



# *Leading the Way in Aerospace and Advanced Manufacturing Training*

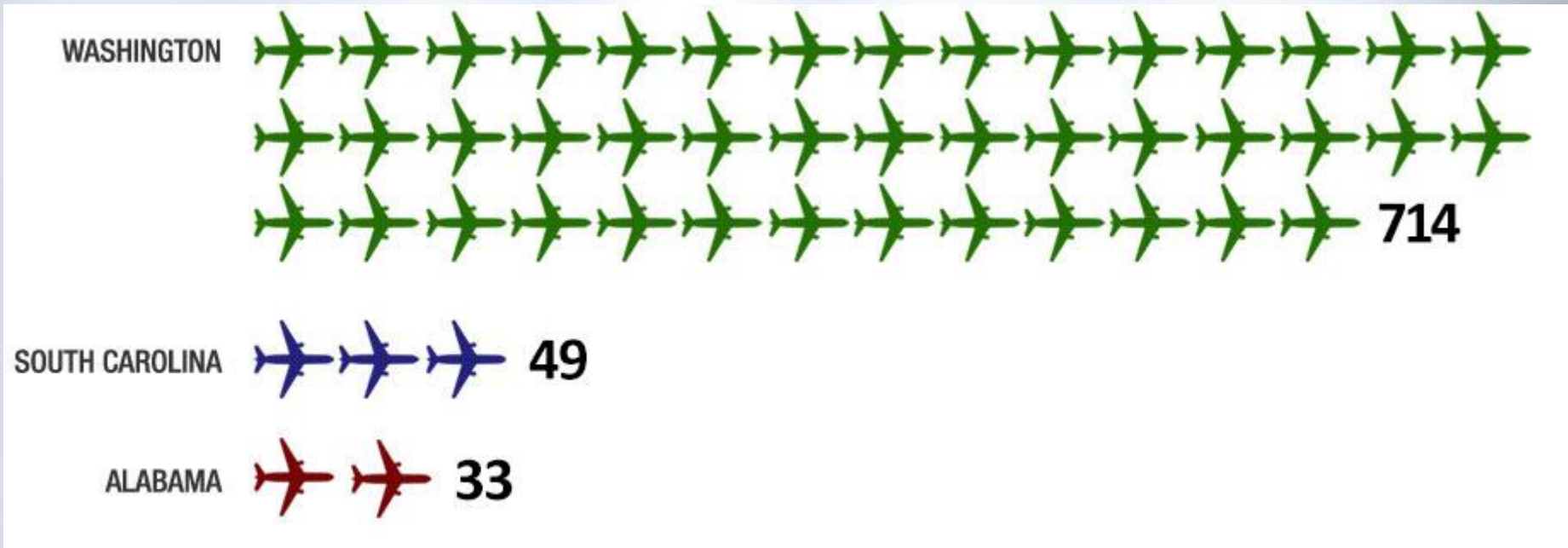
**Jesse Cote, Chair AMJTC/AJAC  
& IAMAW DL 751**

**Joseph Hauth, Director, Business Development  
Shannon Matson, Deputy Director**



# Industry Need

## Total Commercial Aircraft Production (2017)



Source: Washington State Department of Commerce

# Washington State Industry

## Aerospace...

- 1,425 aerospace-related companies as of 2014<sup>1</sup>
- 136,000 workers produce 1,400 aircraft and unmanned aerial systems annually, 90% of all commercial aircraft in the United States
- Washington accounts for 20% of the nation's aerospace jobs (2014)

## And Beyond...

- 289,000 manufacturing employees in Washington in 2014, with annual average compensation of \$84,000.

1. Sources: Workforce Training and Education Coordinating Board/State Board for Community and Technical Colleges, *Aerospace Manufacturing Skills: Supply, Demand, and Outcomes for Washington's Aerospace Training Programs Annual Report – 2015*; Washington State Department of Commerce, *Washington State Aerospace Industry Strategy 2014 Update*; National Association of Manufacturers, *Washington Manufacturing Facts*.

