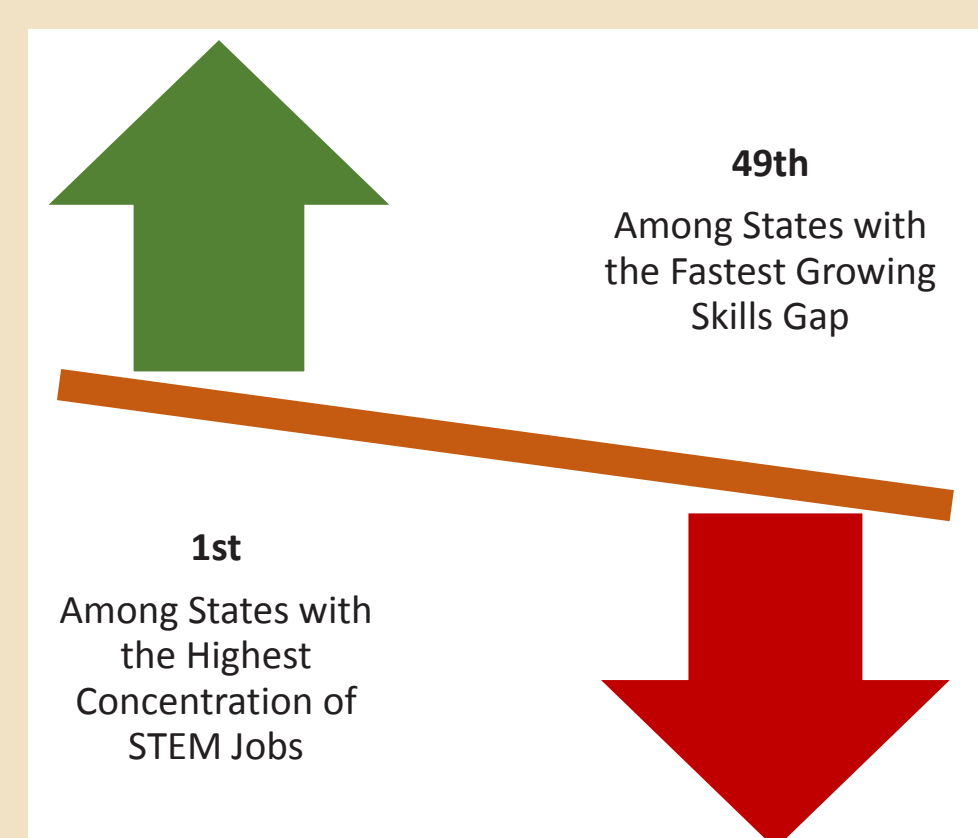




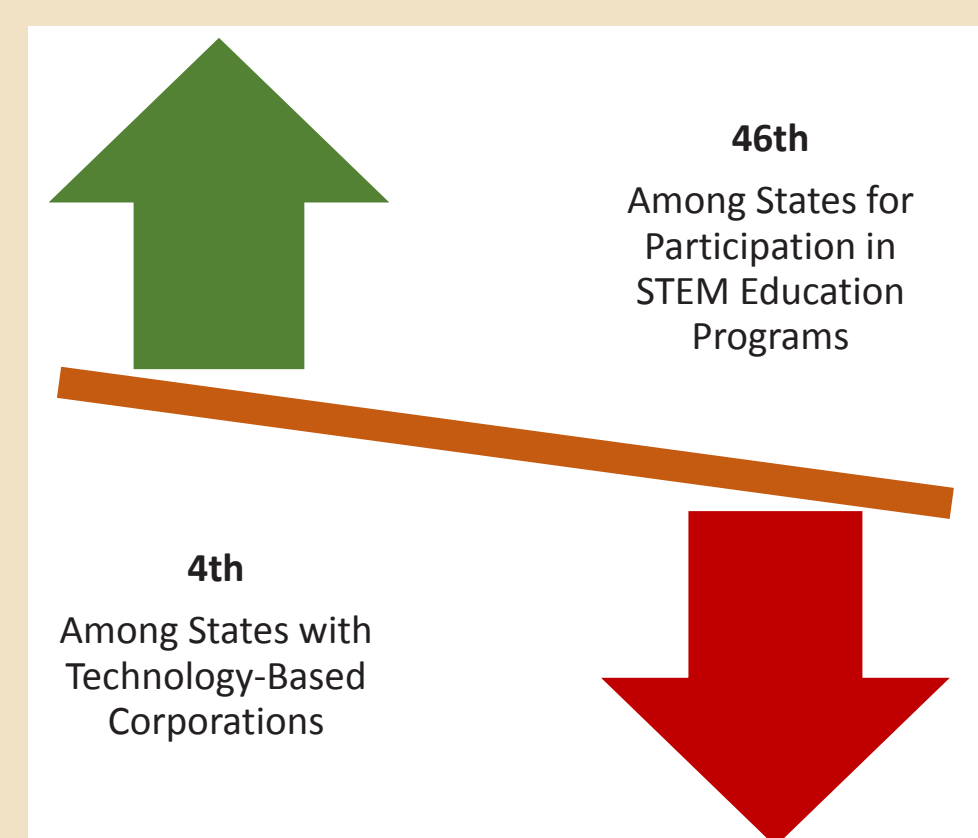
# THE CHALLENGE

## FOSTERING SYNERGY BETWEEN WASHINGTON'S EDUCATION SYSTEM AND ITS TECHNOLOGY-DRIVEN ECONOMY.

Aligning the education system with employers' needs in Washington requires a direct focus on STEM education.

