

On the Move

Building Pathways to International Trade, Transportation and Logistics Jobs in the Port-related Economy



September 2013

PORT JOBS 

SkillUp
WASHINGTON

Acknowledgements

This study was prepared under contract with SkillUp Washington with funding provided by the National Fund for Workforce Solutions. For more information, visit their websites at www.skillupwa.org and www.nfwsolutions.org.

Additional support was provided by the City of Seattle, Office of Economic Development.

Port Jobs would like to give special thanks to the following people for sharing their time, knowledge and connections:

- Tom Green, Senior Manager, Air Cargo Operations and Development, Port of Seattle
- Dave Gering and Marilyn Young Skogland, Manufacturing Industrial Council
- The employers and stakeholders who participated in interviews and meetings

Research and report writing assistance was provided by Business, Government, Community Connections.

The cargo ship and airplane photographs on the front cover are courtesy of Don Wilson, Port of Seattle.

For more information about Port Jobs, visit our websites:

www.portjobs.org

www.airportjobs.org

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Executive Summary

International Trade is a vital part of Washington’s economy, with 40% of all jobs in the state tied to the import and export of goods and services – from airplane parts and machinery to food and medicines. Thousands of workers in King County are directly involved in moving these goods, making up an industry broadly referred to as **International Trade, Transportation and Logistics (ITTL)**.

For 20 years, Port Jobs has played a significant role as an intermediary in assisting job seekers and employers in port-related trade, transportation and travel. This study aims to deepen our understanding of ITTL employment pathways and inform Port Jobs’ next steps efforts to support the Port of Seattle’s *Century Agenda* and a vibrant Port economy.

Through employer interviews, meetings with colleges and stakeholders involved in ITTL initiatives, a job openings scan, and reviews of research and labor market data, Port Jobs found:

1. When hiring workers, ITTL employers value internal referrals, prior industry experience and core basic skills.
2. Looming retirements, low turnover, and job growth may point to hiring challenges in the ITTL sector in the future.
3. Many ITTL jobs offer self-sufficiency wages and career ladders.
4. ITTL certificate and degree programs are expanding, and coordination efforts among workforce stakeholders are underway.
5. Port Jobs is well-positioned to serve the workforce needs of port-related ITTL companies, particularly those in the air cargo sector.

In response to the research findings, Port Jobs plans to expand its ITTL work in four main areas:

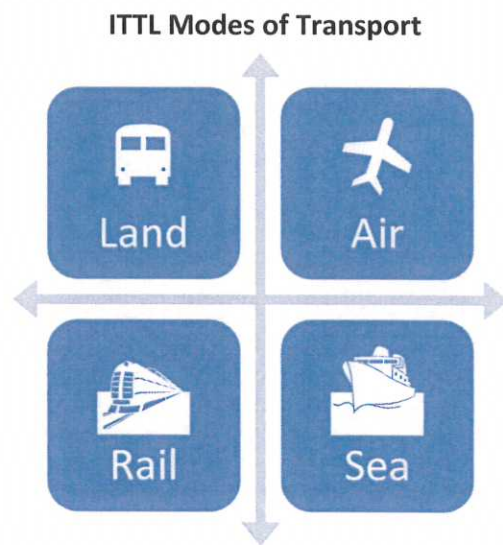
1. Cultivate ITTL employer relationships and act as a conduit to ITTL jobs, with a deliberate focus on air cargo.
2. Expand Airport University offerings to build pathways into ITTL careers, including the development of a new *Introduction to International Trade, Transportation, and Logistics* course.
3. Act as a conduit to ITTL certificate and degree programs at area colleges.
4. Coordinate ITTL system-building efforts with local workforce development entities.

Introduction

Take a look around. **What do you see?** Maybe a computer, a phone or a television? Your favorite sweater, a pair of shoes or a backpack? Coffee, a banana or a bowl of cherries? Chances are, these items were produced or grown somewhere else across state, the country, or the world. Then they were shipped – by boat, airplane, truck or train – to your neighborhood market or right to your door.

International trade is a vital part of Washington state’s economy. Recent research estimates that **40%** of all jobs in Washington are tied to the import and export of goods and services.¹ The industry that moves all of those shoes and televisions and cherries is broadly referred to as **International Trade, Transportation and Logistics (ITTL)**.² ITTL encompasses the planning, management, movement, and distribution of goods by land, air, rail, and sea. Or as one Chief Cargo Officer put it, “We are the industry that links the factories on one side of the world and shops on the other.”³

Against this backdrop, for 20 years Port Jobs has played a significant role as an intermediary in assisting job seekers and employers in the Port-related trade, transportation, and travel economy. During this time the mission of Port Jobs – to make good jobs easier to get and good employees easier to find – has remained constant. Port Jobs’ programs like **Airport Jobs** and **Airport University** help people find work and build transferable skills to advance in their careers. They also enhance the competitiveness of Port-related companies by providing a skilled and ready workforce.



¹ Washington Council on International Trade & the Trade Development Alliance of Greater Seattle, *An International Competitiveness Strategy for Washington State*, 2012.

² This sector is referred to by several different names and definitions, such as: Transportation and Logistics; Transportation and Warehousing; and Transportation, Distribution and Logistics.

³ John McCurry, “Industry faces hard work to attract new blood,” *Air Cargo World*, March 15, 2013.

Port Jobs' work also supports the Port of Seattle's **Century Agenda**, which includes strategies and objectives to:

"Increase workforce training, jobs and business opportunities for local communities in trade, travel and business."

*"Position the Puget Sound Region as a premier international logistics hub... including tripling air cargo volume and growing seaport annual container volume."*⁴

Port Jobs ITTL Research

Port Jobs has done several studies on the ITTL sector. The first, completed in 2006, looked at employment and occupations found in the burgeoning ITTL sector. Next Port Jobs explored college training programs and career ladders in ITTL. Finally, Port Jobs did an in-depth study of short-haul owner operator truck drivers who move cargo in and out of Puget Sound ports.⁵

This study aims to deepen our understanding of ITTL employment pathways and inform Port Jobs' next step expansion efforts to:

- 1) Support the current and emerging hiring needs of Port-related ITTL employers, and
- 2) Prepare job seekers and incumbent workers to pursue and advance in ITTL jobs.



In 2000, Port Jobs created **Airport Jobs**, a centralized employment center at Sea-Tac International Airport that connects job seekers with openings at airport-related companies.

Three years later, Port Jobs launched **Airport University (AU)**, a partnership with Highline Community College and the Seattle Community College District.

AU offers credit-bearing college courses for airport workers in business information technology and customer service. Job skills classes prepare new hires for security badging (SIDA), airfield driving (AOA), and Washington State Food Handlers Permit tests.

The appetite among employers, job seekers and airport workers for Port Jobs' services is strong. In 2012:

- 78 airport companies hired 1,088 Airport Jobs clients, filling nearly 1,170 open positions.
- 234 people enrolled in AU's onsite college classes and jobs skills classes.

⁴The Port of Seattle's *Century Agenda* aims to add 100,000 jobs over the next 25 years through Port-led economic growth. See: www.portseattle.org/about/commission/pages/century-agenda.aspx

⁵ See Appendix 3 for a listing of Port Jobs' ITTL research.

ITTL in King County

Puget Sound airports and seaports help drive international trade, providing entry and exit points for everything from cherries and apples to computers and machinery. In 2012, steamship lines moved more than 1.8 million TEUs (20-foot equivalent units, also called containers) of goods through the Port of Seattle seaport.⁶ To put it into context, think about this: A single 20-foot container can hold about 48,000 bananas. The containers on the back of freight trucks are often 40-foot containers (or 2 TEUs), which can hold 12,000 shoeboxes.⁷ At Seattle-Tacoma International Airport, another 283,500 metric tons of cargo – like airplane parts, Copper River salmon, fruits and vegetables – flew through the region last year.⁸



Photograph by Don Wilson/Port of Seattle

When freight moves from point A to point B, it may travel across several “modes” along the supply chain. For example, shoes may arrive in Seattle by cargo ship, then be transported by truck to a railroad, travel by rail to a transload facility in Chicago, and then be delivered by truck to their final destination. A network of players makes this happen. Companies like steamship lines, marine terminal operators, barge transportation companies, freight forwarders, trucking

⁶Port of Seattle, *Marine Terminal Information System*. TEU, or twenty foot equivalent unit, is a standard unit of measure in the shipping industry. It is equivalent to a container 20 feet long by 8 feet wide and 8 feet high.

