

Mapping Your Future

Supply Chain Management

What is Supply Chain Management?

Supply chain management (SCM) makes sure the right amount of raw materials are in the right place at the right time so that they can be made into finished products and sold to the customer. The supply chain is made up of suppliers, manufacturers, distributors, and retailers that supply, produce, deliver and sell products. Each link along the chain is essential. Companies use SCM because it helps them control and track their materials, avoid waste, and save money.

Some supply chain practices have been around for ages, but standardizing supply chain procedures across industries is a new business practice called supply chain management. Big companies used to be the only ones who used SCM until smaller companies caught on and saw the value in it. Fast-forward to today and now most businesses of all sizes use SCM to compete in today's global economy. This means that it's a booming field with many jobs.

SCM gets people who work in these three functions to work together like a finely tuned machine:

- **Purchasing** professionals buy the raw goods, and the supplies and equipment needed to create the final product. They choose suppliers, negotiate prices, and manage the inventory. They typically work in offices and travel frequently.
- **Operations** professionals oversee manufacturing or assembly and manage the facilities where they take place. They make production schedules and work assignments. They may work in offices or places where goods are made, like factories.
- **Logistics** professionals plan and organize the flow of final products to get them to their final destination. This includes activities like packaging, storage, moving, and distribution. They work in offices and at depots, distribution centers, and warehouses.

Why Work in Supply Chain Management?

- You can travel. SCM professionals often travel the globe to find the right materials and oversee manufacturing. It gives them the chance to interact with people from different countries and cultures.



- You can make a difference. You can help companies bring their costs down so they can sell their product for less money. You can help companies be environmentally friendly or help charities get relief supplies to war-torn nations. Or, if there is a natural disaster closer to home, you can help fellow New Yorkers connect to resources like food, water, clothing and shelter.
- It's everywhere. Supply chain functions are more alike across industries than you think. Think of a bar of chocolate and a computer. Even though they are so different, they both require people and materials to supply, make, distribute, and sell them. This means many job opportunities to break into the field.
- You can solve problems. If you love puzzles or are good at solving problems, then SCM may just be your calling. At its core, SCM is all about making processes work better than before.
- It's very social. People power supply chain activities. They are responsible for advancing all related activities from one link to the next. Building and forming relationships ensures people work together productively.
- And the pay is good, too. Across the US, entry-level SCM workers earn an average of about \$50,000 a year. In just a few years, they can easily make a lot more, especially if they invest in higher education.

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Supply Chain Management and the Chocolate Factory

Imagine you own a company that makes and sells chocolate bars. Imagine all the steps it takes to gather the ingredients, make the chocolate and get it to the people who want to buy it.

First, you need people who can find and buy the right ingredients to make a chocolate bar. Then they need to get the ingredients to the factory where you will make the bars. You also have to calculate how much of each ingredient will be needed to make the number of chocolate bars you plan to sell.

Chocolate bar ingredients come from all over the world. You'll have to work with people from different countries to get what you need. For example, you may buy milk from a company in upstate New York and cocoa beans from a company in Brazil. Someone has to make sure that everything is shipped on time. And if goods are shipped from overseas, you need to make sure you follow all of the laws of international trade.

You'll also need people to keep track of how much of each ingredient to have on hand, make sure there is space to store it all, and control the flow of goods into and out of the factory. If you have too much of something – like milk – the extra may go to waste. If you order too little of something, you can't make your chocolate bar until more arrives.

Finally, you need to distribute the chocolate bars to stores where customers can buy them. You will need people to find warehouses where the chocolate bars can be safely stored and easily transported to the right stores when they are expected.

In short, you will need SCM professionals to coordinate all of these functions and people!

What Skills Do I Need to Go into SCM?

