

SOUTH CAROLINA'S COMPETITIVE

EDGE

TIRE INDUSTRY

SOUTH CAROLINA
WHERE THE RUBBER MEETS THE ROAD

ECONOMIC DEVELOPMENT *and* GROWTH *through* EDUCATION



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SOUTH CAROLINA'S COMPETITIVE
EDGE

TIRE INDUSTRY

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SOUTH CAROLINA

WHERE THE RUBBER MEETS THE ROAD

South Carolina creates an environment of success for the tire industry, and success breeds success. The Palmetto State is the top tire producer in the US, generating over 99,000 units each day. It also leads the country in exports and accounts for over 30 percent of the nation's overseas market, which is nearly four times as much as its closest competitor, Ohio.

The past five years have been extraordinarily successful, with billions of dollars invested in South Carolina by three of the world's largest tire manufacturers: Michelin, Bridgestone and Continental. All totaled, these three companies employ nearly 11,000 South Carolinians. An additional 3,000 jobs are on their way as new plants by Trelleborg Wheel Systems Americas, Inc. and Giti Tire Group reach full production, along with various expansion projects across the state.

According to a 2012 *The Wall Street Journal* article, South Carolina's "high-tech workforce" is the secret to this success. This talented workforce "makes the state an easy choice for tomorrow's factories, where highly automated plants require skilled operators."

The key to building that skilled workforce is readySC™, which provides recruitment and training solutions for new and expanding industries throughout the state. Since 2010, readySC has trained over 2,500 people for the tech-savvy tire industry, and an additional 3,000 are projected to be trained in the next five years.





TIRE FIRMS IN SOUTH CAROLINA

The Palmetto State is the
NATION'S TOP TIRE PRODUCER
generating over 99,000 units each day

OVER 2,500 PEOPLE
have been trained by readySC
in the tire industry since 2010



South Carolina has "SOLIDIFIED ITS STATUS AS THE NO. 1 TIRE-PRODUCING STATE,

with an estimated 99,000 units of daily tire production, as new plants and expansions by Bridgestone Americas, Continental Tire and Michelin began having an effect. The state's collective capacity will keep growing with the addition of plants from Giti Tire and Trelleborg Wheel Systems in 2016."

— TIRE BUSINESS' 2015 MARKET DATA BOOK

It is an ongoing relationship that goes back 40 years. readySC has been successfully recruiting and training the skilled workforce needed for the tire industry since 1975 when Michelin opened the first of many plants in the state. According to Ed Zobel, legislative liaison for the SC Technical College System from 1974 – 2005, "One of the reasons Michelin came to South Carolina was that we could custom-make a training program that

just fit like a tailor-made suit."

That tailor-made approach still works today: from recruitment micro-sites and pre-employment workplace simulations to train-the-trainer programs and comprehensive on-the-job training. South Carolina's readySC program uses its wealth of experience to design the right solution that is a perfect fit for each company's unique needs.



readySC's 3 Phase Approach – discovery, design and delivery



During **discovery**, readySC™ works with a company's Subject Matter Experts to determine the skills, knowledge and abilities needed and define the culture and working environment they want to create at their facility.



In the **design** phase, readySC™ integrates a company's principles into every facet of the training so their training plan is customized precisely to their needs.



For **delivery**, readySC™ partners with company management to intertwine company role expectations with foundational and process-specific knowledge.

THE FIRST STEP ON THE ROAD TO DISCOVERY

GITI Tire, the 10th largest tire company in the world and one of the most successful in Asia, announced in June 2014 that it would establish its first North American manufacturing facility in Richburg, South Carolina. For the Singapore-based company, this will be its first manufacturing facility built outside of the continent of Asia.



PT Gajah Tunggal Tbk
Tangerang, Indonesia

"This significant investment represents our strong commitment to customers in North America. This is a key milestone for GITI Tire and an important part of our growth strategy worldwide. Existing business and strong demand for GITI Tire's passenger and light truck tires in North America have made this significant investment in South Carolina possible," said Enki Tan, executive chairman of GITI Tire Group, in a statement.