⁷Costamare, Inc, *Container Facts*, www.costamare.com.

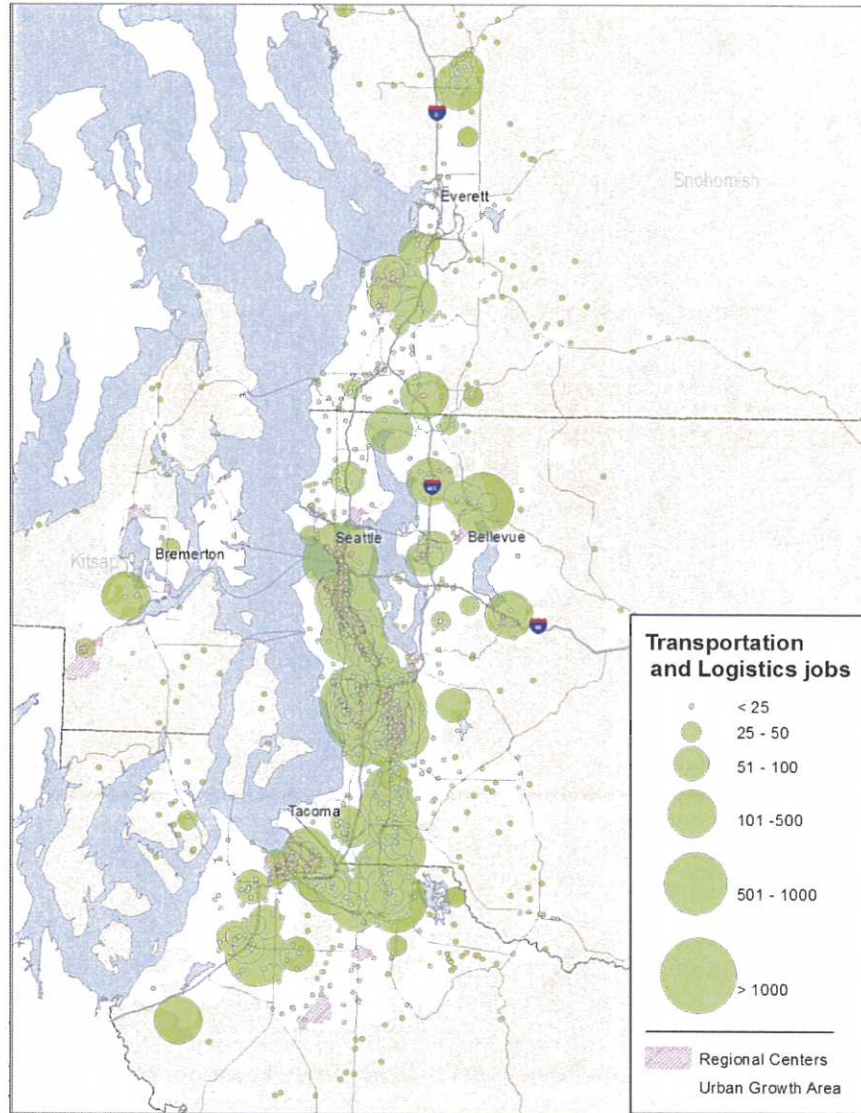
⁸Port of Seattle, *2012 Airport Statistics*. www.portseattle.org

companies, third party logistics providers, warehouse and transload facilities, railroad companies, ground handlers, airlines, and cargo security screeners.⁹

Figure 1: ITTL Job Locations¹⁰

Puget Sound Regional Council estimates that roughly 50,000 people work in the ITTL sector across the Central Puget Sound region, with nearly 35,700 people in King County. The bulk of these jobs are in trucking, air transportation and warehousing. Figure 1 shows that ITTL jobs cluster along I-5 south from Seattle to Tacoma, with concentrations near Sea-Tac Airport.¹¹

ITTL workers help move nearly \$5.4 billion in agricultural products and \$7.6 billion of non-agricultural products through the Port of Seattle annually.¹²



Source: Employment Security Department/PSRC, 2010. Locations generalized.

⁹ For a more detailed explanation of the intermodal freight system, see Port Jobs' report "Big Rig, Short Haul: A Study of Port Truckers in Seattle". www.portjobs.org

¹⁰ Puget Sound Regional Council, *Regional Economic Strategy for the Central Puget Sound Region: ECONOMY*, Adopted July 25, 2012. Reprinted with permission.

¹¹ Ibid. Based on 2011 labor market data. The Central Puget Sound region includes King, Kitsap, Pierce, and Snohomish Counties.

¹² Port of Seattle, *Export Cargo Statistics*. <http://www.portseattle.org/Cargo/SeaCargo/Pages/Exports.aspx>

In the future, industrial property development near Sea-Tac Airport, such as the recently announced Des Moines Creek Business Park, may lead to an increase in air cargo exports and a corresponding increase in demand for workers.¹³ The Puget Sound Regional Council's *Regional Economic Strategy* states, "The greatest challenge confronting virtually all [industry] clusters is access to a skilled workforce." This is an opportune time to ensure that a ready and skilled workforce is in place to meet the current and future needs of the ITTL industry.



Photograph by Don Wilson/Port of Seattle

¹³ Port of Seattle, *Port of Seattle Selects Developer for 87 Acre Des Moines Creek Business Park*, <http://www.portseattle.org/Newsroom/News-Releases/Pages/default.aspx?year=2013#381>, June 14, 2013.

Research Methods

This report focuses on port-related ITTL employment opportunities that require an Associate's Degree or less and that support "landside" ITTL operations, such as dockworkers and material handlers as opposed to "on board" positions such as captains, sailors or pilots. Port Jobs also looked at the air cargo industry, which is a Port of Seattle Century Agenda priority, and at jobs which contribute to Port of Seattle import and export gateways. In light of these priorities, Port Jobs' research methods fell into the following six areas:

ITTL Employer Interviews: Port Jobs interviewed 25 employers to gain insight into hiring needs, entry requirements, desired certifications and degrees, and advancement opportunities. Interviews were conducted in person at worksites, by phone, at job fairs, and by focus group. Ten of the interviews were conducted in partnership with the Manufacturing Industrial Council, a group which advocates for industrial businesses and for retaining family-wage jobs. Companies represented freight forwarding, warehousing, trucking, air cargo, marine transportation, customs brokerage, distribution centers, and short-line railroads, among others.

Stakeholder Meetings: Port Jobs met with stakeholders involved in local and regional ITTL initiatives regarding their current employment, training, and research efforts. These discussions were used to determine whether efforts could be better integrated and/or aligned to support the ITTL sector and the entry and advancement of workers.

Job Openings Scan: Between July 15 and 19, 2013, Port Jobs did a scan of ITTL job openings in King County that required an Associate's Degree or less. This review was conducted to develop a snapshot of available jobs and hiring requirements. Port Jobs searched 10 career websites and 100 company websites. Forty-seven (47) companies posted 84 jobs with an estimated 118 openings during the period.

Review of Labor Market Information: Labor market data from the Washington State Employment Security Department (www.workforceexplorer.com) were collected for 12 occupations to identify projected employment, annual openings, growth, and hourly wages.

Port Jobs Client Data: Port Jobs client data were mined to gather selected demographic data about the residence of people who visited and got jobs through the Airport Jobs center.

Review of local and national ITTL-focused research: ITTL research from across the United States was reviewed to get a better understanding of ITTL workforce training, partnerships and programs and effective practice.

See Appendix 2 for more detail regarding these research methods.

Key Findings

Port Jobs' research identified several key findings related to entry and advancement into ITTL careers, current opportunities for ITTL training, and needs for further coordination among workforce development organizations working in the ITTL sector.

