

The Economic Value of Iowa State University of Science and Technology



IOWA STATE UNIVERSITY OF SCIENCE AND TECHNOLOGY (Iowa State) creates value in many ways. The university plays a key role in helping students increase their employability and achieve their individual potential. The university facilitates, through its focus on innovation and entrepreneurship, new research and economic developments and also draws visitors and students to the state, generating new dollars and opportunities for Iowa. Iowa State University Extension and Outreach (ISU Extension and Outreach) is actively engaged in providing research-based education and information to improve lives of Iowans in all 99 counties. Iowa State provides students with the education, experiential training, and skills they need to have fulfilling and prosperous careers. Its student, employee, and Iowa State-coordinated community volunteers support the state economy through the output and employment generated by state businesses and organizations. Furthermore, Iowa State is a place for students to meet new people from various backgrounds, increase their self-confidence, and promote their overall health and well-being.

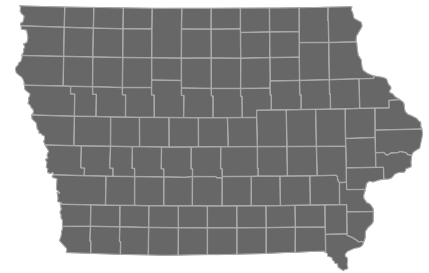
Iowa State enhances both the lives of its students and the state economy. The university supports a variety of industries in Iowa, serves businesses in the state, and benefits society as a whole in Iowa from an expanded economy and improved quality of life. Additionally, the benefits created by Iowa State extend to the state government through increased tax revenues and public sector savings.

This study measures the economic impacts created by Iowa State on the business community and the benefits the university generates in return for the investments made by its key stakeholder groups—students, taxpayers, and society. The following two analyses are presented:

 **Economic impact analysis**

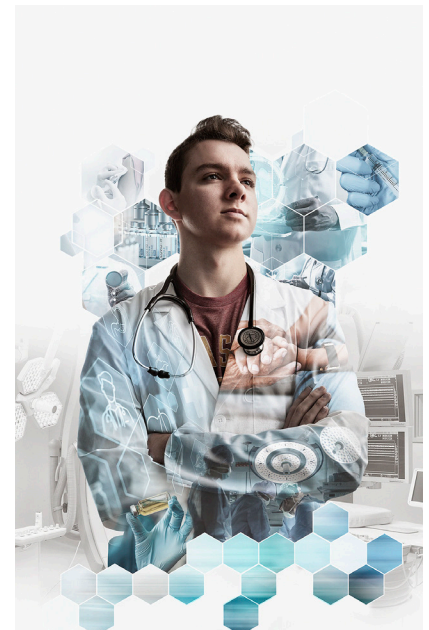
 **Investment analysis**

All results reflect employee, student, and financial data, provided by the university, for fiscal year (FY) 2023–24. Impacts on the Iowa economy are reported under the economic impact analysis and are measured in terms of added income. The returns on investment to students, taxpayers, and society in Iowa are reported under the investment analysis.



Iowa

Iowa State influences both the **lives of its students** and the **state economy**.




Economic impact analysis




Iowa State promotes economic growth in Iowa through its direct expenditures and the resulting expenditures of visitors, students, and state businesses. The university serves as an employer and buyer of goods and services for its day-to-day, construction, and research operations. Numerous start-up and spin-off companies have formed as a result of programs and knowledge at Iowa State. The university's reputation and activities attract visitors and students from outside Iowa, whose expenditures benefit state vendors. Iowa State encourages its students, employees, and Iowa State coordinated community members to volunteer in the community, helping businesses and organizations grow. In addition, Iowa State is a primary source of higher education to Iowa residents and a supplier of trained workers to state industries, enhancing overall productivity in the state workforce.

