

**Port of Seattle
Airport Career Pathways/
Aircraft and Facilities Maintenance Career Pathways Project**

**Implementation Plan
October 10, 2019**

Background Information

The airport career pathways project aims to meet the skill and workforce needs of airport employers and, at the same time, create career and job opportunities for incumbent workers at the airport as well as job seekers, including those from target populations and economically distressed areas. It is designed to complement the Port's investments in the Airport Jobs Center, which connects job seekers to employers and their job openings; and Airport University, which provides incumbent workers at the airport access to community college training.

A key feature of the airport career pathways project is upskill-backfill.

- Upskill – Provide incumbent workers in targeted entry jobs at the airport with the skills, training, and supports needed to move into targeted, in-demand pathway jobs.
- Backfill – Provide job seekers—with a focus on those from target populations and priority communities—with the skills, training, and supports needed to fill openings in entry jobs created as incumbent workers move into pathway jobs.

The benefits include:

- A supply of skilled, trained workers for both pathway and entry jobs.
- An expanded, organized approach to airport career pathways (including those that cross occupational areas and employers) versus the current approach of employers hiring workers away from one another.
- A workforce development system that is responsive to the needs of the airport sector (e.g., training that is targeted to help incumbent workers as well as job seekers move along airport career pathways, and provided at times and locations accessible to airport workers).
- A leveraging of public and private resources.
- A strengthening of connections between the airport and target populations and priority communities.

Work done to date includes:

- Contracting with ICF, an international consulting firm with experience working on airport and aviation workforce development, to map airport career pathways at SeaTac, as the first step in developing a project to help workers at the airport move from entry jobs to pathway jobs. This included conducting market research and interviews with employers and incumbent workers.

Five key airport career pathways were identified:

- Aircraft and facilities maintenance
- Ground operations
- Customer service/passenger services
- Safety and security
- Dining and retail

For each career pathway, occupations at entry and early, mid, and senior career levels were identified, along with key duties and responsibilities; knowledge, skills, and abilities; competencies; and education, work experience, and other requirements. Also identified were related training offered by area community and technical colleges; and challenges, barriers, and opportunities in moving along pathways.

- Identifying targeted, in-demand pathway and entry jobs, based on regional labor market information, online job postings, and employer surveys.

Targeted pathway jobs include:

- Aircraft mechanics and service technicians
- General maintenance and repair workers
- Airport maintenance workers
- Skilled trades

Targeted entry jobs include:

- Baggage handlers
- Ramp agents
- Line service technicians
- Fuelers
- Janitors
- Aircraft cabin cleaners
- Cargo/warehouse agents

- Convening airport employers, at the invitation of Port of Seattle Managing Director of Aviation Lance Lyttle, to share results of the research and analysis, and get their feedback.

Issues and themes that emerged from the meeting included:

- Employers have unmet workforce needs, due in part to a tight labor market.
- Employers are changing their workforce practices to recruit and retain workers.
- Some informal upskilling and backfilling is already occurring among airport employers—in that employers are hiring workers away from one another—but it's not part of a broader airport career pathways development strategy.
- Some occupations have increasing skill and certification requirements.
- Some employers are already partnering with the workforce development system.
- Seattle's high cost of living affects employers' ability to recruit and retain workers.

All of this presents a strategic opportunity for the airport career pathways project.

- Gathering additional information on area training programs aligned with targeted airport career pathway jobs, including key program features, results (e.g., completion rates, employment rates, industry of employment, and median earnings) and student characteristics (e.g., race/ethnicity, gender, age, and prior education); and then meeting with training providers to discuss the training required to move along targeted airport career pathways, existing training and gaps, and challenges and opportunities in providing training to workers at the airport (e.g., time, location, supports, etc.).
- Identifying aircraft and facilities maintenance as the first career pathway to target, based on a number of factors (e.g., labor market analysis, employer input, discussions with education and training providers and other potential partners, interest on the part of airport workers in entry jobs, etc.).

