Data and Information for Workforce Alignment

THEC

Statutory Reports

TENNESSEE LEAP

Annual Report
2019

Labor Education Alignment Program

Tennessee Higher Education Commission

THEC

Academic Supply and Occupational Demand in Tennessee

Workforce Needs and Degree Production

Annual Report
January 15, 2019

THEC

Tennessee Higher Education Commission

THEC

Statutory Reports

- Producer AND consumer of workforce information.
  - Report to meet our own duties AND use other agency reports
- NOT individual level data; much more macro
  - Statewide
  - Region- and county-level

THEC

Future of Work

- Align industry and higher education
- Prepare for 2030 workforce and beyond

- Necessary credentials AND skills?

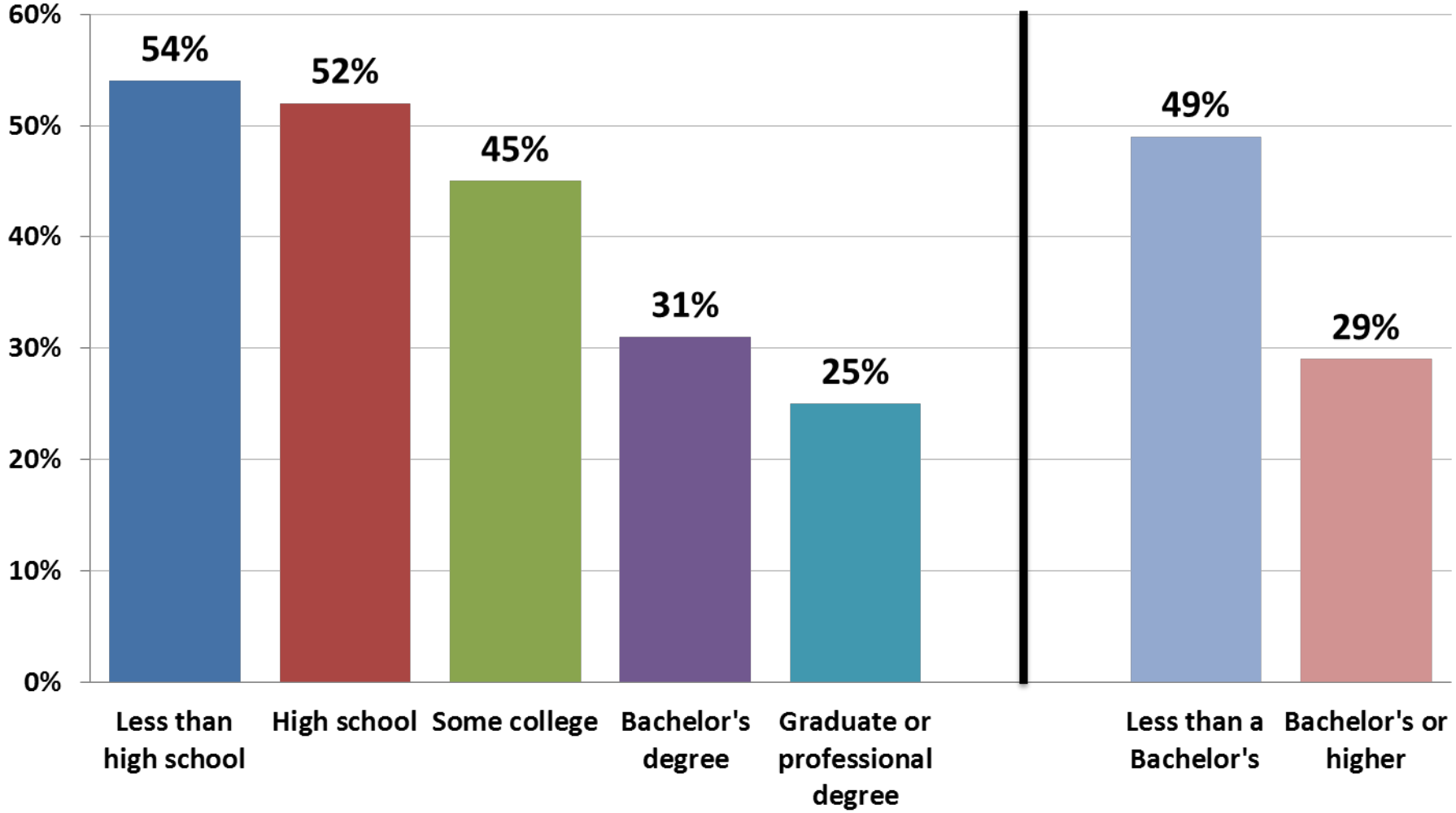
- Speed and agility from higher education
- Changes to:
  - Degree production?
  - Program approval?

