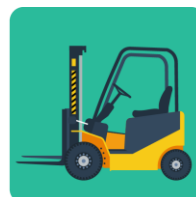
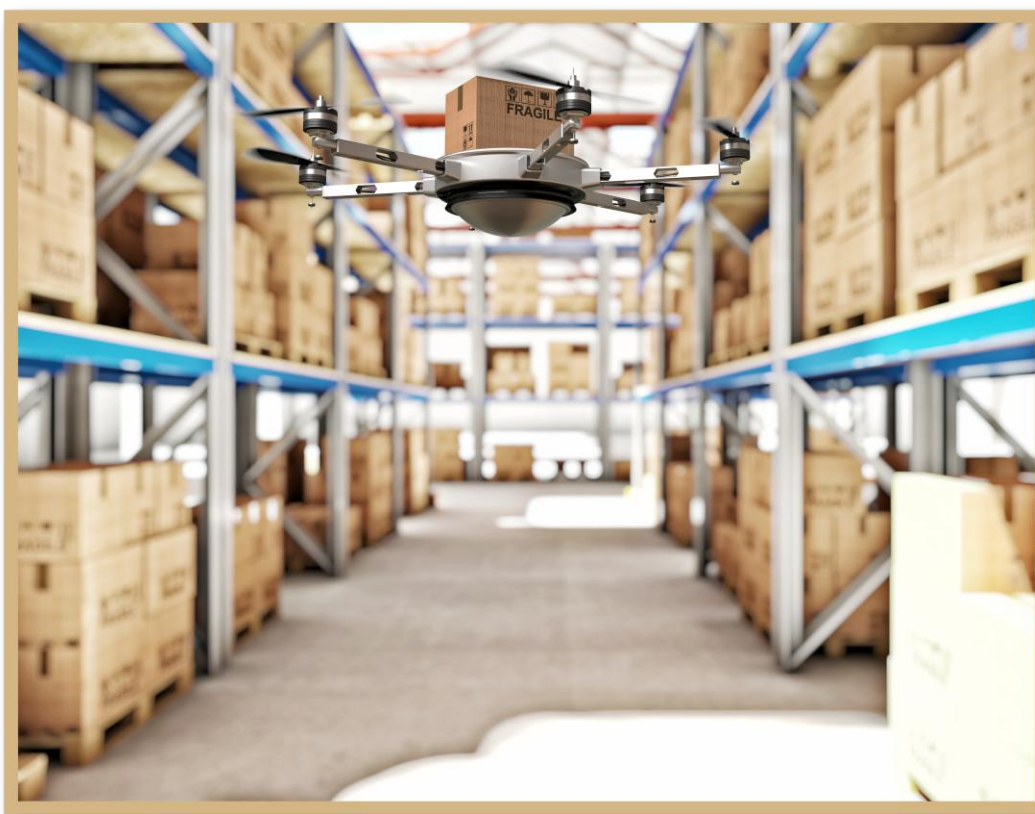




The Importance of Supply Chain Technician Certifications to Technicians

By Sara Pearson Specter



Supply Chain Technician (SCT) Certifications: An Introduction

A supply chain technician is defined as “a person who installs, operates, supports, upgrades or maintains the software, hardware, automated equipment and systems that support the supply chain.”¹ To find employment at any level of a supply chain—the different organizations across a network that transform raw materials and components into finished goods, then deliver them to the end consumer—today’s technicians must understand both automated warehousing facilities and the technologies and systems they rely upon.

The variety of foundational skills² technicians are expected to possess spans several fields, including:

- General mechanics and manufacturing technologies
- Direct current (DC) and alternating current (AC) electrical and electronics
- Pneumatic and hydraulic power supplies
- Welding
- Technical communications, including blueprint reading, documentation, analysis, mathematics and calculations
- Scanners, microprocessors, control systems and programmable logic controllers (PLCs)
- Occupational Safety and Health Administration (OSHA) safety standards for general industry

It’s a broad field of expertise, characterized by the variety of different job titles used to describe the position. Among them: Industrial Machinery Technician, Industrial Maintenance Mechanic, Electromechanical Technician and Mechatronics Technician.