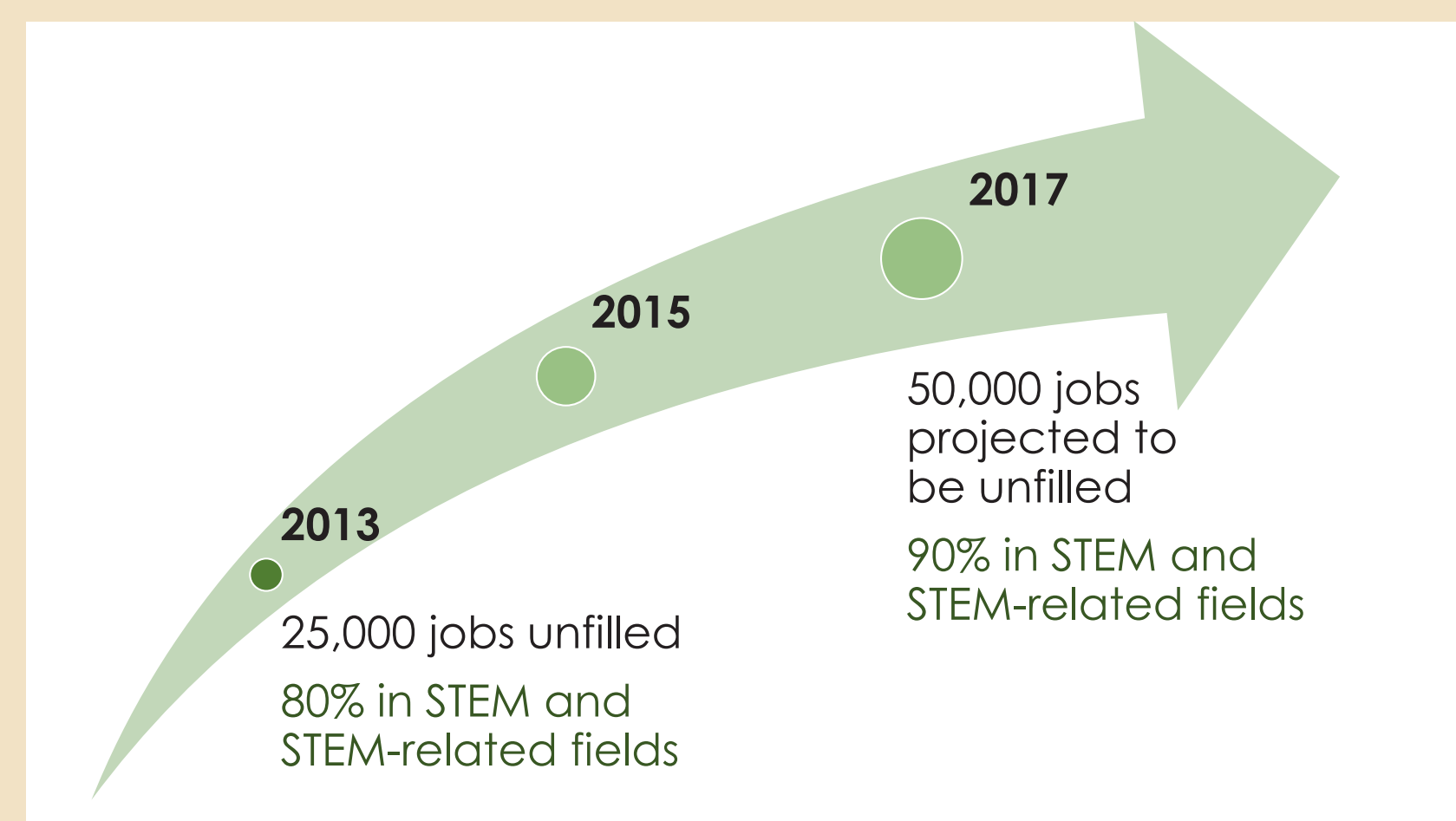


Washington's growing high-tech economy creates high-skilled, high-wage jobs, putting pressure on the state's postsecondary education and training system