Operations spending impact

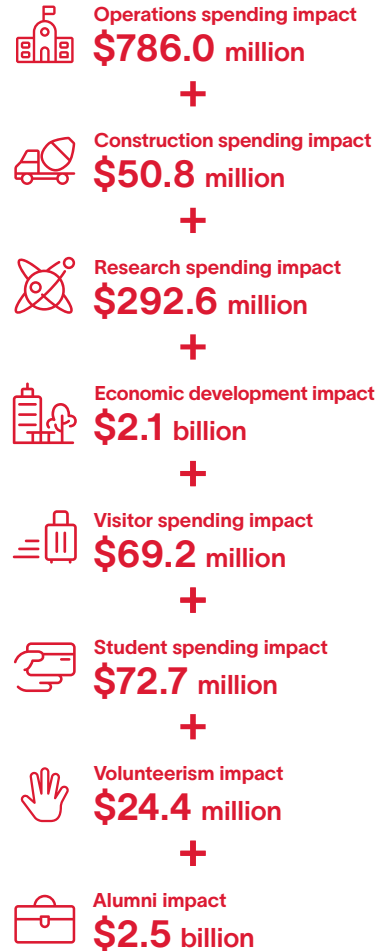
 Iowa State adds economic value to Iowa as an employer of state residents and a large-scale buyer of goods and services. In FY 2023-24, payroll at Iowa State was \$687.9 million,¹ much of which was spent in the state for household and living expenses, including groceries, mortgage and rent payments, and dining out. In addition, the university spent \$289.1 million on expenses related to facilities, supplies, and professional services.²

Iowa State's operations spending added **\$786.0 million** in income to the state during the analysis year. This figure represents the university's payroll, the multiplier effects generated by the in-state spending of the university and its employees, and a downward adjustment to account for funding that the university received from state sources. The \$786.0 million in added income is equivalent to supporting **13,972 jobs** in the state.

Construction spending impact

 Iowa State invests in capital projects each year to maintain its facilities, create additional capacities, and meet its growing educational demands. While the amount varies from year to year, these quick infusions of income and jobs have a substantial impact on the state economy. In FY 2023-24, Iowa State's construction

Impacts created by
Iowa State in FY 2023-24



 Total economic impact
\$6.0 billion

OR

 Jobs supported
59,888

¹ Includes royalty payments to investors related to Iowa State who still live in Iowa.

² Research employees and their payroll as well as non-pay expenses for research and construction are excluded from this impact as they are measured in the following impacts.



spending generated **\$50.8 million** in added income, which is equivalent to supporting **522 jobs**.

Research spending impact



As a land-grant institution, research is critically important to Iowa State and an integral part of the university's commitment to improving the lives of Iowans while also contributing to the betterment of the nation and world. Iowa State and its faculty have a proven track record of success in attracting external sponsored funding to leverage the state's investment in the university. Research activities impact the economy by employing people and requiring the purchase of equipment and other supplies and services. Over the last four years, Iowa State received 582 invention disclosures, filed 191 new patent applications, and produced 166 licenses.

Iowa State research developments

Fiscal year	Invention disclosures	Patent applications	Licenses executed
2020-21	179	51	47
2021-22	112	41	34
2022-23	156	46	60
2023-24	135	53	25
Total	582	191	166

Source: Iowa State

Research at Iowa State is highly integrated with student education, as well as the delivery of science-based education and information through Extension and Outreach. Research activities impact the economy by employing people and requiring the purchase of equipment and other supplies and services.

In FY 2023-24, Iowa State spent \$142.7 million on payroll to support research activities. This, along with \$223.5 million in other research spending,³ created a net total of **\$292.6 million** in added income for the state economy. This added income is equivalent to supporting **4,349 jobs**.

Value of Extension and Outreach



ISU Extension and Outreach strengthens communities and their local economies by enhancing leadership capacity, broadening engagement, teaching best practices, preparing the future workforce, and providing problem-solving assistance. In FY 2023-24, Iowa State's Extension and Outreach helped **2,255 organizations** and assisted **449 companies**, **60,000 farmers**, and **140,740 non-farmers** across the state to receive necessary certification. Iowa State has 100 Extension and Outreach county office locations across the state.

³ Excludes indirect costs because indirect costs are not necessarily spent during the analysis year.

Around **392 employees** work off campus delivering Extension and Outreach, with 377 of these employees being paid by the counties rather than on Iowa State payroll. Due to the specific nature of the majority of these activities, Lightcast does not attempt to measure an impact. Overall, the private and public value Extension and Outreach offers on a daily basis for individuals and state and local communities is significant. It should be acknowledged that the data in this report represent only a small sampling of the organization's overall educational, environmental, and economic development activities.

