

A Plan to Revitalize the Illinois Economy and Build the Workforce of the Future

October 2019

An Illinois economy that creates jobs and expands prosperity to communities across the state is a central part of Governor JB Pritzker's agenda. Under Governor Pritzker's administration, the Illinois Department of Commerce and Economic Opportunity's mission is to support and maintain a strong economic environment for those we serve—taxpayers, employers, workers, and communities—by actively recruiting and growing businesses, maintaining a 21st-century workforce, enhancing innovation, and bringing jobs and investment to underserved communities throughout Illinois.

Table of Contents

- 2** Greetings from Governor JB Pritzker
- 3** Executive Summary
- 14** Thinking Big
- 16** Providing World-Class Customer Service
- 19** Strengths to Build On
- 22** Challenges to Overcome
- 24** Building the Workforce of the Future
- 29** Winning in Key Industries
 - 32 Agribusiness and Ag Tech
 - 37 Energy
 - 41 Information Technology
 - 45 Life Sciences and Healthcare
 - 50 Manufacturing
 - 54 Transportation and Logistics
 - 58 Small Businesses



Greetings from Governor JB Pritzker

Summer 2019

My Fellow Illinoisans:

Today I am proud to share my vision for creating an economy in Illinois that works for everyone.

Since I took office in January, we've already begun making strides toward growing our state's economy after years of neglect and intransigence. In my first six months in office:

- ✔ I prioritized, proposed, and implemented record investments in education to prepare our students for good-paying jobs
- ✔ I signed into law a bipartisan, balanced budget, ushering in a new era of fiscal responsibility and stability
- ✔ I launched a \$45 billion bipartisan investment plan to build new roads, bridges, and other transportation infrastructure, creating hundreds of thousands of jobs
- ✔ I worked with the business community to extend research and development (R&D) tax credits, helping build up our manufacturing and technology industries
- ✔ I promoted and helped pass tax incentives for new apprenticeship programs allowing businesses to train their workers on the job
- ✔ I worked in a bipartisan fashion to lower taxes by phasing out the burdensome corporate franchise tax for 300,000 businesses

For the first time in nearly two decades, we've seen simultaneous strong job growth in every region of the state. Underlying my vision is the fundamental principle of equity. No matter their zip code, every Illinoisan deserves economic opportunity. Where in the past sustainable and inclusive economic development has been elusive, instead I am committed to reinvigorating the most important foundational element of Illinois' economy: our diverse and talented workforce.

Much of our state's potential workforce has been underutilized. That's why we are working to retain and attract young people to Illinois by improving the affordability and quality of our public colleges and universities. Reversing a legacy of commercial disinvestment from black and brown communities, I'm focused on attracting new and existing businesses to those under-resourced communities that present clear opportunities for commercial development. We have brought a new era of fiscal responsibility and balanced budgets to our state, eliminating uncertainty for job creators considering whether to relocate to Illinois.

In short, Illinois has the most talented and dedicated workforce in the nation. We are poised for growth. And we are open for business.

Sincerely,

A handwritten signature in black ink, appearing to read 'JB Pritzker'.

JB Pritzker

Governor, State of Illinois

Executive Summary

Illinois has the fundamental building blocks of a thriving, inclusive economy. We have some of the best talent and higher education institutions in the world. We are a global transportation hub, boasting the highest concentration of transportation and logistics companies in the nation. We have abundant natural resources that provide the foundation for a thriving agricultural sector. Illinois companies deliver world-changing innovations in tech, life sciences, and manufacturing.

Yet we can do more to bring prosperity and opportunity to every corner of Illinois. When Illinois governments, nonprofits, educational institutions, and businesses come together to execute the right plan, the possibilities for our economy are endless.

This economic plan outlines a vision to reinvigorate our economy and spur equitable growth. We propose an ambitious agenda that builds on the successes of this administration to reposition state government as a valuable partner to workers and businesses in Illinois.

Aspirational Goals

In crafting this plan, we were guided by the following three priorities:

Lay the Foundation for Long-Term Growth

by investing in and fostering research, entrepreneurship, and innovation.

We will track our progress toward this goal by comparing the state performance to regional and national trends on the following metrics:

- Exports
- Foreign direct investment
- Entrepreneurship
- Patents
- Worker productivity
- R&D spending

Reduce the Equity Gap

by investing in, providing support to, and taking down barriers for economically disadvantaged populations.

We will track our progress toward this goal by tracking average earnings relative to the statewide average for the following populations:

- Women
- Rural residents
- People of color
- People with disabilities
- Veterans
- Justice-impacted populations¹
- Immigrant populations

Attract More Workers and Businesses to Illinois

by aggressively marketing the state and providing a solid foundation for business growth and attraction.

We will track our progress toward this goal by tracking the following metrics:

- Net domestic and international migration
- Jobs created and retained

A New Foundation

Improving the state's economy starts with getting some basic things right. In the process of implementing our economic plan, we will ensure that state government and our partners are focusing on the following tasks that will provide a foundation for our other efforts:

- **We will market the state to the world.** Our location, our people, and our infrastructure provide a strong foundation for long-term economic growth and job creation. We will activate government and business leaders as brand ambassadors for Illinois by providing them with the tools necessary to attract companies, residents, and tourists.
- **We will provide excellent customer service.** State government will be a valuable economic development partner by listening, assisting, and working transparently to identify the needs of Illinois residents and businesses, determining how to address them, and following through on solutions.
- **We will bring about a resurgence of economic opportunity and workforce development in underserved areas, including both urban and rural communities.** One of government's primary roles is to ensure that those who have faced historical structural barriers have the same opportunity to participate in the economy and benefit from economic growth as everyone else. This administration is working with educational institutions and businesses to enhance skill levels for underserved communities so businesses with job opportunities can thrive. In addition, we are directly addressing barriers that men and women in underserved communities face in their attempts to start and grow new businesses.
- **We will foster collaboration by developing regional economic hubs.** Economic development is regional. Companies within a region share the same regional workforce, transportation infrastructure, health and education system, and suppliers. We will strive for an Illinois where all the key economic actors in regions across Illinois, including state and local governments, industry, unions, universities, and nonprofits are communicating well and working together to accomplish the same economic vision.
- **We will implement evidence-based programs and policies.** The stakes for economic development are high. When done correctly, it can positively impact the lives of millions of residents across the state. With these high stakes and our challenged—but improving—fiscal condition, it is incumbent upon us to ensure that our policies are effective. The programs and policies that we adopt will be based on evidence, and we will recalibrate our efforts if we are not achieving our goals.

What We've Done

We're already getting started on implementing a strategy to help Illinois thrive. In the seven months since this administration took office, we have accomplished a broad range of policy changes and reforms that address the challenges of residents and employers throughout the state. The following are just a few examples of our successes this year.

- ✔ We passed the bipartisan Rebuild Illinois capital plan, which is a historic \$45 billion investment in creating good jobs, fixing Illinois' crumbling roads and bridges, and constructing major projects that are essential to the state's economic future.
- ✔ We significantly increased Monetary Award Program (MAP) scholarships and AIM HIGH merit scholarships, allowing 10,000 more students with financial need to attend college in Illinois.
- ✔ We worked with the General Assembly to implement a new Apprenticeship Tax Credit.
- ✔ We are expanding successful apprenticeship models, such as the Chicago Apprentice Network, to get commitments from corporations and community colleges across the state to expand their apprenticeship programs.
- ✔ We are implementing the new Illinois Works Jobs program, which will help us build a diverse pipeline of workers in the construction and building trades.
- ✔ We legalized production of cannabis for recreational use, creating a new industry as well as a new opportunity for Illinois farmers. To help social-equity applicants, we will provide grants, loans, and training so they can actively participate in and benefit from the new industry.
- ✔ Through a new Data Center Tax Credit, we are attracting major investments in data centers—buildings that house servers to store and centralize companies' data.
- ✔ To instill confidence in long-term investment in research in the state, we extended the Research and Development Tax Credit through January 1, 2027, which will help spur innovation, particularly in the tech and manufacturing industries.
- ✔ We worked with the General Assembly to expand and make permanent the Manufacturers' Purchase Credit.
- ✔ We worked with the General Assembly to eliminate the Corporate Franchise Tax, which posed a significantly high compliance burden and penalized businesses for locating or expanding their operations in the state.
- ✔ Through the Office of Minority Economic Empowerment, we are issuing \$15 million in grants to minority-owned businesses and the incubators that serve them.

Thinking Big

To address some of the state's biggest economic challenges, we need to think big. Below are the primary, game-changing programs we will pursue to reverse population decline, close the equity gap, and lay the foundation for economic growth across the state.

- **Downstate revitalization:** We will embark on a comprehensive effort to attract and retain businesses in downstate communities and build a pipeline of young, talented workers and entrepreneurs.
- **Increase investment in communities of color:** We will invest in transportation, broadband, and small business development while bringing down barriers to the job market and capital in communities of color.
- **Retain young talent:** We will keep our high school and college graduates here by making college more affordable and providing appealing opportunities in Illinois after graduation.
- **Connect the Illinois start-up ecosystem:** We will create an online platform that allows Illinois-based small businesses and start-ups to easily access resources, content, and connections to build and grow their businesses from anywhere at any time.
- **Treat prospective businesses like valued customers:** We will build a premier business-talent matchmaking service, establish processes to receive constant feedback from businesses, and modernize our delivery model of business services.
- **Deliver end-to-end career services for displaced workers:** We will provide wraparound services, including career counseling, moving services, retraining, and more to help displaced workers navigate job displacement.

A Plan to Revitalize Illinois

We will implement our vision by focusing on initiatives to achieve the following strategic goals:

- Providing World-Class Customer Service
- Building the Workforce of the Future
- Winning in Key Industries

In each area, we've identified specific challenges and action steps to address them.

Providing World-Class Customer Service

State government owes Illinois residents a dogged commitment to identify their needs and deliver solutions. We are focused on improvements that will impact how businesses and job seekers obtain state support, which will ultimately enhance their success.

Simplify applications and processes so businesses can access state services and information more efficiently.

Refresh outdated regulations.

Increase awareness and access to programs benefitting businesses and workers.

Solicit continuous feedback from businesses, entrepreneurs, and local organizations to make continuous process improvements.

Modernize delivery of services.

Update and broaden incentive programs.

Clarify the mission and collaboration model with partner public and private entities, such as Intersect Illinois.

Coordinate efforts across all state agencies to achieve greater economic and governmental outcomes.

Building the Workforce of the Future

Increasing the skills of the Illinois workforce, particularly for underserved populations, is a win-win for residents and businesses. Residents get an opportunity to provide better lives for their families and pursue careers they are passionate about. And a trained, diverse, and skilled workforce is key to attracting new businesses and helping current Illinois businesses thrive.

Identify and tailor training to high-impact regional clusters and associated in-demand occupations.

Increase collaboration between community colleges and industry to develop apprenticeships and other training programs that meet the specific needs of employers.

Launch a "Governor's Champions" recognition program to formally acknowledge employers making workforce commitments.

Expand college and career pathway endorsement systems to give high school graduates an early start in key industry areas.

Create a barrier reduction fund for apprentices.

Develop return on investment and qualitative outcome data for various education and training programs.

Establish and support equity goals.

Increase state funding for MAP grants by 50 percent from fiscal year 2019 levels by fiscal year 2023.

Expand efforts to prepare inmates prior to their release with life skills, career readiness, and occupational training.

Improve and expand mass transit systems throughout the state to better connect workers and centers of industry.

Provide information and support for employers seeking to hire and retain immigrant workers and for immigrant workers trying to work in Illinois.

Use smart online tools to connect job seekers to valuable information and programs that work.

Create a one-stop shop for customized workforce solutions.

Winning in Key Industries

In this economic development plan, we identify a set of concentrated industry clusters in which the state has a large employment base and is positioned to compete globally for talent and investment. The performance of these industries in particular will have a large impact on the state economy, and that impact will be felt across all regions of the state.

-  Agribusiness and Ag Tech
-  Energy
-  Information Technology
-  Life Sciences and Healthcare
-  Manufacturing
-  Transportation and Logistics

Table 1

Illinois Statistics for Selected Industries

Industry	Jobs in 2018	Average wage	Location quotient	Employment change, 2009–18	Number of employers	Projected employment change, 2016–26	State purchasing coefficient	Value added per employee
Agribusiness and Ag Tech	192,084	\$60,106	0.96	+ 22.6%	8,982	+ 5.5%	\$34	\$99,099
Energy	54,401	\$95,741	0.96	- 3.0%	2,062	0.0%	\$60	\$514,050
Information Technology	137,651	\$108,153	0.84	+ 39.5%	15,780	+ 11.9%	\$65	\$129,300
Life Sciences	48,751	\$152,030	0.90	+ 5.1%	1,655	+ 2.0%	\$24	\$386,973
Healthcare	733,133	\$57,732	0.94	+ 8.0%	29,713	+ 8.1%	\$66	\$96,154
Manufacturing	417,830	\$68,260	1.20	- 2.2%	13,240	+ 1.0%	\$32	\$146,155
Transportation and Logistics	515,178	\$70,129	1.27	+ 15.1%	40,801	+ 9.4%	\$75	\$71,731

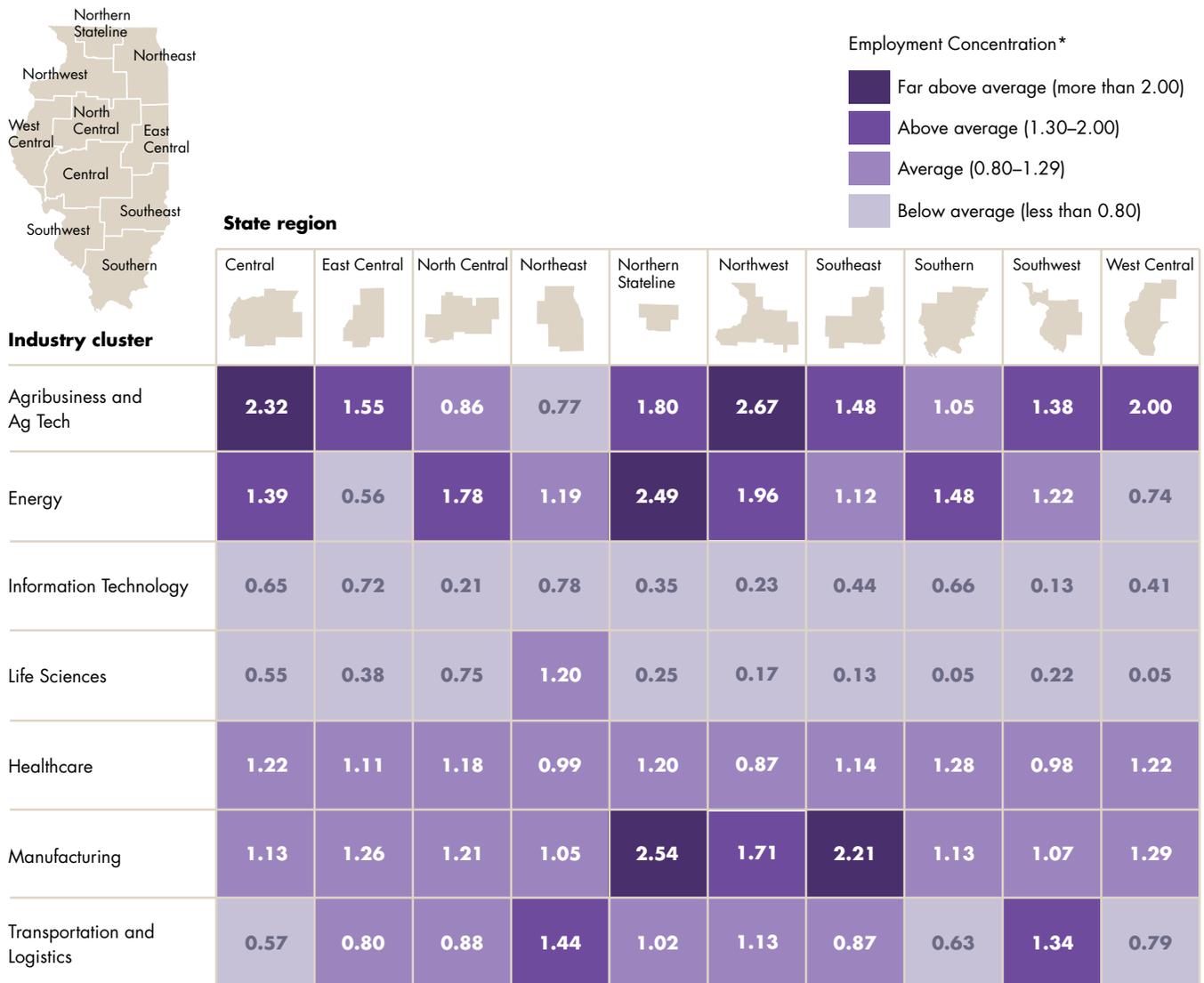
Note: Location quotient is the ratio of the employment share in Illinois to the employment share in the nation. State purchasing coefficient is the share of every \$100 spent by companies in this industry that goes to suppliers in Illinois. The “manufacturing” industry includes only manufacturing industries not included in other sectors.

