

MIDDLE SKILL SUPPLY CHAIN CAREER PATHWAYS

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6/27/2017



This document was funded in whole by a \$24.5M TAACCCT grant awarded by the U.S. Department of Labor's Employment and Training Administration to the LINCS in Supply Chain Management consortium.

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INTRODUCTION

The ports of Los Angeles and Long Beach bring in 40 percent of total containerized trade in the United States, making the goods movement industry vital to Southern California. A total volume of 468.8 million tons of domestic freight, valued at \$1.1 trillion, moved throughout the region across the various modes of transportation in 2015.¹ Out of the 4.8 million jobs in Los Angeles County, approximately 1 million jobs are high-wage, high-growth middle-skill occupations.² Middle-skill jobs are defined as low-skill/experience jobs that require a high school degree or equivalent, but not a post-secondary degree. These occupations are projected to grow by 6 percent from 2014 to 2019.² To fill these middle skill jobs, it is necessary to assess current and expected regional demand for middle-skill workers – and adjust education and training accordingly.

The LINCS Middle-Skills Report was created by the Center for International Trade and Transportation (CITT) for Long Beach City College (LBCC). LBCC will use this research to focus on training that leads to job placement and upskilling opportunities for emerging, incumbent, and displaced workers. The report looks at four different studies to identify critical occupations and competencies for middle-skill jobs:

1. New Skills at Work (JP Morgan Chase & Co.):

The 2015 “New Skills at Work” report by JPMorgan Chase & Co. gives an overview of the middle-skill jobs in Los Angeles. It mentions that 1 million of the 4.8 million jobs in L.A. County are middle-skill occupations, with an average hourly wage of \$29.75. These middle-skill jobs are projected to grow by 6 percent through 2019. The report shows that middle-skill jobs include transportation supervisors and logistician/supply chain specialists. It offers the following recommendations to build career pathways: (1) commit to a regional approach to career pathway development; (2) develop pathways that integrate adult literacy with industry-aligned skills training; (3) make work readiness a regional priority; (4) assess current and expected regional demand for middle-skill workers, adjusting education and training accordingly; and, (5) expand work-based learning across the pipeline.

2. Goods on the Move (Los Angeles County Economic Development Corporation):

The 2017 “Goods on the Move” report by the Los Angeles County Economic Development Corporation (LAEDC) provides information on freight’s economic and workforce impacts. It also dedicates a section on future workforce needs, mentioning that 21,430 new jobs will be created in this industry over the next five years and will need

¹ Los Angeles County Economic Development Corporation (2017). *Goods on the Move! Trade and Logistics in Southern California*.

² JP Morgan & Chase Co. (2015). *Strengthening Los Angeles – Building a Middle-Skill Workforce to Sustain Economic Growth and Expand Opportunity*.

69,910 replacement workers over the same period. Within these new jobs, the highest number of openings will be within the transportation and material moving industry (7,010 new jobs, 21,670 replacements). Approximately 42 percent of these projected openings within the next five years will require a high school diploma and need no experience. These figures highlight the need for workforce training, specifically for the following job types: aviation, maritime, rail, commercial drivers, warehouse workers, freight brokers and agents, and supply chain, logistics, and purchasing managers.

3. **Goods Movement/Alternative Fuels (Pacific Gateway):**

The Pacific Gateway Workforce Investment Network (Pacific Gateway) connects skilled workers to businesses within the Signal Hill, Long Beach, and Los Angeles Harbor Community. In 2013, Pacific Gateway published their “Goods Movement/Alternative Surveys Fuel Report” with goal of identifying the workforce resources and emerging technologies needed for employers in the goods movement/logistics sector to grow and become more competitive. The labor findings from the survey shows that 47 percent of respondents plan to hire employees within the next six months, and another 22 percent plan to hire within the next year to two years; 59 percent of respondents identified ‘drivers’ as the most needed occupation. Several respondents selected ‘other,’ specifying the following occupations: clerks; customer service; surveyors; dispatcher; warehousemen; petroleum inspectors, chemists; line handlers; installers; sales & support; and, experience of non-vessel operating common carrier (NVOCC), custom brokerage.

4. Goods Movement & Transportation Cluster Workforce Analysis (Pacific Gateway):

The 2013 Pacific Gateway “Cluster Workforce Report” identified employment needs in the goods movement sector. The report used the following methodology: (1) collect and analyze industry and occupational data to identify and examine the trends in the industry; (2) examine the educational and training requirements for entry into occupations within the industry sectors; and, (3) conduct a gap analysis to identify the occupations where shortages and excesses of workers are projected. The gap analysis showed that there will be a shortage of roughly 9,000 qualified workers available to the affected industries over the next eight years. Between 2012 and 2020, an estimated 24,000 openings will be available in occupations that have entry requirements and only 15,000 new workers with the credentials to attain jobs in those occupations. Bus and truck mechanics and diesel engine specialists are projected to have among the greatest shortage of new qualified workers, potentially leaving roughly 2,700 jobs unfilled between 2012 and 2020. At the other end of the spectrum, there are several occupations projected to have a surplus of qualified workers. General operations managers, which typically require a minimum of a Bachelor’s degree in Business Administration for entry, is projected to have 175,049 new qualified workers entering the workforce between 2012 and 2020 and only 23,093 jobs in that occupation will be available in the goods movement sector.

While the four studies use different methodologies, they reach the same conclusion that middle-skill jobs will be in higher demand. This document posits sample career pathways based on insights from the reports. Page 5 of this report shows a competency model pyramid for sample middle-skill career pathways that lead to a supply chain manager position. In addition to the competencies, the pyramid maps SCPro™ Certifications. SCPro™ Certification is a three-tiered program awarded by the Council of Supply Chain Management Professionals (CSCMP) that assesses progressive knowledge and skills across integrated supply chain activities. While the JP Morgan study provided the core framework for a middle-skill career pathway to a supply chain manager position in Los Angeles County, CITT expanded the model to include relevant skills and competencies respective to each position.

