

# RAVEN

| Issue No. 17 |



Glen Raven Customers Share Best Practice Insights

LET ENDLESS POSSIBILITIES BEGIN™



Dear Readers,

One of the most popular business concepts today is “best practices.” Broadly defined, best practices are processes that generate superior results and which lend themselves to emulation by many different organizations.

This issue of the Raven is devoted to sharing best practices followed by some of our customers. Every day we learn of innovative approaches that our customers have developed, and we’re fortunate that these customers are often willing to share their ideas for everyone’s benefit.

Best practice examples in this issue truly encompass the full range of business challenges, beginning with targeted marketing. Our cover story concerns a successful campaign that our Technical Fabrics team launched this summer in cooperation with G&K Services of Minnetonka, Minnesota. Their target was oil field workers in Texas, and the results have been impressive.

In the area of global commerce, Wm. J. Mills & Co. of Greenport, New York, has harnessed the Internet to develop a global marine business and achieve robust growth in the sale of distinctive canvas bags. Hoover Canvas of West Palm Beach, Florida, has also pioneered best practices with the Internet by marketing awnings and shade structures through a strategic Web presence.

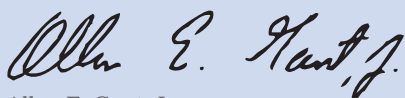
As the world changes rapidly, transformation becomes a priority, and AR Tech of Fontana, California, has led the way in how a company can sustain core strengths while growing and enhancing profitability. Succession planning is an issue for every company, and we are featuring two examples of best practices in this area – The Chism Company of San Antonio, Texas, and Acme Sunshades of San Leandro, California. Also highly relevant are insights into client relationship building from Baraboo Tent & Awning of Baraboo, Wisconsin.

Operational efficiency lends itself to a great many best practices, and two of the best examples are Marygrove Awnings of Detroit, Michigan, and Kansas City Tent & Awning of Kansas City, Missouri. Marygrove is leading the industry with best practices in information technology, while Kansas City Tent & Awning is a master at productivity enhancement through material selection and process improvements.

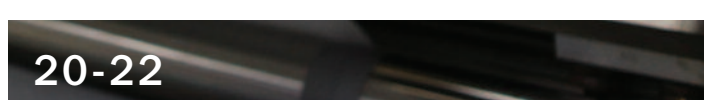
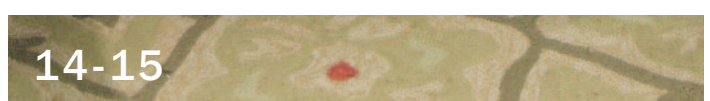
What are the best practices of entrepreneurs? John Highfield of Gladwin, Michigan, shares the story of how he developed The Boat Guard, an automated pontoon boat cover. Closely related to entrepreneurship is the ability to lead by design innovation, which is detailed by TUUCI, a shade structures company in Miami, Florida. Product development is also at the heart of entrepreneurship as illustrated by NanoH<sub>2</sub>O of El Segundo, California, a leader in technology for saltwater desalination through reverse osmosis filtration.

Adding additional dimensions to our best practices issue are Wieland Copper Products of Pine Hall, North Carolina, Summer Classics of Birmingham, Alabama, and Rainier Industries of Seattle, Washington. Working in partnership with our logistics subsidiary, Wieland is excelling at the application of logistics in an industry that thrives on just-in-time deliveries of extruded copper products. Summer Classics is leading the way with best practices in merchandising within the patio store channel, and Rainier Industries demonstrates how to succeed with a growing diversity of products.

As you will read, there is no shortage of innovative thinking among our customers. These articles are only a small sampling of the incredible range of new ideas bubbling up every day. It’s this commitment to innovation that gives us great confidence for the future that we share with all of our customers, trade partners and associates.



Allen E. Gant, Jr.  
President and CEO  
Glen Raven, Inc.



**ON THE COVER** Oil and gas workers in San Antonio, Texas, were the target of a marketing campaign by G&K Services and Glen Raven Technical Fabrics.

**INSIDE COVER, TOP** Merchandising can enhance sales for patio stores as illustrated by Summer Classics.

**INSIDE COVER, BOTTOM** Wm. J. Mills & Co. of New York is marketing distinctive canvas bags worldwide.

## TARGETED MARKETING

Challenge – Target marketing for measurable results

Best Practice Example – G&K Services  
Minnetonka, Minnesota  
www.gkservices.com

# TARGETED MARKETING REACHES TEXAS OIL AND GAS WORKERS

As an opportunity for a targeted marketing program, San Antonio, Texas, with its booming oil and gas industry is the ideal place for the ideal product. The ideal product in this case is protective work wear distributed by G&K Services and incorporating Glen Raven's GlenGuard® FR fabrics.

"We began this program with a clearly identified need," said Gary Urbanski, marketing manager for G&K Services, one of the nation's largest work-apparel service providers. "Oil and gas workers need to wear protective work wear, but it's very hot in the Texas oil fields. We had the product that could provide protection and also keep workers cool and comfortable."

The six-month campaign was launched in San Antonio in May with billboards placed along commuter routes used every day by oil and gas workers. The message was clear and simple: "The Coolest FR Workwear," which results from GlenGuard FR fabrics that meet all industry safety standards yet are lightweight for greater comfort.

Outdoor boards were supplemented with radio advertising on stations frequently listened to by the target market. Helmet stickers and posters added a guerilla element, while national print advertising was used to carry similar messages to oil and gas field management personnel.

The advertising campaign was managed by Glen Raven Technical Fabrics Marketing Director Rich Lippert and tightly integrated with the G&K San Antonio office through sales force activation including dedicated phone lines. The program has served as a rallying point for G&K personnel as they enjoyed a spike in incoming calls and greater product and brand awareness throughout the marketplace.

"We have definitely increased our book of business in the region as a result of this campaign," Urbanski said. "The results are still being tallied, but we know sales leads have increased substantially; we have signed additional business and benefited from greater product awareness. We have had far more people coming to us and asking for more information about our FR offering."

Glen Raven's technical fabrics team, including Rodney Holland, market manager for GlenGuard FR fabrics, has worked closely with G&K throughout the program, including Mark Lewis, G&K general manager in San Antonio.

"Everyone invested the time to understand the market, the target audience and the product benefits for end users," Urbanski

said. "There are great opportunities in targeted marketing and working cooperatively in the industry. It's fun, it's interesting and it works."

## Targeted Marketing Best Practices

Below are some of the best practices in targeted marketing illustrated by the G&K Services campaign:

- **Find the right location** – Targeted marketing requires certain crucial elements to be successful, including a concentrated group of potential users in a defined area that can be reached cost effectively. San Antonio was ideal for this campaign with a high concentration of oil and gas workers who needed protective work wear that was cool.
- **Define the benefits** – Also essential to effective target marketing is the ability to articulate clearly the product benefits to end users. For the San Antonio program, the billboard and radio messaging focused on helping oil and gas workers not only be safe on the job, but also cooler and more comfortable with work wear made of lighter-weight fabric.
- **Target the media** – Targeted marketing requires efficient and effective channels of communications. Billboards supplemented by radio were ideal to reach oil and gas workers as they drove to and from job sites.
- **Integrate with sales** – Creating awareness and demand is only one half of the targeted marketing equation. Sales must also be activated to follow up effectively on newly generated leads.
- **Collaborate** – Collaborative efforts can leverage budgets and personnel within targeted marketing programs. G&K and Glen Raven shared a common goal of increasing the sales of work wear with FR fabrics. It became an effective partnership as the two companies collaborated to define the needs of the end user and express the product's benefits in language that resonated with oil and gas workers.

**RIGHT, TOP** Oil and gas workers enjoy the comfort and protection of work wear provided by G&K Services and featuring GlenGuard® FR fabric.

**RIGHT, BOTTOM** G&K and Glen Raven marketing teams in front of a billboard; left to right, Rich Lippert (Glen Raven), Keith Zapalack (G&K), Steve Hundgen (Glen Raven), Mark Lewis (G&K), Brandon Fuller (G&K), Gary Urbanski (G&K) Rodney Holland (Glen Raven) and Jarod Guier (G&K). Work wear featured in the campaign is highly protective, yet attractive and lighter weight for increased comfort.



