



Looking Back to Race Ahead

Panelists

Secretary Marcia Hultman, South Dakota Dept. of Labor and Regulation

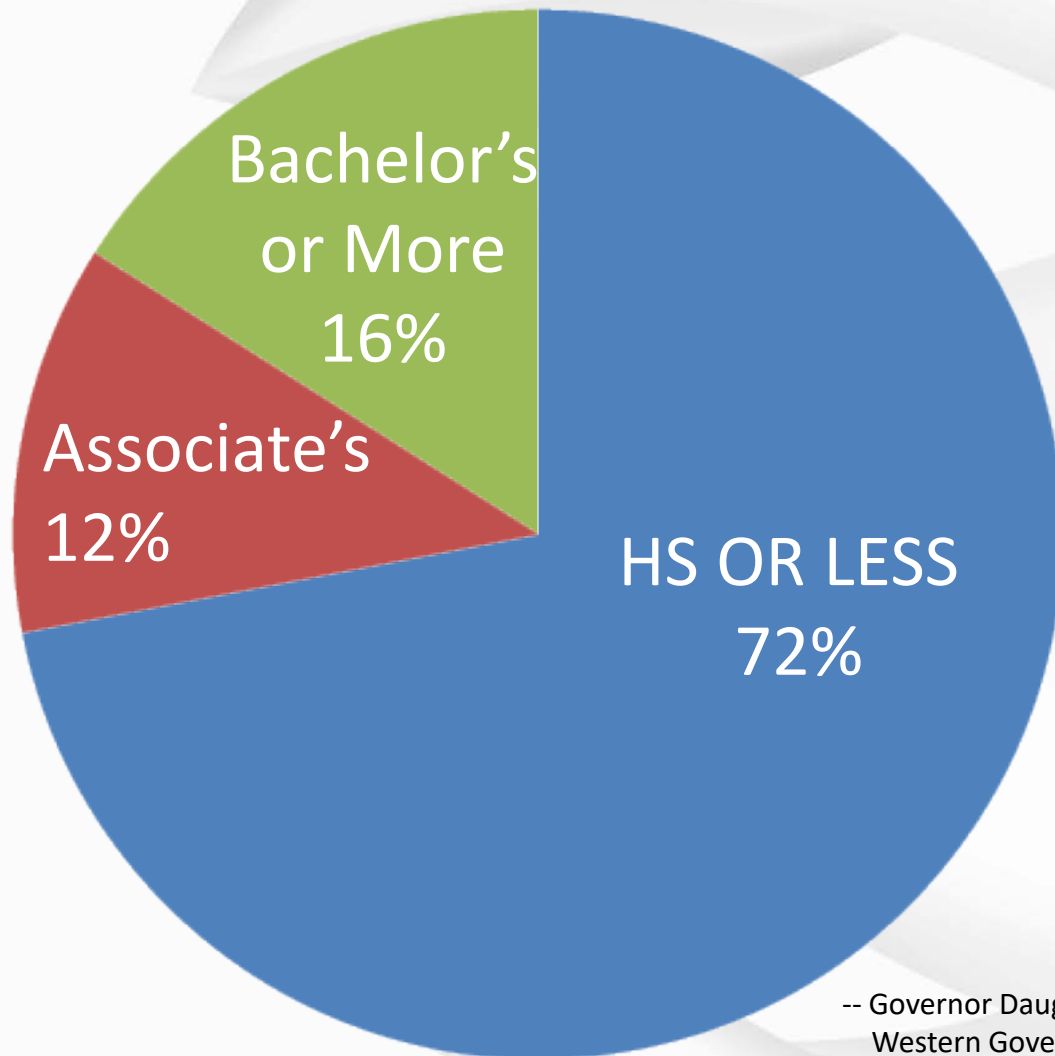
R. Joel Farrell, PhD, NCC, LPC -- Chief of Academic Analytics

Demetria “Lynn” Strickland, Executive Director, Aerospace Joint
Apprenticeship Committee (AJAC)