# The Need for Apprenticeship

- Aging workforce
- Decade drift
- Tight labor market – grow your own versus poaching
- Apprenticeship ROI – biggest bang for the buck

# Apprenticeship Return on Investment

## Employer

- Increased production
- Increased innovation
- Increased employee retention
- Reduced waste
- Reduced recruiting costs

Source: Canadian Apprenticeship Forum

# AJAC – from Concept to Design

**Created in 2008 out of industry concerns (union, non-union, IAMAW #751):**

- **Retiring** workforce,
- Increasing **skills gap**,
- Increased industry demand due to **global competition**,
- Rapidly **changing technology**

**Legislative task:** Develop a “21<sup>st</sup> Century” innovative state-wide apprenticeship training programs to address industry concerns

**Programs:** open to all aerospace and advanced manufacturing employers across Washington State

**Industry-driven** by locations and occupations

- Governed by Board of Directors (AMJTC) and a apprenticeship committee (AJAC) with equal representation of labor and management

# Meeting Employer Demand

## Employer Partnerships

- **Overall Structure:** incumbent worker apprenticeship program using dual model of training;
- **Occupations** are based on **employer demand by location** – for example, new **Industrial Manufacturing Technician (IMT)** program
- **Establish relationship** with industry employers:
  - Sign employers as Training Agent,
  - Assists with the **selection process** to enroll employees as apprentices,
  - Agree to **wage progressions**,
  - Provide **mentor training**,
  - Provide **On-the-Job Advisor** – review shop structure, rotations, mentor qualifications, reporting (American Apprenticeship Initiative Grant),
  - **95%** of employers pay for tuition/books or reimburse

# Building Demand

## Program Goal

- 400 active apprenticeships (Net, factoring in annual graduations, attrition)
- Statewide focus
- Multiple industry sectors – aerospace and advanced manufacturing

## Strategy – multi-tiered approach

- Direct engagement
- Employer roundtables
- Pre-apprenticeship (Manufacturing Academy)

## Tools

- Business Developers
- Marketing & Communications
- Data Systems – Salesforce and Apprentice Tracking System