Economic development impact



Iowa State creates an exceptional environment that fosters innovation and entrepreneurship, evidenced by the number of Iowa State start-up and spin-off companies related to the university and companies that have grown in the state with support of Iowa State. Start-up companies, created specifically to license and commercialize Iowa State technology or knowledge, have a strong and clearly defined link to Iowa State. Spin-off companies, created and fostered through university programs or faculty and alumni, have a clear but weaker link to Iowa State. In addition, companies that benefited from Iowa State's Small Business Development Center (SBDC) and Center for Industrial Research and Service (CIRAS) are included under spin-off companies.

In FY 2023-24, Iowa State start-up and spin-off companies added **\$2.1 billion** in income to the Iowa economy, which is equivalent to supporting **12,464 jobs**. Of this added income, \$226.5 million was due to start-up companies, with the remainder due to spin-off companies. This impact includes the positive effects Iowa State's SBDC and businesses assisted through CIRAS have on Iowa.

Visitor spending impact

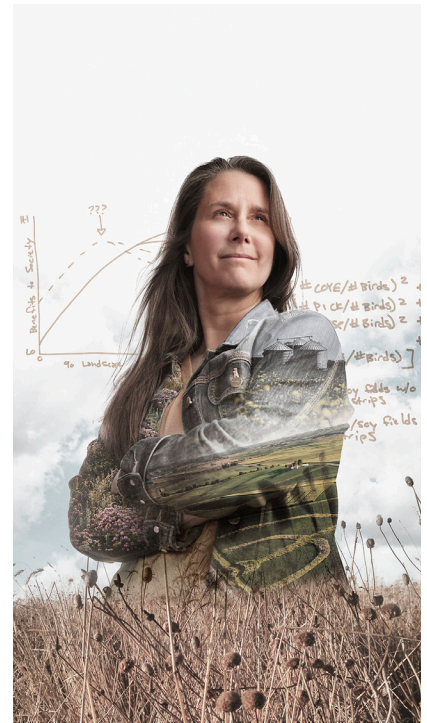


Hundreds of thousands of visitors from outside the state were attracted to Iowa State during the analysis year to attend commencement, sports events, and other activities sponsored by the university. While in the state, visitors spent money for lodging, food, transportation, and other personal expenses. The off-campus expenditures of the university's out-of-state visitors generated a net impact of **\$69.2 million** in added income for the state economy in FY 2023-24. This \$69.2 million in added income is equivalent to supporting **1,324 jobs**.

Student spending impact



Around 50% of students attending Iowa State originated from outside the state in FY 2023-24, and many of these students relocated to Iowa to attend Iowa State. These students may not have come to the state if the university did not exist. In addition, some in-state students, referred to as retained students, would have left Iowa if not for the existence of Iowa State. While attending the university, these relocated and retained students spent money on groceries, accommodation, transportation, and other household expenses. This spending generated **\$72.7 million** in added income for the state economy in FY 2023-24, which supported **1,240 jobs** in Iowa.



Volunteerism impact



Iowa State encourages its students and employees to volunteer in Iowa, where they strengthen businesses and organizations while advancing community goals. At the core of ISU Extension and Outreach are community volunteers whose time, talents, and dedication make possible high-quality programs and lasting impact across the state. Iowa State students, employees, and coordinated community members volunteered over 875,500 hours of their time in Iowa in FY 2023-24.

In terms of actual impact on the Iowa economy, these volunteers generated **\$24.4 million** in added income for the state in FY 2023-24, equivalent to supporting **851 jobs**. This estimate, however, understates contributions of extension volunteers throughout the state, who give their time at county and state fairs, community gardens that supply food banks, and tax assistance programs, delivering the multi-million-dollar benefit to Iowans, underscoring that the true economic impact is far greater.

Alumni impact



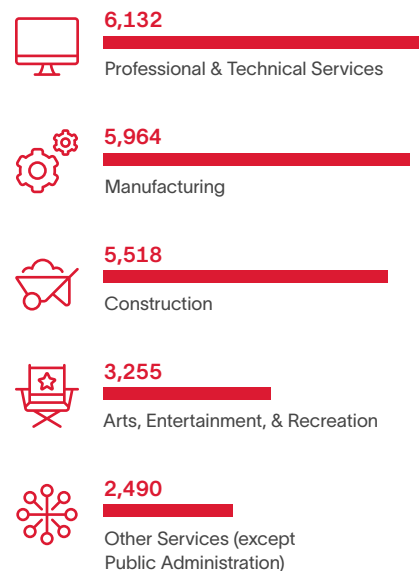
The education and training Iowa State provides for state residents has the greatest impact on the state of Iowa. Since its establishment, students have completed rigorous and robust academic programs at Iowa State and entered the state workforce with greater knowledge and new skills. Today, thousands of former Iowa State students are employed in Iowa. As a result of their education from Iowa State, the students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2023-24, Iowa State alumni generated **\$2.5 billion** in added income for the state economy, which is equivalent to supporting **25,167 jobs**.