to keep pace with employer demand.



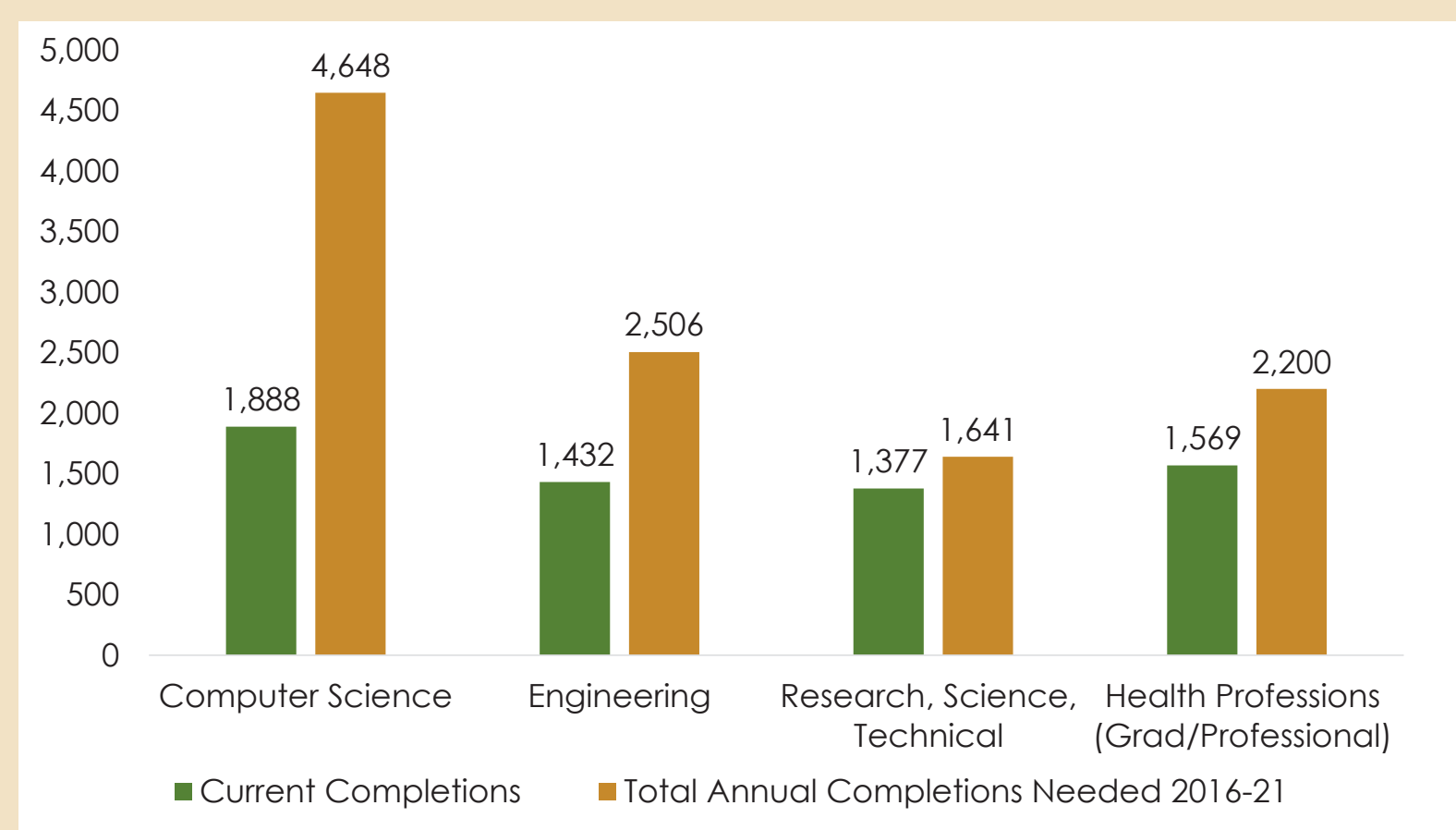
Washington's employers are experiencing a growing number of unfilled vacancies due to a lack of qualified candidates.

