Economy Environment

Sustainable San Diego

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SAN DIEGO BUSINESS JOURNAL

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Rick Urban
Quality Controlled Manufacturing Inc.

Elliot Hoffman
True Market Solutions

SDSU's new Student Union

This is the first in a new series of monthly supplements highlighting the region's sustainable business practices and the economic opportunities emerging in resource management, renewable energy and engaging corporate culture for a more efficient, profitable bottom line.

For information on how you can participate in this project and sponsorship availability contact us at: 858.277.6359 or email bbaranski@sdbj.com

Solar electric panels are among the many energy-efficient systems Qualcomm Inc. employs to reduce utility costs and curb use of fossil fuels.

TAKE CHARGE OF YOUR ENERGY AND SAVE

Finding the Right Combination of Technologies is Key to Avoiding Financial Risks

■ By Terry Clapham

When Qualcomm Inc., decided to take greater control of energy consumption at its San Diego locations, the technology selected was combined heat and power (CHP) gas turbines, among the most efficient energy sources available because in producing electricity it also provides thermal energy.

Today, Qualcomm's three CHP systems deliver more than 13.5 megawatts of reliable, ultra high-efficiency electricity that meets up to 90 percent of building needs and produces waste heat to run absorption chillers that provide cooling for the facilities and data centers. The company's satisfaction with the systems has resulted in a decision to add another 4.3-megawatt CHP system in 2014,

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SDSU's new Student Union Will Be a Flagship for Green Technology

■ By Beth Downing Chee

The new Student Union at San Diego State University is taking the concept of "going green" to new heights with the installation of a green roof.

The LiveRoof Green Roof System was installed by Florasource Limited and covers a 1,382 square-foot space on the roof adjacent to the building's dome which will soon be a campus icon.

"The new Aztec Student Union was envisioned from its earliest planning stages as an exemplar of the most rigorous standards in environmentally sensitive design and construction," said Robert Schulz, university architect and associate vice president of operations.

"The roof of the new union is outfitted with highly reflective roofing materials to reduce heat load; photovoltaic panels that generate a portion of the building's electrical needs; and a rooftop garden that both slows runoff from the roof and tempers the space underneath from external temperature swings," Schulz continued.

The green roof is just one of the energy

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Santee Manufacturer QCMI Completes Inaugural Program on Sustainable Practices

■ By Tom York

Rick Urban, a top executive at Quality Controlled Manufacturing Inc. (QCMI) in Santee, is always seeking better ways to keep his complex machining business on the leading edge of new practices and processes.

With innovation top of mind, QCMI recently completed an inaugural six-month sustainability program under the auspices of San Francisco-based consulting firm True Market Solutions in partnership with San Diego Gas & Electric Co.

Two QCMI employees met with representatives from eight other businesses in a "sustainability circle" to find new sustainable ideas such as installing sustainable lighting in the 65,000-square-foot shop,

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Organizations Join Together in Innovative Sustainability Circles

■ By Marion Webb

Last week, representatives from nine handpicked small- to mid-size San Diego organizations met with local experts to learn how they can create sustainability and long-term success by "doing more with less."

Elliot Hoffman, founder and CEO of San Francisco-based consulting firm True Market Solutions (TMS) which together with San Diego Gas & Electric Co. (SDG&E) created the sustainability circle program to help small- to mid-size businesses inspire changes in the environmental, social and economic aspects, said that the program's early successes are already visible.

"The goal of the program is to help companies improve their profitability by fully embracing and embedding sustainable business practices," Hoffman said. "There is a myth that sustainability will cost you a lot of money when in truth, it will make you money."

TMS persuaded California's utility companies—SDG&E, Pacific Gas and

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Circles:

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Electric Companies, Southern California Edison and Southern California Gas—to invest in the concept. SDG&E helps TMS identify local groups that would benefit from the program, and agreed to pay 75 percent of the $7,500 up-front investment each firm makes to become a member of the sustainability circle, Hoffman said. In addition, TMS charges each firm a flat rate of $1,875 for running the program, including hiring the sustainability experts and coaches.