Most successful supply chain managers are:

- **Analytical.** They are good at working with numbers and software systems to identify trends, solve problems, weigh risks and rewards of business decisions and improve business processes.
- **Tech Savvy.** Technology is used all along the supply chain, from the way we supply materials, to the methods used to record and track inventory and everything else beyond and between.
- **Business Savvy.** Supply chain managers must understand the ins and outs of their business to make informed decisions.
- **Collaborative.** You have to be good at making and keeping relationships with partners up and down the supply chain.
- **Strong Communicators.** The importance of strong communication skills can't be overstated. When SCM is working, the purchasing, operations and logistics functions communicate with each other seamlessly.
- **Culturally Competent.** Awareness of and sensitivity to different cultures promotes effective communication and stronger working relationships with all key contacts along the supply chain.

How Can I Get My Foot in the Door?

SCM is a relatively new field and it's still taking shape. In the past few years, many colleges and universities have begun to offer related degree programs. More and more, SCM firms recruit from these programs. Enrolling in one of these can give you a huge advantage in getting into the field.

Once you get your foot in the door, you may want to consider getting credentialed. Popular choices in this field are Project Management Professional (PMP)® – which is especially useful for companies looking to adopt SCM practices – or higher-level options for companies with well-established SCM practices like APICS Certified in Production and Inventory Management (CPIM) or APICS Certified Supply Chain Professional (CSCP). Each of these will help you advance in this field and make more money. Finally, people with Master's Degrees in SCM can make \$100,000 per year or more.

Put Yourself on the Map: How to Use This Brochure

Like any map, this Career Map helps you find your way to new places – in this case, a bunch of careers within one specific industry. (An industry is a loosely defined area of businesses engaged in similar work.) As you read, ask yourself: what different kinds of jobs are there? How could one job lead to the next? Which ones will I like? How much money can I earn, and how long will it take me to get there? What kind of training do I need?

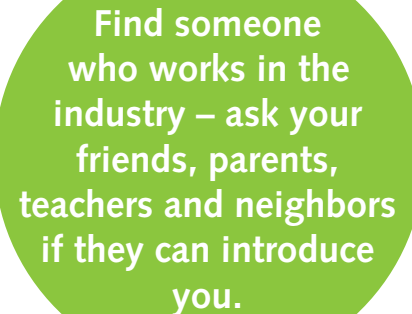
One of the best ways to find a satisfying career is to get clear about your personal interests and strengths. What do you most enjoy doing? What do your friends, teachers, parents say you do best? Do you prefer to work with people, ideas or things? Do you want to be in charge, or work alongside your peers? Which of these jobs will let you be your best?

Once you've found a path that sounds like a good fit, it's time to test it out. Find someone who works in the industry – ask your friends, parents, teachers and neighbors if they can introduce you. Ask if they are willing to talk with you for a few minutes. This is called an “informational interview.” You're not asking them to find you a job; you're only asking to listen and learn about their experience. If you ask in a professional manner, many people are happy to speak with you. (If you're nervous about this, ask a teacher, guidance counselor or parent to help.)

Before you meet with the person, reread this brochure and write down any questions you have, for example:

- What do you spend your day doing in this job?
- How did you get started in this field?
- How much reading, writing or math do you do in your job?
- How do people dress at the work place?
- Do you have a routine set of tasks you do every day or do you do something different every day?
- Do you work the same schedule every week, or does it change?
- What courses would I take in high school or college to prepare for this job?
- What is my next step after high school if I am interested in this field?
- Where can I find people who can help me learn more about this field?

Make sure to send a thank you note, and in no time you'll be on your way. For more information about this industry and many others, you can visit www.careerzone.ny.gov



**Find someone
who works in the
industry – ask your
friends, parents,
teachers and neighbors
if they can introduce
you.**

