

VIGOR's Harbor Island Training Center

Classes provide needed skills and assistance:

- Two 12-week certificate programs, 24 weeks total
- Daytime classes teach core manufacturing skills including welding, blueprint reading, fabrication, applied math, & safety procedures – both hands-on training & classroom instruction
- Students also get counseling and guidance to help w/transition; some students graduate early into employment
- April 2015 expanded w/10-week evening maritime welding classes in Aluminum and Advanced Pipe to increase and diversify welder skills to match growing industry demands

Success leads to family-wage jobs in and beyond maritime:

- 81% of daytime graduates are employed; 9% in apprenticeships; many graduates in advanced training
- Many at Vigor & other maritime companies (Foss, Kvichak, Global Flagship, Puglia Shipyards, S3 Marine)
- Some at other manufacturers (Creo Industrial Arts, Genie Industries, Nucor Steel, Inline Design, Five Star Metals, Duwamish Industrial Welding)
- Graduates generally emerge at associate level making \$20-25/hour plus full benefits
- At Vigor workers make \$50-75k/year w/medical, dental, vision, life, disability, 401k and/or pension, vacation & holidays

Clear need for workers & expanded program:

- Quality craft workers hard to find – marine welders, electricians, machinists, pipefitters
- Nearly 20% of Vigor workforce will reach retirement age within 10 years, taking decades of maritime experience with them
- Number of people entering industry also decreasing

Students embrace program:

- As of Spring 2016, 120 students have completed the daytime program with 88% completion rate
- Generally 17-21 students/class; 27% minority, 12% women, 18% veterans

Workforce development provides multiple benefits:

- Trainees gain skills and confidence needed to land family-wage industrial jobs
- Communities benefit with residents employed in well-paid jobs
- Region and industry get well-trained workforce needed to remain competitive

Effective partnership with South Seattle College:

- **Vigor** built 8,000-square foot Training Center at Harbor Island shipyard, outfitted it with weld booths, computer lab, dedicated tool room, machining equipment. Vigor also pays part of instructor's salary; provides scrap steel & periodic additional support w/equipment, facility upgrades including recent 2,000sf addition
- **South Seattle College** developed a 6-month welding intensive curriculum, leases space, pays main teacher salary & benefits, provides program communication & enrollment support, works with grants, etc.
- **Start:** First class June 2013

Additional partners demonstrate broad support:

- State of Washington funding to SSC
- Pipefitters Union donated new welding equipment
- Workforce Development Council of Seattle-King County provided tuition and tools direct to students
- Community-based organizations such as Seattle Jobs Initiative, Pacific Associates, TRAC Associates and King County have provided support and assistance for students, including equipment, tools, transportation and other emergency needs

Workforce development provides multiple benefits:

- Trainees gain skills and confidence needed to land family-wage industrial jobs
- Communities benefit with residents employed in well-paid jobs
- Region and industry get well-trained workforce needed to remain competitive

Other Vigor workforce training programs: Portland since 2008, Ketchikan since 2013

For more information on the Harbor Island Training Center, please visit

<http://www.southseattle.edu/harbor-island-training-center/>

Other resources:

- Youth Maritime Training Association ***<http://ymta.net/>***
- Post-Secondary Programs ***<http://marinecenterofexcellence.com/training-careers/marine-manufacturing-technology-and-related-programs/>***

Career Connect Washington: Strategic Plan

STEM Education Innovation Alliance

BAIN & COMPANY 

Significant gap between supply and demand of skilled workers in Washington – and a large opportunity for Career Connect WA to fill it



**MANY EMPLOYERS
SEEKING
SKILLED LABOR**

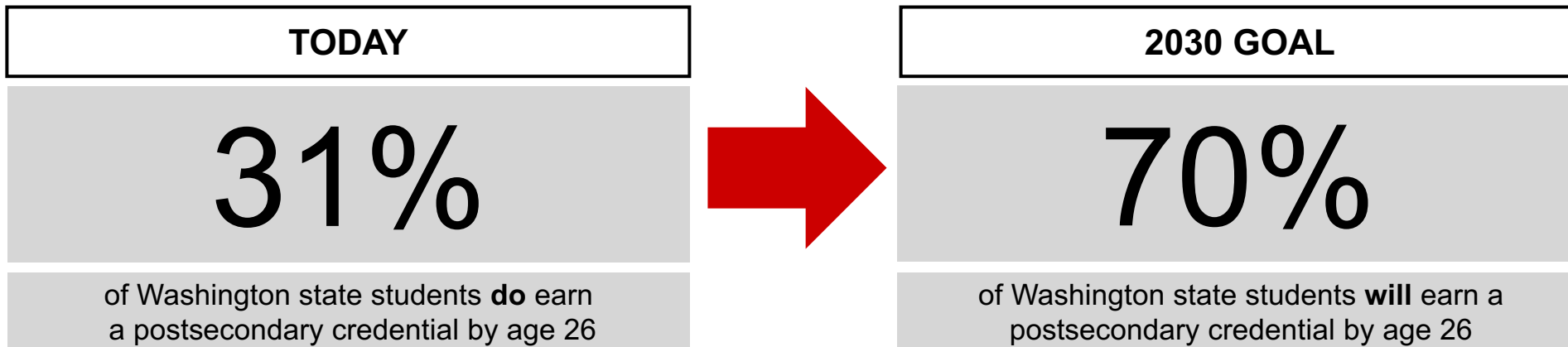
740,000 job openings expected in WA in next five years;
70% will require **postsecondary credentials**



**FEW GRADUATES
WITH RIGHT
SKILL SET**

Only **31%** of WA high school students earn a
postsecondary credential

OPPORTUNITY FOR CAREER CONNECTED LEARNING IN WASHINGTON:



Context for our efforts: Success for this effort depends on a close partnership between business, labor, government, and education stakeholders across the state

Project leadership – Maud Daudon
Project management / coordination – Marc Casale

Business and Philanthropy Leadership Committee

Industry Sector Leaders
 Ben Bagherpour, Hans Bishop, Ray Conner, David D'Hondt, Perry England, Tim Engle, Scott Morris, Susan Mullaney, Brad Smith, Brad Tilden, Ardine Williams, John Hurd

Funders
ballmer GROUP
 James and Judy K. Dimon Foundation

BILL & MELINDA GATES foundation
Microsoft
Bloomberg Philanthropies

Industry Association Leaders


LIFE SCIENCE WASHINGTON



Legislative Leadership Group



Labor Leadership Group



WASHINGTON BUILDING TRADES
 + others not listed

Intermediaries and Experts
 (e.g., Road Map Project, Suzi and Eric LeVine)

- Industry Sector Groups (incl. employers, labor, etc)**
- Healthcare
 - IT
 - Manufacturing
 - Agriculture
 - Maritime
 - Life Sciences
 - Utility
 - Aerospace
 - Construction

Education and Government Leadership Group—led by John Aultman, Kate Davis, and WA Legislature



Strategic Planning



National / Regional Expertise



Communications



Regional Working Groups (e.g., WA STEM networks, regional workforce development)



+ others not listed

To address this opportunity, there are many career-connected learning efforts already underway in Washington

/ NOT EXHAUSTIVE



seattle metropolitan chamber of commerce



Deep Dive: Registered Apprenticeship

/ PRELIMINARY / EXAMPLE

Registered Apprenticeships are federally and state-approved programs that provide workers with skills required to meet employer needs, yielding a credential, training, and work experience. Upon program completion, workers are competitive candidates for employment and have been working in the field for several years.

Criteria

On-the-job experience

- 2K-10K hours
- At employer site
- Paid for work hours
- Dedicated mentor

Classroom learning

- 144 hours+ each year (per every 2K hours OJT)
- In-class instruction up-to-date with industry needs

High-opportunity jobs

- Jobs are recognized and valued throughout an industry
- Highly skilled occupations

Credentials

- Trade certification (may be stackable)

Funding sources

- Apprentices, Employers, State operating funds (via CTCs)

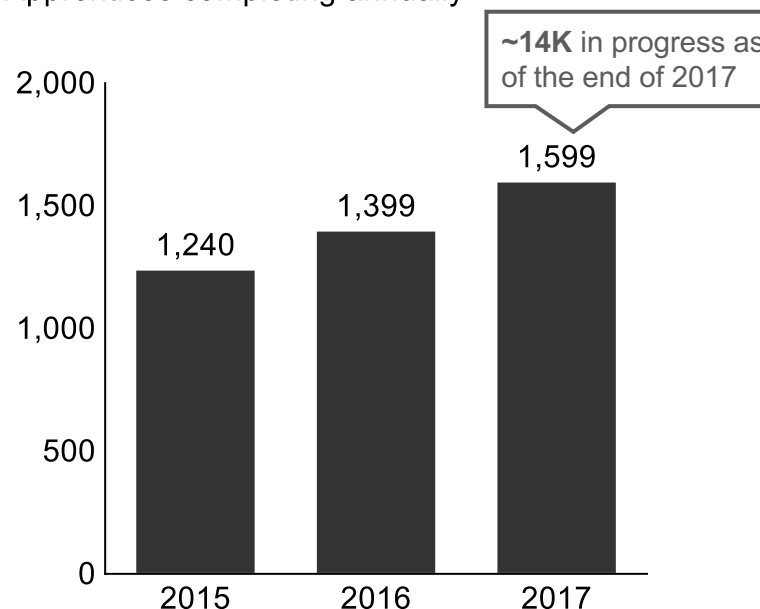
Governing Bodies



Current WA programs

- **Top occupations (~60% of registrations)** are Fire Fighters, Carpenters, Laborers, Electricians, Ironworkers, Drywall installers, Sprinkler fitters, Roofers, Tree trimmers

Apprentices completing annually



What we've heard

"[Being an apprentice] is life-changing for me. This is something that I have a strong passion for and I can easily do this for the rest of my life if need be. I'm having a blast with this."

Student, IT Apprentice

*"Apprenticeships provide important skills but it's a complicated system and can be difficult for employers, educators, and young adults to opt in. The holy grail is to set up something for apprenticeships that is **simple and widespread.**"*

Leader, Education

*"There are **preconceived notions about apprenticeships and labor unions** – not all apprenticeship programs are connected to a union, but many are."*

Leader, Industry Associations

Source: <https://www.lni.wa.gov/TradesLicensing/Apprenticeship/>; Apprenti website; WSATC quarterly reports; Business and Philanthropy Leadership interviews

Although Washington is a leader in career-connected learning, there are opportunities to improve outcomes overall

There is much to be excited about in Washington...

Variety of programs

- Robust apprenticeship system; dozens of individual programs serving a wide range of needs

Many young adults served

- Thousands of individuals served by programs today

Engaged, motivated stakeholders

- Multiple organizations and individuals excited to contribute

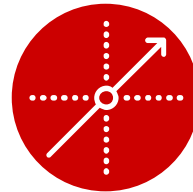
Funding progress

- Legislation, RFP processes already in place

...but we have opportunities to improve



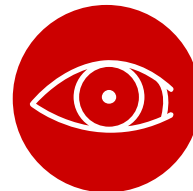
- **Vision:** Our stakeholders are not aligned on (or collectively working toward) a shared, well-understood, long-term vision



- **Scale:** There are aspects of the current career-connected learning ecosystem preventing us from reaching more young adults / families / employers

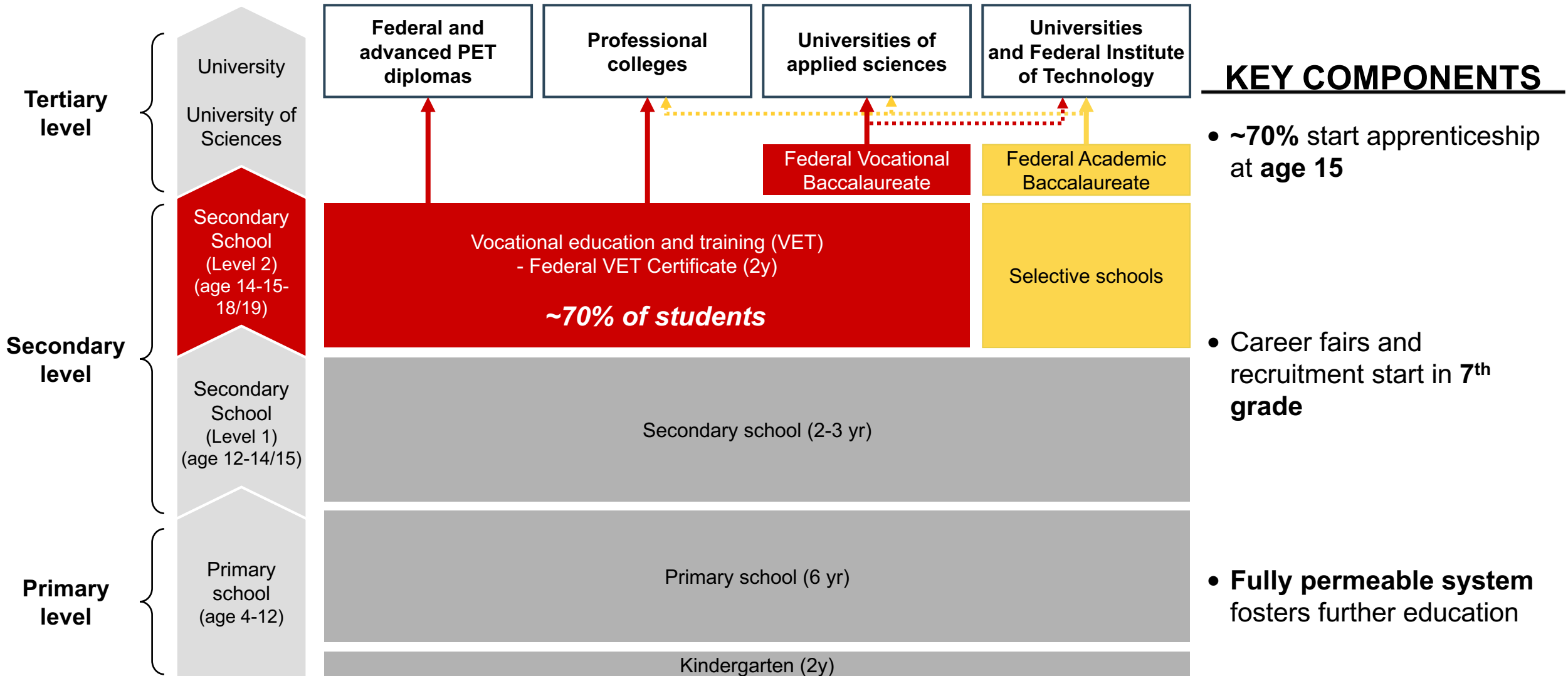


- **Coordination:** We lack coordination across programs, at regional and state level, to make career-connected learning more effective in WA



- **Perception:** There are cultural barriers preventing further adoption of career-connected learning

A full-potential example: Swiss apprenticeship model has equalized unemployment rates for youth and general population (~3.1%)



Source: Graphic: SFS Group; Data: Die Lage auf dem Arbeitsmarkt – Swiss government September 2017 report

We will create 6 key deliverables that will enable implementation of a system of career-connected education across Washington



10-year program vision

Student offering, career/ed pathways, % WA young adults enrolled, prioritized schools/districts, employer offering, prioritized industries



Detailed system design

Identifying key tensions / tradeoffs, ways of integrating with existing programs, and target populations for both pilot and end-state phases



10-year growth plan

Initiatives, owners, phasing, costs, milestones, and tracking metrics



Funding model

Including both philanthropy and self-funding



Governance model

to be accountable for the rollout and realization of 10-year vision



Engagement and communications plan

Including key actors who need to commit and support the system

Our timeless vision for career-connected learning in Washington

/ DRAFT



Every young adult in Washington will have **multiple pathways toward economic self-sufficiency**, strengthened by a **comprehensive state-wide system for career-connected learning**.