Moderator

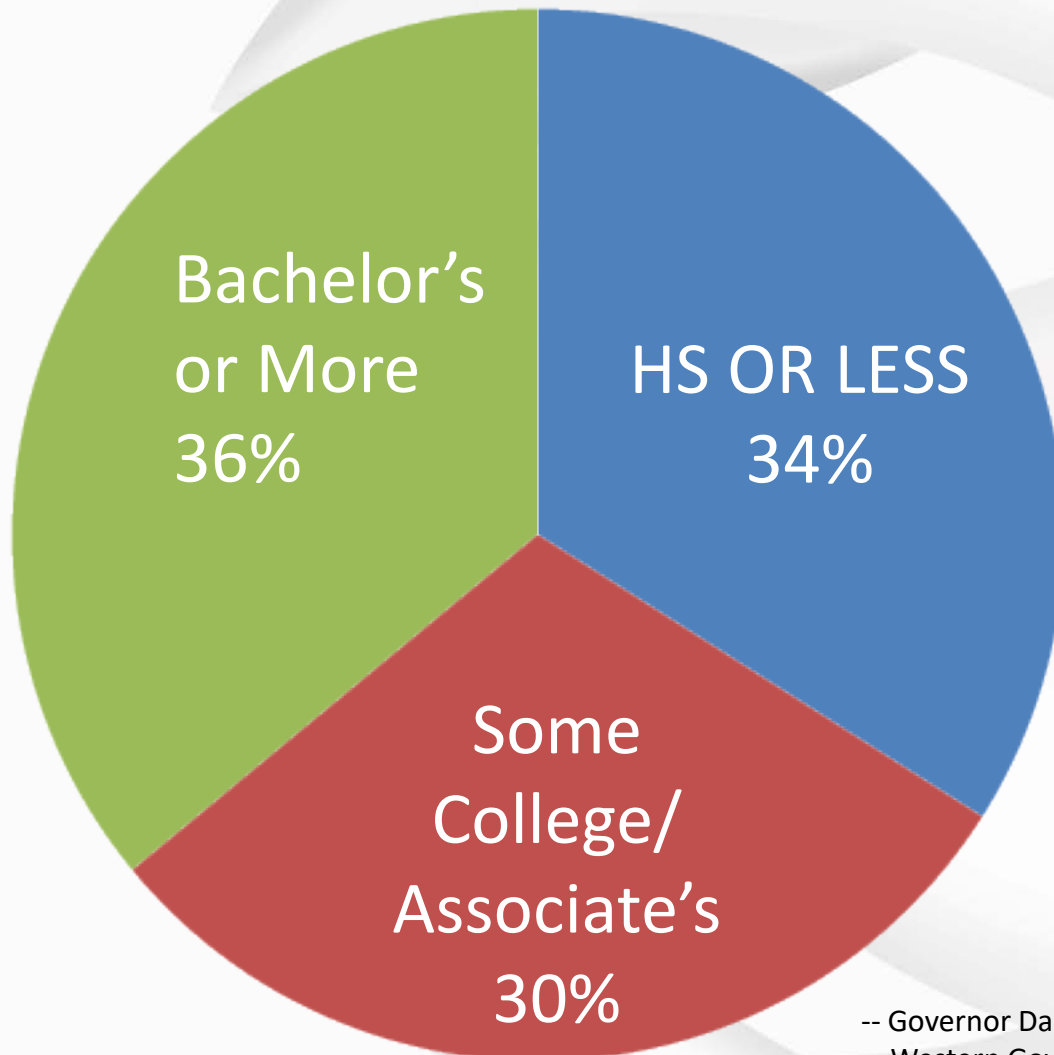
Michael D Cartney, President, Lake Area Technical Institute

1973



-- Governor Dugaard's
Western Governors' Association Presentation

2016



-- Governor Dugaard's
Western Governors' Association Presentation

The US economy has added...