Future of Work

Occupation	Average wage	Automation potential	Typical education required
Packaging & Filling Machine Operators & Tenders	$31,000	100%	Less than Bachelor's Degree
Food Preparation Workers	$23,000	91%	Less than Bachelor's Degree
Payroll & Timekeeping Clerks	$44,000	87%	Less than Bachelor's Degree
Light Truck or Delivery Services Drivers	$35,000	78%	Less than Bachelor's Degree
Computer Network Support Specialists	$68,000	62%	Less than Bachelor's Degree
Medical Assistants	$33,000	54%	Less than Bachelor's Degree
Retail Salespersons	$27,000	47%	Less than Bachelor's Degree
Computer Programmers	$85,000	38%	Bachelor's Degree or More
Registered Nurses	$72,000	29%	Bachelor's Degree or More
Maids & Housekeeping Cleaners	$24,000	18%	Less than Bachelor's Degree
Home Health Aides	$24,000	11%	Less than Bachelor's Degree
Software Developers, Applications	$105,000	8%	Bachelor's Degree or More
Management Analysts	$92,000	4%	Bachelor's Degree or More
U.S. total	**$49,600**	**46%**	

Source: Mark Muro, et.al, Brookings Institute. *Automation and Artificial Intelligence: How Machines Are Affecting People and Places.* January 2019.

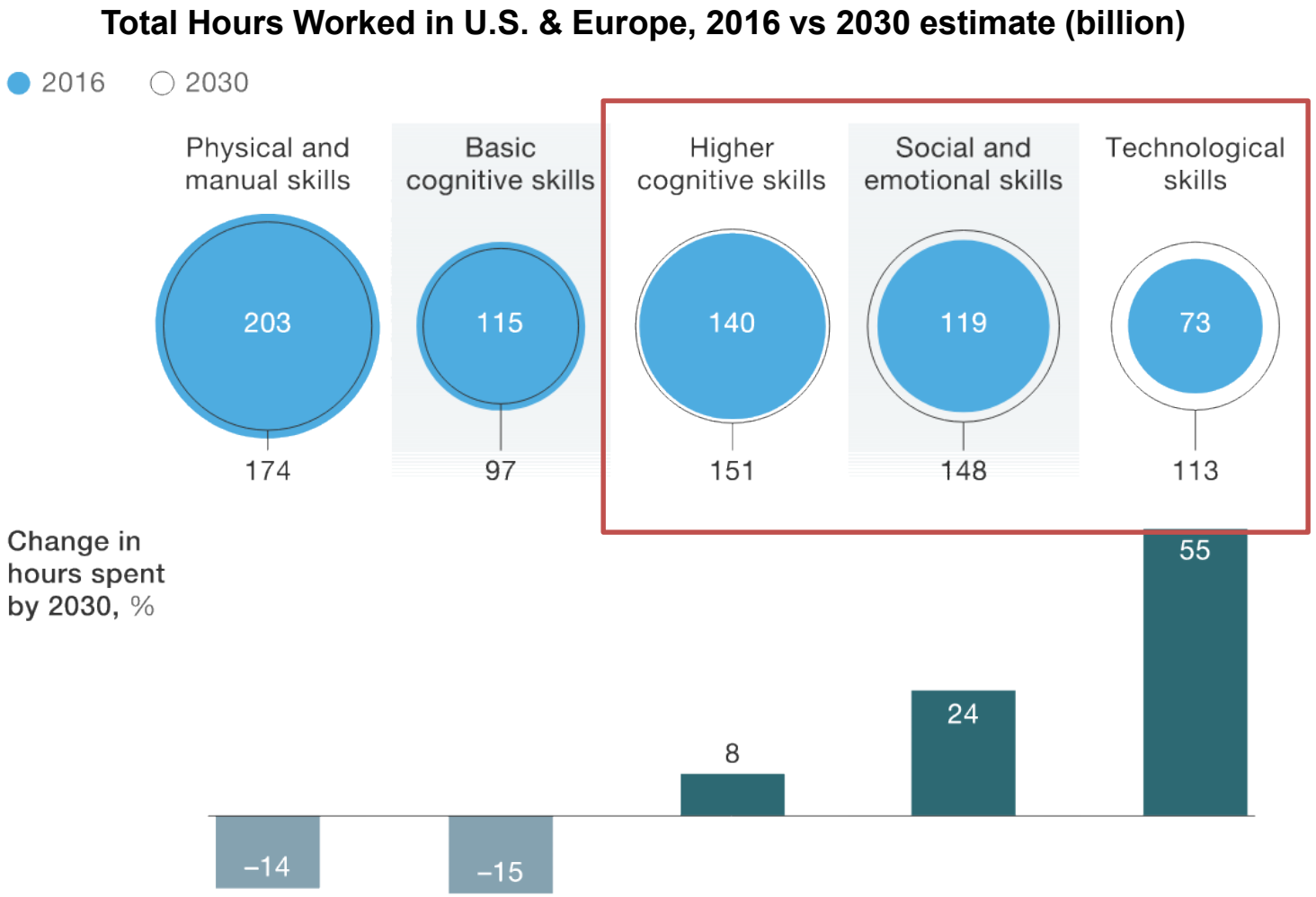
Job Change from Automation, by Attainment