Source: Illinois Department of Employment Security, Quarterly Census of Employment and Wages, 2009 and 2018

In Table 2, we show the concentration of employment in each industry for each region of Illinois. The numbers reflect the ratio of the share of employment in that industry in the region to the share of employment in that industry to the nation. For example, a “1” means that the region has the same share of employment in that industry as the nation, while a “2” means the region has twice as much employment share in that industry as the nation.

Table 2

Employment Concentration for Selected Industries by Region, Relative to Nation



Note: “Employment Concentration” is the ratio of the employment share in Illinois to the employment share in the nation.

Source: Estimates from Regional Economic Models, Inc., 2018

To address the challenges in each industry, we will take the following action steps (more details about the challenges in each industry, and the actions we have taken to address them, are included in the section “Winning in Key Industries,” starting on page 33).



Agribusiness and Ag Tech

We propose making a range of investments and starting new programs that will facilitate technology adoption for small and mid-sized farms, encourage innovation among farm suppliers and processors of agricultural products, and boost connections with global markets.

Expand broadband to unserved and underserved rural areas of the state.

Invest in facilities that encourage collaboration between researchers and industry and the commercialization of cutting-edge ag tech products in communities across the state.

Increase funding for University of Illinois Extension to expand business support services for farms.

Convene an ag tech summit, followed by regional ag tech fairs throughout the state to connect technology companies working on solutions for agribusiness with small and mid-sized farmers.

Actively pursue more funding from the USDA and other federal agencies that provide grants for agriculture research and programming.

Provide a Renewable Chemicals Production Tax Credit.

Work with the Illinois Treasurer’s Office to prioritize investment in agribusiness.

Expand and increase awareness of foreign trade zones to facilitate access by food processing and other agribusiness exporters.

Revitalize the partnership between the State and the Regional Development Authority program.

Provide Agricultural Innovation Vouchers to help Illinois farmers transition to in-demand crops, implement renewable farming methods, adopt new technologies, or pivot to a more efficient business model.

Provide eligible businesses, including university-based start-ups, with matching grants when they win federal Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants.



Energy

To address energy challenges, we will make big investments in green infrastructure, promote clean energy innovation across the state, and prepare our workforce for a green energy future.

Improve access to energy efficiency and other clean tech jobs to underserved populations by expanding on successful training and incubator programs.

Through investment in broadband, enable utility companies to more efficiently distribute electricity and lay the foundation for the energy grid of tomorrow.

Build electric vehicle infrastructure for medium- and heavy-duty vehicles.

Build innovation labs near universities that conduct cutting-edge research in clean energy technology.

Work with the Illinois Treasurer’s Office to prioritize investment in clean energy.

Encourage universities to set up programs in which business school students help researchers at universities commercialize their research.

Expand career pathway programs that strengthen the pipeline for energy jobs throughout Illinois.

Provide eligible businesses, including university-based start-ups, with matching grants when they win federal Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants.



Information Technology

As we modernize our incentive programs, make major capital investments in infrastructure and broadband, and foster connections between researchers, innovators, and industry, we will be able to more aggressively pursue top tech talent and companies and ensure that we build the relationships and support for homegrown tech companies to start and grow right here in Illinois.

Provide broadband to people interested in creating and growing information technology companies in currently unserved areas.

Provide grants and loans to companies that seek to acquire and rehabilitate sites and facilities for R&D, commercialization, and tech transfer activities.

Work with companies to increase employment in IT occupations in rural and unserved areas.

Give start-ups access to the Research and Development Tax Credit.

Invest in facilities that encourage collaboration between researchers and industry and commercialization of cutting-edge products in communities across the state.

Create a web-based platform to connect start-ups to investors, corporations, universities, resources, and incentives.

Encourage universities to set up programs where business school students help researchers at universities commercialize their research.

Work with cities across Illinois on downtown development to remain competitive in attracting technology talent.

Support efforts to innovate products and services at tech companies.

Expand IT apprenticeships through new programs at community colleges.

Provide eligible businesses, including university-based start-ups, with matching grants when they win federal Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants.



Life Sciences and Healthcare

We will use capital plan funding to build out infrastructure and facilities that meet the needs of life sciences companies and provide credits that spur innovation. We will also provide workforce training for in-demand healthcare occupations and boost our support for small healthcare providers and other businesses to increase technology adoption.

Invest in facilities that encourage collaboration between researchers and industry and commercialization of cutting-edge healthcare products in communities across the state.

Extend broadband to unserved and underserved areas, resulting in more opportunities to provide healthcare via telehealth technologies.

Give start-ups access to the Research and Development Tax Credit.

Work with industry to identify regulations in healthcare that impede innovation and limit access to unserved or underserved individuals, and work with consumer groups to address those regulations.

Build wet lab space and colocate corporations, university researchers, and start-ups.

Renovate and upgrade the Macomb Career and Technical Education Center and nursing building at Spoon River Community College.

Start the Illinois Healthcare Extension to provide support services to small and mid-sized healthcare providers to improve technology adoption and support back-office operations.

Work with the Illinois Community College Board (ICCB) and stakeholders in the industry to address the shortage in a range of healthcare occupations.

Work with the Illinois Treasurer's Office to prioritize investment in start-up life sciences and biopharmaceuticals companies.

Provide eligible businesses, including university-based start-ups, with matching grants when they win federal Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants.

Implement the healthcare transformation capital grant program to transform hospital facilities to meet the needs of the communities they serve.

Provide Community Health Center Construction grants to construct and upgrade community health providers for underserved communities.

Assemble and sponsor a healthcare tech road show, including targeted healthcare tech demonstrations across Illinois, especially in downstate communities, to facilitate technology adoption among small and mid-sized healthcare practitioners.



Manufacturing

We plan to increase our efforts to recruit and train the manufacturing workforce of tomorrow. We will also provide innovation vouchers to facilitate adoption of automated technologies and revise R&D credits to make them available to start-up companies as they develop new products.

Collaborate with manufacturers, workers, and colleges to develop a comprehensive agenda to address the state's manufacturing challenges.

Give start-ups access to the Research and Development Tax Credit.

Launch a student loan repayment assistance pilot program for graduates of Illinois universities and community colleges that agree to teach manufacturing-related subjects.

Start a Teachers' Corps among retired manufacturing workers and managers.

Provide Manufacturing Innovation Vouchers to manufacturing companies that develop and execute detailed and strategic plans to make investments that will make their operations more efficient, productive, and competitive.

Issue competitive grants for infrastructure improvements, construction of training facilities, and site remediation and preparation that will facilitate manufacturing investment and growth.

Make investments in manufacturing workforce training infrastructure at community colleges.

Establish two manufacturing training academies at downstate community colleges and eliminate residency requirements for those programs so that any Illinois resident can participate.

Work with the manufacturing industry on a marketing campaign to increase the number of people entering high-demand manufacturing occupations.



Transportation and Logistics

To support growth in the transportation industry, we will continue to pursue innovative and effective ways to improve our transportation workforce and infrastructure needs. We will also facilitate innovation in transportation technology and adoption of that technology by small and mid-sized transportation and logistics companies.

Expand successful workforce development programs in transportation, distribution, and logistics.

Work with companies interested in developing innovative transportation projects, such as autonomous fleets, to determine if laws or regulations need to be adjusted to make way for emerging industries.

Expand and increase awareness of foreign trade zones, while using them to complement major intermodal logistics centers.

Make big investments in transportation infrastructure through the Rebuild Illinois capital plan.

Pilot public-private partnerships to attract international investment dollars to the state for infrastructure repair.

Convene a transportation technology summit to tackle the challenge of getting small to mid-sized transportation companies the technology they need to grow.

Provide grants for Illinois transportation companies to purchase and implement track-and-trace technology.

Small Businesses

While the State already provides a broad range of support for small businesses, we need to do more to expand access to those services, ensure that they are high quality, and make them easy to understand and navigate.

Invest in broadband to expand internet access to entrepreneurs and small business owners across the state so they can expand their reach and customer base.

Consolidate resources and programming into one centralized, web-based location, making it easier for businesses to seek help and take advantage of incentives, grants, and other offerings.

Rigorously evaluate SBDC performance and provide intensive support and intervention for those centers that are not providing local small business owners with the quality services that they need.

Identify the top two to three most burdensome processes for small business owners when they interact with state government, and work with the relevant agencies and industry to simplify or streamline those processes.

Expand the SCORE partnership across the state to increase entrepreneurs' access to mentors.

Expand the Advantage Illinois loan program by signing more lenders and expanding capital access to more underserved communities across the state.

Focus the Angel Tax Credit on true angel and start-up companies.

Thinking Big

Our economic plan is driven by the following foundational principles.

Downstate revitalization: We will embark on a comprehensive effort to attract and retain businesses in downstate communities and build a pipeline of young talented workers and entrepreneurs. We will work closely with towns and cities throughout downstate Illinois to develop comprehensive plans that could include downtown redevelopment; new housing, parks, or shopping centers; transportation and public transit improvements; new or rehabilitated schools or career and technical education centers; and more. We will work with these communities to rehabilitate blighted and historic properties and re-envision outdated infrastructure to renew connections between industry and communities. We will bring to bear coordinated resources from federal, state, and local governments, as well as nonprofits. State resources will include economic development and public infrastructure funds from the state's historic \$45 billion capital plan (Rebuild Illinois), community development block grants, workforce training programs, targeted incentives, and more.

Increasing investment in communities of color: Our state has a legacy of redlining and decades of commercial and industrial disinvestment in communities of color. We will focus efforts and invest resources in transportation, broadband, small business development, and a range of programs that meet those communities' needs. We will bring down barriers that affect start-up businesses and low-income workers, and set targets for diversity in government procurement, oversight, and programming.

Retaining young talent: Illinois has experienced a mild but steady decline in population since 2014, with outmigration of young people leading the trend.² We are working to keep our high school graduates in-state by making our public universities and community colleges more affordable for Illinois students. And we will keep our college graduates here by exploring incentives and programs that will provide appealing opportunities to do fulfilling work in Illinois after graduation.

Connecting the Illinois start-up ecosystem: Access to funding, talent, mentorship, and programming are crucial when starting or growing a business. There are many funding opportunities, mentor programs, physical locations that provide assistance, and online content that entrepreneurs are not aware of or are unable to access. It is our job at the State of Illinois to create awareness of these resources and improve upon them. We will create an online platform that allows Illinois-based small businesses and start-ups throughout the state to easily access resources, content, and connections they need to build and grow their business from anywhere at any time.

Treating prospective businesses like valued customers: Businesses that are considering relocating to Illinois have many factors to evaluate—and one of the most crucial factors is available talent. We will build a premier business-talent matchmaking service to help businesses moving to Illinois get paired with the workforce they need through apprenticeship, training, recruitment, and other talent programs. We will establish processes to receive constant feedback from businesses, entrepreneurs, and local organizations, and follow through on that feedback. And we will modernize our delivery model of services to what customers want, including online, mobile, and simply explained tools and programs that can be accessed from any device, in person, or by phone.

Delivering end-to-end career services for displaced workers: Delivering end-to-end career services for displaced workers: Finding a new job can be stressful, and it is more complicated than just résumé writing, interviewing, and tackling the first day of work. We will establish a pilot program to provide wraparound services, including career counseling, moving services, retraining, and more, for workers who have experienced layoffs or structural shifts in the economy such as major industry decline to help them navigate the many life events that go along with job displacement.

Providing World-Class Customer Service

State government owes Illinois residents a dogged commitment to identify their needs and deliver solutions. The Pritzker administration has identified numerous ways we can provide better service and have already begun to execute on them. We are focused on ensuring that businesses and job seekers obtain the right kind of state support, enhancing their prospects for success.

Simplify applications and processes so businesses can access state services and information more efficiently. Some of the hoops businesses have been forced to jump through are unnecessary, and information about the process can be opaque or difficult to find. As a result, some businesses that cannot afford a consultant or lawyer to decipher the complicated applications don't seek much-needed support. We are performing a rigorous review of all applications for business services, incentives, and job training, and how those applications are processed, to ensure that they are easy to understand, require only the necessary information, and result in a response within a reasonable and predictable time period. For example, we are reviewing and proposing potential revisions to the currently opaque and legalistic EDGE Tax Credit regulations to ensure that the EDGE application process is easy and transparent for businesses and taxpayers. In addition, we intend to provide a one-stop portal website to give both new and existing businesses a central repository for all permitting, licensing, and registration forms and documents needed to conduct business in Illinois.

Refresh outdated regulations. Each year, we will conduct a regulatory assessment and update to keep up with the pace of rapidly changing industries and eliminate unnecessary or outdated friction points. In this first year, we will catalog all regulations that affect businesses; work with industry, researchers, and citizens' interest groups to identify which regulations are most burdensome; and require that relevant agencies and rulemaking bodies pursue an open and deliberative process to implement rule changes or processes to reduce this burden.

Increase awareness and access to programs benefitting businesses and workers. Too many businesses are unaware of the programs and services the State provides, so we have begun and will continue to aggressively market what the State has to offer. We will assemble a list of economic development organizations, regional chambers, business groups, and community organizations that will receive



regular updates on our programs and how to access them. Also, we will aggressively market new grant opportunities associated with economic and community development to qualified applicants, including embarking on social media campaigns when relevant (when potential applicants are in the general public).

