

Keeping the Supply Chain Moving

Supply chain management offers plenty of career opportunities for people with the right skills.

With the increasingly rapid pace of business, a company's bottom line can rely on how fast it gets products and services to customers at the lowest competitive price without compromising quality. That's where supply chain management comes in. Professionals in this field focus on getting products to customers when they need them.

The role of supply chain management has taken on new prominence because of the increasing emphasis on providing on-demand goods and services. A well-functioning supply chain enables a company to differentiate its business and thereby gain competitive advantage.

Supply Chain Management Occupations

Supply chain management requires many skills, including knowledge of production and processing, administration and management, transportation, and customer and personal service. Functions may vary depending on the industry. For instance, a retail and distribution business like Wal-Mart has different supply chain manager functions than manufacturers like Proctor & Gamble and General Mills, or a service provider like Mayo Clinic.

In manufacturing, for example, supply chain management encompasses all movement and storage of raw materials, work in progress, finished goods and inventory from the point of origin to the point of consumption. Logistics, purchasing, and various planning and analyst roles are common in many manufacturing supply chains.

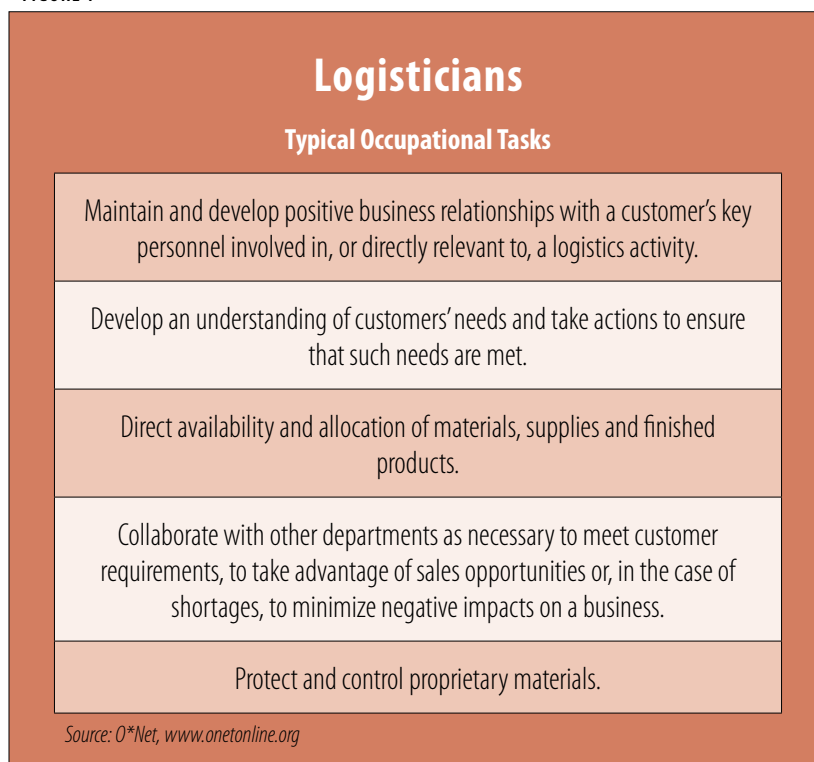


This article looks at two key supply chain management occupations in detail – logisticians and purchasing managers.

Logistics management involves planning, implementing and controlling the flow and storage of goods, services and related information from point of origin to the customer. **Logisticians** plan, analyze and control the systems involved in these functions to ensure a smooth and coordinated effort. Logisticians might report on product delivery, inventory, storage or other supply chain processes to identify or recommend changes. They might also manage activities, including invoicing, electronic bills and shipment tracing (see Figure 1).

In food manufacturing, for instance, a logistician might be responsible for ensuring perishable products are stored properly and that storage time is minimized to reduce waste and maintain quality. Logistics managers also make sure third-party contractors are meeting their goals and keeping up with required changes and demand. Logisticians are employed in many industries, including manufacturing, professional and business services, and public administration. Table 1 shows employment by region for logisticians in Minnesota and median wages.