In addition to these four studies, this report adds supporting information from labor market data pulled from Burning Glass and O*Net. Burning Glass is software that uses labor market data and job listings from online job boards to provide critical job needs and corresponding competencies, which is useful for finding information on necessary skills for various jobs. Each section includes table with Burning Glass data showing job posting and corresponding skills relevant to the respective occupation. Sponsored by the U.S. Department of Labor/Employment and Training Administration, O*Net serves as the primary database for occupational information. O*Net provides data on occupations and industries, including projected job openings, wages, and competencies. A chart summarizing the O*Net data is provided on pages 35 and 36. The competency model section on page 6 provides more detail on each of the positions (including

O*Net data) and information from the four reports such as wage statistics, related titles, skills, and any other relevant information related to career pathway development. CITT recognizes the limitations of historical labor market data and will suggest solutions in the conclusion section of this report.

REPORT FOCUSES AND CONTRIBUTIONS

Name	Geographic Focus of Region	Industries Addressed	Assessment of Industry Growth	Presentation of Structured Career Pathway
LAEDC – Goods on the Move	Los Angeles County	Global Trade and Logistics	21,430 jobs will be created within the next five years	Contributed qualitative support to the related job titles, skills, and competencies for occupation within the framework.
JP Morgan – New Skills at Work	Southern California (Los Angeles, Riverside, Orange, San Bernardino, Ventura)	Health Care and Global Trade and Logistics	79,000 additional projected middle-skill global trade and logistics jobs through 2019	Clearly defined career pathway structure.
Pacific Gateway- Goods Movement/Alternative Fuels Survey Report	Lomita, Long Beach, Signal Hill, Torrance	Goods Movement and Logistics Sector.	Acknowledges potential for growth based on the demand of new hires and openness to training entrants.	Contributed qualitative support to the related job titles, skills, and competencies for occupation within the framework.
Pacific Gateway – Goods Movement & Transportation Cluster Workforce Analysis	Lomita, Long Beach, Signal Hill, Torrance	Goods Movement and Logistics Sector.	Growth projections for the industry could potentially grow above 22,000 jobs by 2022.	Contributed qualitative support to the related job titles, skills, and competencies for occupation within the framework.

The chart above provides a snapshot of all four studies by organizing key points under four categories: ‘Geographic Focus of Region,’ ‘Industries Addressed,’ ‘Assessment of Industry Growth,’ and the ‘Presentation of Structured Career Pathway.’ As shown in the chart, each study focuses on different geographic regions. For example, the LAEDC covers the greater Los Angeles County, whereas the JP Morgan study focuses on the Southern California Region. Studies conducted by the Pacific Gateway Workforce, on the other hand, focus on local cities such as Lomita, Long Beach, Signal Hill, and Torrance. However, all four studies address the needs in the Global Trade and Logistics industry. Each study contributed information to the competency model for Middle Skills Supply Chain Career Pathways presented in this report. Although all four studies focus on different regions, they do show a growth in jobs for Global Trade and Logistics sector for all geographic regions.

MIDDLE SKILL SUPPLY CHAIN CAREER PATHWAYS

		<u>Position</u>	<u>Education</u>	<u>SCPro™ Fundamentals Certification</u>
Industry-Valued Certifications: Certified Professional in Supply Chain Management, Certified Production and Inventory Management. Certified Supply Chain Professional Common Skills: Logistics and supply chain management, business and employee management, budgeting, quality assurance and control	\$51.00/Hr.	Supply Chain/Logistics Manager	Bachelor's Degree or Higher	N/A
Industry-Valued Certifications: Forklift Operator Certification Common Skills: Inventory maintenance, warehouse management system, production distribution, manufacturing resource planning, material flow, forklift operation	\$21.86/Hr.	Warehouse/Distribution Supervisor	High School Diploma or equivalent/Less than 5-years experience	N/A
Industry-Valued Certification: N/A Common Skills: Transportation management skills, scheduling, administration skills (payroll processing, transportation management systems)	\$27.58/Hr.	Transportation Supervisor	High School Diploma or Equivalent	Demand Planning
Industry-Valued Certification: Certified Professional Logistician Common Skills: Logistics and supply chain knowledge, general business skills, productivity software	\$39.48/Hr.	Logistics and Supply Chain Specialist	Bachelor's Degree	Transportation Ops/ Warehousing Ops/ Inventory Mgmt./ Manufacturing & Service Ops/ Supply Mgmt. & Procurement
Industry-Valued Certification: N/A Common Skills: Data entry, order entry, accounting, sales, inventory management	\$15.19/Hr.	Order Processor	High School Diploma or equivalent/Short-term on-the-job-training	Customer Service Operations
Industry-Valued Certification: N/A Common Skills: Sorting and packaging, hand truck maintenance, forklift operation, hand truck operation	\$13.27/Hr.	Shipping and Receiving Clerk	High School Diploma or equivalent/Short-term on-the-job-training	N/A
Industry-Valued Certification: APICS Certification Common Skills: Production and processing, administration and management, accounting software, communication	\$22.58/Hr.	Scheduler/Operations Coordinator	High School Diploma or equivalent/Short-term on-the-job-training	Supply Chain Management Principles

Source: JPMORGAN CHASE Strengthening Los Angeles 2015

COMPETENCY MODELS



SHIPPING/RECEIVING CLERK

JP MORGAN

Education/Experience Level

High school diploma or equivalent. Short-term on-the-job training.

Salary

Median Hourly Wage: \$13.27.

Skills/Certification

Skills group: Transportation.

Common skills: Transportation management skills, scheduling, administration skills (payroll processing, transportation management systems).

Industry-valued certification: N/A.

PACIFIC GATEWAY GOODS MOVEMENT AND TRANSPORTATION CLUSTER WORKFORCE ANALYSIS

Related Titles

53-6099: Transportation Workers, Short-term on-the-job training

53-7199: Material Moving Workers, Short-term on-the-job training

LOS ANGELES COUNTY ECONOMIC DEVELOPMENT CORPORATION: GOODS ON THE MOVE!

Relevant Information

“Warehouse Workers: Only trained and competent operators shall be permitted to operate a powered industrial truck (i.e. forklift). According to the U.S. Department of Labor, all operators must be trained and certified by their organizations. Training consists of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video, written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace. Organizations may take advantage of external training programs, like those offered by the Teamsters union, but must subsequently provide site-

specific information related to training topics. OSHA does not require licensing, but employers may choose to license their operators. Many warehouse workers, such as shipping or receiving clerks, operate forklifts.”