Solicit continuous feedback from businesses, entrepreneurs, and local organizations to make continuous process improvements. We will put in place a new system that allows us to systematically and proactively solicit input from businesses and others who have interacted with the state through our programs and services. This will include surveys, as well as tracking how well we have responded to feedback, whether actions are required in response, and who will follow up on those actions. Private companies that seek to make things easy for their customers have long had systems like this in place. We have set a goal of consistently contacting 500 entities each year—from economic development organizations to major companies to small businesses—to ensure that their needs are met and that they understand how the State can be a valuable partner in growing their businesses and creating new jobs.

Modernize delivery of services. We intend to give customers what they want, including useful online and mobile tools and programs that can be accessed easily from any device, in person, or by phone. Information about state programs has been siloed by agency or funding source, and difficult to navigate. We will revamp economic development tools for businesses, residents, and local governments to improve the user experience and ensure a straightforward path to information and access.

Update and broaden incentive programs. Important economic development tools such as the EDGE Tax Credit, the Enterprise Zone program, and Angel Investment Tax Credit may need to be refreshed. Our state's major tax incentives are fundamentally unchanged from what they were several decades ago and address the needs of a relatively narrow set of businesses. In the coming year, we will perform a rigorous evaluation on the effects of all major tax incentive programs and work with the General Assembly to implement reforms to ensure that they have the intended impact, use taxpayer funds efficiently, and do not leave behind small businesses and underserved populations.

Clarify the mission and collaboration model with partner public and private entities, such as Intersect Illinois. Our goal is to maximize the collective impact of state government and our economic development partners. We are working with partners such as Intersect Illinois to ensure their role is appropriately defined. We will closely coordinate with partners to attract companies considering relocating in Illinois, convey a coherent message of what Illinois has to offer, and perform valuable research on Illinois' competitiveness and business and workforce needs.

Coordinate efforts across all state agencies to achieve greater economic and governmental outcomes. The Department of Commerce and Economic Opportunity, for example, will seek stronger collaborative relationships with the Department of Transportation when assessing economic development infrastructure needs, with the Department of Revenue as it relates to data sharing and evaluation of the State's tax credit programs, and with education agencies on building a diverse and talented workforce.

Strengths to Build On

Illinois has a diverse and dynamic economy. We have some of the best talent and higher education institutions in the world. We are a global transportation hub, boasting the highest concentration of transportation and logistics companies in the nation. We have abundant natural resources that provide the foundation for a thriving agricultural and tourism economy.



Highly Productive Workforce

Talent is the single most important factor businesses consider when starting a new operation or relocating to a new site. Illinois has the largest and most productive workforce in the Midwest, and we are competitive with large states across the nation. Illinois workers generate \$81 in economic output per hour worked, putting them in the top 10 in the country by productivity and far exceeding productivity in our neighboring states.³ One-third of Illinois residents hold a bachelor's degree or higher, also outpacing our neighbors and most other competitor states.⁴



Top Colleges and Universities

Illinois has a highly educated and skilled workforce because we have world-class educational institutions. According to *U.S. News & World Report*, Illinois has two of the top 10 universities in the nation, two of the top 20 engineering programs, two of the top 10 business schools, and two of the top 25 medical schools. Our nine statewide public universities and 50 community colleges provide educational and research opportunities for residents in every corner of the state. Our colleges and universities attract more than



5,000 international students every year who often stay to work or start a business in Illinois after they graduate.⁵ Illinois excels in the high-demand fields of computer science, artificial intelligence, and data science, as the second-largest producer of computer science degrees and fifth-largest producer of data science degrees—more than twice the national average. The state is also the fourth-largest producer of MBAs, which are especially important in commercialization and start-ups.⁶

Our universities are performing cutting-edge research and fostering innovation that can change the world. In 2016, Illinois universities spent \$2.4 billion on R&D. These investments have led to paradigm shifts and cutting-edge breakthroughs in medicine, engineering, and technology. Some of the fastest-growing companies in the state started at entrepreneurship programs at Illinois universities.



Center of Transportation and Trade

Multimodal transportation and logistics have long been areas of strength for Illinois, with the state ranking third in the country by value of freight shipments. With \$600 billion in goods shipped out in 2017, Illinois was the origin of more freight than Indiana and Wisconsin combined.⁷ Illinois boasts the largest rail hub in the country, with a quarter of all national rail traffic and almost half of all intermodal shipments.⁸ The recent enactment of Rebuild Illinois, the largest transportation infrastructure investment in state history, means that Illinois will remain a leader in transportation and logistics for decades to come.

Our extensive transportation system and global connections provide thousands of Illinoisans across the state with high-paying employment opportunities. We have the highest share of employment in transportation, logistics, and warehousing of any state in the nation.⁹ In recent interviews with businesses operating in Illinois, strategic location and accessibility to customers and suppliers were the most often cited assets for doing business in Illinois.¹⁰



Abundant Agriculture and Natural Resources

Illinois is rich in natural resources that contribute to the state's economy by facilitating trade, attracting tourists, enhancing the quality of life for residents, and supporting a diverse agricultural industry.

Our fertile farmlands and hard-working farmers have made Illinois a leader in soybean and corn production, which is relied upon globally for food supply, feed for animals, sustainable biodiesel, and more.¹¹ The abundance of corn in the state has also made Illinois a top producer of ethanol in the United States with billions of gallons of ethanol produced and exported each year.¹²

Illinois borders the Great Lakes and has more than a thousand miles of navigable waterways. In addition to recreational opportunities for boating and fishing, these waterways provide access to global markets for Illinois businesses. Boats on Illinois rivers carried 29 million tons of freight worth \$34 billion in 2015.¹³

Challenges to Overcome

Despite our strengths, some challenges impeding a stronger economy still linger across the state. To build a robust economy that can withstand future downturns and meet the demands of tomorrow's business community, we need to address these challenges head on.

Outmigration

Illinois has experienced a mild outbound migration of approximately 0.3 percent on average for the past five years. This trend is driven particularly by migration among young people, minorities, and rural populations. For the past four years, an increasing number of young people have left the state after graduating high school or college. The Pritzker Administration's focus on college affordability and quality education has led to renewed investment in state universities and community colleges. New business creation in communities of color and a downstate revitalization effort undertaken since the beginning of 2019 are intended to reverse outmigration in communities that have historically suffered disinvestment.

Inequality

Income inequality in Illinois has ranked high among US states as rural and semirural areas in the state struggle with particularly high poverty. The poverty rate in Chicago-adjacent counties is approximately 5 percent, which is far less than the rate of nearly 30 percent in rural and semirural counties.¹⁴

Income inequality by race is also a big challenge for Illinois. The African American unemployment rate in Illinois is 8.8 percent, exceeded only by the African American unemployment rate in Pennsylvania and Washington, DC. For white, Latino, and Asian Illinois residents, the unemployment rate is less than 4 percent.¹⁵ Illinois cities are among the most segregated in the country. According to an analysis by *Governing* magazine, Peoria and Danville are the most segregated cities in the country compared with peer cities of similar size and demographics, with Springfield and Rockford among the most segregated compared with their peers.¹⁶ Segregation has a range of deleterious effects, including an impact on access to adequate housing and schooling, as well as access to job opportunities and entrepreneurial resources.

The new administration has put a priority on reversing income inequality by addressing wage gaps, healthcare costs, college affordability, unfair tax policies, and job creation in forgotten communities.

Indistinct Industry Strengths

Regions can capture economic growth by being a top destination for a few specialized industries. Industry specialization in Illinois is less pronounced than in other states. While

we perform well across a broad range of industries, there are few industries in which we are known to be among *the best* locations.¹⁷ We rank in the top five in terms of concentration of employment relative to the nation in only two sectors: “transportation and warehousing” and “wholesale trade.”

Diversification can be an advantage, but it weakens our ability to attract new investment, top businesses, and top talent in some high-growth industries in which we could otherwise have an advantage. These industries include life sciences, information technology, and food manufacturing.

Lagging Commercialization of R&D

Start-up companies across the country represent some of the most important job creators and opportunities for growth. Illinois has made enormous strides in building a start-up ecosystem that attracts new entrepreneurs and companies, but it still lags behind most states across the innovation funnel, from R&D funding to the rate of new entrepreneurs. We are the sixth-largest state by population with the fifth-largest economy in the country, but we rank ninth in R&D spending and 15th in federal R&D support.¹⁸ In 2017, our entrepreneurship rate was rising but still only 0.24 percent, well below the national average of 0.33 percent.¹⁹

History of Fiscal Imbalances

Until this year, the State of Illinois faced significant fiscal imbalances for decades, and the situation was only made worse by a 736-day budget impasse from 2015 to 2017. The fiscal condition of the state has affected the ability of government to operate efficiently and the ability of businesses to invest confidently. It has also driven many costs down to the local government level, where property taxes are now high relative to other states. For the first time in years, in June 2019, Illinois enacted a bipartisan, balanced budget and credit rating agencies have begun to recognize the increasing stability of the state’s fiscal condition.

Unresponsive Bureaucracy

The State has not made it easy to understand how to navigate bureaucracy, obtain crucial information, or receive necessary permits and licenses in a timely manner to run a business efficiently and with confidence. Complicated procurement processes make it difficult for small and mid-sized businesses in particular to partner with the State and receive government contracts. Small and mid-sized businesses are disproportionately owned by women, minorities, or people with disabilities. The new administration is reversing the course and streamlining bureaucracy to make government more friendly to job creators.

Building the Workforce of the Future

Illinois is home to a labor force of nearly 6.5 million people and more than 200 higher education institutions. Increasing the skills of the Illinois workforce, particularly for underserved populations, is a win-win for residents and businesses alike. Residents get an opportunity to provide a better life for their families and pursue careers they are passionate about. Businesses get access to the skilled labor they need to operate and grow. Surveys of business executives consistently rate the availability of skilled labor as the top site-selection factor, ahead of other considerations such as real estate costs, tax rates, or financial incentives.²⁰ A well-trained, diverse, and skilled workforce is key to attracting new businesses and helping current Illinois businesses thrive.

In response to Governor Pritzker's Executive Order 2019-03, Illinois' workforce, education, and human services agencies (DCEO, ICCB, IDHS, and IDHS) identified evidence-based practices and models that have a good chance of success in Illinois. They also identified innovations in Illinois that hold promise for achieving our workforce and job creation goals and serving disenfranchised populations.

Challenges

Illinois' workforce challenges include connecting the needs of industry with the skill sets of displaced workers, facilitating access to the labor market for disadvantaged communities, and net outmigration of young talent.

- **Industries experiencing technological change and an aging workforce struggle to find new workers with the skills they need.** Technological change is altering which sets of skills are in demand across a broad range of industries. Also, the workforce is aging and the talent pipeline is thin, particularly among some skilled professions that require licensing or certification.
- **Low-income workers are not provided benefits or sufficient pay to enable them to take time off or pay tuition for training programs.** Training and education cost money, and they require a substantial amount of time that cannot otherwise be spent working or taking care of a family. Childcare, transportation, and tuition costs are barriers to joining or completing job training for low-wage Illinois workers.
- **There are a range of professions—many of them high paying—for which institutional barriers prevent participation by women, returning citizens, people with disabilities, and people of color.** Even when minority groups do gain access to an industry where representation is low, they have limited opportunities for advancement due to institutional and systemic discrimination. In particular, this is a problem in the construction trades, tech, and some manufacturing sectors.
- **Outmigration of high school and college graduates negatively impacts the Illinois workforce.** Until this year, uncertainty about higher education finances and scholarship funds for college students drove many Illinois high school graduates to attend college out of state. Many of those students will start their careers elsewhere after receiving their degrees. Also, although Illinois is home to a world-class college and university education system, too many graduates of Illinois colleges and universities move out of state after receiving their degrees, opting to start their careers elsewhere.

What We're Doing Now

This year, we dramatically increased funding for higher education and for scholarships for Illinois residents. We made it easier and cheaper to start apprenticeship programs and hire apprentices, and we continue to run federally funded programs that provide job training for workers and connect employers, job seekers, and trainers.

- We are **implementing a new Apprenticeship Tax Credit**, passed by the General Assembly this year, worth up to \$3,500 per person to cover apprenticeship educational expenses, or \$5,000 for programs that occur in unserved or underserved areas. We also **provide apprenticeship intermediaries and regional apprenticeship navigators in each Illinois region**. Intermediaries bundle the needs of small and mid-sized businesses and then sponsor and manage apprenticeship programs for these employers. Apprenticeship navigators serve as key points of contact in the region for outreach and partnership development to help expand apprenticeship programs.
- We **significantly increased Monetary Award Program (MAP) scholarships and AIM HIGH merit scholarships**, allowing an additional 10,000 students with financial needs to attend college in Illinois.
- Public schools and community colleges are **investing in career and technical education (CTE) with a \$5 million increase in this year's budget**. CTE provides high school and community college students the skills and training they need to be successful in a specific set of well-defined careers in high-wage, high-skill, and high-demand occupations.
- We are **providing customized upskilling services to workers with a \$3 million expansion of the state's Employment Training Investment Program (ETIP)**. Through the ETIP program, the state provides competitive matching grants to companies that provide job training to Illinois residents. These grants are often made available to a large range of small or mid-sized companies through an organization such as a trade association or chamber of commerce.
- We are **expanding on successful apprenticeship models**, such as the Chicago Apprentice Network, to get commitments from corporations and community colleges across the state to expand their apprenticeship programs, particularly in industries that have not traditionally provided apprenticeship programs (e.g., healthcare and business services).
- The state's 22 Local Workforce Innovation Area (LWIA) local workforce boards are coordinating with community colleges and community development organizations to **provide customized training programs for residents**. Local workforce boards create regional strategic plans for workforce development and facilitate coordination between industry, community colleges, and others to ensure that workforce training efforts meet regional employer needs.
- The State Dislocated Worker Unit is **providing rapid response services to employers and workers in the case of a permanent closure or mass layoff or a disaster** that results in mass job dislocation. The State Dislocated Worker Unit coordinates with employers to provide on-site information to workers about employment and retraining services to help them retain employment when feasible or obtain re-employment as soon as possible.

- We are providing participating employers in the **Illinois Hires Heroes Consortium the resources to recruit and retain high-quality veteran candidates**. Resources include HR training, recruitment and support practices, and more. Members of the consortium include more than 100 employers across the state.
- We are implementing the new Illinois Works Jobs program. Through this program, **we are building a diverse pipeline of workers in the construction and building trades** through grants to community-based organizations that recruit, prescreen, and provide pre-apprenticeship skills training, particularly to populations that have historically been underrepresented. The program will incentivize contractors to hire workers from underrepresented populations through a new bid credit program. Also, the program requires that apprentices perform 10 percent of the total labor hours worked on public works projects.
- We worked with the General Assembly to **expand a set of tax credits for relocating and expanding businesses through the recently enacted Blue Collar Jobs Act**. Companies that receive credits for relocating or expanding in Illinois through Enterprise Zones, River's Edge Redevelopment Zones, Economic Development for a Growing Economy (EDGE), or High Impact Business credit programs, will now also be able to qualify for credits based on wages paid to construction workers for construction associated with that relocation or expansion.
- **Illinois workNet® acts as the primary employment and training resource for workforce development**. The portal offers unique features, such as locally and geographically tailored information on job training programs, education, and other resources, that benefit individuals, businesses and workforce professionals. A business hub supports employers in finding qualified job candidates, training the workforce, and assisting in navigating employment regulations and taxes.
- **Through IllinoisJobLink.com, we are connecting job seekers to employers**. Illinois JobLink allows job seekers to post their résumé and search job listings, and allows employers to post job openings for free.

