MOTOR VEHICLES

TARGET INDUSTRY OVERVIEW

PRODUCTS, COMPONENTS & SUPPLY CHAIN

SOUTH CAROLINA

I-77ALLIANCE

Five counties. One ideal opportunity.

Building on the strong work ethic and strategic location, the South Carolina I-77 Alliance region now attracts international and domestic investment that is creating jobs, boosting profits, and building a bright future for producers of a wide range of critical Motor Vehicles products. Among them are Motor Vehicles parts, auto tires and wheels, batteries, hydraulic systems as well as auto truck accessories.

South Carolina has fostered an enduring business-friendly environment that cultivated the **average annual GDP growth of 3%** from 2015 - 2020 in the Motor Vehicles cluster, compared with 0% nationally.

Many of the brands calling South Carolina home are familiar: BMW and Daimler Trucks, Volvo Cars and Toray, Mercedes-Benz Vans and Michelin, Continental, Bridgestone and Giti Tire, and Schaeffler and Bosch. Plus, there are many others that are very well known to the manufacturers who depend on their parts and components.

We hope you enjoy learning about Motor Vehicles manufacturing in South Carolina and the I-77 region, discovering the numerous reasons why hundreds of Motor Vehicles companies call South Carolina home.

— Harry M. Lightsey, III
Secretary, S.C. Department of Commerce

— Christopher Finn
Interim President and CEO, South Carolina I-77 Alliance

SOUTH CAROLINA'S BUSINESS CLIMATE | 2021 *Area Development Magazine* Rankings

For decades, South Carolina has been recognized as a leader in state-level economic development and the top state for per capita foreign direct investment (FDI). *Area Development* magazine, a trade publication for corporate real estate and economic development, reported SC was ranked 4th in their "2021 Top States for Doing Business" survey of site selection consultants, with individual category rankings shown below. This report aligns with "Top Location Factors," identified by respondents from the same survey.

RANKED #1

- Business Incentive Programs
- Favorable Regulatory Environment

RANKED #2

- Speed of Permitting

RANKED #4

- Cooperative & Responsive State Government
- Workforce Development Programs
- Available Real Estate (t)
- Site-Readiness Programs (t)
- Overall Cost of Doing Business (t)

RANKED #5

- Logistics and Infrastructure (t)

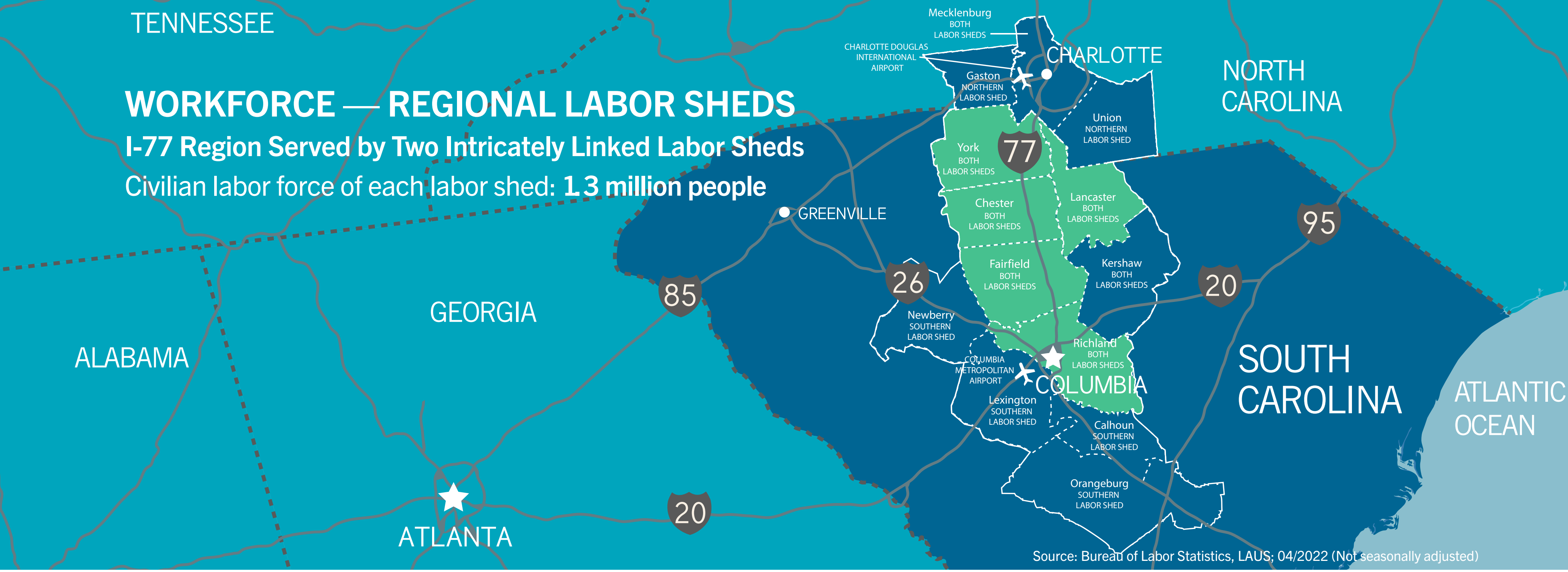
"Availability of skilled labor ranks No. 1 in the Consultants Survey...100 percent of the respondents to our Consultants Survey rated availability of skilled labor as "very important" or "important,"...Additionally, nearly all (98 percent) of the responding consultants say availability of skilled labor is affecting their clients' facilities plans or current operations."