PACIFIC GATEWAY GOODS MOVEMENT AND ALTERNATIVE FUELS INFORMATION FUTURE WORKFORCE NEEDS

Employers took advantage of the “Other” category to capture additional information about their most needed occupations. The listing indicated that employers anticipate needing the following occupations: Clerks; customer service; Surveyors; dispatcher; warehousemen; petroleum inspectors, chemists; line handlers; Installers; Sales & Support; and, experience of Non-Vessel Operating Common Carrier (NVOCC), custom brokerage.

O*NET

Job Title

O*NET - **43-5071.00** (Shipping, Receiving and Traffic Clerks)

Sample of Reported Job Titles

Receiver, Receiving Clerk, Receiving Manager, Shipper, Shipping and Receiving Clerk, Shipping Clerk, Shipping Coordinator, Shipping/Receiving Clerk, Traffic Manager, Warehouseman

Description

Verify and maintain records on incoming and outgoing shipments. Prepare items for shipment. Duties include assembling, addressing, stamping, and shipping merchandise or material; receiving, unpacking, verifying and recording incoming merchandise or material; and arranging for the transportation of products.

Technology Skills

1. **Data base user interface and query software:** FileMaker Pro; MSR Visual Exporter
2. **Enterprise resource planning ERP software:** Exact MAX; Infor ERP Visual; Oracle JD Edwards EnterpriseOne; SAP
3. **Label making software:** Barcode labeling software; Endicia Internet Postage; Laser Substrates PostalXport
4. **Materials requirements planning logistics and supply chain software:** Bill of lading software; Varsity ShipSoft Supply Chain Execution Suite; Warehouse management system WMS; WindowBook Postal Package Partner
5. **Procurement software:** Aestiva Purchase Order

Knowledge

1. **Clerical:** Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.
2. **Production and Processing:** Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.
3. **Customer and Personal Service:** Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Skills

1. **Public Speaking:** Talking to others to convey information effectively.
2. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
5. **Coordination:** Adjusting actions in relation to others' actions.

Abilities

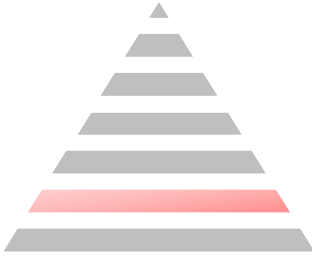
1. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

Education Survey

High school diploma (80%); some college, no degree (10%); associate's degree (5%)

BURNING GLASS REPORT

43-5071.00 Shipping and Receiving Clerks								
SPECIALIZED SKILL	POSTINGS	%	BASELINE SKILL	POSTINGS	%	SOFTWARE SKILL	POSTINGS	%
Shipping and Receiving	180	46.63%	Communication Skills	94	24.35%	Microsoft Excel	65	16.84%
Forklift Operation	160	41.45%	Detail-Oriented	73	18.91%	Microsoft Office	52	13.47%
Labeling	95	24.61%	Physical Demand	70	18.13%	Electronic Data Interchange	31	8.03%
Shipping	91	23.58%	Bilingual	64	16.58%	Microsoft Word	29	7.51%
Microsoft Excel	65	16.84%	Organizational Skills	61	15.80%	SAP	16	4.15%
Inspection	64	16.58%	Spanish	53	13.73%	Enterprise Resource Planning (ERP)	14	3.63%
Lift Trucks	62	16.06%	English	52	13.47%	Word Processing	9	2.33%
Freight Handling	57	14.77%	Computer Skills	51	13.21%	Microsoft Outlook	8	2.07%
Truck Driving	57	14.77%	Multi-Tasking	49	12.69%	Microsoft Powerpoint	8	2.07%
Data Entry	56	14.51%	Writing	40	10.36%	Microsoft Windows	4	1.04%



ORDER PROCESSOR

JP MORGAN

Education/Experience Level

High school diploma or equivalent short-term on-the-job training.

Salary

Median Hourly Wage: \$15.19

Skills/Certification

Common skills: Data entry, order entry, accounting, sales, inventory management, inventory maintenance, warehouse management systems, product distribution, manufacturing resource planning, material flow, forklift operation.

Skill group: Warehouse distribution. Industry-valued

Industry-valued Certification: Forklift operator certification

PACIFIC GATEWAY GOODS MOVEMENT AND TRANSPORTATION CLUSTER WORKFORCE ANALYSIS

Related Titles

43-9061: Office Clerks, Short-term on-the-job training

LOS ANGELES COUNTY ECONOMIC DEVELOPMENT CORPORATION: GOODS ON THE MOVE!

Related Titles

43-4151: Order Clerks, Short-term on-the-job training

Salary

Median Annual Wage: \$33,408

O*NET

Job Title

O*NET - **43-4151.00** (Order Clerks)

Sample of reported job titles

Hub Associate, Materials Specialist, Order Analyst, Order Clerk, Order Entry Administrator, Order Entry Representative, Order Processing Clerk, Order Taker, Sales Assistant, Warehouse Clerk

Description

Receive and process incoming orders for materials, merchandise, classified ads, or services such as repairs, installations, or rental of facilities. Generally receives orders via mail, phone, fax, or other electronic means. Duties include informing customers of receipt, prices, shipping dates, and delays; preparing contracts; and handling complaints.

Technology Skills

1. **Data base user interface and query software:** Automated manifest system software; Data entry software; Microsoft Access
2. **Electronic mail software:** Email software; Microsoft Outlook
3. **Enterprise resource planning ERP software:** IBM Sterling Configure, Price, Quote; Oracle JD Edwards EnterpriseOne; SAP
4. **Office suite software:** Corel WordPerfect Office Suite; Microsoft Office
5. **Spreadsheet software:** Microsoft Excel

Knowledge

1. **Customer and Personal Service:** Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
2. **Clerical:** Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.
3. **Production and Processing:** Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.

Skills

1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
3. **Public Speaking:** Talking to others to convey information effectively.
4. **Service Orientation:** Actively looking for ways to help people.
5. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.

Abilities

1. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.