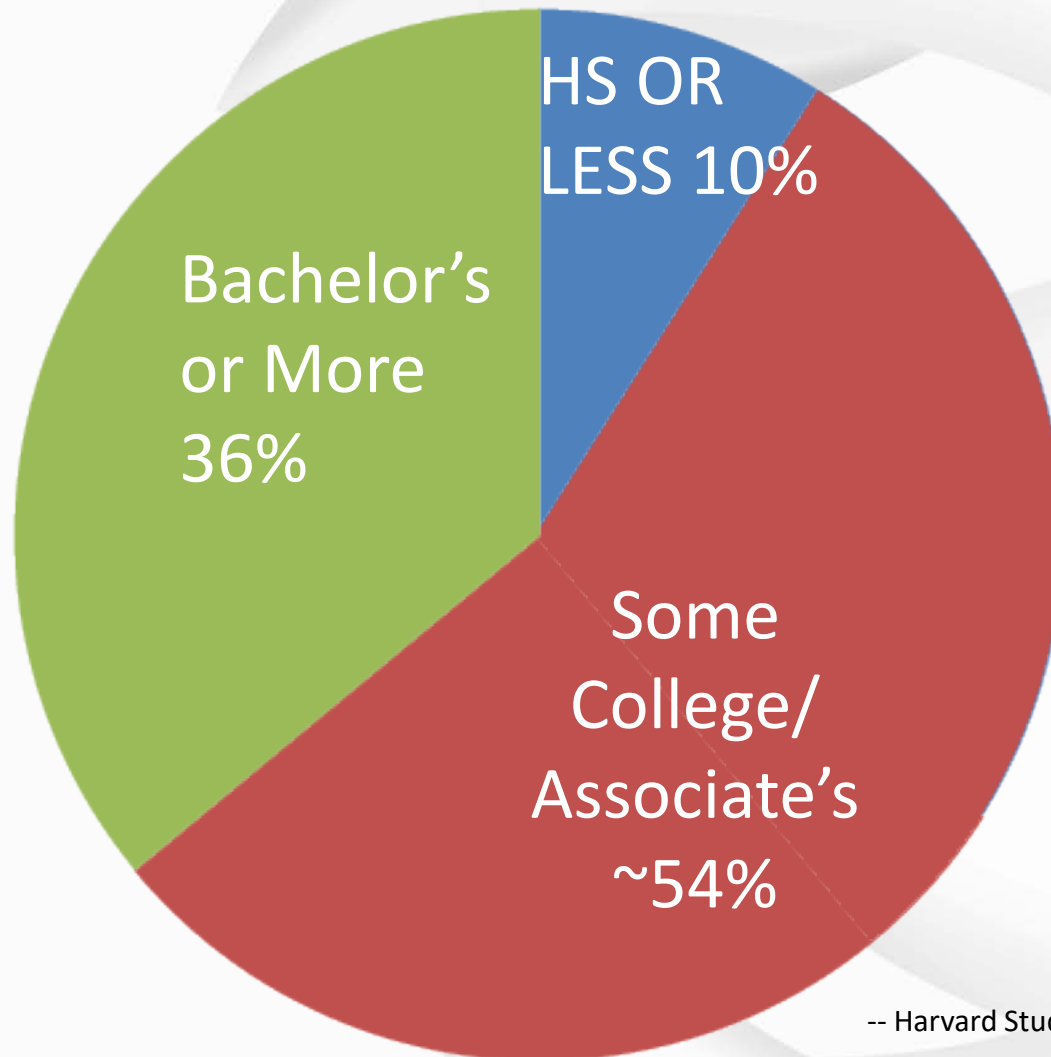
11.6 million jobs since the
recession bottomed out.

11.5 million (99% of them) have
gone to workers with at least some
college education

