**INTRO TEXT**

In recent decades, the diffusion of digital technology into nearly every business and workplace, also known as “digitalization,” has been remaking the U.S. economy and the world of work, increasing the potential of individuals, firms and society while also contributing to a series of troublesome impacts and inequalities, such as worker pay disparities across many demographics, and the divergence of metropolitan economic outcomes.

This report presents a detailed analysis of changes in the digital content of 545 occupations covering 90 percent of the U.S. workforce in all industries since 2001. The analysis categorizes U.S. occupations into jobs that require high, medium or low digital skills. **Read about the report’s methodology – pointer icon »**

The full report concludes with implications of the key findings and suggests ways communities can work with firms and workers to spread the benefits of digitalization while mitigating its potentially harmful effects. **Read about the report’s primary recommendations – pointer icon »**

**(STATIC GRAPHIC: DIGITALIZATION LEVELS BY OCCUPATION)**

**Graphic title: Select occupations and digital skill level, 2016**

**Section title: The U.S. economy is digitalizing at an extremely rapid pace.**

Between 2002 and 2016, the shares of U.S. jobs that require substantial digital knowledge rose rapidly, whether because of changes in the digital content of existing occupations or due to shifts in the distribution of occupations. **Read more about the changing U.S. workforce – pointer icon »**

Workers of every stripe—from corporate finance officers to sales people to utility workers and nurses—are now spending sizable portions of their workdays using tools that require digital skills.

**(INTERACTIVE GRAPHIC: CHANGE OVER TIME)**

Graphic text:

*56 percent of the jobs studied required low digital skills in 2002.*

*Meanwhile, nearly 40 percent required medium digital skills.*

*And just 5 percent required high digital skills.*

*But by 2016, the share of jobs requiring high digital skills had jumped to 23 percent.*

*The share of jobs requiring medium digital skills rose to 48 percent.*

*And in a huge shift, the share of jobs requiring low digital skills fell from 56 to 30 percent.*

**Section title: The degree and pace of change of digitalization varies widely among occupations and across industries.**

Digitalization scores rose in 517 of 545 analyzed occupations from 2002 to 2016. The average digitalization score across all occupations rose from a low level of 29 in 2002 to a medium level of 46 in 2016, a 57 percent increase.

**(INTERACTIVE GRAPHIC: BUBBLE GRAPH)**

Additionally, virtually all industry groups saw their mean digital scores increase from 2002 to 2016, though the degree and speed of digital adoption vary significantly. Leading the digitalization race is a group of broad service sectors, including professional, scientific and technical services (55); media (52); and finance and insurance (55). On the lower end, education, transportation and warehousing, basic goods manufacturing, and construction have scores mostly in the 30s. **Read more about the changing digital scores of diverse industries – pointer icon »**

~~DELETE: STATIC GRAPHIC (INDUSTRY)~~

**Section title: Digitalization is associated with increased pay and job resiliency in the face of automation but also vastly uneven trends for job growth and wages, and presents gender- and race-based challenges..**

*Note: Instead of static graphics, include text in “expandable boxes” a la “Implications and Recommendations” section of* [*Water report*](https://www.brookings.edu/research/exploring-national-and-local-water-use-patterns-in-the-u-s/)

Expandable box: Automation

* Nearly 60 percent of tasks performed in low-digital occupations appear susceptible to automation, compared to only around 30 percent of tasks in highly digital occupations. **Read more about the correlation between digitalization and automation – pointer icon »**

Expandable box: Job growth

* Job growth has been rapid in high-digital level occupations, such as computer-mathematical and business-finance occupational groups, as well as in low-digital level occupations, such as personal care and food preparation. By contrast, middle-digital occupations, such as office-administrative and education occupations have seen much slower job growth. **Read more about the correlation between digitalization and job growth – pointer icon »**

Expandable box: Wages

* The mean annual wage for workers in high-level digital occupations reached $72,896 in 2016, whereas workers in middle-level digital jobs earned $48,274 on average, and workers in low-level digital occupations earned $30,393 on average. **Read more about the correlation between digitalization and wages – pointer icon »**

Expandable box: Wage growth

* Between 2010 and 2016, occupations with high-level digital scores on average registered more than 0.8 percent wage growth annually, compared to middle-level annual wage growth of 0.3 percent, versus annual wage declines of 0.2 percent for low-level occupations. **Read more about the correlation between digitalization and wage growth – pointer icon »**

Expandable box: Gender

* Women (48), with slightly higher aggregate digital scores than men (45), represent about three-quarters of the workforce in many of the largest medium-digital occupational groups, such as health care, office administration, and education. Conversely, men continue to dominate the highest-level digital occupations, such as computer, engineering and management fields, as well as lower-digital occupations such as transportation, construction, natural resources, and building and grounds occupations. **Read more about the correlation between digitalization and gender – pointer icon »**

Expandable box: Race/ethnicity

* Whites (65 percent of the workforce) remain overrepresented in high-level digital occupational groups, such as engineering and management, as well as medium-level digital areas such as business and finance, the arts, and legal and education professions. Asians (6 percent of the workforce) account for 21.3 percent of highly digital computer and math occupations, and 11.6 percent of engineering occupations. Blacks (12 percent of the workforce) are overrepresented in medium-digital occupations such as office and administrative support, community and social service, as well as low-digital level jobs such as transportation, personal care, and building and grounds maintenance. Hispanics (17 percent of the workforce) are significantly underrepresented in high-level digital technical, business and finance occupational groups, and somewhat underrepresented in medium-level legal, sales, and education positions. **Read more about the correlation between digitalization and race/ethnicity – pointer icon »**

**Section title: Metro digitalization is widespread, but diverging**

Text: Digitalization is happening everywhere, but its progress varies unevenly across the map. Metropolitan areas’ current wage levels and recent wage growth appear to be highly correlated with mean digitalization scores. Additionally, metros are diverging in their digitalization ratings: the higher (or lower) a metro area’s 2002 share of high-level digital occupations, the greater (or lesser) the growth of its share of jobs in such occupations in the years 2002 to 2016. **Read more about the variance in regional digital performance »**

**(INTERACTIVE GRAPHIC: METRO MAP)**