Key Findings

- 1. When hiring workers, employers value internal referrals, prior industry experience and core basic skills**
 - Recruitment draws heavily from employee referrals and word of mouth
 - Computer, customer service skills are among most important skill
 - Requirements focus on prior experience
 - Peak season ramp-up offers opportunities for temporary work and career exposure
- 2. Looming retirements, low turnover, and job growth may point to hiring challenges in the future**
 - Some positions are currently hard to fill
 - Turnover in ITTL jobs tends to be low
 - Some companies anticipate worker shortages
 - ITTL jobs are growing
- 3. Many ITTL jobs offer self-sufficiency wages and career ladders**
 - Career ladders exist for people who build their skills and experience
- 4. ITTL training programs are expanding, and coordination efforts among workforce stakeholders are underway**
 - College programs focused on ITTL have expanded
 - Workforce development stakeholders are beginning to align efforts
- 5. Port Jobs is well-positioned to serve the workforce needs of port-related ITTL companies, particularly those in the air cargo sector**

I. When hiring workers, employers value internal referrals, prior industry experience and key basic skills

When companies have job openings, most will advertise on their websites. Additionally, some use career sites such as Indeed, Monster, Airportjobs, WorkSource and Craigslist to post ads. Employer interviews revealed, however, that ITTL companies place a high value on applicants that have been referred by employees or others in the industry. Seventy-five (75%) reported that many of their new hires come from these sources. One employer commented, “One of the best ways to get into the industry is by knowing someone.” This reliance on internal referral networks can make it challenging for job seekers who want to enter the industry, but who do not have these contacts. Some ITTL employers suggested that meeting face-to-face in a job fair setting is a good way to start building connections. A handful of companies said that they use temporary staffing agencies to ramp up their workforce during peak seasons, and may later contact high performing temporary workers when new positions opened.



Photograph by Don Wilson/Port of Seattle

Several employers stated that they like to recruit veterans because of their discipline and strong work ethic, and many have proven leadership skills. Also veterans often have heavy equipment experience that can be transferrable to heavy diesel maintenance and mechanic jobs. Online resources, such as the O*NET Code Connector and Military Crosswalk Search¹⁴ can help facilitate the crosswalk between military occupations to civilian jobs. For example, veterans who worked as Transportation Management Coordinators (Army) or Logistics Specialists (Marines) may transition into Cargo/Freight Agent positions. Veterans of higher rank, such as Air Transportation Managers, may transition into supervisory or management roles within air cargo companies.

Computer, customer service skills among most important for ITTL jobs

Employer interviews and job descriptions (like the one in Figure 2) highlighted basic knowledge and skills that workers need for entry- to mid-level ITTL jobs.¹⁵ These include:

Basic industry knowledge – including terminology, how the supply chain works, and modes of transportation.

Computer skills – particularly Microsoft Office products and the ability to learn specialized software programs, such as warehouse management systems.

Customer service skills – which are critical in this customer-focused, fast-paced environment.

Written/verbal communication skills – including business writing and email etiquette. Some employers mentioned the need to read/write/speak the English language.

Basic math skills – often cited in dockworker, shipping/receiving and fueling jobs. Many office jobs require math skills for such tasks as calculating freight pricing or compiling quotes.

Figure 2: Air Export Agent Job Description

Job Tasks	<ul style="list-style-type: none"> • Handle all air export administration, e.g., develop air rates, air waybills, air service and work instructions • Answer phone; Review and answer correspondence • Prepare reports • Compile, store and retrieve data using computer • May be responsible for special shipments involving perishables (e.g., live sea urchins)
Requirements	<ul style="list-style-type: none"> • High School Diploma/GED • 3-5 years of experience • Word, Excel, Outlook • Fast/accurate data entry skills • Subject to background check and drug screen • Good spelling, grammar, writing, punctuation • Strong customer service skills/experience • Excellent phone etiquette

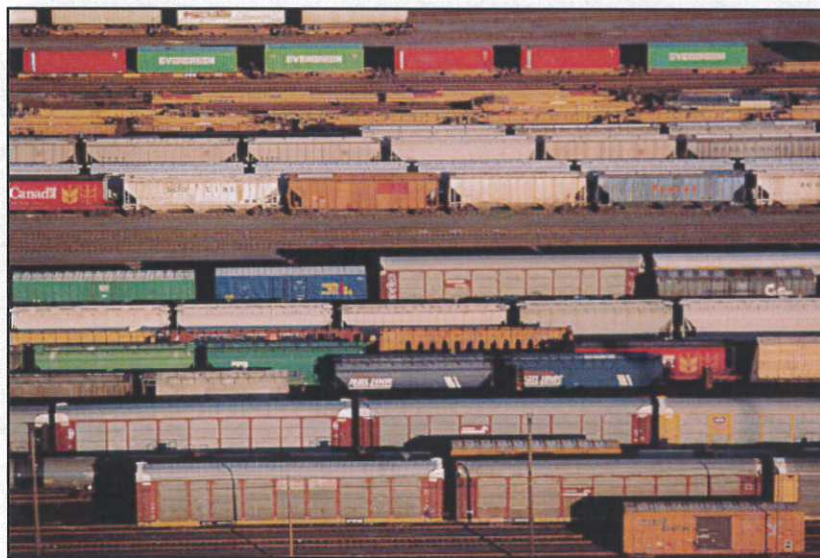
¹⁴ www.onetcodeconnector.org and www.onetonline.org/crosswalk/MOC

¹⁵ This echoes findings from other ITTL workforce research, including Port Jobs’ report *Logistics and International Trade: Career Ladders and Training Programs in an Evolving Sector*, South Seattle Community College ITTL DACUM research, and Dena Horton, Clark College, *Freight Mobility Workforce Issues, Trends, and Recommendations for the Transportation Industry in the Pacific Northwest*.

Employers also described qualities that made people well-suited for careers in ITTL:

- The ability to be agile and solve problems in different transportation modalities and logistics venues. This was echoed by a chief cargo officer, who said that companies “needed a tough, alert, versatile workforce that could deal with anything from Icelandic eruptions and Japanese tsunamis to political upheavals, economic crises and environmental concerns.”¹⁶
- The ability to learn the company’s “way of doing things”. Twenty four percent (24%) of the employers interviewed said that they had their own internal training programs and wanted new workers to learn their company’s processes and methods, regardless of how much prior experience they may have. Said one customs brokerage, “We train to fill the role.”
- Twenty-seven percent (27%) of job listings indicated that applicants must pass drug screening and/or background checks. These are particularly common in truck driving jobs, airport jobs, warehouse, and cargo handling positions.

See Appendix 6 for detailed job tasks and requirements for 11 ITTL job postings.



Rail yard

¹⁶McCurry, “Industry faces hard work to attract new blood”.

Entry requirements focus heavily on prior experience

When hiring new workers, ITTL companies value prior industry experience. Seventy (70%) of employers interviewed said they did not look for particular certificates or degrees, but instead looked for people with experience in a related industry or job function, such as work in a warehouse. The vast majority of job openings reviewed (73%) indicated that previous industry experience was preferred or required; for example, 3 to 6 months for freight handlers and up to a year for warehouse jobs. Office occupations like export agents often required 2 to 4 years of experience in freight forwarding, transportation, logistics, or supply chain. Management positions, like Warehouse and Export Managers, generally required five or more years of industry and supervisory experience. In some positions prior experience was interchangeable with higher education.

Most of the jobs reviewed in the job openings scan required only a high school diploma or GED. While certificates and degrees may not be *required*, in some cases they are *preferred*. Also employers noted that having a degree showed that the candidate had dedication and commitment. Also if “all other things were equal”, a candidate who had earned a relevant certificate might be more likely to be hired because she demonstrated an interest in working in the field. For advancement to higher-level “supply chain management” positions, an advanced degree is often required.

Many employers indicated that they don’t require warehouse applicants to have forklift certification. Employers must certify that all employees can safely operate company forklifts regardless of whether they have prior certification. Job openings show, however, that most warehouse and freight handling positions *prefer* candidates that have forklift experience. Job seekers who want to enter these kinds of jobs, but who have had no prior experience, may benefit from taking a forklift certification class through a community college. This may give them a ‘leg up’ in the hiring process, as might other industry-specific certifications such as Hazardous Materials and Dangerous Goods training.

Peak season ramp-up offers opportunities for temporary work and career exposure

Several companies reported that they “ramped up” their workforce during busy seasons, such as the summer cherry harvest or Chinese New Year, by hiring temporary workers or “casuals”. For example, a freight forwarder estimated that the company increases its freight handling and warehousing workforce by 20-30% at peak times. Similarly a marine transportation company nearly doubles its workforce during its busy season. Temporary workers are then laid-off at the end of the season. Some employers commented that temporary positions such as warehouse agents, dockworkers or “box preppers” provide a good training ground to build experience in the industry. Companies may later call back high performing temporary workers when new positions open.