# WM. J. MILLS GROWS GLOBALLY WITH BOAT OWNERS, BAG AFICIONADOS

GLOBAL COMMERCE  
Challenge – Capitalizing on the global economy

Best Practice Example – Wm. J. Mills & Co.  
Greenport, Long Island, New York  
[www.millscanvas.com](http://www.millscanvas.com)

Wm. J. Mills & Co. traces its history to the late 19th Century when the company was founded by William Mills, a Scottish immigrant who began a sail loft on Long Island. The company today is owned and managed by a fifth generation that has expanded the business to include a wide variety of marine canvas, awnings, covers of all types, patio cushions and a distinctive line of handcrafted canvas bags. In the process, global commerce has become an essential part of the company.

“For many years, our company was the exclusive supplier of canvas for Boston Whaler boats, and today we work with Whaler dealers and owners all around the globe for canvas refits,” said Bob Mills, vice president. “On our website, boat owners can review more than 3,000 Whaler part numbers organized by model and year. Boat owners email photos to us so that we can match the right canvas for their boats anywhere in the world.”

The company website is also supporting a robust global business in canvas bags. For many years, the company crafted bags from scrap fabric during the off-season as a sideline. When Jamie Mills, current president and CEO, joined the company, he focused on expanding the bag business through online sales and exclusive boutiques.

“Wm. J. Mills is a great brand with an iconic label, which people are attracted to,” Jamie Mills said. “We are fortunate to be located in an area attuned to unique accessories and fashion, which has created a strong following for our canvas bags.”

In addition to online sales to consumers, Wm. J. Mills offers exclusive bag designs to boutique stores throughout the region and has attracted coverage in the national news media, including Vogue, Cosmopolitan, Rolling Stone and The New York Times. International sightings of their bags are common.

“A friend of my daughter’s saw one of our bags in a subway in Singapore,” Bob Mills said. “Our employees enjoy receiving bag-sighting photos from around the world. It seems ironic that here we are a manufacturing company located in the heart of an exclusive tourist area of Long Island shipping sewn goods to Asia.”





### Global Commerce Best Practices

Global commerce best practices from Wm. J. Mills & Co. include the following:

- **Embrace global commerce** – While competing with companies all around the world can be intimidating, it's essential to get past the fear, do your research and use your creativity to find ways to capitalize on global market opportunities.
- **Technology** – The Internet has opened up the global marketplace to virtually everyone through e-commerce websites, email and the power of social media to create a following. Internet technology is the single greatest avenue for accessing worldwide opportunities.
- **Product quality and consistency** – If you participate in the global marketplace, product quality and consistency must be foremost. A product issue thousands of miles away is expensive to resolve and can quickly damage a brand.
- **Outside assistance** – Numerous professional trade and government resources are available to provide information and assistance, particularly related to the paperwork required for international shipping. Attend a seminar, access background information on the Web and contact your trade association.
- **Freight forwarders** – Speaking of outside assistance for global trade, a solid step forward is developing a relationship with a freight forwarder that can manage global shipping, including customs regulation.
- **Flexibility** – It requires flexibility to be successful in global commerce. Recognize that things will not always go as planned, requiring creative problem solving and the ability to adapt to customer needs. Build flexibility into your global business plans.

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**LEFT, TOP TO BOTTOM** Wm. J. Mills is owned by a fifth generation of the Mills family; left to right are Bob, Bill and Jamie Mills. Boston Whaler boat owners worldwide call on Wm. J. Mills for canvas refits. Global commerce is also supporting a robust canvas bag business by this New York-based company.

## TRANSFORMATION

Challenge – Transforming for growth, profitability

Best Practice Example – A&R Tarpaulins, Inc.,  
AR Industries/AR Tech  
Fontana, California  
www.artarpaulins.com

## AR INDUSTRIES TRANSFORMS WITH AR TECH



When Bud and Carmen Weisbart bought into the ownership of A&R Tarpaulins, Inc. in 1978 from Ralph Weisbart and Aundra Arrington, it was a successful company focused on the fabrication of tarps used as truck covers, truck cover systems and industrial curtains, as well as awnings and shade structures. It was a good business, but the Weisbarts knew the company could grow and improve job security for its people by transforming into a provider of value-added products.

“We began by clearly defining the business we were in, which was the manufacture of engineered products that are totally or primarily made of fabric,” Bud Weisbart said. “This definition gave us a very open environment that we could pursue in diversifying our products and markets and transforming the company.”

The company’s transformation began by providing tarps for facilities protection at aerospace companies in Southern California. Based on early successes with these basic assignments, A&R was asked to expand its product offerings into clean work area enclosures and other ground support. As A&R proved itself with increasingly complex assignments, aerospace customers began to request technical products for flight hardware.

“We had to grow our staff with engineers and designers who could help us comply with strict quality standards,” Weisbart said. “We also had to ensure that our entire staff understood the ramifications of our new product offerings. For example, a truck cover can be off by a few inches and there’s no problem. For an aerospace product the tolerance might be a quarter of an inch or even less.”

A&R personnel not only learned greater precision in their fabrication techniques, they also learned how to work with more sophisticated materials featuring high and low temperature and electromagnetic interference (EMI) protective qualities required by aerospace applications. The company achieved ISO 9001 certifications, including AS 9100 aerospace standards.

“All of this transformation did not occur overnight. It took many years of recruitment, training and development to get where we are today,” Weisbart said. “We became very much involved in collaborative development with aerospace engineers

and grew step by step. One engineer would talk to another engineer and as a result our assignments increased.

“At the same time, we never turned our backs on our core work of truck covers and industrial curtains and awnings and shade structures that provided the financial resources needed to invest in new businesses,” he said. “We continue to innovate in our core business as evidenced by our proprietary tarp repair tapes.”

### Transformation Best Practices

Transformation best practices from AR Tech include the following:

- **Define your core competency** – The ideal starting point is to define your organization’s core competencies in broad terms that allow you to consider diversification opportunities. This definition should include a clear statement for why you exist.
- **What value can you offer** – Closely associated with defining your purpose is to define the value you will bring to the market through transformation and diversified offerings. The goal should be to identify unique opportunities with value-added features.
- **Invest in your people** – Transforming a company requires that you invest in your people and that you retain them for a number of years in a stable work environment where organizational knowledge and expertise grows.
- **Long view** – Transformation does not occur quickly; in the case of A&R, the company has been pursuing its transformation/diversification strategy for more than 30 years. It’s essential to progress step by step, earning a reputation for quality and reliability in the new product or service area.
- **Base business** – While you are transforming your company, it’s critical to have a base of business that can generate the cash flow needed for investing in the future.

**TOP** Bud and Carmen Weisbart have transformed their company from a commodity provider of industrial tarps to a valued aerospace industry supplier.



# BOAT GUARD BRINGS INNOVATION TO MARINE COVERS

## ENTREPRENEURSHIP

Challenge – Starting a new enterprise

Best Practice Example – Boat Guard

Gladwin, Michigan

[www.theboatguard.com](http://www.theboatguard.com)

John Highfield was like most new boat owners. For the first two years after acquiring his pontoon boat he faithfully covered it, stem to stern, after each outing. And, also like many boat owners, he grew tired of wrestling with the boat cover and stopped using it in year three. You can guess what happened next.

“My boat looked like it was living in dog years. For every year that went by it looked like it aged seven,” Highfield said. I looked around at all my neighbors’ boats and they were all going through the same thing. I remember one neighbor came over and said ‘it’s too bad they don’t make a cover where you can just push a button and it goes on.’ I thought to myself, that’s a great idea.”

The timing was perfect for Highfield, who had been a dry-wall contractor working on as many as 200 homes a year during the housing boom. With the recession of 2007, housing construction in the Michigan area came to a screeching halt and gave Highfield the time and the motivation to pursue his new invention.

After considerable trial and error, Highfield’s creation was in prototype form – a wireless, motorized pontoon boat cover. Push a button and the cover extends or retracts in 45 seconds, eliminating the toil of manually covering the boat. Further refinements came with the prototype and he began marketing the covers in 2010.

“It took six years from the time I had the idea to the time we installed the first Boat Guard cover; there were plenty of times when I wanted to quit, but I believed in what I was doing,” Highfield said.

The Boat Guard is ruggedly constructed of marine-grade materials and designed to cover an entire pontoon boat. It requires minimal power, so the drain on marine batteries is small. Highfield has been installing most of the units he sells, but is also establishing a dealer network.

“At 48 years of age and having worked for myself most of my life, I knew I couldn’t go to work for anyone else,” Highfield said. “Boat Guard has seen a lot of trial and error and it hasn’t been easy, but we feel good about where we are today.”