No matter what job is called by an employer, supply chain technicians are in high demand. The U.S. Bureau of Labor Statistics projects job growth in the field to be as high as 28%, or 120,000 new positions created, by 2020.³ Further, The National Center for Supply Chain Technology Education (SCTE) found in a May 2013 study that “current employment for supply chain technicians is estimated to be 203,000. However, over the next two years this field is expected to grow at a significant rate... [projected at] an increase of 30%, or an additional 61,000 jobs in 24 months.”⁴

The field is growing because supply chain technicians are needed by every industry that utilizes a supply chain to produce and deliver its products to market. They include retail, automotive, pharmaceutical, food and beverage, consumer packaged goods, manufacturing, aerospace, durable goods and more. At companies in these

¹ National Center for Supply Chain Technology Education, “Definition of a Supply Chain Technician,” <http://www.supplychaintech.org/modelprogram.html>, accessed November 16, 2014.

² National Center for Supply Chain Technology Education, “Supply Chain Technology Skills,” <http://www.supplychaintech.org/careerawareness/sct-skills.html>, accessed November 16, 2014.

³ National Center for Supply Chain Technology Education, “Job Opportunities,” <http://www.supplychaintech.org/careerawareness/sct-jobs.html>, accessed November 16, 2014.

⁴ National Center for Supply Chain Technology Education, “Supply Chain Technicians in the U.S.: Nationwide Employer Survey Results, May 2013,” <http://www.supplychaintech.org/industrysurvey.html>, accessed November 18, 2014.

industries, technicians support, maintain and repair increasingly complex automated equipment and machinery: advanced technologies that are installed and used throughout manufacturing, warehousing and distribution facilities with increasing frequency.

Although the field is growing, it currently lacks a formal certification process. By obtaining a formal, industry-recognized certification, a technician can show a current or prospective employer that he or she has attained a specific level of supply chain-related technical knowledge, skills, competence and ability.

Such a certification process is currently in development. Upon its completion, it will establish a core set of skills required, as well as an independent evaluation procedure that will validate an individual's mastery of those skills. Certification will benefit workers at any level of their career, including: entry-level high school graduates and technical/community college students, workers with (or without) related experience looking to enter the field, displaced workers, veterans, and workers currently employed in the field who seek to advance their careers.

This white paper outlines how the Supply Chain Technician (SCT) Certifications differ from the existing assortment of available logistics and material handling certifications, as well as details the multiple benefits they offer persons seeking to work in this field.



Supply Chain Technician (SCT) Certifications: Stackable and Complementary

Several professional certifications are currently available to workers in the field that are related to logistics and material handling. They include:

- The Manufacturing Skill Standards Council (MSSC) offers two levels of an American National Standards Institute (ANSI) accredited certification program, the **Certified Logistics Associate (CLA)** and **Certified Logistics Technician (CLT)**. The CLA is the first level for front-line material handling associates, and must be completed prior to earning the second, mid-level CLT.⁵ An assessment test must be passed in each level for certification to be awarded. To employers, the ANSI accreditation of MSSC's certification programs under ISO Standard 17024 (personnel certification) demonstrates that the organization is committed to continuous improvement. It also verifies that the skills of persons certified to MSSC's standards are common and consistent.⁶ (ANSI is the United States' division of the International Organization of Standardization (ISO)).
- The Occupational Safety & Health Administration (OSHA) offers an **Outreach Training Program for General Industry**. This program provides training on how to prevent safety and health hazards in general industrial workplaces.⁷ It is a voluntary program, offered as a 10-hour class for entry-level workers and a 30-hour class for supervisors and personnel responsible for safety. The focus is on ten topics surrounding hazard identification, avoidance and control. OSHA itself does not run the training program; it instead authorizes trainers who conduct courses through an OSHA Training Institute (OTI) Education Center. At the end of the required training hours, participants are issued a course completion card by the trainer.
- PMMI, the Association for Packaging and Processing Technologies, offers a **Mechatronics Certificate**. Participants earn the certification by completing a series of assessments in several areas, including fluid power, industrial electricity, mechanical components and programmable logic controllers.⁸ The certification program was developed by the organization to support companies in the packaging and processing portions of the supply chain.

