CTE is *The* Agenda

Career Technical Education (CTE) is learning that works for students and the economy. CTE is also at the heart of any agenda focused on opportunity and economic competitiveness.

CTE is the Jobs Agenda

- More than half of all jobs (53 percent) in the U.S. today are middle-skill jobs that require more than a high school diploma, but less than a four-year degree. Many of these jobs are in technical fields such as health care, information technology and advanced manufacturing.[1]

- Yet only 43 percent of workers are trained to the middle-skill level,[2] leading to a skills gap that leaves employers searching for qualified talent and many workers without job opportunities.

- In fact, in 2018, 46 percent of employers in the U.S. cite difficulty finding skilled talent, and many of the hardest-to-fill positions are in technical fields that require a background in CTE.[3]

- CTE programs directly connect learners in high school and postsecondary with employers, providing a clear pipeline of talent and unique opportunities for students to engage in internships, apprenticeships and other meaningful on-the-job experiences.[4]

> ### Career Clusters
> *A framework for CTE that encompasses the full world of work across 16 Career Clusters, which represent all industries, sectors, careers and jobs in the global economy.*

CTE is the Education Agenda

- Only CTE offers students the academic, technical and employability skills – and opportunities to connect hands on experiences with classroom instruction – they need to be prepared for the career of their choice.

- CTE prepares students for careers and is a proven instructional strategy that keeps students engaged. Forty-five percent of students say CTE courses provide them with real-world examples that help them better understand academic classes.[5]

- The graduation rate for CTE concentrators is about 94 percent,[6] approximately 10 percentage points higher than the national average.[7]

- About 88 percent of high school graduates take at least one CTE course,[8] but only 20 percent are concentrating in a specific career field by taking an intentional sequence of courses.[9] This is a gap that needs to be closed is more students can receive the full benefit of CTE.

CTE is the Infrastructure Agenda

- There are more than 14.5 million individuals employed in infrastructure-related activities, 11 percent of the entire U.S. workforce.[10]

- While many of these jobs are in the construction field, there are many other relevant CTE pathways that prepare individuals for infrastructure-related careers.

- CTE must be a critical component of our strategy to fill the current demand for infrastructure jobs and ensure we have the workforce to meet our national infrastructure challenge.

> ### D+
> *Grade given by American Society of Civil Engineers on the state of America's Infrastructure*
>
> ### $2 trillion
> *Estimated cost to fix America's infrastructure* [9]

Career Clusters Relevant to Infrastructure[12]	Career Clusters Relevant to Infrastructure You May Not Have Considered	
Architecture & Construction *Plan, design and build infrastructure projects. Careers include:* • *Civil engineers* • *Contractors* • *Carpenters*	**Agriculture, Food & Natural Resources** *Ensure projects are environmentally sound and manage key elements of infrastructure. Careers include:* • *Water treatment managers and technicians* • *Soil scientists*	**Arts, A/V Technology & Communications** *Support the design process and installation of telecommunications systems. Careers include:* • *Graphic designers* • *Telecommunications techncians*
Government & Public Administration *Plan and implement large-scale infrastructure projects and ensure legal compliance. Careers include:* • *Urban and regional planners* • *Inspectors* • *Clerks*	**Business Administration & Management** *Provide critical management and operational support for all entities. Careers include:* • *Office and procurement clerk* • *Budget analysts* • *Human resource specialists*	**Information Technology** *Provide back-end organizational support for any and all entities. Careers include:* • *Network administrators* • *Software developers* • *Web developers*
Transportation, Distribution & Logistics *Oversee all global logistics and supply management and vehicular maintenance. Careers include:* • *Logistics analysts* • *Cargo and freight agents* • *Mechanics*	**Manufacturing** *Design, build, maintain and repair equipment and machines for infrastructure projects. Careers include:* • *Electrical technicians and engineers* • *CNC machinists* • *Wind turbine technicians*	**Science, Technology, Engineering & Mathematics** *Lead critical aspects of the design and implementation of infrastructure projects. Careers include:* • *Materials engineers* • *Conservation scientists* • *Engineering technician*

[1] National Skills Coalition. (2017). Middle Skills Fact Sheet. Retrieved from http://www.nationalskillscoalition.org/resources/publications/2017-middle-skills-fact-sheets/file/United-States-MiddleSkills.pdf
[2] *Ibid.*
[3] Manpower Group. (2018). *Solving the Talent Shortage: Build, Buy, Borrow and Bridge.* Retrieved from https://go.manpowergroup.com/talent-shortage-2018
[4] For examples of high-quality CTE programs, see www.careertech.org/excellence-in-action
[5] Association for Career and Technical Education. (2014). *CTE Works! 2014 Results from a National Survey*. Retrieved from https://www.acteonline.org/wp-content/uploads/2018/03/2014_NRCCUA_ACTE_Research_Report_Final.pdf
[6] From the 2016-17 academic year. Retrieved from https://perkins.ed.gov/pims/DataExplorer/Performance
[7] National Center for Education Statistics. (2018). *Public High School Graduation Rates.* Retrieved from https://nces.ed.gov/programs/coe/indicator_coi.asp
[8] National Center for Education Statistics. (2013). Table H176. Retrieved from https://nces.ed.gov/surveys/ctes/tables/h176.asp
[9] Based on Advance CTE's analysis of CTE concentrator data from https://perkins.ed.gov/pims/DataExplorer/CTEConcentrator and public high school enrollment data from https://www.census.gov/data/tables/2016/demo/school-enrollment/2016-cps.html
[10] Brookings. (2016). *Infrastructure skills: Knowledge, tools and training to increase opportunity.* Retrieved from https://www.brookings.edu/wp-content/uploads/2016/05/metro_20160510_infrastructure_skills_report.pdf
[11] American Society of Civil Engineers. (2017). "Infrastructure Report Card." Retrieved from http://www.infrastructurereportcard.org/
[12] For more, see www.careertech.org/career-clusters

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