Aircraft mechanics and service technicians, one targeted pathway job in the aircraft and facilities maintenance career pathway, is projected to generate average annual job openings of about 350 (due to both growth and replacement needs). The average wage for aircraft mechanics and services technicians is \$33.83 an hour.¹

- Prioritizing building on and building out South Seattle College’s aviation maintenance technician (AMT) program, the positives of which include:
 - AMT program has ties to airport employers (e.g., Delta).
 - Training is FAA certified, leading to airframe and power plant licenses.
 - Some airport workers are already taking part in training while working at the airport. So, it’s a matter of making this pathway work for more airport workers rather than starting from scratch (and helping employers of airport workers in entry jobs backfill the resulting job openings).
 - Airport University scholarships are available (and already being used for this program).
 - South Seattle College is interested in partnering with the Port.

Also, Washington Career Bridge data show that South Seattle College’s AMT programs have an overall completion rate of 84 percent and an employment rate of 85 percent.²

Project Design

The aircraft and facilities maintenance career pathways project focuses initially on building on and building out South Seattle College’s aviation maintenance technician (AMT) program, so that more airport workers in entry jobs can take part and succeed in the program and get jobs as aircraft mechanics and service technicians. This includes:

- **Conducting targeted outreach to and recruitment of airport workers in entry jobs, and marketing the project to airport employers**
 - Outreach and recruitment, with a focus on airport workers in targeted entry jobs – baggage handlers, ramp agents, line service technicians, fuelers, janitors, aircraft cabin cleaners, and cargo/warehouse agents

¹ Average annual job openings projections are for Seattle-King County for 2017-2027; and the average wage estimate is for Seattle-Tacoma-Bellevue for 2018. See <https://esd.wa.gov/labormarketinfo/projections> and <https://esd.wa.gov/labormarketinfo/occupations>.

² See <http://www.careerbridge.wa.gov>.

- Aircraft and facilities maintenance career pathway information sessions featuring incumbent workers in targeted pathway jobs such as aircraft mechanic and service technician (including, if possible, graduates of South Seattle's AMT program), representatives from South Seattle and the AMT program, and Airport Jobs and Airport University staff. Sessions will include:
 - Information on the job of aircraft mechanics, career pathways, and job requirements
 - Labor market information (e.g., jobs, openings, wages, etc.)
 - Information on South Seattle's AMT program (e.g., how to apply, what training covers, how long it is, what it costs, etc.)
 - Information on Airport Jobs and Airport University, including scholarships
 - Checking on qualification for various sources of funding to support participation in the project
 - Q&A regarding math and English skills required
- Marketing of the project to airport employers, including its upskill-backfill component
- Tours of airline maintenance departments
- **Creating an AMT onramp course for those in entry jobs at the airport**
 - Curriculum: math and English contextualized to aviation and introduction to terminology, concepts, and tools key to AMT program
 - Team teaching (basic/transitional studies and aviation faculty)
 - 7 credit hybrid class, consisting of 3 to 4 hours of face-to-face class time a week, plus computer homework time
 - Costs: \$25 fee (waived if a financial hardship) and \$200 books (for onramp course and AMT first quarter)
 - Onsite at the airport
- **Providing participants academic supports while in the AMT program**
 - Math support embedded as part of AMT training
 - Integrated Basic Education and Skills Training (I-BEST) for AMT program, with training slots in I-BEST cohort held for those participating in AMT onramp course
- **Providing scholarships and other financial assistance to participants to help pay for training and associated costs**
 - Airport University scholarships, including an \$800 scholarship for participants who complete the AMT onramp course and go on to AMT training
 - Workforce funding programs such as Worker Retraining, Basic Food Employment and Training (BFET), Opportunity Grants, etc.
 - Federal and state student financial aid (e.g., Pell Grants, Washington College Grants, etc.)
 - South Seattle College scholarships

- Workforce Development Council of Seattle-King County/WorkSource funding (WIOA training dollars, etc.)
- Support fund for books, estimated to cost \$600; tools, \$600; and FAA licensing/certification fees, \$1,500
- **Providing participants services and supports while in training (and after)**
 - Career coaching/navigation
 - Services and supports through workforce funding programs (e.g., transportation and child care assistance, advising, etc.)
 - Mentoring, with mentors including incumbent workers in targeted pathway jobs
 - Referrals to community resources
 - Job search/preparation assistance
- **Expanding engagement of airport employers with targeted pathway and/or entry jobs, unions, and industry associations**
 - Port connections to airport employers, industry leadership
 - South Seattle College connections to airlines, especially Delta
 - Port Jobs/Airport Jobs connections to Alaska; and more than 100 employers listing job openings with Airport Jobs Center
- **Working to foster adoption of practices that enable those working in entry jobs to take part in training (e.g., work schedules, tuition assistance, etc.)**

The project also advances the Port’s equity goals. It provides airport workers in entry jobs—a diverse group—the opportunity to move along the aircraft and facilities maintenance career pathway to quality, family wage jobs such as aircraft mechanics and service technicians. It also helps to diversify South Seattle College’s AMT program student population and what is largely a white, male dominated job. Some relevant data points are included below.