The Chester County site is an excellent opportunity for both the company and the people of South Carolina. According to the South Carolina Department of Commerce, the company plans to invest \$560 million and create 1,700 new jobs over the next decade.

A number of elements persuaded the company to locate in South Carolina, including the area's workforce and training opportunities provided by readySC™ and the technical college system.

Through collaboration with GITI subject matter experts, readySC will craft a customized recruiting and training solution designed to meet the initial hiring and production needs at the new facility.

Understanding the unique needs of a start-up company is crucial to the development of a successful recruitment and training strategy, and this first step begins with the Discovery Phase of readySC's 3D Process.

For GITI Tire, this required a two-week Discovery trip in March 2015 to study existing facilities in Asia.

Marianne Borders, Area Director for readySC, led the Discovery team, which consisted of curriculum development and design experts. The readySC team traveled to select facilities in Indonesia and China that provided the best model for operations at the new South Carolina location.

The first days of the visit focused on production at the PT Gajah Tunggal Tbk facility in Tangerang, Indonesia. GITI Tire owns a 49.7% stake in the company, which manufactures tires for consumer cars and sports utility vehicles, commercial vehicles, off-road vehicles, specialty machinery and motorcycles.

From there, the team traveled to Hefei, China to tour the first and largest GITI facility in the





Marianne Borders, readySC Area Director (2nd from left), and Kelly Shumaker, HR Director of GITI Tire Manufacturing, USA (3rd from left), listen as Quality Assurance Executive Director Michel Dube (center) describes the manufacturing processes of the PT. Gajah Tunggal Tbk facility in Indonesia. Also shown are Julianto Djajadi, Executive Vice President of Business Operations, North America, GITI Tire USA (5th from left) and Sylvia Soerijadi, CFO of GITI Tire USA (6th from left).

country. Located in the Hefei Economic and Technology Development Zone, GITI Tire Anhui produces tires for various vehicle types and road conditions. Major R&D and supply chain facilities are also located together with the plant.

A leading goal of these plant visits was to observe critical steps in the production process from the reception

of raw materials to tire storage and shipment and the different jobs associated with each of these various methods. The Discovery team focused on the primary development questions, including: what are the positive aspects that need to be duplicated at the new facility? What are the quality standards that will be expected? What are the most challenging and/or difficult tasks that will need to be learned for the job?

GITI TIRE, THE 10TH LARGEST TIRE COMPANY IN THE WORLD,
will establish its first North American greenfield manufacturing facility in Chester County

**\$560 MILLION,
1,700 NEW JOBS**
over the next decade

New facility will combine manufacturing and distribution activities, with total building area estimated to be
1.8 million square feet



5 MILLION TIRES
to be made during the first phase of production, with plans to further increase production capacity in response to future market demand and conditions



About GITI Tire

GITI Tire Group, headquartered in Singapore, has been in the tire business since 1951. GITI Tire operates eight manufacturing plants and produces a broad range of tire products, serving major original equipment vehicle manufacturers, auto-service outlets, tire dealers and consumers in more than 130 countries worldwide.



Enki Tan, Executive Chairman of GITI Tire Group (right), with SC Governor Nikki Haley (center)

“This significant investment represents our strong commitment to customers in North America. This is a key milestone for GITI Tire and an important part of our growth strategy worldwide.”

— ENKI TAN, EXECUTIVE CHAIRMAN OF GITI TIRE GROUP

An examination of existing training plans and materials focused on:

- How training is currently conducted, documented, measured and delivered
- How training will be similar at the new facility
- What knowledge, skills and abilities are needed to perform the entry-level functions of the job

During these plant visits, the team also observed differences and similarities between the culture at the existing facilities and identi-

fied what is planned for the South Carolina facility.