Purchasing

Operations

INCREASING LEVELS OF EDUCATION/TRAINING REQUIRED

High School Diploma or Equivalent Plus Experience	Bachelor's Degree Plus Experience	High School Diploma or Equivalent Plus Experience
<p>Purchase Expeditor</p> <p>DUTIES: Provides follow-up support for purchase orders. Relays purchase order information to appropriate staff.</p> <p>PAY RANGE: \$28,000 to \$49,000 per year</p>	<p>Category Manager</p> <p>DUTIES: Purchases, develops and markets product lines with the goal of maximizing a firm's profitability. Activities may include modifying existing lines and creating interesting and innovative merchandising strategies to sell the products (like bundling, gifting, packaging, promotions, etc.).</p> <p>PAY RANGE: \$40,000 to \$116,000 per year</p>	<p>Shift Manager</p> <p>DUTIES: Plans and coordinates shift operations to ensure that quality, safety and production performance benchmarks are met or exceeded.</p> <p>PAY RANGE: \$31,000 to \$63,000 per year</p>
<p>Bachelor's Degree or Several Years' Experience</p> <p>Inventory/Replenishment Specialist</p> <p>DUTIES: Maintains proper inventory levels by performing daily counts, identifying and resolving inventory problems, organizing scheduled inventory counts and communicating with warehouses and distributors.</p> <p>PAY RANGE: \$66,000 to \$93,000 per year</p> <p>Inventory/Materials Manager</p> <p>DUTIES: Manages the acquisition, storage and distribution of inventory to minimize wasted inventory.</p> <p>PAY RANGE: \$66,000 to \$93,000 per year</p> <p>Demand Planning Manager</p> <p>DUTIES: Leads all inventory planning activities. Drives inventory commitments and warehouse distribution processes through preparing demand, purchasing and inventory forecasts and financial projections.</p> <p>PAY RANGE: \$73,000 to \$122,000 per year</p> <p>Purchasing Manager</p> <p>DUTIES: Manages all purchasing activities. Receives orders and approves purchases of goods or services. Analyzes changes or new issues in materials and supplies to find ways to reduce costs and improve quality.</p> <p>PAY RANGE: \$65,000 to \$115,000 per year</p>	<p>Purchasing Director</p> <p>DUTIES: Identifies and builds relationships with key suppliers. Directs and coordinates product purchasing, selling and distributing activities. Aligns purchase efforts with customer demand and analysis of current and future product availability.</p> <p>PAY RANGE: \$76,000 to \$135,000 per year</p> <p>Purchasing Executive</p> <p>DUTIES: Oversees all aspects of an organization's purchasing function for goods or services. Responsible for planning and directing materials and supplies to improve productivity.</p> <p>PAY RANGE: \$127,000 to \$287,000 per year</p>	<p>Bachelor's Degree or Several Years' Experience</p> <p>Materials Scheduler</p> <p>DUTIES: Coordinates production schedules with delivery of raw goods to ensure that the right amount of material arrives at a production facility at the right time.</p> <p>PAY RANGE: \$47,000 to \$84,000 per year</p> <p>Production Planning Manager</p> <p>DUTIES: Plans, coordinates and controls manufacturing processes to promote productivity. Develops and implements project plans and commitments for the production team.</p> <p>PAY RANGE: \$63,000 to \$112,000 per year</p>
<p>MAP KEY</p> <p>Pay Range The pay range reflects typical pay from entry level to experienced. The higher pay takes many years to reach and development of significantly greater skills and knowledge.</p> <p>Jobs that are primarily part-time are expressed as hourly pay; jobs that are primarily full-time are shown with annual pay. Those that could be either are shown both ways.</p> <p>Education Minimum education and experience requirements. This may vary from employer to employer.</p>		
<p>This flyer highlights jobs in the sector projected to have the same or more openings between now and 2020.</p>		

Types of Employment

	HOURS/WEEK	SCHEDULE	WAGE/SALARY	PAYMENT	COMMON BENEFITS
Full-Time	Usually 35+	Steady	Annual	Weekly or bi-weekly	Paid sick leave, vacation time, health insurance, retirement savings
Part-Time	Usually <35	May vary	Hourly	Weekly or bi-weekly	Usually none
Temp	As needed by employer	May vary	Hourly	Weekly or bi-weekly	Usually none
Per Diem	As needed by employer	Daily or Per Shift	Hourly	Weekly or bi-weekly	Usually none
Self-employed aka Freelance	Varies	Varies	Negotiate rate of pay with client	Upon completion of work or on a schedule of deliverables	None: must pay own taxes and health insurance
Union			Typically higher than comparable non-union positions		As negotiated by the union with the employer on behalf of members