2. Looming retirements, low turnover, and job growth may point to hiring challenges in the future

Eighty percent (80%) of the employers interviewed expressed minimal difficulty finding entry level workers for freight handling and warehouse types of positions. Some companies did have challenges filling specialized positions, however. For example, trucking companies had trouble finding qualified Truck Drivers with Class A Commercial Drivers' Licenses, particularly for long-haul and cross-border driving. Challenges included finding people who can pass strict drug tests, who have good driving records, and who have the requisite driving experience. One company, for example, said that its insurance policy required drivers to have at least three years of truck driving experience, which limited the pool of candidates since few newly-graduating truck driver students qualified.¹⁷

Other companies, particularly marine transportation and trucking companies, had trouble finding skilled tradespeople to do maintenance and repair work on everything from containers, forklifts, chassis, and refrigeration units to industrial machinery and diesel engines. Employers mentioned jobs titles such as Mechanic, Diesel Mechanic, Heavy Machinery Diesel Mechanic, and Ground Service Equipment (GSE) mechanic.



Long-haul truck drivers are in demand according to our local employer interviews

¹⁷Additional challenges in truck driver recruitment were identified in the report *Freight Mobility Workforce Issues, Trends, and Recommendations for the Transportation Industry in the Pacific Northwest* (2005).

Turnover in ITTL jobs tends to be low

Employer interviews suggest that once a person is established in the industry, turnover tends to be low. Thirty-five (35%) of employers stated that turnover is low and that longevity within companies was common. For example, one barge company said that many employees had worked there for 15 years or more. A freight forwarder found that turnover was particularly low once an employee had been with the company for three years. Another employer suggested that turnover was low because of its rigorous hiring process, and because many employees were hired through employee referrals or were temporary workers that had been “called back”.

Some companies anticipate worker shortages

Some companies noted that their workforce is aging, and while they may not have trouble filling entry-level positions today, retirements were on the horizon. “Warehouse retirements are coming,” said one human resources manager. Others noted that as their dockworkers aged, young people were not coming in to fill new positions. Some companies were starting to bring in personnel in anticipation of retirements in order to build expertise through training and informal mentoring.

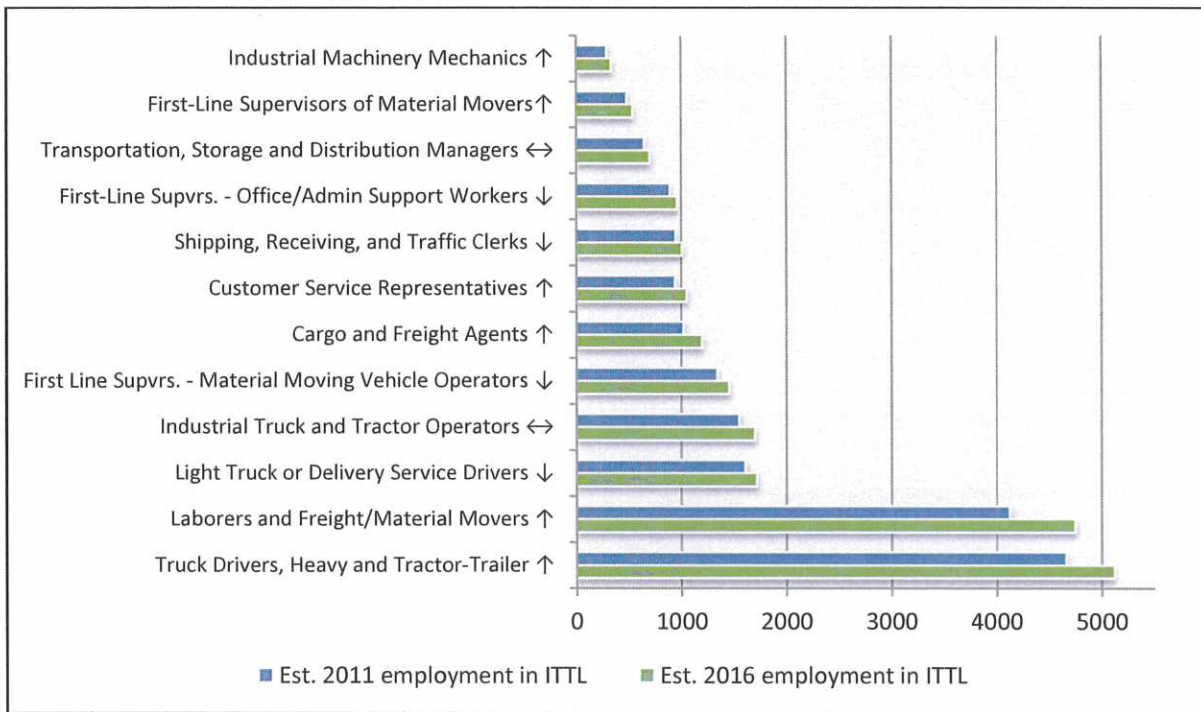
ITTL occupations are growing

At the same time, labor market information points to growth in ITTL jobs. Port Jobs reviewed 12 ITTL occupations, which together make up nearly half of the employment in the ITTL sector. These are shown in Figure 3.

Together these occupations are projected to grow at a somewhat faster rate than all occupations in King County (2.2% annually, compared to 1.9% respectively), increasing from 18,500 workers in 2011, to more than 20,500 by 2016. Cargo/Freight Agents are expected to grow the fastest at 3.2% annual growth. With growth and attrition, ITTL employers will need to fill an estimated total of 850 openings each year for these positions (2011-2016).¹⁸

¹⁸ See Appendix 2 for labor market methodology and Appendix 5 for a table of employment projections and annual growth by occupation.

Figure 3: Estimated Employment in 12 ITTL Occupations (2011 and 2016) and Demand¹⁹



The chart shows that:

- Truck Drivers (heavy) and Freight/Material Movers make up nearly half of the employment in these occupations, and are considered to be “in demand”. The need for truck drivers was echoed by employers above.
- Administrative positions like Cargo/Freight Agents and Customer Service Agents, while much smaller by comparison, are also “in demand” occupations.
- Industrial machinery mechanics make up the smallest portion of ITTL employment among these occupations, though these jobs are also “in demand”.
- Some supervisor positions, including those that supervisor material moving vehicle operators and office/administrative support workers, are considered “not in demand”, yet they are growing occupations.

¹⁹ Washington State Employment Security Department, *2013 occupational employment and wage estimates (Seattle/Bellevue/Everett Metropolitan Division)*, www.workforceexplorer.com. Local workforce development councils categorize occupations as **in demand** ↑ (more job openings in future), **balanced** ↔ (job openings will remain about the same) or **not in demand** ↓ (fewer job openings).

The Workforce Development Council of Seattle-King County identified ITTL occupations that may have a shortage of workers by 2019, and these include Freight/Material Movers, Industrial Tractor Operators (forklift), Supervisors of Freight/Material Movers, and Supervisors of Material Moving Machine Operators.²⁰ Some of these positions are the same ones that are currently considered balanced or not in demand.

These findings – looming retirements, low turnover, and job growth – coupled with an improving economy, point to potential challenges for the ITTL industry as seasoned employees retire, and companies have fewer workers ready to step up and take their places. It will be critical to track these issues and get ongoing feedback from ITTL employers about their emerging hiring needs.