Timeless articulation of principles, values, and core capabilities

- **Better outcomes for young adults:** Every young adult will have agency and support to choose from a suite of pathways to post-secondary credentials and high-potential careers, including but not limited to 4-year college, and with equity of opportunity for all demographics

Young adults will...

- be academically prepared and work-ready
- be supported and guided in making choices about their education and careers
- have meaningful and engaging learning experiences
- complete those experiences
- gain valuable credentials for high-opportunity careers
- move forward on their path toward careers and / or further education.

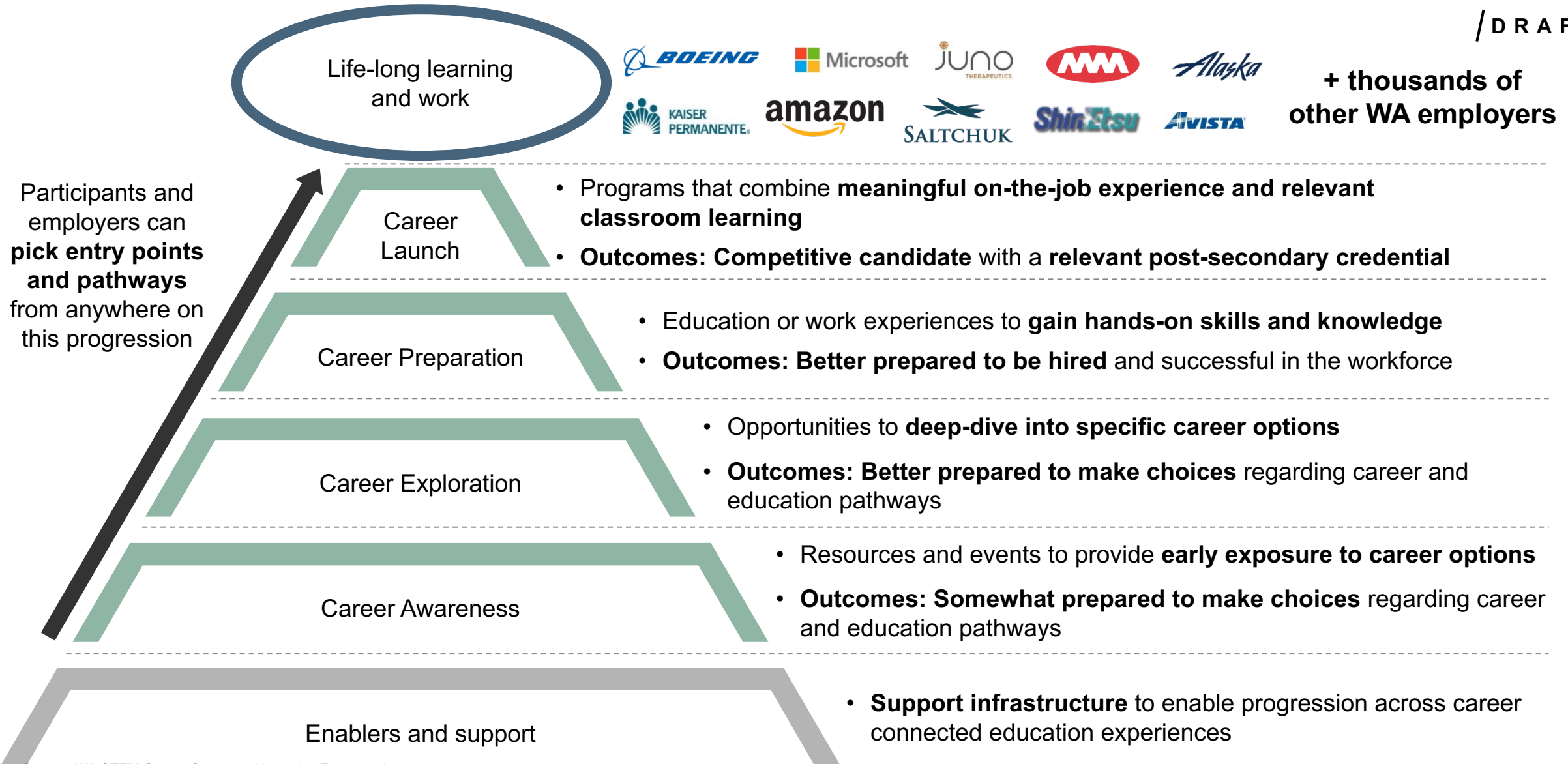
- **Better outcomes for employers:** Improve talent pipeline with a deeper and more diverse pool of local talent, who are work-ready and trained with relevant career skills

Employers will...

- have easy, accessible engagement in career-connected learning efforts
- Increase / expand sponsorship of young adults in career-connected learning
- have access to talented candidates that are prepared and trained to fill workforce gaps
- improve retention of that talent over time
- have a workforce of life-long learners, passionate about their career choices
- be well positioned to upskill workforce to meet changing industry needs

Career-connected learning is a range of different experiences, all moving young adults toward lifelong learning and work

/ DRAFT



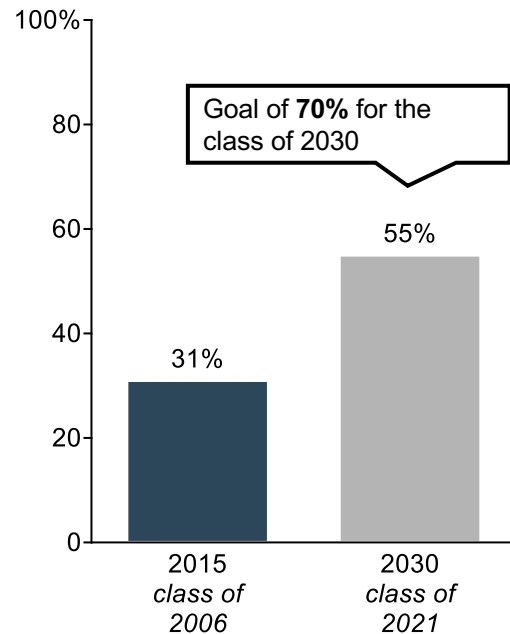
Source: WA STEM Career Connected Learning Framework

We will know we are successful when Washington improves across 4 key metrics

/ ILLUSTRATIVE

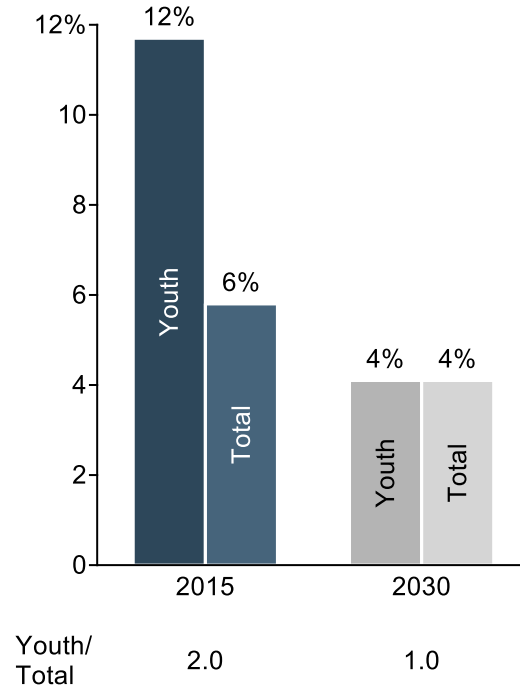
Increased postsecondary credential attainment...

% WA high school students who earn a postsecondary credential by age 26



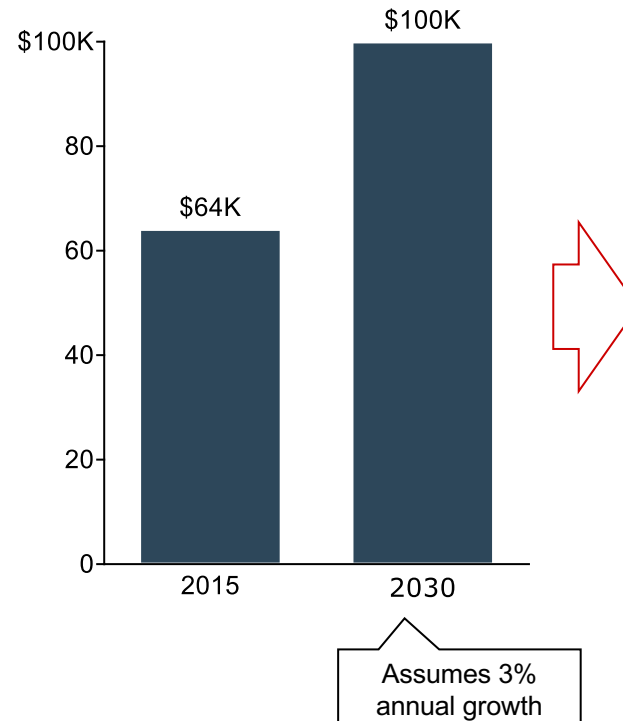
...increased youth employment...

WA unemployment rate



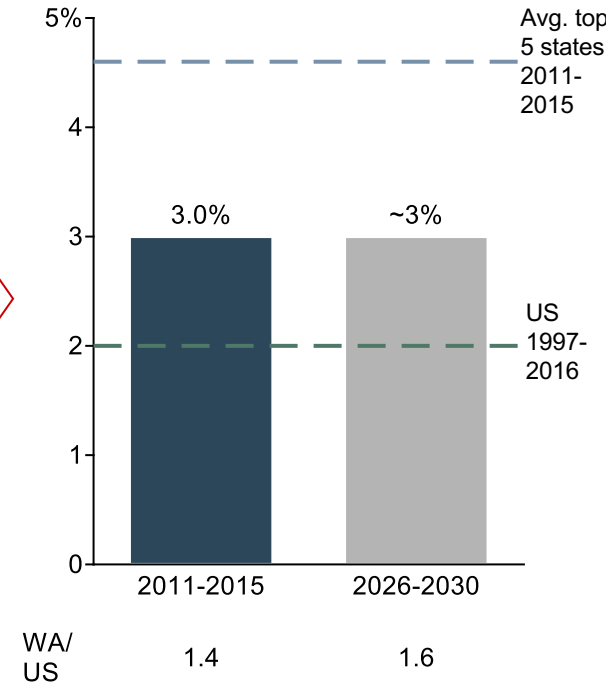
...and increased economic mobility...

WA Median Household Income



...will all drive economic prosperity in Washington

WA 5 year real GDP CAGR



Note: Assumes both youth (16-24) and WA total unemployment reach US average unemployment (4.1%); Assumes US 5 year real GDP CAGR of 2% from 2026-2030; Assumes top quartile states on average ~1.5X US 5 year real GDP CAGR based on top quartile states for 2011-2015

Source: WA Roundtables Pathway to Great Jobs in Washington State; Bureau of Economic Analysis; Bureau of Labor Statistics; U.S. Census Bureau

How can you engage with Career Connect WA State System design

We want to hear your voice during the system design process

- Drop us a note anytime at info@careerconnectwa.org and sign-up for our webinars

