

Massachusetts' Path to Becoming the Climate Technology Hub of the World

How did the Commonwealth of Massachusetts, once ridiculed for high taxes and the Irish Mafia, become known for best-in-class innovation in life sciences, robotics, and cleantech?



The Commonwealth became home to several pioneering technology companies—iRobot, Boston Dynamics, Biogen, Genzyme, Moderna, Raytheon Technologies, and Digital Equipment along the path to emerging as the leading hub. The most visible testament to the state's leadership sits at the edge of the MIT campus in

Kendall Square. This area, spanning less than 100 hectares, hosts landmark institutions, including MIT's CSAIL (Computer Science and AI Laboratory), MIT.nano, the world-renowned Media Lab, and numerous industry leaders in pharmaceuticals developing breakthroughs in drug discovery. These include the MIT Koch Cancer Center, Brain & Cognitive Sciences Center, the Broad and Whitehead Institute encompassing LabCentral, a life sciences incubator creating novel technologies and therapies.

Nearby are research centers for Google and Microsoft, as well as the headquarters of Akamai, which powers the internet. A short walk away is **The Engine**, a tough-tech venture builder investing in startups developing groundbreaking solutions in quantum computing, long-duration energy storage, sustainable manufacturing, carbon capture, and biomedicine. North lies **Greentown Labs**, the America's first and largest climate technology incubator. Greentown Labs, with a satellite facility in Houston, Texas, has housed over 600 startups that collectively have raised more than \$6 billion in capital. Across the Charles River into Boston is the Seaport District, home to a cluster of robotics startups at **MassRobotics**, a robot and automation systems incubator.

The Innovation Ecosystem: A Strategic Structure: Where the physical world meshes with emerging technologies, numerous challenges confront the entrepreneurs building a new venture. Success depends

on a variety of supportive stakeholders— collaborative industry partners, capital ready to place big bets, best-in-class mentoring, and seed funding crucial to bring technologies developed in the university lab to market. Let's examine how these elements all come together in Massachusetts, by examining the roles of **MassChallenge** and the **Massachusetts Clean Energy Center (MassCEC)**.

MassChallenge: Zero-Equity Support for Startups: Unlike well-known West Coast accelerators Y-Combinator and Techstars, MassChallenge, founded in the aftermath of the 2008 financial crisis, operates as a zero-equity startup accelerator. Its mission is to help high-impact, early-stage startups *accelerate-to-scale*. MassChallenge rewards entrepreneurs through a competition-based model, awarding equity-free cash prizes to the top-performing startups in each bootcamp.

Annually MassChallenge supports roughly 500 companies in either an early-stage accelerator or early-commercialization program in health-tech, fintech, clean-tech, resilience, sustainability, and food innovation. Since 2010, more than 4,500 startups have participated in a MassChallenge accelerator bootcamp. Since the start MassChallenge affiliated startups have collectively raised over \$13 billion in capital with a 60% survival rate.

MassChallenge operates globally, with a presence in Texas and international hubs in Mexico, Switzerland, and Israel. Additionally, it runs an annual cross-exchange program with Japanese startups in partnership with JETRO.

Massachusetts Clean Energy Center (MassCEC): The mission of the **Massachusetts Clean Energy Center (MassCEC)**, a quasi-economic development agency established in 2009, is to accelerate the growth of clean energy technologies, drive innovation, and strengthen the local economy. MassCEC supports the commercialization of clean energy technologies through several grant programs and the 2030 investment. The core pillars of MassCEC are:

1. De-risking technologies through climate-tech innovation and investment
2. De-risking markets in clean transportation and a net-zero electric grid
3. Supporting industry to develop large-scale Offshore Wind projects
4. Growing the state's clean energy workforce through immersive internships and training

Eligible startups receive grants ranging from \$15,000 to \$350,000. Many of the funded startups are members of Greentown Labs or The Engine. Notably, Massachusetts exploits the innovation fostered locally to drive realization of its own clean energy transition, by being the first in the nation to launch an ***Office of Energy Transition*** for the state under the Executive Office of Energy and Environmental Affairs.

Regional Connectivity: Boston's innovation ecosystem thrives on its interconnectedness with other prominent hubs, including New York City, ranked #2 in the 2023 Global Startup Ecosystem Report, and the Toronto-Waterloo Corridor, where the **MaRS Innovation District** hosts over 12,000 startups in AI, life sciences and transformative technologies. These cross-regional connections position Massachusetts to lead the way in decarbonizing industries and building a low-carbon future.

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Currently, Steven leads Asia Focus G.K., a climate tech advisory company that helps energy-intensive companies decarbonize through cutting-edge technologies. He holds both a Bachelor of Science and a Master of Science in Electrical Engineering & Computer Science from the Massachusetts Institute of Technology (MIT) and an Executive MBA from Boston University.