Education Survey

High school diploma (48%); some college, no degree (24%); associate's degree (16%)

BURNING GLASS REPORT

43-4151.00 Order Clerk								
SPECIALIZED SKILL	POSTINGS	%	BASELINE SKILL	POSTINGS	%	SOFTWARE SKILL	POSTINGS	%
Data Entry	26	37.14%	Communication Skills	30	42.86%	Microsoft Office	11	15.71%
Order Entry	26	37.14%	Detail-Oriented	29	41.43%	SAP	11	15.71%
Customer Service	20	28.57%	Problem Solving	17	24.29%	Microsoft Excel	10	14.29%
Microsoft Office	11	15.71%	Organizational Skills	16	22.86%	Microsoft Word	9	12.86%
SAP	11	15.71%	Typing	16	22.86%	Enterprise Resource Planning (ERP)	4	5.71%
Microsoft Excel	10	14.29%	Multi-Tasking	12	17.14%	Oracle	4	5.71%
Microsoft Word	9	12.86%	Computer Skills	10	14.29%	Microsoft Outlook	3	4.29%
Customer Contact	7	10.00%	Writing	10	14.29%	NetSuite	3	4.29%
Inside Sales	5	7.14%	Telephone Skills	6	8.57%	Word Processing	3	4.29%
Logistics	5	7.14%	Bilingual	5	7.14%	Microsoft Powerpoint	2	2.86%



SCHEDULER/OPERATIONS COORDINATOR/OCEAN AND FREIGHT AGENT

JP MORGAN

Education/Experience Level

High school diploma or equivalent Moderate-term on-the-job training.

Salary

Median Hourly Wage: \$22.58.

Skills/Certification

Skills group: Logistics and supply chain.

Common skills: Production and processing, administration and management, accounting software, communication.

Industry-valued certification: APICS Certification.

PACIFIC GATEWAY GOODS MOVEMENT AND TRANSPORTATION CLUSTER WORKFORCE ANALYSIS

Related Titles

Occupations in air transportation:

43-5011: Cargo and freight agents, short-term on the job training.

Occupations in water transportation:

43-5011: Cargo and freight agents, short-term on the job training.

LOS ANGELES COUNTY ECONOMIC DEVELOPMENT CORPORATION: GOODS ON THE MOVE!

“Neither brokers nor agents require an education beyond a high school diploma, but they may have acquired training through an employer or through a variety of online or in-person programs specific to their career. This training serves to inform prospective agents and brokers on how to follow laws and regulations, create and retain a customer base, and carry out standard tasks and operations.

Training programs for freight brokers and agents exist in many forms, from single-day lectures and webinars to master degree programs. Lloyd’s Maritime Academy based out of the United

Kingdom provides a part-time, 12-month, distance learning (online) Diploma for Ship and Port Agents, as well as a similar 18-month Ship Agent MBA through a partnership with Middlesex University London. Employer training varies depending on the firm; between the aforementioned RFX and Trinity Logistics, the former prefers to take on experienced agents that can be quickly integrated into their system, while the latter brings in and trains new agents.”

O*NET

Job Title

O*NET - **43-5011.00** (Cargo and Freight Agents)

Sample of Reported Job Titles

Cargo Agent, Documentation Clerk, Drop Shipment Clerk, Freight Broker, Intermodal Dispatcher, International Coordinator, Load Planner, Logistics Coordinator, Logistics Service Representative, Operations Manager

Job Description

Expedite and route movement of incoming and outgoing cargo and freight shipments in airline, train, and trucking terminals, and shipping docks. Take orders from customers and arrange pickup of freight and cargo for delivery to loading platform. Prepare and examine bills of lading to determine shipping charges and tariffs.

Technology Skills

1. **Enterprise resource planning ERP software:** SAP
2. **Mobile location based services software:** Transportation management software; Web-based dispatch software
3. **Office suite software:** Corel WordPerfect Office Suite; Microsoft Office
4. **Procurement software:** Brokerage software
5. **Spreadsheet software:** Microsoft Excel

Knowledge

1. **Transportation:** Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.
2. **Customer and Personal Service:** Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
3. **Geography:** Knowledge of principles and methods for describing the features of land, sea, and air masses, including their physical characteristics, locations, interrelationships, and distribution of plant, animal, and human life.
4. **Public Safety and Security:** Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions.

Skills

1. **Public Speaking:** Talking to others to convey information effectively.
2. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
5. **Service Orientation:** Actively looking for ways to help people.

Abilities

1. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
2. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
3. **Near Vision:** The ability to see details at close range (within a few feet of the observer).

Education Survey

High school diploma (93%); some college, no degree (6%); associate's degree (2%)

BURNING GLASS REPORT

43-5011.00 Cargo and Freight Agents								
SPECIALIZED SKILL	POSTINGS	%	BASELINE SKILL	POSTINGS	%	SOFTWARE SKILL	JOB POSTINGS	%
Customer Service	65	61.32%	Leadership	47	44.34%	Microsoft Excel	17	16.04%
Customer Contact	55	51.89%	Detail-Oriented	22	20.75%	Microsoft Office	12	11.32%
Forklift Operation	49	46.23%	Communication Skills	21	19.81%	Microsoft Word	7	6.60%
Materials Moving	47	44.34%	Problem Solving	18	16.98%	Microsoft Outlook	4	3.77%
Receiving	47	44.34%	Writing	15	14.15%	Microsoft Powerpoint	4	3.77%
Customer Billing	21	19.81%	Computer Skills	11	10.38%	Salesforce	2	1.89%
Logistics	19	17.92%	Organizational Skills	11	10.38%	SAP	1	0.94%
Microsoft Excel	17	16.04%	Bilingual	10	9.43%			
Data Entry	16	15.09%	Team Work/ Collaboration	10	9.43%			
Freight Brokerage	12	11.32%	Time Management	9	8.49%			



WAREHOUSE/DISTRIBUTION SUPERVISOR

JP MORGAN

Education/Experience Level

High school diploma or equivalent; less than 5 years of experience.

Salary

Median Hourly Wage: \$21.86

Skills/Certifications

Common skills: Inventory maintenance, warehouse management system, production distribution, manufacturing resource planning, material flow, forklift operation.

Industry-valued certification: Forklift Operator Certification.

PACIFIC GATEWAY GOODS MOVEMENT AND TRANSPORTATION CLUSTER WORKFORCE ANALYSIS

Related Titles

43-1011: First-Line Supervisors of Office and Administrative Support Workers.