Help us identify systemic barriers and opportunities you see

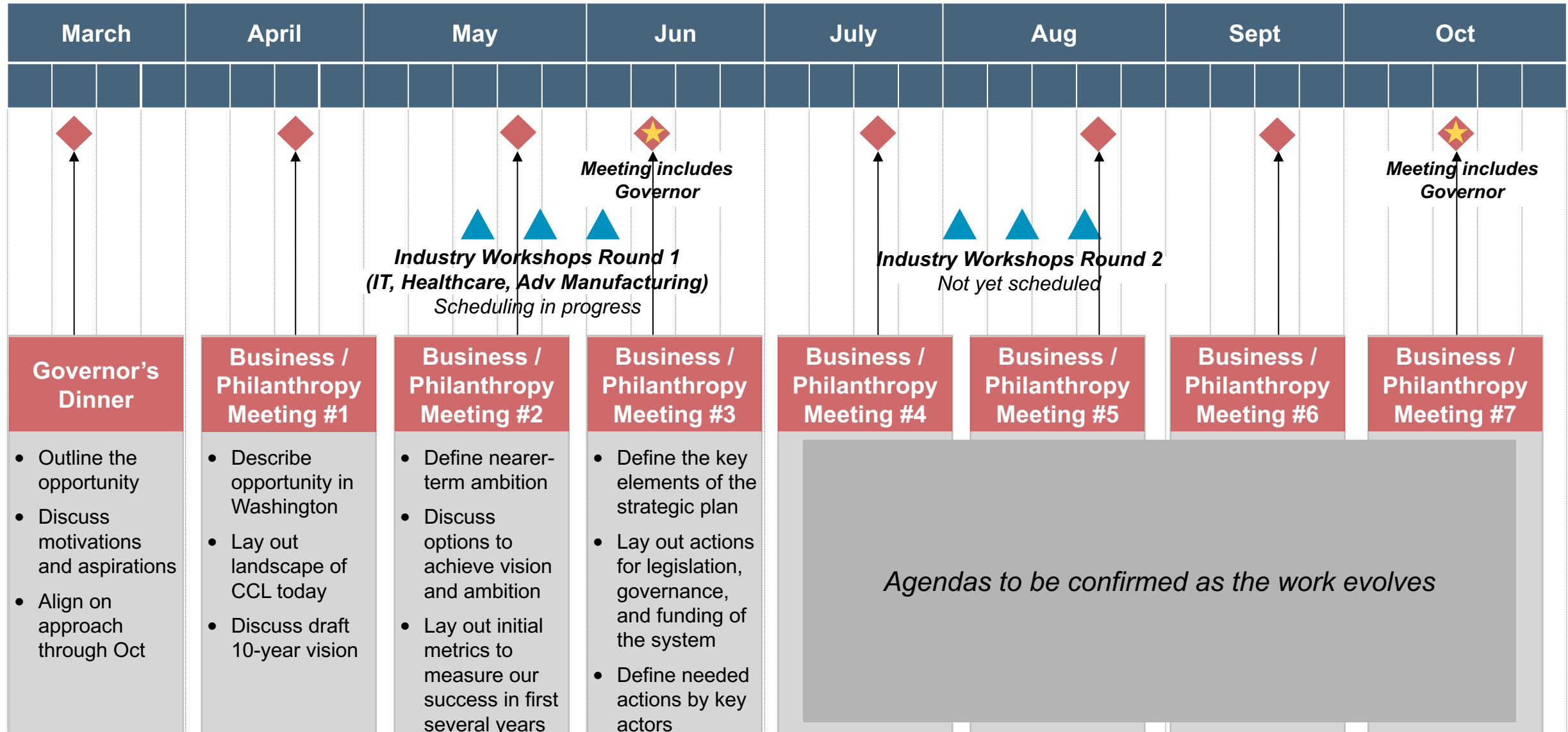
- Help us understand policy and procedural challenges (e.g. funding disincentives)
- Help us understand tools that are already in place to support the system (e.g. Running Start for dual credit)

Help us understand how to grow Career Connected Learning experiences

- How can we grow and diversify registered apprenticeships?
- How can we work with employers to create other high-quality Career Connected Learning experience?

Backup

Context for our efforts: The Business and Philanthropy Leadership Committee for the system design meets monthly



Executive summary – where we stand now

Opportunity

- **Washington is growing GDP >3% per year**, but our **young adults are not accessing economically self-sufficient, choice-filled lives** – unemployment remains twice as high for youth as for the state overall
 - Despite the majority of job listings in WA being accessible to young adults and paying a sustainable wage, employers are struggling to fill these jobs in a timely manner (<1 month)
 - Most of these jobs (~70%) require post-secondary education, but only ~31% of WA students are earning a post-secondary degree, creating a gap between demand and supply of talent, even as Washington is set to create 740K new jobs by 2021

Ongoing efforts

- **Many career-connected learning programs exist today in WA**, serving thousands of young adults statewide with programs that guide them toward fulfilling careers and / or further education
 - ~8K young adults participate in Registered Apprenticeships annually
 - Many other career-connected programs are supported by key government agencies, plus enabling programs (e.g., Running Start) and intermediaries (e.g., Road Map Project, WA STEM)
 - With strong support from Governor Inslee, Washington is ramping its efforts to create an integrated, scalable system to reach more young adults

Challenges

- **Washington's breadth in career-connected learning is exciting, but we have opportunities to improve**, and a unique window of opportunity with bipartisan, broad-based support. **We need:**
 - A unified, well-understood, long-term vision, and an understanding of where we fall short today
 - Greater ability to scale career-connected learning to reach more young adults, families, and employers
 - Better coordination across programs, at regional and state level, to make career-connected learning more effective for young adults, families, and employers
 - Progress toward removing cultural barriers to further adoption of career-connected learning

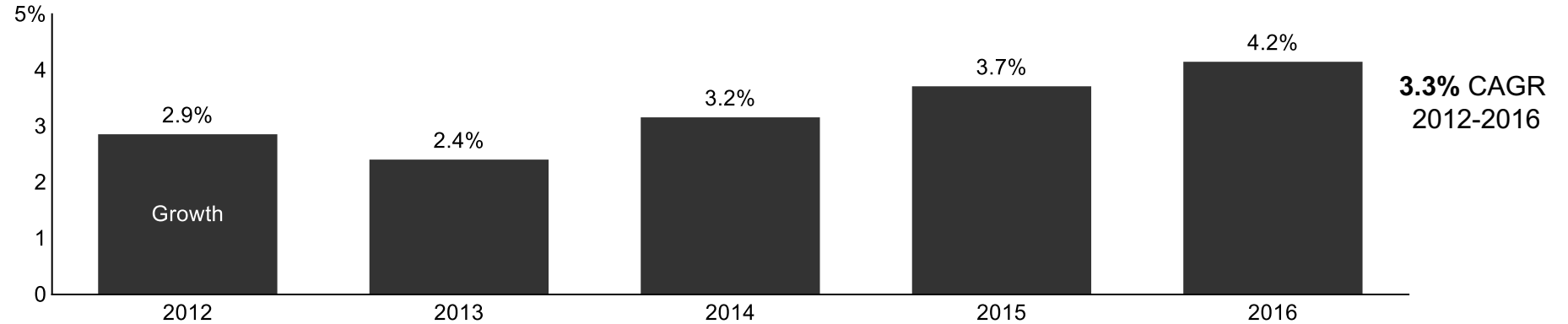
Vision

- Our **long-term vision** is that every young adult in Washington will have **multiple pathways toward economic self-sufficiency**, strengthened by a **comprehensive state-wide system for career-connected learning**
 - Vision should also improve equity of opportunities for disadvantaged groups (e.g., lower income and minorities)
- In the next Business and Philanthropy Leadership meeting, we will focus on our **nearer-term ambition**, with more specific goals for years 1-5

The opportunity: Washington's economy is growing 3%+ per year, but the youth unemployment rate remains >2X that of WA overall

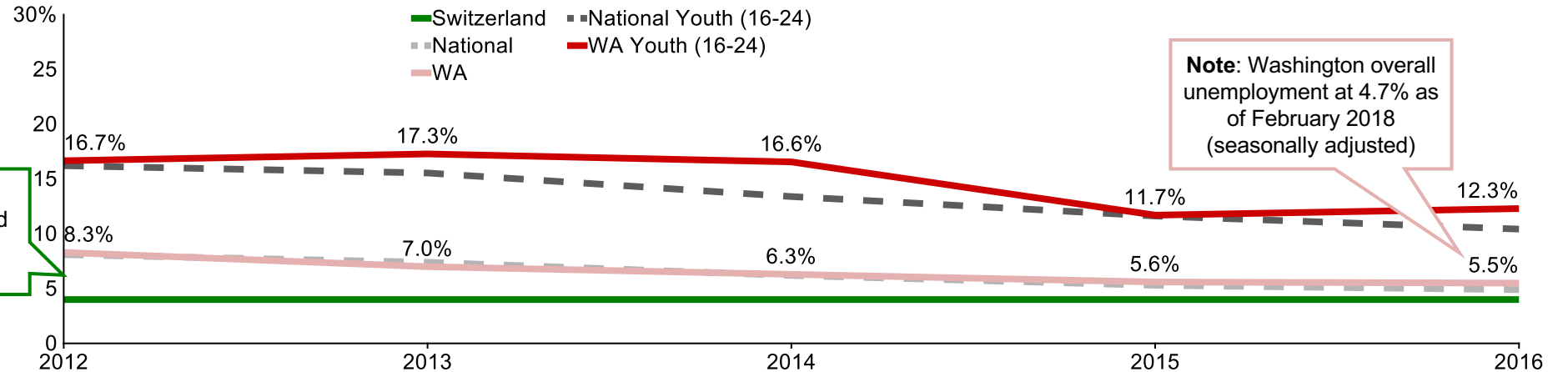
Washington's economic (GDP) growth

Real YoY GDP Growth, Washington State



Washington's youth unemployment

Unemployment rates (%)



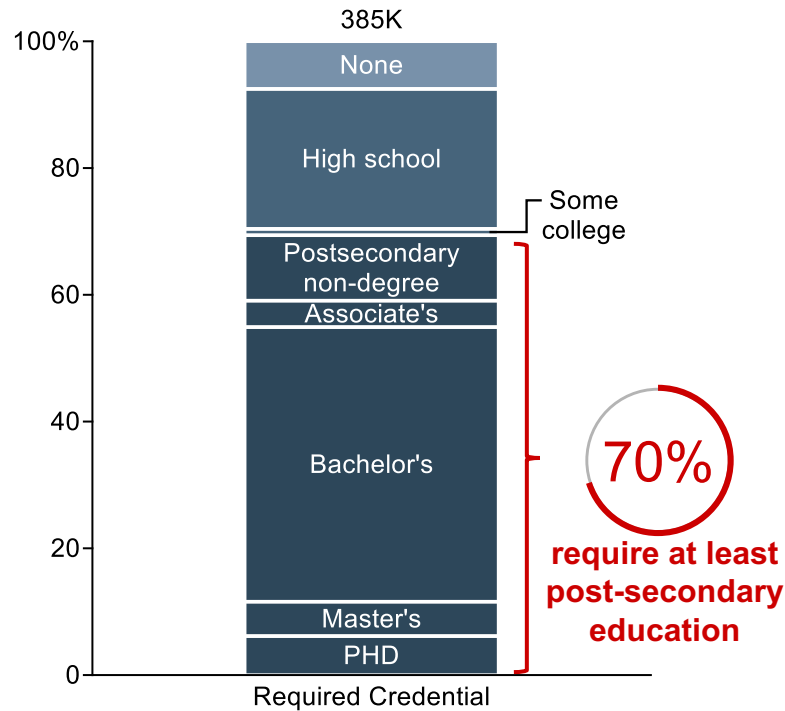
Reference point: Youth unemployment in Switzerland is the same as overall unemployment at ~4%

Note: Unemployment rates do not include individuals who are not in the labor force (e.g., students). Unemployment rates are annual (not seasonally adjusted). Source: Bureau of Economic Analysis; Bureau of Labor Statistics; Employment Security Department; Interview with Swiss Industry Association

The opportunity: Employers' stated job requirements do not align with credentials being earned by WA young adults, creating a gap in talent supply and demand

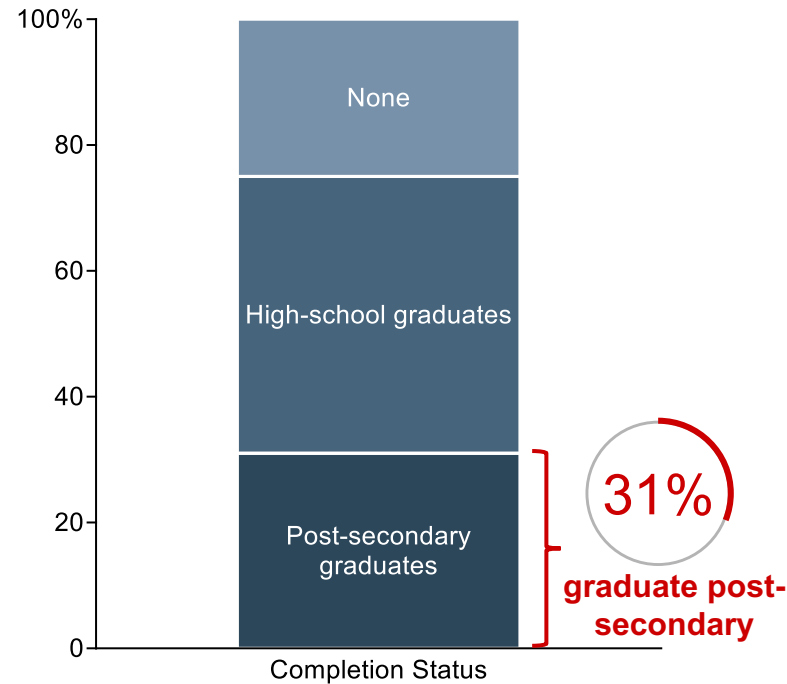
~70% of high opportunity jobs require post-secondary ed...

Washington high-opportunity online job postings reporting required credential 2017



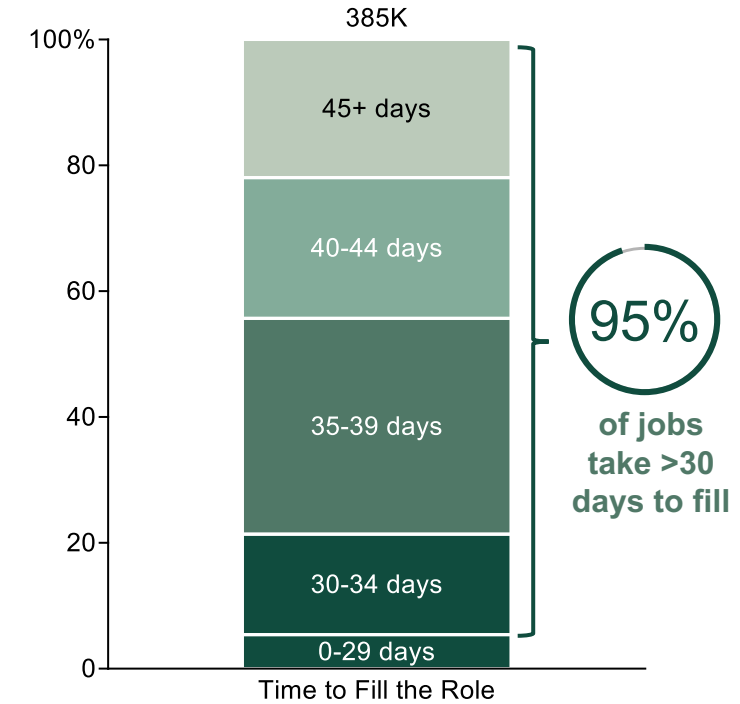
...but only ~31% of WA students are completing post-secondary...