### Entrepreneurship Best Practices

Entrepreneurship best practices from The Boat Guard include the following:

- **Begin with a clearly defined, unmet need** – Highfield was certain that large companies had to be working on a retractable boat cover for pontoon boats, but he discovered no one else was pursuing the idea, creating an open opportunity. His personal experience and the experiences of other boaters confirmed the need.
- **Be prepared for trial and error** – Prototyping an invention is only the first step; while the prototype may function perfectly, be prepared to address flaws in design and fabrication when actual production begins.
- **Do not rush to market** – As the cliché goes, you only have one opportunity to make a good first impression. Going to market before a new product or service is perfected is a common mistake that dooms many entrepreneurial ventures by negative word of mouth compounded by social media.
- **Work ethic** – Long hours of hard work accompanied by high levels of frustration are common for most entrepreneurs.

It takes a tremendous work ethic and persistence to push through the hard times.

- **Promotion and marketing** – Getting the word out on a new product is an essential step, made easier through the Internet and by using the news media for new product publicity. Never underestimate the power of word-of-mouth communications.
- **Protect your idea** – A patent is advisable to protect your new idea. Highfield researched how to file a patent and submitted his own application.
- **Learn to adapt and change** – The initial design may be just what you had in mind, but listening to the marketplace can lead to important changes. Highfield has created a manually operated retractable cover for boats on which an electric motor is not feasible due to space limitations.

**TOP** John Highfield established his new business with the able assistance of his wife. Boat Guard is an automated, retractable boat cover for pontoon boats that Highfield invented and patented.

## CHISM COMPANY KEEPS BUSINESS IN THE FAMILY

SUCCESSION PLANNING – FAMILY  
Challenge – Transitioning the business within the family

Best Practice Example – The Chism Company  
San Antonio, Texas  
[www.chismcompany.com](http://www.chismcompany.com)

**R**oy Chism began working in the family business at the ripe old age of 5, accompanying his father at business meetings and spending time in the shop. He joined the business, which was founded in 1951, as an adult in 1977. He and his father worked closely and well together, focusing on commercial shade structures for a variety of markets and expanding the business through locations in San Antonio and Austin.

“My father did a good job of taking me into the business, and we had many talks about where we wanted the company to go,” Chism said. “When he passed away unexpectedly in 1983, I was in a good position to continue the business.”

In 2007, after more than 30 years in the business, Chism began to position the company for sale, assuming that neither of his two sons or daughter had any interest in carrying on the family tradition. All members of the family had worked for the company through high school and college, but each had moved in other career directions.



Roy Chism (left) has organized a multiyear transition program for bringing his son Ryan into the business.

## BILL FULLER FUNDS RETIREMENT WITH SALE OF COMPANY

SUCCESSION PLANNING – SELLING THE BUSINESS  
Challenge – Transitioning the business outside the family

Best Practice Example – Acme Awning Company  
San Leandro, California

**B**ill Fuller had owned and operated Acme Awning Company for 20 years in late 2003 when he decided it was time to begin thinking seriously about retiring. A successful sale of the business was essential to cashing in on his many years of hard work and investment.

“I didn’t have any family members or employees to transition the business to, so a sale was my only option,” Fuller said. “Like any business owner, my goal was to realize the greatest value possible from a sale.”

Acme Awning Company, which has been renamed Acme Sunshades, traced its history to 1922 with Fuller as the fourth owner. The company had established a solid reputation in the marketplace for quality products and good service, and Fuller felt the time was right for a sale.

He followed a methodical process in preparing his business for sale. A good bit of that process entailed disposing of excess and out-of-date inventory and strengthening the company balance

sheet. Fuller took time to prepare three years of income statements while also documenting various business processes he followed so that he could pass that knowledge along to a new owner.

“I did my homework and talked to several brokers and investment bankers and narrowed it down to a couple of companies to represent me; I finally selected the one that I thought was best,” Fuller said.

The broker told Fuller that it would take at least eight months to complete the sale, but things moved much faster. A buyer in the broker’s database expressed an interest in the business and based largely on Fuller’s preparation made an offer and closed the sale within eight weeks.

“The pace of events was very fast,” Fuller said. “I sold it at the top of market and agreed to a three-month training period during which I would work at the business training the new owner. Additionally, I remained a partial owner of the business

“After I graduated from the University of Dallas, I decided that I wanted to go into teaching,” said Ryan Chism, Roy’s 32-year-old son. “Over weekend visits and holidays, however, Dad and I would catch up on what was going on in the business. At that time, Dad was really reshaping the company and introducing new computer-driven machinery onto the shop floor.”

Ryan was impressed by the young people who had joined The Chism Company and found that the new technology created a dynamic environment that required new skills and new ways of thinking.

“The energy that I saw in the business was contrasting sharply with the slow, bureaucratic pace of an educational institution,” Ryan said. “That’s when I really began to miss the pleasure of making things and seeing the finished product in use.”

When Ryan came into the business three years ago, he and his father agreed to a multiyear transition process that had Ryan working in all parts of the business. His assignment was not just to learn how the business operates but to identify areas for improvement and establish long-range business plans.

“I think a multiyear process has reduced the effects of a learning curve,” Ryan said. “I have been able to work at improving the business one aspect at a time rather than taking on a large set of responsibilities all at once without adequate experience. It has also given my father and me space and time to figure out how we can best work together.”

Ryan and his father have agreed to a transition timeline of approximately six years at which time Roy, currently 56, plans to enjoy a more flexible work and recreation schedule.

“The longer the succession process, the more you can reshape your business,” Roy said. “Ryan has a different vision for the future, and we’re molding the business into that vision. At the same time, we both have a clear understanding of each other’s expectations.”

### Family Succession Planning Best Practices

The Chism Company experience with business succession illustrates these best practices:

- **Multiyear timeline** – A multiyear timeline for succession has many benefits. The new owner has time to not only learn the business, but to implement improvements and long-term strategies. A longer timeline also gives the current owner time to transition into a new phase of life.
- **Open communications** – Open and candid communications is essential during succession planning and implementation. Everyone should have a clear understanding of roles, responsibilities and timing.
- **Look to the future** – During the succession process, it’s essential to look as far into the future as feasible in terms of capital and people investments. Succession planning should not be just about ownership; it should entail long-range, strategic planning for the health and future of the business.
- **Not just at the top** – Business succession planning should not stop with the president and owner. Succession plans should be in place for every key individual in a small business.



Bill Fuller and his wife, Theresa, enjoy an Alaskan vacation as part of his retirement, which was funded through a successful sale of his awning business.

for an additional two years serving as the responsible managing officer on the company’s contractors license until the new owner was qualified to get his own license.”

### Selling The Business Best Practices

Some of the best practices emerging from Fuller’s experience include the following:

- **Preparation before the sale** – Preparing a business for sale is a crucially important step that may require two to three years of advance work. In Fuller’s case, he disposed of unusable inventory and resolved outstanding accounts payable while accumulating and organizing important financial data on the business.

- **People and equipment** – As part of the preparation for sale, remember the importance of having experienced people committed to the business, backed by the necessary equipment to get the job done.
- **Selecting an advisor** – Hiring a business broker or investment banker is an important step. When selecting a broker, check references and ask in detail about how your business will be marketed.
- **Assisting the new owners** – Potential buyers will surely appreciate and may require the current owner to stay on board for a period of months to provide training and assistance with transitioning current clients. A well-organized, written training plan that can be presented to the prospective buyers is a solid addition to the marketing package.
- **The marketing package** – Think about the selling points for your business and make sure these messages are in the sales presentation. Fuller had a number of supporting sales points including the fact that Acme had been in business since 1922, won numerous awards over the years and consistently scored high in customer surveys. Excellent vendor relationships and trade association leadership were also accentuated.
- **Setting a realistic price** – One of the most difficult and most important phases of a sale is setting a realistic price. No one wants to leave money on the table, but setting an unrealistic price is a sure formula for failure. Seek expert assistance in establishing the market value.
- **Structuring the sales transaction** – While business owners are naturally inclined to seek out the highest possible sale price for the business, it’s advisable to think through the structure of the sale and its potential tax implications. Consider the relative advantages of a stock sale over an asset-based sale if your business is incorporated.

## JUST-IN-TIME LOGISTICS

Challenge – Delivering high-value products just-in-time

Best Practice Example – Wieland Copper Products  
Pine Hall, North Carolina  
[www.wielandcopper.com](http://www.wielandcopper.com)

# JUST-IN-TIME LOGISTICS SUPPORTS HIGH-VALUE PRODUCTS



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**D**ating back to the Roman era, copper has long been revered for its amazing properties, ranging from electrical conductivity and antibacterial protection to waterproofing and malleability. Because of this metal's ability to add value in applications that range from construction to medical devices demand remains strong and market values high.