From Hefei, China, the Discovery team then traveled to Shanghai to the company's Chinese headquarters to meet with GITI Tire leaders. By the conclusion of the meeting, readySC and GITI had defined a preliminary timeline for recruitment and agreed on an effective pre-hire training strategy.

The output from this Discovery Phase will be used to Design and Deliver customized training that helps to maximize GITI's success in North America.

The Chester County facility represents GITI's ninth manufacturing plant in its global system and is the first greenfield project in North America for GITI Tire. The plant will produce passenger and light truck tires for the replacement and original equipment markets, and should be operational in 2017. During the first phase of production, the plant's capacity is expected to be five million tires annually. GITI Tire plans to further increase production capacity in response to future market demand and conditions. The plant plans to generate 1,700 new jobs over the next 10 years.



DESIGNING A START-UP SOLUTION

How does a company train new hires while the manufacturing facility is still under construction?

In 2012, Continental Tire began hiring new employees for its start-up facility in Sumter, SC. The only problem – the plant was still under construction. How could the company give potential new employees a taste of what it is like to work for a tire company if the facility wasn't even finished yet?

Enter readySC™, which collaborated with Continental Tire to develop an innovative training simulation that combined technology with a physical re-creation of a tire production environment. Designed by readySC to meet the unique needs of a start-up facility, the program helped trainees learn in a simulated industrial environment while the Continental site was under construction.

Following a discovery visit to one of Continental's established facilities, readySC began determining how an iPad application might be used to simulate the tire inspection department for training purposes. The resulting application that was developed included a wireless Bluetooth scanning device similar to the one used in the work environment. The iPad application and scanner were used during pre-employment training to gauge the trainee's knowledge and understanding of tires and the inspection process. It also provided a unique self-selection means to measure a person's desire and endurance in handling tires for an extended period of time.

Pre-employment training began in a classroom at the local technical college. In this environment, trainees learned about tire manufacturing in general and specifically about Continental's strong emphasis on safety. Trainees then moved to a training lab designed to replicate the inspection area at Continental. In this training bay, participants began a hands-on inspection simulation. Each station in the training bay was equipped with tire racks, manual turntables and an iPad. Using the iPad connected via Bluetooth to a barcode scanner, trainees entered information about the tire into a specially designed software application. As part of the training, participants inspected a rack of tires following a prescribed simulation cycle.

During two 50-minute practice sessions, instructors interacted closely with trainees to answer any questions. Meanwhile, with the help of the iPad, participants received real-time feedback about their progress. After the inspection simulation, trainees completed a 20-minute comprehension test. At the end of each session, the



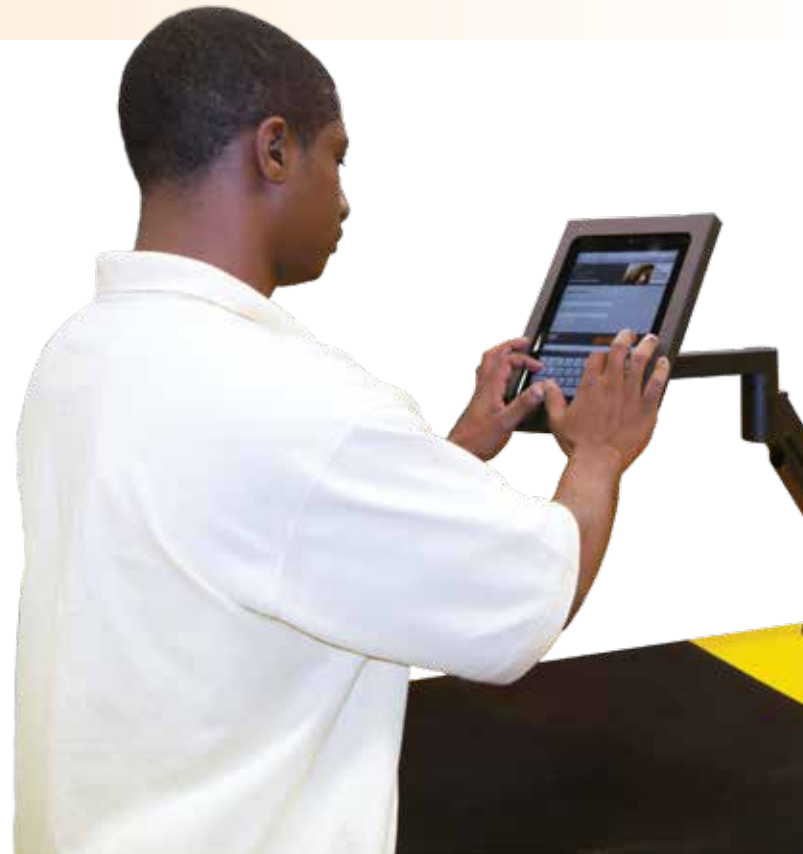
“What Continental appreciate all of the effort that has gone into designing and building a ‘best of the best’ tire inspection training exercise.”