Washington high schoolers by completion status (cohort graduating high school in 2006)



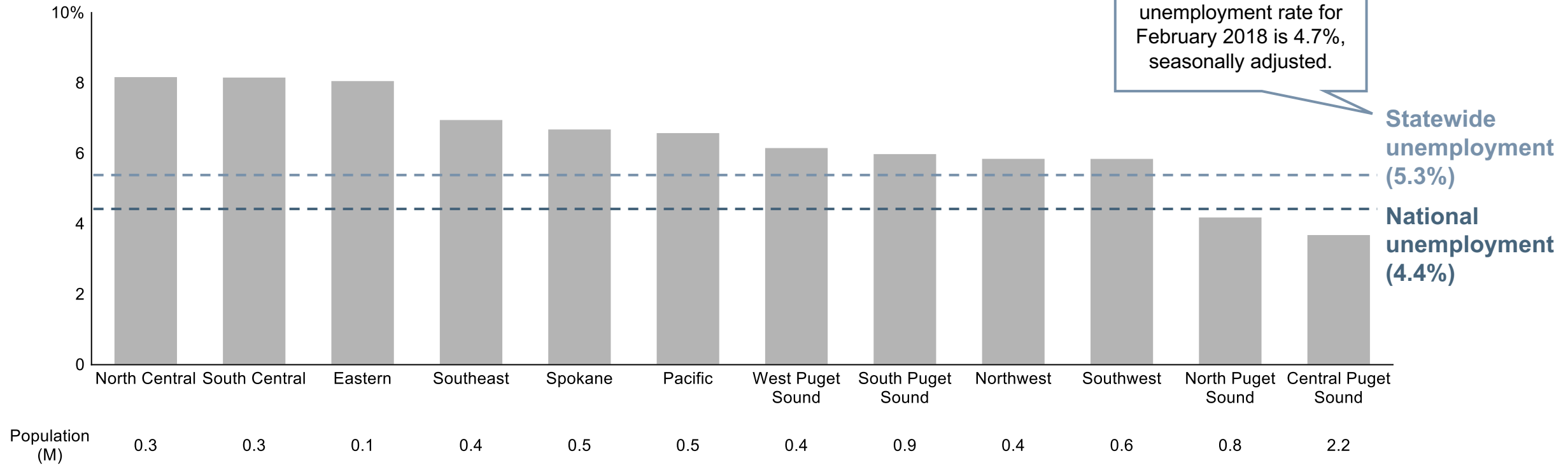
... creating a labor market inefficiency and unfilled jobs

Washington high-opportunity online job postings by time to fill 2017



The opportunity: One effect of this gap is that, despite strong economic growth, too many WA residents experience unemployment well above the national average

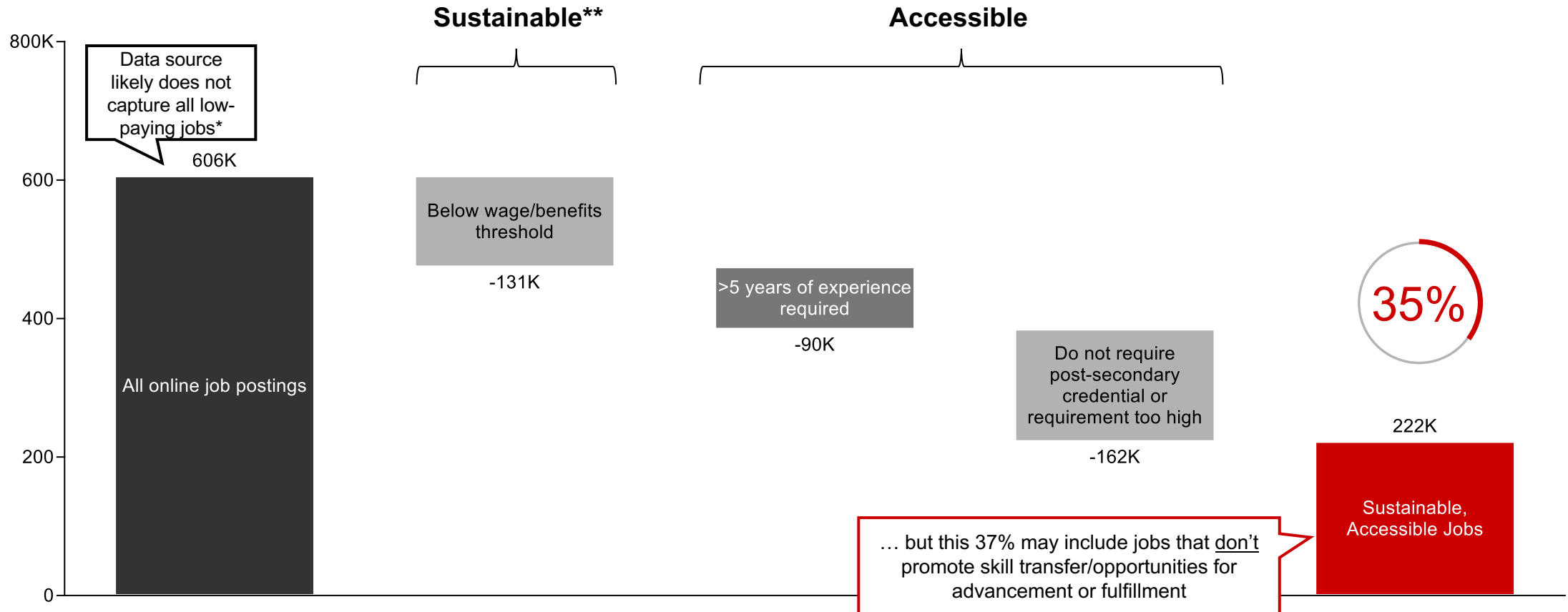
Unemployment rate by region, February 2018
(not seasonally adjusted)



Unemployment is a serious issue across Washington state, particularly in central and / or rural regions

Filtering all online job postings in WA for high-opportunity careers suggests up to ~35% of posted jobs are both sustainable and accessible

Washington online job postings 2017



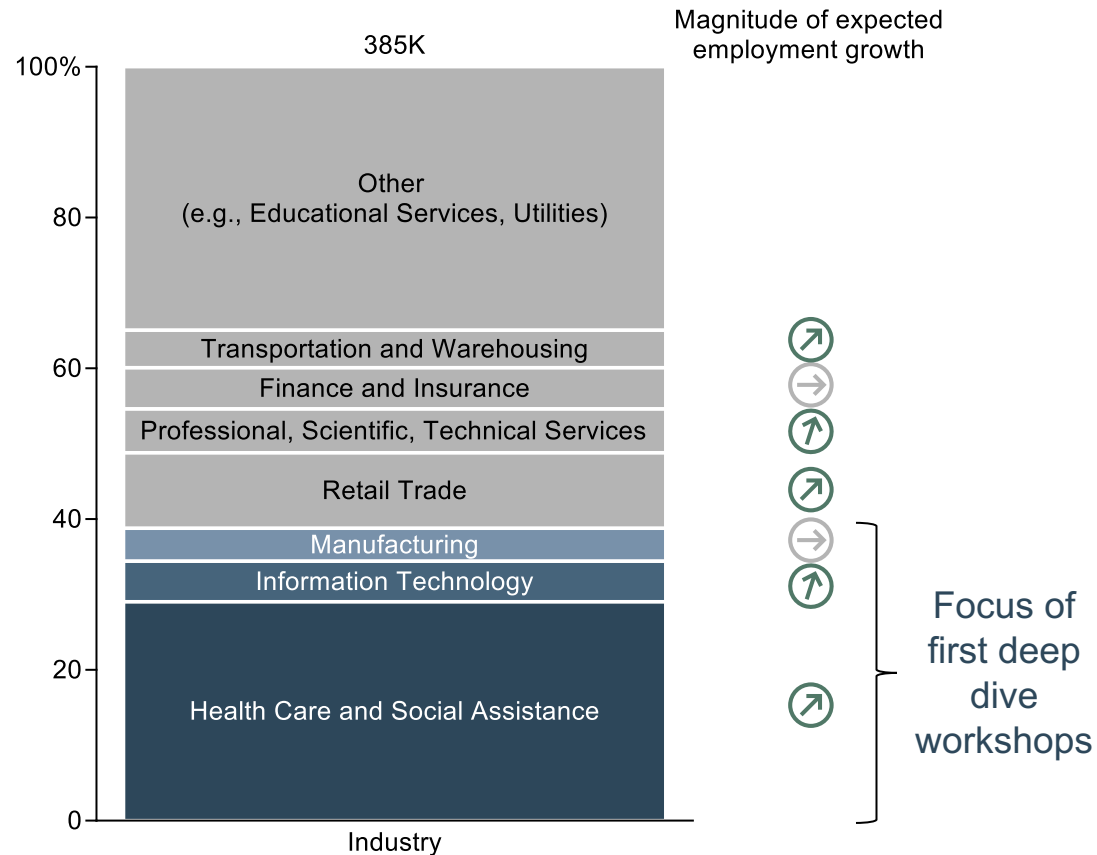
Note: *Low-paying jobs may not be captured due to the platform (never posted online), the reporting (posters do not indicate salary if unattractive), or the source (Burning Glass biases away from part time/temporary job postings). Additionally, more job postings are posted for very high demand jobs. Wage threshold calculated as 50% above WA STEM reported living / family wage of ~\$14 / hour for a value of \$43,500; **Sustainable jobs may include some jobs with vulnerability to automation
 Source: Burning Glass; Bureau of Labor Statistics; WA STEM

Many industries in Washington provide high opportunity jobs today, but struggle to fill those jobs in a timely fashion

OPPORTUNITY

385K+ postings for 'high opportunity' jobs last year, across a variety of key Washington industries

Washington high-opportunity online job postings 2017



Note: Software Developer roles from Professional Services and Amazon postings included in IT. Retail and Healthcare postings skew toward high 'churn' roles and heavy re-postings. Source: Burning Glass; WA State ESD industry employment projections

... but many can take months to fill

/ EXAMPLES

Manufacturing

- Mechanical Engineer (35-39 days)
- Production Supervisor (35-39 days)

Information Technology

- Software Developer / Eng. (40-44 days)
- Program Manager (40-44 days)

Healthcare

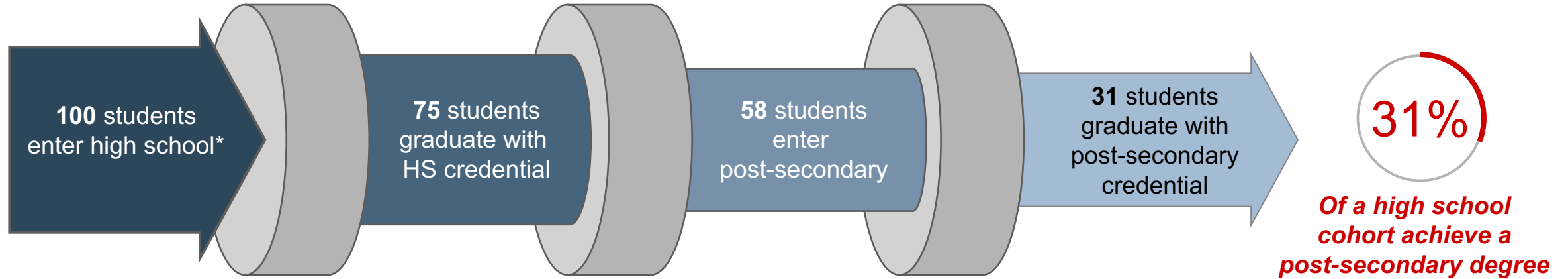
- Registered Nurse (35-39 days)
- Nursing Assistant (30-34 days)

Other

- Systems Analyst (45+ days)
- Maintenance Technician (35-39 days)

Education gap begins well before applicants enter the job market, highlighting the importance of K12 education to build the pipeline

OPPORTUNITY

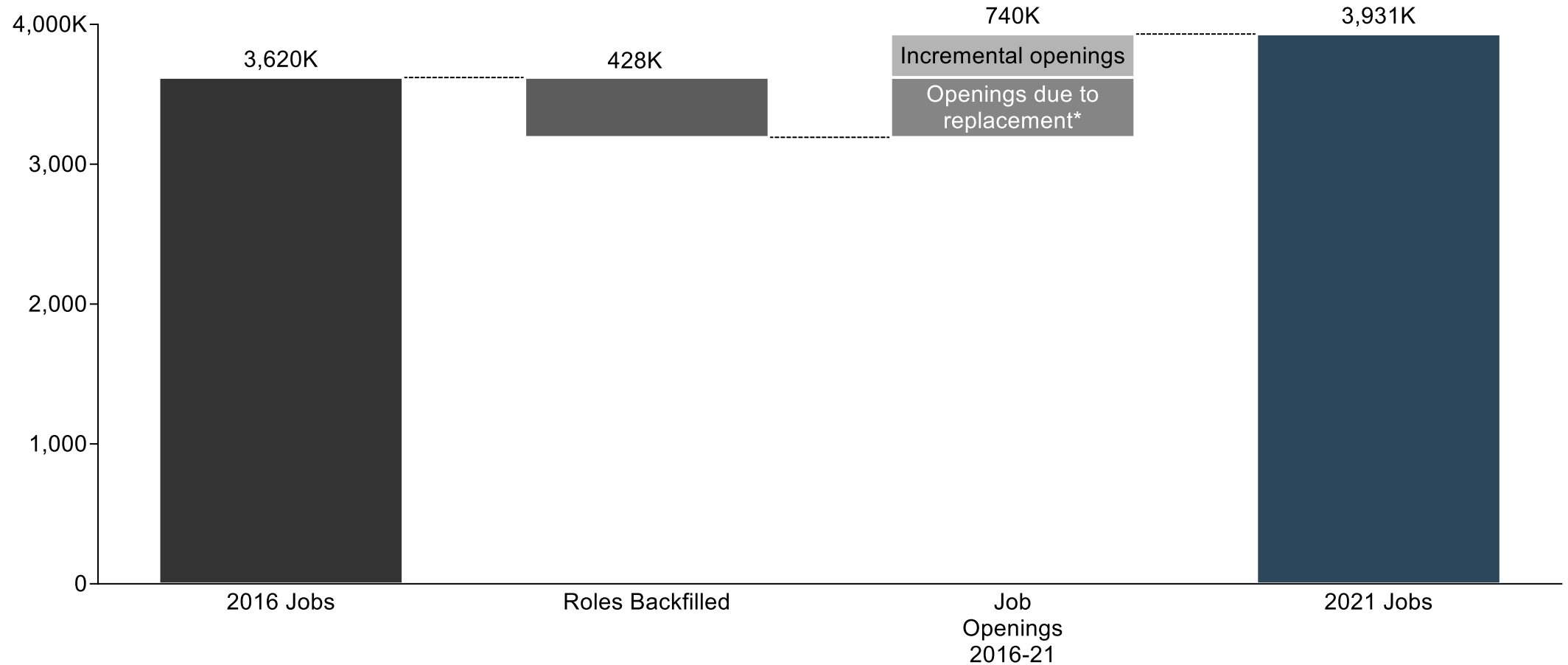


Note: *Data collected for high school cohort class of 2006
Source: WA Roundtable Final Report