One of the world's leaders in copper and copper alloys is Wieland, a worldwide corporation headquartered in Ulm, Germany, that includes Wieland Copper Products in Pine Hall, North Carolina. Wieland Copper Products manufactures various types of copper tubing for the air conditioning and refrigeration industries, original equipment manufacturers, and plumbing tube distributors in the U.S. It's a high-tech operation that provides just-in-time product availability to customers with distribution centers in Ohio, New Jersey, Illinois, Georgia, Tennessee, North Carolina, Mississippi, New Hampshire, Texas and Missouri.

"Copper is a high-value metal that requires just-in-time shipping because our customers do not want to maintain inventories," said Scott Chilton, plumbing sales manager for Wieland Copper Products. "Sometimes we don't know what will be shipped on any given day until we come to work in the morning and receive the customer order. The shipment has to go out

that same day, and we have to be able to provide our distribution center and our customer with a delivery time they can count on."

To meet its customers' just-in-time expectations, Wieland Copper Products has formed a highly efficient logistics system that includes services from Glen Raven Logistics. Shared databases and electronic communications form the backbone of this finely tuned partnership.

"We need a logistics partner that can provide high levels of transparency in scheduling and shipping," said Tim Naulty, Wieland Copper Products purchasing manager. "The Raven Rater from Glen Raven Logistics has been a big step forward for us. We can see in real time the status of all shipments, and everyone is working from the same source of information."

Raven Rater is an online transportation management system that not only provides customers with quotes on shipment, but also the ability to schedule pickups and deliveries and track shipments in progress. Glen Raven Logistics Account Manager Jerry Vernon serves as Wieland Copper Products' primary point of contact.

In addition to providing access to online, real-time information, Wieland Copper Products also requires a logistics partner

with its own fleet of trucks and flatbed trailers for flexibility and responsiveness. A strong safety record and high levels of insurance coverage are core to the Wieland Copper Products logistics process.

“An essential element in logistics with Wieland Copper Products is our shared understanding of their customers’ needs balanced against DOT (Department of Transportation) regulations concerning number of continuous hours on the road by our drivers,” said Dan Cox, president of Glen Raven Logistics. “Working together from a common information source is essential as we collaborate in setting and meeting the expectations of their customers.”

### Logistics Best Practices

Below are some of the best practices in just-in-time logistics from Wieland Copper:

- **Transparency** – Transparency in logistics means that real-time information is available to everyone from a shared database. Everyone knows at all times the exact status of each shipment so there are no surprises.
- **Online communications** – Internet-based communications, such as the Raven Rater, change everything in logistics, providing real-time status reporting and continual communications between logistics providers, customers and, ultimately, the end user. The sophisticated logistics system employed by Wieland Copper would not be possible without the latest in information technology.
- **Reliability** – In a just-in-time environment, there is virtually no margin for error. When a commitment for delivery is made, there must be confidence that the date will be met and should something change, everyone will be alerted immediately.
- **Asset based** – Logistics companies often integrate multiple carriers managed by a centralized services team. For intense just-in-time industries, such as Wieland Copper, logistics providers must have their own fleets of trucks and trailers for greater levels of flexibility and responsiveness.
- **Partnership** – Partnership in logistics means that client and logistics provider share common challenges and develop shared creative solutions. Glen Raven Logistics appreciates the just-in-time requirements of Wieland Copper, and Wieland understands the added complexity of DOT hours on the road regulation compliance.
- **Safety and security** – When the product is as valuable as copper tubing, safety, security and insurance are paramount.

**LEFT** Wieland Copper Products and Glen Raven Logistics have formed a team focused on best practices in logistics support. Left to right are Jerry Vernon (Glen Raven Logistics account manager), Dan Cox (Glen Raven Logistics president), Scott Chilton (Wieland sales manager for plumbing), Tim Naulty (Wieland purchasing manager), Barbara Shaffer (Wieland sales account specialist) and David Gregory (Wieland director of finance and purchasing). **BOTTOM** Copper is a highly valued commodity, requiring careful handling and just-in-time delivery to customers nationwide.



RELATIONSHIP BUILDING  
Challenge – Forming long-term  
partnerships with customers

Best Practice Example – Baraboo Tent & Awning  
Baraboo, Wisconsin  
[www.barabooawning.com](http://www.barabooawning.com)

## BARABOO PROVES VALUE OF INVESTING IN PARTNERSHIPS

**W**hen Craig Culver and his family began planning the first Culver's restaurant in Sauk City, Wisconsin, in the early 1980s, one of the early steps was to secure a fabricator for custom umbrellas and awnings. After another fabricator had turned the Culvers down because the job was too small, Clyde Moon, owner of Baraboo Tent & Awning, agreed to take on the project.

Fast forward to 2012 and Culver's ButterBurgers and Fresh Frozen Custard has grown to more than 460 restaurants in 19 states, and Baraboo Tent & Awning has grown right along with them, providing awnings and umbrellas for each new location. It's a classic case history of forming lasting business partnerships.

"When my dad called on the Culvers, they had previously operated a couple of local restaurants, but no one had any idea that the new restaurant would take off as it did," said Andy Moon, who joined Baraboo Tent & Awning in 1996. "My father's philosophy was to treat others as he wanted to be treated himself."

Culver's needed umbrellas for their restaurant locations that could stand up to strong winds common in the Midwest. Baraboo applied its awning knowledge and crafted a tough and durable umbrella that they like to refer to as "an awning on a stick," reflecting its highly engineered construction.

"Craig Culver wanted a quality product that would be consistent from one location to the next," Moon said. "And they wanted to know that we would be there for them on time, every time. We've delivered over the years and have grown with them."

Since its founding in 1926, Baraboo Tent & Awning has been the leader in custom fabric craftsmanship, designing and manufacturing awnings and umbrellas, boat covers and many other applications. The work for Culver's helped the company expand its services to other national restaurant franchises.

"Building great relationships with customers is all about service and focusing on great results every time," Moon said. "Even if you lose money on one job you have to focus on the overall relationship and the long-term potential."



### Relationship-Building Best Practices

Baraboo's experience with Culver's illustrates these relationship building best practices:

- **Golden Rule** – You can never go wrong by following the Golden Rule – treating others as you would have them treat you.
- **Don't discount the small guys** – Every company starts small, and forming a supportive relationship in the early stages can lead to sustained growth over the long term.
- **Customer service** – There is nothing like outstanding customer service to build and sustain a relationship. Excellent communications and quick response to issues are core to relationship building.
- **Customization** – Offering customized products and services builds long-term relationships; relationships grow when your company is the only one – or the best one – to meet the need.
- **People** – Great relationships are sustained when your employees are well trained, encouraged to succeed and motivated by respectful treatment. Solid customer relationships must extend throughout both organizations from senior management and owners all the way to fabrication and service personnel.
- **Focus on results** – At the end of the day all that matters are results. You'll build strong relationships with customers when all of your employees have a results-oriented focus with the customer's needs front and center.

**TOP** On left, Craig Culver, president of Culver's ButterBurgers and Fresh Frozen Custard, and Andy Moon, co-owner of Baraboo Tent & Awning.

# HOOVER CANVAS ADAPTS MARKETING TO CHANGING TIMES

## AWNING MARKETING

Challenge – Marketing awnings and shade structures

Best Practice Example – Hoover Canvas

Fort Lauderdale, Florida

www.hoovercanvas.com

For many decades, the conventional wisdom in marketing awnings called for prominent displays in the Yellow Pages. After all, people “let their fingers do the walking” when it came time to make home purchases.

The Yellow Pages are still a viable marketing approach in some areas, but marketing tools and techniques have changed dramatically thanks to the Internet and a function called “search.” One of the leaders in this transformed thinking is Hoover Canvas based in Fort Lauderdale, Florida.

“When I first mentioned to my dad that we should cut back on our Yellow Page advertising he thought I was crazy,” said Matt Carroll, vice president with Hoover Canvas. “When I showed him the numbers on how we attract new business, he could see that our websites were stronger in producing leads and less costly.”

Hoover Canvas was established in 1949 and purchased by the Carroll family in 1979. The company focuses on Dade, Broward and Palm Beach counties, with a sister company in Baltimore and a distributor in the Bahamas. The company has continued to grow and change over the years, which is reflected in its marketing programs. An emphasis on Yellow Page and print ads has given way to five websites that emphasize each of the markets the company serves. By linking these sites and deploying key words in Web copy, Hoover enhances search results in its favor.