—STEPHANIE HESS, DIRECTOR OF HUMAN RESOURCS FOR CONTINENTAL TIRE THE AMERICAS

application exported simulation performance data and test results. The company received these results on a regular basis.

Once construction on the Continental site was complete, the need for an off-site simulation changed as on-site training became available, and the training plan evolved accordingly. However, the readySC solution was an integral part of the company’s initial start-up phase.

“We at Continental appreciate all the effort that went into designing and building a ‘best of the best’ tire inspection training exercise,” said Stephanie Hess, director of human resources for Continental Tire the Americas. “This interactive exercise afforded candidates the opportunity to apply what they learned in the classroom about tire manufacturing — all while utilizing the latest iPad technology. The readySC team truly delivered a value-added simulation for Continental.”



About Continental

In 2011, Continental Tire selected Sumter, SC to be its first North American passenger/light truck tire plant built since the 1970s. At production rates of 8 million tires per year by 2017, the site would employ 1,600 skilled workers. readySC™ partnered with Central Carolina Technical College (CCTC) to provide customized recruitment and training solutions designed to meet the organization’s specific workforce and training challenges. readySC also partnered with Apprenticeship Carolina™ to offer Continental customized apprenticeship training programs to meet highly skilled and future workforce needs. More than 650 employees have been recruited and trained so far. Production of tires began three months ahead of schedule. readySC and CCTC will soon open the Advanced Manufacturing Technology Training Center through a collaborative partnership with the city of Sumter, Sumter County, the state of South Carolina and federal funding. This facility will offer necessary skills training for the employees of Continental Tire, as well as for students of CCTC and the growing workforce of Sumter County.

At production rates of 8 million tires per year by 2017, the site would employ

1,600 SKILLED WORKERS

MORE THAN 650 EMPLOYEES

have been recruited and trained so far

Production of tires began **THREE MONTHS AHEAD OF SCHEDULE**

HELPING VETERANS GET JOBS

Working with Operation Palmetto Employment, readySC is committed to connecting military-friendly employers to veterans in our state who are eager and available to work. One of those veterans is Michael Hicks, II, Mixing Control Room Operator at Continental Tire Sumter, who participated in Continental’s pre-hire training. “I don’t have any manufacturing experience, but I have some military experience, and that provided me a gateway into this great company,” he said. The readySC training helped with “getting the feel” of what it was like to work for Continental, before the first day on the job. “readySC provided a lot of information and training that helped us become ready for working at Continental Tire.” As part of the pre-hire training, “we had a lot of math. We also had safety, OSHA, the four core values (of Continental Tire), learning how to work with one another. We also learned how to inspect tires.”

Michael expressed his appreciation for the opportunity provided by Continental and readySC. “Continental took a chance on me, due to my military experience. I’m so excited to be here right now.”