2016, Georgetown University Center on Education and the Workforce

-- Governor Dugaard's
Western Governors' Association Presentation

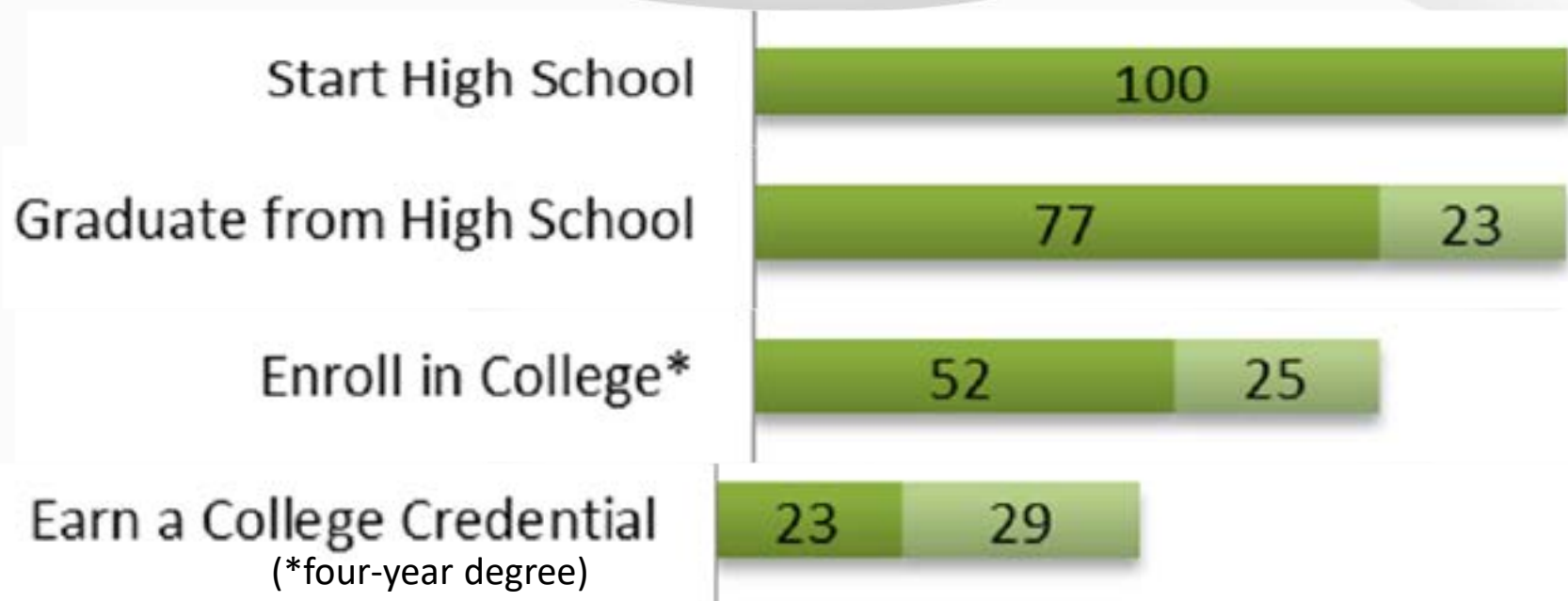
2030



-- Harvard Study

South Dakota

From 100 Ninth Graders....



-- Governor Dugaard's
Western Governors' Association Presentation

**What are we doing for the 77 who
did not get a Bachelor's?**





SOUTH DAKOTA
DEPT. OF **LABOR**
& **REGULATION**

Looking Back to Race Ahead

PRESENTER:
MARCIA HULTMAN

Youth in the Workforce

- Youth Participation Rate (ages 16 to 19)

