to extend the life of the building?" asks Diana Dorschner, principal at architectural firm DorschnerAssociates, Inc.

And when you set your project budget, think carefully about your contingency fund for unforeseen conditions. "With a renovation, this has to be slightly larger than with new construction," says Rick Gabriel, architect and director of sustain-

able design at DorschnerAssociates, Inc. "You might tear open walls and find pipes or electrical wiring you didn't think were there, and now they have to be moved. Getting the new work to fit in with the old tends to make renovations more complicated."

Area experts recommend involving your architects, engineers and construction managers from the beginning of the project. "We're seeing continuing and improved collaboration between designers and construction people to best meet building owners' needs," notes Ron Luskin, director of business development and marketing at Arnold & O'Sheridan Consulting Engineers.

Evaluate Your Building

They can help you assess your entire facility up front.

"Even if you're just renovating one space, it may have implications for the rest of the building, the common areas or the HVAC (heating, ventilation and air conditioning) system, for example," Gabriel says. If you don't address these factors, you may end up spending more to

fix problems later.

As part of your evaluation, you'll want to get a baseline understanding of your energy consumption.

"Most utility companies can provide owners with online tools to track their energy use, and where owners need more specialized tracking of their energy costs, we work with them to provide a custom energy dashboard," explains Mark Tusler, environmental engineer and principal at BT Squared, Inc.

You may find that some of your systems need adjustment. "Your mechanical systems may need recalibrating to operate more efficiently, or they may need to be replaced to reduce energy use and improve air quality and comfort," Luskin says.

"You may want to add occupancy sensors to your electrical or lighting systems, or update your telecommunications systems, with forethought to five or 10 years from now when you might want to further expand."

A renovation can provide the opportunity to take measurements of your facility and create plans, too. If you're not the

www.greatermadisonchamber.com

original owner of a building, you may not have its original plans and blueprints. And today you may be able to get plans in digital format. Increasingly, designers are using building information modeling (BIM) software to create 3D plans, especially for large, complex projects.

"It creates a database of a building—every door, window, wall, and component," says Gabriel.

"It helps you manage your building more effectively and gives you a model for any future projects," Dorschner says. "It's easy to find any component of a building in the database, and it's easy to modify as things change."

There may also be opportunities to improve operations.

"We'd look at your whole process to see how we could improve the way it moves through your facility," says Smith. "We can often find some quick wins."

A building has to operate in an efficient fashion to deliver what the owner needs for the bottom line, Luskin observes.

"You need to think of how you'll create value and drive a benefit from your building project," he says. "You need to look to innovation, flexibility and improving productivity to realize a return on your investment."

Use Green Strategies

Sustainable design strategies can help drive a benefit from your renovation.

"Begin with the 'low hanging fruit,'" meaning relatively inexpensive, easily implemented green elements, advises Eric Truelove, director of sustainable design at

The Renschler Company, which provides design/build construction services.

"Look at interiors first," he says. "Go with Green Seal products (certified as environmentally friendly) where possible, including paints, glues, adhesives and carpeting to keep VOCs (volatile organic compounds) down for improved indoor air quality."

Then look for energy saving measures. "If you have light fixtures over eight years old, it's time to replace them, and you should put lights under occupancy control in most areas—fixtures within 20 feet of a window should have a combination of occupancy and daylight control. This technology, which detects activity through sound and infrared heat and turns lights on or off, has been around for some time but the sensors have improved considerably."

In terms of water use, Truelove recommends replacing plumbing fixtures more than five years old, switching to dual-flush toilets and low-flow showers, if applicable, and adding in-sink aerators to reduce water usage. "These are all fairly inexpensive," he notes.

If your HVAC system is more than 12 years old, it probably needs replacing.

"Also look at air-to-air energy recovery—a way to recapture all the exhaust air leaving a building and use it for heating or cooling," says Truelove. "It uses use far less energy."

Building envelope (walls, floors, windows, doors, roof) issues are more expensive. "We typically evaluate them if the building is more than 15 years old, and

improvements like better wall insulation and new windows or roofing make a lot of sense if they're more than 25 years old," Truelove says.

A solar hot water heater makes sense if you use a lot of hot water.

"And if you really want to go to the highest fruit, look at solar panels," says Truelove.

"In many cases electric utilities will pay you twice the normal cost of energy generated. It's expensive, even with available rebates, but it does work very well if you have a lot of money. But first do all the other things."


Incentives available through Focus on Energy can help shorten the payback of these investments. "There are many programs available," Luskin says.

"And it's always best to engage the Focus on Energy people early to make sure you understand the requirements for obtaining funding. Then you can ensure your project will meet them."

LEED and Green Globe

More building owners are now interested in green building ratings and certifications. "You can rely on the LEED and Green Globe systems," Truelove asserts. "If your space is more than 50,000 square feet, consider LEED. If it's smaller, Green Globe is much more economical and suited to smaller buildings."

The certifications have gained significant market recognition, Dorschner notes.

"Now people are familiar with the systems, and how certification guarantees performance criteria." 



www.greatermadisonchamber.com

PHOTO COURTESY OF SARA INVESTMENT REAL ESTATE



Dorschner/Associates, Inc.'s renovation transformed a pre-engineered metal warehouse on Nesbit Road into a colorful retail property.

MAY 2010 | Page 11