— Area Development 14th Annual Consultants Survey, 2018

WORKFORCE — REGIONAL LABOR SHEDS

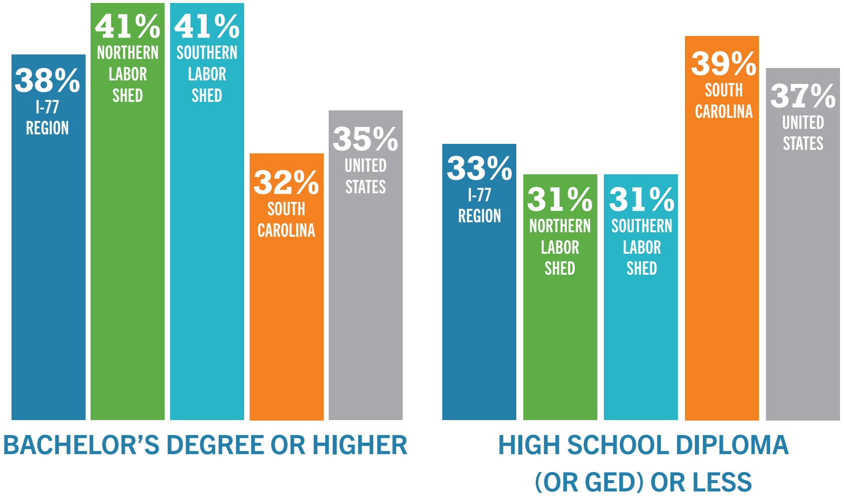
I-77 Region Served by Two Intricately Linked Labor Sheds

Civilian labor force of each labor shed: **1.3 million people**

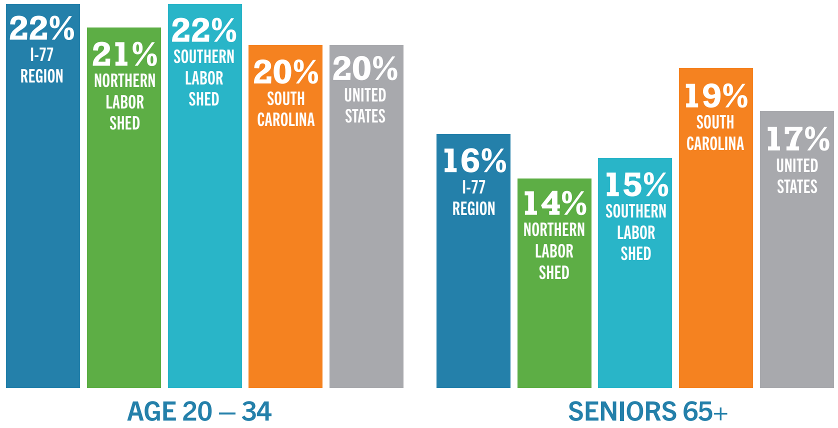


Two labor sheds serve the I-77 region and both offer new or expanding companies access to a massive workforce, shown above, and one that is more educated and younger than SC and US averages.