The company also sponsors lunch-and-learn programs with area architects who willingly attend to gain needed continuing education credits. These sessions not only educate architects on the applications of shade, but also position Hoover as a trusted resource.

“Online works best for us because customers are doing their homework with Internet search,” Carroll said. “When we meet with prospective customers, they are educated about our products from the website. It’s also important for us to belong to business and trade organizations in our markets. When a contractor can put a face with a name, that builds trust that goes a long way.”

### Awning Marketing Best Practices

Best practices in awning marketing from Hoover Canvas include the following:

- **Websites** – The role of the Internet in marketing continues to grow as consumers and businesses rely on search to find needed products. Websites are essential.



- **Creative websites** – The best websites are those with quality, colorful images, including video. Copy should be brief with an emphasis on key words that will help improve search results.
- **Targeted marketing** – Track sales leads so that marketing tactics can be measured and targeted. Print and Yellow Page advertising continues to play a role in awning marketing. In Hoover’s experience, however, print advertising tends to appeal to the bargain shopper, and Yellow Pages are most often used by older generations.
- **Outreach and relationships** – If your focus is on the commercial market, outreach and relationship building are important for architects, specifiers, building contractors and renovators.
- **Word of mouth** – No matter how wired the world becomes, word of mouth continues to play an essential role. Social media enables disgruntled customers to spread their complaints far, wide and fast. Attention to quality and service is the most important of marketing best practices. Use online reviews to spot potential weaknesses in your customer service, and address problems or complaints quickly.
- **New tools** – Inexpensive video cameras and build-your-own websites are opening up online marketing to companies of all sizes. Time spent investigating the options can save money and create qualified leads.

**TOP** Hoover Canvas is focusing on the Internet in its marketing program, deploying multiple websites in support of various product offerings.



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## MERCHANDISING ENLIVENS PATIO STORE SALES

RETAIL MERCHANDISING  
Challenge – Increasing patio store sales

Best Practice Example – Summer Classics  
Birmingham, Alabama  
[www.summerclassics.com](http://www.summerclassics.com)

When consumers visit Summer Classics patio stores, CEO Bew White has one goal in mind – encourage those potential customers to linger inside the store because the longer customers linger, the more likely they are to buy.

“When someone walks into one of our stores I want them to say ‘I love this store; I don’t want to leave,’” White said. “All of the master retailers are good at this, and it’s a great opportunity for the patio store segment.”

Summer Classics creates an environment ideal for lingering through merchandising – a thoughtful process of staging every aspect of a store, from the outside appearance to how the staff is dressed and greets customers. Most important is how the furniture is displayed inside the store with a full range of accessories, a variety of fabrics in each setting and ample space between sets.

“While merchandising in the patio store segment has improved in the last decade, most stores still display multiple sets with little or no decoration, and sets are typically displayed very close together,” White said. “Customers decide very quickly whether they think they can do business with you and whether they like your store. If you are not hearing ‘I love this store’ many times over, then you are doing something wrong.”

Effective merchandising by patio stores is more important than ever given the changing landscape for casual furniture. Through compelling displays, patio stores can carve out a competitive niche in a world of mass merchants and e-commerce.

“The biggest hurdle to effective merchandising for most patio retailers is the lack of willingness or ability to invest,” White said. “The reality is that without effective merchandising, your store will lose market share and you will lose sales. Plus, good merchandising really doesn’t cost as much as you would think.”





## Retail Merchandising Best Practices

Best practices in retail merchandising from Summer Classics include the following:

- **Encourage lingering** – Effective merchandising encourages customers to stay in the store longer and to repeat their visits. Longer visits and more visits translate into more sales. Create a discovery process around every set with creative accessories.
- **Accessories and lifestyle** – Good merchandising in patio stores emphasizes the use of interesting accessories, from tableware and lighting to throws and artwork. The goal is to create a casual lifestyle setting that invites the consumer to join in.
- **Don't overbuy and overlap** – A common mistake by many retailers is to show too many sets, too close together that overlap by category. When you show five sling sets, you are encouraging customers to purchase the least expensive one.
- **Show multiple fabrics** – Today's casual fabrics are offered in coordinating sets of solids, patterns and stripes. Effective merchandising features colorful sets that show how fabrics can work together for a pleasing effect.
- **Consider the environment** – Floors and walls must be considered in the retail environment for effective merchandising. Careful planning of retail floor space will allow you to get the most from your merchandising efforts.
- **Change the scene** – Retailers should reinvent themselves at least every five years with new wall colors and flooring.

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**LEFT AND RIGHT** Best practices in patio store merchandising emphasizes the extensive use of accessories to create a space where consumers want to linger.

# MARYGROVE AWNING APPLIES TECHNOLOGY FOR EFFICIENCY

OPERATIONAL EFFICIENCY – INFORMATION TECHNOLOGY  
Challenge – Applying technology for greater efficiency

Best Practice Example – Marygrove Awnings  
Detroit, Michigan  
[www.marygrove.com](http://www.marygrove.com)

When you ask Mike Falahee, owner of Marygrove Awnings, one of the nation's largest retractable awning companies, to name his single most important recommendation for operational efficiency his first response is housekeeping.

"I've visited several awning companies over the past five years and was not surprised to find that the most successful companies are the ones with well-organized, clean shops," Falahee said. "A messy, poorly organized shop has a negative impact on everything, including the attitudes and morale of the people who work there."

While Falahee's first instincts for operational efficiency point to housekeeping, his own four-state awning company has taken operational efficiency to an entirely new level through a sophisticated information technology system that was custom built from the ground up over the past several years. From electronic sales presentations to quality assurance after the installation, Marygrove operates through a fully integrated information technology system.



Mike Falahee, owner of Marygrove Awnings.

"We recognized that one of our customer's major concerns after the purchase is 'when is my awning going to be installed?'" Falahee said. "Using that concern as our starting point, we created a system that links sales presentations and subsequent orders to our production, inventory and installation systems so that within 30 seconds of entering a new order, a salesman has a firm installation date to share with the customer. This process has eliminated 85 percent of calls from customers after the sale and reduced by 30 percent the time that schedulers spend researching and answering questions on installation dates."

Operational efficiency and customer satisfaction are also built into the system through a process of order confirmation. Customer service personnel telephone each customer to confirm in detail all aspects of every new order, which is supplemented with a follow-up email. The email contains a link to a personalized Web page where the customer can review the order details, track the order's progress and confirm the installation date. The result has been a dramatic decrease in production and design issues at the time of installation from 4 percent to less than 1 percent.

Additionally, Marygrove's information technology system, which is shared by company locations in Detroit, Toledo, Houston and Sarasota allows for company-wide online jobs tracking and incorporates GPS (Global Positioning System) technology to assure the most efficient routing and deployment of installers. Marygrove installers are also equipped with iPad video technology to record each installation. These videos are transmitted electronically to the home office to be reviewed for quality assurance and shared internally as a way of recognizing quality installations.

"The addition of video was a great idea because our people take pride and ownership in their work," Falahee said. "We show the videos during the Christmas party and people say 'look what we did – it's beautiful.' This is the kind of personnel outlook you want in a business."

## Operational Efficiency Best Practices – Information Technology

Below are some of the information technology best practices illustrated by Marygrove Awnings:

- **Housekeeping** – Is your shop clean and well organized? Do your people spend hours each day trying to find tools? Before you start spending dollars on computers, make sure the basics are covered by a clean, well-organized work environment.
- **Brainstorming** – Before you begin to invest in information technology, gather your key people together and talk through the needs of your business, including the customer's perspective. Brainstorming on the front end will help assure a system that truly meets your needs with buy-in from your people.
- **Plan long term** – Don't expect to accomplish a sophisticated system such as operated by Marygrove overnight. It takes time and effort through a logical, phased-in approach.
- **Focus on customer service** – One of the most important efficiency practices at Marygrove – confirming customer orders – doesn't require technology, but has resulted in huge gains in customer satisfaction, efficiency and reduced costs.
- **Link everything together** – Many companies create automated systems for certain aspects of the business, such as inventory or accounting, but fail to link everything. An integrated system that begins with the sales presentation and concludes with quality assurance will increase your operational efficiency many times over.
- **Technology abounds** – While integration of technology is essential for the long term, don't delay small improvements that can be affordable and quickly improves operations. Installing GPS on installation trucks can save time in finding customer locations. iPads and smartphones can record installation details. iPads are also a fun and interactive way to make sales presentations that inspire customers.