53-1021: First-Line Supervisors of Helpers, Laborers, and Material Movers

53-7064: Packers and Packagers, Short-term on-the-job training

Description

The Warehousing and Storage industry, like many of the previously discussed industries, includes occupations that present opportunities for entrants with mostly short-term-on-the-job training. In fact, the only occupation in this industry that requires prior experience is that of a supervisor. In terms of the spread of jobs in this industry Laborers and Freight, Stock, and Material Movers, Hand and Industrial Truck and Tractor Operators make up almost 40 percent of all jobs; both offer opportunities to workers who are able to complete training on the job for a short amount of time.

LOS ANGELES COUNTY ECONOMIC DEVELOPMENT CORPORATION: GOODS ON THE MOVE!

Related Titles

11-3071: Transportation, Storage, and Distribution Managers;

Salary

Average median wage: \$87,891.

O*NET

Job Title

O*NET - **11-3071.02:** Storage and Distribution Manager

Related Job Titles

Cold Storage Supervisor, Customer Service Manager, Distribution Center Manager, Distribution Manager, Distribution Operation Manager, Load Out Supervisor, Shipping Manager, Shipping Supervisor, Stores Supervisor, Warehouse Manager

Description

Plan, direct, or coordinate the storage or distribution operations within an organization or the activities of organizations that are engaged in storing or distributing materials or products.

Technology Skills

1. **Analytical or scientific software:** Integrated Decision Support Netwise Enterprise; Integrated Decision Support Netwise Frontline; QUALCOMM QTRACS; QUALCOMM ViaWeb
2. **Electronic Mail Software:** IBM Lotus Notes; IBM Notes; Microsoft Outlook
3. **Inventory management software:** Aljex Inventory; Iptor Supply Chain; MRA Technologies MRATrack Warehouse Management System; Sentai Pinpoint
4. **Materials requirements planning logistics and supply chain software:** Catalyst International CatalystConnect; IBM i2 Transportation Manager; Integrated Decision Support Corporation Netwise Supply Chain; TECSYS EliteSeries
5. **Enterprise resource planning ERP software:** Infor EPR BAAN; Microsoft Dynamics GP; SAP

Knowledge

1. **Mathematics:** Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
2. **Administration and Management:** Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
3. **Transportation:** knowledge of principles and methods of moving people or goods by air, rail, sea, or road, including the relative cost and benefits.
4. **Personnel and Human Resources:** Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.
5. **Customer and Personal Service:** Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Skills

1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. **Public Speaking:** Talking to others to convey information effectively.
4. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
5. **Coordination:** Adjusting actions in relation to others' actions.

Abilities

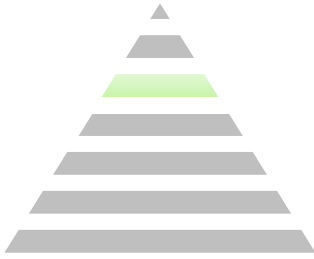
1. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
2. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
3. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

Education Summary

Bachelor's degree (58%); high school diploma or equivalent (21%); some college, no degree (8%)

BURNING GLASS REPORT

11-3071.02 Storage and Distribution Manager								
SPECIALIZED SKILL	JOB POSTINGS	%	BASELINE SKILL	JOB POSTINGS	%	SOFTWARE SKILL	JOB POSTINGS	%
Scheduling	45	27.27%	Writing	54	32.73%	Microsoft Excel	44	26.67%
Microsoft Excel	44	26.67%	Communication Skills	52	31.52%	Microsoft Office	33	20.00%
Supervisory Skills	43	26.06%	Planning	47	28.48%	Microsoft Powerpoint	21	12.73%
Warehouse Management	38	23.03%	Organizational Skills	43	26.06%	Microsoft Word	13	7.88%
Budgeting	34	20.61%	Problem Solving	41	24.85%	Word Processing	10	6.06%
Microsoft Office	33	20.00%	Computer Skills	33	20.00%	Electronic Data Interchange	8	4.85%
Customer Service	30	18.18%	Building Effective Relationships	30	18.18%	Microsoft Project	8	4.85%
Project Management	30	18.18%	Bilingual	27	16.36%	Microsoft Visio	8	4.85%
Inventory Management	29	17.58%	Detail-Oriented	26	15.76%	Enterprise Resource Planning (ERP)	6	3.64%
Forklift Operation	26	15.76%	Team Work/ Collaboration	25	15.15%	Microsoft Outlook	5	3.03%



TRANSPORTATION SUPERVISOR

JP MORGAN

Education/Experience Level

High school diploma or equivalent

Salary

Median Hourly Wage: \$27.58

Skills/Certifications

Common skills: Transportation management skills, scheduling, administration skills (payroll processing), transportation management systems.

Skill group: Transportation

PACIFIC GATEWAY GOODS MOVEMENT AND TRANSPORTATION CLUSTER WORKFORCE ANALYSIS

Related Titles

53-1031: First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators. Work experience in a related occupation.

49-1011: First-Line Supervisors of Mechanics, Installers, and Repairers. Work Experience in a related occupation.

Description

The requirements to enter into occupations in the industry are perhaps the lowest in the goods movement sector; this is also the sector that contains the greatest number of jobs. Most of the top occupations in the trucking sector require only on-the-job training with the exception of Bus and Truck Mechanics and Diesel Engine Specialists and the management or administrative jobs of General and Operations Managers; those occupations require a postsecondary non-degree award and a Bachelor's degree or higher, respectively.

LOS ANGELES COUNTY ECONOMIC DEVELOPMENT CORPORATION: GOODS ON THE MOVE!

Related Titles

53-1021: First-Line Supervisors of Helpers, Laborers, Movers, education needed for entry level: 7, Work experience needed for entry level: <5 years, On the job training to attain competency: none, Average median wage Ca 2015: 48,587.

53-1031: First-Line Supervisors of Transp. /Vehicle Ops., education needed for entry level: 7, Work experience needed for entry level: <5 years, On the job training to attain competency: none, Average median wage Ca 2015: 59,018.

O*NET

Job Title

O*Net - **53-1031.00** - First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators

Description

Directly supervise and coordinate activities of transportation and material-moving machine and vehicle operators and helpers.

