



### Who We Are

A growing coalition of global semiconductor and technology leaders, universities, nonprofits and government organizations calling for the U.S. to establish a **Technology Hub in the Northeast** region dedicated to ensuring **U.S. leadership of the Intelligent and Secure Edge**.

### Overview

Availability of low-power computing and ubiquitous connectivity ushered in the current wave of information & communications technology, with ~29B connected devices projected by 2023. These devices operate at the “Edge” of the digital and physical worlds and transform our daily lives, the way businesses operate, how our armed forces protect our nation, and the impact we have on the world through a diverse set of applications such as smart phones, assisted driving, radar systems, and factory automation.

**What’s the opportunity?** The emergence of future technologies such as AI, 5G/6G, new computing paradigms, and smart materials presents a **strategic opportunity for the U.S. to get ahead of the next wave of Intelligent Edge devices and applications** – including truly autonomous vehicles, next-generation communications, intelligent machines, and digital healthcare - that will determine economic prosperity, national security, and our ability to address climate change and public health challenges.

**What’s our mission?** Bring together a coalition of leaders from industry, academia, nonprofits, and government to transform Massachusetts, and the greater Northeast, into the innovation engine needed to accelerate domestic development, scaling, and adoption of the disruptive microelectronics innovations that will ensure U.S. leadership of the Intelligent and Secure Edge.

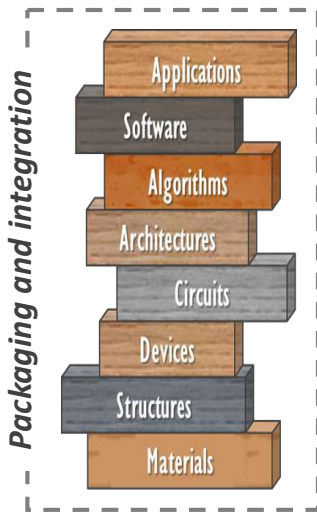
- **Create the disruptive edge-microelectronics ecosystem** – centered in Massachusetts – needed to solve the challenges too big for one entity and catalyze a virtuous cycle of innovation, economic growth, and investment across the Northeast.
- **Establish a network of facilities** where leading U.S. companies, startups, universities, and government can work together to explore, prototype, and scale new non-silicon materials, devices, process and packaging/integration technologies and tools foundational to the Intelligent Edge.
- **Fund projects and integrate with existing initiatives** (e.g., DoD Manufacturing Innovation Institutes) to foster new ideas, support success of startups in the region, coordinate innovation across the full technology stack, and accelerate transfer of innovations to low volume manufacturing.
- **Develop and inspire future workforce** through curriculum development, professional opportunities, vocational training, and K-12 outreach and attract the best minds and businesses to the region.
- **Ensure an effective governance and a flexible business model** that provides a path to self-sustainability while ensuring focus remains on the long-term needs of the nation and the U.S. microelectronics industry, not the interests of any specific entity.

**Why the Edge Center?** The Edge Center fills a gap in the nation’s technology engine caused by lack of investment in, and broad access to, the non-silicon microelectronics technologies that will be foundational to the Intelligent and Secure Edge. It also builds the ecosystem needed to coordinate innovation at the intersection of materials, sensors, microelectronic devices, networks, software and applications at the scale currently only possible within the closed doors of the largest tech companies.

Massachusetts’s leading position in compound semiconductors and other new materials development and its unique combination of, and proximity to, the leading semiconductor, microelectronics, software and AI, life-sciences, defense, and robotics companies along with the best universities, hospitals and healthcare networks in the world positions it as the ideal location to fulfill the Edge Center’s mission.

## Technology innovation

Edge Center addresses gaps in the U.S. technology engine across the technology stack



Source: SRC Decadal Plan

- Autonomous microsystems and AI
- Advanced communications
- Embedded Security at the Edge
- Distributed networks
- Sensor fusion
- Energy harvesting and ULP architectures and electronics
- Integrated photonics
- Novel sensors: CNTs, bio, chem
- Microfluidics and MEMS
- Wide Bandgap semiconductors
- Heterogeneous Integration and packaging of Microsystems

Note: Not exhaustive

**#1:** Facilities to explore, prototype, and scale new materials, devices, and process technologies and tools

**#2:** Heterogeneous integration and packaging center to explore new ways of integrating non-silicon technologies

**#3:** Funding to accelerate innovation of new materials and devices and fill gaps further up the technology stack

**#4:** Integration with existing initiatives to coordinate innovation across the full technology stack

## Ecosystem development

Ensures lasting impact by establishing the ecosystem and holistic framework for industry, universities, and government to work together in complex technology spaces that span the technology stack

**Open broad access** to unique infrastructure, capabilities, and expertise to attract long-term ecosystem partners and drive outsized impact on the industry and country

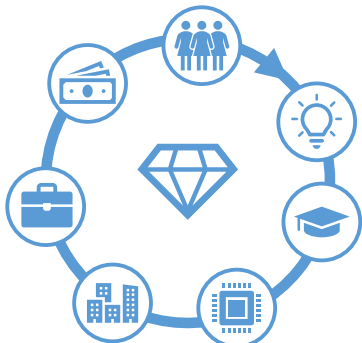
Establish Centers of Excellence that **create lasting community** of innovators, developers, business and technology leaders and facilitate collaboration across the full stack

Break down silos between private and public organizations to **maximize massive potential of Northeast** region's unique mix of technology and industry expertise

Work with VC and industry partners to provide startups **access to capital, business intelligence, & technical resources** to transition ideas to real-world application

## Transforms Northeast Region

Builds critical mass that will catalyze virtuous cycle of innovation, economic growth, and investment



- Create thousands of high paying jobs
- Attract, educate, and retain top technical talent
- Build local tech startup and business ecosystem
- Attract outside investment

## Growing ecosystem of key partners