MORE EDUCATED WORKFORCE



YOUNGER WORKFORCE



Source: Esri Community Analyst, 2022 Estimate

WORKFORCE — MOTOR VEHICLES OCCUPATIONS

SKILLED LABOR JOB DENSITY*

Location quotients compare regional concentrations of employment to the national concentration. A value of 1.0 illustrates matching rates and values over 1.2 imply a unique strength. (Ex. – LQ = 4.96. Local employment is almost five times the Nation's concentration rate)

SOC CODE	OCCUPATION	EMPLOYED	LQ
51-4022	Forging Machine Setters/Operators/Tenders	137	3.9
51-9197	Tire Builders	119	2.5
17-2131	Materials Engineers	84	1.5
17-3026	Industrial Engineering Technologists and Technicians	220	1.4
51-4081	Multiple Machine Tool Setters/Operators/Tenders	476	1.4

Source: Chmura Economics, JobsEQ; I-77 Region. Primary & secondary sectors as defined in appendix.

FASTEST-GROWING SKILLED LABOR JOBS*

SOC CODE	OCCUPATION	I-77 REGION	SOUTH CAROLINA	UNITED STATES
51-9197	Tire Builders	288%	9%	1%
51-4072	Molding, Coremaking, and Casting Machine Setters/Operators/Tenders	54%	22%	6%
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters/Operators/Tenders	39%	1%	-6%
51-4021	Extruding and Drawing Machine Setters/Operators/Tenders	18%	-3%	-7%
49-9041	Industrial Machinery Mechanics	17%	19%	16%

Source: Chmura Economics, JobsEQ; 2016 - 2021; Primary & secondary sectors as defined in appendix.

*Note: Occupations with minimum average employment of 75 during Q4 2021 included. Private sector only. Occupation groups analyzed: Engineering; Scientists; Installation, Maintenance, and Repair; and Production.

WORKFORCE — EXISTING LABOR PIPELINE

An invaluable component of the Motor Vehicles industry's growth in the I-77 region is access to a trained workforce coupled with competitive wages. The following table details employment and wages for the fifteen occupations* projected to have highest demand from Motor Vehicles operations, based on national employment trends. The occupation with the highest projected demand is listed first and then ranked accordingly.

SOC Code	Occupation	I-77 Region			I-77 Median[2]	Compared to USA Median[2]
		Employed[1]	Entry-Level Wage[2]	Experienced-Level Wage[2]		
17-2112	Industrial Engineers	786	$26.88	$45.48	$38.03	-11%
17-2141	Mechanical Engineers	691	$23.89	$44.76	$35.67	-18%
49-9041	Industrial Machinery Mechanics	1,135	$18.32	$30.05	$25.91	-3%
51-1011	First-Line Supervisors of Production and Operating Workers	1,569	$19.33	$35.77	$29.23	-3%
51-2028	Electrical, Electronic, and Electromechanical Assemblers	482	$10.63	$19.18	$15.58	-11%
51-2031	Engine and Other Machine Assemblers	56	$16.49	$26.20	$21.97	0%
51-2092	Team Assemblers	2,800	$11.35	$18.08	$14.81	-8%
51-2099	Assemblers and Fabricators, All Other	567	$11.30	$17.98	$14.76	-9%
51-4031	Cutting, Punching, and Press Machine Setters/Operators/ Tenders	474	$13.13	$19.13	$16.68	-6%
51-4041	Machinists	1,114	$13.37	$24.04	$19.57	-11%
51-4072	Molding, Coremaking, and Casting Machine Setters/ Operators/Tenders	436	$13.51	$22.98	$19.33	+21%
51-4081	Multiple Machine Tool Setters/Operators/Tenders	476	$13.46	$20.24	$16.92	-6%
51-4121	Welders, Cutters, Solderers, and Brazers	969	$14.71	$23.56	$19.57	-8%
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	1,434	$12.31	$22.07	$17.79	-9%
51-9124	Coating, Painting, and Spraying Machine Setters/ Operators/Tenders	386	$14.04	$24.76	$18.13	-4%

■ LQ between 0.8 and 1.2 (Description on page 4)
■ LQ at or above 1.2 (Description on page 4)

Source: Chmura Economics, JobsEQ; Primary & secondary sectors as defined in appendix.
* Note: Occupation groups analyzed: Engineering; Scientists; Installation, Maintenance, and Repair; and Production
1 - Average private-sector employment during four quarters ending Q4 2021
2 - 2020 Average Annual Wage, based on 2,080 hours annually

HIGHER EDUCATION

One of the most critical elements and strengths of the United States is its research and development (R&D) institutions…Research being conducted at top U.S. universities not only gives this country a world class standing; it helps attract the best and the brightest talent from around the globe.

