



Searching the Supply Chain Transportation & Logistics



October 2016

Introduction

With advancements in technology, the way in which we work is changing. People are planning their vacations on their smart phones and using technology to access all types of information. The transportation industry is learning how to use technology to increase production and with that, the people working within the industry need to know how to use various devices to track and receive information. Not only do job-seekers need the educational requirements for a career, they need to develop leadership, teamwork and problem solving skills. Employers are not only looking for someone who has a grade 12 education, they want someone who understands the industry and the role they play within the supply chain.

To help prepare people for employment, your Local Employment Planning Council has created a series of research reports to better prepare current and future job seekers for changing demands in occupations.

We would like to thank local industry insiders for their insight into this sector, local economic development offices for their input and advice and the Canadian Supply Chain Sector Council as well as the Ontario Truck Driving School for allowing us to utilize their photos.

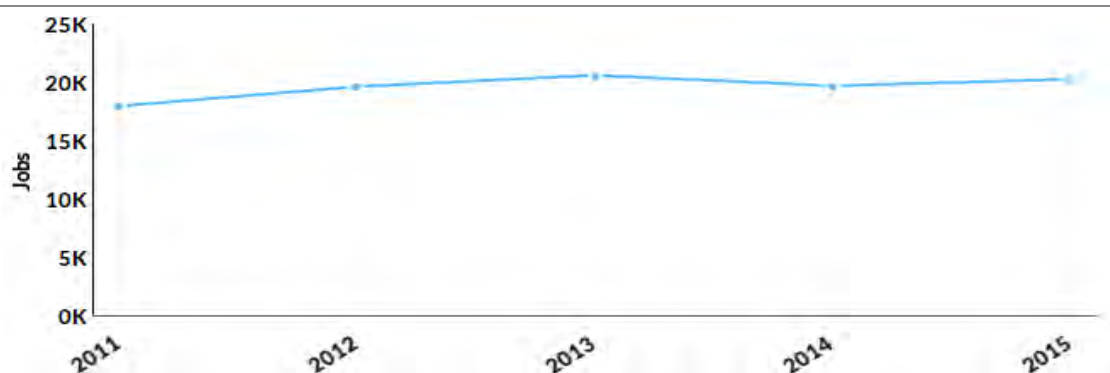
This is the second research report in a 5-part series that explores the evolution of skills required to be successful in key employment sectors. Each sector has been identified through discussion with local economic development offices and by examining the prominent sectors in our communities. Across Elgin, Middlesex, Oxford and London, it is clear that these five sectors play a significant role in our economy and our workforce:

-  Agriculture
-  Healthcare
-  Manufacturing
-  Supply Chain
-  Retail

London Economic Region, Supply Chain Sector Labour force

17,915	20,215	2,300	12.8%
2011 Jobs	2015 Jobs	Change (2011-2015)	% Change (2011-2015)

Source: OMAFRA – Economic Modeling Specialists International (Emsi) Canadian Data set Q3 2016



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Searching the Supply Chain – Transportation & Logistics

The London Economic region is home to hundreds of business sectors which both feed and utilize the Supply Chain. According to the Supply Chain Employment guide, Elgin, Oxford, and Middlesex County have seen continued growth and diversity, moving from the primarily agriculturally based beginnings to become a dominant region for manufacturing and high tech business in Ontario. Besides being a manufacturing region, it is also a major transportation hub. Not only do major organizations have distribution facilities in the region, but many large and small transportation companies have warehousing and distribution terminals in the region.

With transportation being a major draw for companies to locate in this region there are lots of opportunities in this sector.

Transportation includes much more than trucking. We also need to consider

- ❖ Air- Freight and passenger
- ❖ Rail- Freight and passenger
- ❖ Ship- Primarily freight
- ❖ Passenger- Personal

It's also important to note that a career in the supply chain can be long term employment. A position in the chain has many levels, from entry-level to senior management. To move up in your career, you will have to prove that you have a combination of soft and technical skills. Small and medium size companies are the backbone of our region, with over 700 manufacturing businesses, and even more service sector providers, so the opportunities are out there.

Which occupational groups are increasing in employment opportunities?