Problem will escalate as job growth accelerates – 740K jobs will be added in Washington between 2016 and 2021

OPPORTUNITY

Projected job openings in WA State 2016-2021



Note: *Includes retirees, individuals leaving workforce, individuals leaving the state
Source: Bureau of Labor Statistics; WA Roundtable report

Washington is serving thousands of young adults today with a wide variety of programs

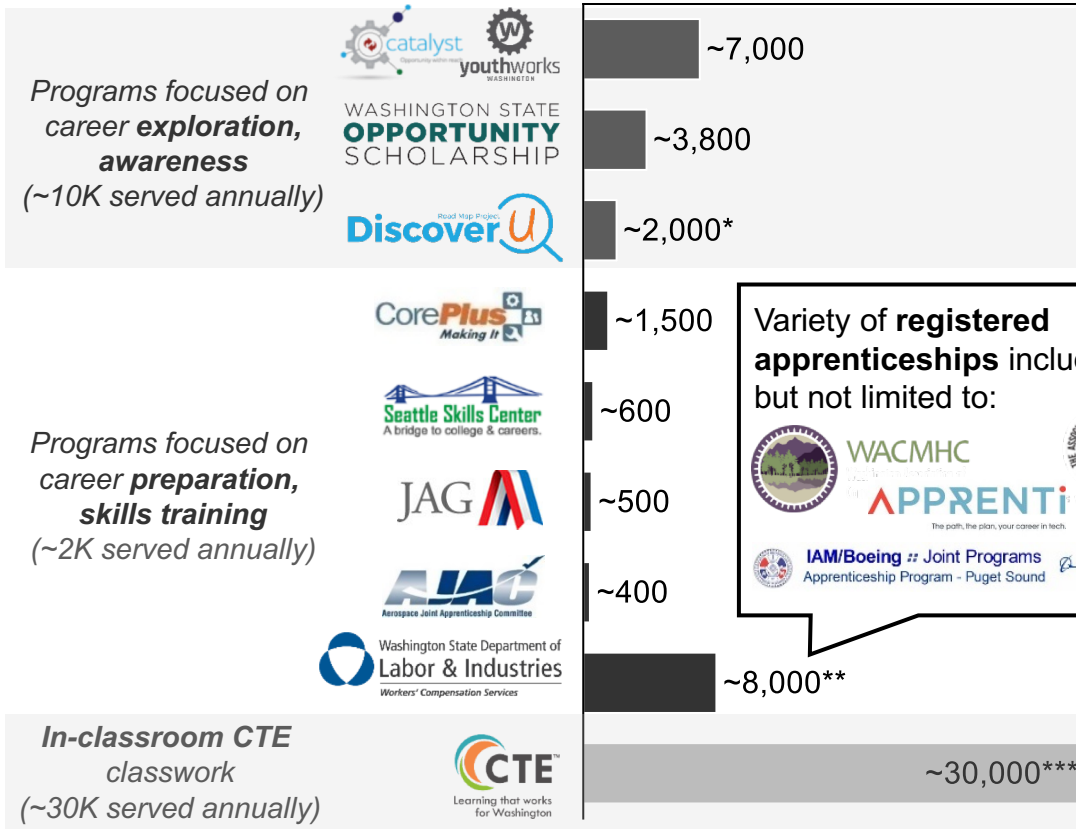
ONGOING EFFORTS

Ongoing programs serve thousands of young adults with a variety of CCL opportunities...

...plus several other programs from state and local providers...

/ NOT EXHAUSTIVE
...but CCL only touches a small % of students

Young adults served annually (approximate)



Variety of registered apprenticeships including but not limited to:



1.1M

students in the K12 system in Washington

83K

students to enter 9th grade this year

Note: *Includes students participating in worksite tours; **Approximately 17,000 active apprentices in 2017, 47% young adults (under 29); ***CTE students served based on enrollment in any CTE class
Source: Business and Philanthropy Leadership Interviews; Individual program press releases and publicly-available data; OSPI Key Facts as of 2015

Most career-connected learning experiences are owned and funded by a range of government agencies, statewide and local

ONGOING EFFORTS



- **Role in CCL:** Support overall employment for Washington, lead regional teams for initial RFP
- **Key areas of impact:** Operated RFP / grant process for CCL programs, operate Work Source Washington portal for job matching



- **Role in CCL:** Manage workforce standards, including for registered apprenticeships
- **Key areas of impact:** Created WSATC (Apprenticeship & Training Council)



- **Role in CCL:** Advocate for a better educated / prepared WA workforce, led Career Connect Taskforce
- **Key areas of impact:** Participated in Policy Academy to create initial findings on CCL, ran 'Showcase of Skills' for CTE across the state

Agencies partner to create, fund, and support many career-connected learning (CCL) programs



- **Role in CCL:** Provide strategic guidance, advocacy for higher education, administer specific programs (e.g., Gear Up)
- **Key areas of impact:** Financial aid support for CCL, Passport to Careers program, manage Washington State Opportunity Scholarship and College Bound



OSPI | Office of Superintendent
of Public Instruction

- **Role in CCL:** Operate public education, including Career Training & Education (CTE)
- **Key areas of impact:** Partnerships for student support, administer programming (Core+, STEM)



- **Role in CCL:** Operate community / technical colleges in Washington, including partnering with OSPI on CTE, supporting Running Start
- **Key areas of impact:** Administer dual credit programs for CTE and job skills programs

Deep Dive: Youth Registered Apprenticeship

/ PRELIMINARY / EXAMPLE

Youth Registered Apprenticeships are apprenticeship programs for high school students (ages 16+) that provide skills required to meet employer needs, yielding a high school degree, credential, and work experience. Upon completion, workers are competitive candidates for employment.

Criteria

On-the-job experience

- At least 2000 hours
- At employer site
- Paid for work hours
- Dedicated mentor

Classroom learning

- 144 hours+ each year (per every 2K hours OJT)
- In-class instruction awarded through HS or CTCs, up-to-date with industry needs

High-opportunity jobs

- Jobs are recognized and valued throughout an industry
- Highly skilled occupations

Credentials

- High school degree attained
- Trade certification (may be stackable)

Funding sources

- Employers, State operating funds

Governing Bodies



Current WA programs / services

- **Include a subset of Registered Apprenticeships (age 16-18) and include three focus areas for Washington:**
 - Healthcare
 - Manufacturing
 - Food preparation and serving

Spotlight:



Aerospace Joint Apprenticeship Committee

- Designed for high school juniors/seniors to develop **career-ready skills in the aerospace and advanced manufacturing industries and a direct path to trade certification** (may be stackable)
- Successful pilot program yielded **heavy employer engagement** (11 active / 36 prospective)
- **55-75 YA's projected to enroll** in the 18/19 school year across 8 school districts and 5 WA counties

What we've heard

"Employers and schools have the curriculum and on-the-job training set up for us to succeed, because that is what they are trying to do, so I am really excited about it."

Student, AJAC Apprentice

"We need to have youth apprenticeships - if we're waiting until they're 18 or even 16, we lost the moment in time. How do we excite young people about careers at a young age?"

Executive, Healthcare

"The best thing about my job is that no two days are ever the same. It is a challenging and rewarding job and I love it!"

Student, Dispatch Apprentice

"[To scale Youth RAs]... you have to have fundamental changes in education system and the department of Labor and Industries to allow youth to get on the shop floor and work with the equipment. For instance, high school students are not allowed to touch the same equipment at work that they work with at school."

Leader, Industry Association

Source: <https://www.lni.wa.gov/TradesLicensing/Apprenticeship/>; Business and Philanthropy Leadership Interviews; 2018 AJAC Youth Apprenticeship Year-In-Review

Other Career Launch Programs can take a variety of forms; one example is Shoreline CC's Automotive Training Center

/ PRELIMINARY / EXAMPLE

“The Professional Automotive Training Center at Shoreline Community College is the premier automotive technician program in the US. The Center and its industry partners originated this innovative model that integrates education with hands-on workplace experience.”

Shoreline Community College website



*“Automotive manufacturers are **thinking about the long term**. Employers are **shaping the curriculum**, and if they didn't, the program would not meet its objectives.”*

Leader, Education

On-the-job experience and Classroom learning

- Factory-sponsored programs are 2 years with 11 weeks on-the-job for every 11 weeks in the classroom
- General Service Technician program is two quarters at the Center and one quarter in a workplace setting

High-opportunity jobs

- Typically leads to an automotive technician job, \$50-52K salary
- Variety of career pathways into parts, sales, finance and insurance, management, and marketing.

Credentials

- Two-year Applied Associate in Arts and Sciences degree
- Other manufacturer-specific training certificates
- GST students receive a certificate of proficiency

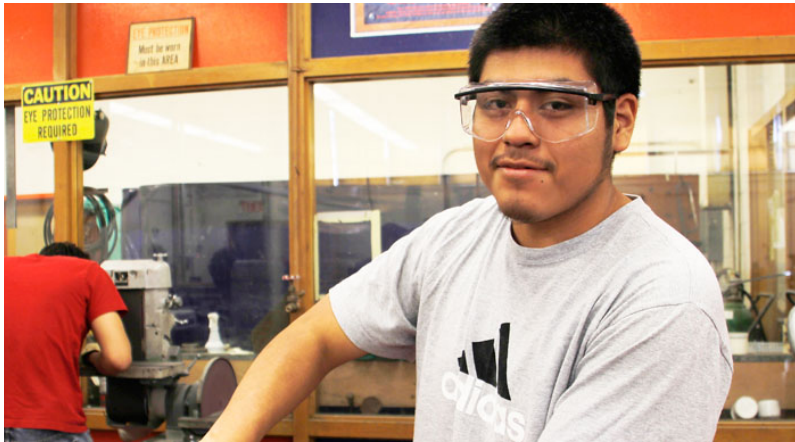
Funding sources

- Local dealerships sponsor students
- Employers help fund program startup costs
- Shoreline supports education and infrastructure costs

Program offerings



Deep dive: CorePlus



What is CorePlus?

- Career and technical education program (manufacturing)
- Two year commitment: first year dedicated to ~540 hours of basic transferrable skill sets (Core), second year dedicated to ~540 hours of occupation-specific skill sets (Plus)
- Serves ~1,500 students per year
- Curriculum available at 50+ schools across the state with 25+ participating companies
- Skill Centers and Comprehensive High Schools awarded \$450K a year in start-up grants to teach Core Plus

Key facts

- Developed by MIC (Manufacturing Industrial Council), OSPI, and Boeing
- Received funding from legislature to open 20 new locations in 2017
- Mixed (public / private) funding
- Statewide presence

“Being in a class that’s professionally based has helped me understand what employers want out of me when I enter the real world.”

Senior, Seattle Skills Center

“Most of the time I have no idea why I’m learning something in math class, but I understand the math here because I have to apply it to my project. It just makes more sense to me.”

Junior, Granite Falls

“It’s not a shop class for drop outs. Over the last 6 years I have had every valedictorian in my manufacturing class. It was what set them apart to get them into Ivy league schools like MIT or Stanford.”

Michael Werner, Granite Falls High School

Deep dive: Apprenti

ONGOING EFFORTS

TECHNOLOGY



Key facts

- Run by Washington Technology Industry Association (WTIA)
- Free for apprentices
- Focus on underrepresented students
- Mixed (public / private) funding
- National presence

What is Apprenti?

- Short, intensive training followed by registered apprenticeship
- Guaranteed job offer after acceptance to Apprenti, focused on high-tech positions
- Graduated approximately 150 apprentices to date
- Received \$3.5M in grants for program set-up spread over 5 years from US Dept. of Labor and WA State L&I, with \$200K from JP Morgan
- Received \$4M in state funding

"[Apprenti] is sending the best-quality candidates, based on their soft skills and their ability to learn."

Jennifer Carlson, Executive Director WTIA Workforce Institute

"I was ready to move past the academics and get into the workforce."

Jared Call, Apprenti apprentice

Deep dive: Washington State Opportunity Scholarship (WSOS)

ONGOING EFFORTS

ACROSS INDUSTRIES



Key facts

- \$2,500-\$7,500 given per year for up to 5 years (for a total potential scholarship of \$22,500)
- Created by the Washington State Legislature and industry partners
- Supports students from low- and middle-income households
- Every private dollar raised is matched dollar-for-dollar by the state through a unique public-private partnership
- Statewide presence

Source: WA Opportunity Scholarship website; The Seattle Times

What is WSOS?

- Strives to fill open seats in high-demand, economy-driving sectors (e.g., aerospace, STEM, health care) by providing targeted scholarships
- In addition to scholarships, WSOS provides professional development, mentorship, skills-building workshops and industry exploration opportunities
- WSOS will serve 16,000 students pursuing high-demand degrees by 2025

“The success of the program has, in many ways, exceeded our expectations. We’re reaching people of lower means, we’re reaching people of color, women as well as men, people who have never been to college...the opportunity to take this kind of formula and apply to other postsecondary credentials is not only exciting but important for the state.”