FIGURE 1

TABLE 1 **Employment and Wages of Supply Chain Occupations**

Logistician	Employment	Median Wage
Minnesota	2,410	\$35.94/hr
Minneapolis-St. Paul MN-WI MSA	2,010	\$36.57/hr
Southeast Minnesota	330	\$26.96/hr
Central Minnesota	120	\$33.58/hr
Southwest Minnesota	70	\$32.25/hr
Northwest Minnesota	60	\$32.34/hr
Northeast Minnesota	30	\$37.26/hr

Note: Employment estimates reflect first quarter 2015.

Source: DEED, Labor Market Information Office, Occupational Employment Statistics

FIGURE 2



Logisticians work closely with many other professionals, including accountants, operations research analysts, industrial engineers, purchasing agents, and production, planning and expediting clerks.

Purchasing managers direct and coordinate activities within the purchasing department. They ensure that suppliers agree to and comply with contracts, adhere to quality standards, and fulfill orders in a timely manner (see Figure 2).

The purchasing function has changed over the last 20 years, especially in manufacturing, to include efforts to reduce environmental impacts. As more people become concerned about the environment, they are pressuring businesses to reduce their carbon and waste footprints. In response to the growing need for integrating environmentally-friendly choices into the supply chain, purchasing professionals now have to understand the impact that their purchasing decisions have on society, the economy and the environment. Supply chain management strives to reduce waste in raw material extraction, production, packaging, shipping, use, disposal and reuse.

TABLE 2 **Employment and Wages of Supply Chain Occupations**

Purchasing Manager	Employment	Median Wage
Minnesota	2,410	\$49.03/hr
Minneapolis-St. Paul MN-WI MSA	1,890	\$51.63/hr
Central Minnesota	150	\$38.31/hr
Northwest Minnesota	120	\$42.61/hr
Southwest Minnesota	100	\$41.79/hr
Northeast Minnesota	80	\$43.56/hr
Southeast Minnesota	N/A	\$42.61/hr

Note: Employment estimates reflect first quarter 2015.

Source: DEED, Labor Market Information Office, Occupational Employment Statistics

A purchasing department may include legal professionals to handle purchasing contracts, supplier relations experts, compliance officers who focus on regulations, inspectors, managers and engineers. Purchasing management jobs, sometimes called procurement jobs, are found in manufacturing; professional and business services; trade, transportation and utilities; and education and health services industries.

In many companies, purchasing managers work closely with transportation, storage and distribution managers. In some cases these functions are combined into a supply chain manager.

Table 2 shows employment by region for purchasing managers in Minnesota and median wages.

Challenges of Managing a Supply Chain

The biggest challenge in supply chain management is combining rigorous planning with the flexibility to adapt to unpredictable situations. Anything that disrupts the supply chain is a major threat to business continuity that can ultimately reduce revenue, decrease market share, inflate costs, and threaten production and distribution.

When a company's suppliers are in another country, the company may be more vulnerable to supply disruptions. Local regulations, government instability, infrastructure quality, inflation and crime are some examples of problems that can affect global sourcing.

Ivory Coast, for instance, is the world's largest exporter of cocoa beans. During the country's second coup d'état during 2010-2011, businesses that relied on Ivory Coast for their supply of cocoa beans faced major supply challenges. While the country was in political disarray, goods

could not be safely transported on roads and were not allowed to move out of ports. This caused a shortage and price hike for the cocoa supply, causing disruptions in many corporate supply chains.

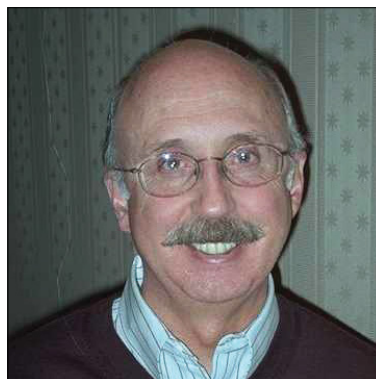
The East Coast blizzard in January is another example of an unpredictable situation that can disrupt a supply chain. With trucks stuck on the sides of roads, grocery stores ran out of products.