Occupation including NOC code	Jobs in 2011	Jobs in 2015	Change
Industrial engineering and manufacturing technologists and technicians (2233)	230	441	221
Information systems analysts and consultants (2171)	1,305	2,328	1,023
Purchasing agents and officers (1225)	658	904	246
Customs, ship and other brokers (1315)	103	136	33
Storekeepers and partspersons (1522)	318	416	98
Material Handlers (7452)	3,710	4,810	1,100
Managers in Transportation (0731)	467	597	130
Source: OMAFRA – Economic Modeling Specialists International (Emsi) Canadian Data set Q3 2016			

- There was a major increase in the number of jobs for material handlers and information systems analysts and consultants from 2011 to 2015 in the London Economic Region (LER).
- There was also a 92% increase in the number of industrial engineering and manufacturing technologist and technician occupations during the same time period.

NOC code- National Occupation Classification is a standard code to classify occupations. By searching a specific NOC code, job-seekers can assess the skills required in the occupation.

Studying the Supply Chain Workforce

The supply chain is one of the most essential sectors in the Canadian economy, impacting both business and consumers in the country. It is a system of businesses, people, activities, information, and resources involved in moving a product or service from supplier to customer. According to the Supply Chain Employment Guide, "the supply chain links activities that involve:

- Businesses- that take the resources and utilize people to make products
- People- who use the machinery
- Information- that is analyzed to make sure the resources, people and organizations are used efficiently and the products customers want are available
- Resources- the material used to make something

To help with the flow of products, information is shared through the supply chain. The more the companies within a supply chain are able to work together and coordinate their activities, the more likely they'll be able to optimize the flow of goods from supplier to customer and to react efficiently to changes in demand."

"With baby boomers rushing towards the retirement finish line- including many in the trucking industry - transportation and logistics employers are searching for new ways to fill their soon to be vacant seats. Whether it's hiring drivers or filling the demand for forklift operators, employers are looking for candidates who are collaborative with peers and adept with technology. From flagging a safety problem to taking initiative with a process improvement, supply chain employers are looking for employees throughout the operation who can think a few steps ahead of their immediate responsibilities," Joanne Cleaver, New Trends in Transportation and Logistics Recruitment.

According to the HR Study Update Canadian Supply Chain Sector Council, employees said that the following skills are needed within the sector:

- Financial Planning
- Forecasting
- Cost Analysis
- Knowledge of international business practices
- Languages
- General management and business
- Knowledge of laws and regulations
- Mechanical Skills
- Knowledge of logistics functions and the supply chain
- Knowledge of transportation

Did you know there are 15 new occupational standards linked to supply chain?



Canadian Shipper News - <http://www.canadianshipper.com/videos/supplying-standards/>

Observations

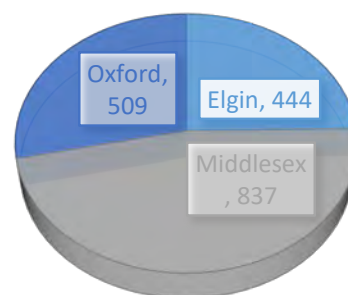
Across all occupations, soft skills are becoming increasingly important especially so, for management positions. The general trend of up-skilling across occupations is bound to continue in the coming years. Due to the changing nature of jobs, technical knowledge will become somewhat less important while skills to adapt and learn new things will be more valued. Certain knowledge – like computer technology– will become more important. For higher skilled jobs, employers are looking for a post secondary education and want people who can continuously learn, communicate, interact and adapt to changing environments.

- Automation is increasing and logistics is becoming more complex and global. That means analytical and electric computer skills will be even more important. Social and cultural skills will be needed as well.
- The Government of Canada introduced a mandate to require the use of Electronic Logging Devices (ELDs) by federally-regulated motor carriers and commercial vehicle drivers. An ELD automatically tracks vehicle movement, but allows for annotations by both the driver and the motor carrier's agent to explain or correct records.
- The Ministry of Transportation has also moved its plan forward to require Mandatory Entry Level Training (MELT) for all new class A licence holders in the trucking industry.

The following chart is sourced from the Strategic Human Resources Study of the Supply Chain Sector:

New Skills Required	<ul style="list-style-type: none"> • Computer skills • Software skills • Communications
Skills Increasing in Importance	<ul style="list-style-type: none"> • Computer Skills • Communications • Analytical and decision-making skills
Skills Decreasing in Importance	<ul style="list-style-type: none"> • Writing (e.g., hand writing and use of typewriters) • Paper work and paper documentation • Manual activities, such as ledger, calculations, data entry, bookkeeping, typing
Skills No Longer Required	<ul style="list-style-type: none"> • Manual and clerical activities, such as filing, tracing

TOTAL NUMBER OF BUSINESSES IN TRUCK TRANSPORTATION CANADIAN BUSINESS COUNTS JUNE 2016



“Truck transportation” is spread across the London Economic Region, with the majority of businesses located in Middlesex County, which includes the City of London.