Brad Smith, President of Microsoft

“There is a resurgence of valuing technical education, and I see this as part of that pendulum swinging a little more...A four-year university is not for everyone. It’s really important that we provide different opportunities for young people.”

Amy Morrison Goings, President of Lake Washington Institute of Technology

Other programs enable career-connected learning by supporting K12 education and encouraging post-secondary education

ONGOING EFFORTS

/ NOT EXHAUSTIVE

Role of “enabling” programs

Train critical skills

- Employers expect students to bring primary skills (e.g., math, writing) to the workplace

Ready students for post-secondary education

- Students prepared for post-secondary are more likely to succeed in CCL paths – and vice versa

Deep dive

What is Running Start?

- Dual-enrollment program allowing 11th and 12th graders to attend college courses while in high school
- Provides up to two years of paid tuition to WA community and technical colleges, Central WA University, Eastern WA University, WA State University, Northwest Indian College
- Enables students to complete a significant amount of college credits in advance so that they can then earn a degree faster
- Accounts for 25% of community college enrollment in WA State



Dozens of efforts, both local and national



Source: OSPI; The Seattle Times; Business and Philanthropy Leadership Interviews

“[Running Start] teaches you to work for quality, and not for quantity.”

Nia Hall, Running Start student from Garfield High School

“If they’re truly ready to take college classes, why should we hold them back?”

Adam Lowe, National Expert in Dual-Credit Courses

“In 25 years, this dual-credit program has [become] so successful... that some think the state should...bring in greater numbers of low-income and minority students who could benefit the most from such a program.”

The Seattle Times Education lab

An ecosystem of ‘intermediaries’ provide a foundation for CCL by engaging stakeholders and developing research and policy recommendations

ONGOING EFFORTS

/ NOT EXHAUSTIVE

Role of intermediaries in CCL

Bring stakeholders together

- Serve as connection point for individuals and agencies involved

Develop policy recommendations

- Invest in research and strategy for potential policy or programmatic changes

Engage with programs indirectly

- Administer and fund specific student-facing programs

Deep dive

What is Washington STEM?



- Aims to match Washington youth with the thriving STEM economy in the state by increasing access, interest, and success
- Creates a “network of networks” to spread STEM best practices across the state
- Maintains an innovation team to incubate ideas for teaching and learning STEM education
- Focuses on passing legislative agenda that increase access to STEM and create pathways to high-demand careers

Dozens of efforts, both local and national



Source: WA STEM website; GeekWire; Business and Philanthropy Leadership Interviews

“STEM is everywhere – agriculture, aerospace and technology just to name a few favorite Washington industries – and should be for everyone...[WA state] has all the right ingredients to be a leader in universal STEM education and preparing a diverse and world-class workforce, and we won’t rest at Washington STEM until that is a reality.”

Caroline King, CEO of Washington STEM

“We said, we need to do something different, to think outside of district policies and have some collective approach to graduating more of our students, particularly our students of color.”

Tafona Ervin, Director of Collective Action for Foundation of Tacoma Students

Vision: Our stakeholders are not aligned on (or collectively working toward) a shared, well-understood, long-term vision



CHALLENGES

Educators

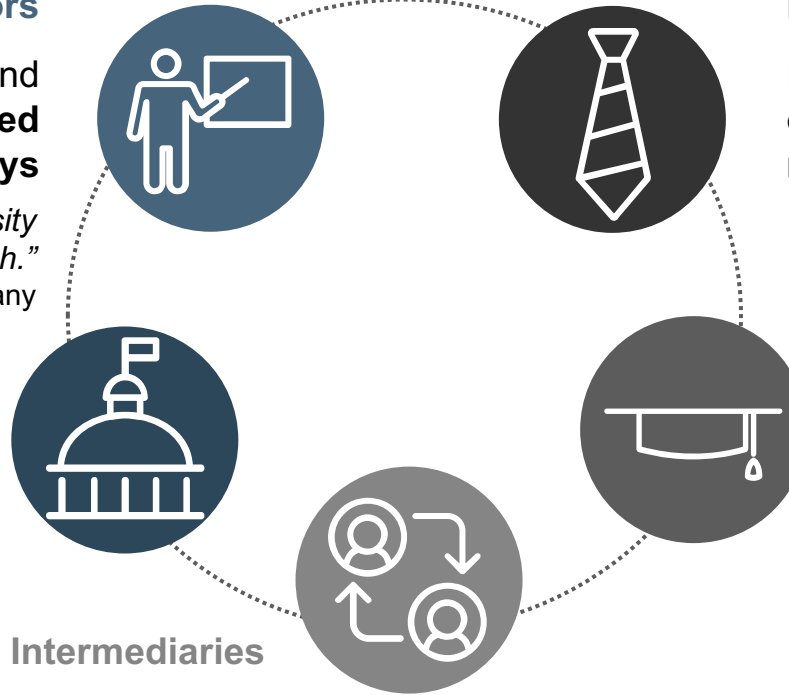
Measure success of students and educators on **traditional metrics, focused on traditional pathways**

“Educators are measured based on university readiness- everything is to push to a 4 year path.”
Executive, Technology Company

Government

Operates in **organizational siloes** when creating legislation, policy, and funding awards

“Groups are working individually because the convening mechanism to pull those groups together is missing.”
Leader, Philanthropy



Intermediaries

Operate independently to drive individual programming efforts forward

“There are many individual orgs working on their own efforts. People may say they’re aligned to a state-wide solution but will revert to their own method of program they’ve been developing instead.”
Executive, Industry Association

Employers

Fill many roles by **importing talent from outside WA or finding experienced hires**, rather than investing in the WA talent pipeline

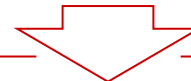
“Right now, a lot of companies hire from out of state. We should be able to fill more roles locally.”
Executive, Life Sciences Company

Young Adults

Are educated about and choose traditional paths, with majority of young adults not attaining post-secondary education

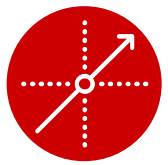
“If you’re a student in WA, the 2 and 4 year pathways are clear – the classes to take, the test, the application. The steps are clear.”
Leader, Education Association

“There’s a perception in the community at large that apprenticeships are a second tier approach for jobs, that it’s subpar to going to college.”
Executive, Technology Company



How can we bring stakeholders together around a shared vision?

Scale: There are aspects of the current career-connected learning ecosystem preventing us from reaching more young adults / families / employers



CHALLENGES

Barrier to scale

Existing infrastructure not leveraged across programs

Program solutions not always repeatable, particularly across different WA regions

Funding model doesn't incentivize growth

Impact

- New programs expend effort and lose momentum 're-inventing the wheel'
- Programs do not always share learnings and/or resources
- Regional employers build point solutions, even when there are opportunities to build once, then scale statewide
- Rural young adults have a narrower set of opportunities
- Current funding model (e.g., credit/completion targets for community colleges) doesn't move stakeholders to the right outcomes, and becomes a roadblock for growth

How it manifests

*"We need to **think about this as a system** – if we think about it only with the lens of individual programs, we will never scale."*
Executive, Non-profit

*"There are individual efforts all over the state, but they don't build on what the others have already started... We need to **tap into existing support systems** to accelerate."*
Executive, Healthcare Company

*"The economy in Seattle is not the economy on the east side of Washington... if all the apprenticeships are in Seattle, **we are missing the mark.**"*
Executive, Healthcare Company

*"We have to **figure out a different model** for kids who aren't close to skill centers."*
Leader, Education Association

*"There are huge **negative funding implications** when we have students learning **outside a traditional classroom**. We take a hit straight to our budgets"*
Leader, Education Association

Coordination: We lack coordination across programs, at regional and state level, to make career-connected learning more effective in Washington

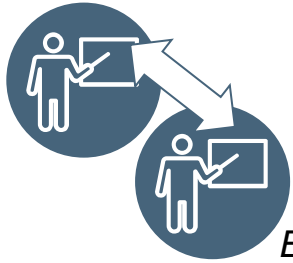


CHALLENGES

/ NOT EXHAUSTIVE

A few examples of stakeholder coordination challenges surfaced so far...

Educator

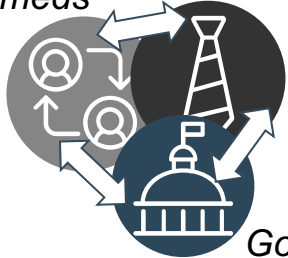


Credit transferability among educational institutions is too complex: Dozens of transfer agreements between community colleges and 4-year universities negotiated individually, creating a web of policies for students to navigate.

“Every community college in WA has a different equivalency guide set up with the University of Washington. Why can’t we streamline to one?”

Leader, Education Association

Intermeds Employer

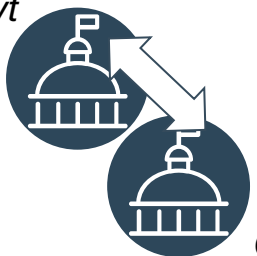


Employers missing a clear, simple way to engage in the ecosystem: Some employers are inundated by disjointed requests for supports from all angles, and others struggle to identify the right path to engage.

“Once employers express an interest, they’re inundated – there’s no coordinated approach.”

Executive, Construction Company

Govt



Lack of clarity around ownership or decision rights: Even when solutions to critical barriers are identified, efforts are diluted when it the responsible party isn’t clearly identified and given the right decision authority.

“Efforts are too diluted across various initiatives across agencies – I think there are too many levers are being pulled at once.”

Executive, Healthcare company

Source: Business and Philanthropy Leadership interviews

Perception: There are cultural barriers preventing further adoption of career-connected learning



CHALLENGES

The challenge

Cultural resistance to prioritizing pathways beyond standard 4-year college track

*“Perception is that **apprenticeships are a second-tier approach**, that they are subpar, don’t lead to good jobs, or prevent students from going to college.”*

Executive, Technology Company

*“In Switzerland, we make it clear that **apprenticeships are not a dead end** – many still go to college afterward, or immediately go into a good career.”*

Leader, Swiss Industry Association

What good looks like

- **Multiple paths** to high quality jobs with ability to shift between – no tracks, fully permeable
- **Community understands and promotes variety** in pathways to reach employment or further education



How can we shift mindsets?

Limited sense of collective responsibility among employers for state talent pool

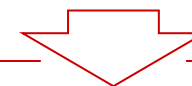
*“We are a state of rugged individualists... but we need to learn to take on **collective initiatives**.”*

Executive, Industry Association

*“The Swiss model is community-based... and **cost is shared by the entire community**.”*

Leader, Industry Association

- Employers see their role as **preparing a workforce for the state and industry**, not just for their own talent pipeline
- Young adults learn a set of skills that are **portable across industries**



How can we find a more collective approach?

Great K-12 Teachers - a KEY Piece of the STEM Workforce Puzzle

NextGen STEM teachers will help students discover the connections between science, math, engineering, and computer science



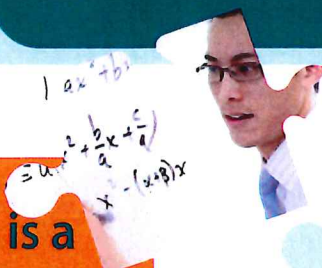
NextGen STEM teachers will be knowledgeable, collaborative, and inspirational



NextGen STEM teachers will be diverse, making learning accessible and relevant to ALL students



Currently there is a shortage of STEM teachers across Washington State



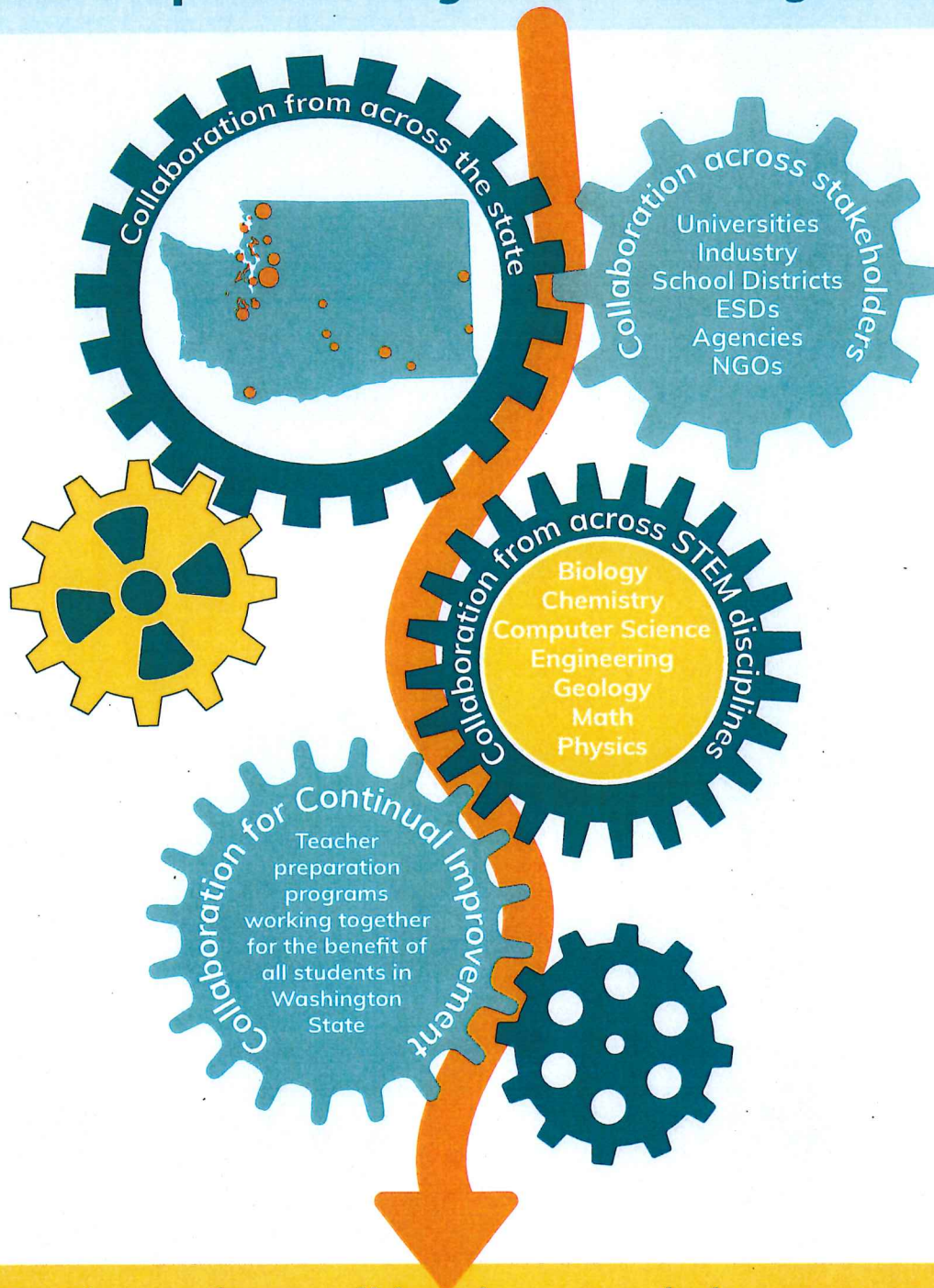
Impacting the STEM Workforce



Learn more about how you can help us create the Next Generation of STEM Teachers

contact Roxane Ronca Roxane.Ronca@wwu.edu

The Next Generation of STEM Teacher Preparation Programs in Washington State



Students from all backgrounds have a path
to becoming a STEM teacher

**Preparing the Next Generation of Students for
Washington's STEM Workforce**

This work funded in part by a grant from the National Science Foundation

contact Roxane Ronca Roxane.Ronca@wwu.edu

The Next Generation of STEM Teacher Preparation Programs in Washington State—Join the Partnership