Total impact

Iowa State added **\$6.0 billion** in income to the Iowa economy during the analysis year, equal to the sum of the operations, construction, and research spending impacts; the economic development impact; the visitor and student spending impacts; the volunteerism impact; and the alumni impact. The \$6.0 billion impact does not include the full value of Iowa State's Extension and Outreach activities, which benefit state and local communities and economies by helping thousands of companies and farmers. For context, the \$6.0 billion impact was equal to approximately **2.5%** of the total gross state product (GSP) of Iowa. This contribution that the university provided on its own is roughly the same as the entire Accommodation & Food Services industry in the state.

Iowa State's total impact can also be expressed in terms of jobs supported. The \$6.0 billion impact supported **59,888 state jobs**, using the jobs-to-sales ratios specific to each industry in the state. This means that one out of every 36 jobs in Iowa is supported by the activities of Iowa State and its students. In addition, the \$6.0 billion, or 59,888 supported jobs, stemmed from different industry sectors. For instance, the activities of Iowa State and its alumni in the Professional & Technical Services industry sector supported 6,132 jobs in FY 2023-24. If the university did not exist, these impacts would not have been generated in Iowa.

Iowa State impacts by industry (jobs supported)



One out of every 36 jobs in Iowa is supported by the activities of Iowa State and its students.





Investment analysis

An investment analysis evaluates the costs associated with a proposed venture against its expected benefits. The analysis presented here evaluates Iowa State as an investment from the perspectives of students, taxpayers, and society in Iowa. As with the economic impact analysis, this analysis considers only FY 2023-24 activities.

Student perspective



In FY 2023-24, Iowa State served 32,152 students. The students paid for tuition, fees, books, and supplies. They also took out loans and will incur interest on those loans. Additionally, students gave up money they would have otherwise earned had they been working instead of attending college. The total investment made by Iowa State's students in FY 2023-24 amounted to a present value of \$593.5 million, equal to \$408.6 million in out-of-pocket expenses (including future principal and interest on student loans) and \$184.9 million in forgone time and money.

In return for their investment, Iowa State's students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average Iowa State bachelor's degree graduate from FY 2023-24 will see annual earnings that are \$26,600 higher than a person with a high school diploma or equivalent working in Iowa. Over a working lifetime, the benefits of a bachelor's degree over a high school diploma will amount to an undiscounted value of \$1.2 million in higher earnings per graduate. The present value of the cumulative higher future earnings that Iowa State's FY 2023-24 students will receive over their working careers is \$2.6 billion.

The students' benefit-cost ratio is 4.4. In other words, for every dollar students invest in Iowa State in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$4.40 in higher future earnings. Annually, the students' investment in Iowa State has an average annual internal rate of return of 14.3%, which is impressive compared to the U.S. stock market's 30-year average rate of return of 10.9%.

Students see a high rate of return for their investment in Iowa State



Average annual return for Iowa State students
14.3%



Stock market 30-year average annual return
10.9%



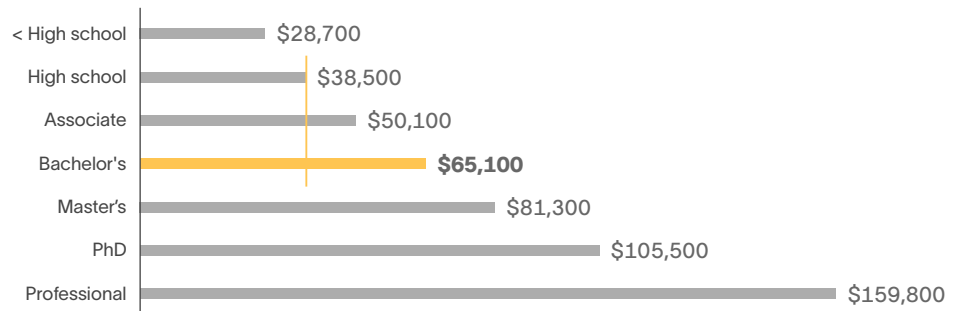
Interest earned on savings account (national deposit rate)
0.5%

Source: Forbes' S&P 500, 1994-2025; FDIC.gov, January 2024

Average earnings by education level at career midpoint

The average bachelor's degree graduate from Iowa State will see an increase in earnings of **\$26,600** each year compared to a person with a high school diploma or equivalent working in Iowa.

