

# allianz

Volume 3 • 2018 | The Magazine for Partners of B. Braun's OEM Division



THE EYES & EARS OF  
PROJECT MANAGEMENT

AUTOMATED MANUFACTURING:  
FOUR POINTS TO CONSIDER BEFORE YOU SCALE UP

# CONTENTS



4-5  
Editor's Note



6  
Ask the Experts:  
Leo Wong &  
David Banko



8-11  
A Deeper Look: Cultural  
Audits and OEM



30-31  
▪ Personal Best  
▪ Virtual Reality Tour



12-13  
The Eyes & Ears of  
Project Management



14-19  
Automated Manufacturing:  
Four Points to Consider  
Before You Scale Up



20-21  
▪ New Faces at B. Braun OEM  
▪ New Location



32-33  
Importing & Exporting  
Products & Expertise: The  
Global Strength of B. Braun  
OEM Division



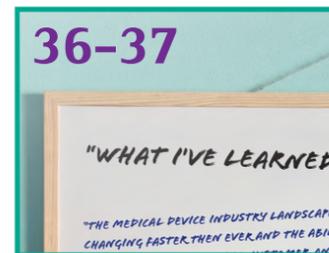
22-25  
B. Braun in Italy:  
Manufacturing Skill &  
Production Opportunity



26-27  
▪ New Website  
▪ What Is This?



28-29  
How We Put the "Sharing"  
in Sharing Expertise



36-37  
"What I've Learned"

## B | BRAUN SHARING EXPERTISE

Volume 3 | 2018

**Publisher:** B. Braun Medical Inc.

**Editor-in-Chief:** Tom Black

**Contributing Editor:** Dave Williams

**Co-Contributing Editor:** Allison Longenhagen

**Design & Production:** Lehigh Mining & Navigation

**Creative Director:** Denis Aumiller

**Design:** Laura Dubbs

**Project Manager:** Cathy Wagner

**Copywriter:** Michael Drabenstott

**Production Assistant:** Donna Mugavero

**Printing:** Doug Earp

**Photography:** John Sterling Ruth Studio

**YouTube** B. Braun OEM USA – bboemchannel.com

**LinkedIn** linkedin.com/company/b--braun-medical

### B. BRAUN MEDICAL INC.

861 Marcon Blvd.

Allentown, Pa. 18109

TF. 1.800.523.9676

P. 1.800.359.2439

us.bbraunoem.com

© 2018 B. Braun Medical Inc., Allentown, Pa.

All rights reserved. OEM 18-6384 4/18 LMN

CHECK OUT OUR MEDICAL WORD SEARCH ON PAGE 41!



Tom Black

## EDITOR'S NOTE

Remember those personal (and business) resolutions from January? Every New Year's Eve, many of us resolve to make improvements in our personal and professional lives. For a while, the health clubs were crowded with people ambitiously pursuing weight targets, fitness goals and personal improvement efforts. Now about halfway through the year, how many people have you read about or talked to who have kept their resolutions? Most studies put the number at less than 10 percent!

Despite good intentions, many of us seem to "misplace" those lists by March. But most experts agree that sticking to those resolutions requires accountability – having someone to report to and, just as importantly, support you with your betterment plan.

The same holds true with your company's business objectives. An experienced, trustworthy outsourcing partner can help you reach your goals. B. Braun Medical wants to share years of experience in the healthcare industry so that we all have a successful 2018.

In this edition of *allianz*, you will find how cultural audits can help you determine your best choice for business partners in any field. You will see how B. Braun is redoubling our

focus on meeting customers' timelines with additional project management resources and automation. Our facility spotlight takes you to the wonderful country of Italy, where our manufacturing site in Mirandola provides custom bags and medical devices for distribution throughout the world.

Our "Ask the Experts" segment features two of our health economics experts' explanation of how healthcare providers are marketing products and services. We introduce new team members, disclose our "Seven Principles of Sharing Expertise" and, once again, include our highly requested "What I've Learned" page listing observations, perspectives and insight from your healthcare industry peers.

Finally, there are many people in this industry who go above and beyond their social responsibility. B. Braun's Mike Connelly is an example of the good that can arise with the daily thought of helping others – far beyond the benefits that medical devices provide to mankind. His story reminds us that a resolution to help others should be right up there with how we seek to improve ourselves.

Please let us know how we can help make 2018 another successful year for you and your company. It's never too late to partner with us on your business resolution list.

An experienced, trustworthy outsourcing partner can help you reach your goals. B. Braun Medical wants to share years of experience in the healthcare industry so that we all have a successful 2018.