OPERATION PALMETTO EMPLOYMENT



Operation Palmetto Employment is a statewide initiative to help our veterans, service members and their spouses find meaningful civilian careers. Its vision is to make South Carolina the most military-friendly state in the nation, and its mission is to educate South Carolina employers on the value of military hires and to help South Carolina’s military community get jobs.

There are many benefits to being a vet-friendly employer, but none greater than increasing your human capital. Register as a military-friendly employer, post jobs and connect with pre-screened applicants in your area.

For more information: www.operationpalmettoemployment.sc.gov



To learn more, visit: <https://youtu.be/FELO1c3N7HM>



MAKING TRAINING DELIVERY A PRIORITY



It is rare for a plant expansion and a new plant start-up to occur in the same locality at the same time. However, Bridgestone made it happen in Graniteville, South Carolina with the help of readySC™.

Bridgestone Americas, Inc. announced in late 2011 that it would spend \$1.2 billion to expand its Passenger Tire Plant (PSR) and build a new off-road radial tire (ORR) manufacturing facility in South Carolina. This investment represented the largest single initial capital investment in the state's history to date.

The new 1.5 million-square-foot manufacturing facility in Graniteville is the first Bridgestone plant outside of Japan to produce large and ultra-large ORR tires. The expansion of the PSR facility, which accounts for \$346 million of the investment, was finished in the summer of 2013. When fully completed, these two projects will increase Bridgestone Americas' workforce in Aiken County by more than 850 jobs.

readySC partnered with the local SC Works office and the Lower Savannah Council of Government to support Bridgestone's recruitment goals. Additionally, readySC worked collaboratively with the company and Aiken Technical College to train Bridgestone's newly hired employees making sure they quickly attained the necessary plant-specific entry-level skill sets.

One of many tools utilized by readySC to support Bridgestone's training effort is the train-the-trainer program. After initially conducting training for selected

members of Bridgestone's ORR Plant, the plant embraced the program and established it as a foundational part of their training structure. They quickly recognized that having qualified and certified trainers in all areas of production and staffing created both tangible and intangible efficiencies.

According to Rayette Godson, training specialist with Bridgestone, "We have well over 70 people trained in the program to date and plan to do about 50 more the rest of this year, so we'll have a lot of people that we can call on at any point in time to conduct good, sustainable training that's going to be consistent throughout the plant." She strongly urges other companies to use the readySC train-the-trainer program. "If you have the opportunity to take advantage of the program, absolutely do that... It's really a process of developing the future of your company."

As of mid-2015, the PSR Plant and ORR Plant operations are lauded as huge successes for Bridgestone Americas, for Aiken County, and for the state as a whole. The customized solutions and flexibility provided by readySC and all the workforce partners in simultaneous and seamless support for the two plants demonstrate perfectly how South Carolina works to enable companies and our ready workforce to grow together.

In 2011, Bridgestone announced the largest single monetary investment in South Carolina's history:

**850 JOBS,
\$1.2 BILLION INVESTMENT**



This included expansion of its existing light-truck and passenger tire plant and the establishment of a

**BRAND NEW OFF-ROAD
RADIAL TIRE PLANT**

The remarkable investment earned South Carolina the

**2011 GOLD
SHOVEL AWARD**

by *Area Development Magazine*



For more on the success of the readySC train-the-trainer program, see: www.readysc.org/testimonials/train-the-trainer-program.html



The train-the-trainer course requires each student to demonstrate what they've learned by teaching a skill to someone else.

MICHELIN – GOING THE DISTANCE for 40 YEARS

In November 2014, Michelin North America made history when the company debuted plans for the world's first manufacturing plant to build revolutionary airless radial tires in Piedmont, SC. The new 135,000 square-foot facility signifies a \$50 million investment and represents Michelin's 10th manufacturing facility in South Carolina and the 16th in the US.