Sample of Reported Job Titles

Dock Supervisor, Driver Manager, Fleet Manager, On Car Supervisor, Operations Supervisor, Street Supervisor, Supervisor, Trainmaster, Transportation Supervisor, Warehouse Supervisor

Technology Skills

1. **Accounting software:** General ledger software
2. **Bar coding software:** Barcode software
3. **Calendar and scheduling software:** Scheduling software
4. **Data base user interface and query software:** Microsoft Access
5. **Electronic mail software:** Microsoft Outlook

Knowledge

1. **Transportation:** Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.
2. **Customer and Personal Service:** Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
3. **Administration and Management:** Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.

4. **Personnel and Human Resources:** Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.
5. **Clerical:** Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.

Skills

1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Coordination:** Adjusting actions in relation to others' actions.
3. **Management of Personnel Resources:** Motivating, developing, and directing people as they work, identifying the best people for the job.
4. **Time Management:** Managing one's own time and the time of others.
5. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Abilities

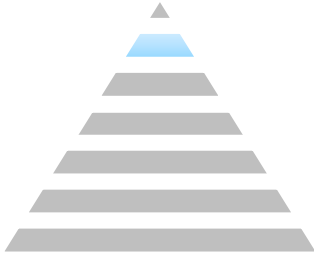
1. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
2. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
3. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
4. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.

Education Level Required

High School diploma or equivalent (70% of respondents); some college, no degree (13%); post-secondary certificate (12%)

BURNING GLASS REPORT

53-1031.00 First Line Supervisors								
SPECIALIZED SKILL	POSTINGS	%	BASELINE SKILL	POSTINGS	%	SOFTWARE SKILL	POSTINGS	%
Supervisory Skills	48	58.54%	Communication Skills	35	42.68%	Microsoft Excel	19	23.17%
Scheduling	32	39.02%	Physical Demand	17	20.73%	Microsoft Office	18	21.95%
Budgeting	20	24.39%	Computer Skills	15	18.29%	Microsoft Word	8	9.76%
Microsoft Excel	19	23.17%	Planning	15	18.29%	Word Processing	5	6.10%
Customer Service	18	21.95%	Writing	15	18.29%	Microsoft Outlook	4	4.88%
Microsoft Office	18	21.95%	English	14	17.07%	AS/400	2	2.44%
Repair	13	15.85%	Organizational Skills	11	13.41%	Enterprise Resource Planning (ERP)	2	2.44%
Staff Management	12	14.63%	Problem Solving	11	13.41%	Microsoft Access	2	2.44%
Inspection	11	13.41%	Bilingual	10	12.20%	Microsoft Powerpoint	2	2.44%
Performance Appraisals	10	12.20%	Detail-Oriented	9	10.98%	SAP	2	2.44%



LOGISTICIAN/SUPPLY CHAIN SPECIALIST

JP MORGAN

Education/Experience Level

Bachelor's degree.

Salary

Median Hourly Wage: \$39.48

Competencies/Skills

Common skills: Logistics and supply chain knowledge, general business skills, productivity software.

Skill group: Logistics and supply chain.

Industry-value certification: Certified Professional Logistician. Los Angeles County Economic Development Corporation: Goods On The Move!

Relevant Information:

“Logistics analysts and managers maintain and interpret logistics data (e.g. availability, maintainability, reliability, strategic sourcing and distribution, etc.), resolve problems concerning transportation, logistics systems, imports or exports, or customer issues, work with multiple departments to improve efficiency of operations, and prepare reports containing forecasts and recommendations. Purchasing manager's plan and direct purchases, negotiate contracts and sales, interview and hire staff, and prepare and process purchase orders. The majority of workers in these occupations hold bachelor's degrees. Supply chain and logistics managers may pursue further education in the form of a master's degree, while purchasing managers may be hired with an associate's degree.”

O*NET

Job Title

O*Net - **13-1081.00** – Logisticians

Description

Analyze and coordinate the logistical functions of a firm or organization. Responsible for the entire life cycle of a product, including acquisition, distribution, internal allocation, delivery, and final disposal of resources.

Sample of Reported Job Titles

Client Services Administrator, Logistician, Logistics Director, Logistics Team Lead, Logistics Vice President, Operations Vice President, Production Planner, Program Manager, Supervisory Supply Management Specialist, Supportability Engineer

Technology Skills

1. **Accounting software:** Intuit QuickBooks
2. **Computer aided design CAD software:** Autodesk AutoCAD
3. **Customer relationship management CRM software**
4. **Data base user interface and query software:** Microsoft Access; Structured query language SQL
5. **Electronic mail software:** Microsoft Outlook

Knowledge

1. **Transportation:** Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.
2. **Administration and Management:** Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
3. **Customer and Personal Service:** Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
4. **Mathematics:** Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
5. **Computers and Electronics:** Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.

Skills

1. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
2. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. **Coordination:** Adjusting actions in relation to others' actions.
4. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
5. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.

Abilities

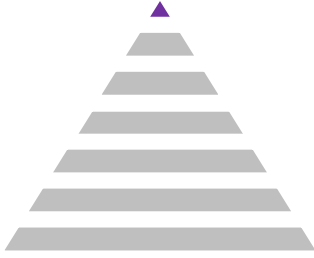
1. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
2. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
3. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
4. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.

Education

Bachelor's degree (75%); high school diploma or equivalent (8%); post-secondary certificate (8%)

BURNING GLASS REPORT

13-1081.00 Logician								
SPECIALIZED SKILL	POSTINGS	%	BASELINE SKILL	POSTINGS	%	SOFTWARE SKILL	POSTINGS	%
Logistics	64	48.48%	Communication Skills	57	43.18%	Microsoft Excel	55	41.67%
Microsoft Excel	55	41.67%	Planning	56	42.42%	Enterprise Resource Planning (ERP)	30	22.73%
Scheduling	34	25.76%	Organizational Skills	43	32.58%	Microsoft Office	26	19.70%
Supply Chain Knowledge	33	25.00%	Building Effective Relationships	25	18.94%	SAP	23	17.42%
Manufacturing Resource Planning (MRP)	31	23.48%	Decision Making	23	17.42%	Microsoft Powerpoint	13	9.85%
Enterprise Resource Planning (ERP)	30	22.73%	English	23	17.42%	Microsoft Word	11	8.33%
Microsoft Office	26	19.70%	Writing	23	17.42%	Microsoft Access	10	7.58%
SAP	23	17.42%	Detail-Oriented	21	15.91%	Electronic Data Interchange	9	6.82%
Supply Chain Management	23	17.42%	Problem Solving	21	15.91%	Oracle	7	5.30%
Forklift Operation	22	16.67%	Computer Skills	19	14.39%	Macros	5	3.79%



LOGISTICS/SUPPLY CHAIN MANAGER

JP MORGAN

Education

Bachelor's Degree or Higher

Salary

Median Hourly Wage: \$51.00

Skills/Certifications

Common skills: Logistics and supply chain management, business and employee management, budgeting, quality assurance and control

Industry-valued certifications: Certified Professional in Supply Chain Management, Certified Production and Inventory Management, Certified Supply Chain Professional.