What We're Going To Do

To ensure that our workforce policies promote equity, we will provide resources to low-income households and require reporting on how underserved populations are impacted by workforce development programs across the state. We will also provide improved outreach and easy-to-use services to employers and workers alike, to ensure they are connected to the training opportunities they need.

- **Identify and tailor training to high-impact regional clusters and associated in-demand occupations.** All Illinois education, workforce, and economic development agencies will agree to use a common set of key state and regional level target industries and occupational or career pathway clusters. By agreeing to focus resources on specific clusters, the state can create a competitive advantage in emerging industries and make economic development efforts more effective.
- **Increase collaboration between community colleges and industry to develop apprenticeships and other training programs that meet the specific needs of employers.** This effort will include building a network of industry ambassadors that share their experiences and best practices in developing programs at community colleges. We will also establish “navigator” positions at community colleges across the state. These navigators will be liaisons that will cultivate industry-specific knowledge and devote significant time to building productive relationships with local employers, as well as assisting students in attaining the skills and information they need to participate in apprenticeships.
- **Launch a “Governor’s Champions” recognition program to formally acknowledge employers making commitments** appropriate to their size for apprenticeships, youth apprenticeships, and internships.
- **Expand college and career pathway endorsement systems to give high school graduates an early start in key industry areas.** High school graduates with a pathway endorsement on their transcript have connections to local employers and have earned early college credit. More than 70 school districts across Illinois are already partnering with community colleges, universities, and employers to build college and career pathways that combine career-focused coursework, work-based learning, and student supports. The administration will leverage both federal and state funds to drive substantial year-over-year expansion of these pathway endorsement systems, focused on the key industries in this plan and other talent shortage areas, such as teaching.
- **Create a barrier reduction fund for apprentices in industries with particularly low representation of women and minorities such as construction trades and certain manufacturing sectors.** We will work with the General Assembly to create a pilot program, which would cover childcare and transportation costs, provide supportive services, including job readiness supplies, and offer nonfinancial support, including counseling and mentoring. In a similar program in Oregon, 72 percent of the women in the program stated that the fund allowed them to participate in an apprenticeship that they otherwise could not have participated in.²¹
- **Develop return on investment and qualitative outcome data** for various education and training programs. Workforce training programs vary in quality, and to ensure that our programs are effective and that we are deploying taxpayer funds efficiently, we will collect data and analyze the performance of a broad range of our workforce efforts.

- **Establish and support equity goals.** Set specific, measurable equity goals for all workforce programs receiving federal or state funds to ensure that disparities in access, employment, and earnings for underserved populations will no longer be masked by aggregate performance data. Publicly accountable advisory and oversight boards and councils must play a key role by adopting equity goals and plans to achieve them.
- **Work with the General Assembly to increase state funding for MAP grants by 50 percent from fiscal year 2019 levels by fiscal year 2023.** This will increase the number of MAP grant recipients by more than 50,000 students while increasing the average amount awarded per student.
- **Expand efforts to prepare inmates prior to their release with life skills, career readiness, and occupational training.** At the Kewanee Life Skills Re-Entry Program, 233 inmates have participated in essential skills training, cognitive behavior therapy, high school equivalency or GED courses, technical education, work experience within the institution, and job search assistance. The administration is expanding the successful program to Logan, Murfreesboro, and Graham correctional facilities. In addition, we are adopting similar strategies in nonspecialized correctional facilities, ensuring that employment and training opportunities are more widely available to inmates as they return to their communities.
- **Improve and expand mass transit systems throughout the state to better connect workers and centers of industry using funds from the bipartisan infrastructure investment plan.** Some of the more notable investments from the bipartisan capital plan include rail extensions in Metro East and Kendall County, Amtrak service between Chicago and Rockford, and significant investments to maintain Chicago's transit infrastructure.
- **Provide information and support for employers seeking to hire and retain immigrant workers, as well as immigrant workers trying to work in Illinois.** International migrants are more likely to start new businesses than native citizens and can bring high-demand skill sets that fill workforce gaps but navigating the federal bureaucracy to hire immigrants can be prohibitively difficult. We will train our customer-facing staff on the requirements for business to hire and retain immigrants so that we can help Illinois employers, as well as immigrant job seekers, navigate that process.
- **Use smart online tools to connect job seekers to valuable information and programs that work.** Illinois has many data tools available to researchers, companies, and workers to help understand labor market trends, workforce needs and opportunities, and performance results of a variety of public programs, but these data resources do not "talk" to one another. Illinois recently won a \$1 million competitive grant from the Department of Labor Workforce Data Quality Initiative to expand the Progressive Pathways project and provide an online "front door" to workforce development tools and resources. This project will improve career pathway decision making by Illinois residents, particularly those who are low-income, underemployed, and unemployed.
- **Create a one-stop shop that works closely with companies relocating to or expanding in Illinois to assess their need for workforce solutions, develop and provide customized training programs, and assist in employee recruitment and screening.** This program would be modeled after Louisiana's FastStart and Georgia's QuickStart program, both of which are widely recognized as best practices in the field of workforce development.

Winning in Key Industries

In this economic development plan, we identify a set of concentrated industry clusters in which the state has a large employment base and is positioned to compete globally for talent and investment. The performance of these industries in particular will have a large impact on the state economy, and that impact will be felt across all regions of the state.



Agribusiness and Ag Tech



Energy



Information Technology



Life Sciences and Healthcare



Manufacturing



Transportation and Logistics

Each of these industries has a unique history in Illinois and faces distinct global competition, and therefore needs to be addressed with targeted strategies. In the following section, we identify a set of specific challenges for each industry, our progress in addressing those challenges, and how we plan to help these industries succeed over the next five years.

In Table 2, we show concentration of employment in each Illinois region for each industry. The numbers reflect the ratio of the share of employment in that industry *in the region* to the share of employment in that industry *to the nation*. For example, a “1” means that the region has exactly the same share of employment in that industry as the nation, while a “2” means the region has twice as much employment share in that industry as the nation.

Table 1

Illinois Statistics for Selected Industries

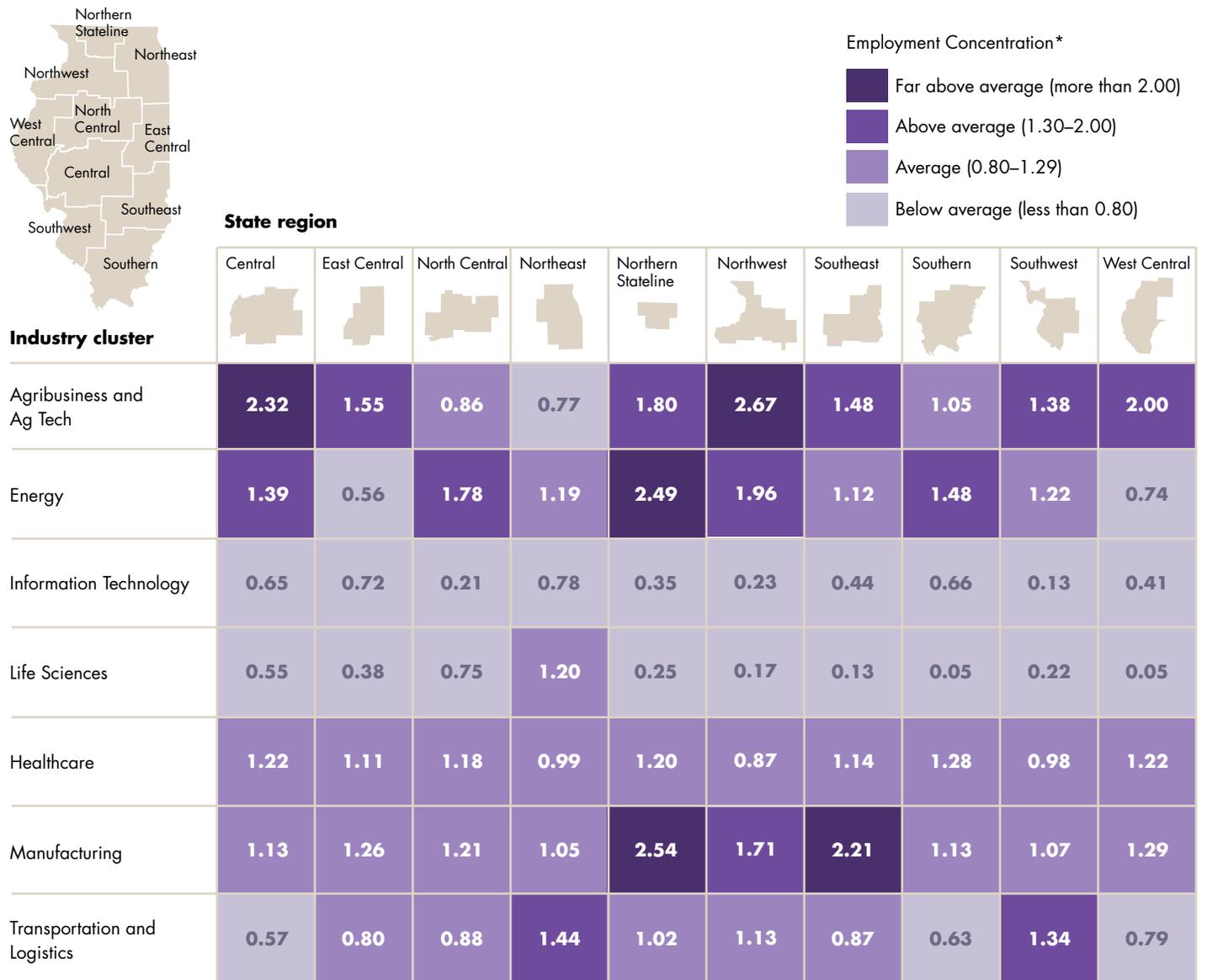
Industry	Jobs in 2018	Average wage	Location quotient	Employment change, 2009–18	Number of employers	Projected employment change, 2016–26	State purchasing coefficient	Value added per employee
Agribusiness and Ag Tech	192,084	\$60,106	0.96	+ 22.6%	8,982	+ 5.5%	\$34	\$99,099
Energy	54,401	\$95,741	0.96	- 3.0%	2,062	0.0%	\$60	\$514,050
Information Technology	137,651	\$108,153	0.84	+ 39.5%	15,780	+ 11.9%	\$65	\$129,300
Life Sciences	48,751	\$152,030	0.90	+ 5.1%	1,655	+ 2.0%	\$24	\$386,973
Healthcare	733,133	\$57,732	0.94	+ 8.0%	29,713	+ 8.1%	\$66	\$96,154
Manufacturing	417,830	\$68,260	1.20	- 2.2%	13,240	+ 1.0%	\$32	\$146,155
Transportation and Logistics	515,178	\$70,129	1.27	+ 15.1%	40,801	+ 9.4%	\$75	\$71,731

Note: Location quotient is the ratio of the employment share in Illinois to the employment share in the nation. State purchasing coefficient is the share of every \$100 spent by companies in this industry that goes to suppliers in Illinois. The “manufacturing” industry includes only manufacturing industries not included in other sectors.

Source: Illinois Department of Employment Security, Quarterly Census of Employment and Wages, 2009 and 2018

Table 2

Employment Concentration for Selected Industries by Region, Relative to Nation



Note: "Employment Concentration" is the ratio of the employment share in Illinois to the employment share in the nation.

Source: Estimates from Regional Economic Models, Inc., 2018



Agribusiness and Ag Tech

Illinois has a centuries-long history as a center for agriculture. Today, Illinois farms are the number-one producer of soybeans in the country, the number-two producer of corn, and the number-four producer of pigs.²² Our success in agriculture has led to growth across a range of associated industries including manufacturing of tractors and other specialized farm vehicles and equipment, fertilizer and pesticide manufacturing, food processing, and urban agriculture. This group of industries collectively make up Illinois' "agribusiness" cluster. While Illinois companies in agribusiness began by serving Illinois farms, many of them are now global, producing their goods in Illinois and exporting them all over the world.

Industry Challenges

Agribusiness faces some of the same challenges that other industries face, including access to capital for product development and access to efficiency-improving technology for small businesses. However, some of the industry's greatest challenges are global, including the threat of climate change and uncertain trade policy.

- **Climate change threatens to undermine the success of Illinois' farmers.** The Midwest is already suffering from the impacts of climate change, and the projections are troubling. Extreme weather patterns are contributing to increased flooding, droughts, damage to infrastructure, and lower crop yields across Illinois. According to the most recent National Climate Assessment, warm-season temperatures are projected to increase more in the Midwest than any other region of the United States. The result will be eroded soils, more pests and pathogens, degraded quality of stored grain, and lower crop yields.²³
- **The Trump administration's tariffs are destabilizing the farming industry.** Illinois is the number-one producer of soybeans in the nation. Over the past year, China purchased almost no soybeans from American farmers during a trade standoff with the United States.²⁴ While China made some soybean purchases from farmers over the past few months, this trade war and the threat of others (in early June, the Trump administration threatened to escalate tariffs with Mexico—a major purchaser of Illinois corn) are crippling their ability to confidently invest for the future.
- **Capital is scarce for developing new agricultural products with extended development cycles.** Preliminary research is often carried out at universities using grant funding. But little private capital exists from private equity and venture capital funds that often only will invest once a company has a proof of concept or has begun selling its product. Between preliminary research and final product, there is a time lag during product development that can be particularly long for agricultural products because of federal regulatory oversight and potential seasonal impacts during testing. During that time, capital is difficult to obtain.
- **High perceived risk, as well as limited access to technical expertise and high-speed internet, often lead to slow adoption of technology solutions for farms.** Taking advantage of new technology is essential to remaining competitive in the global market. For example, precision farming is an approach that incorporates data-driven methods and new technology to manage and optimize the production of crops and is anticipated to increase crop yields by 70 percent by 2050.²⁵ Farmers tend to be risk-averse about adopting new technologies. Further, technology adoption often depends on access to high-speed internet and technical experts, which are less available in rural areas.

What We're Doing Now

To address some of the challenges in this industry, we are doing our part to prevent climate change, increasing access to broadband in rural areas, providing business support services for small and mid-sized farms, and moving quickly to implement legal hemp and cannabis production.