# MATERIAL SELECTION, PROCESS IMPROVEMENT BOOSTS EFFICIENCY

OPERATIONAL EFFICIENCY – MATERIALS, PROCESS  
Challenge – Gaining efficiency with materials, process

Best Practice Example – Kansas City Tent & Awning  
Kansas City, Missouri  
[www.kctentandawning.com](http://www.kctentandawning.com)

In an industry with a long history and respect for tradition, change can be hard to come by, particularly when it relates to time-honored materials and processes. Mike Chael, vice president and co-owner of Kansas City Tent & Awning, is the first to admit that he was resistant at first to some of the best changes the company ever made.

“The two biggest changes we’ve made over the past 10 years were switching from steel to aluminum for framework and the addition of fabric stapling,” Chael said. “Honestly, I fought it at first, but today we are 25 to 30 percent more efficient as a result with a higher quality product.”

Aluminum framework has resulted in numerous advantages in terms of efficiency and quality. The welding process is cleaner and more consistent with a finished product that is just as strong as steel but much lighter for easier installation and powder coated for great looks and low maintenance. Stapling materials is also more efficient with a longer-lasting product and the professional appearance that customers demand.

Kansas City Tent & Awning, a leader in the manufacture of awnings, canopies and shade structures in the Midwest since 1901, also achieves high levels of efficiency through a precise and disciplined approach to pattern making. The company’s ratio of production to the size of its staff is recognized as among the best in the industry.

“We are a very modern company with an up-to-date website and modern shop equipment,” said Nathan Urdang, president, co-owner and master fabric craftsman. “A lot of shops use CAD (Computer Aided Design) for patterns, but at Kansas City



Left to right are Mike Chael, vice president and co-owner, and Nathan Urdang, president and co-owner, of Kansas City Tent & Awning.

we do them with pen and paper. I can draw a pattern with a complete cut list faster than someone using a CAD system.”

Detailed pattern making at Kansas City Awning is a highly disciplined process that details every piece of framing to be cut and welded along with detail on each fabric component. The result is virtually no waste in framing or fabric and the ability of multiple departments to work simultaneously on the same job, assured of a high-quality result that comes together perfectly.

“Some awning shops struggle every day to get a job out the door, but struggling will eat you up and it doesn’t have to be that way,” Urdang said. “We make the work interesting and fun, which makes us better fabricators.”

## Operational Efficiency Best Practices – Materials, Processes

Below are some operational efficiency best practices from Kansas City Tent & Awning:

- **Open to change** – It’s only natural to resist change at first. However, as new materials and processes come along, it’s essential to review each one to determine if and how they can add to operational efficiency and quality.
- **Information resources** – One of the best ways to stay abreast of the latest in materials and processes is through professional association involvement, such as PAMA (Professional Awning Manufacturers Association.) Trade groups can provide unbiased information along with opportunities to network with others in the industry.
- **Discipline** – Discipline and attention to detail in the manufacturing process are essential to operational efficiency.

Detailed pattern making as followed by Kansas City reduces waste, enhances quality and allows departments to collaborate effectively.

- **Investments in modern equipment** – Technology of all kinds is advancing, and investments in modern equipment are essential to keep pace in quality and efficiency. Small and consistent investments every year can avoid the need for a massive cash infusion for a shop that becomes woefully outdated over time.
- **Stop struggling** – By establishing and following a consistent, disciplined process focused on efficient throughput, you can eliminate struggling and greatly boost your efficiency.
- **Personnel** – Next to the cost of material, payroll is the greatest expense for most businesses. With consistently efficient processes, disciplined approaches and modern equipment, you will find that fewer people can do more, boosting profitability.



## DESIGN INNOVATION

Challenge – Design innovation as competitive advantage

Best Practice Example – TUUCI

Miami, Florida

[www.tuuci.com](http://www.tuuci.com)

# DESIGN INNOVATION REDEFINES MARKETS

There are many ways to redefine an existing market. Pricing, distribution and branding are some of the most common. Another avenue for redefining a market is design innovation. You develop a new and exciting way to meet a basic human need.

This has been the path of TUUCI, a Miami-based manufacturer of parasols and shade structures that are as artistic as they are durable and high functioning. For the past 14 years, the company has been dedicated to redefining shade, a basic need that has existed for as long as there have been humans on the planet.

“You have to start with a blank canvas and throw out all the rules,” said Dougan Clarke, TUUCI’s CEO and chief shade architect. “We’re building platforms and creating barriers between the sun and gathering areas for people. Once we started to think of them as platforms we opened up a broader world of design.”

TUUCI draws its inspirations from the water. Dougan began his career in a boatyard where he worked with durable marine hardware and learned the importance of design simplicity and reliable function. The ocean also provides artistic inspirations from sea life, such as sting rays and mantas, and the beauty of the water and sky.

“We begin by letting ideas run full tilt, but then we reach a point where we have to draw a line in the sand,” Clarke said. “The design has to strike a balance between form and function; it must be something that the market can understand and that can be merchandised to customers.”

One of the greatest challenges with design inspiration is avoiding the temptation to follow the lead of others. From trade shows and Internet searches, it’s easy to lose the innovative edge.

“Don’t send me links to other people’s websites,” Clarke said. “It’s easy to fall into the trap of getting inspirations from the work of others. There are already enough ‘me-toos’ out there. We are only interested in the novel that can breathe new life.”

## Design Innovation Best Practices

Best practices in design innovation from TUUCI include the following:

- **Start with a blank canvas** – If you are truly pursuing design innovation, a blank canvas is the only place to start. Drawing inspiration from others only leads to me-too copies.
- **Stand for something** – While you work from a blank canvas, it’s essential to stand for something. For TUUCI, its core is inspiration from the marine environment for both form and function.
- **Keep it simple** – No matter the product or service, simpler is almost always better. If a component or a step in the process doesn’t add value, eliminate it.
- **Balance form and function** – One of the greatest of challenges in design innovation is to balance form and function. It must be appealing to the eye and perform better than other options.
- **Don’t forget the marketplace** – Ultimate design innovations must translate into the market environment. Stay in close contact with customers and consumers to assure market-ready innovation.
- **Invest time and money** – Everyone would like to hit on a design innovation quickly with minimal effort, but the reality is that innovation takes time and the ability to learn from and tolerate your mistakes.
- **Discipline** – While the creative process must be free-wheeling at its origin, discipline is crucial for success. Can this product be manufactured efficiently and profitably and will customers understand the concept and want it?

**LEFT** Dougan Clarke, founder and chief shade architect with TUUCI, with the company’s innovative F-1 High-Tension Shade Parasol. TUUCI innovation includes marine grade hardware and cutting-edge engineering and design.

## NEW OFFERING FROM NANO<sub>H</sub>2O BOOSTING GLOBAL DESALINATION EFFICIENCY

PRODUCT DEVELOPMENT  
Challenge – Driving innovative  
product development

Best Practice Example – NanoH<sub>2</sub>O  
El Segundo, California  
[www.nanoh2o.com](http://www.nanoh2o.com)



## RAINIER INDUSTRIES PROVES VALUE OF PRODUCT DIVERSIFICATION

PRODUCT DIVERSIFICATION  
Challenge – Growth through product diversification

Best Practice Example – Rainier Industries  
Seattle, Washington  
[www.rainier.com](http://www.rainier.com)

When Scott Campbell took over the reins of his father's tent and awning business in 1984, he set his sights on growth through product diversification. Through a series of acquisitions and by investing in new capabilities, the company diversified and grew steadily in graphic applications, fabric structures, retractable window shading and industrial fabrics.

“One of our most important goals was to address the impact on our company caused by the seasonality of the tent and awning business,” said Campbell, who changed the name from Puget Sound Tent & Awning to Rainier Industries to reflect its growing diversity. “As graphics and brand identity became essential elements of commercial awnings, it was natural for us to expand into this business. We were often called upon to cut and sew fabric for banners, so it was natural for us to expand into fabric printing and offer a complete range of graphic solutions.”

Today Rainier Industries focuses on four core product areas that are highly diverse, yet based on core competencies related to fabrics, graphics, wood and metal fabrication. The company's displays business encompasses retail and public spaces, vehicle wraps, sports graphics and wall murals. Shelter operations include awnings and fabric structures, while shade includes retractable window shading. The industrial fabrics business includes aerospace, marine windows and military applications.

“While we are a highly diverse company, everything we do falls under common umbrellas related to our core competencies,” Campbell said. “Every product is custom made, and we often draw upon capabilities across departments to meet a customer's need for a one-of-a-kind solution.”