# ASK THE EXPERTS:

LEO WONG AND DAVID BANKO



Leo Wong,  
Director of Marketing,  
Strategic Purchasing



David Banko,  
Director, Health  
Economics, Outcomes  
and Research



**Q:** How has the discipline of health economics changed medical device development and marketing?

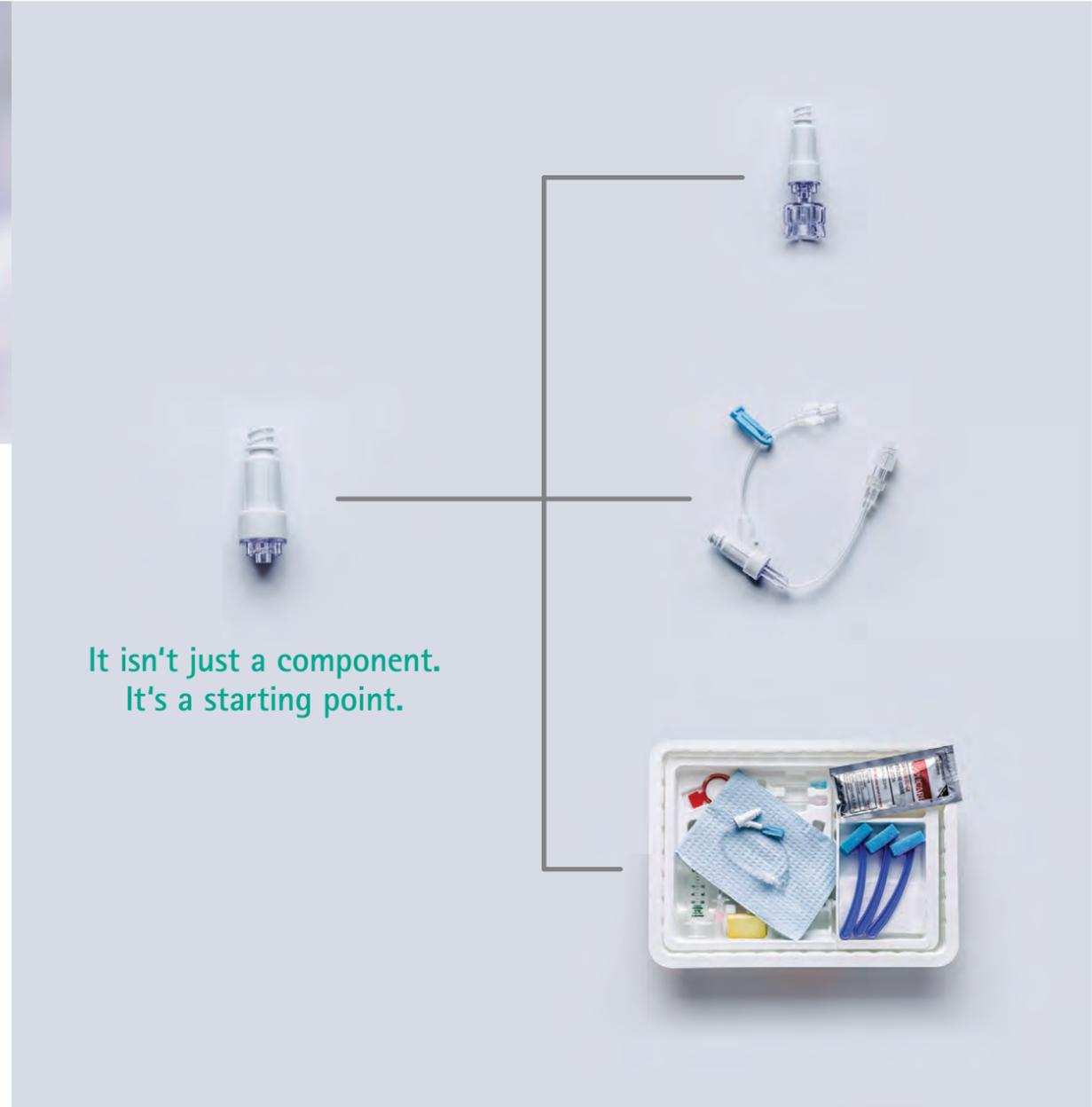
Years ago, companies would assess market needs, then charge R&D and engineering to develop a device. Companies would tally all of the costs that went into producing a final device – R&D, materials, machinery, regulatory and so on – add a margin and set the price. That inside-out process has been turned outside-in. We start with the customers and determine how a device can improve outcomes, simplify healthcare delivery and lower costs, all of which will inform the device's fair market value and price.

**Q:** How do the four Ps of health economics differ from the four Ps of marketing?

The traditional four Ps of marketing are product, place, price and promotion – all mostly inward viewpoints. The outside-in approach forces us to look at four different Ps: the provider (hospital), physician, payer and patient. Each device has the potential to provide different levels of value to each of the four Ps. That value influences how medical devices are designed and marketed.

**Q:** How does the concept of health economics apply to contract manufacturing?

While contract manufacturers are certainly adept at building devices to specification, they can be even more valuable when consulted early within a health economics context. If you have research about issues faced by the provider, physician and patient, share it with your contract manufacturer. We can bring our experience and perspective to the project and possibly recommend alternative designs that enhance delivery, reduce complexity and improve outcomes – all of which can improve the market value of the device.



It isn't just a component.  
It's a starting point.

Start with B. Braun OEM's deep product catalog. Add in some serious design and engineering chops. It means we can create a device, set or kit tailored to your exact specifications. Once we've finished designing, we'll handle everything from project management and manufacturing to packaging, sterilization and regulatory approval. With endless products and a full suite of capabilities, we're the ideal choice to speed your project to market. B. Braun OEM. The only outsourcing partner you'll ever need.

B. Braun Medical | OEM Division | USA | [us.bbraunoem.com](http://us.bbraunoem.com) | 1-800-359-2439



## A DEEPER LOOK: CULTURAL AUDITS AND OEM

---

Everyone in the medical device industry is familiar with quality audits. They're essential in determining if a supplier can meet a purchaser's expectations. Objective metrics are central to the procurement process.

However, numbers never tell the whole story. That's why we embrace the idea of a "cultural audit" – a look beyond objective documentation to the compatibility of supplier and customer on many levels. This concept formalizes actions that usually happen informally as a relationship matures. In the contract manufacturing relationship, a cultural audit addresses purposes, expectations and boundaries of the engagement.



### Cultural audit details

An informal cultural audit starts with the very first handshake. The complex mingling of first impressions, measures of trust, compatibility and other essential elements quickly becomes apparent.

A formal cultural audit takes the process further by reviewing all aspects of a new relationship. Here are important elements we consider in conducting cultural audits of our working partners.

- **Corporate missions.** We determine if our companies' missions are aligned, and evaluate how prospective partners uphold their missions.
- **Company heritage.** Similarly, we consider a company's history and heritage. What in a company's DNA underpins its practices and market approach?
- **Financial stability.** A supplier-customer relationship may entail significant mutual investments of time and money. Financial analysis of a prospective partner is essential to determine its practices and overall soundness.
- **Management practices.** How has the company dealt with the FDA or the public? Does it exhibit responsibility and pursue remedies? Is it confrontational and unresponsive? Its reaction to previous situations could predict its response to future issues.
- **Corporate directives.** Knowing a company's motivation on many fronts can help a contract manufacturer develop product or process improvements supporting long-term objectives.

- **Innovation and technology.** Do prospective partners match up well in technological sophistication and openness to new approaches?
- **Compatibility at parallel organizational levels.** Contract manufacturing works best when professional counterparts at each company communicate openly and completely.
- **Personal objectives.** People are at the heart of any supplier-purchaser relationship. Knowing others' personal motivations reveals expectations that don't appear in specs or supplier agreements.