- In adopting the U.S. Climate Alliance principles, Governor Pritzker is committing to those included in the Paris Agreement, including **reducing greenhouse gas emissions by at least 26 to 28 percent below 2005 levels by 2025.**
- Governor Pritzker signed into law the state's largest ever infrastructure program, which **invests in rural roads, bridges, and waterways, as well as ports and levees.** The administration is also **aggressively deploying state resources and obtaining federal resources to counteract flooding and other natural disasters that affect Illinois farmers.** Governor Pritzker has issued disaster proclamations in 36 counties in response to flooding, bringing together several state agencies to address the needs of those communities as they recover from the floods.
- Illinois community colleges across the state are providing training in agriculture, food, and natural resources. Statewide, there are **213 certificate and degree programs in these fields that have graduated more than 3,600 residents** in the past three years.
- **We are providing \$13 million in the 2020 fiscal year to University of Illinois Extension** for business support services for farms and ag tech companies, as well as 4-H youth development, STEM education programs, and other agriculture programs.
- **We began issuing licenses in April for the production of hemp,** diversifying crop options and expanding revenue opportunities for farmers across the state. Industrial hemp is still an emerging industry but is rapidly growing and has the potential to grow to a multibillion-dollar industry with applications in materials, paper, food, oils, and more.
- We are **helping improve water quality, reduce soil erosion, and restore wetlands** by providing \$20 million in capital plan funds to bolster the Illinois Conservation Reserve Enhancement Program (CREP). CREP is a partnership between the Illinois Department of Natural Resources and the US Department of Agriculture.
- By successfully pushing to **legalize production of cannabis for recreational use,** the Pritzker administration is creating a new industry and a new opportunity for Illinois farmers. To help social equity applicants, we will provide grants, loans and training so they can actively participate in and benefit from the new industry.²⁶
- The Governor worked with the General Assembly to **eliminate the Corporate Franchise Tax,** which posed a significantly high compliance burden and penalized businesses, including agribusiness, for locating or expanding their operations in the state.

What We're Going To Do

We propose making a range of investments and starting new programs that will facilitate technology adoption for small and mid-sized farms, encouraging innovation among farm suppliers and processors of agricultural products, and boosting connections with global markets.

- **Use the \$420 million included in the capital plan to expand broadband to unserved and underserved areas of the state.** This will have a significant impact on small to mid-sized farmers who currently do not have access to the internet. Most of the latest digital technologies used in agriculture can be implemented only with internet access. Also, access to the internet results in access to a broader community of potential employees, suppliers, and customers.
- **Invest in facilities that encourage collaboration between researchers and industry and commercialization of cutting-edge products in communities across the state.** Using capital plan funds, we will invest in facilities that provide equipment for researchers and collaborative space for industry and entrepreneurs. For example, the governor's capital plan includes \$500 million for the Discovery Partners Institute (DPI) and the Illinois Innovation Network (IIN), which is a collaboration with Illinois universities to provide space and program funding across the state for entrepreneurs, innovators, students, faculty researchers, and industry representatives to work together to solve some of the world's biggest problems and commercialize products. One of the first announced IIN facilities is the Northern Illinois Center for Community Sustainability, which will in part focus on advances in food and agriculture.



- **Increase funding for University of Illinois Extension to expand business support services for farms.** University of Illinois Extension offers a range of services, including farmdoc—a widely utilized service that provides tools, data, and analysis to commercial farmers—and business development and support for small farms. During the budget impasse, they received limited and delayed funding from the State, resulting in significant attrition of their programs. By investing more in University of Illinois Extension agricultural business development programs, we will help address rural unemployment, make Illinois farms more competitive, and gain a foothold in emerging industries such as urban agriculture.
- Convene an ag tech summit, followed by regional ag tech fairs throughout the state to **connect technology companies working on solutions for agribusiness with small and mid-sized farmers.**
- **Actively pursue more funding from the USDA and other federal agencies that provide grants for agriculture research and programming.** We will dedicate staff to connect with Illinois agricultural companies, rural economic development organizations, and research entities about opportunities to solicit funding from the federal government.
- **Provide a Renewable Chemicals Production Tax Credit.** We will work with the General Assembly to implement a new volume-based credit for companies that manufacture renewable chemical products from biomass feedstock that are not used for food, animal feed, or fuel. Possible products that use renewable chemicals include textiles, pharmaceuticals, pesticides, and paints. Renewable chemicals make up less than 1 percent of total chemical production today, but are expected to grow at more than 12 percent per year over the next 10 years.²⁷ Illinois is a center for agriculture and chemical manufacturing, so we have a natural advantage in this industry, but nearby states like Iowa and Minnesota with similar advantages have put credits in place to attract this innovative and fast-growing industry.
- **Work with the Illinois Treasurer’s Office to prioritize investment in agribusiness.** The Illinois Growth and Innovation Fund (ILGIF) is an impact investment fund managed by the Office of the Treasurer for technology businesses in Illinois. The ILGIF has up to \$700 million in Illinois assets to invest in private equity, venture capital, and other funds, which are in turn required to invest twice as much into start-up companies based in Illinois. We will work with the Treasurer’s Office to prioritize investments in a set of focus industries, including agribusiness, that have trouble accessing capital due to long development phases.
- **Expand and increase awareness of foreign trade zones to facilitate access by food processing and other agribusiness exporters.** Illinois currently has eight foreign trade zones. In foreign trade zones, companies pay a tariff only on the inputs for a manufactured product, use local labor and equipment to manufacture the product, and avoid tariffs when exporting the finished product. While food processing companies heavily utilize foreign trade zones in some other states, that is not the case in Illinois. Despite the concentration of agriculture and food processing and manufacturing in Illinois, only one company in this sector had a significant presence in a foreign trade zone in Illinois in 2017, and it was located in northeast Illinois.²⁸ Expanding these zones and ensuring they are strategically located for the agribusiness industry can enhance trade and reduce business costs.

-
- **Revitalize the partnership between the State and the Regional Development Authority program.** Established as municipal corporations in Illinois statute, there are currently 10 Regional Development Authorities that are able to issue federally tax-exempt bonds to finance private development in most areas of the state. Only three Authorities have been active in recent years. We will appoint members to these Authorities where needed, propose legislation to increase transparency and better align the Authorities' responsibilities with the priorities of the Administration, and engage and fully recognize the Authorities as economic development partners. The ability to finance and provide low-interest loans—up to \$500 million, in some cases—for regional economic development priorities is a valuable economic development tool.
 - **Provide Agricultural Innovation Vouchers** to help Illinois farmers transition to in-demand crops, implement renewable farming methods, adopt new technologies, or pivot to a more efficient business model. We will work with the General Assembly to provide competitive 1:1 matching grants to small and mid-sized farms that can be used for investments in specialized equipment and software, as well as technical expertise and consulting.
 - **Provide eligible businesses, including university-based startups, with matching grants when they win federal Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants.** SBIR and STTR grants are designed to help small businesses turn innovative ideas in tech into commercially market-worthy products, and studies have shown that augmenting those funds with a state match can increase the number of projects that go on to receive further funding and develop products.²⁹ We will work with the General Assembly to provide funding for these matching grants.



Energy

Illinois has a diverse, strong, and growing energy industry. As a net exporter of electricity to other states, and with biofuels among our top exports, energy exports are particularly important to the Illinois economy. Renewable energy is expanding across the state, and Illinois is making significant progress in moving toward a clean energy economy.

In clean energy industries, Illinois has a small but growing cohort of innovative businesses, including electric vehicle manufacturers, specialists in renewable electricity generation, and experts in battery storage.

Industry Challenges

In the emerging clean energy technology industry, innovators face challenges getting the capital they need in Illinois and commercializing the cutting-edge research that takes place at universities. For the broader energy industry, a rapidly changing landscape threatens to leave small businesses and displaced workers behind.

- **Our universities need help in commercializing their research and building relationships with industry.** Illinois has some of the best research institutions in the country, many of which are conducting cutting-edge research. It is difficult to turn a cutting-edge research finding into a commercialized product, and while universities often provide resources to faculty members to do so, they have limited capacity for this effort since it is not central to their mission as educational institutions. Furthermore, the research interests of faculty members often do not align with the research needs of industry.
- **In the rapidly growing energy efficiency industry, small businesses are at risk of being left out.** Under the Future Energy Jobs Act, utilities are required to allocate more than \$250 million to energy efficiency programs, including energy efficiency improvements to buildings. To provide these services, contractors require special training, certification, and other licensing.
- **Capital is scarce for developing new energy technology products with extended development cycles.** Preliminary research is often conducted at universities using grant funds. But little private capital exists from private equity and venture capital funds, who often only will invest once a company has a proof of concept or has begun selling its product. Between preliminary research and final product, there is a time lag during product development that can be particularly long for clean energy products. During that time, capital is difficult to obtain.
- **Investment in new technologies has been concentrated on the coasts,** and companies in the Midwest have been missing out. There are a lot of exciting new developments occurring in clean energy in Illinois, but investors are concentrated in California, which has a long history of incentivizing development and providing regulatory certainty for clean energy.

What We're Doing Now

Illinois is already taking bold steps to increase renewable energy, invest in the clean energy and energy efficiency workforce, modernize the electric grid, and support clean energy technology start-ups.

- In adopting the U.S. Climate Alliance principles, Governor Pritzker is committing to the principles of the Paris Agreement, including **reducing greenhouse gas emissions by at least 26 to 28 percent below 2005 levels by 2025.**
- The Illinois Commerce Commission and Illinois Power Agency are **working with utilities to implement the Future Energy Jobs Act (FEJA), which requires expansion of energy efficiency programs, a dramatic increase in renewable energy generation, and investment in job training for the clean energy economy.** FEJA requires that ComEd and Ameren support energy efficiency initiatives to reduce electricity waste by 21.5 and 16 percent, respectively, by 2030. It also requires that 4,300 megawatts of new solar and wind power be built in Illinois by 2030, and that all major utilities in Illinois source 25 percent of their electricity from renewable sources. Finally, FEJA devotes \$750 million to job training for clean energy and energy efficiency jobs, and assistance for low-income customers, seniors, and disabled veterans.
- The Illinois Clean Energy Innovation Fund—seeded by grant funds from DCEO and overseen by the Illinois EPA—is a revolving investment fund that is **making investments in high-potential, early-stage, and Illinois-based clean technology companies.**
- The Illinois Home Weatherization Assistance Program (IHWAP) is **helping low-income residents and households conserve fuel and reduce energy costs** by making their homes and apartments more energy efficient. IHWAP also provides many health and safety upgrades ensuring safe and healthy homes.
- Illinois community colleges are **training workers in the energy industry, with 59 separate certificate or degree programs that have yielded more than 6,000 graduates** in the past three years.
- Through the Illinois Green Economy Network (IGEN), community colleges are **spending \$2 million annually to showcase new clean energy technologies and develop curricula and programs to train the clean energy workforce.**
- We are **providing energy efficiency assessments** for local governments, such as for wastewater treatment plants, **providing extensive training to construction workers** and state officials on the state's energy code, and **investing in clean energy research** at the state's universities through programs at the Illinois EPA.
- **Through the new data center tax credit, we are incentivizing data centers to be carbon neutral or meet green building standards.** Data centers use a lot of energy and can have a significant carbon footprint. To qualify for a new tax exemption for large data center investments, newly constructed data centers must be carbon neutral or meet well-defined green building standards.
- Governor Pritzker worked with the General Assembly to **eliminate the Corporate Franchise Tax**, which poses a significantly high compliance burden and penalized businesses for locating or expanding their operations in the state.
- By repealing the **20-year-old Kyoto Protocol Act, Governor Pritzker is enabling the State to propose and adopt rules to reduce greenhouse gas emissions.** The Kyoto Protocol Act prohibited the Illinois EPA or Pollution Control Board from doing so.

**What We're
Going To Do**

To continue to address the energy challenges that we face, we will make big investments in green infrastructure and promote clean energy innovation across the state.

- **Improve access to energy efficiency and other clean tech jobs to underserved populations by expanding on successful training and incubator programs.** The significant investment that we are making in energy efficiency will result in more jobs among underserved populations in the state through a proactive effort to train small contractors on how to access these funds and encourage large contractors to diversify their workforce. We will facilitate this process by expanding incubator programs for contractors and training workers on the specialized skills required to make energy efficiency improvements.
- **With \$420 million for broadband in the capital plan, enable utility companies to more efficiently distribute electricity and lay the foundation for the energy grid of tomorrow.** While all households and businesses in Illinois have access to electricity, they do not all have access to broadband. Utilities need a high-speed internet connection to install smart meters, effectively monitor load distribution remotely, and use other new tools necessary to monitor the modern grid.
- **Use \$70 million from Rebuild Illinois, the Governor's bipartisan capital plan, to build electric vehicle infrastructure for medium- and heavy-duty vehicles.** These funds will be used for necessary infrastructure such as charging stations to allow for increased electric vehicle adoption among shipping companies. We will prioritize locating these stations in underserved areas at strategic locations for trucking freight.



-
- **Build innovation labs near universities** that conduct cutting-edge research in clean energy technology to bring together industry and academic researchers and assist with commercialization of that research. Building these labs in opportunity zones will help attract private investment, stretching state dollars.
 - **Work with the Illinois Treasurer’s Office to prioritize investment in clean energy.** The ILGIF is an impact investment fund managed by the Office of the Treasurer with up to \$700 million in Illinois assets to invest in private equity, venture capital, and other funds. Funds that receive investment from ILGIF are required to invest in Illinois technology start-ups and match the state’s contribution. We will work with the Treasurer’s Office to prioritize ILGIF investments in a set of focus industries, including clean energy, that have trouble accessing capital due to long development phases.
 - **Encourage universities to set up programs where business school students help researchers at universities commercialize their research.** A number of universities around the country have programs where researchers and business school students work together to bring research to market. Similar programs could be established at Northwestern’s Kellogg School of Management, the University of Chicago’s Booth School of Business, University of Illinois Gies College of Business, and other MBA programs across the state.
 - With an increase in funding this year, ICCB and the state’s community colleges will **expand career pathway programs that strengthen the pipeline for energy jobs** throughout Illinois.
 - **Provide eligible businesses, including university-based start-ups, with matching grants when they win federal Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants.** SBIR and STTR grants are designed to help small businesses turn innovative ideas in tech into commercially market-worthy products. Studies have shown that augmenting those funds with a state match can increase the number of projects that go on to receive further funding and develop products.³⁰ We will work with the General Assembly to provide funding for these matching grants.



Information Technology

Information technology encompasses a broad range of disciplines including data processing, computer programming, computer systems design, computer facilities management, and web design. These fields are rapidly growing and are projected to continue to do so over the next 10 years as consumers become more connected and industries across the economy implement technological solutions to solve their biggest problems.

Currently, the industry is clustered in a few areas across the state, primarily Chicago, and the positive impact of the industry's growth has not been strongly felt in downstate, rural, or unserved and underserved communities.

Industry Challenges

Chicago is increasingly competitive in tech, and Illinois boasts some of the nation's top higher education programs in tech. However, Chicago has challenges competing with other tech hubs for talent and capital, and downstate communities fare much worse.

- **Recruiting and retaining the best talent in technology and engineering is an ongoing challenge for Illinois.** The largest tech companies are concentrated in the San Francisco Bay Area, Boston, and Seattle. Chicago has started to gain ground in attracting tech talent, but has room to improve, and other cities in Illinois are lagging.
- **Availability of expansion-stage funding is pushing businesses to other states.** A vast majority of capital for tech start-ups are located in tech innovation hubs outside of Chicago (San Francisco, New York, Boston, and Austin), and investors often require or encourage Chicago start-ups to relocate to one of these hubs once they start growing.
- **Need for better integration between local industry, tech developers, and universities diminishes the amount of innovation that ultimately turns into a marketable product.** While groundbreaking research is happening at Illinois' research universities and national laboratories, only a small portion of that is commercialized. There are only loose connections between researchers and industry to coordinate their efforts and identify paths to commercialization.
- **Rural areas and low-income or less densely populated urban areas across the state lack access to technology infrastructure,** such as broadband. As a result, workers and entrepreneurs are disconnected from the tech ecosystem.