These are the types of problems that supply chain managers have to plan for and manage when they occur.





Kevin Sundberg



Richard Greig

Breaking Into the Field

Supply chain management is a hot field that is changing rapidly. Many colleges in Minnesota, including Metropolitan State University in St. Paul, offer bachelor's and graduate courses for people who want to enter the field or people already in the industry who want to improve their skills and marketability.

Kevin Sundberg and Richard Greig recently talked about their careers as supply chain managers, including how they got into the field and the skills that are necessary to do the job well.

“Being a good communicator, being well-organized and having good analytical skills is essential in this field.”

Sundberg, senior inventory analyst at Plymouth-based Thrifty White Pharmacy, is in charge of financial reports related to managing the age of the inventory and internal controls on pharmaceutical drugs. Previously, he worked at General Mills in the logistics division for four of his eight years with the global company. He started at General Mills in the corporate planning and analysis division as an accountant and later moved to the supply chain logistics division.

Sundberg's day-to-day activities in the logistics department included providing consistent reporting, analysis and forecasting. He did risk assessments to strengthen internal controls and ensure Sarbanes-Oxley compliance for warehousing locations across the U.S. and Canada. He also developed improvements for inventory audits in compliance with internal control policies, and he led projects aimed at reducing inventory count costs.

Sundberg has a bachelor's degree in accounting from Metropolitan State University. “Working as an accountant helped me acquire

valuable experience in financial and data analysis,” he said.

Communication skills also are essential to the job. Because of the cross-functional nature of the work, managers must share information with other departments. Also, a problem-solving and trouble-shooting ability helps to recover a disrupted chain. Anything that disrupts the flow in a supply chain is recognized in today's economy as a major threat to business continuity.

Richard Greig directs operations at The Village Co., a Chaska-based firm that specializes in bath products. Besides leading the company's supply chain effort in a consulting capacity, he also is an adjunct professor with the University of Minnesota and the Minnesota State Colleges and Universities system.

After leaving the military in 1972, Greig found his first job in supply chain as a shipping supervisor with Gould Batteries in St. Paul. He did not have a college degree then, but he was offered the job because of his officer's experience in the military.

TABLE 3

Certifications in Supply Chain Management

Professional Organizations	Certification
American Production and Inventory Control Society (APICS)	Certified in Production and Inventory Management (CPIM)
	Certified Supply Chain Professional (CSCP)
Council of Supply Chain Management Professionals (CSCMP)	SCPro-Certification in Logistics
	Project Management Certifications
Manufacturers Alliance	Lean Manufacturing-Practitioner and Leader
	6 Sigma Green Belt Certification

Shortly after that he joined the American Production and Inventory Control Society (APICS). While attending his first APICS International Conference in 1974, he realized that completing a degree in business would complement what he was learning on the job.

“Business was very different back then, and the discipline of supply chain was unknown,” he said. “This was before computers were common.”

Greig believes that without a college degree in business or something related, entering the field would be difficult because of the highly specialized nature of jobs under the supply chain umbrella. Entry-level staff members are often brought in as general analysts and then

specialize in a specific part of supply chain management. Employers also appreciate specific professional experience and sometimes look for related certifications, including APICS certification. Other certifications that employers look for are listed in Table 3.

Greig has served in many supply chain roles, including shipping supervisor, manager of production, purchasing manager, distribution and control manager, and operations manager for firms like Amway, Quintessence, Tsumura, Belae, Holmberg Co. and Lubrication Technologies Inc. He also worked as director of supply chain for Hollywood Fashion. “Being a good communicator, being well-organized and having good analytical skills is essential in

this field, because a good chunk of your work is based on good decision-making,” he said. “One bad decision or error can cause everything to stop.”

Supply chain management offers excellent opportunities, particularly for people with analytical, communication and planning skills and a business background. Many Minnesota colleges offer bachelor’s and graduate-level courses for people entering the field or career veterans who want to upgrade their skills. **T**