Each of these certifications represents knowledge and skill sets complementary to those of supply chain technicians. However, none of them completely cover the broad range of expertise required of workers who support, maintain and repair automation equipment throughout supply chain distribution operations.

⁵ Manufacturing Skill Standards Council (MSSC), "Certification," <http://www.msscusa.org/certification/>, accessed November 18, 2014.

⁶ Manufacturing Skill Standards Council (MSSC), "ISO 17024," <http://www.msscusa.org/iso-17024/>, accessed November 18, 2014.

⁷ United States Department of Labor Occupational Safety & Health Administration, "OSHA Outreach Training Program: General Industry," <https://www.osha.gov/dte/outreach/generalindustry/index.html>, accessed November 18, 2014.

⁸ PMMI, "PMMI Mechatronics Certificate Programs," <http://www.pmmi.org/Education/content.cfm?ItemNumber=1010>, accessed November 18, 2014.

In contrast, the new certifications—currently being developed by MSSC and MHI—will validate the proficiencies specific to the scope of the supply chain technician. Titled *Certified Technician in Supply Chain Automation (CTSCA)*, this industry standards-based certification is based upon a definition of "supply chain technician (SCT)" developed by the National Center for Supply Chain Technology Education.

The credential will allow individuals to demonstrate proficiency in four critical areas of work function germane to the SCT:

- 1) *Demonstrating Basic Supply Chain Automation Competency;*
- 2) *Maintaining Equipment/Systems;*
- 3) *Installing, Modifying, Troubleshooting and Repairing Equipment/Systems; and*
- 4) *Installing, Modifying, Troubleshooting, and Repairing Basic Controllers and Networks*

Candidates will have the option of securing certification in each respective function area and would receive a master CTSCA certification upon attainment of all four. Those possessing the MSSC Certified Logistics Associate certificate would be granted equivalency in function area #1, making these certifications truly stackable. Two *Plus* endorsements will also be available to those who have attained the master CTSCA and wish to add certifications for the still higher skilled areas of:

- *Installing, Modifying, Troubleshooting, and Repairing Advanced Controllers Systems and*
- *Installing, Modifying, Troubleshooting, and Repairing Advanced Equipment Network Systems*

All CTSCA certification options will carry the esteemed MSSC American National Standards Institute (ANSI)-accreditation and are expected to be released January 1, 2016.



Supply Chain Technician (SCT) Certifications: Nine Benefits to Technicians

With the establishment of the CTSCA Certifications, technicians who earn them can expect to find benefits in as many as nine different areas during their careers in manufacturing, warehousing and distribution facilities.

Among them:

1. **Opportunity to learn.** Regardless of a student's or worker's level of experience in the supply chain industry, the CTSCA Certification offers a chance to broaden both knowledge and skills about the automation technologies used throughout the field—and their service requirements.

- **For individuals new to both the workforce and the industry**—such as high school, community college and technical school students—working toward a certification through specific coursework at a designated, authorized education provider is an opportunity to learn new concepts and skills. Earning CTSCA Certification demonstrates to potential employers that an entry-level candidate has been prepared to succeed in a fast-paced, variety-filled work environment and to apply critical thinking skills.