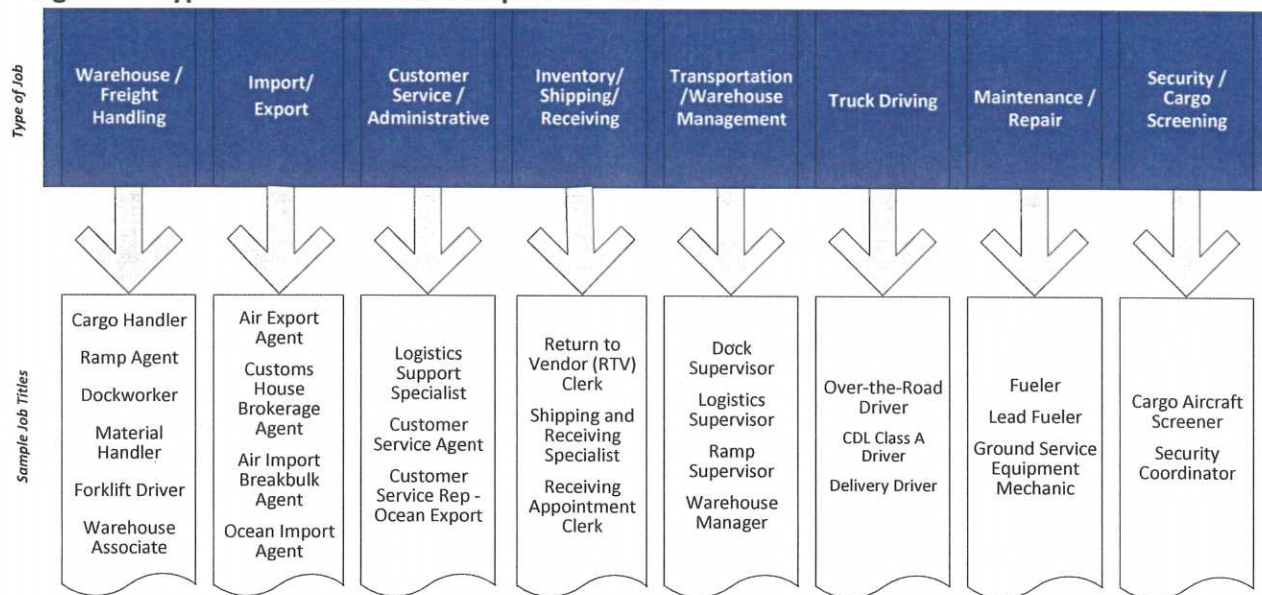
Photograph by Apprenticeship and Nontraditional Employment for Women

²⁰ Workforce Development Council of Seattle-King County and Community Attributes, *Talent Pipeline Study for Healthcare, Manufacturing, Transportation and Logistics*, August 2011.

3. Many ITTL job pathways offer self-sufficiency wages and career ladders

There are a variety of job pathways in ITTL. Figure 4 shows a sampling of some of the job functions and titles found within the sector. They include those commonly associated with ITTL, such as truck driving or freight handling and warehouse work. Similar positions focus on inventory control and shipping/receiving and are often seen in distribution centers for retailers like Costco or at manufacturing companies. Customer service positions are found across many different industries, while import/export positions focus specifically on documentation and coordination for shipments entering or leaving the country. As new security rules have been enacted, security and cargo screening jobs have emerged. Finally trades-related positions maintain and repair the cargo handling equipment, containers, and trucks, and fuel airplanes.

Figure 4: Types of ITTL Jobs and Sample Job Titles²¹



Many jobs pay self-sufficiency wages

The Self-Sufficiency Calculator for Seattle-King County estimates how much a person or family must earn to cover basic living expenses without additional subsidies. In Seattle, for example, a single individual needs to work full-time earning \$10.62 per hour to be “self-sufficient”; by comparison for a family of four (two adults, a preschooler, and a grade school student), both parents need to earn \$14.58 per hour.²²

²¹ From Port Jobs’ job openings scan, July 15-19, 2013.

²² *The Self-Sufficiency Calculator for Washington State*, www.thecalculator.org

A review of hourly wages for 12 ITTL occupations suggests that, depending on a family's size, ITTL positions can pay self-sufficiency wages. Figure 5 shows that at the 25th percentile²³, wages range from \$11.06 per hour for Freight/Material Movers to \$36.58 per hour for Transportation, Storage and Distribution Managers. Seven of the 12 occupations pay between \$12 and \$19 per hour.

Figure 5: Hourly wages for Selected ITTL Occupations (25th percentile)²⁴



Career ladders exist for people who build their skills and experience

Eighty-two percent (82%) of employers noted that there are opportunities to advance to supervisory level positions within their companies. A typical entry-level next step job is a “lead”, which manages a small group of front-line staff. For example, in an air cargo company, a person can move from **Cargo Agent**, to **Lead Cargo Agent** where she manages five workers, to a **Supervisor** who manages both agents and leads. Other examples found in a scan of job openings included Warehouse Worker to Lead; Logistics Coordinator to Logistics Supervisor; and Ocean Export Agent to Ocean Export Supervisor. While companies provide training to new workers to show them the company’s “way of doing things”, entry-level supervisory training is often lacking. One air cargo general manager noted that internal management training often focuses on upper-level company leaders, and not on front-line workers.

²³ 25th percentile wages are on the lower end of the wages paid in a particular occupation; whereby, 25% of workers earn below this wage, and the remaining 75% of workers earn above this amount. Port Jobs selected this percentile as a conservative snapshot of what workers in these occupations earn.

²⁴ WA Employment Security Department, *2013 Occupational Employment and Wage Estimates*, Seattle/Bellevue/Everett Metropolitan Division, 25th percentile.

In other ITTL settings, workers can advance to higher skilled positions as they gain experience in using more specialized equipment. For example, in one “cross-doc” facility, a worker could start as a **Laborer** earning \$12 per hour. After 6 months of forklift training, she can advance to **Forklift Driver** earning \$15 per hour. As a Forklift Driver she can progress to equipment that lifts increasingly heavy loads (for example, from 6,000 pounds to 50,000 pounds). After several years of experience, she may advance to **Barge Loader** where she can earn upwards of \$30 per hour.

From here, select people with strong computer, math and communication skills and good work performance could eventually move into higher-level management jobs within the company or move to a larger company. For example, one short-line railroad company said that workers with more experience (e.g. engineers) sometimes move to larger railroads like BNSF for higher pay or more hours because there are very few local jobs.

Having an understanding of the full supply chain can help facilitate career mobility. In many ITTL companies there are office, warehouse, customer service and freight forwarding sides to the business, suggesting that job seekers who understand the supply chain will be better positioned to know where their own skills, interests and abilities fit. Additionally ITTL companies often hire from within. UPS, for example, is well known for promoting employees, with 90% of workers starting in the warehouse.²⁵ Other smaller companies that we interviewed echoed this practice.