This list is intended to show the breadth of the supply chain sector and is by no means a complete list.

CAREERS IN THE SUPPLY CHAIN

Manufacturing/Retail

Sourcing/Procurement

Planning

Transportation

Intermodal

Truck Lines

Courier

Ocean

Air

Railways

Warehousing & Distribution

Distribution Centres

Warehouse/Storage Facilities

3rd Party Logistics

4th Party Logistics

SHARED CORPORATE SERVICES

Freight

Procurement

Operations

Logistics

Information Technology

Human Resources

Administration, Customer Service & Quality Assurance

Health & Safety

Accounting & Finance

Executive-level Supply Chain Roles

• Chief Supply Chain Officer • VP, Supply Chain • Chief Operating Officer • Director, Operations • VP, Operations • General Manager 0016

Professional
• VP, Transportation
• Manager, Transportation
• Manager, Ocean Imports

0016, 0713

Professional
• Chief Procurement Officer
• VP, Procurement
• VP, Purchasing
• VP, Materials Management
• Manager, Strategic Planning
• Manager, Purchasing

0113

Professional
• Plant Manager
• Production Manager
• Postal and Courier Service Manager

0721, 0132, 1214

Professional
• Chief Logistics Officer
• VP, Logistics
• Manager, Logistics Planning
• Logistics Technical Manager

0114, 1215

Professional
• VP, Information Technology
• Chief Information Officer
• Manager, System Development/Planning
• Manager, Electronic Data Processing

0213

Mid Range
• Inventory Auditor
• Programmer
• Systems Analyst

2233, 2171, 2172, 2175

Support
• Network Technician
• Software Support
• Information Technology Team Member

See www.ictc-ctlc.ca

Professional
• VP, Human Resources
• VP, Employee Relations
• Manager, Human Resources
• Manager, Employee Relations

Mid Range
• Supervisor, Staffing & Administration
• Benefits Coordinator
• Human Resources Coordinator

Support
• Time & Attendance Administrator
• Human Resources Administrator
• Human Resources Administrative Assistant

Professional
• Chief Administration Officer
• VP, Customer Service
• VP, Sales
• Manager, Quality Assurance
• Manager, Customer Service
• Manager, Administration
• Manager, Business Development

Mid Range
• Supervisor, Administration
• Coordinator, Administration Contracts
• Quality Assurance Team Leader

Support
• Customer Service Representative
• Administrative Assistant
• Receptionist

Professional
• VP, Health & Safety Risk Management
• Director, Health & Safety
• Manager, Loss Prevention
• Manager, Health, Safety & Wellness

Mid Range
• Resource Protection Investigator
• Occupational Health Nurse
• Trainer, Safety & Hazard Awareness

Support
• Claims Clerk
• Patrol
• Administrative Assistant

Professional
• Chief Financial Officer
• VP, Finance (also Senior and Executive VPs)
• Director, Financial Services
• Controller
• Accounting Manager

Mid Range
• Payroll Administrator
• Financial Analyst
• Accounting Coordinator

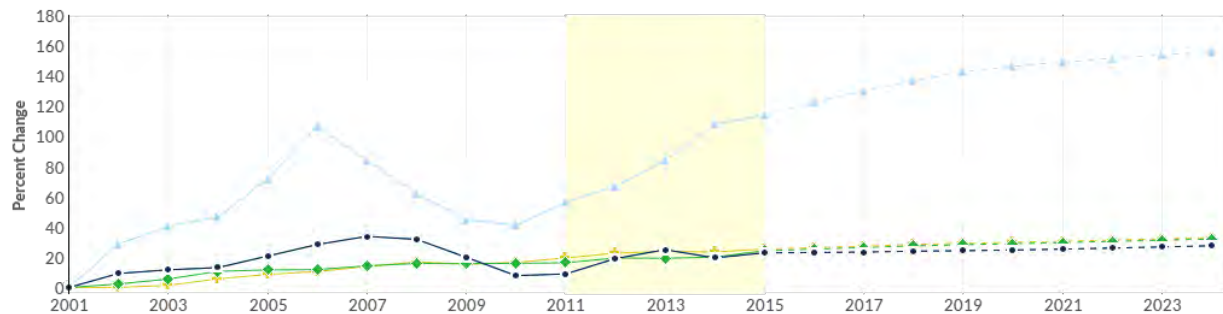
Support
• Accounts Payable Clerk
• Payroll Clerk
• Accounts Receivable Clerk

Sample four-digit National Occupational Classification (NOC) codes, the nationally accepted standard that classifies and describes occupations in Canada, are included in each of the supply chain-related boxes. (View all supply chain NOC codes on the facts and figures sheet on the Council's "What is a Supply Chain?" webpage.)