Subjective matters are important to supplement the objective measures of quality audits. Thorough cultural audits help a relationship start strong and stay strong. They facilitate both parties finding compatibility and identifying areas where they can communicate and collaborate better.

The OEM Division of B. Braun Medical Inc. offers a free white paper on the concept of cultural audits. Email us at [info@bbraun.com](mailto:info@bbraun.com) to request a copy.

## THE EYES & EARS OF PROJECT MANAGEMENT



As B. Braun's Manager, OEM/International Sales Operations, Ed White is a key player. During seven years in sales, he has built an excellent relationship with our manufacturing operations. He works with account managers, engineers and everyone else who contributes to a successful project, making sure everyone is connected where they need to be along the project timeline.

"I'm the eyes and ears of customers within B. Braun," White said, "an advocate within the process and an advocate for the project. The ultimate goal is to do what's right by the customer while working within our established protocols."

"It's important to eliminate internal obstacles to make projects move, getting everyone on the same page," he said. "These efforts are often invisible to the customer – and that's how it should be. On bigger jobs I can be helpful in adhering to timelines to moving products to market as quickly as possible."

### Communication essentials

In this sophisticated, detail-rich process, communication is essential.

"More and more, customers say they want to speak discipline to discipline," said Tom Black, Vice President, OEM and International Sales and Marketing. "Their Q/A talks to ours; their regulatory department talks to ours. Ed gets everyone aligned throughout the engineering and production process to facilitate information sharing."

"We want customers to understand that we have all the expertise that goes along with all the components," Black added. "It makes us different from many of the competitors out there. It's something of value that we can provide our customers. But it doesn't happen automatically. That's where a professional like Ed can make all the difference."

B. Braun's OEM work has always demanded utmost skill and attention. Serving our customers as a contract manufacturer requires deep and simultaneous knowledge of our products and our customers' projects, as well as exceptional sensitivity to their needs.

What's also essential is an understanding, complete and coordinated, of the medical device environment. This embraces documentation, regulatory requirements, sterilization, materials, packaging, market forces and manufacturing specifics that must all be addressed to deliver successfully on an outsourcing engagement.

In truth, we've done this for years, never stinting on resources needed to bring contract manufacturing assignments to positive outcomes. But as the medical device market grows ever more complex, every project demands even more coordination and attention to detail. Consequently, we've created a position exclusively to support this work, and staffed it with a manager of great experience, energy and knowledge.



"We want customers to understand that we have all the expertise that goes along with all the components. It makes us different from many of the competitors out there."

– Tom Black, Vice President, OEM & International Sales & Marketing

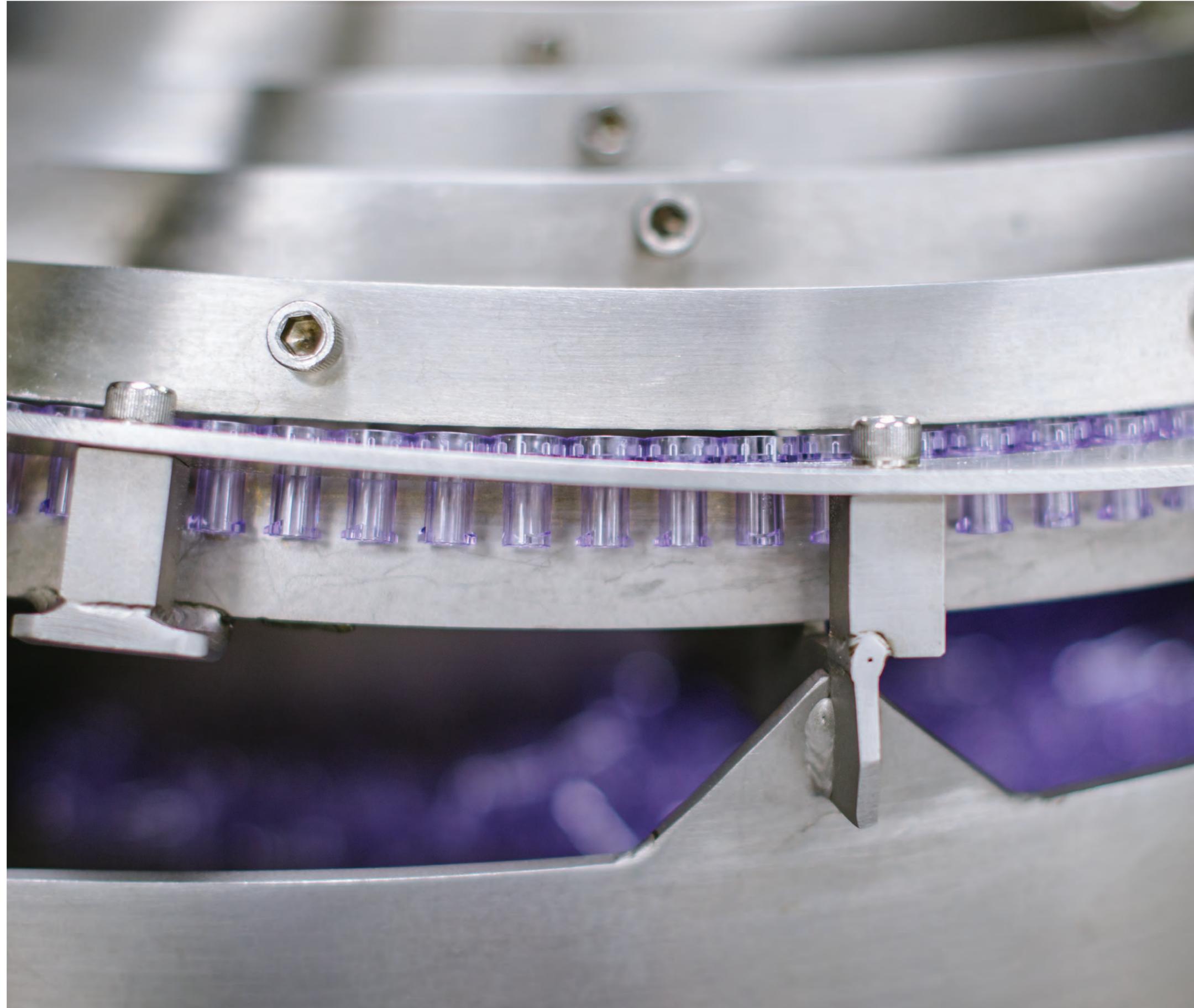
# AUTOMATED MANUFACTURING:

## FOUR POINTS TO CONSIDER BEFORE YOU SCALE UP

---

High-volume manufacturing typically involves the introduction of automation into the medical device fabrication and assembly process. However, many medical devices begin their life cycles at lower volumes, for which manual procedures are a better fit. Successfully scaling to automated manufacturing requires foresight and planning to streamline the production process and minimize changes that can increase cost and time to market.