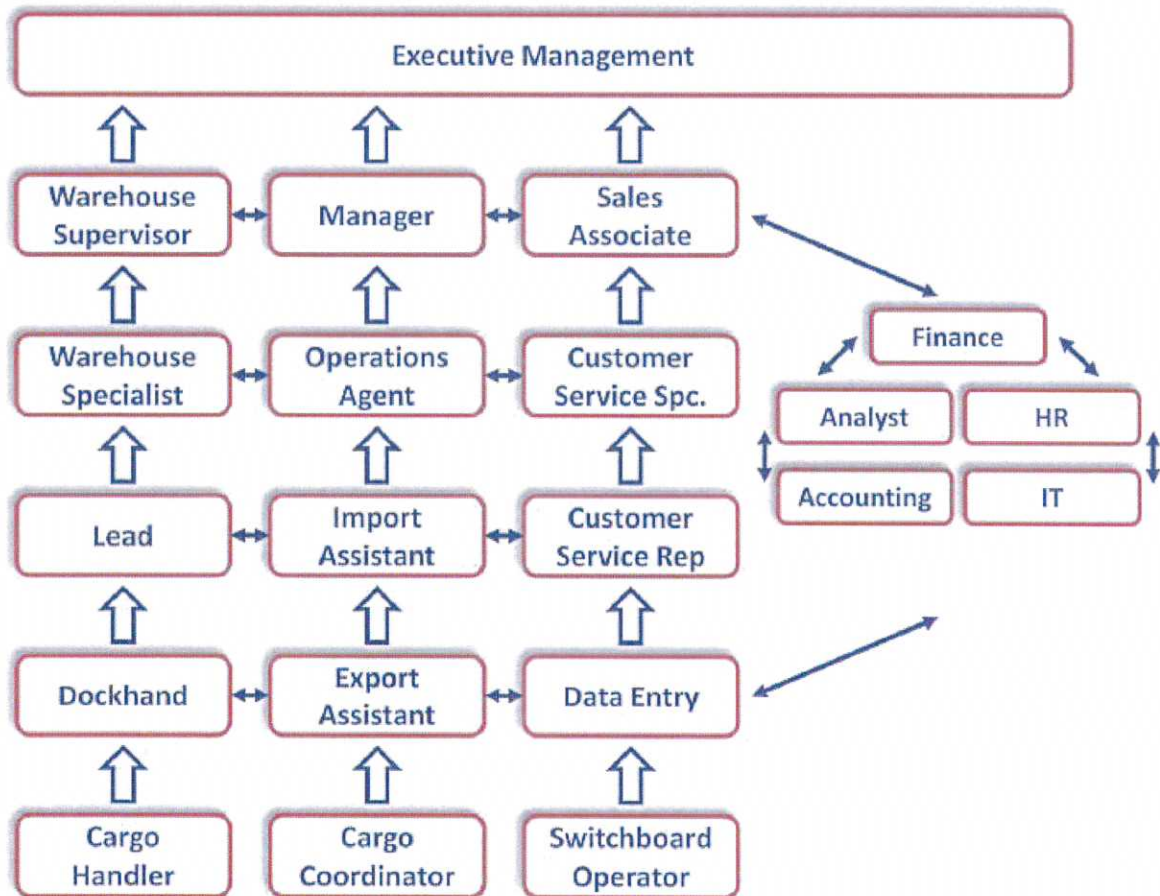


Warehouse dock doors

²⁵ Center of Excellence for Global Trade and Supply Chain Management Skills Gap Forum. March 2013.

Figure 6 shows sample career paths within a multi-national transportation and logistics company, suggesting that as workers gain experience in different parts of the company, they can move in several different directions.

Figure 6: Sample Career Paths – Transportation and Logistics Company²⁶



²⁶Adapted from Educational Data Systems Inc., *Transportation, Distribution, and Logistics Career Center Final Report and Business Assessment Summary*, December 2010.

4. ITTL training programs are expanding, and coordination efforts among workforce stakeholders are underway

In 2008, Port Jobs did a review of 19 ITTL training programs nationwide, six of which were in the Seattle area. What we found was an industry that was just beginning to emerge as an employment sector, and training programs that were relatively new.²⁷ Since then, there has been an increasing focus on the ITTL sector among colleges and workforce development organizations. ITTL offerings at Puget Sound area colleges and universities have grown and changed, with several new or revamped programs launching in 2013. For example,

- North Seattle Community College reintroduced its International Trade certificate in January 2013. In September 2013, it launched a new Bachelor of Applied Science degree in International Business, the college's first BA program.
- In 2011, the University of Washington (UW) closed its program in Global Trade, Transportation and Logistics studies due to budgetary constraints. In September 2013, UW launched an online Master of Supply Chain Transportation and Logistics program.
- South Seattle Community College (SSCC) offered a 19-credit Transportation, Logistics and Supply Chain Management certificate in 2009 and 2010; however this certificate is no longer available. SSCC is currently developing a certificate program to prepare students for Global Logistics Associate certification through the American Society of Transportation & Logistics.
- Highline Community College and the Center of Excellence for Global Trade and Supply Chain Management partnered to offer non-credit Customs Broker Preparation and Fundamentals of Importing courses.

Figure 7 shows the locations of eight colleges currently offering ITTL coursework in the Puget Sound area, including the specific certificate and degree programs offered by each. Additionally it shows the people who have gotten jobs through Airport Jobs, by their home zip code. ITTL certificate and degree programs allow job seekers and incumbent workers to build skills for entry and advancement in the ITTL sector. Port Jobs can act as a connector to link incumbent workers interested in furthering their ITTL careers with local ITTL training programs. Reciprocally, there is an opportunity for Port Jobs to connect graduates of these programs to ITTL jobs in the port-related economy.

²⁷ Port Jobs *Logistics and International Trade: Career Ladders and Training Programs in an Evolving Sector*. 2008. The list of programs reviewed was not exhaustive of those in the Puget Sound area or nationwide.

Figure 7

Airport Jobs Visitors Who Were Hired and their Proximity to Colleges with International Trade, Transportation, and Logistics Certificate and Degree Programs

Several colleges in the Puget Sound area offer certificate and degree programs in International Trade, Transportation and Logistics (ITTL) that can help workers build skills to advance in a variety of ITTL career pathways. This map shows the number of people who got jobs through Port Jobs' Airport Jobs center by their home zip codes (between 2004 and 2012) and their proximity to community/technical colleges and universities that offer ITTL certificates and degrees. This box also lists each college's ITTL-specific programs:

Shoreline Community College

- Purchasing and Supply Chain Management (Certificate of Proficiency OR Associate in Applied Arts and Sciences)

North Seattle Community College

- International Trade (Certificate)
- International Business (Bachelor of Applied Science)

University of Washington

- Master of Supply Chain Transportation & Logistics

South Seattle Community College

- Global Logistics Associate (Certificate)
- Hospitality Management (Bachelor of Applied Science)

Highline Community College

- Custom Broker Exam Prep (Non-credit course)
- Fundamentals of Importing (Non-credit course)
- International Business and Trade (Certificate)
- International Business and Trade (Associate in Applied Science)

Green River Community College

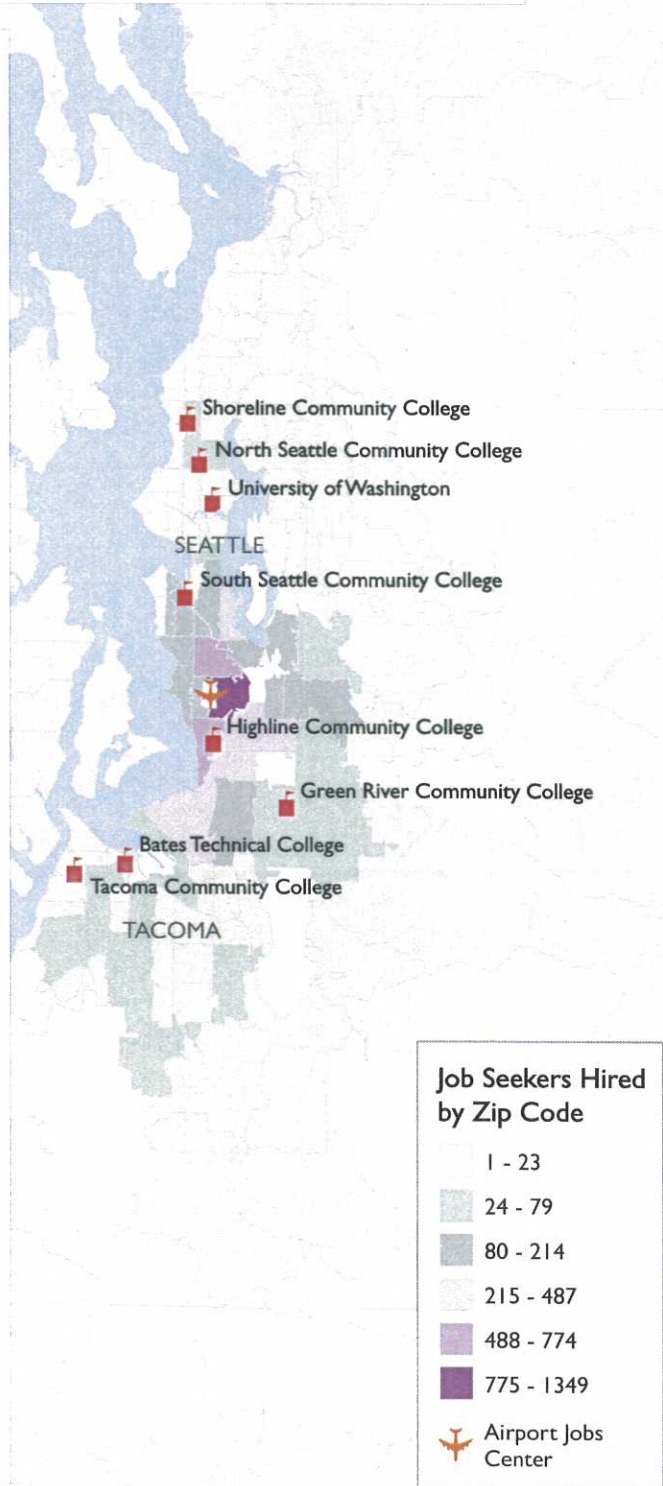
- Forklift Operation
- Certified Logistics Associate
- Certified Logistics Technician
- Aircraft Dispatcher (Certificate)
- Air Transportation (Associate in Applied Science)
- Aviation Technology (Associate in Applied Science) in one of the following: Air Traffic Control, Aircraft Dispatch, Professional Pilot, Helicopter Pilot