Source: Brookings analysis of 2016 American Community Survey 1-Year microdata (U.S. data).

THEC TSAC

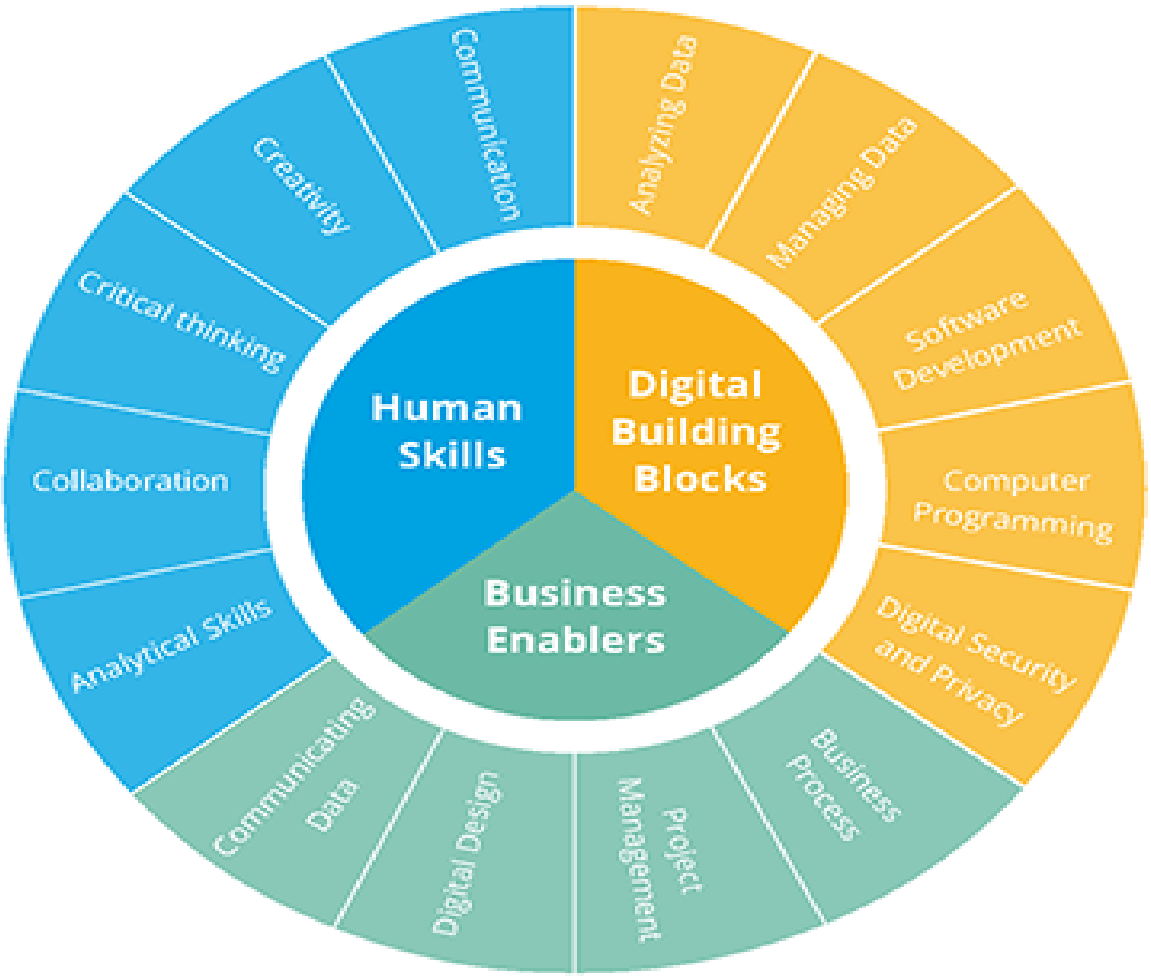
Shift in Required Workforce Skills



Source: McKinsey & Company, McKinsey Global Institute Workforce Skills Model; McKinsey Global Institute analysis.

THEC TSAC

The New Foundational Skills of the Digital Economy



These 14 skills, already in wide demand by employers, command salary premiums and are crucial for workers who want to keep pace with a changing job market.

P20 Connect – longitudinal data

- Individual-level data
  - Can link **K12, higher education, and workforce data** (i.e., employment intensity, unemployment insurance) at the person-level.

- Most often (though not always!) used for "capital R" research; collaborations with external parties.

72,865 Students

2007 Cohort of High School Freshmen

10,545 students
did not graduate high school

22,334 students
entered the workforce

$9,030
average income

16% chance
of earning above
minimum wage

40,235 students
enrolled in postsecondary

THEC TSAC

P20 Connect – longitudinal data

- i.e., Working *while enrolled* in higher ed?
- i.e., High school grads who *do not enroll* in higher ed?
- Challenge: industry not occupation.
  - Work in healthcare, but we can't tell if doctor or janitor
    - Wages proxy for this.

GIVE Act

GIVE

Governor's Investment in Vocational Education

THECB TSAC

Two-pronged initiative

- Increased **dual enrollment grant** funding for courses in high-need fields
- **Community-based grants** to address local and regional industry/workforce demands.

Dual enrollment grants

- Crosswalk courses, programs, and high-need industry demands
  - THEC/TSAC are "keepers" of the high-need, high-demand list.

- Tangible, actionable, immediate use of linked data!

THEC TSAC

Community-based grants

- TCAT Covington – **Digital Agronomy Program**
  - Complete curricula for Digital Agronomy Programs at K-12, TCAT, and Community College levels
  - Hire instructors and work-based learning coordinators; equip TCAT classrooms

Community-based grants

- Motlow State Community College – **Teaching Innovative Learning Technologies (TILT)**
  - Expand the current **middle college mechatronics program** to additional local high schools
  - Create a **computer coding program,** beginning at the middle school level, expanding into high school and culminating in **Python Certification**.

In conclusion -

- We are still learning the best ways to marry higher ed and workforce data and use effectively!
- Data from many sources – not just US or TN Departments of Labor
- Reporting and research is critical, but how to make data/information actionable?

THEC

Questions? Thank you!

Emily House
Emily.House@tn.gov

www.tn.gov/thec
@TNHigherEd
@HouseEA

THEC TSAC