	2005	2015
US	47.5%	37.8%
SD	61.3%	50.5%

- Enrolled in High School – 18%



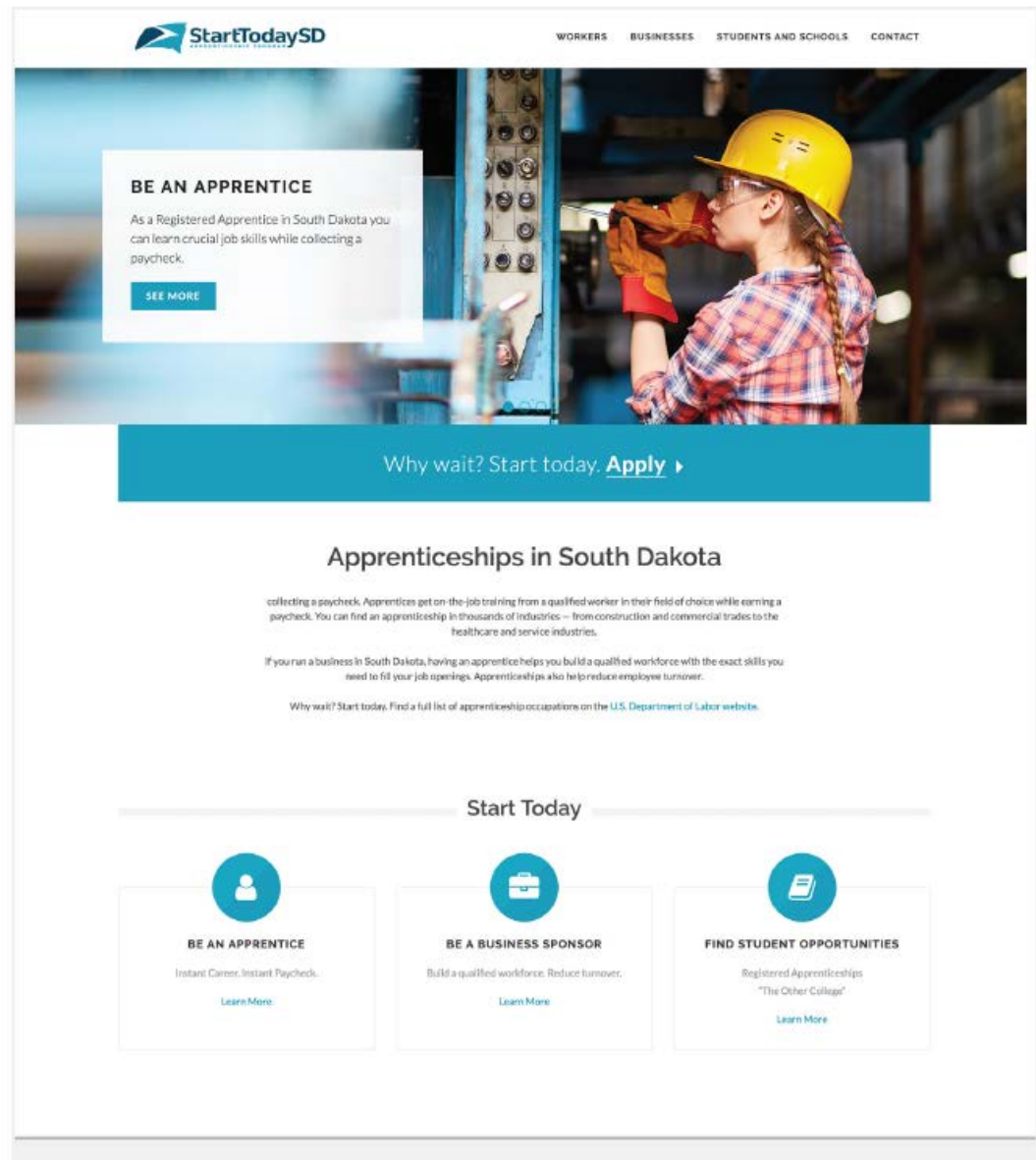
StartTodaySD

APPRENTICESHIP PROGRAM

- Goal: Increase # of Registered Apprentices
- Audience
 - Individuals
 - Businesses
 - Influencers
- Strategy: Mix of awareness & action-oriented tactics
- Execution: Leverage the distain of “waiting”

Tactics

- Traditional and
- Apprenticeship
- Microsite







Apprenticeship: The Foundation of Enlisted Education



R. Joel Farrell, PhD, NCC, LPC
Chief of Academic Analytics

The views expressed are those of the author and do not reflect the official policy or position of the Air University, the United States Air Force, the Department of Defense or the US Government.



Air University



- **Serves a total force of 61,254 Officers, 256,803 Enlisted, and 140,068 Civilians**
- **Offers degree programs (Associate through PhD), professional continuing education and professional military education to support USAF needs/requirements**
- **72 Applied Associate of Science (AAS) programs**
 - **71 for Enlisted member tied to career field**
 - **1 for Civilians (Air Force Leadership and Management)**
- **Enlisted AAS**
 - **Technical Training**
 - **Apprenticeship with On-the-Job Training**
 - **Enlisted Professional Military Education**



Technical Training Apprenticeship



- **Deliberate progression through increasing skill levels to develop:**
 - **Technical Expertise**
 - **Technical Skills**
 - **Leadership and Management Skills**
- **Assessed and Evaluated for technical competency and performance**
- **Skill Levels**
 - **Helper**
 - **Apprentice (Level 3)**
 - **Journeyman (Level 5)**
 - **Craftsman (Level 7)**
 - **Superintendent (Level 9)**



Future Continuum of Learning



- **Current model is a programmatic framework based on the industrial model of training and education**
 - Relies on fixed numbers of inputs (students) at specific times
 - Assumes all inputs start at novice level
 - Results in average of 5 to 7 years to complete AAS
- **Evolving Model**
 - Incorporate competency based placement/progression for technical training
 - Create progressive building blocks or “chunks” of education and training
 - Provide multiple delivery formats
 - On-Demand—When Airman wants for self
 - On-Command—When Airman needs for job
 - Foster earlier completion of AAS

Leading the Way in Aerospace and Advanced Manufacturing Training

Apprenticeship is Higher Education

Demetria “Lynn” Strickland
Executive Director



@ajactraining



/ajactraining



/ajactraining

WA State Aerospace Industry

- Over 1,400 aerospace and aerospace-related companies in WA state
- 136,100 employees – core industry and aerospace related industries
- Aerospace companies produced \$69.9 billion in business revenue while aerospace related companies produced \$10.7 billion totaling \$80.6 billion
- Aerospace companies paid \$10.1 billion in wages while aerospace related companies paid \$2.9 billion totaling \$13.0 billion in wages
- WA state accounts for 19.2% of the nation's aerospace jobs

1. CAI Community Attributes, Washington State Aerospace Economic Impacts 2016 Updates (October 2016)

National Industry Need

Advanced Manufacturing encompasses various industries to include: aerospace, agriculture, automotive, biomedical, food processing, manufacturing, space, etc.