This flow chart was originally created by the Careers In Logistics Subcommittee of the Calgary Logistics Council and has been altered by the Canadian Supply Chain Sector Council, with permission.

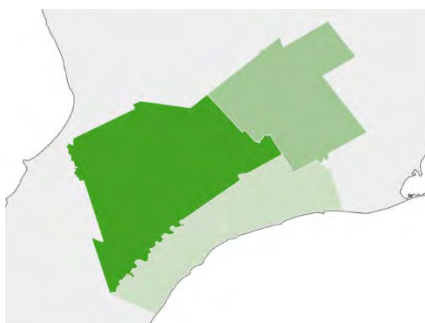
Regional Trends

- As of 2015, there were approximately 511,857 workers in the supply chain sector labour force within Ontario (excluding truck drivers).
- Opportunities within the sector are increasing, adding 2,300 jobs from 2011 to 2015 in the London Economic Region.
- Over half of the occupations within the supply chain sector are located in Middlesex County, including London.



Region	2011 Jobs	2015 Jobs	Change	% Change
● Region (Elgin, Middlesex, and Oxford Counties)	17,915	20,215	2,300	12.8%
● Southern First Nations	66	91	25	37.9%
● Ontario	479,010	511,857	32,847	6.9%
● Canada	1,152,840	1,209,737	56,897	4.9%

Source: OMAFRA – Economic Modeling Specialists International (Emsi) Canadian Data set Q3 2016



Census Division	2015 Jobs
Middlesex	14,413
Oxford	4,091
Elgin	1,711

Source: OMAFRA – Economic Modeling Specialists International (Emsi) Canadian Data set Q3 2016

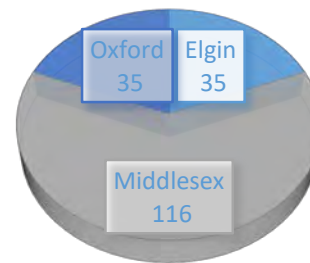
Predictions

The supply chain sector has already started to see the impact of new technologies and computer changes. Especially ICT (Information and communication technology) applications are becoming more important. Some examples are modern navigation systems (GPS), and driver assistance, driver augmentation and electronic logging devices (ELD). These changes require skills like computer use, planning, problem solving and customer service. Also fully automated metro/subway systems are already in service in Germany, Japan, China, Singapore and the US. Fully automated cars are also under development, but are unlikely to be implemented in regular traffic within the next few years.

- The development and adoption of technology will result in increased production, reliability, sustainability, safety and security for all modes of transportation, warehousing and for logistic activities.
- Transportation and logistics providers are increasingly adopting advanced technologies and innovative processes to keep their competitive advantage. They are looking at reducing costs, improving services and decreasing their carbon footprint.
- Mandatory entry-level training will be required effective July 1st, 2017, increasing the number of qualified drivers on the road.
- Drivers in non-scheduled and non-passenger transport will need to use new navigation systems that help them change their route while on the road. New technologies inside (e.g. driver assistance) and outside the vehicle (e.g. traffic management, car-to-infrastructure systems) will also call for a higher degree of computer skills and technical competencies

"It's all about puzzles, so if you enjoy puzzles and want a job where there will be new and different challenges every day then the supply chain is the place to be." – Employer

TOTAL NUMBER OF BUSINESSES IN SUPPORT ACTIVITIES FOR TRANSPORTATION



A majority of businesses that are classified as “activities for transportation” are located in Middlesex County, including the City of London.



Changing and Emerging Skill Requirements

The predicted changing and emerging skill requirements are based on key interviews with employers. Additional insight came from educational instructors within the sector, industry associations, and the Supply Chain Sector project. The following are just some of the changes taking place in the sector

- Mobile technology is transforming the transportation industry, from tracking the location of vehicles, containers and parcels to predicting the location of goods. This has increased demand for skills and experience in the development and management of mobile apps, bar code systems, and remote tracking technologies
- More than ever, each new hire in transportation must understand that their attitude and actions ripple through the workplace to affect customers
- Logistics and transport management are mainstream management careers where people will be faced with with a number of challenges. If you can lead a team and problem solve this could be a good fit.