What We're Doing Now

Through investments from the Rebuild Illinois capital plan and tax credits for data centers, we have provided an environment for the infrastructure that tech companies need. Furthermore, we provide a range of credits and grants dedicated to assisting tech start-ups.

- Through a new Data Center Tax Credit, we are **attracting major investments in data centers—buildings that house servers to store and centralize a companies' data**. Companies can receive a sales tax exemption for building a data center into which they invest more than \$250 million. In addition, if the data center is located in an underserved area, companies can receive an income tax credit for wages paid to construction workers.
- **To instill confidence in long-term investment in research in the state, we are extending the Research and Development Tax Credit** through January 1, 2027, which will help spur innovation, particularly in the tech and manufacturing industries.
- Illinois community colleges across the state are providing training with an IT focus. Statewide, there are **416 certificate and degree programs in IT that have graduated nearly 6,000 residents** in the past three years.
- **Community colleges, universities, and high schools are developing IT career pathway opportunities for young people with disabilities**. Working in partnership with employers and state government partners, Illinois schools provided this training to 1,364 young people with disabilities across the state in the 2018 fiscal year.
- Through the Angel Investment Tax Credit program, we are **providing credits to investors that invest in small companies** doing most of their business in Illinois.
- We are **providing \$2.5 million in competitive technology-based grants in fiscal year 2020** to match investment in tech projects and companies, to support socially disadvantaged business owners attempting to enter the market, and to provide seed money for nascent industries in Illinois.
- Governor Pritzker worked with the General Assembly to **eliminate the Corporate Franchise Tax**, which posed a significantly high compliance burden and penalized businesses for locating or expanding their operations in the state.
- The Blockchain Technology Act and the Blockchain Business Development Act, passed this year by the General Assembly, are **expanding the legal use of blockchains for contracts and record keeping**. These legal changes represent a first step in allowing a range of companies to experiment with blockchain technology in their operations. The Blockchain Business Development Act focuses on financial technology and the use of blockchain technology in banking.

What We're Going To Do

If we modernize our incentive programs, make big capital investments such as the Discovery Partners Institute and broadband, and foster connections between researchers, innovators, and industry, we can aggressively pursue top tech talent and companies, and ensure that we build the relationships and support for homegrown tech companies to start and grow right here in Illinois.

- **With the \$420 million in funds for broadband in Rebuild Illinois, the bipartisan capital plan, we will provide broadband to people interested in creating and growing information technology companies.** People who want to start or grow a small business require access to the internet where they can conduct research, assess the competitive landscape, and sell their products, among other critical activities.
- With **\$50 million for emerging technology enterprises included in the Rebuild Illinois bipartisan capital plan**, we will provide grants and loans to companies that seek to acquire and rehabilitate sites and facilities for R&D, commercialization, and tech transfer activities.
- **Work with companies to increase employment in IT occupations in rural and unserved areas.** With advancement in communication technology and increasing access to high-speed internet, it's easier than ever for companies to hire remote workers or develop small satellite offices. This presents an opportunity to train and recruit IT workers in rural areas. We will work with companies to expand their workforce in rural Illinois, use federal WIOA funds to provide job-training programs that focus on the skills needed for IT workers working remotely, and provide resources to rural high schools and community colleges to build IT college and career pathways that will complement WIOA job-training programs.
- **Give start-ups access to the Research and Development Tax Credit.** Start-up companies that are still developing products cannot currently take advantage of the Research and Development Tax Credit since they have no tax liability. We will work with the General Assembly to make the Research and Development Tax Credit transferable for qualified small businesses (QSB). QSBs are companies with less than \$5 million in gross receipts in the year credits are awarded, and no gross receipts in the five consecutive years prior to the year credits are awarded.
- **Invest in facilities that encourage collaboration between researchers and industry and commercialization of cutting-edge products in communities across the state.** Using Rebuild Illinois capital plan funds, we will invest in facilities that provide equipment for researchers and collaborative space for industry and entrepreneurs. For example, Rebuild Illinois includes \$500 million for the Discovery Partners Institute (DPI) and Illinois Innovation Network (IIN), which is a collaboration with Illinois universities to provide space and fund programs for entrepreneurs, innovators, students, faculty researchers, and industry representatives to work together to solve some of the world's biggest problems and commercialize products.
- **Create a web-based platform to connect start-ups to investors, corporations, universities, resources, and incentives.** We can do a better job supporting start-up companies by partnering with local SBDCs and incubators to create an online one-stop portal that provides a range of resources, including content about how to start a business, industry-specific programming, connections to mentors, and referrals to investors.

-
- **Encourage universities to set up programs where business school students help researchers at universities commercialize their research.** A number of universities around the country have programs in which researchers and business school students work together to bring research to market. Similar programs could be established at Northwestern’s Kellogg School of Management, the University of Chicago’s Booth School of Business, University of Illinois Gies College of Business, and other MBA programs across the state.
 - **Work with cities across Illinois on downtown development.** The competition for technology talent is largely about location and attracting the necessary workforce. We will work with local communities to rebuild downtowns, housing developments, parks, shopping centers, art, and bike lanes that match the lifestyle desires of the next generation and improve business attraction for their region. As part of this effort, we will work to encourage the rehabilitation of blighted and historic properties and modernize infrastructure in communities across the state. There are a range of federal, state, and local grants and incentives that can be brought to bear in this effort.
 - **Support efforts to innovate products and services at tech companies.** Technology is rapidly changing the landscape of the delivery of products and services. In this environment, it is important for Illinois to attract companies to the state and allow them to flourish. We will support innovation to increase the availability of such products and services. The innovation unit within the Illinois Department of Financial and Professional Regulation and other regulators will work together to engage with companies as they develop and test new products and encourage new and innovative technologies in ways that are both beneficial and safe for Illinois consumers and businesses.
 - **Expand IT apprenticeships through new programs at community colleges.** The ICCB was awarded the US Department of Labor (DOL) Scaling Apprenticeship through Sector Based Strategies grant to implement the Customized Apprenticeship Program-Information Technology (CAP-IT) model. The ICCB will work with ten community college partners and other leaders to develop or expand a customized IT apprenticeship pathway, utilizing the strengths of their current apprenticeship models, local workforce agencies, and employer partnerships. The model will include pre-apprenticeship bridge programs, pre-apprenticeship, and apprenticeship models. Each model incorporates essential employability skills to ensure individuals have the skills necessary to succeed in the apprenticeship program.
 - **Provide eligible businesses, including university-based start-ups, with matching grants when they win federal Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants.** SBIR and STTR grants are designed to help small businesses turn innovative ideas in tech into commercial-market-worthy products. Studies have shown that augmenting those funds with a state match can increase the number of projects that go on to receive further funding and develop products.³¹ We will work with the General Assembly to provide funding for these matching grants.



Life Sciences and Healthcare

Illinois has been a global leader in biopharmaceuticals, chemical manufacturing, and medical equipment for nearly a century. These industries are critical in developing new biological and medicinal products (such as vaccines), ag biotech, and medicinal technology (such as medical devices). The Illinois Science + Technology Park, Argonne National Laboratory, the University of Chicago, and Northwestern University are all internationally recognized for their life sciences and medical research. The Illinois Medical District is one of the largest urban medical districts in the United States.

However, Illinois has experienced a major exodus in life sciences R&D talent over the past decade. Chicago was ranked third in R&D talent in 2002, but has since been surpassed by Boston, San Francisco, New York, and others.³² Other states are heavily investing in ecosystems and policies that help this industry to thrive such as increasing access to capital and connecting universities with companies that will commercialize products.

Industry Challenges

Illinois no longer has the facilities, the research environment, or the investment activity to retain or attract the top talent and fastest-growing companies in life sciences. And we face the same challenges that states across the country face in the healthcare industry: an insufficient workforce to meet fast-growing demand, changes in treatment models, and inconsistent use of technology.

- **Wet lab space is hard to come by in Illinois.** Wet lab space—or lab space suitable for handling various types of hazardous “wet” chemicals—is critical for the life and health sciences to thrive but requires large amounts of physical space and is costly to build. Other states are outpacing Illinois in their investment in physical wet lab and spaces for colocating researchers and industry.
- **Capital is scarce for developing new life sciences products with extended development cycles.** Preliminary research is often carried out at universities using grant funding. But little private capital exists from private equity and venture capital funds who often only will invest once a company has a proof of concept or has begun selling its product. Between preliminary research and final product, there is a time lag during product development and testing that can be particularly long for biotech and life sciences innovations. During that time, capital is difficult to obtain.
- **R&D funding is not keeping pace with national growth.** Total R&D activity in the state has grown just 1.8 percent annually since 2011, compared with a 4.6 percent annual growth rate nationally.³³ The state’s approach to supporting R&D through the Research and Development Tax Credit has likely contributed to this slowdown. The legislature allowed the credit to expire in 2010 and 2016. Prior to that, the credit was renewed within a year of expiration in 1999, 2004, and 2009. Credit expiration fosters uncertainty in a field that requires substantial foresight for investment.
- **Rapid growth in the healthcare sector could result in a workforce shortage for a range of healthcare occupations in Illinois.** Illinois has a nursing shortage across the state due to an aging workforce. The Illinois Nursing Workforce Center estimates that by 2020 the state will face a shortage of more than 21,000 nurses.³⁴ In addition, a study by Mercer Workforce Analytics found that the following occupations will likely face a national shortage by 2025: home health aides, nursing assistants, medical and lab technicians, and nurse practitioners.³⁵ With an aging population, Illinois is likely to experience these shortages even more than the typical state.

- **Small healthcare practitioners struggle to adopt new business models and technology.** From electronic health records to new tools to gather and share patient information, technology and telehealth affect the patient experience and how healthcare is provided. The fractured nature of the healthcare market has resulted in a wide range of expertise and ability to adopt new technologies and practices, with many small and mid-sized businesses being left behind.
- **Demographic and industry changes are transforming traditional models of healthcare delivery.** Population in Illinois is moving out of rural areas, mid-sized towns, and under-resourced communities in cities across Illinois. In addition, patients are increasingly interested in home-based and community-based care than in traditional hospital options, driving down hospital bed utilization. As a result, some hospitals—which are regional and neighborhood economic anchors—are downsizing or closing, especially in areas that are already economically depressed.



What We're Doing Now

We've made changes to our incentives to encourage more R&D activity and eliminated some business costs for manufacturers. We also have invested in training facilities for the healthcare workforce.

- Under legislation passed this year, we are **extending the Research and Development Tax Credit** through January 1, 2027, which is critical to manufacturers looking for certainty as they plan for the next 10 to 15 years. Each dollar of R&D tax credits results in more than a dollar increase (some estimate up to \$2.50) in R&D spending. In addition, the credit will encourage more entrepreneurship in high-tech industries.
- Under new legislation, we are **administering a new Apprenticeship Tax Credit that provides up to \$3,500 per person to cover apprenticeship educational expenses and up to \$5,000 for programs that occur in unserved or underserved areas.** This will be particularly valuable for companies in healthcare that are interested in using apprenticeships to recruit and train the next generation of frontline healthcare workers.
- The governor worked with the General Assembly to **eliminate the Corporate Franchise Tax**, which posed a significantly high compliance burden and penalized businesses for locating or expanding their operations in the state.
- The Pritzker administration worked with the General Assembly to **expand and make permanent the Manufacturers' Purchase Credit**, which will expand the Manufacturing Machinery and Equipment sales tax exemption. Effective July 1, 2019, companies are not only able to receive a sales tax exemption for machinery or equipment used primarily in the manufacturing of personal property for retail sale or lease, but also for consumable products used in the production-related processes, such as coolants, hand tools, adhesives, fuel, and oil. A modified version of the exemption has not been active since it sunset in 2014. Making the sales tax exemption permanent will provide certainty to manufacturers, while the expanded exemption will save these companies millions of dollars as they invest in Illinois in the coming years.
- Through the Underserved Physicians Workforce Act, passed by the General Assembly this year, we are **providing grants, loan assistance, and scholarships to physicians who perform their residency in an underserved community.**
- Through amendments to the Illinois Health Facilities Planning Act passed this year, we are **tightening rules and increasing requirements for public notice around the closure or transfer of ownership of hospitals.** This change allows communities more time to prepare and respond to potential changes in regional hospital service.
- **Illinois community colleges are administering more than 600 certificate and degree programs in a range of health sciences.** These programs have graduated more than 45,000 students over the past three years.

What We're Going To Do

We will use capital plan funding to build out infrastructure and facilities that meet the needs of life sciences companies and provide credits that spur innovation. We will also provide workforce training for in-demand healthcare occupations and boost our support for small healthcare providers and other businesses to increase technology adoption.

- **Invest in facilities that encourage collaboration between researchers and industry and commercialization of cutting-edge products in communities across the state.** Using Rebuild Illinois capital plan funds, we will invest in facilities that provide equipment for researchers and collaborative space for industry and entrepreneurs. For example, Rebuild Illinois includes \$500 million for the Discovery Partners Institute (DPI) and Illinois Innovation Network (IIN), which will provide space and fund programs for entrepreneurs, innovators, students, faculty researchers, and industry representatives to work together to solve some of the world's biggest problems and commercialize products. One of the first announced IIN facilities is the drug discovery and innovation pavilion at the University of Illinois at Chicago.
- Using **\$420 million from the bipartisan capital plan for the expansion of broadband, extend broadband to unserved and underserved areas.** This expansion could result in more opportunities to provide healthcare via telehealth technologies, which would increase access to healthcare services for incarcerated people and residents of rural and unserved communities and expand treatment opportunities in the fields of mental health and opioid addiction.
- **Give start-ups access to the Research and Development Tax Credit.** Start-up companies that are still developing products cannot currently take advantage of the Research and Development Tax Credit since they have no tax liability. We will work with the General Assembly to make the credit transferable for qualified small businesses (QSB). QSBs are companies with less than \$5 million in gross receipts in the year credits are awarded, and no gross receipts in the five consecutive years prior to the year credits are awarded.
- **Work with industry to identify regulations in healthcare that impede innovation and limit access to unserved or underserved individuals, and work with consumer groups to fix those regulations.** State regulations on healthcare delivery prevent testing and implementation of some innovative practices. Specifically, there are restrictions on the administration of remote diagnostic tests or exams and what action can be taken, such as whether a prescription can be provided. Using a well-defined set of limitations, we will work with the General Assembly to implement a three-year program in which companies can apply for and receive permission to operate with more flexibility to allow for innovative practices where there is reason to believe there will be no harm to patients. This will spur innovation in the healthcare field that would be especially beneficial in rural, underserved, and unserved communities, while maintaining important consumer protections that are necessary for public health and safety.
- **Build wet lab space and colocate corporations, university researchers, and start-ups using funds included in the bipartisan Rebuild Illinois capital plan.** In addition, we will work with the General Assembly to **provide tax incentives to businesses looking to create their own wet labs** by making them eligible for the High Impact Business Credit, which includes an exemption from sales tax on building materials and personal property used in manufacturing. This program will initially be capped at \$2 million in credits annually and prioritized for underserved areas.
- With \$6 million from the fiscal year 2020 budget, **renovate and upgrade the Macomb Career and Technical Education Center and nursing building** at Spoon River Community College, which offers two-year degrees for students entering the healthcare industry.