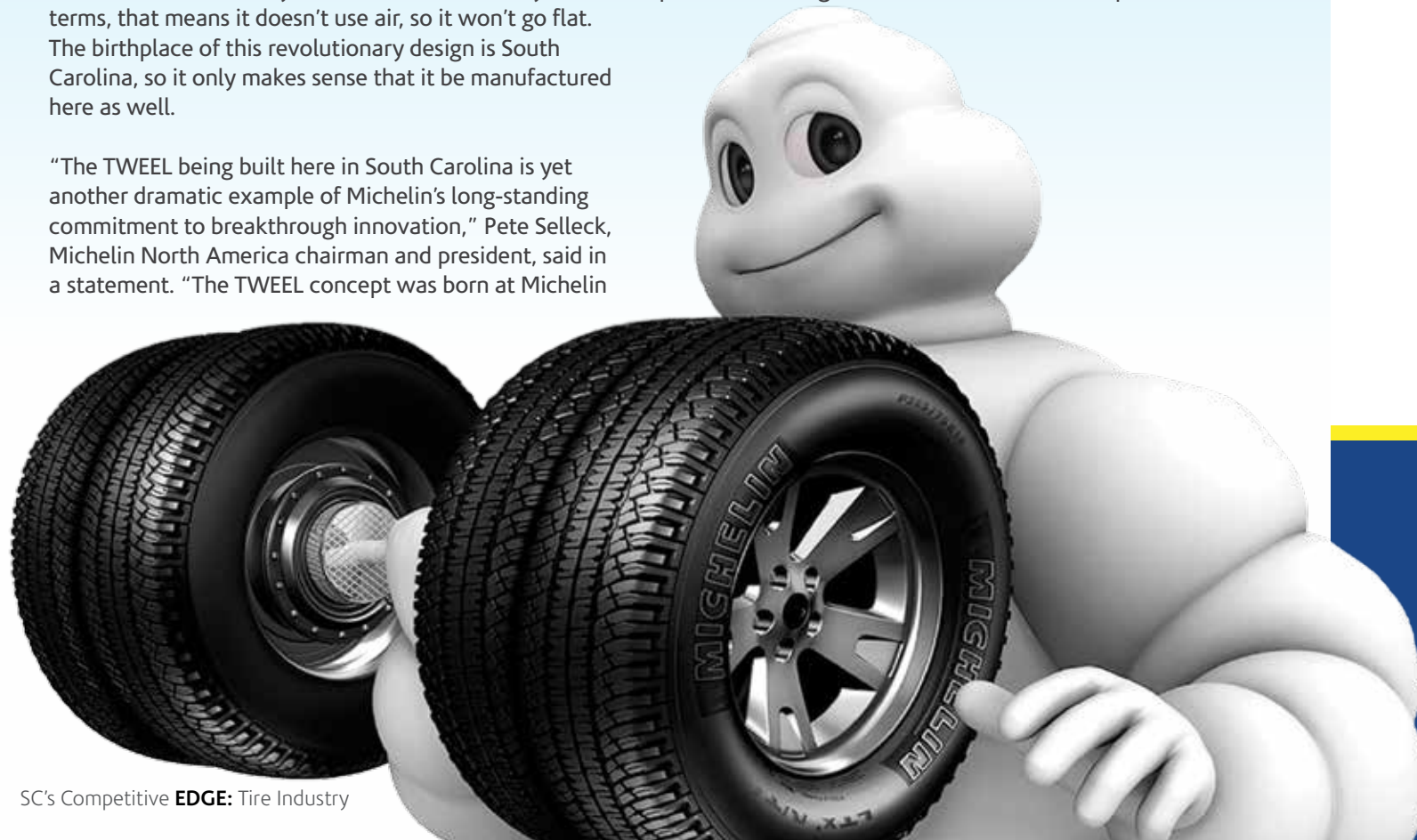
readySC™ is working with Michelin to recruit for the new facility in Piedmont and their other expansions in the state. This cements Michelin's presence in South Carolina, the home of Michelin North America's corporate headquarters.