Open communication with your B. Braun OEM Division team can help you transition more easily to automation during the product life cycle.





**Design for manufacturing.** Device design needs to encompass more than your specifications. It is essential that devices are designed to be manufactured efficiently over the entire product life cycle. That means taking into consideration the equipment and processes required if device production may ultimately be automated. After all, automated, high-volume processes could be slightly or significantly different than the benchtop or prototype equipment used for producing lower volumes. Early discussion with the manufacturing team is critical to understanding how high-speed automation may affect the design so provisions can be made to avoid problems when scaling up.

**Material selection.** A crucial part of designing for manufacturing is ensuring the materials selected are acceptable for high-volume, automated processes. Devices with injection-molded components are a perfect example. Lower cavitation might be more forgiving with a material (such as a polycarbonate) than a high-speed system producing components in a 96-cavity mold. The solution: Work with B. Braun to specify materials that have already been qualified for manufacturing with different processes at various volumes. Otherwise, you could burn time and money adjusting materials and potentially updating regulatory applications.

**The solution:** Work with B. Braun to specify materials that have already been qualified for manufacturing with different processes at various volumes.

**Supply chain and procurement confidence.** When it comes to material selection, strategic procurement must ensure that the suppliers selected at the genesis of a device's product life cycle will be able to continue supplying with the same quality and reliability when volumes increase. Can the suppliers scale as demand grows? Do they have a long-term commitment to producing the material or component? Will they have the financial resources and management stability to continue supplying you once you invest in automated processes? The time, expense and uncertainty of qualifying a new supplier can cut into the cost efficiencies of an automated process.

**Cultivate a team approach to optimize efficiency.** The move to high-volume manufacturing isn't a once-and-done event. There are many opportunities to continue learning and improving after the process has been established. B. Braun works closely with suppliers critical to the capacity to upgrade to automated manufacturing, such as custom machine builders and mold manufacturers. The more expertise we share with them, the better they can supply equipment that will meet the design intent and match your product's intended life cycle.

Overall, automated manufacturing requires a product life-cycle approach that looks beyond immediate needs and anticipates future demand. After long-term volume parameters have been established to complement product specifications, the team can determine how to meet both short-term and long-term volumes – and have a road map to scale and realize the benefits of automated manufacturing.



## NEW FACES STRENGTHEN OEM DIVISION TEAM

Two new members to the OEM Division team – Trisha Cobbs and Michael Chacko – are looking forward to using their abilities to the benefit of customers.



Trisha, Sales Service Manager, OEM & International Divisions, works internally at B. Braun to make sure customer requirements and agreements are maintained throughout the design and manufacturing process. She closely tracks customers' quality and purchase agreements and monitors B. Braun's change control process to ensure customers are notified of changes in processes, materials, vendors and more in accordance with the agreements.

Trisha joined B. Braun in June 2017 after more than 15 years in positions encompassing supply chain, customer support and purchasing – a combination of skills that makes her ideal for this role. "Everything I've done to this point in my life makes me feel that I'm in the right place," she said.

"As soon as I got here, I realized the OEM Division has a customer-first mentality, and I adore it. It's something that has been instilled into me before I got here. Ultimately, my goal is to keep the customers happy. Without customers, no one will have a job."



Mike, OEM Account Manager, Mountain Region, becomes more customer-facing after working as an engineer in the OEM Division. He will be represent the OEM Division with accounts in the center of the country to match our capabilities with customer needs.

"I'm excited to bring my engineering background to the sales process. A lot of our customers are engineers, so I can communicate in their language," said Mike, who holds a B.S. in Biomedical from Penn State. "When I'm in front of customers, I can think on my feet to understand their expectations. I can quickly and confidently recognize how feasible their designs are to manufacture and assemble. Then we can work collaboratively to improve their product and the process."

He said he also relishes working with his colleagues to bolster the account group's engineering prowess. "I can help our team members understand drawings or test reports better," he said. "Our OEM group is like a basketball team: You can't have five centers. We all have different strengths and backgrounds. Together, we all contribute to our clients' successes."



## NEW OFFICE BRINGS US EVEN CLOSER TO MANUFACTURING

We've always claimed that we work very closely with our B. Braun engineering and manufacturing colleagues. Now we can say we're even closer – literally.

A recent relocation of our B. Braun OEM Division offices puts us within eyeshot of our Allentown, Pa., manufacturing facility. We're just a four-minute stroll to the building's front door.

We moved our offices this fall to accommodate the continued growth of B. Braun at the corporate headquarters on 12th Avenue in Bethlehem, Pa. That building had been our home since the 1980s. If you're planning to visit us, make sure you use this address in your GPS: 861 Marcon Blvd., Allentown, PA 18109.