The first San Diego sustainability circle comprised nine local companies, including Ken Blanchard Cos., a developer of leadership training programs for large corporations (350 local employees); the Balboa Park Cultural Consortium, (1500 employees); Carlsbad-based flower grower Mellano & Co., (250 employees); and Santee-based machining business Quality Controlled Manufacturing Inc. (QCMI) (100 employees); MG Properties, (60 employees); Hunter Industries, Irrigation and Control Manufacturer, (900 employees); North County Health Services, (500 employees); Mitchell Industries, (2000 employees); and CDC Small Business, (100 employees). These firms completed the first San Diego-based sustainability circle on Dec. 16, 2013 and came up with a total of 246 initiatives with 75 being gas and electric-specific, Hoffman added.

"This is a very action-oriented program," Hoffman said. January 15th marked the third session of the second sustainability circle with nine San Diego-based organizations, including San Diego's Anthony's Fish Grotto restaurants; Doncasters Group Ltd., an engineering firm in Chula Vista; the City of Chula Vista; Neighborhood House; Cobham Defense Electronics; Monterrey The Natural Choice; and Francis Parker School in San Diego. By year-end, Hoffman hopes to run eight circles in San Diego; five in the Bay Area; and four in Los Angeles County.

"Our goal is to launch 40 circles in California this year alone," Hoffman said.

Hoffman, whose passion about sustainability issues shines through, said it took time to persuade SDG&E and other utility companies to buy into the program. Erin Coller, SDG&E's communications manager, said that SDG&E and TMS worked together on integrating the energy efficiency resources and services available to SDG&E clients, such as On-Bill Financing and other incentive programs.

"Initial efforts focused on recruiting mid-sized business customers who would most likely benefit from the auditing process and assistance with identifying ways to save energy and cut costs with minimal capital investment," Coller said.

Hoffman credits SDG&E for being a large part of the program's early success. "The utility companies have been generous to support their customers by making it almost free to them," Hoffman said.

The participating groups, in turn, also need to be committed and willing to invest their time and money to implement the various initiatives. "It's about changing the culture of the companies and being conscious of the resources they are using," Hoffman said. "We want to help them change, so it becomes their natural way of doing things."

Hoffman, a former small business owner, said he knows the challenges well. Together with his wife, Hoffman started a bakery in their Bay Area home kitchen in 1974. Working 24/7 the bakery Just Desserts grew to 350 workers. In 2003, Hoffman sold the business to a private equity fund. In 2004, he became a member of the San Francisco-based Presidio School of Management, which runs a graduate program in sustainability management.

"I saw that the world of sustainability was growing in the United States and there was a lot of focus on the larger companies where the money is," he said. "I took my passion for smaller companies and attached sustainability to create a company that is devoted to small to mid-size companies."

He founded TMS in 2011 and now has 12 employees. For 2014, he hopes to reach $3 million in revenues, up from $400,000 in 2013. He expects the rising demand for sustainability circles will be the driving force behind TMS's own sustainability.

At the same time, Hoffman knows he has a big task ahead. "It will take another generation or two before real change is being made," he said.

This is how it works:

- A sustainability circle runs six months and includes nine to 10 organizations.
- Each business typically sends two managers to the monthly, all-day seminars where they learn from the sustainability experts, TMS' coaches and each other.
- During this time, each company typically develops 25 initiatives they can implement into a company-specific action plan.

"Each of the sessions deal with different initiatives that the companies can implement and around different subjects," Hoffman said. "We bring in local experts that talk about lighting, water, how to make products that use less packing and how to make real change."

QCMI, for instance, calculated that by investing a total of $850,000—the bulk of which will go toward converting to solar energy—it will save $370,000 annually on becoming more energy and resource efficient, Hoffman said.

"Turning off all the electronics at night will save QCMI $2,600 a year; going to double-sided printing will save more than $12,000 a year and adding Big Ass Fans' (fans) in their facility, can save them $20,000 a year by cooling more efficiently," he added.