- Over the next decade (2015-2025), approximately **3.5 million jobs** will need to be filled;
- **2.5 million** jobs due to aging workforce and over **700K** jobs due to business expansion with a projected **2 million not being filled due to skills gap**;
- 84% of employers agree there is a **talent shortage**;
- 82% of executives believe the **skills gap** will impact their ability to meet customer demand;
- Every manufacturing job creates another **2.5 new jobs** in local goods and services

1. Deloitte and Manufacturing Institute, *The skills gap in U.S. manufacturing 2015 and beyond* (2015)

History of AJAC

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

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

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

- **Programs:** open to all aerospace and advanced manufacturing employers across Washington State
- **Intentional connection** with local community and technical colleges
- **Industry-driven** by locations and occupations
- **Overall Structure:** **incumbent worker** apprenticeship program using **dual model** of training structure was selected;
- Joint governance with **equal representation** of labor and management on both Board of Directors (AMJTC) and apprenticeship committee (AJAC)

Why Apprenticeship

Why Apprenticeship?

To remain competitive and attract to attract and retain business, we need a skilled workforce and a robust workforce development system

- 34 Community/Technical Colleges in WA State
- 6 public colleges/universities and over 14 private colleges/universities
- Internal organizational training and multiple training organizations

Apprenticeship is a proven model of training that provides good ROI for the employer, community and apprentice

Apprenticeship has been termed “The Original 4 Year Degree” and “The Earn While You Learn” model of training

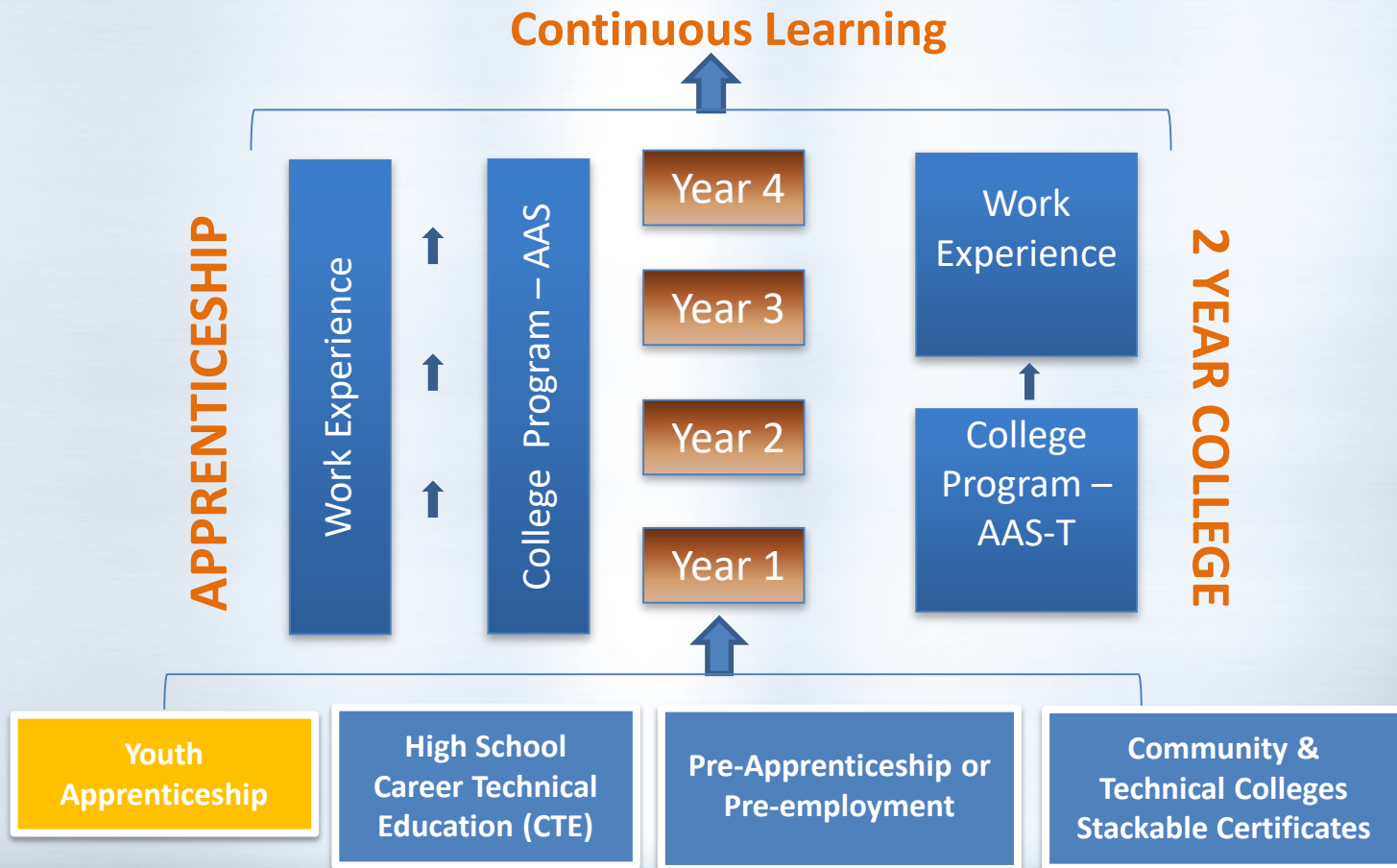
Apprenticeship has a good ROI for employers, community and apprentices