- **Start the Illinois Healthcare Extension to provide support services to small and mid-sized healthcare providers** to improve technology adoption and support back-office operations. Business support services provided through agricultural and manufacturing extension programs have long been touted as some of the most cost-effective economic development tools. They help small and mid-sized homegrown companies stay up to date, train workers, and use the most recent technology. Healthcare practitioners, if anything, are even more in need of those services today. They are also small business owners, and they need support in the face of a quickly changing and fractured industry so they can focus on providing high-quality healthcare. We will work with the General Assembly and industry representatives to raise funds for and identify the best organizational structure for the Illinois Healthcare Extension.
- **Work with the Illinois Community College Board (ICCB) and stakeholders in the industry to address the shortage in a range of healthcare occupations**, especially as the administration makes needed investments and improvements in funding for community colleges.
- **Work with the Illinois Treasurer's Office to prioritize investment in life sciences and biopharmaceuticals.** The Illinois Growth and Innovation Fund (ILGIF) is an impact investment fund managed by the Office of the Treasurer for technology businesses in Illinois. Through the ILGIF, the Treasurer's Office can invest up to \$700 million in Illinois assets to invest in private equity, venture capital, and other funds. These private funds are in turn required to invest twice as much into Illinois start-up companies. We will work with the Treasurer's Office to prioritize investments in a set of focus industries, including life sciences and biopharmaceuticals, that have trouble accessing capital due to long development phases.
- **Provide eligible businesses, including university-based start-ups, with matching grants when they win federal Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants.** SBIR and STTR grants are designed to help small businesses turn innovative ideas in tech into commercially market-worthy products. Studies have shown that augmenting those funds with a state match can increase the number of projects that go on to receive further funding and develop products.³⁶ We will work with the General Assembly to provide funding for these matching grants.
- **Use Rebuild Illinois' healthcare transformation capital grant program to transform hospital facilities to meet the needs of the communities they serve.** Hospitals are economic anchors. When they close, there can be significant negative effects on the regional economy. The Department of Health and Family Services will engage in a community-based process to determine future healthcare delivery needs, administer grants to hospitals and healthcare providers to transform their facilities, and ensure that transformation benefits the community economically. This work will emphasize social determinants of health, including but not limited to food insecurity, housing, economic development, and workforce opportunities.
- **Administer \$50 million in Community Health Center Construction grants from the bipartisan Rebuild Illinois capital plan for equipment purchases and acquisition of new physical locations** to deliver health services and construct community health centers for underserved communities. This investment will allow hospitals in low-income areas to upgrade their technology and facilities to provide needed services to communities across the state.
- **Assemble and sponsor a healthcare tech road show**, including targeted healthcare tech demonstrations across Illinois, especially in downstate communities, to facilitate technology adoption among small and mid-sized healthcare practitioners. New technologies can help healthcare businesses run their back-office operations efficiently, communicate with and collect data from patients, and work with government and insurance companies.



Manufacturing

Illinois' manufacturers account for more than 13 percent of the state's output and employ 10 percent of the state workforce in a variety of sectors, from food and automotive production to petroleum and medicine.³⁷ Between 2009 and 2013, manufacturing exports in Illinois grew by almost 60 percent—faster than the national average, yet Illinois' manufacturing sector has not recovered to the employment levels it had prior to the 2008 financial crisis.

To support and grow the manufacturing industry, we need to create a robust talent pipeline for business owners, invest in the infrastructure that will allow manufacturers to succeed, and facilitate technology adoption and updated production processes to help Illinois manufacturers remain competitive.

Industry Challenges

Automation is leaving some elements of the Illinois manufacturing industry and workforce behind. Furthermore, the state has allowed the infrastructure that manufacturers rely on to deteriorate.

- **There is a shortage of workers in certain manufacturing occupations due to an aging workforce and a shift in skill requirements due to automation.** There is increasing demand for certain manufacturing occupations, including welders, machinery mechanics, and computer numerically controlled (CNC) machine operators and programmers.³⁸ These professions in particular are in demand as manufacturing automation increases and licensed professionals like welders are aging out of the workforce. The shortage of people that can teach manufacturing skills is compounding this challenge.
- **Deteriorating infrastructure inhibits direct and indirect supply-chain flows and the exporting of manufactured goods.** Illinois has a robust infrastructure network to facilitate global trade. Maintaining and consistently updating this network to remain competitive is costly and requires extensive coordination between federal, state, and local governments, as well as industry partners. Over the past 10 years, even as maintenance needs have grown, the state has not passed a capital plan to address infrastructure needs. More than 2,300 Illinois bridges are classified as structurally deficient,³⁹ Illinois roadways are ranked 47th in the nation by the American Society for Civil Engineers,⁴⁰ and the state's waterways carry significant risk, with many locks exceeding their design life.
- **R&D funding is not keeping pace with national growth.** Total R&D activity in the state has grown just 1.8 percent annually since 2011, compared with a 4.6 percent annual growth rate nationally.⁴¹ The state's approach to supporting R&D through the Research and Development Tax Credit has likely contributed to this slowdown. The legislature allowed the credit to expire in 2010 and 2016. Prior to that, the credit was renewed within a year of expiration in 1999, 2004, and 2009. Credit expiration fosters uncertainty in a field that requires substantial foresight for investment.
- **The continued shift toward automation has left the industry struggling to keep up with technological advances.** Automation has been affecting manufacturing for decades and continues to do so at a rapid pace. Small and mid-sized manufacturers in particular struggle to adopt new technologies and adapt their production processes to remain competitive in a global market.

What We're Doing Now

We're making extensive investments in manufacturing workforce training, revitalizing our transportation infrastructure, and incentivizing apprenticeships and R&D through tax credits. We also have made critical changes to business taxes that make our tax code much simpler and reduce the cost of manufacturing investment.

- Illinois community colleges are providing extensive manufacturing training. Statewide, there are **534 certificate and degree programs in manufacturing at community colleges that have graduated more than 11,000 residents** in the past three years.
- Under an amendment to the Public Community College Act that passed in the 2019 legislative session, **the Illinois Community College Board is working collaboratively with local stakeholders, such as industry, high schools, and economic development organizations, to establish manufacturing training programs.**
- Under recently passed legislation, we are **extending the Research and Development Tax Credit through January 1, 2027**, which is critical to manufacturers looking for certainty as they plan for the next 10 to 15 years. Each dollar of R&D tax credits results in more than a dollar increase (some estimate up to \$2.50) in R&D spending.
- The Pritzker administration worked with the General Assembly to implement a **new Apprenticeship Tax Credit that provides up to \$3,500 per person to cover apprenticeship educational expenses, or \$5,000 for programs that occur in unserved or underserved areas.** Manufacturers are among the most prominent users of apprenticeship programs.
- The Pritzker administration worked with the General Assembly to **expand and make permanent the Manufacturers' Purchase Credit**, which will expand the Manufacturing Machinery and Equipment sales tax exemption. Effective July 1, 2019, companies are not only able to receive a sales tax exemption for machinery or equipment used primarily in the manufacturing of personal property for retail sale or lease, but also for consumable products used in the production-related processes, such as coolants, hand tools, adhesives, fuel, and oil. A modified version of the exemption has not been active since it expired in 2014. Making the sales tax exemption permanent will provide certainty to manufacturers, while the expanded exemption will save these companies millions of dollars as they invest in Illinois in the coming years.
- Governor Pritzker worked with the General Assembly to **eliminate the Corporate Franchise Tax**, which posed a significantly high compliance burden and penalized businesses for locating or expanding their operations in the state.
- We are **increasing awareness and use of the expedited permitting process for environmental permits.** Our use of this process has accelerated, and we have now issued hundred of permits through this expedited process. We plan to continue to promote this option that allows more certainty for manufacturers facing environmental regulations, provides flexibility to state agencies, and protects our environment.

What We're Going To Do

We plan to increase our efforts to recruit and train the manufacturing workforce of tomorrow. We are also going to provide innovation vouchers to facilitate adoption of automated technologies, revise R&D credits to make them available to start-up companies as they develop new products, and streamline our permitting processes.

- **Collaborate with manufacturers, workers, and colleges to develop a comprehensive agenda to address the state's manufacturing challenges.** For the first time in the state's history, we will develop an Illinois manufacturing strategic plan. The goals of this plan will be to improve the productivity and trade connections of Illinois' manufacturers and to train the manufacturing workforce of the future. We will work closely with industry leaders, educators, and legislators to develop and follow through on the plan, and we have been awarded the opportunity to participate in a "policy academy," supported by the national Manufacturing Extension Partnership, which will provide resources and expertise to support this effort.
- **Give start-ups access to the Research and Development Tax Credit.** Start-up companies that are still developing products cannot currently take advantage of the Research and Development Tax Credit since they have no tax liability. We will work with the General Assembly to make the credit transferable for qualified small businesses (QSB), using the same definition as the IRS. QSBs are companies with less than \$5 million in gross receipts in the year credits are awarded and no gross receipts in the five consecutive years prior to the year credits are awarded.
- **Launch a student loan repayment assistance pilot program** for graduates of Illinois universities and community colleges who agree to teach manufacturing related subjects to address the teacher shortage within the industry. This initiative will be driven by the manufacturing industry, in partnership with the State, and will require support from the General Assembly.
- **Start a Teachers' Corps among retired manufacturing workers and managers.** We will work with manufacturing companies and trade associations to reach out to former manufacturing workers and managers to teach manufacturing-related subjects in community colleges and high schools.
- **Provide Manufacturing Innovation Vouchers** to manufacturing companies that develop and execute detailed and strategic plans to make investments that will make their operations more efficient, productive, and competitive. We will work with the General Assembly to provide 1:1 competitive matching grants to small and mid-sized manufacturers seeking to dramatically improve their productivity through new equipment, reorientation of their manufacturing process, or other changes that require significant investment or retraining. The grants could be used for specialized equipment or software; access to technical expertise on R&D, commercialization, or automation; and worker training.
- With funds for economic development and public infrastructure provided through the capital plan, **issue competitive grants for infrastructure improvements, construction of training facilities, and site remediation and preparation** that will facilitate manufacturing investment and growth.
- **Make investments in manufacturing workforce training infrastructure**, including \$15.8 million for the construction of a career, technical, and manufacturing center at McHenry County College and competitive grants Rebuild Illinois to support educational, technical, and vocational programs.



- **Establish two manufacturing training academies at downstate community colleges**, and work with the General Assembly to eliminate residency requirements for those programs so that any Illinois resident can participate. These academies will serve high school and community college students, as well as job-training participants.
- **Work with the manufacturing industry on a marketing campaign to increase the number of people entering high-demand manufacturing occupations.** In addition to refilling the manufacturing talent pipeline and providing access to high-paying jobs, this effort will increase enrollment at public universities and community colleges across the state. In a similar effort in Utah in 2016, the State contributed \$250,000 to a multimillion-dollar campaign that was also funded by a group of universities and manufacturers. The Utah campaign resulted in enrollment in manufacturing training nearly tripling after one year.⁴²



Transportation and Logistics

Of all 50 states, Illinois has the highest share of employment in the transportation and warehousing industry and the third-highest share of employment in wholesale trade.⁴³ Illinois is the most active rail hub in the country. O'Hare Airport is the 18th busiest airport in the world for cargo traffic and the sixth busiest for passenger traffic.⁴⁴ The Illinois Maritime System connects more than 1,000 miles of navigable waterways with Lake Michigan, and transports more than \$30 billion in freight every year.⁴⁵

With its central location and connectivity, Illinois has long been a global center of transportation, logistics, and distribution. While this industry has great potential to grow in Illinois, its growth depends on access to high-demand workers, the latest technology, and top-notch transportation infrastructure.

Industry Challenges

Maintaining transportation infrastructure in Illinois is the most important issue for the transportation and logistics industry. Other challenges for the industry include maintaining a skilled workforce in the face of retirements and keeping up with new technology in tracking and communications.

- **Small to mid-sized companies have difficulty accessing cutting-edge technology in vehicles and operations management.** Maintaining a competitive edge for companies in this quickly changing industry requires staying on top of the latest technology and using it creatively. Many small to mid-sized companies do not have the expertise to access this technology.
- **The industry is seeing a wave of retirements among truck drivers and other skilled positions without many trainees in the pipeline to replace them.** The average age for truck drivers has trended upward for several decades and now exceeds 50. Young people are not going into truck driving and other skilled transportation professions at the same rates they did 10 to 20 years ago, in part due to the amount of time (often three years or more) it takes to obtain a license.⁴⁶
- **As the busiest rail hub in the United States, northeast Illinois is also home to the most rail congestion.** The situation is exacerbated by ongoing disputes between federal, state, and industry parties over who will pay for infrastructure investments to decongest the region.
- **Our infrastructure is outdated and requires significant maintenance.** Following 10 years without a capital plan in the state, more than 2,300 Illinois bridges are classified as structurally deficient and Illinois roadways are ranked 47th in the nation by the American Society for Civil Engineers. The state's waterways carry significant risk, with many locks exceeding their design life, resulting in hazardous conditions and high risk of closures. Pockets of the state do not have access to high-speed broadband.
- **Many shipping companies are falling behind in implementation of tracking technology.** Customers of shipping companies increasingly demand detailed, real-time information about the precise location and expected timeline for their deliveries, but many shippers still rely on phone calls, e-mails, and electronic data interchange (EDI) to track and trace shipped goods.

What We're Doing Now

The bipartisan Rebuild Illinois capital plan makes historic investments to maintain and improve the state's transportation infrastructure. We also have substantial programming in place to address the workforce needs of the transportation industry.

- Through Workforce Innovation and Opportunity Act (WIOA) funding from the federal government, we are partnering with service providers across the state to provide **170 training programs focused on increasing the transportation and logistics talent pipeline**. These include trucking schools that offer commercial driver licenses (CDL) as well as training and certifications in warehousing and logistics. We have trained almost 3,500 Illinois workers through these programs in the past three years.
- We are **providing apprenticeship grants to support transportation and logistics training on the job and in the classroom for Illinois residents**. These apprenticeships involve partnerships between Illinois transportation and logistics companies and community colleges to train new employees and upskill their workforce. Since 2016, 96 Illinois residents have received training through these programs.
- We are **providing training and support to overcome barriers to workforce entry for the highway construction industry** through the Highway Construction Careers Training Program (HCCTP). This program provides training in the highway construction industry; financial assistance for transportation and childcare; and construction tools, clothing, and equipment to participants.
- **The Construction Business Development Center (CBDC) is preparing transportation-related construction firms to participate on highway and vertical construction contracts**. They have a particular focus on providing services to disabled-, women-, veteran-, and minority-owned enterprises and small businesses. Services are customized to the assessed strengths, challenges and needs of participating firms. This includes education, guidance, and feedback on general business and construction-specific operations, including strategic planning and assistance with the IDOT prequalification application.
- IDOT's Economic Development Program is providing **grants for roadway improvement or construction that are necessary for access to new industrial or distribution companies**. Each grant can be up to \$2 million and is based on the number of jobs created and retained at the site.
- The governor worked with the General Assembly to **eliminate the Corporate Franchise Tax**, which posed a significantly high compliance burden and penalized businesses for locating or expanding their operations in the state.

What We're Going To Do

To support growth in the transportation industry, we will continue to pursue innovative and effective ways to improve our transportation workforce and infrastructure needs. We will also facilitate innovation in transportation technology and adoption of that technology by small and mid-sized transportation and logistics companies.