Source: Lightcast employment data



Taxpayer perspective



Iowa State generates more in tax revenue than it receives. These benefits to taxpayers consist primarily of taxes that the state government will collect from the added revenue created in the state. As Iowa State students will earn more, they will make higher tax payments throughout their working lives. Students' employers will also make higher tax payments as they increase their output and purchases of goods and services. By the end of the FY 2023-24 students' working lives, the state government will have collected a present value of \$473.6 million in added taxes.

Benefits to taxpayers will also consist of savings generated by the improved lifestyles of Iowa State students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes. The education that Iowa State students receive will generate savings in three main categories: 1) health care, 2) justice system, and 3) income assistance. Improved health will lower students' demand for national health care services. In addition, costs related to the justice system will decrease. Iowa State students will be more employable, so their reduced demand for income assistance such as welfare and unemployment benefits will benefit taxpayers. For a list of study references, contact the university for a copy of the main report. Altogether, the present value of the benefits associated with an education from Iowa State will generate \$26.6 million in savings to state taxpayers.

Total taxpayer benefits amount to \$500.2 million, the present value sum of the added tax revenue and public sector savings. Taxpayer costs are \$279.4 million, equal to the amount of state government funding Iowa State received in FY 2023-24. These benefits and costs yield a benefit-cost ratio of 1.8. This means that for every dollar of public money invested in Iowa State in FY 2023-24, taxpayers will receive a cumulative present value of \$1.80 over the course of the students' working lives. The average annual internal rate of return for taxpayers is 4.7%, which compares favorably to other long-term investments in the public sector.

Social perspective



Society as a whole in Iowa benefits from the presence of Iowa State in many ways through education, research, and extension. Iowa is a more attractive place to live, work, and play because of the ISU Extension and Outreach programs focused on improving quality of life in every Iowa county. Society benefits in two major ways in terms of investment analysis. Primarily, society benefits from an increased economic base in the state. This is attributed to the added income from students' increased lifetime earnings (added student income), added income from the university's activities, and increased business output (added business income), which raise economic prosperity in Iowa.

Benefits to society also consist of the savings generated by the improved lifestyles of Iowa State students. As discussed in the previous section, education is statistically correlated with a variety of lifestyle changes that generate social savings. Note that these costs are avoided by the consumers but are distinct from the costs avoided

For every dollar of public money invested in Iowa State, taxpayers will receive a cumulative value of **\$1.80** over the course of the students' working lives.

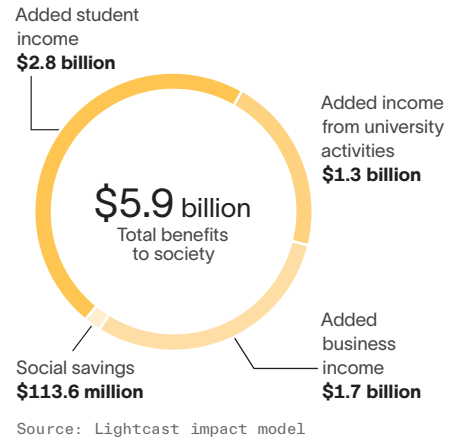


by the taxpayers outlined above. Health care savings include avoided medical costs associated with smoking, obesity, substance abuse, and depression. Justice system savings include avoided costs to the government and society due to less judicial activity. Income assistance savings include reduced welfare and unemployment claims. All Iowans benefit when young people are prepared for college and careers and are ready to become Iowa's future workforce and successful, contributing members of society. Society also benefits when families and communities become more resilient and are better able to handle any challenges they may face. For a list of study references, contact the university for a copy of the main report.