**B. Braun OEM Division's New Location:  
861 Marcon Blvd., Allentown, PA 18109**



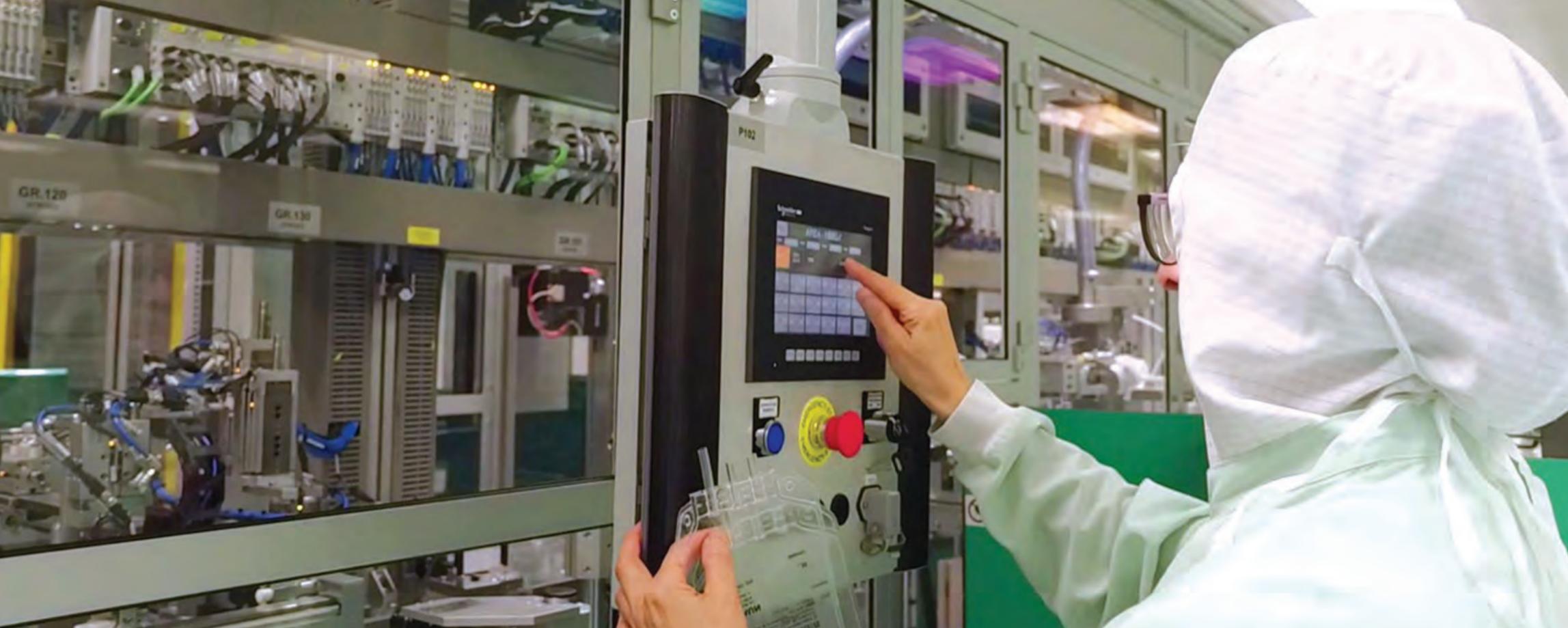
## B. BRAUN IN ITALY: MANUFACTURING SKILL & PRODUCTION OPPORTUNITY

---

At the B. Braun manufacturing plant in Mirandola, Italy, an operational reality of great importance to OEM customers plays out every day.

Mirandola, which specializes in making precision bags for IV drug delivery, has the ability to manufacture products on a contract basis. As a plant that applies next-generation technologies every day to maximize both quality and volume, it offers extraordinary opportunities for customization.

Consequently, many OEM Division customers have projects ideal for this plant's core capability of manufacturing delivery bags for a range of critical applications.



### More than a slogan

"Sharing Expertise," B. Braun's worldwide slogan, is perfectly expressed in the contract work at this facility. "Our customers are able to leverage capabilities honed here for hospital care products," said Eleonora Compagnone, Export Sales Manager at the factory, which is officially called B. Braun Avitum Italy S.p.A. For many years, this FDA-registered production site has been a center for research and development, quality process refinements to the highest international standards and high-volume manufacturing capabilities.

Mirandola is a world leader in its specialty, producing a varied selection of single-use standard bags as an essential part of B. Braun's global medical device manufacturing capabilities. Customers of our OEM Division benefit from a center of excellence that can accommodate specific needs in materials, configurations and port options.

These bags can be purchased independently or incorporated into complete medical devices. Expert on-site assistance in engineering, packaging, sterilization and other services contribute to a dramatic range of outsourced solutions.

"We can fully customize a product or a system," Eleonora said. "Or we can use or modify components that already exist." Together, these capabilities offer major advantages to contract purchasers.

### Improved production in the wake of destruction

The efficiency and effectiveness of production at this facility are even more remarkable given that the Mirandola region was staggered by devastating earthquakes in May 2012. The tremors took lives throughout the area. Many buildings collapsed and countless others were damaged.

The widespread destruction reached the B. Braun plant, demolishing one side of the production area. Restoring it to full production capacity at uncompromised levels of quality was a critical goal in the days after the quake.

"This was important," Eleonora said. "We had to look at our contingency planning for getting back in production quickly. We had to show our partners that we could restore our output. It was a kind of rebirth."

The plant was rebuilt quickly. In fact, production there never entirely ceased. New construction went well beyond mere repair. Today, the factory includes a state-of-the-art cleanroom operation that continues to expand and automated facilities that were upgraded in 2015 and 2016. Between 2011 and 2016, the number of employees increased from 161 to 268.

The remarkable success of this renewal, restoration and expansion is illustrated by production tallies recorded in 2012 and the years following. Year over year, the total number of pieces produced at Mirandola was up 59 percent in 2013, seven percent in 2015 and 17 percent in 2016. Forecasts predict further robust growth.

Tracking with these changes are continuing expansions in the international capabilities of the site. "We're prepared to pull together the right team for a contract project," Eleonora said, "with engineering resources in the U.S. and Italy, and manufacturing and standardization capabilities in Italy. This is what's possible from the B. Braun team across the world."

## SINGLE-USE STANDARD BAGS

B. Braun's OEM Division offers a varied selection of single-use standard bags for solutions as part of its complete medical device contracting manufacturing capabilities. The bags are manufactured in B. Braun's FDA-registered Mirandola, Italy, production site, which has state-of-the-art technologies and adheres to international quality standards.

### Material:

- Clear or Yellow EVA
- Single-layer or Multi-layer (Multi-layer bags provide barrier properties against oxygen penetration and UV radiation for long-term stability.)