LOS ANGELES COUNTY ECONOMIC DEVELOPMENT CORPORATION: GOODS ON THE MOVE!

Description

Direct and coordinate a production purchasing warehousing and distribution of services and activities while aiming to streamline distribution needs, reduce costs and improve customer service and safety. Logistic analyst and managers maintain and interpret logistics data (availability, maintainability, reliability, strategic sourcing and distribution etc.)

O*NET

Job Title

O*NET - **11-9199.04:** Supply Chain Manager

Related Job Titles

Global Supply Chain Director, Supply Chain Director, Supply Chain Manager, Supply Chain Vice President

Description

Direct or coordinate production, purchasing, warehousing, distribution, or financial forecasting services or activities to limit costs and improve accuracy, customer service or safety. Examine existing procedures or opportunities for streamlining activities to meet product distribution needs. Direct the movement, storage, or processing of inventory.

Technology Skills

1. **Analytical or scientific software:** Minitab; SAP APO; Simulation and modeling software
2. **Data base user interface and query software:** Microsoft Access; Structured query language SQL
3. **Inventory management software:** IBM ILOG Inventory Analyst; Oracle Inventory
4. **Materials requirements planning logistics and supply chain software:** Infor Lawson Supply Chain Management; Oracle e-Business Suite Supply Chain Management; SAP SCM; Swisslog Warehouse Manager
5. **Enterprise resource planning ERP software:** Microsoft Dynamics; Microsoft Dynamics AX; Oracle Hyperion; SAP

Knowledge

1. **Production and Processing:** Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.
2. **Administration and Management:** Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
3. **Transportation:** knowledge of principles and methods of moving people or goods by air, rail, sea, or road, including the relative cost and benefits.
4. **English Language:** Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
5. **Customer and Personal Service:** Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Skills

1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.

3. **Public Speaking:** Talking to others to convey information effectively.
4. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
5. **Coordination:** Adjusting actions in relation to others' actions.

Abilities

1. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
2. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
3. **Problem Sensitivity** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

Education Summary

Bachelor's degree (67%); master's degree (15%); post-baccalaureate certificate (7%)

BURNING GLASS REPORT

11-9199.04 Supply Chain Manager								
SPECIALIZED SKILL	POSTINGS	%	BASELINE SKILL	POSTINGS	%	SOFTWARE SKILL	POSTINGS	%
Supply Chain Knowledge	103	87.29%	Planning	71	60.17%	Microsoft Excel	37	31.36%
Supply Chain Management	100	84.75%	Communication Skills	67	56.78%	Enterprise Resource Planning (ERP)	28	23.73%
Logistics	56	47.46%	Team Work/ Collaboration	30	25.42%	SAP	27	22.88%
Procurement	50	42.37%	Writing	29	24.58%	Microsoft Office	19	16.10%
Purchasing	47	39.83%	Building Effective Relationships	26	22.03%	Microsoft Powerpoint	19	16.10%
Microsoft Excel	37	31.36%	Problem Solving	25	21.19%	Electronic Data Interchange	10	8.47%
Project Management	37	31.36%	Leadership	19	16.10%	Microsoft Word	10	8.47%
Scheduling	32	27.12%	Detail-Oriented	18	15.25%	Oracle	7	5.93%
Inventory Management	30	25.42%	Organizational Skills	17	14.41%	Word Processing	6	5.08%
Enterprise Resource Planning (ERP)	28	23.73%	Presentation Skills	16	13.56%	Microsoft Access	4	3.39%

O*NET DATA SUMMARIZED

		Supply Chain/Logistics Manager	Warehouse Distribution Supervisor	Transportation Supervisor	Logistician/Supply Chain Specialist	Order Processor	Shipping and Receiving Clerk	Scheduler/Operations Coordinator/Ocean and Freight Agent	Total
Technology	Analytical or Scientific Software	X	X						2
	Database User Interface and Query Software	X		X	X	X	X		5
	Inventory Management Software	X	X						2
	Materials Requirements Planning Logistics and Supply Chain Software	X	X				X		3
	Enterprise Resource Planning ERP Software	X	X			X	X	X	5
	Electronic Mail Software		X	X	X	X			4
	Accounting Software			X	X				2
	Bar Coding Software			X					1
	Calendar and Scheduling Software			X					1
	Computer Aided Design CAD Software				X				1
	Office Suite Software					X		X	2
	Spreadsheet Software					X		X	2
	Label Making Software						X		1
	Procurement Software						X	X	2
	Mobile Location Based Services Software							X	1
Customer Relationship Management CRM Software				X				1	
Skills	Active Listening	X	X	X	X	X	X	X	7
	Reading Comprehension	X				X			2
	Speaking	X	X			X	X	X	5
	Complex Problem Solving	X							1
	Coordination	X	X	X	X		X		5
	Critical Thinking		X	X	X		X	X	5
	Monitoring		X		X			X	3
	Time Management			X					1
	Reading Comprehension				X		X		2
	Service Orientation					X		X	2
	Social Perceptiveness					X			1
	Management of Personnel Resources			X					1