— Site Selection magazine

Clemson University

Midlands Technical College

UNC Charlotte

University of South Carolina

Winthrop University

York Technical College

UNC Charlotte and Clemson University are not located in the I-77 region.

HIGHER EDUCATION — MOTOR VEHICLE AND COMPONENT MANUFACTURING DEGREES*

The I-77 region and its extended geography, as defined on page 11, is home to numerous research universities and technical colleges. These institutions churn the labor force, providing new talent in addition to the existing, trained workforce. The following table details the 2020 - 2021 higher-education graduates for programs that align with occupations demanded by Motor Vehicles operations, based on national hiring trends.

CIP Code	Programs	Certificates or 2-Year Degree	4-Year and Advanced Degrees	Total Awards
14.1901	Mechanical Engineering	0	462	462
48.0508	Welding Technology/Welder	237	0	237
14.1001	Electrical and Electronics Engineering	0	169	169
47.0604	Automobile/Automotive Mechanics Technology/Technician	167	0	167
15.0805	Mechanical/Mechanical Engineering Technology/Technician	46	92	138
15.0499	Electromechanical Technologies/Technicians, Other	95	0	95
15.0303	Electrical, Electronic, and Communications Engineering Technology/Technician	62	31	93
15.9999	Engineering/Engineering-Related Technologies/Technicians, Other	0	91	91
52.0205	Operations Management and Supervision	0	73	73
48.0501	Machine Tool Technology/Machinist	60	0	60
TEN-PROGRAM TOTAL		667	918	1,585
ALL PROGRAMS (33) RELATED TO MOTOR VEHICLE/COMPONENTS MFG. OCCUPATIONS[1]		1,052	1,021	2,073

■ LQ between 0.8 and 1.2 (Description on page 4)
■ LQ at or above 1.2 (Description on page 4)

TOTAL HIGHER EDUCATION STUDENT POPULATION (2020-2021 SCHOOL YEAR)

I-77 REGION

61,699

GRADUATES — 15,300

(8 TWO AND FOUR-YEAR SCHOOLS AND 2 TECHNICAL COLLEGES WITH MULTIPLE CAMPUSES)

+

EXTENDED REGION

85,757

GRADUATES — 23,912

(17 TWO AND FOUR-YEAR SCHOOLS AND 4 TECHNICAL COLLEGES)

=

TOTAL STUDENT POPULATION

147,456

TOTAL GRADUATES — 39,212

Source: Chmura Economics, JobsEQ

*Note - School year 2020-2021. Graduates reflects students with dual majors, therefore some school's figures may be higher than National Center for Education Statistics (NCES) database.

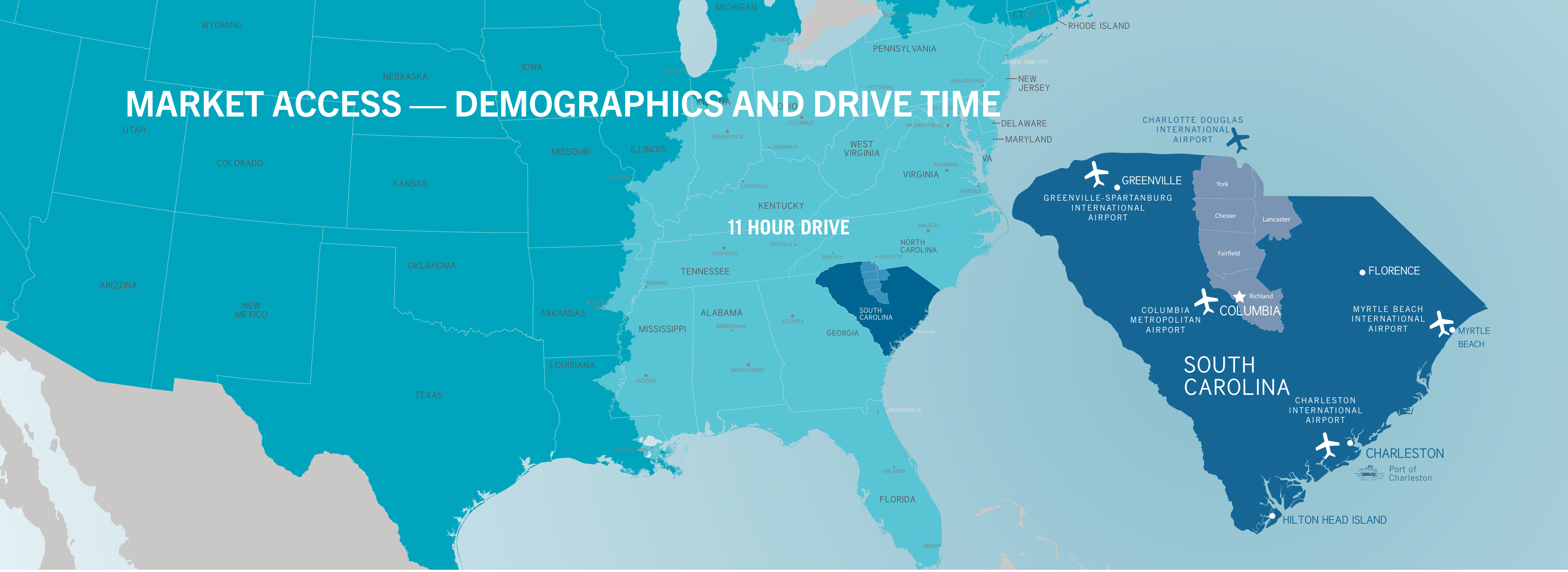
1— Occupation groups analyzed: Engineering; Scientists; Installation, Maintenance, and Repair; and Production