### Configurations:

- 50-4,000 ml
- Single or Dual Chamber
- Port options according to filling type
- Custom printing available

Two-chamber model allows aseptic filling and separate storage of other constituents until ready for infusion. Our single-use standard bags can be incorporated into a complete medical device. B. Braun also offers on-site engineering assistance, packaging, sterilization and other services for a reliable outsourced solution.

# WEBSITE UPGRADED FOR BETTER USER EXPERIENCE

B. Braun OEM Division has completed a major upgrade of its website ([us.bbraunoem.com](http://us.bbraunoem.com)) to deliver a better experience for the user.

Completely updated with refreshed content and new images, the mobile-friendly website maintains many of the favorite features from the previous site, including product listings and search, as well as a resource center with informative white papers, brochures and videos.

The clean, easy-to-navigate site will help OEM Division customers find the products and services they need for their contract manufacturing projects, said Allison

Longenhagen, marketing associate and project lead. "We built this with our customers in mind every step along the way," she said.

Check out our new website.  
Visit [us.bbraunoem.com](http://us.bbraunoem.com).



## WHAT IS THIS?

B. Braun Medical is always looking to improve quality, not only for our customers but for our own employees as well. Assembling IV sets and small medical devices requires intricate hand movements, which puts significant amounts of stress on the operator's fingers and hands. Using custom fixtures that we design in-house, we create a better working environment for our technicians by implementing more ergonomic equipment. In the image above, the operator is using a fixture to aid in removing caps on a device prior to being bonded to tubing. This also results in fewer injuries that could delay customer builds and hold up production. At B. Braun Medical, we value our employees as much as our customers.

## HOW WE PUT THE "SHARING" IN SHARING EXPERTISE

The B. Braun philosophy of Sharing Expertise permeates all facets of our operation, as any deep-seated philosophy should.

The "expertise" portion stems from the potent combination of our 179-year history in the medical business and the diverse, deep and collective talents of our 61,000 team members worldwide.

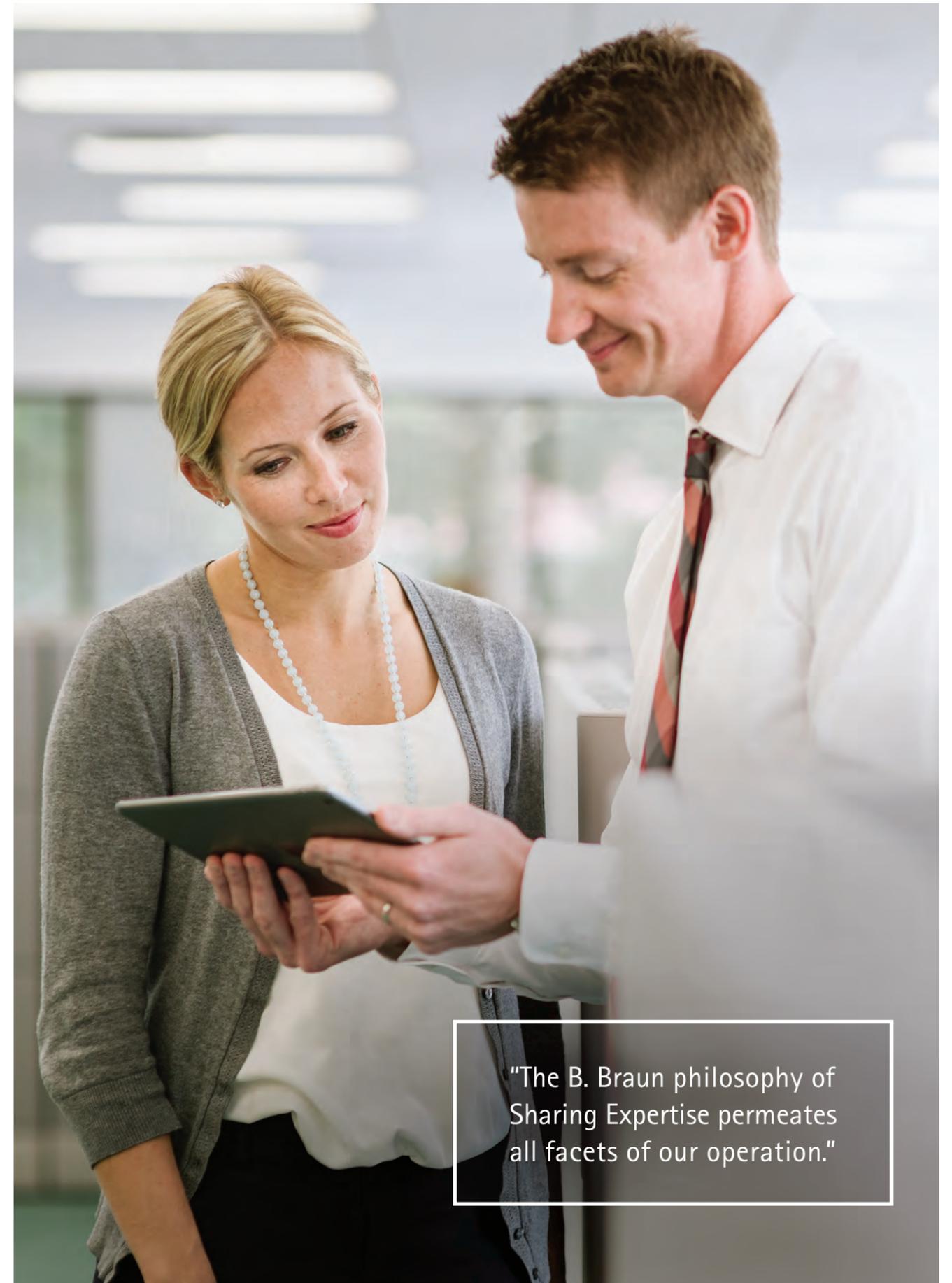
When it comes to "sharing," we do that by communicating. In that spirit, we have developed seven guiding communications principles that underpin our philosophy and enhance the way we interact with each other and with our customers.

And in the true spirit of Sharing Expertise, we're proud to list the seven principles below. We hope you notice us practicing them – and understand why we do. We encourage you to apply them in your interactions with us. (After all, communication is a two-way process.) And we welcome you to adopt all or some of them at your own company.

