SOUTH CAROLINA’S COMPETITIVE EDGE
AUTOMOTIVE INDUSTRY
DRIVING SUCCESS IN SOUTH CAROLINA
ECONOMIC DEVELOPMENT and GROWTH through EDUCATION
ADDING VALUE TO YOUR WORKFORCE

The ROI of Military Hires

Today’s armed forces are a highly trained, motivated workforce. They bring leadership and management skills to the table — soft skills that are hardest to grow. Employers can teach business and industry skills, but service members arrive with the talent and proficiencies needed to take any organization to the next level.

Active duty or retired, most veterans and service members embody certain core values unique to military service: attributes like discipline, battle-tested leadership, a solid work ethic, trainability, adaptability and the ability to thrive under pressure.

Employers and hiring managers can access this desirable workforce through Operation Palmetto Employment (OPE), South Carolina’s military hiring initiative. At no cost, OPE supports business owners and hiring managers by providing pre-screened military applicants based on your qualifications. There are many opportunities to participate in military-specific job fairs and hiring events statewide. Companies that pledge to hire and retain South Carolina’s transitioning service members can also receive special recognition and training by applying to become a certified Palmetto Military Employer (PME).

To learn more about how OPE can help increase your human capital, visit OperationPalmettoEmployment.sc.gov or call (803) 299-1713.
When BMW announced that it was opening its first North American production facility in South Carolina, it created a seismic shift in the state’s manufacturing landscape. In 1992, South Carolina was known more for making towels and sheets than cars. Over 20 years and more than $7 billion in investment later, BMW has helped transform South Carolina into a major epicenter of advanced automobile manufacturers and suppliers. Technical skills are essential to this industry, and readySC has partnered with BMW from the start to help recruit and train its workforce. Today, BMW faces new challenges as its initial workforce begins to consider retirement and succession planning becomes a necessity.

Sky Foster, department manager for Corporate Communications at BMW Manufacturing Co., talked with EDGE about the extraordinary achievements of the South Carolina plant, and the importance of readySC and the SC Technical College System to its past and future success.

EDGE: BMW recently announced that the South Carolina site had reached a major milestone by becoming the largest BMW facility, is that correct?

Sky Foster: Yes, we are now the largest plant within the BMW production network by volume. That’s quite an accomplishment for South Carolina, coming from being a green-field and a startup just over 22 years ago. To have accomplished what we have accomplished to date is absolutely phenomenal, because South Carolina wasn’t an automotive hub. We didn’t know how to manufacture cars. But, because there’s such a resilience in the people of the state of South Carolina, we learned how.

The skilled workforce that we have is a huge reason behind our success, but we also had the support of the statewide technical college system, which includes readySC. There was a pro-business attitude in the state of South Carolina, and all of those factors came together to make us who we are today and continued on next page
positioned us within the group to be extraordinary. Our associates have such a tremendous sense of pride, and when you feel good about what you do, you’re really good at it.

**EDGE:** Tell us about how BMW has grown in South Carolina over the years.

**SF:** In a 20+ year period, we have grown to over 3 million vehicles—that’s another testimony to what we’ve developed in the state. We’ve had one expansion after the other, and have contributed over $7 billion to the state of South Carolina because of our presence here. It’s even more if you look at that in combination with our tier one suppliers and other partners that work with us. We’ve built a strong supplier network of 270 companies throughout North America, which has grown tremendously from an original 22 supplier network.

**EDGE:** How many people are employed at the Spartanburg site now?

**SF:** We have more than 8,000 jobs on-site. That’s a lot of people. We call it our own little city. There’s no slowing down, with 5.6 million square feet and growing…and growing. Honestly, we had no idea how much it was going to grow when BMW first came to South Carolina, and I have been here since the start. I’ve seen the company go from initial construction to where it is today, from just a handful of cars to now over 1400 produced a day, and that’s incredible — it truly is.

**EDGE:** Since you have the unique perspective of being here from the beginning, what was your experience with readySC and its training and recruitment program during BMW’s startup phase?

**SF:** My career at BMW started in Human Resources, and I was happy to know that there was a readySC program to help us prepare for the future. We partnered together to develop the technical training program, assessment centers and recruitment on-boarding. It was so helpful to have readySC there with us as we progressed, always asking, “what do you need?” and “when do you need it?”

We rely heavily on the expertise that the readySC group provides. They have the knowledge and the know-how, and they know the people and the state. They know recruiting practices, on-boarding, assessment, designs and manufacturing models. That knowledge was extremely valuable in helping us to secure a productive workforce initially, and as we continue today. It has been a great partnership — a really great partnership.