Bates Technical College

- Commercial Truck Driving
- Forklift Operation


Tacoma Community College

- Forklift Operation
- General Warehouse Clerk (Certificate)
- Global Transportation and Secure Logistics (Certificate)
- Business with Global Logistics Concentration (Associate in Applied Science)



Job Seekers Hired by Zip Code

- 1 - 23
- 24 - 79
- 80 - 214
- 215 - 487
- 488 - 774
- 775 - 1349

 Airport Jobs Center

*Data Source: PortJobs, Washington Geospatial Portal



Workforce development stakeholders are beginning to align efforts in ITTL sector

Stakeholder interviews underscored the need for workforce development and college entities working in ITTL to continually connect to ensure that their employer engagement, training and placement practices are well coordinated and communicated. Alignment efforts are underway. Port Jobs is part of Pathways to Careers (P2C), a multi-stakeholder partnership initiated by City of Seattle. P2C aims to align certificate and degree programs in the Seattle Community College District and to increase the number of people completing certificates and degrees in four target sectors, including ITTL.²⁸

It is evident, especially due to the wide range of ITTL employers and jobs pathways, that cross-system resource sharing, such as labor market information, reports, and training referrals, is integral to seeing where workforce system stakeholders (e.g., Pathways to Careers, WorkSource, community colleges, workforce intermediaries, and employer groups) may need to better aligned. P2C partners expressed interest, for example, in developing common employer engagement tools to better coordinate employer engagement efforts. This could include, for example, using a common employer engagement tracking system, such as the City of Seattle's *Executive Pulse* database. These and other alignment efforts are critical. The workforce development system's ability to anticipate and address the diverse needs of ITTL employers and their workforce directly affects the region's economic health and competitiveness.

²⁸ P2C target sectors include ITTL, Business Information Technology, Healthcare, and Manufacturing.

5. Port Jobs is well-positioned to serve the workforce needs of port-related ITTL companies, particularly those in the air cargo sector

The Port of Seattle's Century Agenda has a goal of tripling air cargo volume over the next 25 years, which would generate new cargo-related jobs in the region. Port Jobs has placed more than 100 people into cargo-related jobs at Sea-Tac Airport since 2012, primarily with airlines, ground handling companies that sub-contract with some airlines to do cargo handling, and security positions.²⁹

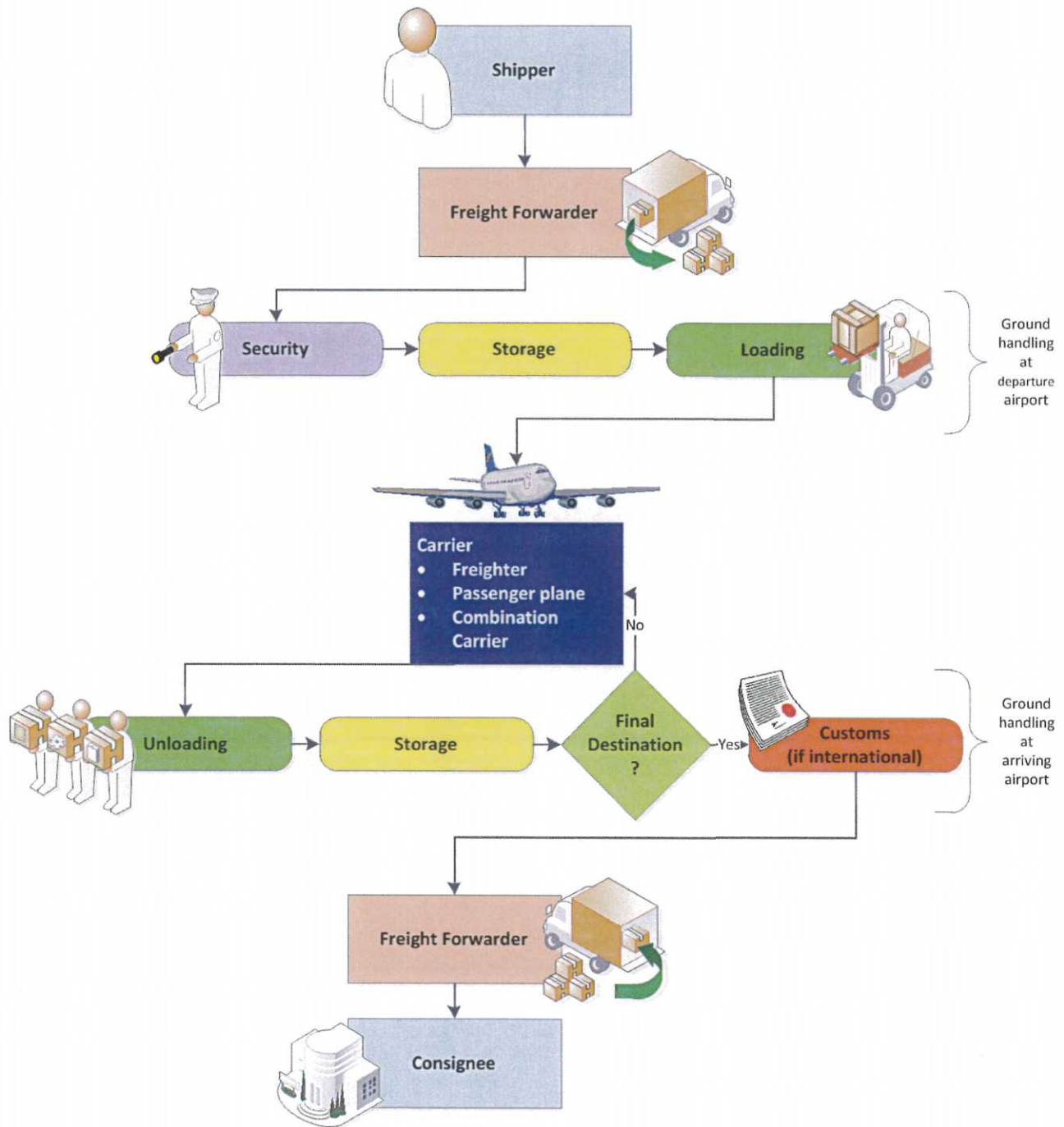


Photograph by Don Wilson/Port of Seattle

Airlines and airports are one part of the air cargo supply chain. The sector also includes companies that support the movement of cargo to and from the airport. For example, Seattle-Tacoma Air Cargo Association (STACA) membership includes companies that do **freight forwarding, trucking, cargo screening, and customs brokerage**. Federal agencies such as **U.S. Customs and Border Protection (CBP)** and the **Transportation Security Administration (TSA)** also participate to ensure the security and legitimacy of cargo entering the U.S. Figure 9 provides a simplified overview of the players involved in moving air cargo between airports, from the shipper to the final destination. Port Jobs' long-term presence at Sea-Tac Airport makes it well-positioned to reach out to the broader spectrum of air cargo companies in King County.

²⁹ Port Jobs, Airport Jobs placement data, January 1, 2012 – August 30, 2013.

Figure 9: Players Involved In Air Cargo³⁰



³⁰ Adapted from J. Petersen, *Air Freight Industry White Paper*, The Supply Chain and Logistics Institute, H. Milton Stewart School of Industrial and Systems Engineering, Georgia Institute of Technology, April 1, 2007.

Air cargo is virtually hidden as it is shipped either in the “belly” of passenger airplanes or in cargo freighters. As a result, people are often unaware of air cargo and of the job opportunities in the sector. As one cargo vice-president said, “There’s an industry-wide problem of getting people to understand that cargo exists. They have no thought of career opportunities. We need to start there, and find a way of connecting with career talent in that way.”³¹ As one response, the International Air Transport Association (IATA) has launched a promotional campaign called “Air Cargo Makes It Happen”, with the goal of raising awareness of how air cargo affects lives, from delivering vaccines and emergency supplies to shipping everyday items like electronics and flowers. See sample ads in Figure 10. These findings also point to a need to educate job seekers and others about the kinds of job opportunities in this sector.