Hoffman noted that the above figures are estimates, but said the action plan aims to give each participant a good analysis of the cost savings in materials and energy.

Flagship:

➡ *from page A23*

conservation features designed into the Student Union with the goal of reaching LEED Platinum certification, the highest rating for green buildings given by the U.S. Green Building Council.

"This rooftop is unique," said Tom Hawkins, owner of Florasource and the Southern California representative of LiveRoof. "All of the storm water runoff, including from the green roof area, will be directed to three large 50,000-gallon tanks resting below the inner courtyard at ground level. This water will be stored for reuse in the landscape, including irrigation of the green roof as needed."

The plants for the green roof are flowering succulents chosen specifically for their resistance to the harsh conditions a rooftop in San Diego will face. Though the roof will be closed during normal operating hours, guests will be able to enjoy the garden during special events and activities held at the union.

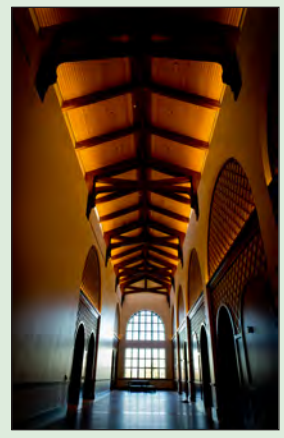
SDSU will "Welcome Home" the Aztec community with the grand opening of the Aztec Student Union on March 7, 2014. The 206,000 square-foot "campus living room" will be the site for special events during The "Grand Dedication Week" March 3 through 8.

Submitted by San Diego State University.

Beth Downing Chee is media relations manager for San Diego State University.

Article photos courtesy of SDSU.

SDSU's new Student Union's Sustainable Features Include:



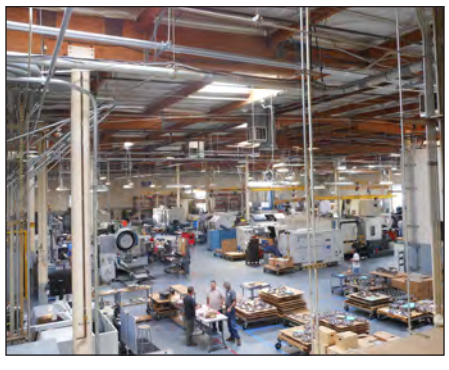
1. Nearly 80 percent of the materials from the original student union, Aztec Center, have been recycled or will be reused in Aztec Student Union.
2. Wood used in the feature wall of the Café Dining area is reclaimed from a previously demolished structure and has been given a second life in this new facility. This wood qualifies as 100 percent recycled material.
3. A minimum of 50 percent of all new wood on the project (not including reclaimed wood in the Dining Hall and any wood from the old sycamore tree) was specified to achieve Forest Stewardship Council (FSC) certification.
4. All wood floors on the project are actually not wood, but bamboo. These highly durable compressed strand-woven bamboo floors qualify as a rapidly renewable material, made from plants that are typically harvested within a 10 year or shorter lifecycle.
5. Composite wood, agrifiber products, and laminating adhesives used in the project contain no added urea-formaldehyde resins, improving indoor air quality and reducing occupants' exposure to carcinogens and irritants in the indoor environment.
6. Natural daylighting and operable windows which reduces dependence on artificial lighting, increases ventilation effectiveness and control.
7. Solar panels for on-site renewable energy to reduce carbon consumption.