21st Century Apprenticeship

Community and Technical College Partnerships

- Intentional partnerships with **local community/technical colleges** for:
 - Review of industry developed curriculum and awards **college credit** for classroom training and some work-based OJT;
 - **50% reduced tuition** for apprentices,
 - **Shared use** of training facilities,
 - Trust or college provided instruction,
 - **Apprentices are college students**
 - Earn a **portable nationally recognized industry credential** and an opportunity for apprentices to earn a **2-year degree** by taking 3-4 general education courses with **ZERO college debt**

Apprenticeship is Higher Education



Increased Apprenticeship Interest

- Obama Administration provided \$95 million to expand apprenticeship into non-traditional industries
- Current administration proposing \$200 million to expand apprenticeships
- New interest of apprenticeship model in non-traditional industries provides an **opportunity** for the apprenticeship and community/technical college communities with interest in:
 - Healthcare
 - IT
 - Hospitality
 - Finance
 - Insurance

Pre-Apprenticeship Pipeline.

- 10 Weeks to include embedded essential skills & 360 hours of classroom and hands-on training
- Participants earn 17-32 **college credits**;
- Provide a **diverse pipeline** into of entry-level skilled workers into industry to **fill open positions** with the eventual goal of **upskilling into apprenticeship** to further career and educational pathway
- Program statistics:
 - 85% completion
 - 20% women
 - 53% minority
 - 30% veterans
 - 76% job placement
 - 80% prequalified for AJAC apprenticeship

10-15 Year “Drift”

Apprenticeship provides an opportunity to engage individuals who cannot or choose not to enter into higher education and still be a productive part of the workforce?

- 29 = Average age of community/technical college student in WA State¹
- 30 = Average age of apprentices registered through State apprenticeship programs (Labor & Industries)¹
- 33 = Average age of AJAC apprentices

Youth Apprenticeship is a “tool” that can be used to lower the average ages, provide a direct pipeline into industry with a more experienced workforce out of high school and address the 10-15 year drift.



Structure of Youth Apprenticeship?

A combination of (7%) classroom and (93%) paid and structured on the job training

Classroom Instruction (RSI)

- OSHA 10 training
- 1st Aid/CPR training
- Manufacturing safety
- 150 RSI hours
- 1-2 high school credits
- 15 college credits

Structured On-The Job Training

- 2,000 hours hands-on experience
- 1:1 assigned mentored
- Job rotation
- Competency-based assessments with wage increases
- **Earn approximately \$28,000** over the course of apprenticeship

Portable, Nationally Recognized Industry Credential upon completion!





Why Youth Apprenticeship?