	Black/ African American	Asian/ Pacific Islander	Latinx	White	Men	Women
Port Jobs clients (proxy for airport workers in entry jobs)	47%	28%	7%	9%	N/A	N/A
Aircraft mechanics/ service techs	9%	5%	19%	82%	96%	4%
South Seattle College AMT grads	14%	27%	2%	50%	94%	6%

Sources: Aircraft mechanics and service technicians (for US, 2018), BLS, Labor Force Statistics from the Current Population Survey, <https://www.bls.gov/cps/cps/cpsaa11.htm>; South Seattle College AMT graduates (for 2013-14, 2014-15, 2015-16 academic years), Washington Career Bridge, <http://www.careerbridge.wa.gov>; and Port Jobs clients (2018), Port Jobs 2018 annual report.

Partner Roles and Responsibilities

Key partners are the Port of Seattle, South Seattle College, and Port Jobs/Airport Jobs. Partner roles and responsibilities include:

- **Port of Seattle**
 - Bring its airport employer connections, industry leadership to the table
 - Model commitment to career pathways as an employer
 - Invest in the project
 - Participate as part of the project team that plans, implements, and evaluates the prototype
- **South Seattle College**
 - Offer AMT onramp course at the airport
 - Provide AMT training, with slots in the I-BEST cohort held for participants in the AMT onramp course
 - Provide participants academic supports while in AMT training (e.g., embedded math support, I-BEST)
 - Leverage its connections to airlines (e.g., Delta and its internships)
 - Provide participants access to existing workforce funding programs (e.g., Worker Retraining, BFET, Opportunity Grants, etc.), federal and state financial aid, and scholarships
 - Provide participants access to existing services and supports (e.g., career coaching/navigation; and services and supports through Worker Retraining, BFET, Opportunity Grants, and its WorkSource affiliate site)
 - Collect data on project outcomes (e.g., participants starting/completing AMT onramp course, starting/completing AMT program, placed and retained in jobs, hourly wage, etc.)
 - Participate as part of the project team that plans, implements, and evaluates the prototype
- **Port Jobs/Airport Jobs**
 - Bring its in-depth knowledge of the airport as a place of employment and its connections to airport employers and workers to the table
 - Conduct targeted outreach and recruitment, including marketing of the project to airport employers and workers, and information sessions and orientations
 - Provide facilitated referrals for airport workers ready to enroll directly in the AMT program, including facilitating the registration process, connecting them to financial assistance at South Seattle, etc.

- Co-develop and provide feedback on the AMT onramp course
- Provide participants in the AMT onramp course support (e.g., career coaching) to promote persistence and completion
- Provide participants access to existing financial assistance (e.g., Airport University scholarships, BFET, etc.)
- Provide participants access to existing services and supports (e.g., job listings, job search/preparation assistance, referrals to community resources, etc.)
- Provide participants access to college advising and financial aid/tuition assistance through its partnership with Seattle Education Access
- Leverage its employer connections (e.g., Alaska, airport employers listing jobs with Airport Jobs)
- Collect data on project outcomes (e.g., participants starting and completing the AMT onramp course and subsequently starting the AMT program, along with their demographics)
- Participate as part of the project team that plans, implements, and evaluates the prototype

Airport employers, unions, and industry associations are also key partners. A critical next step is to engage employers, unions, and industry associations in the project and define their roles and responsibilities. For airport employers, this might include: providing information on targeted entry and pathway jobs, including demand, education, training, and skill requirements, related workforce policies and practices, and hiring needs and challenges; committing to sharing and collaborating with other industry employers around common workforce and training needs and upskill-backfill; participating in training (e.g., curriculum development and work based learning opportunities); implementing workforce policies and practices that support career pathways (e.g., advancement opportunities, supports for workers participating in training, etc.); and participating as part of the project team that plans, implements, and evaluates the prototype.