**EDGE:** Do you see any new workforce challenges now that BMW has been here over 20 years?

**SF:** Some of our people who have been here from the start are now in preparation for retirement. They have a deep knowledge of processes and technologies that has created the successes of our business today. Somehow

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**SOUTH CAROLINA PLANT NOW LARGEST IN BMW NETWORK**

*Annual Production Tops 400,000 X-Models*

The South Carolina BMW facility reached a major milestone in 2015 when it became the largest plant in the BMW network by volume.

According to a January 2016 press release, BMW Manufacturing recorded its largest annual production in 2015. Exactly 400,904 X-models rolled off the line last year making the South Carolina plant the largest volume producer in the company’s global production network. This achievement represents a 15% increase over the production volume for 2014 (349,949). In 2015, the plant exported 70% (281,256) of the total volume to over 140 countries around the globe.

“2015 was another very successful year for Plant Spartanburg,” said Manfred Erlacher, President and CEO, BMW Manufacturing Co. “We have an outstanding team of dedicated associates that are highly committed to delivering premium quality vehicles for our customers to enjoy.”

In 2016, the company's U.S. factory will continue its three-year, $1 Billion investment that was announced in 2014. This expansion will further increase the plant’s overall capacity and add a fifth model to their vehicle line-up, the all-new BMW X7. By the end of 2016, the plant’s annual production capacity will increase to 450,000 units.

BMW began manufacturing vehicles in the U.S. in 1994 and has produced over 3.3 million vehicles in the last two decades. Presently, BMW Manufacturing produces over 1,400 vehicles each day. BMW Group has invested over $7 Billion in the South Carolina plant.

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**Economic Development and Growth through Education**
we must find a way to preserve the skillset of that highly valued human capital.

The people who are now looking to retire have been some of the best innovators. We continue to design programs to help learn from that generation and to teach the next generation.

EDGE: How does apprenticeship and the Tech Scholars Program help that transfer of knowledge?

SF: We need technicians, as does every industry. We all want a technically skilled workforce, and it’s important to maintain and grow that workforce. That was the genesis of the Tech Scholar Apprentice Program. We worked with several educational institution partners to develop the program. The candidates are enrolled for a two-year period typically in the areas that are relevant to manufacturing technologies.

In addition to that, we offer the advantage of tuition and book assistance. Participants are working 20 hours per week, and they’re in school 20 hours per week. It is a good example of how collaboration between education and manufacturing can lead to employment and give better outcomes and opportunities for the next generation. We give them the work experience and support them in their education as they continue to enhance their technical knowledge.

EDGE: It sounds like you’re doing a great job of preparing for the change in your workforce.

SF: I think we are positioned to be prosperous in the future. It is a strong collaboration. Through succession planning, we’re strengthening employees’ skills and abilities. The goal is to continue to give people what they need to be successful at their jobs.

DGE: Do you have any other thoughts about the readySC program and the SC Technical College System?

SF: Our partnership with readySC shows a great example of how collaboration between education, the public sector and the manufacturing sector can lead to employment for South Carolina residents. Because of readySC, we were able to receive better outcomes and offer better opportunities for this generation and the next generation to come.

I think we should continue the partnership with the readySC program and the technical colleges. It has been very rewarding for the company. It has laid the groundwork for our current success, and will allow us to build on that success in the future.

readySC understands the driving force behind success — adaptability, speed, flexibility and a highly skilled workforce. BMW is extremely pleased to have a great partnership with readySC.

About BMW Manufacturing Co., LLC

BMW Manufacturing Co., LLC is a subsidiary of BMW AG in Munich, Germany and is the global producer of the BMW X3 and X5 Sports Activity Vehicles and X4 and X6 Sports Activity Coupe. In addition to the South Carolina manufacturing facility, BMW Group North American subsidiaries include sales, marketing and financial services operations in the United States, Canada and throughout Latin America; and a design firm and technology office in California.

For more information on BMW Manufacturing, visit www.bmwusfactory.com.
Business success is contingent on product and technology, but can only be sustained by a highly skilled workforce. Felix von Nathusius, president and CEO of IFA Rotorion — North America LLC, understands this better than anyone. “If manufacturing wants to be on a competitive level globally, you need a very, very good workforce,” he said. “Apprenticeship is a great opportunity to give back to the community and develop the workforce of the future.”

IFA Rotorion took this philosophy to the next level in 2014 when it helped launch the Lowcountry’s First Youth Apprenticeship program in Industrial Maintenance. IFA Rotorion and three other local companies worked with Apprenticeship Carolina, Trident Technical College and the Charleston Metro Chamber to recruit and sign 11 high school juniors and seniors to apprenticeships.