According to a Michelin press release, the new facility will produce the MICHELIN® X® TWEEL® Airless Radial Tire™. This non-pneumatic tire brings together the tire and the wheel assembly into one solid unit. In layman's terms, that means it doesn't use air, so it won't go flat. The birthplace of this revolutionary design is South Carolina, so it only makes sense that it be manufactured here as well.

"The TWEEL being built here in South Carolina is yet another dramatic example of Michelin's long-standing commitment to breakthrough innovation," Pete Selleck, Michelin North America chairman and president, said in a statement. "The TWEEL concept was born at Michelin

Americas Research Company in Greenville, SC, one of Michelin's three global technology centers, and now the TWEEL will be manufactured right here in the Greenville area to satisfy a growing commercial market."

This innovative approach has been a hallmark of Michelin in South Carolina since it first came to the state four decades ago. readySC has worked with the company from the beginning, tailoring training programs specific to the organization's needs. As skill requirements



evolved, readySC quickly adjusted to meet those changing needs.

"We spent a lot of time with Michelin in all of their expansions," said Dr. James "Jim" Morris, executive director of the SC Technical College System from 1986-1994. "The Michelin experience, and some other programs that demanded high skill, helped push us up a notch in terms of the quality of the training we were delivering."

This level of commitment led to a long-standing partnership that has supported decades of expansions and start-ups, demanding ever-increasing skills from the workforce.

South Carolina's Comprehensive Solution

Through the SC Technical College System, South Carolina provides a comprehensive workforce solution to organizations in the Palmetto State. As part of the System's Division of Economic Development, readySC excels at attracting new and expanding industry to the state. And, Apprenticeship Carolina™ works to deliver the workforce development tools necessary to ensure that organizations grow and prosper in South Carolina over the long-term. Michelin provides an excellent example of this long-term investment in our state's business and industry.

In 2013, Michelin announced a structured two-year apprenticeship

“Building a skilled workforce and increasing the pipeline for skilled labor in advanced manufacturing is very important to Michelin North America. Our registered apprenticeship program aligns very well with this goal.”

— STEVE BURRY, EMPLOYEE RELATIONS PROJECT MANAGER FOR MICHELIN NORTH AMERICA

program for all of its maintenance technicians in South Carolina. Apprenticeship Carolina guided Michelin through the registered apprenticeship process from initial information to full recognition in the National Registered Apprenticeship System. The program was custom designed to work in conjunction with the Michelin Scholars program. Completion of the apprenticeship program will lead to a full associate's degree for each apprentice. Michelin partnered with technical colleges across the state to deliver approximately 1,110 hours of job-related education consisting of a blend of classroom learning and hands-on job experience for all maintenance staff.

Apprenticeship Carolina worked closely with Michelin to help their workforce continue to grow by establishing registered apprenticeships designed to enhance the skills of existing employees.

Steve Burry, employee relations project manager for Michelin North America, lauded the program in a 2013 interview with SME's Manufacturing Engineering magazine. "Building a skilled workforce and increasing the pipeline for skilled labor in advanced manufacturing is very important to Michelin North America," said Burry. "Our registered apprenticeship program aligns very well with this goal. We understand the critical role our employees play in the success of our organization. This program demonstrates Michelin's commitment to our people, our customers and, ultimately, our community."

By working together, readySC and Apprenticeship Carolina provide a comprehensive training solution for companies like Michelin that are looking for long-term success in the state.

8,900 jobs, \$6 billion total investment in South Carolina over the past 40 years

Michelin North America is a prime example of long-lasting success in South Carolina, where the tire maker operates eight tire plants, two rubber mixing/calendering plants, its corporate headquarters, a research-and-development facility and a test track, all employing more than 8,900 in the state.





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.