As Rainier Industries evaluates opportunities for product diversification, it subjects each to core evaluation criteria – is

As world populations swell and as fresh water supplies dwindle, a relatively new company in El Segundo, California, is demonstrating how product development can revolutionize markets and create growth opportunities.

NanoH<sub>2</sub>O was founded in 2005 by entrepreneurs Jeff Green, chief executive officer, and Dr. Robert Burk, chief scientific officer, to commercialize research by Dr. Eric Hoek of the University of California, Los Angeles. Dr. Hoek invented a thin-film nanocomposite membrane that was the initial basis for NanoH<sub>2</sub>O's QuantumFlux seawater reverse osmosis (SWRO) membranes that are revolutionizing the desalination of seawater.

"The basic membrane materials used in desalination had remained the same for more than 30 years," said Barry Fischer, director of quality and procurement for NanoH<sub>2</sub>O. "By using nanotechnology to enhance membrane chemistry, we have created a reverse osmosis membrane that dramatically increases efficiency and reduces energy costs for desalination plants."

QuantumFlux membranes from NanoH<sub>2</sub>O can reduce energy consumption at desalination plants by up to 20 percent, which is an

increasingly significant benefit given the continuing increase in energy costs worldwide. One particular installation in the Caribbean has experienced a 28 percent reduction in energy consumption.

"There are currently more than 16,000 desalination plants in operation around the world, so the growth potential is tremendous," Fischer said. "We are experiencing significant industry interest with more than 60 desalination plants adopting our membranes since they were first introduced in April 2011. That means that QuantumFlux membranes produce more than 20 million gallons of water per day."

Through a robust global sales force and engineering support team, the company is steadily shifting the industry toward the higher-efficiency, state-of-the-art membrane technology. As part of the ongoing product development process, Glen Raven Technical Fabrics has worked with NanoH<sub>2</sub>O in developing new fabric technology to complement the enhanced performance of NanoH<sub>2</sub>O Qfx membranes.

"Successful product development has to be based on solving a customer need well beyond current options," Fischer said. "If improvements are simply incremental, you run the risk of a me-too offering."



**TOP** Tina Houmann, Rainier Industries sales associate, with Scott Campbell, Rainier Industries president. **RIGHT** Leading retailers turn to Rainier Industries for printed banners used in store locations.

the new product a premium offering, does it fit in with existing capabilities, and can it be produced at an attractive profit margin. Following this philosophy, Rainier Industries has achieved an average annual growth rate of 17 percent under Campbell's leadership.



## Product Development Best Practices

Product development best practices based on the experience of NanoH<sub>2</sub>O include the following:

- **True innovation** – Product development that results in me-too products are not likely to be successful or highly profitable, typically competing on price alone. NanoH<sub>2</sub>O's reverse osmosis membranes represent a quantum leap in efficiency, reducing the energy used by desalination plants by up to 20 percent.
- **Migration to the new product** – It's one thing to create an innovative product, but quite another to provide customers with a strategy for migrating to the new way of doing things. NanoH<sub>2</sub>O has built a technical team that works directly with desalination plants throughout the engineering design process to ensure success.
- **Educational process** – Paradigm-shifting new products are not likely to be accepted overnight, particularly in high-tech fields such as water desalination. NanoH<sub>2</sub>O has addressed this

concern by building a staff of engineers and scientists who offer technical seminars around the world.

- **Partnerships** – Product development often requires partnerships with other companies that offer specific component expertise. Open communications, shared objectives and common values are essential for product-development partnerships to be successful.
- **Marketing** – Creating a revolutionary new product is only half the battle. Effective marketing with clear and simple messaging is essential. NanoH<sub>2</sub>O summarizes its value proposition in four simple words – “More Water, Less Energy.”

**LEFT** NanoH<sub>2</sub>O is bringing product innovation to the water desalination industry with manufacturing operations in California.

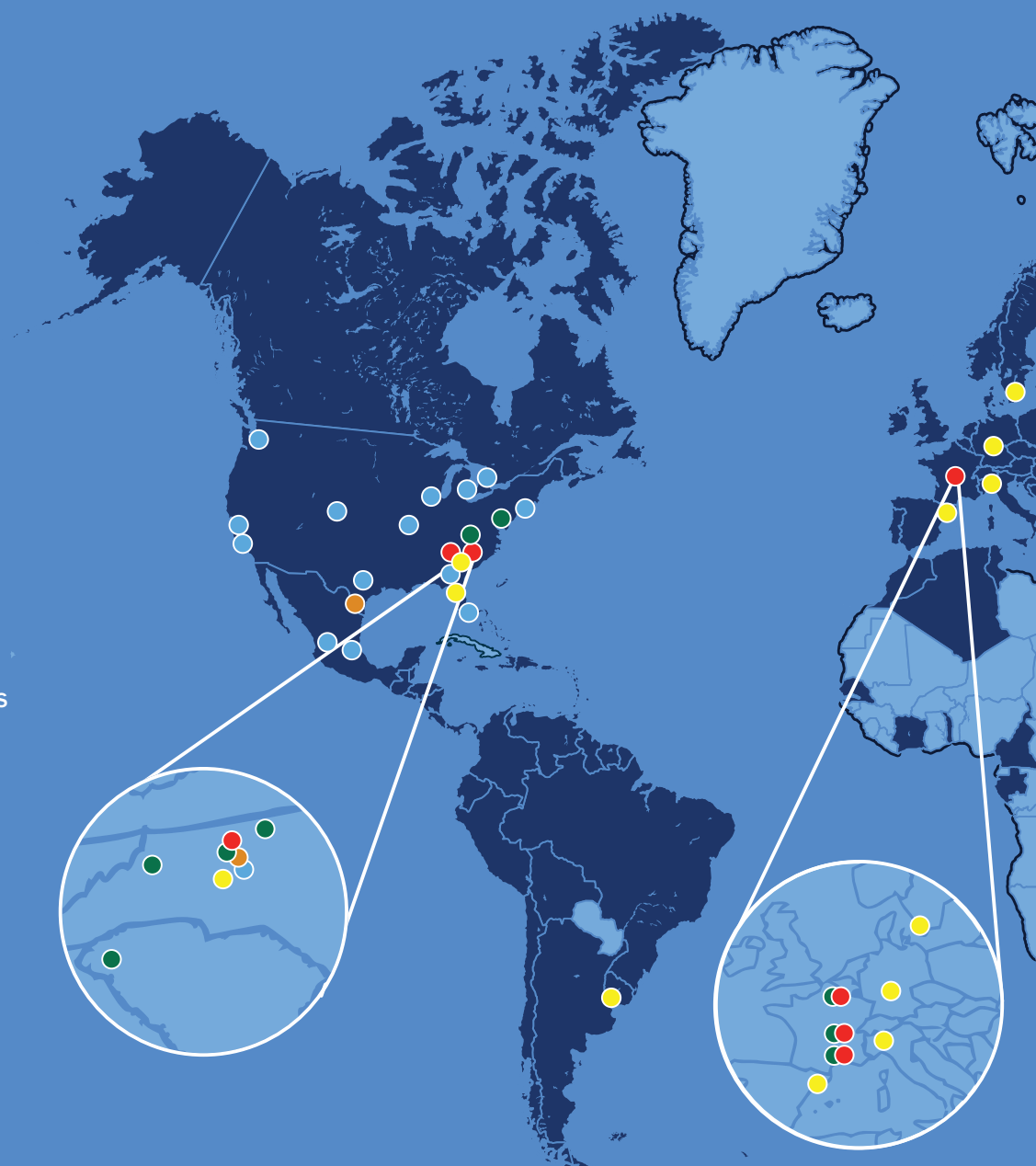


## Best Practices In Product Diversification

Some of the best practices in product diversification illustrated by Rainier Industries include the following:

- **Begin with business objectives** – A product diversification strategy should be based on a solid business strategy. One of the primary drivers for Rainier Industries was to expand into businesses that are immune to the seasonality of tents and awnings.
- **Core competencies** – Diversifying into businesses in which your company has no existing skills and cannot add value is a formula for failure. Diversification should build on core competencies that can be adapted and expanded.
- **Profitability** – Growth for the sake of growth alone or diversity for the sake of diversity alone is not good business. Each diversification opportunity should be evaluated against a benchmark for acceptable levels of profitability.
- **Your team** – Not everyone is cut out for the challenges of a constantly changing environment that results from product diversification. Before diversifying, assure that you have a management team in place that is adaptable and entrepreneurial.
- **Systems** – Closely allied with a flexible management team is the need for well-established operating systems related to areas such as quality assurance, profitability and productivity. Product diversification will stretch the capabilities of these systems, which will be essential for accountability of each new venture.