“This is the way to go to grow the future of our workforce,” Debbi Meuli, human resources manager for IFA Rotorion said. “This was a collaboration of the industries to say, ‘Yeah, we know we are always fighting each other for talent, but here’s a way for us to come together and grow the future workforce here in Charleston and our surrounding counties.’”

“IFA Rotorion is an enthusiastic supporter of the Youth Apprenticeship program. This program is a win-win-win for high school students, employers and the community. The Youth Apprenticeship program in Industrial Maintenance offers students opportunities for on-the-job training, technical training, paychecks and careers that have not traditionally been available to high school students.

We would like to highlight our four youth apprentices: Chris Dunn, second-year youth apprentice, Joe Rojec, second-year youth apprentice, Paul Thieman, second-year youth apprentice and David Moraes-Montana, first-year youth apprentice. These young men have succeeded in attending high school classes, completing college-level classes at Trident Technical College and working on-the-job at IFA Rotorion. They have all distinguished themselves with their abilities, perseverance and positive attitudes.

For more info on The Lowcountry’s First Youth Apprenticeship program in Industrial Maintenance, see Youth Apprenticeship Signing Day 2014 www.apprenticeshipcarolina.com/testimonials/youth-apprenticeship-signing-day.html
The decision to build a new, full van manufacturing facility in South Carolina represents the culmination of a decade of success for Mercedes-Benz in our state. Since 2006, the company has assembled Sprinter vans in its North Charleston plant. Now faced with the expanded training requirements of a full manufacturing facility, Mercedes-Benz Vans (MBV) turned to readySC for assistance.

To begin assessing the extent of the company’s training and recruitment needs, a readySC Discovery team traveled to Daimler’s Mercedes-Benz plant in Düsseldorf, Germany in December 2015. Comprised of SC Technical College System and readySC leaders, curriculum developers, instructors and project managers, the team met with Daimler training and human resources managers to observe and collect data on the plant.

Some 6,000+ workers at Daimler’s Mercedes-Benz plant in Düsseldorf produce approximately 160,000 vehicles per year with the help of hundreds of industrial robots. Daimler representatives took the team on a process tour of the facility, including paint, body, assembly and finish shops.

The team observed a variety of processes, assembly techniques and flow paths. They also met with key subject matter experts (SMEs) from the facility to discuss their jobs and related tasks. Technical
apprentices offered demonstrations for the various workstations and presented the major product from each production line.

During the tour, three skill levels ranging from entry-level to highly-skilled were identified. The type and length of training necessary for each skill level will be determined during the Design phase of readySC training development. Any unique tooling observed during the tour will also be considered when developing any subsequent, hands-on training sessions.

As part of discussions on company culture, Daimler revealed a few of the qualities that the company values in an employee: tidiness, cleanliness, staying calm under pressure and working well with others. In addition, the team learned about Daimler’s four-step pre-hire assessment process that all potential shop floor employees must go through.

Important takeaways from the trip included training materials, pre-hire assessments, process and tooling information. Safety issues were identified, including lifting requirements, overhead welding, working with arms raised at or above shoulder height, repetitive movement cautions and working in backward motion. Since safety is important to the process, safety awareness will be integrated into any training program and emphasized as a goal for everyone.

The next step is to use the team’s findings from the trip to design and deliver a customized training and recruitment plan for Mercedes-Benz Vans. As part of the Discovery Team, readySC area director Terrance Rivers is eager to get started: “readySC is understandably excited about the Daimler expansion. We’re looking forward to showing Daimler that readySC is very capable of providing the trained employees they need.”

“The region has very highly-skilled workers, a dense network of reliable suppliers and an outstanding logistics infrastructure that includes good transport connections to the nearby harbor.”

— VANS VOLKER MORNHINWEG, HEAD OF MERCEDES-BENZ

Mercedes-Benz Vans to invest $500 million in new South Carolina manufacturing plant

With the official announcement of its new South Carolina facility in 2015, Mercedes-Benz revealed that it will expand its current assembly operation in North Charleston to full van manufacturing. The plant will be the first Mercedes van factory in North America and will supply the North American market with the next-generation Sprinter van. Mercedes-Benz Vans, a division of Daimler, plans to invest $500 million in the new manufacturing plant and create 1,300 jobs over the next several years.

Construction of the new factory is scheduled to begin in 2016 and will include a completely new body shop, a paint shop and an assembly line. “This plant is key to our future growth in the very dynamic North American van market,” said Vans Volker Mornhinweg, head of Mercedes-Benz. “Charleston is an excellent location for our new plant. The region has very highly-skilled workers, a dense network of reliable suppliers and an outstanding logistics infrastructure that includes good transport connections to the nearby harbor.”