MARKET ACCESS

"Highway accessibility remains our Corporate Survey respondents number-one site selection concern,...[including] the related factors of highway accessibility and proximity to markets and suppliers."

— Area Development 14th Annual Consultants Survey, 2018

MARKET ACCESS — DEMOGRAPHICS AND DRIVE TIME



LARGE — AND GROWING — REGION

3.6

MILLION PEOPLE

COMBINED MSA POPULATION

TWO METROPOLITAN AREAS

2.8 MILLION CHARLOTTE METRO REGION

847,000 COLUMBIA METRO REGION

17%

I-77 REGION POPULATION GROWTH

746,588 (2010)

875,740 (2022)

US ’10 – ’22 GROWTH, 9%

DOMESTIC MARKET ACCESS

45%

PERCENTAGE OF US POPULATION WITHIN AN 11-HOUR DRIVE

Source: Esri Community Analyst, 2022 Estimate

EXISTING INDUSTRY & SUPPLY CHAIN

"Manufacturers are beginning to learn that supply-chain management is more than just 'leaning on' their suppliers to shave pennies off the cost of a part, raw material, or component. Transportation and logistics should play a bigger role in the site selection process earlier in the decision-making process."

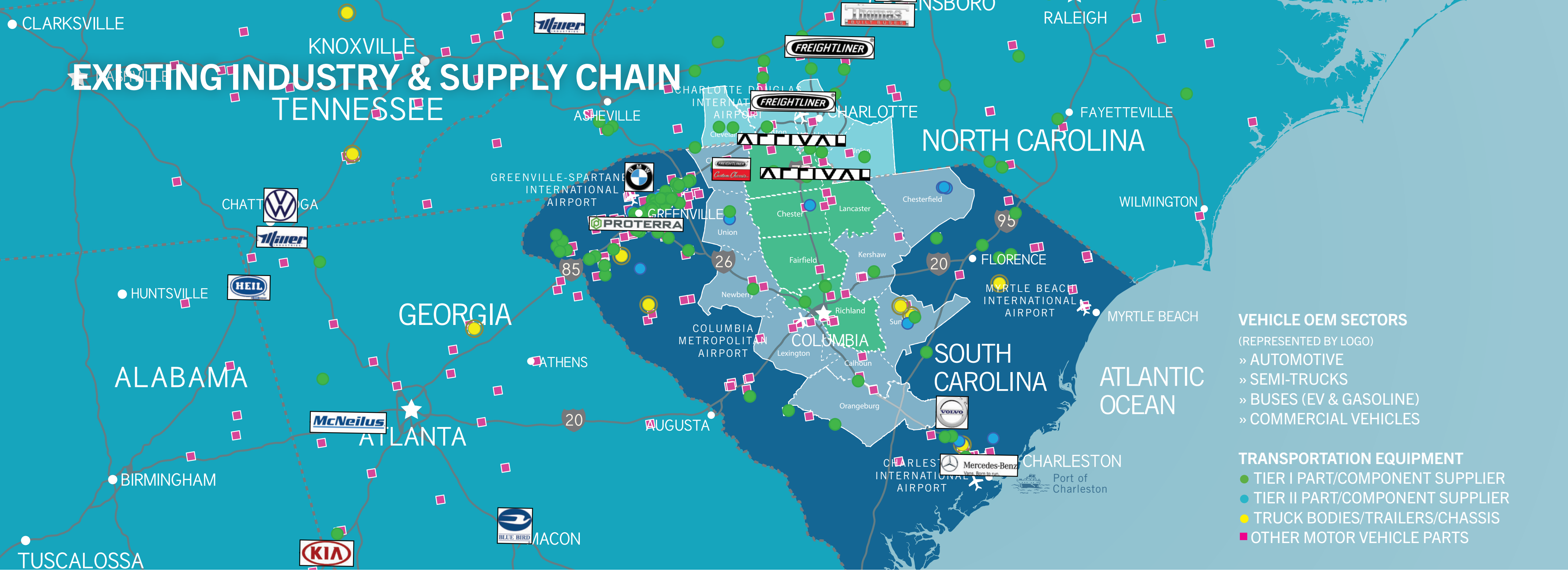
— Area Development magazine, November 2012, The Confluence of Facility Planning and Supply Chain Strategy