Another potential partner is the Workforce Development Council of Seattle-King County, which can bring its expertise, infrastructure, and capacity related to upskill-backfill to the table; provide industry/business engagement and services; and provide job seeker/incumbent worker services (e.g., career exploration, case management, WIOA training dollars, etc.)

Timeline

The implementation plan calls for testing the project design a couple of times as a prototype, making changes based on the results and lessons learned, and then making it an ongoing project. The timeline for prototyping is as follows:

- **Fall 2019**

- South Seattle College develops AMT onramp course
- Port Jobs/Airport Jobs designs targeted outreach and recruitment
- Port Jobs/Airport Jobs starts outreach and recruitment for first AMT onramp course

- **Winter 2020**

South Seattle College offers first AMT onramp course onsite at the airport

- **Spring 2020**

Participants in AMT onramp course start AMT training, with I-BEST, embedded classroom math support, etc. (and complete the 8 quarter AMT program in winter 2022)

- **Summer 2020**

Evaluation of first prototype

This timeline is driven, in part, by South Seattle’s schedule, which has AMT training cohorts starting twice a year – in spring and fall.

It is the Port’s intent to conduct a second prototype will start in winter 2021, following the same quarter by quarter sequence.

Outcomes and Targets

Outcomes for the aircraft and facilities maintenance career pathway project are organized by type:

- Impact: number and percent of participants achieving outcomes such as training completion, job placement, hourly wage at placement, and job retention
- Influence: changes in policy, systems, and practice
- Leverage: funding and resources leveraged

Specific outcomes and targets are:

	Prototype 1	Prototype 2
Impact		
# of participants starting AMT onramp course	19	19
#/% of participants completing AMT onramp course	15/80%	15/80%
#/% of participants starting AMT program	12/80%	12/80%
#/% of participants completing AMT program ³	10/83%	10/83%
#/% of participants placed in targeted pathway jobs ⁴	8/80%	8/80%

³ Completion rate is based on Washington Career Bridge data showing that South Seattle’s AMT programs have an overall completion rate of 84 percent. See <http://www.careerbridge.wa.gov>.

⁴ Placement rate is based on Washington Career Bridge data showing that South Seattle’s AMT programs have an overall placement rate of 85 percent. See <http://www.careerbridge.wa.gov>.

Hourly wage at placement ⁵	\$23.54	\$23.54
#/% of participants retained in jobs (3, 6, 12 months)	TBD	TBD
# of employers taking part in AMT training, hiring participants, and/or providing incumbent workers advancement opportunities	TBD	TBD
Influence		
AMT onramp course implemented	✓	✓
AMT program changes made (e.g., embedded math support, I-BEST)	✓	✓
New airport employer partnerships established	✓	✓
Career pathways from targeted entry to pathway jobs created	✓	✓
Employer policies and practices supporting career pathways implemented	✓	✓
Leverage		
Funding/resources leveraged ⁶	\$347,000	\$217,000

Data will be collected on these outcomes, along with participant demographics, as part of the prototype.

Evaluation and Learning

A key feature of prototyping is testing, learning, and making changes based on the lessons learned. As result, evaluation and learning are built into the design of the project. This includes collecting data on project outcomes, conducting interviews with participants as well as those implementing the project, and project partners coming together to discuss the results, lessons learned, and implications moving forward.

⁵ Placement wage is based on Washington State Employment Security Department data showing that aircraft mechanics and service technicians have a wage of \$23.54 at the 25th percentile (a proxy for entry wage). Data are for Seattle-Tacoma-Bellevue for 2018. See <https://esd.wa.gov/labormarketinfo/occupations>.

⁶ Leveraged funding brought by Port Jobs includes Alaska Airlines-Airport University scholarships committed to the project (\$25,000), a Boeing grant to support the AMT onramp (\$80,000), and an Annie E. Casey Foundation Generation Work Initiative grant (\$50,000). Leveraged funding brought by South Seattle College includes state and federal workforce funding and student financial aid, and college scholarships (estimated at \$192,000).