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Rockwell Automation – Green Roof**Challenge**

Rockwell Automation, headquartered in Milwaukee, provides industrial automation control and information systems and services that help manufacturers achieve a competitive advantage in their businesses. The company employs about 19,000 people.

The company had been hoping to install a green roof on the eighth floor roof of its headquarters building, the historic Allen-Bradley building on Milwaukee's near South Side. A good opportunity presented itself in the form of a grant from the Milwaukee Metropolitan Sewerage District for reducing stormwater flow into the sewer system.



Rockwell Automation's green roof

Strategy

The company hired Christiansen Roofing of Milwaukee to carry out the transformation of the roof. The work started in June 2010 and finished three months later. 48,500 square feet of plants were planted on the 71,000 square-foot rooftop, including 12 varieties of sedum and 12 varieties of native perennials such as Spiderwort and Black-eyed Susan.

Results

The roof became the largest single level green roof in the state. In order to quantify the impacts, the company equipped the roof with two weather stations and a Rockwell Automation Data Management system, which measures and displays a number of environmental factors, including temperatures, water moisture content, and estimated water retention.

Although the cost of converting the roof could not be justified by a simple return on investment based on energy savings and roof maintenance, it became financially viable because of a Federal Grant made available through the Milwaukee Metropolitan Sewage District, providing over \$800,000, which offset 80% of the cost of the conversion. The green roof significantly extends the lifespan of the roof to at least a 40-year period, compared to 15-20 years from a normal roof, which in Rockwell Automation's case was a membrane with rock cover. It does this by protecting the roof from ultraviolet light and by reducing temperature variation. It provides some insulation benefits as well, saving energy costs.

Since the green roof is on the same floor as the area used to entertain customers and host events, it has aided the sales team in boosting the company's image. This has proven important, since Rockwell Automation sells products to make other companies more efficient and productive. It is a visible sign that the company is dedicated to this mission.

The city is also a principal beneficiary. To date, over 356,000 gallons have been diverted from entering the sewer system. The roof can hold up to 40,000 gallons of water, which makes it capable of capturing 1.4-inch rain events.

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