

# Skilled Technical Workforce Overview

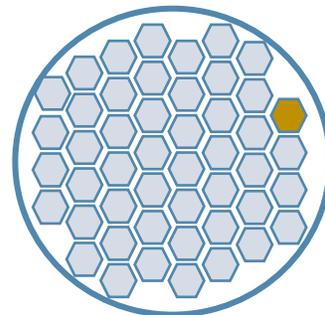
## Definition

The skilled technical workforce (STW) is defined as workers in occupations that use significant levels of science and engineering expertise and technical knowledge and whose educational attainment is less than a bachelor's degree.

## STW Community

From a broad perspective, there are several ongoing studies on the portion of the American workforce in the science, engineering, and technology fields. NCSES has developed the STW Initiative and committed resources to describing and measuring the STW, a subgroup of the STEM workforce. However, this initiative will require cooperation and coordination among the entire STEM stakeholder community to develop policies and practices that support this important segment of the workforce.

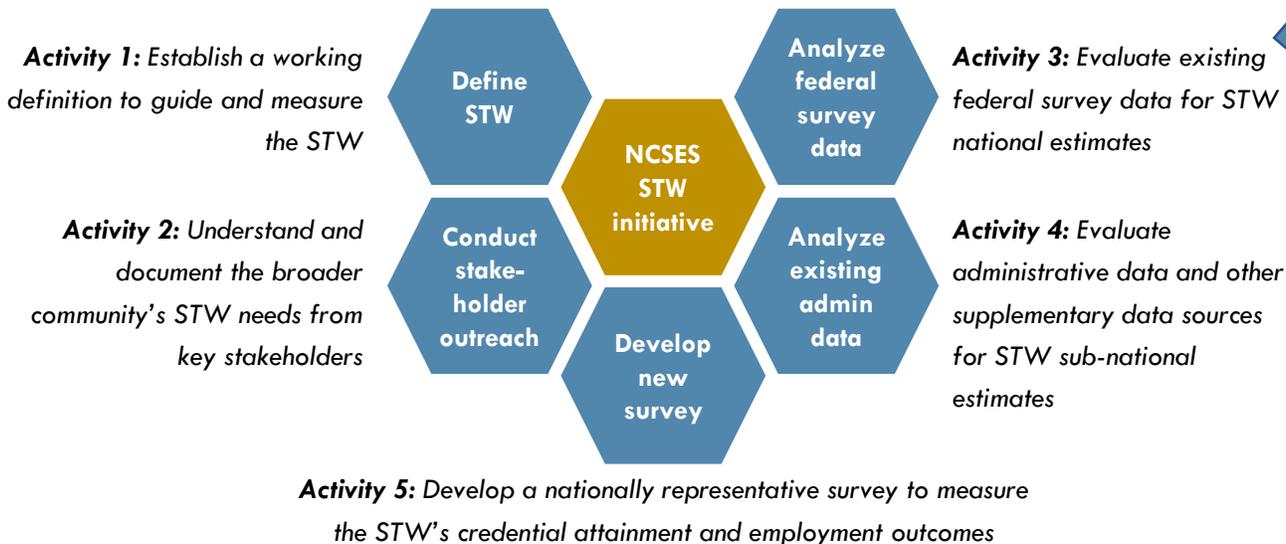
STEM Workforce Community



NCSES STW Initiative

## NCSES's STW Initiative

NCSES's STW Initiative consists of five strategic activities to provide policy-neutral nationally representative estimates and information on the STW.



## NCSES's STW Interest

The STW comprises 13% of the total workforce. NCSES is interested in measuring and understanding the workforce's ability to gain **entry**, maintain **relevance**, and seek **advancement**. Employers demand technically skilled employees but are unable to identify and hire qualified workers. More detailed STW information will inform the U.S. labor market to advance STW policies, processes, and program decisions.

# Skilled Technical Workforce Working Group

**NCSES** National Center for Science and Engineering Statistics

Chartered on May 24, 2019, the NCSES STW Working Group was established to accomplish several strategic activities to support the NCSES STW Initiative. By Summer 2020, the Working Group will produce a final report that documents an action plan for NCSES. Each activity's progress and next steps are described below.

## 1. STW definition

*Goal: Identify an STW definition to enable high-quality national estimates and to inform policy discussions*

### Progress

- Developed an STW working definition that includes two criteria: high level of knowledge in a technical domain and educational attainment below the bachelor's degree
- Used the STW working definition in the 2020 S&E Indicators Report and two thematic reports (S&E Labor Force, Education)

### Next Steps

- Refine working definition with stakeholder input

## 2. Stakeholder outreach

*Goal: Engage stakeholders, determine STW information needs, and explore STW measurement methodology*

### Progress

- Developed STW community outreach materials
- Identified key STW partners and stakeholders
- Held initial engagement discussions and presented at several invited meetings

### Next Steps

- Finalize STW community outreach materials
- Gather information through engagement sessions
- Plan a June 2020 STW stakeholder workshop meeting

## 3. Existing survey data analysis

*Goal: Evaluate employee and employer data from federal surveys as potential sources for STW national estimates*

### Progress

- Developed an inventory of ten highly relevant STW-related federal data sources

### Next Steps

- Draft a literature review of recent research on the STW to identify data sources and policy questions of interest

## 4. Administrative data analysis

*Goal: Evaluate employee and employer administrative data as potential sources for STW sub-national estimates*

### Progress

- Developed an inventory of STW-related administrative data sources through a cooperative agreement with the University of Virginia
- Posted the STW-related data inventory online for public use

### Next Steps

- Investigate the potential sources for fit-for-use to either link or supplement future NCSES STW data

## 5. New survey development

*Goal: Develop a nationally representative survey to measure STW credential attainment and employment outcomes*

### Progress

- Developed plans for the National Training, Education, and Workforce Survey (NTEWS)
- Approved to use the American Community Survey (ACS) as the NTEWS sampling frame

### Next Steps

- Document the guiding research questions and potential data outputs
- Submit NTEWS materials for the Office of Management and Budget approval

## Road map

### 2019

- **November:** Submitted NCSES STW Working Group midterm report
- **December:** Initiated engagement sessions with stakeholders to increase NCSES's understanding of broader community needs

### 2020

- **Early Summer:** Submit NCSES STW Working Group final report, including an action plan for NCSES to continue STW measurement and community engagement efforts
- **Early Fall:** Work with the Office of Management and Budget for final approval of a nationally representative survey of the STW