The Mercedes-Benz Sprinter is the world’s leading large van, and more than 2.8 million Sprinters have been delivered to customers in 130 countries worldwide. In 2014, the company delivered approximately 26,000 Sprinters to U.S. customers, making the United States the company’s second-largest sales market behind Germany. The Sprinter has been available in the U.S. since 2001 and today holds approximately 9 percent of the country’s large van market. The company has operated its current van assembly operation in Charleston County since 2006.
MTU America, Inc., located in Graniteville, South Carolina (Aiken County), is a trailblazer in youth apprenticeship. It is the first company to establish a two-year metal worker program in the United States that is fully accredited by the German-American Chambers of Commerce (AHK USA). This distinction puts MTU at the forefront of establishing quality standards for vocational training that are identical to the requirements in the German Vocational Education and Training Network (VET). Like in Germany, trainees can begin their company career path at the age of 16.

Occupations apprenticed: Skilled Metal Worker

Length of program/education specifics: Produced in partnership with the Aiken County School District, Aiken County Career and Technology Center, and Aiken Technical College, MTU America’s Apprenticeship Program has NO additional cost for the community or students.

11th Grade
As high school juniors, students attend high school classes and career center training sessions while working limited hours at MTU during the school year (as an elective). Students work full-time during the summer.

12th Grade
Students attend high school and career center training sessions while also working limited hours at MTU Aiken Plant during the school year. Students rotate through various departments in order to increase their knowledge of MTU America’s operations.

Final Exam
The three-part exam consists of a practical exam, a written exam and an oral exam which is conducted by a committee consisting of a Chamber of Commerce member, a teacher and an industry representative. Upon completion, students will receive a certification as an Industrial Mechanic (Basic), recognized and protected by the State of South Carolina.

Employment
Upon graduation from high school, employment at MTU America is not guaranteed nor required. With their certification, graduates will be able to obtain open positions at MTU America or many other potential employers.

Number of apprentices: MTU America currently has 11 apprentices, 5 seniors and 6 juniors.

Biggest benefit of apprenticeship for the company: “The MTU America Apprenticeship Program gives us a continuous pool of qualified potential employees,” said Arjonetta Gaillard, Senior HR Generalist for MTU. “It is a win for everyone involved, including the students, their parents, the school and the manufacturing community, as the training learned at MTU can be used by manufacturing companies anywhere.”

Awards and Recognition:
2013 South Carolina Dept. of Education Governor’s Award – Private Sector Champion of the Year
2014 National ACTE Excellence Award – ACTE Award of Merit
National news coverage by The Wall Street Journal and “Dan Rather Reports”
Invitation from the U.S. Dept. of Education to discuss the Apprenticeship Program at the White House
Invitation from the U.S. Dept. of Commerce to discuss the Apprenticeship Program at the White House
Invitation from the U.S. Dept. of Labor to discuss the Apprenticeship Program at the White House
2014 Nigeria Williams, MTU Apprentice, won the German American Chambers of Commerce Trainee of the Year Award
Hosted Senator Tim Scott, Governor Nikki Haley, State Superintendent of Schools Molly Spearman, the National Grants Council and others highlighting the MTU Apprenticeship Program and the Graniteville site
MTU Started-up with readySC:

MTU America has been engineering and manufacturing diesel engines, components and systems in the U.S. for more than 70 years. The Aiken, South Carolina facility provides assembly, engine testing and component machining for MTU Series 2000 and Series 4000 engines. The facility started production in 2010, with training assistance from readySC.

When asked if he would recommend readySC to other companies looking to start up in South Carolina, Joerg Klirsch, vice president of operations for MTU, said, “I would recommend readySC 100 percent because every other startup company will have the same problems that we had. That you come in a completely new environment and within a short period of time you need to meet a lot of knowledgeable people that can help you get your training together. That’s what readySC did for us. I could not think of any other (group) that could do that in a similar way.”

Apprenticeship Level: Kenneth Lybrand is a senior in his second year of the MTU Youth Apprenticeship program.

What do you like most about the program? “I like the hands-on manufacturing experience. I’ve always been a hands-on learner. I enjoy fixing things and working on engines. This relates to why I wanted to expand my knowledge while learning at MTU. I love having this opportunity to experience learning in an organization like this. I have learned to assemble these large engines, how they operate, and doing this while still in school and also earning some money.”