Unfilled Vacancies Due to a Lack of Qualified Candidates



Demand for workers in STEM occupations is increasing at every education level.

High Employer Demand Fields at Baccalaureate Level and Above (2013)



STEM supply problem goes beyond the need for more professional scientists, engineers, computer scientists, and mathematicians.

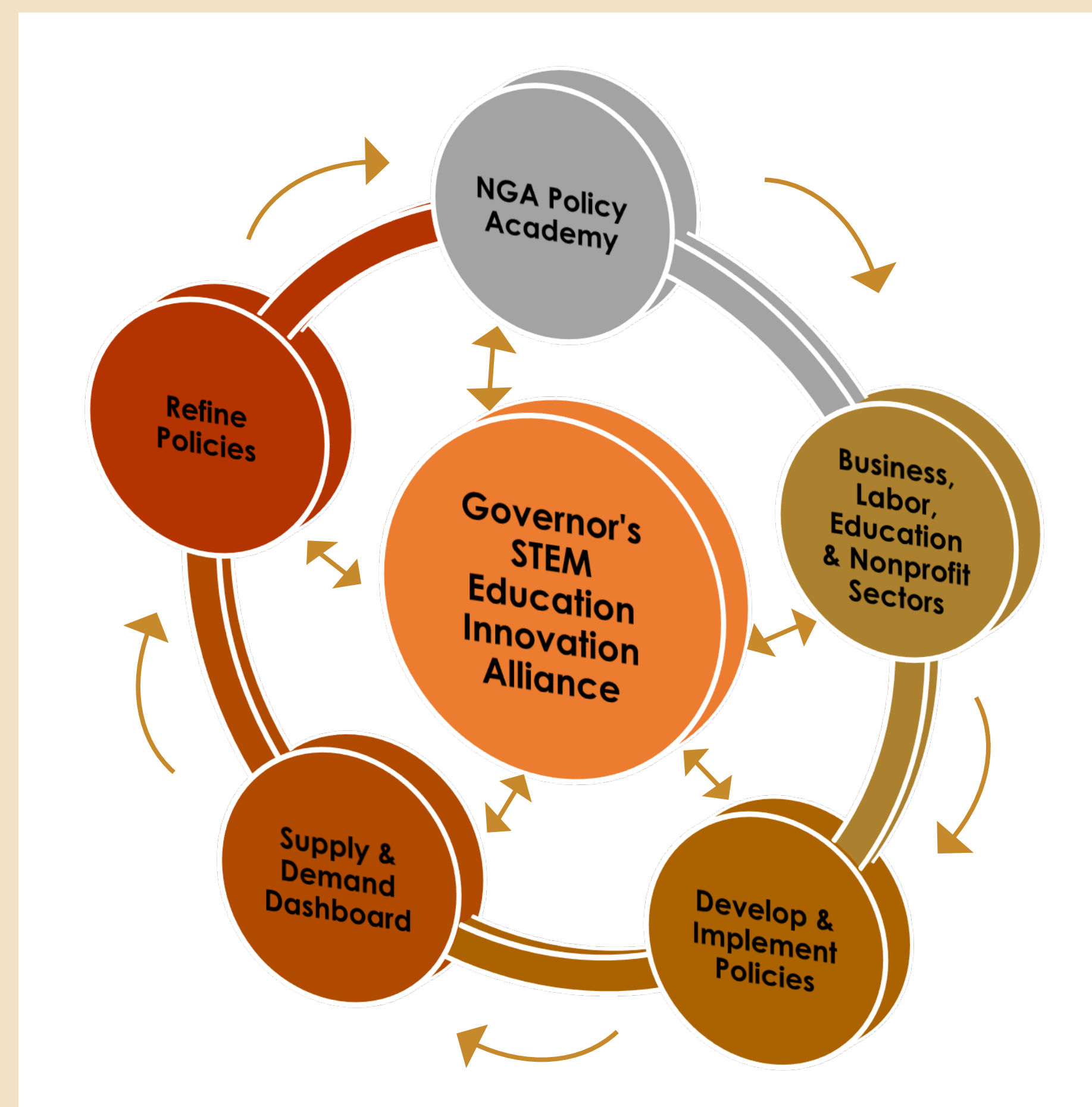
There is also a need for more qualified technicians and skilled STEM workers in a range of occupations and training levels.