- **Expand successful workforce development programs in transportation, distribution, and logistics.** We will utilize federal WIOA funds to work with the transportation and logistics industry to implement and expand training programs that will address their worker shortage. We would target these programs toward workers who are displaced, disabled, people of color, low income, or justice impacted.
- **Work with companies interested in developing innovative transportation projects, such as autonomous fleets, to determine if laws or regulations need to be adjusted to make way for emerging industries.** For example, operating an autonomous vehicle on public roads in Illinois is currently illegal. Refining the law and regulations to address new technologies could help attract innovative projects in rail, sea, road, and air transport. Consumer groups would be involved throughout this process to ensure that any changes to laws or regulations do not come at the expense of public safety or health. Any ensuing change in law or regulation would be carried out in collaboration with the General Assembly.
- **Expand and increase awareness of foreign trade zones, while using them to complement major intermodal logistics centers.** Illinois currently has eight foreign trade zones. In foreign trade zones, companies can ship in manufacturing inputs and use local labor and equipment to manufacture a finished product without paying tariffs on those inputs. While Illinois ranks sixth and third, respectively, in total exports and imports, it only ranks 12th and sixth, respectively, in exports and imports in foreign trade zones.⁴⁷ Expanding these zones and coupling them with logistical centers would create jobs and serve as a business attraction for exporters and importers.
- Using funds included in the bipartisan Rebuild Illinois capital plan, **make big investments in transportation infrastructure, including \$25 billion for roads and bridges, \$1 billion for rail, \$150 million for ports, and \$558 million for aeronautics.** The plan also includes more than



\$420 million for the expansion of broadband, which will help modernize operations for transportation and logistics businesses in communities without internet access. Some particularly important investments include rebuilding the critical freight corridor of Interstate 80 in Joliet from Ridge Road to US 30 and the busy intersection of Interstate 55 and Interstate 72 in Springfield.

- **Support projects to reduce train and auto delays in northeast Illinois through the Chicago Region Environmental and Transportation Efficiency (CREATE) Program** with \$492 million from the capital plan. CREATE is a decades-long, multibillion-dollar partnership between the US Department of Transportation, the State of Illinois, Cook County, the City of Chicago, Metra, Amtrak, and the nation's freight railroads. The program includes 70 different projects—some completed, some ongoing, and some not yet started—to address railroad congestion throughout the Chicagoland region.
- **Pilot public-private partnerships to attract international investment dollars to the state for infrastructure repair.** In 2018 alone, private infrastructure funds raised more than a record-setting \$100 billion to deploy in infrastructure and utilities around the world, and none of the infrastructure dollars are invested in Illinois.⁴⁸ Structured properly, public-private partnerships can help repair our state's infrastructure while also minimizing the state's debt load and risk.
- **Convene a transportation technology summit to tackle the challenge of getting small to mid-sized transportation companies the technology they need to grow.** We will invite some of the top transportation technology companies from Illinois and around the world to a transportation technology summit to specifically showcase their solutions for small and mid-sized transportation companies to improve the efficiency of their operations. These solutions could range from devices to software. The goal will be to accelerate innovation that addresses the needs of small and mid-sized transportation companies and to establish a forum for those companies to communicate with innovative suppliers.
- **Provide grants for Illinois transportation companies to purchase and implement track-and-trace technology.** We will work with the General Assembly to provide grants to small and mid-sized shipping companies in Illinois to help them adopt the technology to keep up with the demands of shipping clients to receive real-time information on the location, status, and arrival time of their products.



Small Businesses

There are more than one million small businesses in Illinois, employing more than 2.5 million people, and offering a wide variety of goods and services that support our economy.⁴⁹ The state offers a number of programs, incentives, grants, and services to help small business owners launch and grow their operations. However, information on how to access those services can be cumbersome to find. Many small business owners from unserved or underserved communities, particularly among minority populations, lack access to the tools they need to succeed.

Challenges

Tracking down and sifting through information, obtaining financing, and finding potential clients and employees can all be a challenge for small businesses, and these challenges tend to be greater for business owners who are minorities or women or located in rural areas.

- **Entrepreneurs face barriers accessing information they need when preparing to start a business.** This includes but is not limited to: the necessary steps to register a business at the state and federal level, which programs and incentives are useful to their business, and how to access the various patchwork of resources or support provided by nonprofits and local, state, or federal government.
- **Entrepreneurs and small business owners often struggle to get access to capital and loans** that are necessary to get a business up and running and to expand a business to meet growing demand. This challenge is particularly acute in underserved communities and among minority populations.
- **Inability to secure access to talent, customers, or service-providers can hinder the growth and success of small businesses located in rural areas and underserved communities.** Small businesses and entrepreneurs rely on informal and professional networks to identify potential clients, suppliers, and employees. These networks can be difficult to plug into for members of disadvantaged populations, including rural populations, women, and people of color.
- **It is time consuming, stressful, and costly to understand which licenses and permits are required of your business, much less to navigate the bureaucratic hurdles and undertake training to obtain those licenses and permits.** Inability to comply with these requirements can cost a small business owner their livelihood and result in environmental and public safety risks.

What We're Doing Now

We provide a broad range of support services, grants, and loans to small businesses in Illinois.

- The Office of Minority Economic Empowerment is **issuing \$15 million in grants to minority-owned businesses and incubators that serve them.**
- Located across the state, **32 Small Business Development Centers (SBDCs) are providing thousands of small businesses and aspiring entrepreneurs with one-on-one business advice, information, and training** in multiple areas to help them develop, grow, and succeed.
- **Procurement Technical Assistance Centers (PTACs) are supporting small businesses seeking government contracts.** PTACs provide one-on-one counseling, certification assistance, technical information, marketing assistance, and training to existing businesses interested in selling their goods and services to local, state, or federal government agencies.
- **The Small Business Environmental Assistance Program (SBEAP) is helping small businesses understand environmental requirements.** The Illinois Environmental Protection Agency (IEPA) provides \$425,000 annually for this program.
- The **Advantage Illinois Loan Program and Funding the Advancement of Minority Entrepreneurs (FAME) program** are helping small business owners secure loans with approved lenders and are also providing lower interest rates. We approved 62 loans through this program in the 2019 fiscal year, including 38 for minority- or women-owned businesses.
- **The Angel Investment Tax Credit Program is encouraging investment in innovative, early-stage companies.** Investors in companies certified as Qualified New Business Ventures (QNBVs) can receive a state tax credit equal to 25 percent of their investment.
- **The First Stop Business Information Center is providing comprehensive information and technical support to business owners** with questions and concerns about government regulations and assistance programs. More than 40,000 businesses have received assistance in the past five years.
- **International Trade Centers (ITCs) are assisting businesses with international trade and exporting.** In the past five years, \$950 million in export sales were secured with ITC assistance.

What We're Going To Do

While the State already provides a broad range of support for small businesses, we need to do more to expand access to those services, ensure that they are high quality, and make them easy to understand and navigate.

- **In the deployment of \$420 million of funds for broadband in the capital plan, we will expand access to entrepreneurs and small business owners** across the state so they can expand their reach and customer base.
- **Consolidate resources and programming into one centralized, web-based location, which will make it easier for businesses to seek help and take advantage of incentives, grants, and other offerings.** We will revamp the online user experience and expand access for entrepreneurs seeking information by providing step-by-step video tutorials, industry-specific and searchable webinars and content, virtual business counseling sessions, and visibility into resources available across the state. Contributors to this interface will include SBDCs and incubators from across the state.
- **Rigorously evaluate SBDC performance and provide intensive support and intervention for those centers** that are not providing local small business owners with the quality services that they need.
- **Identify the top two to three most burdensome processes for small business owners when they interact with state government,** and work with the relevant agencies and industry to simplify or streamline those processes.
- **Expand the SCORE partnership across the state to increase entrepreneurs' access to mentors.** SCORE is the nation's largest network of volunteer, expert business mentors, and they are generally deployed through our Small Business Development Center network.
- **Expand the Advantage Illinois Loan Program by signing more lenders and expanding capital access to more underserved communities** across the state. It takes intensive work to identify partners for lending in underserved communities, and we will increase our capacity to do so.
- **Work with the General Assembly to focus the Angel Tax Credit on true angel and start-up companies.** Under current law, companies that have already received significant amounts of investment—some as high as \$10 million—are eligible for the Angel Tax Credit Program. Since the program is capped, this results in fewer funds going to smaller start-ups. We will work with the General Assembly to restrict Angel Tax Credit eligibility to companies that have received less than \$5 million in investment and to increase the amount of credits set aside for rural companies and companies owned by women, minorities, and people with disabilities.

Endnotes

- 1 “Justice-impacted populations” include residents whose lives have been impacted by the criminal justice system because they or a close family member have spent substantial time in jail or prison.
- 2 “American Community Survey,” US Census Bureau, census.gov.
- 3 We measure productivity as gross domestic product for private nonfarm industries, according to the Bureau of Economic Analysis, divided by hours worked in private nonfarm industries, according to the Bureau of Labor Statistics. Both are for the year 2017.
- 4 “American Community Survey: 2013–2017 5-year estimates,” US Census Bureau, census.gov.
- 5 *2018 Economic Footprint Study*, America’s Urban Campus, 2018, americasurbancampus.org.
- 6 *Illinois Innovation Index: Computer and Data Science Lead the Way*, Illinois Science and Technology Coalition, 2018, istcoalition.org.
- 7 “Bureau of Transportation Statistics,” US Department of Transportation, accessed on July 1, 2019, bts.gov.
- 8 Bill Hough, “Video Review: Chicago, America’s Rail Capital,” *Trains*, March 31, 2017, trains.com.
- 9 Bureau of Economic Analysis.
- 10 *Creating Opportunities for Retention and Expansion: 2017-2018 Annual Report*, Illinois Department of Commerce and Economic Opportunity, May 2018, <https://static1.squarespace.com/static/57f40248d482e9333f85bf67/t/5b22b19aaa4a994a57673de1/1529000354814/CORE+Annual+Report+2017-18.pdf>.
- 11 “National Agricultural Statistics Service.” US Department of Agriculture, nass.usda.gov.
- 12 “State and Metropolitan Area Trade Data,” US Census Bureau, census.gov.
- 13 Robert Ginsburg and Lise Dirks, *An Analysis of the Illinois Maritime Transportation System*, University of Illinois at Chicago, August 30, 2017, uic.edu.
- 14 “American Community Survey,” US Census Bureau, census.gov.
- 15 Valerie Wilson, “Black unemployment is at least twice as high as white unemployment at the national level and in 14 states and the District of Columbia,” Economic Policy Institute, April 4, 2019.
- 16 “Illinois Residential Segregation Data,” *Governing Magazine*, <https://www.governing.com/gov-data/other/illinois-residential-segregation-data-trends-for-metro-areas.html>.
- 17 This analysis of specialization is based on the state share of employment in major and minor sectors, according to the Bureau of Economic Analysis.
- 18 National Center for Science & Engineering Statistics, National Science Foundation, July 1, 2019, nsf.gov.
- 19 Kauffman Index of Entrepreneurial Activity, Ewing Marion Kauffman Foundation. Entrepreneurship rate is share of population that owns a business in the current year that did not own a business in the prior year.
- 20 Geraldine Gambale, “32nd annual corporate survey & the 14th annual consultants survey,” Area Development, 2018, areadevelopment.com.
- 21 State of Oregon, “Increasing Diversity in Oregon’s Heavy Highway Construction Workforce,” 23–4, oregon.gov.
- 22 US Department of Agriculture National Agricultural Statistics Service Illinois Field Office Illinois Agricultural Statistics: 2017 Annual Bulletin, September 2018, nass.usda.gov.
- 23 *2018: Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II*, US Global Change Research Program.
- 24 “China Puts U.S. Soy Buying on Hold as Tariff War Escalates,” *Bloomberg*, May 30, 2019, <https://www.bloomberg.com/news/articles/2019-05-30/china-puts-u-s-soypurchases-on-hold-as-tariff-war-escalates>.
- 25 *Precision farming: Cheating malthus with digital agriculture*, Goldman Sachs Global Investment Research, July 13, 2016, https://docdrop.org/static/drop-pdf/GSR_agriculture-N1sH6.pdf.
- 26 “Social equity applicants” are state residents who reside in low-income areas that have been disproportionately impacted by cannabis-related arrests and incarceration.
- 27 Jessie Stolark, “If You Build It, They Will Come: Biofuels Industry Sees Renewable Chemicals as New Strategy,” Environmental and Energy Study Institute, October 27, 2017.
- 28 79th Annual Report of the Foreign-Trade Zones Board to the Congress of the United States, US Foreign-Trade Zones Board, November 2018, enforcement.trade.gov.

- 29 Lauren Lanahan and Maryann P. Feldman, "Approximating Exogenous Variation in R&D: Evidence from the Kentucky and North Carolina SBIR State Match Programs," *Review of Economics and Statistics* 100, no. 4 (October 2018): 740–52, <https://doi.org/10.1007/s10961-015-9407-x>.
- 30 "Approximating Exogenous Variation," 740–52.
- 31 "Approximating Exogenous Variation," 740–52.
- 32 "2019 U.S. Life Science Clusters," CBRE, February 13, 2019, cbre.us.
- 33 National Center for Science and Engineering Statistics State Profiles. Numbers represent compound annual growth rate from 2011 to 2016 for all R&D spending.
- 34 Illinois Nursing Resource Center, accessed July 1, 2019, nursing.illinois.gov.
- 35 *Demand For Healthcare Workers Will Outpace Supply By 2025*, Mercer, mercer.us.
- 36 "Approximating Exogenous Variation," 740–52.
- 37 Bureau of Economic Analysis.
- 38 "Searching for Evidence of a Skills Gap in Manufacturing," Chicago Metropolitan Agency for Planning, March 4, 2015.
- 39 "2017 structurally deficient bridges, ranked by total number of deficient bridges," American Road & Transportation Builders Association, January 2018.
- 40 *Report Card for Illinois Infrastructure 2018*, American Society of Civil Engineers, 2018, infrastructurereportcard.org.
- 41 National Center for Science and Engineering Statistics State Profiles. Numbers represent compound annual growth rate from 2011 to 2016 for all R&D spending.
- 42 "Utah Manufacturers Association Announces Success of 'Make Manufacturing Your Future,'" Economic Development Corporation of Utah, July 25, 2017, edcutah.org.
- 43 Bureau of Economic Analysis.
- 44 "Preliminary world airport traffic rankings released," Airports Council International, March 13, 2019, <https://aci.aero/>.
- 45 Ginsburg and Dirks, *Illinois Maritime Transportation System*, 2017.
- 46 Jeffrey Short, "Analysis of Truck Driver Age Demographics Across Two Decades," American Transportation Research Institute, December 2014.
- 47 US Foreign-Trade Zones Board, *79th Annual Report*.
- 48 IJInvestor Funds & Investors Report —full-year 2018, IJGlobal, last modified February 19, 2019, <https://ijglobal.com/articles/138029/ijinvestor-funds-and-investorsreport-full-year-2018>.
- 49 "2018 Small Business Profile," US Small Business Administration Office of Advocacy.



Springfield office

500 East Monroe
Springfield, Illinois 62701
217.782.7500

Chicago office

James R. Thompson Center
100 West Randolph
Chicago, Illinois 60601
312.814.7179

illinois.gov/dceo