### Seven Principles of Sharing Expertise

- 1. Open access to information creates the basis for our action.** Transparent, active and intelligent communication allows knowledge to develop and be exchanged.
- 2. Open communication is not bound to hierarchies.** Managers are obligated to provide staff with up-to-date and relevant information, while staff has the responsibility to search for information independently to carry out their jobs.
- 3. Open communication means the ability to express opinions freely and practice constructive criticism.** Teamwork creates transparency in the exchange of knowledge.
- 4. Open communication is characterized by trust, good intentions and mutual respect.** By remaining constructive and goal-oriented, we arrive at solutions together.
- 5. Wherever possible, it is our duty to give priority to personal communication (talking to one another) over electronic communication.**
- 6. Effective email puts the emphasis on exchanging information efficiently with essential recipients.** Make emails and distribution lists as long as necessary but as short as possible.
- 7. Every B. Braun employee is giving a promise with Sharing Expertise.** Making information available to others is critical to everyone's success.

In the end, the Sharing Expertise philosophy only works when there's an open dialogue among all parties. The healthiest, most rewarding interactions and relationships occur when sharing goes both ways, which includes our customers sharing with us. With these seven tenets, we can together harness the power of our collective expertise.



"The B. Braun philosophy of Sharing Expertise permeates all facets of our operation."

## PERSONAL BEST



"Inclusion is near and dear to my heart," says Mike Connelly, B. Braun veteran and the driving force – literally – behind efforts to enable children with disabilities to live the excitement of long-distance running events.

Mike, a Director of Marketing in Allentown, Pa., is deeply dedicated to enriching the lives of young people who can't participate in distance races afoot. "I had two children who had a neurological condition," he said – and the passing of daughter Michaela and son Kevin impelled him toward an unusual way of giving to other children with health issues.

Those medical conditions preclude Mike's young friends from running in 5K or half-marathon events. Instead, they get a first-class seat in an adaptive running chair. Perhaps not coincidentally, Mike is using a specialized device to respond to a health issue – the very kind of technological application that engages B. Braun employees every day. Mike provides the motive power from starting gun to finish line, the human element that brings progress.

He's also pushing hard to share this experience with more children. A nonprofit he founded in 2016, Celebrate Love Always, makes adaptive running chairs available to other charities. One has gone to Fusion Inclusion, the Newark, Del., sponsor of an event where Mike first saw the chairs in action. Another belongs to Camelot for Children in Allentown. He keeps one in his garage available for others to use. Celebrate Love Always is fundraising now to purchase a fourth chair, which will be donated to a father-son triathlon team in Columbia, S.C.

The biggest event for Celebrate Love Always is the Lehigh Valley Health Network Via Relay Marathon, held each September in eastern Pennsylvania. B. Braun is a major sponsor; in 2017, the OEM Division fielded two teams.

To make the ride extra fun, a NASCAR theme is employed – the runner's the crew chief, and the child in the chair's the driver. For Mike Connelly, this is not about finishing first – what matters is giving these kids the joy of taking part.

"It's a great celebration of life to be outside enjoying the beauty of the world," he said. "We don't try to set any records with this thing," he said. "We're there for the fun of it."



## BEING THERE (WITHOUT BEING THERE)

A picture may be worth a thousand words. But it seems that our new virtual reality tour is worth one big one: WOW!

In presenting B. Braun's Allentown, Pa., facility through VR tours, we have enabled virtual visitors to experience our advanced manufacturing plant in all its automated action and fascinating detail.

"Not until people can see our manufacturing facilities live do they realize how broad and extensive our capabilities are," said Tom Black, Vice President, OEM and International Sales and Marketing. "When they see everything from automation to self-directed workforce and continuous improvement measurements, they know we're a trusted partner who can do nearly whatever they ask. They're blown away."

VR users may access six areas in the Allentown facility. The HTC Vive™ platform delivers an introductory film clip about two minutes long, then enables users to turn from a stationary point through a full circle in either direction and look up or down. A voice-over highlights what's happening in the selected room. Further platforms supporting 360-degree video are expected to be added soon.

Black said the VR system also demonstrates B. Braun's strong technology orientation, not just in advanced manufacturing techniques but also in the methods used to transmit and display them.

"Not everyone can make it to Allentown," he said. "From a tradeshow booth or customer office we're visiting, we can set up the VR system – and it's like they're standing on the shop floor even if they're hundreds of miles away."

# IMPORTING & EXPORTING PRODUCTS & EXPERTISE: THE GLOBAL STRENGTH OF B. BRAUN OEM DIVISION

What does it mean to be an international force in medical device manufacturing? It's more than just size. B. Braun's extensive global manufacturing capabilities, augmented by expertise of great breadth and depth, enable our company to assemble exceptional teams and diverse resources.

This is as true of our contract manufacturing efforts as it is of our own projects. In fact, the carefully evolved ability to compose global development and production teams for our own work enables such services for our contract manufacturing customers.

"We have manufacturing locations in 26 countries," said Dave Williams, Director of International Sales, U.S. Products. Each has its own specialties; many are designated Centers of Excellence. Together, they represent an unmatched array of manufacturing solutions. "I know of no other manufacturer with this range of capabilities," Dave said.

## Reaching for worldwide resources

Depending on the contract manufacturing job at hand, design and manufacturing work may begin in the U.S.,

then move forward with know-how and production capacities from other locations. The reverse may also take place. Many B. Braun locations in other countries are registered with the U.S. Food and Drug Administration, a prerequisite when their output will be used here.

Imports to the U.S. on the OEM side, Dave said, may come from any of a number of our facilities worldwide. "Stopcocks are manufactured in Switzerland, syringes mostly in Germany. We are looking to Poland for catheters," he said.

These are just three examples. Around the world, B. Braun makes more than 3,000 hospital care products and devices. Many aspects of this work – design, engineering, materials, documentation, sterilization, packaging, logistics and more – may be available to contract customers. It's an unparalleled body of expertise on which to draw.