We are looking for people with vision to join us in our mission to improve STEM Teacher Preparation

Year 1 Participants Include:

Schools/Districts: ●

- Lake Washington SD
- Central Kitsap SD
- Tesla High School
- Bellingham Public Schools
- Sequim SD
- Lopez Island SD

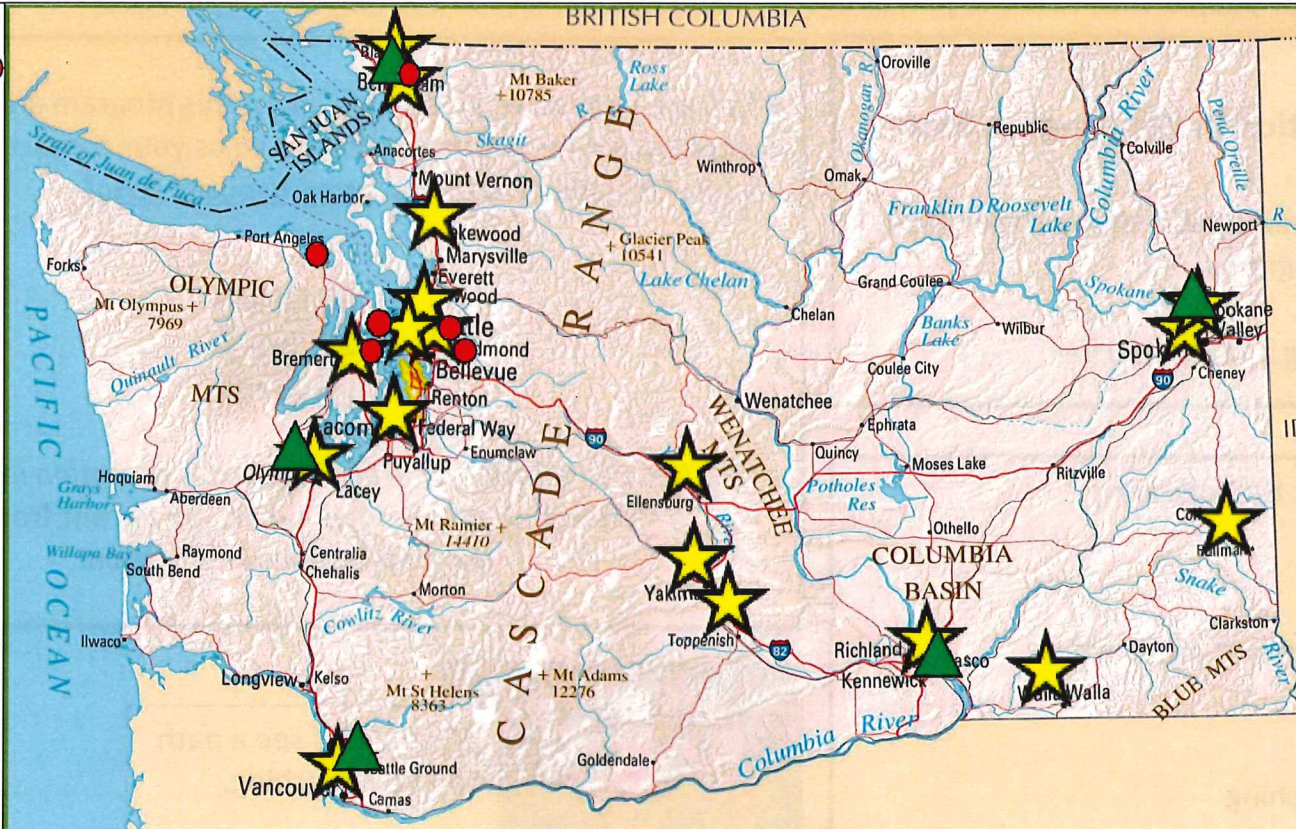
ESD's ▲

- 101, 112, 113, 189, 123

Agencies:

OSPI

PESB



Institutions of Higher Ed: ★

- | | | |
|-----------------------|-----------------------|-----------------------|
| Central Washington U. | Eastern Washington U. | Everett CC |
| Evergreen | Gonzaga | Heritage |
| Northwest University | Olympic College | Pacific Lutheran U. |
| Seattle Pacific U. | Seattle U. | Western Gov. U. |
| UW-Bothell | UW-Tacoma | UW-Seattle |
| Walla-Walla U | WSU-Vancouver | Western Washington U. |
| Whatcom Community C. | WSU-Pullman | |
| Yakima Valley College | WSU-Tri-Cities | |

Industry, and NGO's

- Mozilla
- Code.org
- Pacific Science Center
- LASER
- WA STEM
- PNNL
- ZenoMath (Seattle)
- Pacific Education Institute
- Google
- Washington Opportunity Scholarship
- Institute for Systems Biology

Are you interested in:

- **Improving WA STEM teacher preparation** through collaboration with universities, ESD's, industry, non-profits?
- **Participating in a state-wide collaboration** in STEM teacher preparation that will serve as a model for states across the country?
- **Building your capacity** to be a mentor for new STEM teachers?
- **Collaborating with your alma mater** to improve its science and math teacher preparation programs?
- **Collaborating with local Institutions of Higher Ed** to improve K-16 STEM teaching and learning?

K-12 Teachers, Administrators, ESD's, Non-profits and Industry reps, IHE's, contact us via this QR code or

<https://goo.gl/UFSxqE>



The Next Generation of STEM Teacher Preparation Programs in Washington State—Join the Partnership!

We are looking for people with vision to join us in our mission to improve STEM Teacher Preparation

Our “NextGen” vision for STEM Teacher Preparation in Washington State:

- Teacher Preparation Programs have the **leadership capacity, strategic partnerships, and resources needed** to continually improve their programs.
- Students from all backgrounds have a path to becoming a STEM teacher

Collaborative improvement efforts target the following:

Teacher Preparation Programs enable graduates to:

- Integrate core engineering design ideas in culturally relevant problems.
- Engage students in Computer Science learning.
- Incorporate sustainability principles into their K-12 teaching
- Create meaningful mathematical experiences that make connections between mathematics and other disciplines.

Teacher Preparation Programs prepare future teachers with:

- Powerful clinical practice and induction experiences
- STEM Pedagogical Content Knowledge

If you are interested in learning about this program and or contributing to our efforts, please give us your contact information via this QR code or website <https://goo.gl/UFSxqE>



The *Next Generation of STEM Teacher Preparation in Washington State* project is funded in part, by a grant from the National Science Foundation.



All students see a path to STEM teaching.

IHE's have the leadership, partnerships and resources needed to continually improve





OSPI | Chris Reykdal
State Superintendent

Schools Awarded Grants to Further Computer Science Education

Washington State Legislature affirms commitment to Science, Technology, Engineering, and Math (STEM) in K-12 schools.

OLYMPIA—May 14, 2018—Nearly \$1 million in grants were awarded to improve access to computer science and related educational programs in Washington state, the Office of Superintendent of Public Instruction (OSPI) announced today.

The grants allow districts, schools, and nonprofits to train teachers and provide and upgrade technology. In addition, the grants expand computer science access to groups of students who have historically been underrepresented in computer science programs and careers.

Superintendent of Public Instruction Chris Reykdal said the grants will give more students and educators access to computer science technology. “As our economy grows in advanced technology, our investment in that learning must grow with it,” Reykdal said. “It is especially important that we ensure access to student populations who have not typically engaged in computer science education. This is key to our commitment to equity. Congratulations to the grantees.”

The State Legislature provided \$1 million for computer science education grant funding in 2018. The state grant funds will be matched equally by private sources, which effectively doubles the total grant amount to \$2 million.

Washington state’s [Computer Science K-12 Learning Standards](#) must be used in the implementation of the grant projects.

More information:

- [Computer Science in Washington state](#)
- [Computer Science Education Grants](#)

The 2018-19 grantee list includes:

Awarded	Amount
South Kitsap School District	78,040.00
Manson School District	19,272.00
WSU Tri-Cities	50,000.00
Bellingham School District	27,000.00
Yelm School District	23,200.00
Washington 1st Robotics	49,928.00
Generation YES	39,380.00
Sequim School District	55,762.00
Wahkiakum School District	27,709.00
Vancouver School District	7,585.00
Peninsula School District	30,500.00
Willapa Valley School District	24,200.00
Walla Walla Public Schools	50,000.00

Shoreline School District	55,438.00
Sumner School District	12,750.00
Aberdeen School District	10,500.00
La Conner School District	52,060.00
Auburn School District	51,433.00
Columbia Basin College	14,805.00
Northport School District	19,400.00
Capital Region ESD 113	183,745.00
Prosser School District	5,400.00
Apollo Elementary	23,901.00
Ephrata School District	49,600.00
Warden School District	36,160.00
Onion Creek School District	2,232.00
TOTAL	1,000,000.00

Contact

[Nathan Olson](#)

OSPI Communications Director
360-725-6015

About OSPI

The Office of Superintendent of Public Instruction (OSPI) is the primary agency charged with overseeing K-12 education in Washington state. Led by State Superintendent Chris Reykdal, OSPI works with the state's 295 school districts and nine educational service districts to administer basic education programs and implement education reform on behalf of more than one million public school students.

OSPI provides equal access to all programs and services without discrimination based on sex, race, creed, religion, color, national origin, age, honorably discharged veteran or military status, sexual orientation, gender expression or identity, the presence of any sensory, mental, or physical disability, or the use of a trained dog guide or service animal by a person with a disability.

Questions and complaints of alleged discrimination should be directed to the Equity and Civil Rights Director at 360-725-6162 or P.O. Box 47200, Olympia, WA 98504-7200.

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OSPI provides equal access to all programs and services without discrimination based on sex, race, creed, religion, color, national origin, age, honorably discharged veteran or military status, sexual orientation, gender expression, gender identity, disability, or the use of a trained dog guide or service animal by a person with a disability. Questions and complaints of alleged discrimination should be directed to the Equity and Civil Rights Director, P.O. Box 47200, Olympia, WA 98504-7200, 360-725-6162 (TTY: 360-664-3631), equity@k12.wa.us.

This email was sent to melissagombosky@gmail.com using GovDelivery Communications Cloud on behalf of: Washington Office of Superintendent of Public Instruction · 600 Washington St. S.E. · Olympia, WA 98504





THE WASHINGTON STATE BOARD OF EDUCATION

A high-quality education system that prepares all students for college, career, and life.

2018 Strategic Planning Process:

SBE will adopt a new strategic plan Jan. 2019. Leading up to that, the Board is seeking input from partners & stakeholders across the state at a series of upcoming community forums:

March 5 (Lacey)

May 8 (Yakima)

June 20 (Seattle)

July 10 (Spokane)

November 6 (Vancouver)

Learn more:

<http://www.sbe.wa.gov/meetings>

Next Generation Science Standards (NGSS) Communication Plan

The State Board of Education will be working with partner organizations to enact a communication plan to advance the successful implementation of NGSS and continued sustainability of high-quality science education in our state.

We would like to hear from you:

What are your district concerns/interests/needs regarding NGSS? What would be helpful to you that the State Board of Education could provide? We'd like to gather feedback this spring so we could come back with a resource for you this fall.

To get involved or send feedback, please email our Communications Manager: alissa.muller@k12.wa.us

Equity Statement

SBE has committed to using an equity lens as a guiding principle in its work. We began our in-depth work last year, and recently formalized an Equity Statement and Equity Lens; see them here:

<http://www.sbe.wa.gov/about-us/equity>

WASHINGTON STATE BOARD OF EDUCATION

2017 Community Forums

MULTI-CULTURAL PERSPECTIVES ON CAREER READINESS

3 CITIES

EVERETT, WALLA WALLA, SPOKANE

Participants in Western and Eastern Washington had a chance to share their ideas for improving career readiness with State Board members



ORGANIZATIONS CONTACTED

58

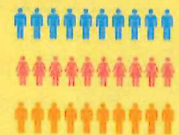


EOGOAC & all member organizations represented on the EOGOAC, school districts, community colleges, local area four year colleges, nonprofits, advocacy organizations, community organizations

111

PARTICIPANTS

Participants included: Parents, students, school board members, teachers, administrators, nonprofit and advocacy organization representatives, and community organization representatives and leaders



IDEAS FROM PARTICIPANTS

3 THEMES



1. The importance of relationships and mentoring for students in school
2. The need for trauma-informed instruction as well as implicit bias and cultural competency training
3. The need to prepare students to think about postsecondary plans sooner

TO LEARN MORE:

Register to stay up-to-date and join us! Visit www.sbe.wa.gov or email us at sbe@k12.wa.us

Regional Educational Needs Assessment by WSAC

The Washington Student Achievement Council (WSAC) released a report on the state's educational needs by region, based on emerging economic trends, employers' long-term planning trends, student demand, community needs and other factors.