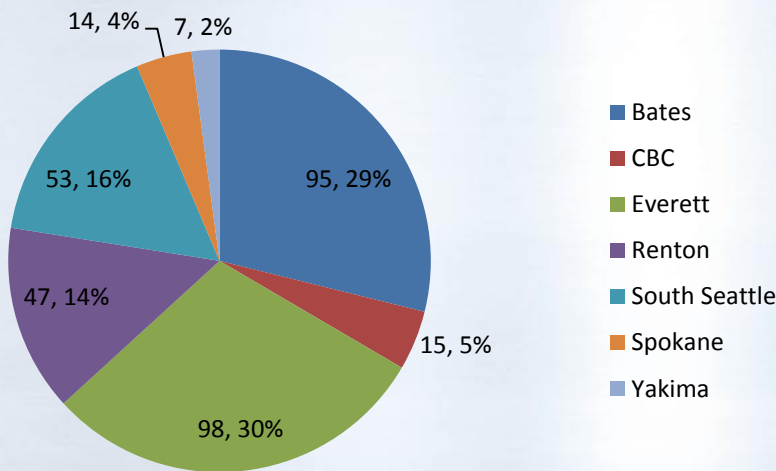


# Program Summary

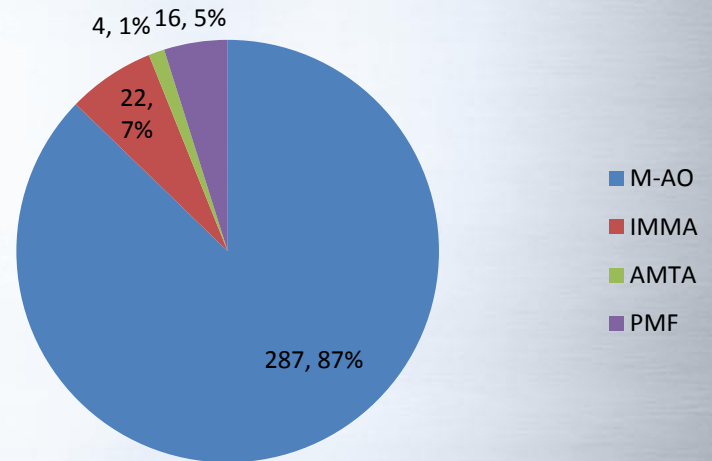
Annual Enrollment - Spring Quarter



# Program Summary



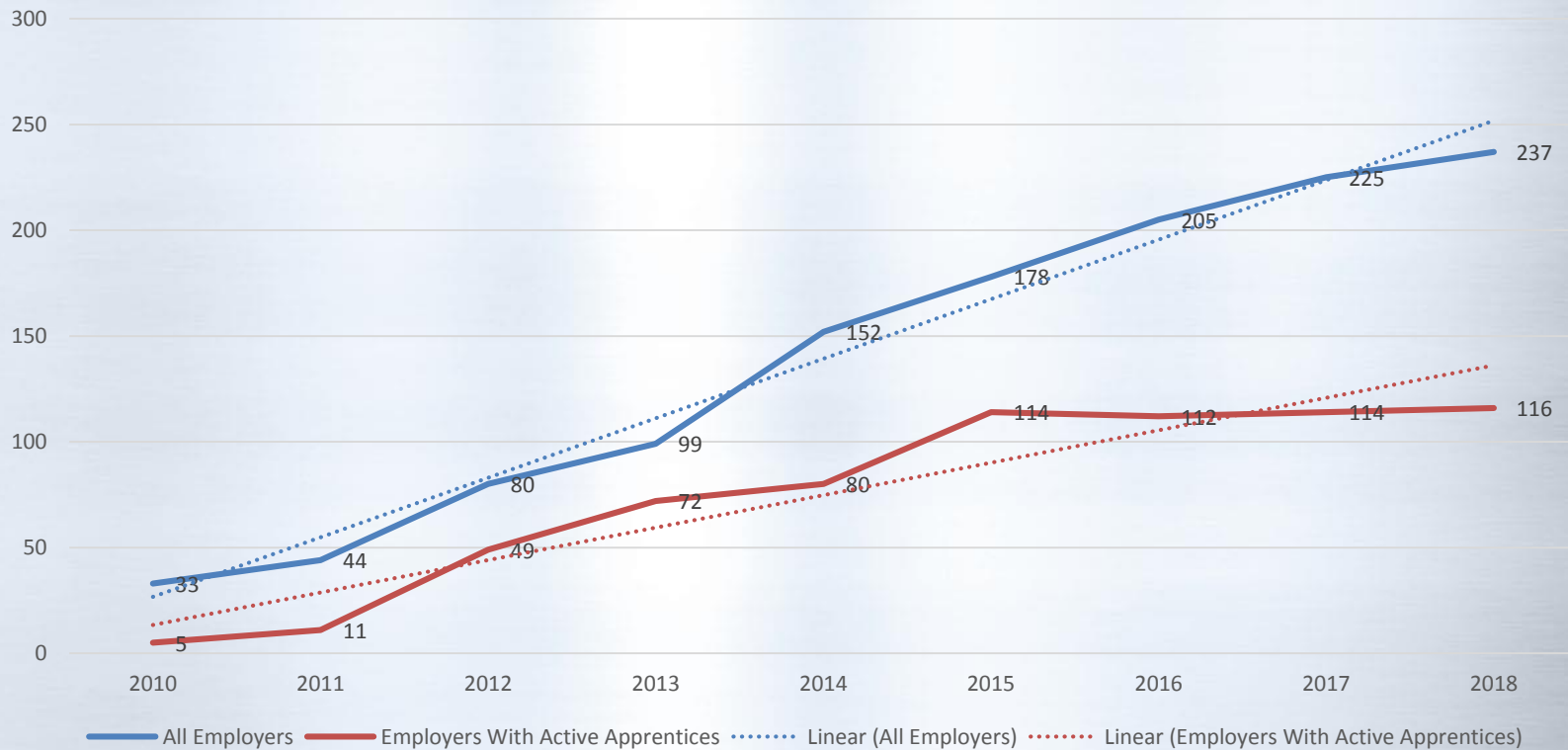