My desire to pursue an industrial maintenance degree has had a large impact on why I chose this particular field. The fact that I am a hands-on learner also appealed to me as this is what I do every day. In the local area, there are not many of these types of programs. I hope that more companies come to this area to give us even more choices in other fields. Companies should be inspired by MTU’s apprenticeship program because it helps young teenagers narrow down their future career. This apprenticeship has helped me not only learn how to build engines but also how to be a good employee.”

What would you say to others thinking about apprenticeship? “I would tell them to take advantage of the opportunity to learn via hands-on activities in a real manufacturing environment. MTU has helped me strengthen my skills, including teamwork and patience. An apprenticeship offers so much that it all can’t be put into words.”

Plans for the future? “After completing my MTU apprenticeship program, I would like to study at a two-year technical college to pursue a degree in industrial maintenance. I would like to do this in conjunction with still working within MTU America. This will hopefully result in a full-time position that will help me expand my MTU growth potential.”

In February 2011, readySC and representatives from the local technical college flew to Germany where they met with ZF officials to understand fully the project’s hiring plans and training requirements. It became evident that an excellent workforce training and development plan would require a collective effort between several partners. Intense planning discussions between readySC, the local technical college and county officials began to take place. These discussions led to the development of the Center for Advanced Manufacturing (CAM). The CAM includes CNC labs, CMM labs and classrooms, which will benefit ZF as well as other industries and the residents of Laurens County for years to come. This partnership met the needs of a new employer, while at the same time providing the local workforce with a means for upgrading their skills with relevant technology-based training.

Mike Edmonds, human resources manager for ZF’s Laurens facility, describes how readySC helped recruit and train its initial workforce. “As an organization, readySC is extremely responsive. They were able to provide us with the right people at the right time with the right knowledge and skills. In addition, their ability to leverage resources and collaborate with necessary stakeholders to meet our company’s needs was quite remarkable. Through the diligent work of readySC and Piedmont Technical College working closely with the county developer, county council and local industry, we now have a top-notch, convenient training center in Piedmont Technical College’s Center for Advanced Manufacturing,” said Edmonds. “readySC has been an excellent partner in making that happen.”

readySC and Piedmont Technical College Partner to Deliver Advanced Manufacturing Training

www.readysc.org/testimonials/zf-transmissions.html
When Volvo Cars Corporation broke ground on its new Berkeley County facility on September 25, 2015, it fortified South Carolina’s status as an epicenter of automotive excellence. The $500 million facility represents Volvo’s first manufacturing plant in the Western Hemisphere and will be home to the world’s only production line of the next-generation Volvo S60 sedan. The car will be the first American-built Volvo sold in the U.S., and it will be shipped overseas through the Port of Charleston for worldwide distribution.

The new facility is expected to create some 2,000 new jobs in the next 10 years and up to 4,000 jobs by 2030. The goal is to produce around 100,000 cars per year, with the first vehicles expected to roll off the assembly line in 2018.

In a statement, Volvo indicated they made the decision to build in South Carolina because of its “easy access to international ports and infrastructure, a well-trained labor force, attractive investment environment and experience in the high-tech manufacturing sector.”

A key component to that “well-trained labor force” is readySC™, which is assisting with the recruitment and training for positions at the new plant. The readySC project is expected to create 2,000 jobs in the next 10 years and up to 4,000 jobs by 2030.
The team is designing a preliminary pre-employment curriculum based on initial meetings with the local Volvo Cars human resource representatives and a Discovery trip to the Volvo Cars manufacturing facility in Sweden. Additional training will be designed in conjunction with Volvo Cars, and a permanent Volvo Cars Training Center will be constructed at the Berkeley County site.

While the facility is under construction, and the new Volvo S60 sedan is being designed by the engineering team in Sweden, hiring strategies are taking shape. The plan is to hire engineers and some of the salaried workforce throughout 2016 and 2017. Production jobs, which will be the majority of available positions, will start to be filled locally as the company gets closer to production launch in 2018. Volvo will be partnering with readySC on the recruitment and training for the production workforce, and these jobs will be posted on: www.readysc.org/volvo.

For more information on Volvo Cars, visit www.volvocars.com/us.

In a statement, Volvo said the decision to build in South Carolina was made because of its ‘easy access to international ports and infrastructure, a well-trained labor force, attractive investment environment and experience in the high-tech manufacturing sector.’
OUR UNIQUE SOLUTION

From your initial start-up and early production goals to your organization’s long-term growth strategy, South Carolina offers a comprehensive workforce solution custom-designed to meet your needs. Our internationally renowned programs — readySC™ and Apprenticeship Carolina™ — along with our robust technical college system provide the training and education necessary to build a competitive workforce ready for today’s demands and tomorrow’s challenges. Learn more at www.sctechsystem.edu.