

Iowa

An agricultural powerhouse adopts sky-high tech to improve crop yields

Agriculture has long been a staple of Iowa's economy, but high-flying technologies are giving farmers there a new competitive edge.

Iowa farmers are increasingly making use of drones to manage their land and improve crop yields.

With bird's-eye views of their fields, farmers can track flooding and crop development, identifying troublesome patterns before they become problematic. Advanced drones equipped with sensors can also identify crops under duress by monitoring the plants' colors.

Farmers can then combine the data they gather by drone with harvest maps and information on soil types to stitch together comprehensive pictures of their farmlands and, if necessary, make adjustments for specific conditions.

In 2017, the Iowa state legislature examined a bill that would revise some drones rules to balance potential business applications with privacy concerns. The state earned an 'A' in the Drones category this year.

Meanwhile, thanks to regulatory progress that gave the sharing economy a shot in the arm in the state's more densely populated areas, Iowa improved its Short-Term Rentals grade to a 'B+'. The state Department of Revenue reached an agreement with short-term rental platforms that made the tech companies — rather than the rental hosts themselves — responsible for collecting and remitting hotel taxes to the state.

Sources: (Des Moines Register) (Auvsi) (The Gazette) (AG Web)

WHAT DID WE DO RIGHT?

Iowa has a Right-to-Work law and it also protects workers from discrimination on the basis of sexual orientation and gender identity.

WHAT CAN WE DO BETTER NEXT YEAR?

Iowa can increase the percentage of households with internet connections of at least 25 mbps.

WHERE HAVE WE MOST IMPROVED?

An agreement between the state and short-term rental platforms frees Iowan hosts from collecting hotel taxes.

Best & Brightest	A
Fast Internet	D+
Grants Advanced Degrees	D+
Tech Workforce	B-
Tax Friendly	C
Attracts Investment	B-
Entrepreneurial Activity	D+
Ridesharing	A
Short-Term Rentals	B+
Sustainable Policies	B
Self-Driving Vehicles	A
Drones	A



Short-Term Rentals

In 2017, short-term rental site Airbnb reached an agreement with the Iowa Department of Revenue to collect and remit hotel taxes on behalf of their hosts.



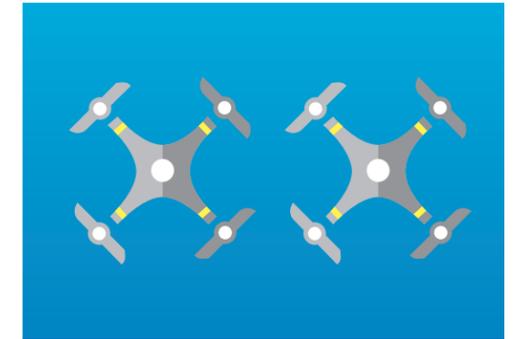
Tech Workforce

Iowa has about 36 tech jobs per capita, placing it in the top half of states in the Tech Workforce category.



Attracts Investment

Though low venture capital spending kept its grade in the category at a 'B-', Iowa spent nearly \$810 per capita on R&D, a 20 percent year-over-year increase from 2017.



Drones

Iowa allows drones to operate state-wide without overly restrictive rules.

Iowa STEM Program Pairs Teachers and Businesses for Real-World Learning

A program in Iowa is giving STEM school teachers real-world applications to reinforce their classroom lessons.

The summer externship — an outgrowth of the Governor's STEM Advisory Council — started with 10 teachers in 2009, and has since ballooned to more than six times that. In 2011, the program received a \$1.2 million grant from the National Science Foundation to help expand its reach.

The program enables teachers to offer concrete experience to students who struggle with abstract STEM concepts, and provides them with the kinds of real-world skills tech companies look for in their new hires.

It could scarcely come at a better time: Between 2014 and 2015, Iowa saw almost 9,000 STEM jobs left vacant. That shortage has affected a wide range of industries, including advanced manufacturing, healthcare, IT and skilled trades.

PHOTO CREDIT: Iowa STEM | Sources: (Des Moines Register)