Current Apprentices by Campus



Current Apprentices by Program

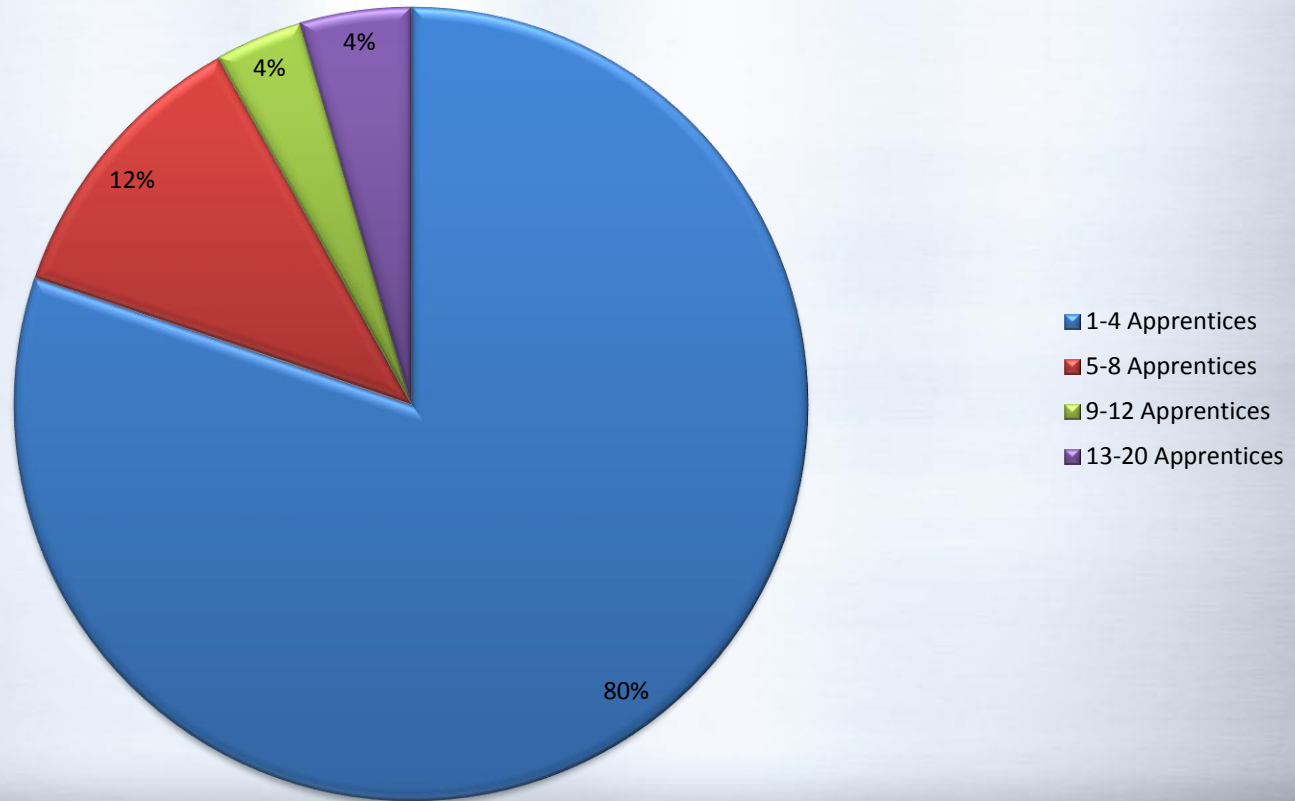
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AJAC Employer Participation