		Supply Chain/Logistics Manager	Warehouse Distribution Supervisor	Transportation Supervisor	Logistician/Supply Chain Specialist	Order Processor	Shipping and Receiving Clerk	Scheduler/Operations Coordinator/Ocean and Freight Agent	Total
Abilities	Oral Comprehension	X	X	X	X	X	X	X	7
	Oral Expression	X	X	X	X	X	X	X	7
	Written Comprehension	X	X	X		X		X	5
	Written Expression	X							1
	Problem Sensitivity	X	X	X			X		4
	Deductive Reasoning			X	X				2
	Inductive Reasoning				X				1
	Information Ordering				X		X		2
	Near Vision					X		X	2
	Speech Clarity		X			X		X	3
Knowledge	Production and Processing	X				X	X		3
	Administration and Management	X	X		X				3
	Transportation	X	X	X	X			X	5
	English Language	X							1
	Customer and Personal Service	X	X	X	X	X	X	X	7
	Mathematics		X		X				2
	Personal Human Resources		X	X					2
	Clerical			X		X	X		3
	Transportation		X	X	X			X	4
	Computers and Electronics				X				1
	Geography							X	1
Public Safety and Security							X	1	

CONCLUSION

This report provides a comparative, retrospective study of four reports produced by JP Morgan, LAEDC, and Pacific Gateway to offer a baseline of labor-market data on trends in middle-skill supply chain jobs in Southern California. While the four studies varied in geographic and industry focus, each report predicted a demand increase in filling the growing number of middle-skill supply chain and logistics occupations that will be available over the next five years within Southern California. However, whether there are enough sufficiently skilled prospects in the talent pool to fill these positions is a legitimate concern moving forward. Pacific Gateway concludes that any data projecting occupational growth will help employers make the best possible investment decisions to take advantage of any ensuing opportunities. JP Morgan also acknowledges that a lack of career pathways contributes to the skills mismatch in Los Angeles County and offers a basic career pathway framework that lists required certifications and skills necessary to fill the mentioned positions. However, none of the studies offer specific skills and competencies that may be required to fill these occupations.

Drawing from JP Morgan's supply chain manager career pathway, CITT expanded the model into a pyramid format which includes SCPro™ Fundamentals Certifications. Each of the reports also referenced occupations listed in the pyramid using Standard Occupational Classification (SOCs). CITT used these SOCs to gather data from O*Net and Burning Glass and provided a list of skills and competencies to expand the model beyond certification and education requirements. Subsequent studies should include a separate Burning Glass analysis to build a more comprehensive list of relevant occupations that should be cross-referenced with BLS data to generate a narrowed list of critical occupations.

CITT also acknowledges the inherent limitations of historical labor market data. To address this, CITT recommends conducting targeted workforce and labor market research by surveying local supply-chain employers who draw from the LBCC talent pools. CITT also suggests gathering employer feedback on the pyramid model presented in this report. Finalizing an employer-approved methodology to construct this pyramid sets a precedent moving forward in developing and finalizing career pathways. CITT recommends conducting needs assessment and talent flow analysis surveys to get a clearer sense of the most critical middle-skills occupations and their respective competencies. Sample questions for these surveys are attached to this report. CITT pilot tested the sample questions with CSCMP and the Board of Southern California Roundtable who determined the value of the attached (or similar set of) questions. With that information, LBCC will be positioned to either enhance current curriculum or develop new curriculum targeting the critical occupations identified by employers. Local employers may then draw from LBCC's degree and non-degree pools of graduates to fill these critical positions. CITT suggests taking the abovementioned steps to develop a talent pipeline that enables employers and LBCC to create a sustainable workforce development ecosystem.

APPENDIX

1. TRADE AND LOGISTICS MIDDLE-SKILL SURVEY

You are being asked to answer a short survey about "middle-skills" in the trade and logistics sector. This survey will be used to help develop training programs. Middle-skills jobs can be described as jobs that require more education and training than a high school diploma but not necessarily a four-year college degree. Concerns have been raised regarding the number of experienced and well-trained middle-skills workers available to meet employer demand in the trade and logistic sector. Occupations such as Logisticians, Production and Planning Managers, Warehouse Associates, and Cargo and Freight Agents are becoming top priorities as the expansion of and revolution in global trade and logistics continues.

1. What is your job title?

2. Which industry segment does your organization primarily represent?
 - a. Warehousing
 - b. Distribution
 - c. Transportation
 - d. Logistics
 - e. Other (please specify): _____

3. Approximately how many employees does your organization currently have? (If you do not know, please indicate in the "I don't know field.")
 - a. Full-time: _____
 - b. Part-time: _____
 - c. Contracted Employees: _____
 - d. I don't know: _____

4. The following are examples of middle-skills-related occupations that have been identified through labor market analysis. Please indicate how important they are to your organization (3-Very Important, 2-Somewhat Important, 1-Not Important, 0-N/A).

Occupation	3	2	1	0
Aircraft Mechanic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ship Engineer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rail Yard Engineer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operation Manager	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supply Chain Manager	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Storage and Distribution Manager	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Logistics Analysts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Warehouse Associate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cargo and Freight Agents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Machine Operators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transportation Inspector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Industrial Truck and Tractor Operators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. What other middle-skills-related occupations not included above are critical to your organization's success? (Please separate multiple answers by a comma).
- _____
6. When you are hiring for middle-skills positions, what level of education do you expect candidates to have?
- High School Diploma*
 - High School Diploma with Industry Experience or certification*
 - Associate's Degree*
 - Associate's Degree with Industry Experience or certification*
 - Bachelor's Degree*
 - Bachelor's Degree with Industry Experience or certification*
 - Industry-recognized certification only*
 - Other (please specify):* _____
7. What industry certification, if any, do you require for new middle-skills hires? (e.g., CSCMP SCPro, APICS, GLS)
- _____
8. What is the average age bracket for middle-skills employees at your organization?
- 20-30*
 - 31-40*
 - 41-50*
 - 51-60*
9. List the major soft skill(s) deficiency faced by your organization.
- Problem solving*
 - Critical thinking*
 - Patience*
 - Teamwork skills*
 - Oral and communications skills*
 - Other (please specify):* _____
10. Identify the major technical skill(s) deficiency faced by your organization.
- Data Management including Excel*
 - Statistical Analysis*
 - Project Management*
 - Enterprise Resource Planning (ERP)*
 - Other (please specify):* _____
11. For middle-skills employees, please indicate how your organization supports professional development (if at all):
- Tuition reimbursement for credit/degree programs*
 - Tuition reimbursement for non-credit or certificate training*
 - Flexible schedule for students to pursue their own training*
 - Do not have a support program*
 - Other (please specify):* _____