# WASHINGTON STATE



## PRIMARY STRATEGY DRIVING THE ACTION PLAN

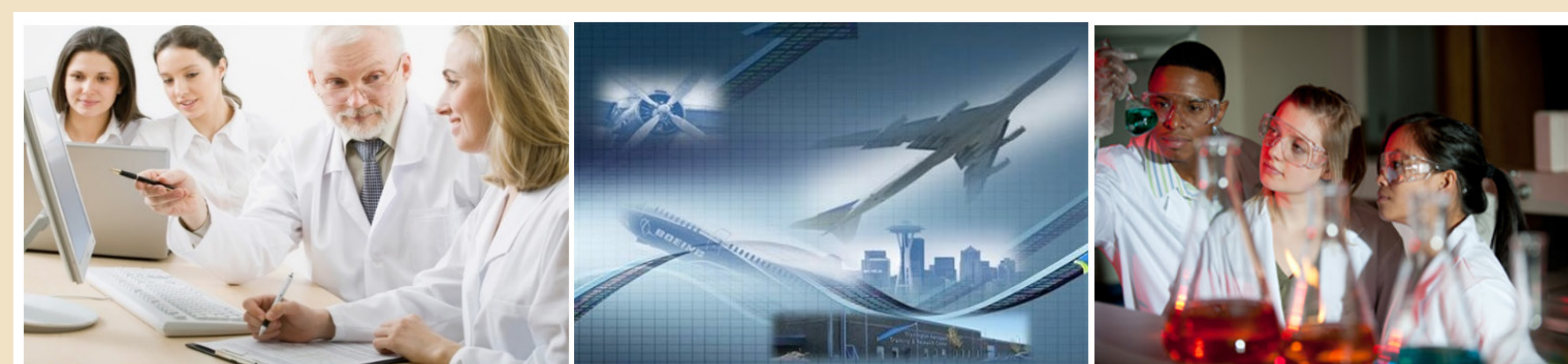


### THE GOVERNOR'S STEM EDUCATION INNOVATION ALLIANCE:

- Leverages resources of the NGA Policy Academy to identify best practices.
- Collaborates with key partners from the education, business, labor, and nonprofit sectors.
- Advises the Governor in the development and implementation of policies to advance STEM education.
- Tracks progress through the creation of a dashboard.
- Refines policies based on the results in an iterative process.