Figure 10: Sample Ads from Air Cargo Promotional Campaign



©International Air Transport Association

Most airports have peak seasons during fall and Christmastime. Sea-Tac Airport is somewhat unique in that its peak season is during the summer. Sweet cherries are one the most popular air cargo exports in our region; nearly 8,900 metric tons were shipped through Sea-Tac Airport in 2012.

³¹ McCurry, “Industry faces hard work to attract new blood”.

During cherry season (June to August) freighter capacity at the airport more than doubles to accommodate cherry shipments³², and staffing levels among air cargo companies also increase. Like other ITTL sectors, there are opportunities to connect job seekers to temporary work during peak season, thereby increasing their awareness of and experience in the industry.

Finally, air cargo is document intensive. Upwards of 18 documents are processed for every air cargo shipment, and currently most of these documents are processed in hard copy. IATA is encouraging the sector to move toward electronic documentation, starting with electronic air waybills. This movement will likely require air cargo workers to have more computer skills in the future.



Loading air cargo

³² Port of Seattle, *Central & Eastern Washington Export & Tourism Roundtable Forums and Tour Briefing Book*, 2013.

Next Steps

The research presented in this report has already begun to influence Port Jobs partnerships and investments in ITTL. The National Fund for Workforce Solutions featured Port Jobs' interim ITTL research and Airport Jobs/Airport University video at the national Atlanta conference of workforce collaboratives in June 2013. In addition, Port Jobs has joined the Seattle-Tacoma Air Cargo Association (STACA), and is investing time and resources to thoroughly understand and identify how best to engage and support these employers. Other opportunities for Port Jobs to support the competitiveness of port-related companies are on the horizon.

In response to the research findings, Port Jobs will expand its ITTL work in four main areas:

I. Cultivate ITTL Employer Relationships and Act as a Conduit to ITTL Jobs

Port Jobs will work to continuously and deeply engage employers in the ITTL sector, while raising awareness among job seekers and incumbent workers about job pathways and opportunities in ITTL. Our goal, through the following efforts, is to act as a connector between job seekers and ITTL employers. Port Jobs will:

- (1) Begin expansion of employer services to a broader range of port-related ITTL employers (e.g. posting job openings, reaching out to and referring job seekers, and/or facilitating hiring events, etc.). In support of the Port of Seattle Century Agenda and given the Airport Jobs location at Sea-Tac Airport, Port Jobs will do intensive outreach to employers in the air cargo sector. This will include working with companies doing business onsite at Sea-Tac Airport, as well as cultivating relationships with air cargo-related companies offsite. Port Jobs will also ensure that air cargo companies are aware of the college courses offered through Airport University. For example, Airport University's business technology classes offer an opportunity to skill up the air cargo workforce as it moves toward electronic document processing.
- (2) Work with ITTL companies to help fill temporary, seasonal positions, which will allow people to gain experience in the ITTL sector and can lead to permanent employment.
- (3) Invite ITTL employers to do on site recruiting at the Airport Jobs office.
- (4) Highlight ITTL job openings on the Airport Jobs website (which was viewed last year by more than 140,000 people) and Port Jobs' Facebook page (which currently has more than 250 "likes"). Additionally, Port Jobs will add an ITTL page to our Port Jobs' website including career pathways, local college programs, and industry-related links.

- (5) Implement ongoing outreach and communication strategies necessary to develop new ITTL employer relationships. This includes becoming a fully embedded member of organizations such as the Seattle Tacoma Air Cargo Association (STACA) to connect with employers and stay abreast of industry trends and needs.
- (6) Serve as a conduit to ITTL jobs for jobs seekers visiting the Airport Jobs office, and reach out to other populations, including:
 - Community college ITTL graduates to facilitate employment into ITTL jobs,
 - Secondary school programs such as the Job Skills Program at the Center for Wooden Boats, and Core Plus Manufacturing Program, sponsored by the Manufacturing Industrial Council, and invite their students to learn about ITTL training and job opportunities, and
 - Veterans to utilize military crosswalk resources that help them apply their previous logistics experience earned in the military to civilian ITTL careers. Currently, nearly 200 veterans visit the Airport Jobs center each year.

2. Expand Airport University Offerings to Include ITTL Courses

Airport University currently offers a series of computer and customer service classes for incumbent workers. See side box. These courses build core skills that align with those identified earlier by ITTL employers. An airport worker can now earn a 15-credit Business Technology certificate from Highline Community College, all by taking classes at the airport.

In an effort to engage more incumbent workers with next step ITTL jobs, Port Jobs will:

<u>Current Airport University Credit Courses</u>
10-Key Mastery
Keyboarding
Microsoft Office 2010
SuperHost Customer Service
Introduction to the Computer
Introduction to the Internet
College 100

- (1) Offer a new *Introduction to International Trade, Transportation and Logistics* course through Airport University. Port Jobs has contracted with a consultant, who was formerly the director of a graduate program in Global Trade, Transportation and Logistics, to develop this course. The course will provide students with a strong foundation in the ITTL fundamentals identified in employer interviews. It will include an overview of world trade systems, basic ITTL terminology, and modes of transportation, including a focus on air cargo. In addition, students will learn about careers in ITTL and community college

programs that offer ITTL certificate and degree programs. The class will be part of the Airport University 2014 course offerings. See Appendix 7 for a topic outline.

- (2) Work with an area community college to reinstate a “Leadership and Supervision” class at Airport University. This class was offered at one time through Airport University and was well-attended. The Leadership and Supervision class will target entry-level workers who currently work in supervisory positions, as well as front-line staff who wish to move up to lead positions. This class will help build tomorrow’s leaders, which will be especially critical as the current ITTL workforce begins to retire.



Airport University students

3. Act as a Conduit to ITTL Training at Area Colleges

Port Jobs will raise awareness and connect job seekers and incumbent workers, including Airport University students, to ITTL training programs that can build their skills and further their careers in the industry. Port Jobs will:

- (1) Seek funding to support an on-site navigator at Airport University to connect job seekers and incumbent workers to the different courses, certifications, and degree programs available.
- (2) Post ITTL college training and course listings in the Airport Jobs office and distribute them to port-related employers.

- (3) Highlight ITTL college training programs on the Port Jobs and Airport Jobs websites, and Facebook page.
- (4) Invite community college partners to provide onsite ITTL recruitment.
- (5) Inform Airport University students about ITTL college training opportunities and build ITTL into current course offerings, as appropriate. Port Jobs has begun to do this, for example, through “College 100”. In summer quarter 2013, we brought in a guest speaker to present about ITTL and local college programs.



Photograph by Don Wilson/Port of Seattle

4. Coordinate ITTL System-building Efforts with Local Workforce Development Entities

Port Jobs will continue to engage with workforce stakeholders engaged in ITTL to ensure that our region has a coordinated ITTL workforce system that is meeting the current and future needs of ITTL employers and workers. Efforts will include:

- (1) Continuing alignment efforts already begun through Pathways to Careers.
- (2) Creating a Dropbox repository for workforce stakeholders to share ITTL reports, research, labor market and related information.

- (3) Bringing together representatives of ITTL college programs to discuss service coordination, career pathways and placement opportunities. This convening will also serve as a venue for discussing the need for cross-system employer engagement tools.
- (4) Participating in further research with workforce stakeholders about the scale of need and potential strategies to assist employers in finding workers for “hard to hire” positions, such as truck drivers and industrial maintenance/mechanics.

Conclusion

As one of the most trade-dependent states in the country, a large percentage of jobs in Washington are tied to international trade. Thousands of workers in King County are directly involved in the movement of goods that we rely upon everyday – from food on our tables to medicines that treat illnesses. It is critical that a ready and skilled workforce is in place to keep these goods flowing.

There is an increased focus among workforce stakeholders, colleges, and local government on the employment and training needs of the ITTL sector. Port Jobs is ready to support the workforce needs of this important engine of the local economy. The strategies identified through our research present an exciting opportunity for Port Jobs and reflect our aims to contribute to the development of a well-trained and skilled ITTL workforce and a vibrant Port economy.

Pathway to a Vibrant Seattle Port Economy