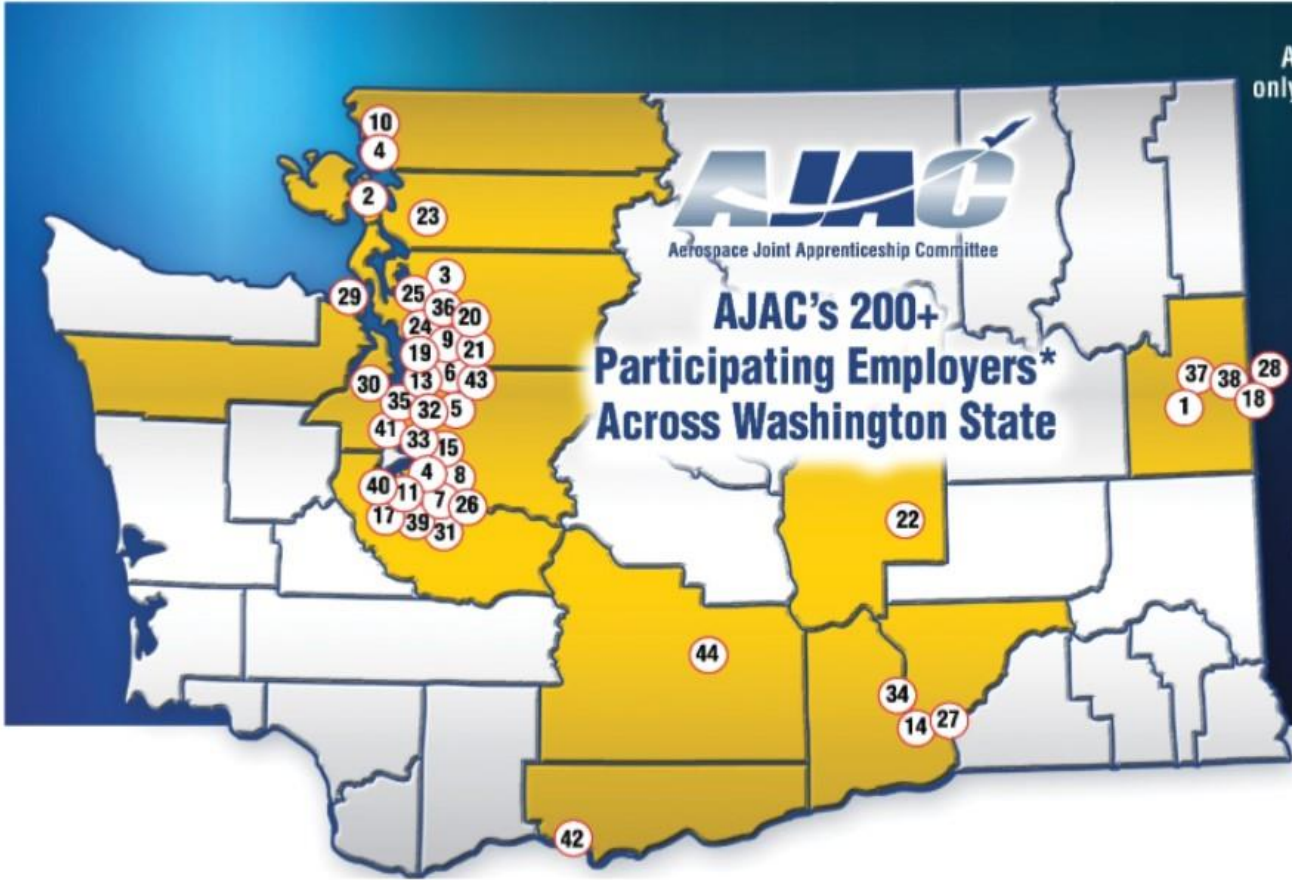


# Program Summary

## Employers by Number of Active Apprentices



# AJAC's 225+ Participating Employers