133,000

MAJORITY-OWNED, FOREIGN-AFFILIATED COMPANIES EMPLOY MORE THAN 133,000 SOUTH CAROLINIANS, WHICH IS THE EQUIVALENT OF 1 OUT OF EVERY 16 JOBS IN SOUTH CAROLINA

Source: US Bureau of Economic Analysis (8/2017)

EXISTING INDUSTRY & SUPPLY CHAIN



The I-77 region and its extended geography are home to a roster of industry-leading Motor Vehicles companies and suppliers. Additionally, some of the world's most successful corporations operate OEM plants in South Carolina that are dependent on Motor Vehicles sectors.

MOTOR VEHICLES PARTS

AMERICAN EAGLE WHEEL CORPORATION
BOMAG
FAB FOURS, INC.
MERITOR
PERFORMANCE FRICTION CORPORATION
PRECISION EQUIPMENT & DESIGN
PURE POWER TECHNOLOGIES
RELION BATTERIES
SCHAEFFLER GROUP USA, INC.
WHEEL PROS, LLC

HEAVY DUTY TRUCK MANUFACTURING

DAIMLER TRUCKS NORTH AMERICA

TIRE MANUFACTURING

GITI TIRE USA

HYDRAULIC & ELECTRONIC DRIVE SYSTEM MANUFACTURING

LINDE HYDRAULICS CORPORATION

SC Manufacturers

BMW · Continental · Giti · MICHELIN · SCHAEFFLER · Scout · VOLVO

To learn more: sccommerce.com/industries

EXISTING INDUSTRY — EXPORTS

The I-77 region is a substantial exporter of Motor Vehicles goods and those manufacturers play a vital role in the global economy. High export values indicate a concentration and specialization of both industry and the labor force.

2017 EXPORT VALUE: PRIMARY MOTOR VEHICLES INDUSTRIES*

$1.5 BILLION
SOUTH CAROLINA

$219 MILLION
I-77 REGION

15% OF SOUTH CAROLINA'S PRIMARY MOTOR VEHICLES INDUSTRIES EXPORTS ARE MADE IN THE I-77 REGION

2017 EXPORT VALUE: SECONDARY MOTOR VEHICLES INDUSTRIES & SUPPLY CHAIN*

$5.8 BILLION
SOUTH CAROLINA

$498 MILLION
I-77 REGION

9% OF SOUTH CAROLINA'S SECONDARY MOTOR VEHICLES INDUSTRIES & SUPPLY CHAIN EXPORTS ARE MADE IN THE I-77 REGION

Source: Brookings Institutions, Export Monitor 2017

*Note: Export data only at four-digit NAICS code level therefore data may include sectors not captured in Primary & Secondary Industries as defined in appendix. Supply Chain sectors defined on page 13.
INSTEAD OF TOP INDIVIDUAL SECTORS STANDARDIZED TO REFLECT CLUSTER GROUPINGS

EXISTING INDUSTRY - SUPPLY CHAIN/B2B, TOP 10 INDUSTRIES*

Motor Vehicles companies in the I-77 region benefit from a vast network of local suppliers. The following table details current employment and respective change since 2021 for industries projected to have highest demand from Motor Vehicles operations, based on national supply chain data. The industry with the highest projected demand is listed first and then ranked accordingly.