B. Braun's Centers of Excellence program, focusing best-practice production in select facilities around the world, contributes powerfully to the creation of successful contract arrangements. Flexible manufacturing capacity enables us to accept many projects. So does a profound store of institutional memory, which contributes to the ability of project teams to plan and execute contract assignments most effectively.

Utilizing integrated international resources, projects go forward rapidly, efficiently and cost-effectively while meeting the strict demands of our contract manufacturing customers.

"There's a huge benefit in working with just one company that offers integrated quality control, regulatory knowledge, outstanding communications and all the rest," Dave said.

"OEM customers gain a lot from these unified processes. We have all the resources and experts they need. This is Sharing Expertise – it translates into every culture and every country we work in."

**"There's a huge benefit in working with just one company that offers integrated quality control, regulatory knowledge, outstanding communications and all the rest."**

– Dave Williams, Director of International Sales, U.S. Products



# SHARING OUR EXPERTISE WORLDWIDE



## KEY

-  FDA-Registered Manufacturing Facilities
-  Global Locations

## COMPANY STATS

-  61,000 People
-  15th Largest Medical Device Company in the World
-  5,000 Different Products
-  8.1 Billion Dollars in Sales (2017)

## "WHAT I'VE LEARNED"

"THE MEDICAL DEVICE INDUSTRY LANDSCAPE IS CHANGING FASTER THAN EVER AND THE ABILITY TO ADAPT AND MEET HIGHER CUSTOMER AND REGULATORY REQUIREMENTS WILL BE PARAMOUNT TO YOUR COMPANY'S SUCCESS."

- Robert Hubert  
Director, Quality Compliance

"THE MARKET POTENTIAL OF AN INNOVATIVE PRODUCT THAT EVERYONE WANTS, BUT NO ONE IS WILLING TO PAY FOR IS STILL ZERO. OUTCOMES EVIDENCE SUPPORTING THE INNOVATION TO MARKET ACCESS STAKEHOLDERS IS A REQUISITE FOR A SUCCESSFUL COMMERCIALIZATION."

- Dave Banko  
Director, Health Economics, Outcomes and Research

"ALTHOUGH THE MEDICAL DEVICE INDUSTRY HAS BECOME MORE AND MORE COMPLEX, I HAVE FOUND THAT SUCCESSFUL SUPPLIERS NEVER LOSE FOCUS ON PROVIDING A LEVEL OF CUSTOMER SERVICE. MAINTAINING A HIGH LEVEL OF CUSTOMER SATISFACTION REMAINS A KEY TO BE SUCCESSFUL."

- Sam Amory  
Vice President, Avitum

"HAVING PERSONALLY USED MANY B. BRAUN PRODUCTS IN A CLINICAL SETTING, I KNOW FIRST HAND THE QUALITY THAT GOES INTO EACH B. BRAUN ITEM. OUR DEDICATION TO QUALITY PRODUCTS AND BETTER PATIENT OUTCOMES MAKES ME VERY PROUD TO WORK AT B. BRAUN."

- Sandra Cray  
Sales Service Associate, OEM & International Division

"FAT, DRUNK, AND STUPID IS NO WAY TO GO THROUGH LIFE, SON."

- Dean Wormer  
Dean of Faber College





# FLORIDA MEDICAL DEVICE SYMPOSIUM

MAY 14–15, 2018

HILTON CARILLON PARK • ST. PETERSBURG, FL

Join your medical device industry peers in St. Petersburg, Florida for the annual Florida Medical Device Symposium—Florida’s premier event for medical technology firms—featuring nationally recognized speakers, expert panels on regulatory issues and industry trends, company exhibits and quality networking opportunities.



[WWW.FLORIDAMEDTECH.COM](http://WWW.FLORIDAMEDTECH.COM)



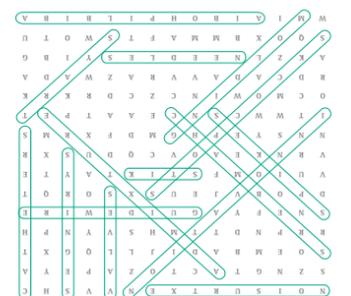
## B. BRAUN WORD SEARCH

Find and circle all the listed words. The words may go horizontally, vertically, diagonally and backwards. Enjoy!

N	O	I	S	U	R	T	X	E	N	V	V	S	H	C
S	Z	N	G	T	A	C	T	O	Z	A	P	E	Y	A
S	O	E	M	B	A	D	I	J	L	L	Q	G	X	T
R	R	P	N	D	T	T	M	H	S	V	Y	N	P	H
S	N	E	F	Y	A	G	U	I	D	E	W	I	R	E
D	P	O	B	V	J	E	U	S	X	S	O	R	Q	T
V	U	I	O	M	F	S	T	I	K	T	A	Y	T	E
V	R	N	K	E	A	O	V	C	Q	D	U	S	X	R
N	N	S	Y	E	P	H	G	M	D	F	X	R	M	S
I	T	W	W	C	S	N	C	E	A	A	T	P	E	T
O	C	M	O	W	I	N	C	Z	C	D	R	K	R	K
R	D	C	A	D	A	V	V	R	A	Z	W	A	D	A
A	K	Z	L	N	E	E	D	L	E	S	Y	I	B	G
S	Q	O	X	B	M	M	A	F	T	S	W	O	T	U
W	M	I	A	I	B	O	H	P	I	L	B	I	B	A

- ABIBLIOPHOBIA
- ADMIXTURE
- EXTRUSION
- KITS
- SPIKES
- TRAYS
- CATHETERS
- GUIDEWIRE
- MOLDING
- STOPCOCKS
- VALVES
- CHAMBERS
- INNOVATION
- NEEDLES
- SYRINGES

Answers:



You can try to juggle many vendors.



Or just call us.



Don't waste time & money dealing with multiple vendors when all you really need is one partner.

B. Braun OEM has all the capabilities to get your product from drawing board to market. Project management, design and prototyping, engineering, quality systems, sterilization and regulatory guidance, to name a few. The best part of having all these capabilities under one roof is that they come with decades of expertise we can't wait to share. Choose B. Braun OEM—your true outsourcing partner.

B. Braun Medical | OEM Division | USA | [us.bbraunoem.com](http://us.bbraunoem.com) | 1-800-359-2439