Regarding completion of MSSC's CLA certification program, a California community college student reported: "The certification help[ed] me gain confidence in myself to perform everyday tasks at work."⁹

- **For persons already working as technicians in the industry**, CTSCA Certification offers the ability to increase your competence in the field, and/or to formally document your existing skills via a credential that is easily understood by employers. Although authorized coursework and classes will be available to help prepare for the certification assessment test, individuals are not required to take them prior to the exam. This gives established technicians an opportunity to leverage their years of on-the-job experience without additional education requirements.

As explained by an Arizona-based recipient of MSSC's CLT certification: "[CLT certification] has allowed me to put my experience on a certificate. Allowing me to show possible employers I have both the experience and certification."¹⁰

- **For workers looking to transition into the industry from elsewhere in the workforce**—including military veterans, persons seeking a career change, and those who are unemployed—obtaining CTSCA Certification

⁹ Manufacturing Skill Standards Council (MSSC), "Certification Report," [http://www.msscusa.org/wp-content/uploads/file/MSSC%20Certification%20Report%20Oct%202013\(3\).pdf](http://www.msscusa.org/wp-content/uploads/file/MSSC%20Certification%20Report%20Oct%202013(3).pdf), accessed December 8, 2014, page 5.

¹⁰ Manufacturing Skill Standards Council (MSSC), "Certification Report," [http://www.msscusa.org/wp-content/uploads/file/MSSC%20Certification%20Report%20Oct%202013\(3\).pdf](http://www.msscusa.org/wp-content/uploads/file/MSSC%20Certification%20Report%20Oct%202013(3).pdf), accessed December 8, 2014, page 5.

offers a means to apply existing knowledge to a new field, as well as to learn new concepts and skills. Upon completion of MSSC certification, an active-duty member of the U.S. Air Force said: “I have found by taking the test that my military career is closely related to [the] civilian workforce. With these certificates I will be able to prove that I can step out of the military and into the workforce.”¹¹

Further, a Florida-based individual who was previously unemployed prior to obtaining an MSSC certification explained: “I was hired into one of the best paying jobs in my area. Prior to getting this certification I wasn’t even getting interview phone calls, even though I had a manufacturing background.... It has changed my life in so many ways.”¹²

2. **Differentiation from other applicants and colleagues.** For CTSCA Certification holders who are either new to the workforce, or already employed as a technician, the document may provide an advantage in getting hired or promoted. According to MSSC, “As employer recognition of certification grows, industry credentials continue to help students and workers set themselves apart from the hundreds or even thousands of competing applicants.”¹³

Likewise, companies that require their automation support, maintenance and repair staffers to have (or acquire) CTSCA Certification may elect to align the certification to performance-based pay, promotions and raises. Earning such a certification would give current technicians an opportunity to advance in their careers and their pay scales within the organization in a consistent, standardized and fair manner.

3. **Independent verification of skills.** Certifications, such as the CTSCA, provide employers with independent, third-party validation of a new hire or current employee’s knowledge and skills. That means having a CTSCA Certification may make a technician more attractive to a potential employer. Employers would understand that CTSCA certificate holders have passed a series of tests covering multiple key areas crucial to successfully supporting, maintaining and repairing automated systems and technologies throughout their facilities in a safe manner.

Indeed, Tom Barnes, HR Manager for ThyssenKrupp Bilstein, said his company highly values applicants with one of MSSC’s certifications, “because these candidates are familiar with key manufacturing concepts like safety and quality before they walk through our door. That allows them to be more productive sooner.... Our confidence in...certification is such that we offer a premium-starting wage for new employees who have that certification.”¹⁴

4. **Potential to earn higher wages. As employer recognition of the CTSCA** Certification grows, workers who earn the designation increase their chances of

¹¹ Ibid., page 4.

¹² Ibid., page 1.

¹³ Ibid., page 3.

¹⁴ Manufacturing Skill Standards Council (MSSC), “Employers,” <http://www.msscusa.org/employers/>, accessed December 8, 2014.

employment and of earning a higher hourly wage through multiple related career paths. By way of example, Table 1 highlights several SCT-related careers that are among those expected to grow in employer demand, and their average hourly and salary pay ranges, below.