NAICS Code	Industry	Employed, Q4 2021			5-Year Employment Change			
		Extended Region	I-77 Region	% in I-77 Region	Extended Region	I-77 Region	South Carolina	USA
325211	Plastics Material and Resin Manufacturing	1,639	135	8%	25%	-65%	2%	3%
325220	Artificial and Synthetic Fibers and Filaments Manufacturing	2,133	466	22%	1%	241%	-21%	-7%
325510	Paint and Coating Manufacturing	451	201	45%	-23%	-28%	-11%	5%
326199	All Other Plastics Product Manufacturing	2,468	496	20%	15%	464%	33%	4%
332119	Metal Crown, Closure, and Other Metal Stamping (except Automotive)	331	62	19%	-36%	-9%	-40%	-6%
333618	Other Engine Equipment Manufacturing	379	248	65%	-27%	1%	2%	-1%
423830	Industrial Machinery and Equipment Merchant Wholesalers	6,674	920	14%	1%	1%	-4%	2%
425120	Wholesale Trade Agents and Brokers	5,706	1,756	31%	-43%	12%	-10%	-46%
484121	General Freight Trucking, Long-Distance, Truckload	7,124	1,082	15%	7%	-9%	4%	3%
551114	Corporate, Subsidiary, and Regional Managing Offices	37,107	7,820	21%	8%	155%	34%	5%

■ LQ between 0.8-1.2 (Description on page 4)
■ LQ 1.2 or higher (Description on page 4)
■ Employment change rate exceeds National Average (Positive growth only)

Source: Chmura Economics, JobsEQ
*Note: Private-sector. Petroleum refineries not included. Extended Region as defined on Page 11.

SUPPLY CHAIN

RECENT ANNOUNCEMENTS IN I-77 REGION

WHEEL PROS, LLC
WHEELS
275 NEW JOBS

MERITOR
AXLES/BRAKES/ SUSPENSIONS
26 NEW JOBS

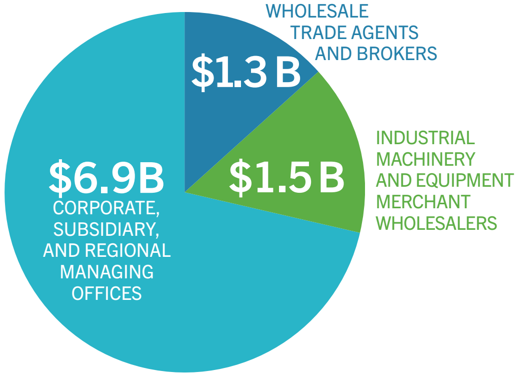
FAB FOURS, INC.
CUSTOM FENDERS/ BUMPERS
88 NEW JOBS

PURE POWER TECHNOLOGIES
FUEL INJECTION EQUIPMENT
79 NEW JOBS

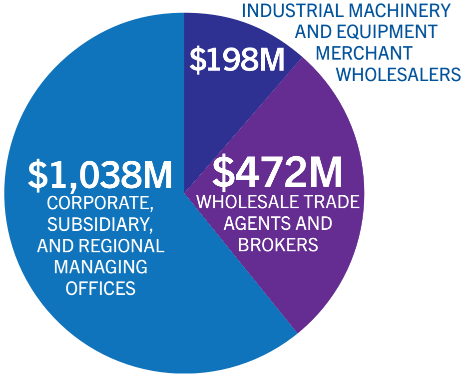
SCHAEFFLER GROUP USA INC.
PRECISION MOTOR VEHICLES COMPONENTS
105 NEW JOBS

Source: South Carolina Department of Commerce

TOP 3 SUPPLY CHAIN/B2B SECTORS*, BY 2020 GDP[1]

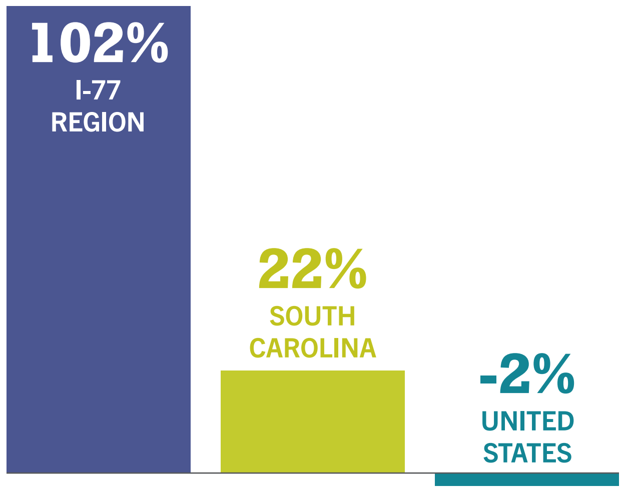


EXTENDED REGION
TOP 3 TOTAL EXPORT VALUE
$9.7 BILLION



I-77 REGION
TOP 3 TOTAL EXPORT VALUE
$1.5 BILLION

MOTOR VEHICLE AND COMPONENTS MANUFACTURING SUPPLY CHAIN* GDP GROWTH, 2015 – 2020



Source: Chmura Economics, JobsEQ
*Note: Supply chain as defined on page 13. Private-sector operations.

