

Illinois State Agencies Quantum Partners

Since 2019, the State of Illinois has supported the growth of quantum information sciences and technology (QIST) throughout the state. Through state capital investments, strong partnerships with our national labs and research and educational institutions, and a laser focus on start-up and business support, Illinois is the leading quantum ecosystem in the country.

The Illinois Department of Commerce and Economic Opportunity (DCEO) serves as Illinois' lead agency collaborating with QIST stakeholders and assisting businesses through incentives, tax credits, grants, and technical assistance in our targeted industries, including quantum. Below is a list of incentives that may be available to businesses in the field of

quantum as well as an overview of the robust quantum industry ecosystem in Illinois.

To date, over \$200 million in state resources and nearly \$300 million in federal funding has been awarded in Illinois to advance quantum research, grow the quantum industry and lead quantum workforce training for the future.

Illinois' latest proposed state budget includes \$500 million in investments to solidify Illinois' leadership in quantum and advanced microelectronics. These investments will create a shared cryogenic facility for research and development and infrastructure for a world-class quantum campus. The funds include state matching contributions for up to an additional \$11 billion in federal CHIPS Act R&D funding opportunities.



BUSINESS INCENTIVES



ECOSYSTEM



FEDERAL INVESTMENTS

BUSINESS INCENTIVES

The State of Illinois Department of Commerce and Economic Opportunity has a comprehensive suite of incentives to help quantum businesses locate and grow in Illinois.

> **Manufacturing Illinois Chips for Real Opportunity Act (MICRO)**

Companies that manufacture semiconductor or microchips or suppliers and makers of associated component parts can receive payroll withholding benefits, tax credits covering a percentage of employee training costs, tax exemptions, property tax abatements, site selection support and expedited permitting.

> **Economic Development for a Growing Economy Tax Credit Program (EDGE) and EDGE for Start-Ups**

The State's bread and butter tax credit program provides corporate income tax credits for new and retained jobs. For recently started companies, the State amended the EDGE program to create EDGE for Start-Ups which provides credits against payroll withholding.

> **Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) Phase I Matching Program**

The federal SBIR and STTR programs are highly competitive programs that encourage domestic small businesses to engage in federal R&D with the potential for commercialization. Illinois' matching grant program provides a state match of up to \$50K to Illinois-based companies that have received a Phase I award through a federal SBIR or STTR program.

> **Innovation Vouchers**

Grant program providing up to \$75K for Illinois' companies to engage in research projects in partnership with an Illinois institute of higher education.

> **Angel Investment Tax Credit Program**

Tax incentive program encouraging investments in innovative, early-stage companies by providing investors in registered businesses with a state tax credit equal to 25% of their investment.

> **Federal Grant Support Program**

Supports Illinois-based applicants for federal grants with a match of up to \$2 million, contingent upon receiving the federal award.

> **Illinois Innovation Venture Fund (INVENT)**

Venture capital program providing direct equity investments for early and later-stage companies in Illinois, with a focus on key sectors aligned with the Illinois economic development plan (including QIST) and founders and communities that have historically faced barriers to accessing capital.



To learn more about DCEO Incentives, scan the QR code or visit us at: innovate-illinois.com/dceo-incentives

ECOSYSTEM

Illinois is home to a strongly connected quantum ecosystem that includes:

> Anchor Collaborative

The Chicago Quantum Exchange, one of the largest quantum collaboratives in the country, along with University of Chicago and University of Illinois Urbana Champaign received \$200 million from Governor Pritzker's Rebuild Illinois Capital Plan to support a joint research building in the City of Chicago.

> National Labs

Illinois has four National Quantum Labs. Illinois institutions represent 40% of the 2018 National NQI center funds:

- Argonne and Fermi each lead 2 of 5 DOE QIS Research Centers.
 - Fermi National Accelerator Laboratory's SQMS
 - Argonne National Laboratory's Q-NEXT
- UIUC and UChicago each lead 2 of the 5 NSF's Quantum Leap Institutes.

> Start-Ups, Incubators, and Accelerators

Duality, the first quantum startup accelerator program in the US, is in Chicago and a strong ecosystem partner. Illinois is home to numerous quantum start-ups and incubators and since 2017, Illinois quantum startups have raised \$33.2 million through 27 agreements — the second-highest number of partnerships by quantum startups in the country.

> Research & Workforce

Illinois has one of the largest quantum-ready talent pipelines with almost 60,000 degrees. The University of Chicago received \$150 million from Google and IBM for advancing quantum computing and the quantum workforce. Northwestern created their Initiative for Quantum Information Research and Engineering (INQUIRE), an interdisciplinary and collaborative effort develop a trans-disciplinary quantum workforce.

> Statewide Quantum Network

In Illinois, a 124-mile quantum network with six nodes connects the University of Chicago, the Chicago Quantum Exchange, and the U.S. Department of Energy's Argonne and Fermi National Laboratories, representing one of the longest quantum networks in the country.

Building Beyond Tomorrow

FEDERAL INVESTMENTS

Illinois has been exceedingly successful in attracting federal dollars to concentrate QIST activities in the state and make Illinois the hub for a collaborative quantum ecosystem.

National Science Foundation

- > • **NSF Engines (2023):** Chicago Quantum Exchange was an NSF Engines finalist and the only one of the 16 finalists in the quantum category. CQE received a \$1 million Type-1 development award.
- **Expanding Capacity in Quantum Information Science and Engineering (2023):** Researchers at Southern Illinois University at Edwardsville received \$745,000 for the project Investigating biomass pretreatment with nanodiamond quantum sensors.
- **National Science Foundation Quantum Leap Challenge Grant (2021):** University of Illinois, Urbana-Champaign (Institute for Hybrid Quantum Architectures and Networks) and the University of Chicago (QuBBE) each received a \$25 million National Science Foundation Quantum Leap Challenge Grant, making Illinois the only state in the nation to receive two of these awards.

> Department of Energy

- **National Quantum Information Science Research Centers:** Illinois set a national precedent in quantum information science as the only state to receive two \$115 million grants from the U.S. Department of Energy, recognizing the extraordinary capabilities of both the Argonne National Laboratory and Fermilab. This unprecedented funding not only marks Illinois as the top recipient for federal quantum research grants in the country but further demonstrates the state's status as a powerhouse of quantum innovation.
- **RENEW Initiative:** With funding through a \$4.8 million award from DOE, University of Illinois Chicago is leading a consortium of seven Historically Black Colleges and Universities, Hispanic-Serving Institutions and female-serving institutions to build diverse educational pathways in quantum.

> U.S. Economic Development Administration

- **Regional Technology and Innovation Hubs (Tech Hubs) (2023):** The Bloch, in the Chicago MSA, has been designated as an official Quantum Technology Hub by the Biden-Harris administration.
- **Local Technical Assistance (2022):** P33, supported by DCEO and CQE, received an EDA Local Technical Assistance grant to build the first regional quantum workforce plan in the nation.



Scan the QR code to learn more about Illinois' unique strengths in the quantum industry.