Career Path Title	Number Currently Employed	Annual Projected Openings	Hourly Wage Range	Annual Salary Range
Electrical Repairers	69,100	1,770	\$20.06 - \$29.90	\$41,700 - \$62,200
Electro-Mechanical Technicians	16,400	320	\$19.74 - \$30.40	\$41,000 - \$63,200
Industrial Machinery Mechanics	287,100	11,710	\$17.95 - \$27.68	\$37,300 - \$57,600
Robotics Technician	16,400	320	\$19.74 - \$30.40	\$41,000 - \$63,200

Additional career opportunities for certified supply chain technicians include employment with an original equipment manufacturer (OEM) or supplier of the automation technologies deployed throughout a variety of industries. Many suppliers offer their customers contract maintenance and repair services. These services are provided by supplier-employed technicians who work on either an as-needed basis, or as a permanently stationed contract employee at a user's facility.

5. **Consistent and common skills and knowledge.** Should one (or all) of the CTSCA Certifications be required by a company for employment or promotion, technicians can be assured that all of their co-workers and fellow team members share a common foundation of skills and knowledge. It won't be necessary to "train" colleagues, or compensate for their lack of training. In the same 2013 survey conducted by MSSC of its CLA and CLT certification candidates, 94% of respondents agreed that earning the credential made them "feel better prepared to work in a team environment."¹⁶
6. **No post-secondary education requirements.** After earning a high school diploma (or equivalent), the acquisition of a post-secondary degree is not necessary to obtain any of the CTSCA Certifications. Several community colleges and technical institutes across the country offer coursework that prepares students for the certifications' exams—as well as provide the opportunity to earn an associate's degree, which can support further career advancement.

¹⁵ National Center for Supply Chain Technology Education, "Wages Earned,"

<http://www.supplychainteched.org/careerawareness/sct-wages.html>, accessed December 8, 2014.

¹⁶ Manufacturing Skill Standards Council (MSSC), "Certification Report," [http://www.msscusa.org/wp-content/uploads/file/MSSC%20Certification%20Report%20Oct%202013\(3\).pdf](http://www.msscusa.org/wp-content/uploads/file/MSSC%20Certification%20Report%20Oct%202013(3).pdf), accessed December 8, 2014, page 3.

7. **Training that pays off.** For technicians currently employed in the field, with or without years of on-the-job experience, an employer might pay for some or all of the training and certification process. According to MSSC's research, "companies are increasingly using MSSC training and credentials to upgrade the skills of their existing workforce or to train new hires up to the level they need in order to be successful."¹⁷

In addition to an expansion of knowledge and skills, employees who earn the associated credentials also benefitted from certification through an expansion of their bank accounts. Of the employers responding to the survey, upon employee completion of certification, 40% awarded a pay increase, 20% awarded a one-time bonus, and 15% promoted the recipients to positions of greater responsibility.¹⁸

