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Illinois aims to boost tech economy with research network

By RAYMON TRONCOSO Capitol News Illinois Report For America

SPRINGFIELD — University of Illinois faculty say an ongoing statewide investment in a public-private research network is key to boosting the state's economy.

The Discovery Partners Institute, a UI-led research and workforce development hub based in Chicago, is the flagship program of the Illinois Innovation Network that seeks to invest in 15 regional hubs affiliated with the UI system to spur economic growth with state funding. The goal of IIN is to create technology jobs in Illinois and train the state's workforce to fill them.

UI representatives testified last month before the state Senate Higher Education Committee during a subject matter hearing, claiming that despite Illinois' success in business and STEM education, the state hasn't seen the economic boon to match its academic output.

"So, broadly, the great thing about Illinois is it is a place where talent gets created, it has tremendous capabilities in creating tech talent," DPI Director Bill Jackson said in his testimony.

According to UI's presentation, Illinois is second nationally in computer science graduates and food research and development, fourth in MBA graduates, and fifth in data science graduates.

But this hasn't translated to the private sector, leading to a "brain drain" of Illinois-educated tech workers, he said.

"But, our issue, right, is we lose that talent," Jackson said. "It goes to the coast, it goes other places and it doesn't stay within the state. We do all the development and we don't get the essence of all that great capability we're building."

Illinois is 31st in state economic growth, 46th in private job growth, and 62 percent of computer science graduates leave the state after receiving their degree, according to the university's representatives. On top of that, half of all start-ups that raise more than \$5 million relocate.

The UI's tech programs are also not racially equitable.

In Chicago, Black residents and Latino residents each make up around 30 percent of the city's population. Cumulatively, they make up 12 percent of Chicago's tech workforce, despite accounting for 60 percent of the general population.

In 2019, less than 2 percent of UI system computer and data science graduates were Black, while 5 percent were Latino. The UI representatives contended that this disparity limits the workforce that can be developed to address personnel shortfalls in the tech industry and keeps Illinois behind other states like California and Washington, which have seen similar levels of academic success as Illinois but have reaped larger growth in the private sector.

The solution, according to UI's presentation, is continued investment in computer science classes and computer science teachers in public schools zoned for underserved communities. They also promote programs that target Black and Latino K-12 students to establish a pipeline for earning computer and data science degrees at Illinois universities.

DPI's Chicago campus, in a development area called The 78, is scheduled to be completed by 2025. Most of the other hubs are situated on public university campuses and in existing structures and are scheduled to be operational over the next few years.

Hubs will have an established focus based on their region and the university that houses them. Focus areas include computing and data, food and agriculture, entrepreneurship and environment, and water.

An economic impact statement crafted by the Boston Consulting Group in late 2019 claims DPI and IIN will generate \$198 billion in economic activity and create or fill 48,000 jobs over the next 10 years. The study says that by the 2029 fiscal year, the project will create or fill more than 9,500 jobs annually, with 4,500 of those going to individuals from underserved backgrounds.

State Sen. Chapin Rose, R-Mahomet,



A conceptual rendering of the future Discovery Partners Institute site in Chicago. Current plans are for the facility to be built in downtown Chicago on land donated by Chicago developer Related Midwest. (Courtesy dpi.uillinois.edu)

who represents the Champaign area, pressed UI system witnesses on how effective their project would really be in cultivating tech talent in the state.

Rose cited a Wall Street Journal article discussing how the world's largest tech companies like Google, Amazon and Microsoft are creating 6-month vocational programs that are meant to serve as a competing and equal credential to a 4-year degree.

"It seems to me the private marketplace is now going to cannibalize our students," Rose said. "What is this space that DPI is trying to capture where it is a market leader that is not already captured by someone else, not captured by Austin, not captured by Silicon Valley, not captured by Boston or by North Carolina?"

Jackson said that while Google and other big tech corporations are filling one gap in the marketplace, DPI will create the capacity for more tech jobs in the state. He also said that its different hubs and focus on creating pipelines in K-12 education allow it to fill multiple market gaps outside of just data science.

According to Jackson, Illinois institutions are uniquely situated for developing digital agriculture, transportation logistics and medical research.