Altogether, the social benefits of Iowa State equal a present value of \$5.9 billion. These benefits include \$2.8 billion in added student income, \$1.7 billion in added business income, \$1.3 billion in added income from university activities, as well as \$113.6 million in social savings related to health, the justice system, and income assistance in Iowa. People in Iowa invested a present value total of \$1.7 billion in Iowa State in FY 2023-24. The cost includes all the university and student costs.

The benefit-cost ratio for society is 3.5, equal to the \$5.9 billion in benefits divided by the \$1.7 billion in costs. In other words, for every dollar invested in Iowa State, people in Iowa will receive a cumulative value of \$3.50 in benefits. The benefits of this investment will occur for as long as Iowa State's FY 2023-24 students remain employed in the state workforce.




Social benefits in Iowa from Iowa State



Summary of investment analysis results

The results of the analysis demonstrate that Iowa State is a strong investment for all three major stakeholder groups—students, taxpayers, and society. As shown, students receive a great return for their investments in an education from Iowa State. At the same time, taxpayers' investment in Iowa State returns more to government budgets than it costs and creates a wide range of social benefits throughout Iowa.

Summary of investment analysis results

 Student perspective		 Taxpayer perspective		 Social perspective	
Present value benefits		Present value benefits		Present value benefits	
\$2.6 billion		\$500.2 million		\$5.9 billion	
Present value costs		Present value costs		Present value costs	
\$0.6 billion		\$279.4 million		\$1.7 billion	
Net present value		Net present value		Net present value	
\$2.0 billion		\$220.8 million		\$4.2 billion	
Benefit-cost ratio	Rate of return	Benefit-cost ratio	Rate of return	Benefit-cost ratio	Rate of return
4.4	14.3%	1.8	4.7%	3.5	n/a*

* The rate of return is not reported for the social perspective because the beneficiaries are not necessarily the same as the original investors.

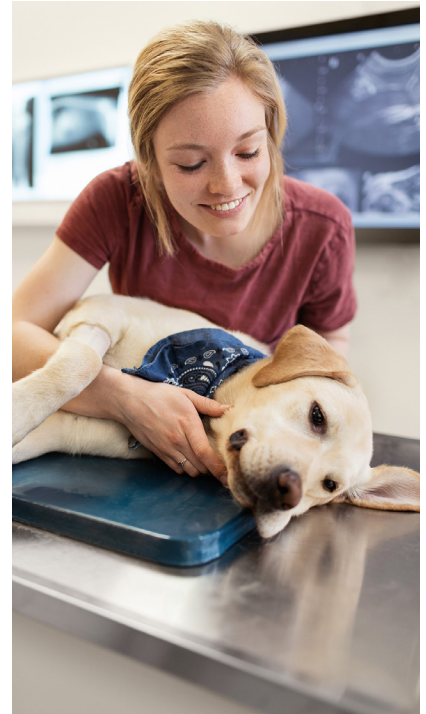
Conclusion

*The results of this study demonstrate that Iowa State creates value from **multiple perspectives**.*

The university benefits state businesses by increasing consumer spending in the state and supplying a steady flow of qualified, trained workers to the workforce. Iowa State enriches the lives of students by raising their lifetime earnings and helping them achieve their individual potential. The university benefits state taxpayers through increased tax receipts and a reduced demand for government-supported social services. Finally, Iowa State benefits society as a whole in Iowa by creating a more prosperous economy, making Iowa a more attractive place to live, work, and play by improving quality of life and generating a variety of savings through the improved lifestyles of students.

About the study

Data and assumptions used in the study are based on several sources, including the FY 2023-24 academic and financial reports from Iowa State, industry and employment data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau, outputs of Lightcast's Multi-Regional Social Accounting Matrix model, and a variety of studies and surveys relating education to social behavior. The study applies a conservative methodology and follows standard practice using only the most recognized indicators of economic impact and investment effectiveness. For a full description of the data and approach used in the study, please contact the university for a copy of the main report.



Lightcast provides colleges and universities with labor market data that help create better outcomes for students, businesses, and communities. Our data, which cover more than 99% of the U.S. workforce, are compiled from a wide variety of government sources, job postings, and online profiles and résumés. Hundreds of institutions use Lightcast to align programs with regional needs, drive enrollment, connect students with in-demand careers, track their alumni's employment outcomes, and demonstrate their institution's economic impact on their region. Visit lightcast.io/solutions/education to learn more or connect with us.