**AJAC**  
Aerospace Joint Apprenticeship Committee

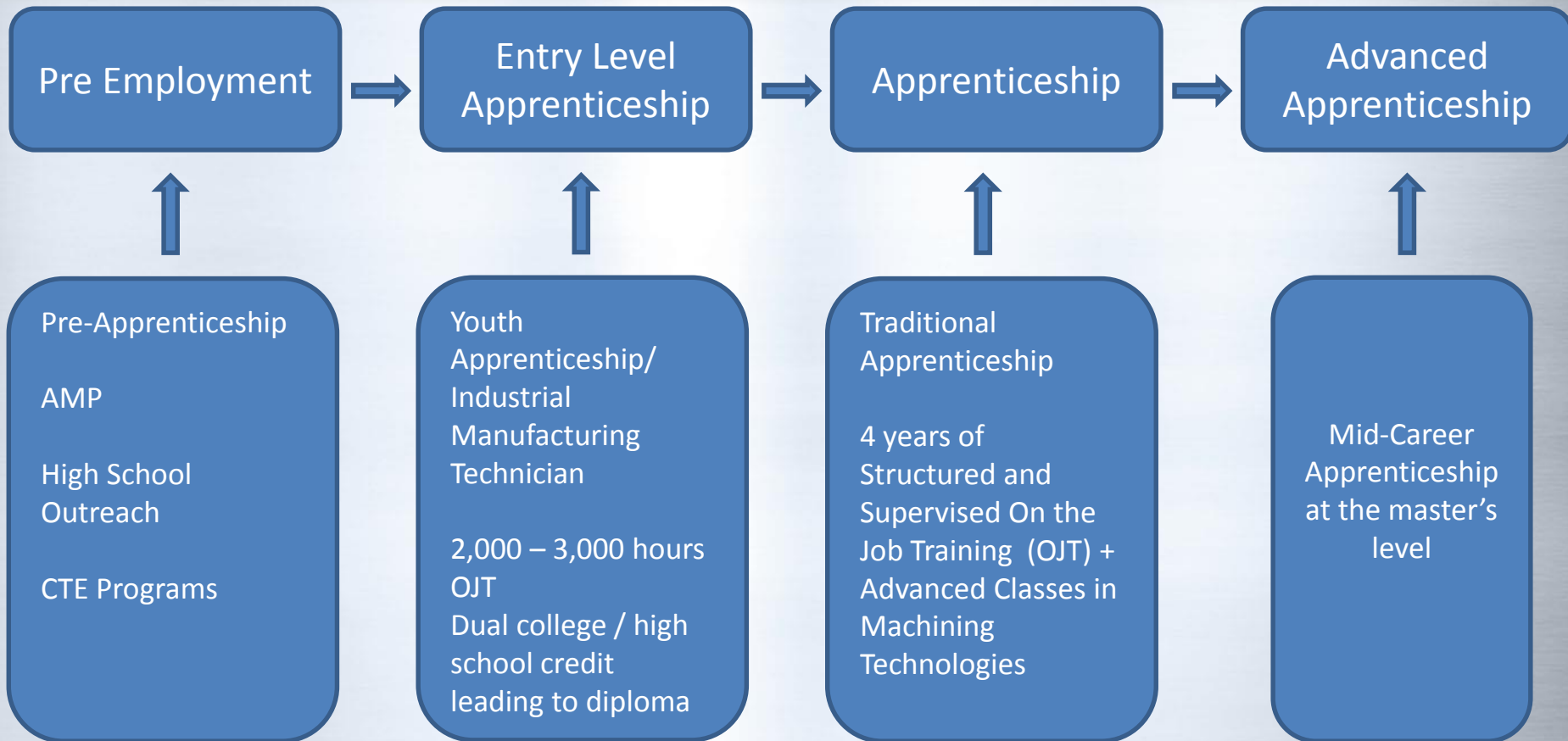
**AJAC's 200+ Participating Employers\* Across Washington State**