“Within the distribution facility there are new puzzles/challenges to solve every day, even just loading one of our trailers is a 3-D Tetris puzzle to combine the different types and sizes of products we have.” – Employer

Working within the sector requires people to think on their feet to meet the daily challenges that come their way. This requires stamina backed by strong skills in the following areas:

- Numeracy – the ability to understand and analyse data is very important
- Problem-solving – the ability to analyse the hard facts and what is being said to arrive at a logical, workable conclusion
- Decision-making – having the ability to make often-vital decisions is essential to any management role, and this depends on quick and effective appraisal of relevant data, empathy and judgement
- Project management – this is important across both logistics and transport as people continue to work on various projects in different teams and across different geographical areas
- IT (information technology) literacy – is the very minimum requirement for any manager today. Managers need to understand how information systems and technology can improve operational efficiency and competitiveness.



- Management Information Systems (MIS)– all businesses use information technology to store data and information. Employers are not expecting you to be writing programs but rather to apply your analytical skills to get the best from the system to make the operations run smoothly.
- Leadership – Delegating roles and being consistently clear on objectives, valuing the contributions of staff and gaining their respect.
- Communication – ensuring that those you deal with always understand what you mean and importantly that you listen to what others says. One of the biggest areas of conflict is ineffective communication.
- Team building – motivating and developing people to work well together to finish the desired result

*“We want **customer service** as the focus of all operators. They may not be interfacing with the end utility customer but we want them to treat the internal customers with the same courtesy as they might with someone who’s on the outside. That’s basic for us.” - Local Employer*

Available resources from the Canadian Supply Chain Sector Council (CSCSC)

The following information can be found on the Canadian Supply Chain Sector Council website (www.supplychaincanada.org):

Connector Tool: Connector is an online tool that provides users with assessments of their supply chain knowledge and essential skills. It generates customized learning plans and activities to upgrade users' competencies.

Recruitment and Retention Toolkit: The R&R Toolkit gives employers the information and resources they need to fill positions in the supply chain with qualified and committed people.

Virtual HR Department: Especially for small and medium-sized organizations, the VHRD includes downloadable information, tools, templates, forms, policy samples and more.

National Occupational Standards: for the Sector Occupational standards can be used by employers, employees and educators or trainers in the supply chain sector.

National Accreditation Program: The Council recognizes supply chain-related educational and training offerings that meet national standards.

Education and Training Compendium: This online database lists the supply chain-related educational and training offerings of post-secondary institutions, associations and training providers across Canada.

Website Resources: The CSCSC’s website is a repository of career and education information and resources.

A full list of resources can be found online at <http://www.careersinsupplychain.ca/>.

Formal Supply Education and Associations

Most employers offer internal (in house) training programs for their employees. This is usually specific to the needs, like health and safety, policies, and the employer's expectations of its employees. There are several options for those who want a formal education in supply chain areas.

Fanshawe College offers several programs in supply chain management

Trios College is a private career college in London that offers a one year program in supply chain

Diamond Flight Centre London provides flight training to Commercial Aviation Management Flight Option students at Western University.

Westervelt College started a supply chain and Logistics program in September.

Surrounding colleges like Conestoga (Kitchener), Seneca (Toronto), and Durham (Oshawa) also offer programs in supply chain management.

There are several professional associations that provide education in Supply Chain Management or Supply Chain specific careers, all which lead to a recognized professional designation. By joining an association, you can increase your network and the opportunities available to you.

APICS- The Operations Management Association, offers two designations, has a local chapter that hosts networking meetings and plant tours, has an affiliation and student chapter at Fanshawe College.

"Ask questions, experience different aspects of supply chain from trucking to rail to warehousing and freight forwarding. Don't just focus on one thing. Experience it all." – Local employer

Supply Chain Management Association, Ontario- Previously known as the purchasing management association of Canada, it offers two education streams and has an affiliation with Fanshawe College.

Canadian International Freight Forwarders Association- Offers designation in freight forwarding and importing/transportation.

Materials Handling and Management Society- Offers an on-line education program for a designation.

Technical Certificates Recognized by the Industry

- Warehouse forklift driver training certificate
- Certified Customs Specialist
- Certified Trade Compliance Specialist
- IT diploma or certificates in programming logistics.
- Introductory Certificate in Logistics & Transport
- Certificate in Logistics and Transport
- Professional Diploma in Logistics and Transport Management
- Advanced Diploma in Logistics and Transport Management
- Masters of Science in Logistics and Transportation Management
- Accountant designation like CGA
- Bookkeeping certificate.
- Certificate program for Freight Forwarders
- International Transport and trade certification
- Professional Freight Forwarder (PFF) Designation
- Professional Logistics certification
- Executive Certificate Logistics (advanced)

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