For more information on careers in this industry:

Careers in Supply Chain Management: <http://careersinsupplychain.org/>

Council of Supply Chain Management Professionals: <http://cscmp.org/>

American Society of Transportation and Logistics: <http://www.astl.org/>

Warehousing Education and Research Council: <http://www.werc.org/>

Association for Operations Management: <http://www.apics.org/>

For information about the DOE CTE Programs:

<http://schools.nyc.gov/ChoicesEnrollment/SpecialPrograms/CTE/default.htm>

<http://CTECouncil.org>

Where can I get additional general information on careers?

For careers in New York State: www.careerzone.ny.gov

For general career information, including videos of nearly 550 careers: www.acinet.org

For general career information: www.bls.gov/k12/

INCREASING LEVELS OF EDUCATION/TRAINING REQUIRED



Some College or Associate Degree	Bachelor's Degree or at Least 5 Years' Experience <i>continued</i>
<p>Freight Broker</p> <p>DUTIES: Serves as a liaison between transport carriers and businesses with shipping needs.</p> <p>PAY RANGE: \$33,000 to \$67,000 per year</p>	<p>Trade Compliance Manager</p> <p>DUTIES: Ensures compliance with the export/import laws and regulations governing all countries in which the company does business.</p> <p>PAY RANGE: \$33,000 to \$68,000 per year</p>
Bachelor's Degree or at Least 5 Years' Experience	Graduate Degree and/or Bachelor's Degree Plus Several Years of Experience
<p>Supply Chain/Logistics Analyst</p> <p>DUTIES: Assembles data, analyzes performance, identifies problems and develops recommendations to improve productivity throughout the supply chain.</p> <p>PAY RANGE: \$33,000 to \$68,000 per year</p> <p>Supply Chain/Logistics Coordinator</p> <p>DUTIES: Develops the timetables for purchasing, production and shipping. Monitors the delivery of supplies, the production process and shipping practices to ensure that deadlines are met.</p> <p>PAY RANGE: \$33,000 to \$68,000 per year</p> <p>Transportation Manager</p> <p>DUTIES: Oversees the inbound and outbound traffic of materials and finished products from distribution centers. Often manages carriers, transportation costs and third-party (a.k.a. outsourced) transportation providers.</p> <p>PAY RANGE: \$33,000 to \$68,000 per year</p> <p>Process Engineer</p> <p>DUTIES: Designs processes that improve the safety and performance of labor, materials, energy and other resources.</p> <p>PAY RANGE: \$33,000 to \$68,000 per year</p> <p>Freight Forward Manager</p> <p>DUTIES: Assists companies in moving goods internationally and ensuring goods reach their destination on time and in good condition. Manages company's import/export activities (air, sea and road).</p> <p>PAY RANGE: \$33,000 to \$68,000 per year</p>	<p>Supply Chain/Logistics Manager</p> <p>DUTIES: Designs and implements projects that will improve the productivity of supply chain processes and systems. Directs the movement, storage or processing of inventory.</p> <p>PAY RANGE: \$61,000 to \$93,000 per year</p> <p>Supply Chain Consultant</p> <p>DUTIES: Reviews existing procedures and examines opportunities for streamlining production, purchasing, warehousing and distribution to meet a company's needs, then develops strategies to cut costs, improve quality and improve customer satisfaction.</p> <p>PAY RANGE: \$58,000 to \$120,000 per year</p> <p>Supply Chain/Logistics Director</p> <p>DUTIES: Directs and oversees operations within the organization's logistics department, including the transportation and storage of goods, vendor selection and negotiation, distribution and inventory control.</p> <p>PAY RANGE: \$72,000 to \$160,000 per year</p>