AJAC apprenticeships are only available to employees of these participating companies. For more information, contact AJAC at (206) 764-7940, [ajactraining.org](http://ajactraining.org) or [info@ajactraining.org](mailto:info@ajactraining.org)

It is the mission of AJAC that the training of apprentices shall be without discrimination based on race, sex, color, religion, national origin, age, disability, sexual orientation, veteran status or as otherwise specified by law.

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# Apprenticeship Pathway





# AJAC Apprenticeship Model

**93% of training time is On the Job (OJT)**

**7% in time in class**

**Comprehensive AJAC support services**

**Results:**

**Journey-level Certificate**

**Transferable college credit**

**Associate/Technical degrees and beyond**

# AJAC Apprenticeship Model: Instruction

## Related (classroom) instruction

- Technical instruction – minimum 144 hours per year
- Classes 4 hours, one night per week
- Accredited through Washington Community & Technical Colleges
  - Classes earn 5 college credits
- Tuition reduced 50% for the apprentice
  - Tuition reimbursement determined by employer's reimbursement policy



# AJAC Apprenticeship Model: OJT

## **Supervised:**

Apprentice works with mentor(s) throughout program

## **Structured:**

Employer provides apprentice with practical work experience in the skill areas required to learn their trade

Hour reporting through Apprentice Tracking System Online



# AJAC Apprenticeship Model

## AJAC state registered apprenticeship programs:

- Precision Machining (8,000 hours)
- Tool & Die Maker (10,000 hours)
- Industrial Maintenance Mechanic (8,000 hours)
- Precision Metal Fabrication (4,000 hours)
- Plastic Process Technician (8,000 hours)
- **NEW:** Industrial Manufacturing Technician (3,000 hours)
- **NEW:** Youth Apprenticeship (2,000 hours)

# Youth Apprenticeship

## **AJAC Registered Youth Apprenticeship:**

- Allows students as young as 16 to participate
- Production Technician – 2,000 hour apprenticeship
- Three models: In school, after school, out of school
- Minor work permit
- Higher education articulations and dual enrollment
- 16 current youth apprentices, additional 75 starting in Spring of 2018

# Manufacturing Prep

## Pre-Apprenticeship: Manufacturing Academy

- 9 – 11 week full time (40 hour per week) program, with college credit
- Approved by local manufacturers
- Navigations services both into training and out to work

## Advanced Manufacturing Prep (AMP)

- 2 day intensive orientation
- Overview of manufacturing, apprenticeship, worker rights, work readiness, assessments, drug screening, financial aid eligibility, advising

# Special Initiatives

- Mentor Training and Master Mentorship – AFL-CIO Working for America Institute
- Workforce Development Council WIOA funding – OJT and ITA supports
- College supports – Adult Basic Education and ESL supports
- New training center in Kent Valley manufacturing corridor
- Juvenile Rehabilitation Services
- Correctional Industries
- System integration across state agencies



# AJAC Program Stats

- 2014 – 2017 **served 717** apprentices
- **340** currently enrolled with **29 veterans**
- **\$17.40 average wage of 1<sup>st</sup> year apprentices**
- **\$25 – 27 hourly average wage of 4<sup>th</sup> year apprentices**
- **230+** employer partners
- **10** community/technical college partners
- **7 high schools/skill center partners**
- **50+** SME instructors
- **30+** classes held each quarter across WA state
- Training to **8\*** middle-skilled apprenticeship occupations



# Begin with the End in Mind



<https://www.youtube.com/watch?v=8yfd7YYxaXo>

## Direct Pipeline into Industry



[youtu.be/AqmLBE7apsI](https://youtu.be/AqmLBE7apsI)