Rose said he was pleased with the idea of DPI and IIN for boosting Illinois' economy through the technology sector, but he cautioned the state "not to create a wheel that's already been created somewhere else."

DPI and IIN were originally approved under former Gov. Bruce Rauner in 2017 but had funding delayed over the course of his term. The state released \$500 million in state funds for DPI and IIN in February, with another \$501 million in non-state funds being committed to both projects.

UI system representatives said half of the state funds will go to DPI and the other half to the 14 other hubs in the network.

According to UI representatives, only a portion of that money has been distributed for the planning and construction of DPI and five other hubs so far.

Those hubs include Eastern Illinois University, Governors State University, Chicago State University, University of Illinois at Chicago and University of Illinois at Urbana-Champaign.

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Illinois solicits device donations for Computer Equity Network

By RAYMON TRONCOSO Capitol News Illinois Report For America

SPRINGFIELD — The state is soliciting computers and related equipment from individuals and companies as part of a new program that will distribute refurbished devices to low-income households.

The Computer Equity Network is a collaboration between the state, the non-profit PCs for People, municipal governments and private businesses. The program is tied to the ongoing Connect Illinois initiative based out of the Department of Commerce and Economic Opportunity that seeks to expand broadband access in the state.

Gov. JB Pritzker announced the program in December.

"One of the largest gaps made even more significant in this pandemic is the digital divide," Pritzker said.

"How can your child learn from home if you don't have internet access? How can you shop for groceries safely online if you don't have a computer? Accessing the digital world has become essential for students, for small business owners, for patient-doctor communications, for job

applications. Really there's no realm in which connecting online hasn't become absolutely necessary in the modern era."

DCEO estimates that out of 4.9 million Illinois households, more than 1.1 million currently lack computer access in their home.

According to DCEO Director Erin Guthrie, the Equity Network will host community hand-off events in all 102 Illinois counties to give away the upgraded devices to eligible families. The events will also feature on-site support from DCEO to provide digital literacy courses and options for accessing low-cost internet services.

What's outside of the state's hands, however, are the actual computers.

"We know that sourcing hardware is a limiting factor in this work, we are here today to call on Illinois companies to help us meet this challenge," Guthrie said. "We are counting on you to maximize the impact of this initiative; your donation is essential as we work to close the gap."

Pritzker suggested that "in the spirit of this holiday season," Illinois companies, when upgrading equipment, can donate their old technology to the Equity Network, where PCs For People will upgrade it and give it to a family in need.

"It's all hands on deck. Employers large and small, and likewise governments large and small," Matt Schmit, the state's Office of Broadband Director, said in an interview.

Colleges and other institutions of higher education that are upgrading equipment and can donate their older computers will be likely donors. Counties, cities or even small towns are also encouraged to partner with local businesses to recycle equipment during an update cycle.

Companies and individuals who give computers to the program are eligible for tax reductions under applicable regulations for property donations to charitable organizations.

Philanthropic entities are also encouraged to contribute. Current partners of the Equity Network include the Illinois COVID-19 Response Fund, the Jewish United Fund, the Girl Scouts of Southern Illinois, and the Urban League of Metropolitan St. Louis.

PCs for People CEO Casey Sorensen said the network has currently committed to providing 20,000 computers to low-income families during the non-profit's first year operating in Illinois. Given

the state's number of households lacking computers is more than one million, significant investment in the program from public, private and philanthropic entities will be necessary to source enough computers to meet the demand.

"It's easy for many to take for granted access to a computer and internet, but the pandemic has shown us millions of kids cannot access education," Sorensen said. "We have received the warm welcome from local corporations, and now with the governor's call to action, we're optimistic about announcing many new partnerships in the near future, that help us sustain supply to reach Illinois families."

Illinois residents who are eligible for free computers must be below 200 percent of the federal poverty line or enrolled in income-based government assistance programs such as free or reduced school lunch, Medicaid or SNAP.

Alongside the distribution events scheduled in every Illinois county, two statewide distribution centers, one in the Metro East area and one in Chicago, will be open for donations.

For more information, visit Illinois.gov/ComputerEquityNetwork for more information.