**GLEN RAVEN GLOBAL LOCATIONS**

- Corporate
- Distribution
- Manufacturing
- Sales/service
- Logistics
- Countries sold into

**CORPORATE**

- **Glen Raven, Inc.**  
Glen Raven, NC  
336.227.6211

**GLEN RAVEN CUSTOM FABRICS**

- **Glen Raven Custom Fabrics, LLC**  
Glen Raven, NC  
336.227.6211
- **Glen Raven Custom Fabrics Anderson Plant**  
Anderson, SC  
864.224.1671
- **Glen Raven Custom Fabrics Norlina Plant**  
Norlina, NC  
252.456.4141
- **Glen Raven Custom Fabrics Link Spinning**  
Glen Raven, NC  
336.227.6211

- **Glen Raven Custom Fabrics High Point Showroom**  
High Point, NC  
336.886.5720

**GLEN RAVEN TECHNICAL FABRICS**

- **Glen Raven Technical Fabrics, LLC**  
Glen Raven, NC  
336.227.6211
- **Glen Raven Technical Fabrics Park Avenue Facility**  
Glen Raven, NC  
336.229.5576
- **Glen Raven Technical Fabrics Burnsville Facility**  
Burnsville, NC  
828.682.2142

**TRI VANTAGE**

- **Tri Vantage, LLC**  
Glen Raven, NC  
336.227.6211
- **Consolidated Distribution**  
Mebane, NC 27302  
877.540.6803

- **Southern CA**  
City of Industry, CA  
800.841.0555

- **Northern CA**  
Hayward, CA 94545  
800.786.7607

- **Colorado**  
Denver, CO 80239  
800.786.7609

- **Florida**  
Miami, FL 33172  
800.786.7605

- **Georgia**  
Lithia Springs, GA 30122  
800.786.7606

- **Illinois**  
Elmhurst, IL 60126  
800.786.7608

- **Missouri**  
Maryland Heights, MO 63043  
800.786.7603

- **New Jersey**  
Somerset, NJ 08873  
800.786.7602

- **Ohio**  
Cleveland, OH 44113  
800.786.7601

- **Texas**  
Irving, TX 75061  
800.786.7610

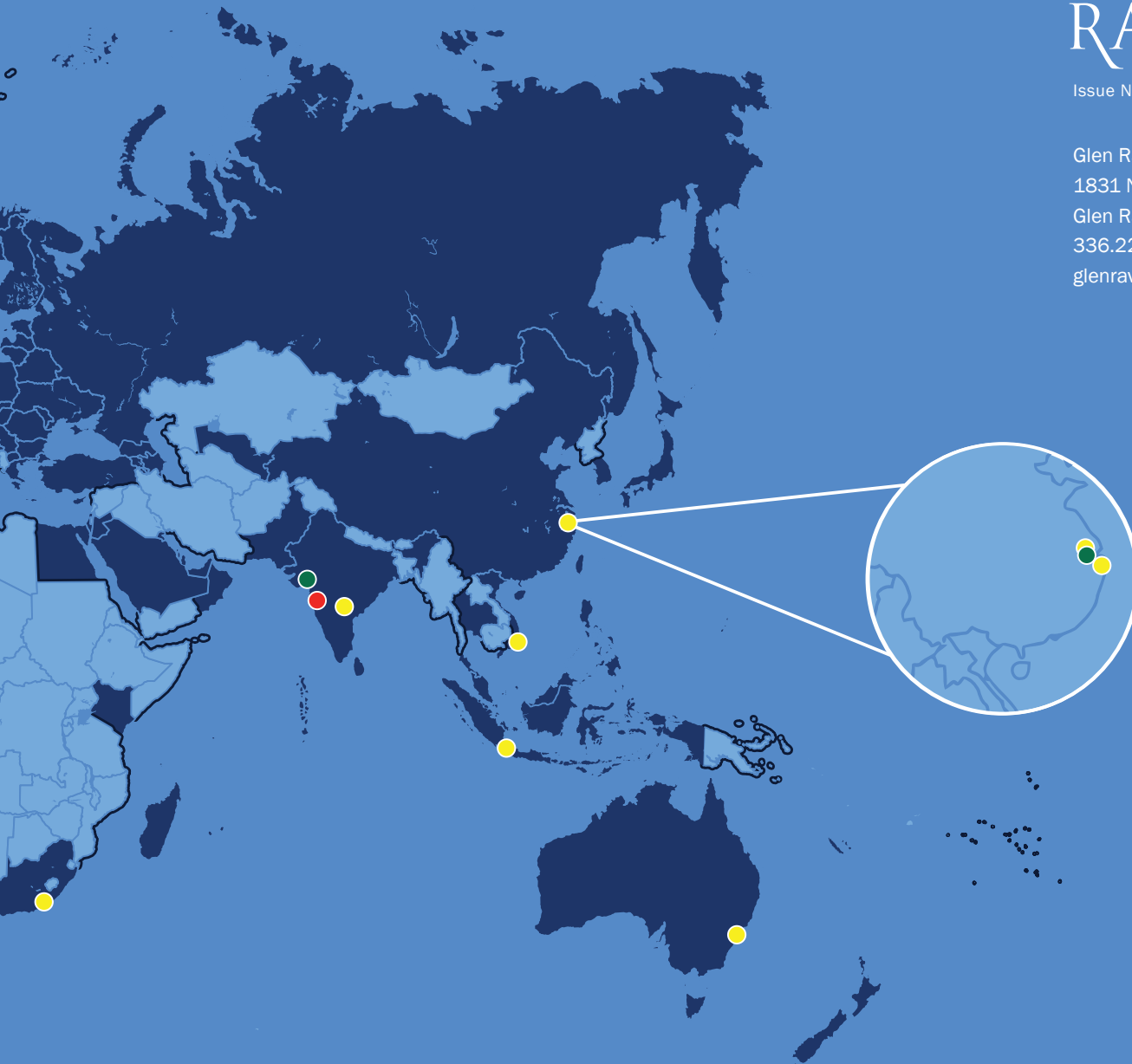
- **Washington**  
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## GLEN RAVEN LOGISTICS/ TRANSPORTATION

● Glen Raven Logistics  
Altamahaw, NC  
800.729.0081

● Glen Raven Logistics  
Laredo, TX  
956.729.8030

## STRATA

● Strata Systems, Inc.  
Cumming, Georgia 30040  
800.680.7750

● Strata Systems Sleeve-It Plant  
Pottstown, PA  
610.495.7400

● Strata India  
Mumbai Head Office  
011.91.22.4063.5100

● Strata India  
Hyderabad Sales Office  
011.91.40.4003.7921

● Strata India  
Daman Plant  
011.91.260.2220160

## R.J. STERN

● R.J. Stern  
Wilkinson, WV  
800.292.7626

## DICKSON-CONSTANT

● Dickson-Constant  
Wasquehal, France  
011.33.03.20.45.59.59

● Italy  
Gaglianico, Italy  
011.39.015.249.6303

● Spain  
Barcelona, Spain  
011.34.93.635.42.00

● Germany  
Fulda, Germany  
011.49.661.38082.0

● Scandinavia  
Göteborg, Sweden  
011.46.31.50.00.95

## DICKSON COATINGS

● Dickson Saint Clair  
Saint-Clair-de-la-Tour, France  
011.33.04.74.83.51.00

● Dickson PTL  
Dagneux, France  
011.33.04.37.85.80.00

● Dickson Coatings USA  
Atlanta, GA  
404.495.5994

## GLEN RAVEN ASIA

● Glen Raven Asia  
Suzhou, JiangSu, China  
011.86.512.6763.8100

## SUNBRELLA/DICKSON GLOBAL OFFICES

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Fort Myers, FL USA  
239.466.2660

● Southern Latin America  
Montevideo, Uruguay  
011.598.2601.3143

● Greater China  
Suzhou, China  
011.86.21.5403.8701

● North Pacific Region  
Shanghai, China  
011.86.21.5403.8385

● Vietnam  
Ho Chi Minh City, Vietnam  
011.84.98.3128022

● Indonesia  
Jakarta, Indonesia  
011.62.21.5289.7393

● South Pacific Rim  
Sydney, Australia  
011.61.2.9974.4393

● South Africa  
Port Elizabeth, South Africa  
011.27.41.484.4443