### ABOUT THE ALLIANCE

- Proposed by Governor Jay Inslee and approved by the Washington State Legislature in 2013 in House Bill 1872.
- Includes members from business, labor, nonprofit, and education organizations.
- Advises the Governor on policies designed to advance STEM education for a diverse population and prepares graduates for employment opportunities in Washington's technology-driven economy.
- Endeavors to ensure that graduates are STEM literate, which is defined as having the ability to identify, apply, and integrate concepts from science, technology, engineering, and mathematics to understand complex problems and innovate to solve them.
- Ensures that creativity, the arts, and other essential elements of a liberal education are integrated with STEM curricula.
- Collaborates with the NGA Policy Academy, which will play a key role in advancing the STEM Alliance agenda, catalyzing efforts to bring disparate resources together and promoting best practice strategies.



### FORGING KEY PARTNERSHIPS

The **STEM Education Innovation Alliance** will work with key partners.

- **Regional STEM networks** in South King County (Puget Sound), Spokane, Tri-Cities, Vancouver, Yakima Valley, and Snohomish County will help build education and training systems aligned with the needs of local and state economies.
- **Washington STEM** will help forge strong relationships with crucial partners in this endeavor and coordinate annual statewide summits, convening a broad range of interested education, business, and community leaders, as well as policymakers and philanthropists.
- Established organizations focused on STEM issues like Washington **Mathematics Engineering Science Achievement (MESA)** and **Leadership & Assistance for Science Education Reform (LASER)** will form a solid foundation on which policy activity can build.

### TRACKING PROGRESS

- A **talent supply and demand dashboard** will provide a valuable mechanism for tracking progress, sharing data, and focusing strategic attention on areas of the education pipeline that could be most productively improved.
- Jim Schmidt, Director of the Education Research Data Center, will lead the effort to create this essential strategic tool.

# METRICS

## DASHBOARD FRAMEWORK

Broad Goals	Metrics
<b>Goal 1:</b> Increase the number and diversity of STEM literate students in the education-to-career pipeline.	<b>Indicator 1:</b> Student interest in STEM fields. <b>Indicator 2:</b> Student STEM achievement in PreK-12 system. <b>Indicator 3:</b> Student readiness for college-level study in STEM fields. <b>Indicator 4:</b> Enrollment in postsecondary STEM programs. <b>Indicator 5:</b> Increase project-based, career, workplace, and community learning opportunities that provide STEM and 21st century skills. <b>Indicator 6:</b> Increase supplemental STEM-enriching learning opportunities both inside and outside the classroom.
<b>Goal 2:</b> Increase the diversity and capacity of K-12 teachers and schools to deliver high-quality, effective STEM education to diverse populations.	<b>Indicator 7:</b> K-12 STEM classes taught by educators trained in the discipline. <b>Indicator 8:</b> Teachers and school leaders with STEM-related degrees.
<b>Goal 3:</b> Expand capacity and pathway options for postsecondary and adult training programs to increase the number and diversity of STEM literate adults.	<b>Indicator 9:</b> Graduates from postsecondary institutions with degrees in STEM fields. <b>Indicator 10:</b> Increase number of graduates in academic transfer STEM programs in public community and technical colleges. <b>Indicator 11:</b> Increase the number of students earning credentials in high employer demand professional technical programs in public community and technical colleges. <b>Indicator 12:</b> Alignment of STEM education programs with workforce needs in key economic sectors. <b>Indicator 13:</b> Narrowing or closing of STEM employment skill gaps.
<b>Goal 4:</b> Increase both public and private support to advance STEM education and workforce alignment goals.	<b>Indicator 14:</b> Funding/resource allocation for STEM education and career training programs in Washington State.



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