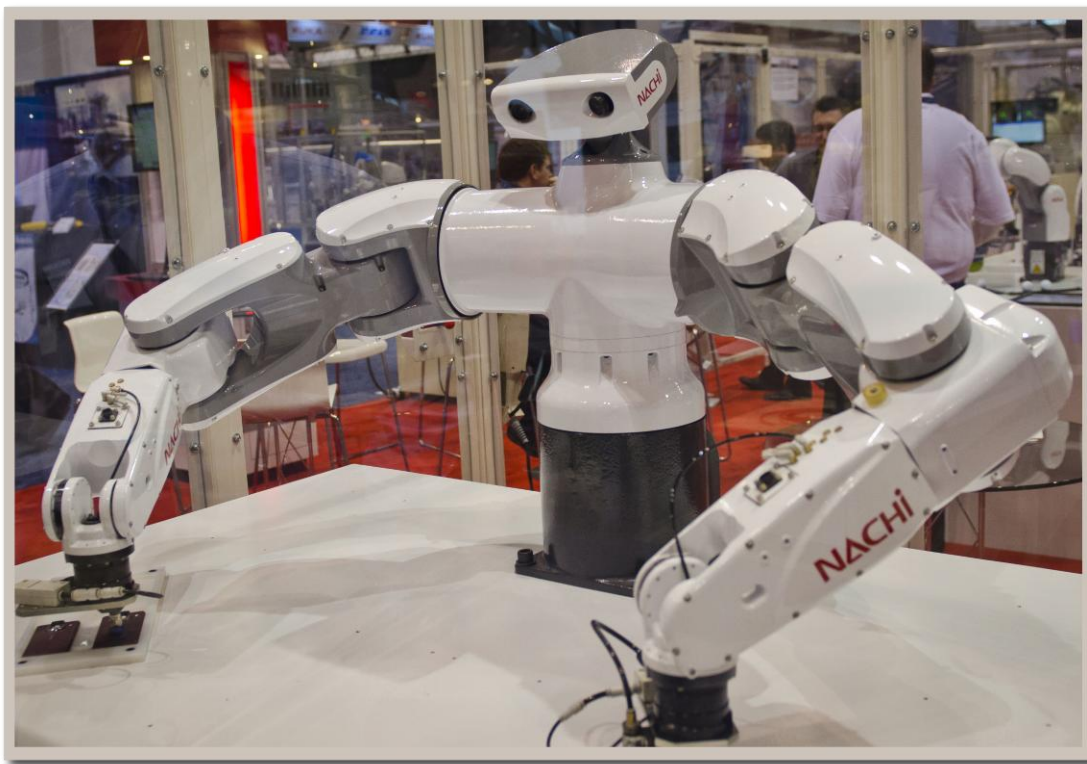
8. **Keep current on the latest automation technology developments.** Automation equipment, technologies and systems continuously evolve. Keeping up with those changes is important, and something that most supply chain technicians actively pursue through regular participation in workshops and technology-based training courses. For holders of an ANSI-accredited MSSC certification, including any of the CTSCA certificates, there is an opportunity to re-certify every five years based on additional related experience, additional related education, or a combination of both. The recertification process gives technicians a chance to demonstrate their increasing experience and/or education in the field, as well as to update their credentials document.
9. **Gain a broader understanding of the importance of your role within the supply chain.** In its study, MSSC has identified a variety of positive impacts individuals experience upon completion and receipt of their certification. Among them is a greater awareness of their personal importance to the supply chain as a key part of the material handling and logistics practices that are so crucial to its successful operation. The survey also found that:
- 90% feel more confident on the job
 - 92% feel more comfortable with the language of the industry
 - 95% have a better understanding of work functions
 - 94% are able to be more flexible in terms of adopting new tasks and technologies
 - 92% are more comfortable working in a high performance, multi-task environment
 - 94% feel more able to problem solve or handle emergency situations

¹⁷ Ibid., page 4.

¹⁸ Ibid., page 4.

Get More Information about the Occupation of SCT

Want to learn more about the occupation of Supply Chain Technician Certification? Visit the National Center for Supply Chain Technology Education at <http://www.supplychainteched.org/>



About the Author

Sara Pearson Specter has written articles and supplements for *MODERN Materials Handling* and *Material Handling Product News* as an Editor at Large since 2001. Specter has worked in the fields of graphic design, advertising, marketing, and public relations for nearly 20 years, with a special emphasis on helping business-to-business industrial and manufacturing companies. She owns her own marketing communications firm, Sara Specter, Marketing Mercenary LLC (www.saraspecter.com). Clients include companies in a diverse range of fields, including materials handling equipment, systems and packaging, professional and financial services, regional economic development and higher education. Specter graduated from Centre College in Danville, KY with a bachelor's degree in French and history. She lives in Oregon's Willamette Valley where she and her husband are in the process of establishing a vineyard and winery (www.BellsUpWinery.com).



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