1 — Extended Region as defined on Page 11

SOUTH CAROLINA'S BUSINESS FRIENDLY ENVIRONMENT

1.9%

UNIONIZATION

PRIVATE SECTOR MANUFACTURING

2ND LOWEST IN THE US

1.7%

UNIONIZATION

ALL PRIVATE SECTOR

LOWEST IN THE US

2.6%

UNIONIZATION

TOTAL ALL PUBLIC + PRIVATE SECTOR

LOWEST IN THE US

Source: Unionstats.com

REAL ESTATE

$3.44

PER SQ. FT.

LEASE RATES FOR MANUFACTURING SPACE IN THE I-77 REGION RANGE FROM $3.15 – $3.73 PSF/YEAR. (US AVG: $5.15 PSF/YEAR)

Source: Colliers International, Columbia Office 2018

INDUSTRIAL POWER RATES IN SOUTH CAROLINA

12%

LOWER

INDUSTRIAL POWER RATES IN SOUTH CAROLINA ARE 12% LOWER THAN THE NATIONAL AVERAGE

6.09¢

PER KILOWATTHOUR

INDUSTRIAL ELECTRICITY RATES SOUTH CAROLINA AVERAGE 2017 ANNUAL DATA

Source: US Energy Information Administration, Form EIA-861M data

WORKFORCE RESOURCES AND INDUSTRY PARTNERSHIPS

WORKFORCE DEVELOPMENT

readysc™
a division of the
SC Technical College System

readySC™ Workforce Training

For more than 50 years, the SC Technical College System has powered readySC™ which provides well-trained employees to companies investing in South Carolina. The readySC™ program includes recruiting, screening and training as well as a tailored curriculum to fit a company's specific needs.

APPRENTICESHIP CAROLINA™
SC TECHNICAL COLLEGE SYSTEM

The South Carolina Technical College System

Apprenticeship Carolina,™ a division of the SC Technical College System, works to ensure all employers in South Carolina have access to the information and technical assistance they need to create demand-driven registered apprenticeship programs. At no cost to the employer, apprenticeship consultants are available to guide companies through the registered apprenticeship development process from initial information to full recognition in the national Registered Apprenticeship System.

To learn more: i77alliance.com/target-industries/

APPENDIX – INDUSTRY CLASSIFICATION

The North American Industry Classification System (NAICS) is the standard six-digit categorization code used by Federal statistical agencies in classifying business establishments for collecting, analyzing, and publishing statistical data related to the U.S. business economy. The following NAICS codes were collectively used to define the cluster in order to collect, aggregate, and analyze industry and workforce data.

PRIMARY INDUSTRIES — Motor Vehicles Manufacturers

NAICS	TITLE
336111	Automobile Manufacturing
336112	Light Truck and Utility Vehicle Manufacturing
336120	Heavy Duty Truck Manufacturing

SECONDARY INDUSTRIES — Manufacturers primarily engaged in adding value to or creating new products from Motor Vehicles

NAICS	TITLE
326211	Tire Manufacturing (except Retreading)
334310	Audio and Video Equipment Manufacturing
336211	Motor Vehicle Body Manufacturing
336213	Motor Home Manufacturing
336214	Travel Trailer and Camper Manufacturing
336310	Motor Vehicle Gasoline Engine and Engine Parts Manufacturing
336320	Motor Vehicle Electrical and Electronic Equipment Manufacturing
336330	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing
336340	Motor Vehicle Brake System Manufacturing
336350	Motor Vehicle Transmission and Power Train Parts Manufacturing
336360	Motor Vehicle Seating and Interior Trim Manufacturing
336370	Motor Vehicle Metal Stamping
336390	Other Motor Vehicle Parts Manufacturing


SOUTH CAROLINA
I-77ALLIANCE
www.I77Alliance.com