- Provide a **direct pathway** into industry with access to **family wage careers** offering continued educational and career pathways
- Encourage youth to **explore and experience** careers within industry and understand the educational and technical skills required to be successful in their chosen career,
- **Engage** youth to complete high school and provide career options for those who cannot or choose not to enter postsecondary education,
- **Eliminate** the “**stigma**” surrounding non 4-year degree careers,
- Provide **access and opportunity** to as many youth to include traditionally underrepresented populations (students of color, young women, youth in rural areas,
- Reduce/Eliminate the “**10-15 Year Drift**”





Youth Apprenticeship – One Year

Later

- **6 college** partnerships to support youth apprenticeship, granting college credits.
- **8 School Districts** in the state are participating in youth apprenticeship starting in 2018/2019 school year with **4 new school districts** anticipated in 2019/2020.
- **11 Employers** have active youth apprentices working on their shop floor with **36 Prospective employers** interviewing prospective youth apprentices to hire for 2018/2019 school year.
- **12 youth apprentices** with a projection of **55-75** youth apprentices the 2nd cohort.
- **2,500 hours** of college level instruction provided to youth apprentices.
- Over **10,000 Hours** of on-the-job training has been conducted by youth apprentices to date and over **\$100,000** in **earned wages**.



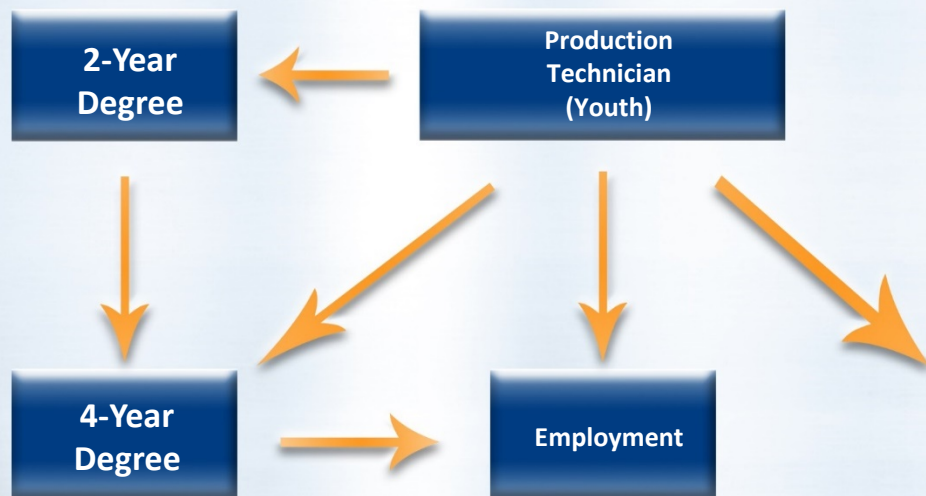
Direct Pipeline into Industry



youtu.be/AqmLBE7apsI



Youth Apprenticeship Pathways



Earn Credit for Previous Education or Experience in one of the following industry occupations

- Machinist (Aircraft Oriented)
- Tool & Die Maker
- Industrial Maintenance Technician
- Precision Metal Fabricator
- Plastic Process Technician

18 Youth Apprentices
11 participating employers
2 participating community/technical colleges



AJAC By the Numbers

- 2014 – 2018 **served 954** apprentices with **418 new** apprentices signed
- **342 active apprentices**
- **\$17.40 average wage of 1st year apprentices**
- **\$22.76 average wage of 4th year apprentices**
- **230+** employer partners
- **11** community/technical college partners
- **7** school district MOU/partnerships
- **50+** SME instructors
- **30+** classes held each quarter across WA state
- Training to **8*** middle-skilled apprenticeship occupations



AJAC By the Numbers

Underrepresented populations

- **Orion Industries:** 20 total; 8 active with 4 pending graduation; 7 graduates
- **Skills, Inc.:** 25 total; 11 active with 2 pending graduation; 5 graduates
- **Lighthouse For The Blind:** 11 total; 5 active; 3 graduates
- **Pioneer Human Services Programs:** 26 total, 14 active with 1 pending graduation; 1 graduate
 - Adult Pre-Apprenticeship since 2014
 - Youth Pre-Apprenticeship since 2014
 - Adult Apprenticeship since 2012
- Pending relationship with **Correctional Industries**
- Pending direct relationship with **Juvenile Rehabilitate Administrations (JRA)**
- **Partnership in Employment (PIE)** – non-profit CBO with immigrant population
- Informal relationship with **Apprenticeship & Non-Traditional Employment for Women (ANEW)**



Questions?



Thank You!