Practices:

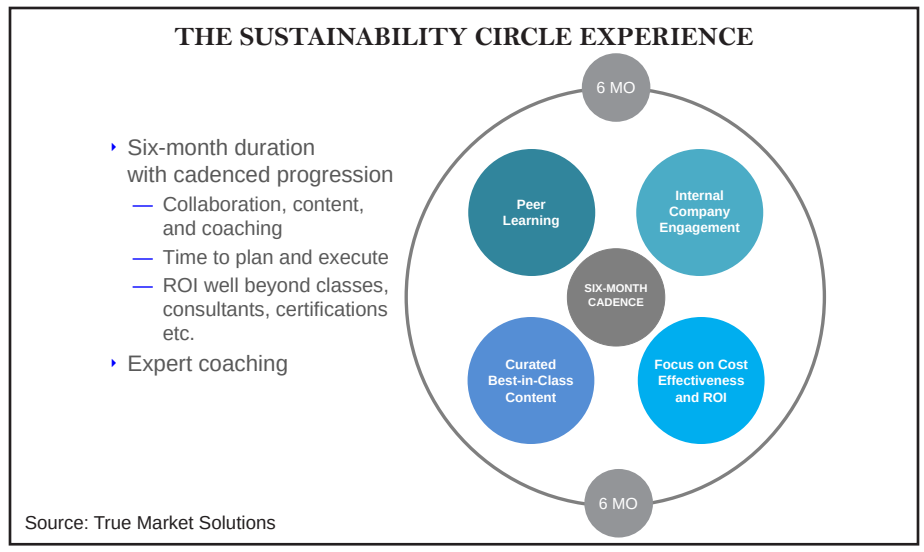
➡ *from page A23*

and changing capacitors that control the flow of current to the company's machines for precise control of electric consumption. QCMI workers also were instructed to switch off equipment when it was not in use, another idea that came out of the monthly meetings. The company even went so far as to print needed documents on two sides of the paper instead of one, and looked at ways to reduce the overall volume of printing.

"The idea was to reduce our carbon footprint," said Urban, who holds the titles of COO and CFO. "But reduce it in ways that made financial sense. We wanted to take steps that related to bottom line profits."



"We looked at what other companies were doing, such as installing motion sensors to turn lighting off when not needed," he added.



Following the monthly meetings, QCMI's staff closely examined its processes to develop ways to reuse waste material from manufacturing that has previously been thrown into the recycling bin. For example, waste material from fusers (equipment used to bring air into an auxiliary generator on board an aircraft) is now used to make another part, saving money and boosting profits.

"We figured out how to cut the center out of the fuser, and make another part from it," he said. "We were previously able to recycle that material, which was good, but now we've come up with a higher use."

QCMI specializes in producing components with complex shapes and contours all with a high degree of quality required for precision equipment. Customers come from aerospace, heavy equipment industries, oil and gas and power generation industries as well as the military. To name one product, QCMI makes a special door for passenger jets modified to carry freight. The door allows the flight crew to enter the aircraft from underneath the cockpit.

"The aerospace industry had been in a down cycle for quite some time, but is now coming out of that," said Urban. "And this is trickling down to us." QCMI does business with so-called Tier 1 suppliers to the two major aircraft makers, Boeing and Airbus. Those Tier 1 customers include $13 billion UTC Aerospace Systems, which emerged after the merger of Hamilton Sundstrand and Goodrich.

QCMI is taking the lead along with many customers who already have sustainability programs in place.

The 36-year-old QCMI was named one of the San Diego Business Journal's fastest growing private companies in 2012, coming in at 69 on the list of 100, and reached another milestone about the same time when the company announced the hiring of its 100th employee. In November 2012, the San Diego Society for Human Resource Management honored QCMI for its workplace practices, an award based on nominations from its employees.

Urban said adopting sustainable practices is part of an overall approach to increase sales and profits.

"As a manufacturer, we're always asking how to do it more efficiently, so getting involved with an outside sustainability circle, we felt like we would get outside views of what we were taking on," he said. "We wanted to see what other people were doing."

"Our customers provide us feedback, since they're trying to do the same thing," he added.

QCMI has installed evaporators to pull hazardous materials from water used in the manufacturing process into a dry product. Trucks no longer have to haul the toxic water in drums to a treatment facility. "Now we just have to deal with the residue," he said.

Urban said sustainable practices have become important with water and power in short supply in drought-stricken Southern California. "It's what our customers have come to expect," he said.