Read more:

<http://wsac.wa.gov/sites/default/files/2017.12.08.regional.education.needs.assessment.pdf>

Washington Comprehensive Assessment of Science (WCAS) Score-Setting Process

SBE adopted a process for score-setting for the WCAS as recommended by OSPI.

Read more on our website: Science Score-Setting
<http://www.sbe.wa.gov/materials.php#January>

SBE/OSPI Roles & Responsibilities

SBE and OSPI formed a task force last fall to review respective roles and duties, and made recommendations to the Legislature concerning the exchange and alignment of specific responsibilities; HB 2824 embodies these recommendations.

ELA/Math College Ready Threshold Scores

The State Board of Education (SBE) adopted ELA and math achievement level scores for the tenth grade assessments. Read more on our website:
10th Grade Score-Setting

<http://www.sbe.wa.gov/materials.php#January>

Please note: The SBE did not adopt a new graduation score. The current graduation score remains the same. The SBE may revisit the graduation score after reviewing assessment data from this year.

Washington School Improvement Framework and School Recognition Update

- SBE and OSPI jointly released the new Washington School Improvement Framework on March 15.
- At their May meeting, SBE suspended recognition of schools for only this year. The Board intends to recognize schools next year.

Higher Education Placement Agreements

Due to the decision to move the Smarter Balanced Assessment to the 10th grade (from the 11th grade), higher education public institutions are reviewing the current placement agreements. Stay tuned...

ESSA Overview of Indicators by Grade Span

Grade Span	Academic Indicators			School Quality & Student Success Indicators
Elementary	Proficiency on the statewide assessments in ELA and Math	Academic growth as measured by Student Growth Percentiles (SGPs)	English Learner Progress	Regular Attendance
Middle				
High	Proficiency on statewide assessments on ELA and Math	Graduation Rate	English Learner Progress	Regular Attendance 9 th Graders on Track Advanced Course-Taking (dual credit)

Implementation of 24 Credit Graduation Requirement

SBE would like to continue hearing from districts about both strategies and challenges of implementing the 24-credit graduation requirement. Share feedback:
linda.drake@k12.wa.us.

New Board Members

SBE would like to welcome new Board members Harium Martin-Morris & Autymn Wilde. Learn more about them on our website:
www.sbe.wa.gov

Highlights from Washington State Activities
Technology Education and Literacy in Schools (TEALS) / Microsoft Philanthropies
May 15, 2018

2018 TEALS WA Computer Science Fair – April 19, 2018

- Over **1,600 high school students from 65 schools across Washington** gathered at Microsoft's headquarters for a day of engaging with exhibitors, presenters, and hands-on workshops. The event highlighted representatives from colleges, companies, and extracurricular opportunities from across the Pacific Northwest.
- [Event summary w/photos](#)

TEALS in the 2018-19 School Year

- TEALS plans to have partnerships with **105 high schools in WA** in 2018-19
- **~25% of TEALS partner schools in Washington are in rural areas** and will be supported by our "Rural and Distance" program with remote volunteers
- TEALS will have **approximately 400 volunteers** building teacher capacity and helping high schools grow their computer science programs in the state

Student Opportunities

- TEALS will have two paid high school summer interns in 2018, focusing on AP Computer Science A curriculum work and development
- The Computer Science Fair, TEALS student opportunities web page, and active promotion from TEALS volunteers and teachers connected students to and have applied for summer internships at eight Washington and three national programs/companies, including Expedia, Google, Microsoft, and the Port of Seattle.

Submitted by,

Patrick O'Steen

Senior Regional Manager, TEALS Pacific Northwest
Computer Science in Every High School | tealsk12.org
patrick@tealsk12.org

LEGISLATIVE RECOMMENDATIONS

Legislative Session 2018: Recommendations to the Governor and the Legislature

In today's world, STEM (Science, Technology, Engineering and Math) knowledge and skills have led to scientific and technological innovations that have permeated our everyday lives and brought immense benefits and challenges. In order to ensure that our youth and adults can compete for exciting new careers in STEM, the STEM Education Innovation Alliance recommends increasing STEM education and career-connected learning opportunities from kindergarten to graduate school.

These strategies must include a focus on increasing participation of underrepresented students and reengaging working adults in postsecondary STEM programs. While most of the recommendations are specific to STEM education, progress is dependent upon a strong foundation through a high quality, well-funded and well-aligned early learning, K–12 and postsecondary education system.

Inspire interest in and preparation for STEM careers through career-connected learning and enhanced STEM curricula.

- Provide additional math support to K–2 students who need it, and professional learning for K–2 teachers to implement math standards.
- Integrate the High School and Beyond plan into the school curriculum, beginning in Grade 8.
- Assign computer science specialists at all educational service districts and ensure initiatives reach all students in the district.
- Expand computer science and education grants to build foundational math skills in elementary school, provide teacher training, make technology purchases and support equity of access for historically underserved groups, including girls and students from low-income, rural and ethnic minority communities.*
- Provide work-based learning and state-approved industry apprenticeships to high school students integrating academic and occupational curricula, and support training and time to implement the new programs.*
- Support funding for professional development strategies that support the Next Generation Science standards.
- Expand dual credit opportunities in STEM: e.g fully fund College in the High School, provide support for books and transportation in Running Start for low-income students, and support K–12 to postsecondary articulation of STEM dual credit opportunities that includes CTE dual credit.
- Provide funding for STEM laboratories, equipment, and classrooms in K–12. (Capital budget)

Support collaboration of industry, educators, foundations, and related state and local government entities to design STEM education strategies, including a focus on equitable access and retention.

- The power of partnership has been invaluable in identifying needs, goals and strategies that will support STEM in the future. The STEM Education

Innovation Alliance requests funding support for the partnership to continue this vital collaboration.

Expand postsecondary STEM education, with a focus on equitable access and retention.

- Expand **financial aid** opportunities to increase equity of access and retention in STEM programs:

- ✓ Rebuild State Work Study and increase the state share of match for positions in STEM fields. This form of financial aid is available for both undergraduate and graduate students at both public and independent schools.*
- ✓ Fully fund the State Need Grant to serve 21,000 students who are eligible but unserved. It is estimated that 25 percent of students receiving SNG are in STEM.
- ✓ Expand the Opportunity Scholarship to students in professional-technical certificate and degree programs as well as programs that address the healthcare skills gap.*
- ✓ Provide Tech Apprenticeship Training stipends to support adults returning to pursue STEM education.*

- Expand **postsecondary STEM education** opportunities:

- ✓ Support college and university operating and capital budget requests:

UW: Funding for continued enrollment expansion in Computer Science & Engineering.

TESC: CS (network analysis, robotics, and cybersecurity) program development and expansion that leverages private and National Science Foundation grant funding and alumni donations, including applied learning experiences for students and faculty.

CWU: Game On (Coding in K–12) and Cybersecurity program development and expansion. Support curriculum development for CS endorsement (teacher preparation).

WWU: STEM bottleneck reduction and gateway program expansion (math, physics and chemistry) and high-demand STEM program expansion (CS, engineering and pre-health sciences). Includes pre-advising and cohort support model for improved outcomes for underserved students. Marine, coastal and watershed sciences program expansion; and the Poulsbo Marine Science Center

WSU: Renewable Energy Program start-up and maintenance funding to implement Senate Bill 5939; and the Joint Center for Deployment and Research in Earth Abundant Materials (JCDREAM) in collaboration with the Pacific Northwest Laboratory and the University of Washington to develop and commercialize next-generation technologies. These technologies are designed to support energy security, economic stability and environmentally sound stewardship.

EWU: Provide funding to support the Interdisciplinary Science Building to enable growth of 20 percent in the STEM college.

- ✓ Support **SBCTC** Guided Pathways planning funding for 22 colleges to organize courses along clear career paths. This initiative focuses on helping more students, especially low-income, first-generation students and students of color, to pursue pathways that lead into the workforce or into a college or university for further education. Career pathways include STEM-focused fields such as science, information technology, allied health, and advanced manufacturing technologies.
- ✓ Expand **work-based learning** and state-approved industry **apprenticeships**.*

**Includes a private match component.*

Operating Budget Comparison for STEM Investments: 2018

STEM Alliance Agenda	Governor's Budget Proposal HB 2299	Final Operating Budget ESSB 6032
Inspire youth through career connected and real-world STEM learning opportunities	Career Connect Washington initiative bringing together state agencies, businesses, schools and more to launch a youth apprenticeship system. \$6 M for next generation Science Standards with training on climate change literacy.	Career Connect Washington initiative bringing together state agencies, businesses, schools and more to launch a youth apprenticeship system. \$4 M to OSPI for professional development on the Next Generation Science Standards with training on climate change literacy. \$131,000 to OSPI for high school pre-apprenticeships.
Support collaboration of industry, educators, foundations, and related state and local government entities to design STEM education strategies, including a focus on equitable access and retention.		\$300,000 to SBCTC for a task force to align programs at UW-Bothell and Cascadia College with workforce needs of the biomedical cluster in Canyon Park. \$135,000 to UW for First-Nations MESA program in the Yakima Valley \$200,000 to CWU for Game On! Program teaching at-risk middle school students about STEM program.
Expand postsecondary STEM education, with a focus on equitable access and retention.	\$3 M to UW to double Computer Science degrees.	\$3 M to UW to double Computer Science degrees. \$1.3 M to WWU for Marine Sciences degree program. \$363,000 to WSAC for a new medical student loan program.

STEM Alliance Agenda	Governor's Budget Proposal HB 2299	Final Operating Budget ESSB 6032
<p>Other Postsecondary:</p>	<p>\$500,000 to support Next Generation clean technology program at WSU.</p> <p>Expand Opportunity Scholarships to students in high-demand professional-technical programs.</p>	<p>\$116 M over 3 years to serve currently-unserved students in the State Need Grant program. In 2019, an additional 4,600 students will be served with an additional \$18.5 M in state funds.</p> <p>\$500,000 to support Next Generation clean technology program at WSU.</p> <p>Expand Opportunity Scholarships to students in high-demand professional-technical programs, and advanced degrees in health care.</p> <p>\$559,000 to WSAC for Foster/Homeless Youth apprenticeship programs.</p>



AJAC's Registered Youth Apprenticeship Program: Year in

The Production Technician (Youth) Program will provide students:

- 2,000 hours of paid on-the-job training
- 15 tuition-free college credits
- 1-3 high school credits
- College short-term Certificate of Completion and a portable industry recognized (occupational journey-level) credential from Washington State Apprenticeship Training Council
- Pathway into **5 career pathways**
 - Machinist (Aircraft Oriented)
 - Tool & Die Maker
 - Industrial Maintenance Technician
 - Plastic Process Technician
 - Precision Metal Fabrication Technician
- Accelerated pathways into adult apprenticeship which allows youth apprenticeship completers to potentially complete their adult apprenticeship program early based on credit for previous education and experience

Work AJAC has done to Advance Youth Apprenticeship:

January 30, 2018, in partnership with the governor's office, held the **2nd Annual Governor's Youth Apprenticeship Summit** with **500** people in attendance, and presentations given from **Wisconsin, New America**, and industry partners.

1 New youth occupation, Automated/Mechatronics Maintenance Technician (Youth) will be advanced to the Washington State Apprenticeship Training Council in 2018.

In partnership with our K-12 partners, **968** high school students in Washington State have had the opportunity to learn about AJAC's Youth Apprenticeship Program through student/parent orientations.

55-75 Youth apprentices are projected to enroll and register in the 2018/2019 school year **dependent with employer placement**.



8 School Districts in the state are participating in youth apprenticeship starting in 2018/2019 school year.

- Tacoma School District
- Renton School District
- Puyallup School District
- Sno-Isle Skills Center
- Everett School District
- Snohomish School District
- West Valley School District
- Spokane Public Schools

4 New school districts participating in 2019/2020 school year.

- Newtech Skills Center
- Spokane Valley Tech
- Yakima Public Schools
- Toppenish School District

Currently, **11 employers** have active youth apprentices working on their shop floor.

36 prospective employers are interviewing prospective youth apprentices to hire for 2018/2019 school year.

Over **2,500** hours of college-level classroom instruction to date.

Over **10,000** Hours of on-the-job training has been conducted by youth apprentices to date.

\$100,000 in earned wages to date

\$25,000 is the minimum total compensation each youth apprentice will receive while working.

6 College partnerships have been established to support youth apprenticeship, granting 15 college credits.

- Renton Technical College
- Bates Technical College
- Yakima Valley Community College
- Spokane Valley Community College
- Everett Community College
- Lake Washington Technical College



Madison, Wisconsin Trip – April 30th – May 2nd

Following up on interest from the 2nd Governor’s Youth Apprenticeship Summit, a small technical group of 12 individuals representing 8 different agencies visited Madison, WI for 2 days. Wisconsin has been doing apprenticeship since 1911 and youth apprenticeship for 28 years.

- Department of Workforce Development which oversees their youth and adult apprenticeship system provided **systemic information on history and the current structure of youth apprenticeship** and its bridge to adult apprenticeship.
- Individuals at various levels of the DWD, to include the **Director of DWD** who has been there since the beginning of the youth apprenticeship system, to individual who implement youth apprenticeship at the **local level** presented information regarding their programs and structure.
- **Wisconsin Youth Apprenticeship Overview**
 - One and a two year option for youth apprenticeship
 - 3,559 enrollees
 - 32 active consortia
 - Consortia leads consisted of:
 - Intermediaries like AJAC
 - Workforce Development Boards
 - Community colleges
 - Chamber of Commerce (Green Bay)
 - 2,765 expected completers by August 2018
 - 2,373 completers to date
 - 2,552 active employers
 - 343 active high schools
 - \$16,252,069.50 earned wages
 - 55 occupations
 - 11 of 16 career clusters
- We toured and spoke with employers, mentors and youth apprentices from:
 - UW-Madison – YA STEM - (BioPharmaceutical)
 - Home Savings Bank-YA Finance (rotations from teller to bank loan department)
 - Waterton High School-Health Science - (CNA, Health Nursing, Health Dietary)
 - City of Watertown Engineering Department – (manufacturing, engineering and construction)
 - Sussex Machine Company – (manufacturing & machinist)

