



University of Maine System Testimony in Support of *LD 788, An Act to Promote an Innovation-driven Economy by Increasing Research and Development Spending* – Presented by University of Maine President/University of Maine System Vice Chancellor for Research & Innovation Joan Ferrini-Mundy, March 11, 2025

Senator Curry, Representative Gere, and distinguished members of the Joint Standing Committee on Housing & Economic Development: My name is Joan Ferrini-Mundy and I am proud to serve as the President of Maine's R1 research university, the University of Maine and its regional campus in Machias. I am also the Vice Chancellor for Research & Innovation for the University of Maine System and the Chair of the Maine Innovation Economy Advisory Board. I recently joined the National Science Board, which oversees the National Science Foundation, where I was formerly the Chief Operating Officer, and advises the President on STEM-related policies and programs.

In short, I spend considerable time focused on sustaining and strengthening research and development (R&D) at our public universities, in this state, and for our nation.

You heard earlier today from Chancellor Malloy that the state of our System is strong, and so too is the state of R&D in Maine. Just last month, UMaine's R1 prestigious designation was affirmed and four other Maine institutions were also recognized for their research by the Carnegie Classification, including the University of Southern Maine and the University of New England. In FY24, UMaine, which accounts for 90% of all university research activity in the state, secured a record \$225.3 million in external R&D grants and contracts and directly supported 354 industry R&D partnerships to solve their challenges and increase their productivity and profits. From mechanical blueberry harvesting improvements to bridges built from composites and synthetic materials for bones, our UMaine-made innovations are improving Mainers' lives and livelihoods, and fueling the state's overall economic growth and competitiveness. And when our students participate in R&D at the undergraduate and graduate levels, they are ready to be innovators and contributors in the skilled, high-tech workforce for Maine for tomorrow.

Despite the proven rate of return, Maine currently invests just 1.1% of its gross domestic product (GDP) in R&D, according to the <u>most recent Measures of Growth report</u>, far below the national average of 3.6% and New England average of 5.7%. This takes into account spending on R&D not just by the State but also by private companies, nonprofit organizations, and higher education institutions like ours.

So why does this matter? As noted by the National Science Foundation, R&D spending fosters the scientific and technological breakthroughs that lead to the development of new and improved processes, services, and products that in turn, strengthen the market and workforce, improve infrastructure and living standards, and grow our economy. The Caribou Russet is an excellent example of this process. Through our Aroostook County-based breeding research program, UMaine partnered with the Maine Potato Board to develop this hearty, high-yield

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Maine Innovation Economy Action Plan

How Science and Technology Can Drive Economic Growth and Benefit All Maine People



How science and technology can drive economic growth and benefit all Maine people

Every day, thousands of Maine people go to work at businesses that compete in the global economy by leveraging innovations developed by Maine researchers. From farmers and food processors to lab technicians and those transforming Maine's forests into a nanocellulose powerhouse, businesses are turning the work of our public, private, and nonprofit research institutions into tangible economic opportunities. They employ the full spectrum of workers, from cleaners and delivery drivers, to salespeople, project managers, and executives, and their payrolls indirectly support even more businesses and workers. They are innovating, growing, and successfully competing in today's global economy.

As Maine seeks to build a resilient 21st-century economy, these businesses are pointing the way. And yet, the potential of research and development (R&D) to build prosperity has not been fully realized. Historically, Maine's R&D investments have been low — just 1% of GDP compared to the national average of almost 3%. In 2021, Maine ranked 44th of the 50 states by this measure. Maine voters and businesses have continually supported meaningful contributions of both public and private dollars, but not enough to create transformative, statewide growth.

In this 2023–2027 plan, the Maine Innovation Economy Advisory Board (MIEAB) presents a vision for science and technology as drivers of economic opportunity across the state. It acknowledges the significant investments made to date and affirms the potential to realize even greater gains by replicating the proven success of partnerships among Maine researchers and innovators.

Vision: A resilient, innovation-driven economy that creates opportunities for all Maine people

Realizing this vision will require the commitment and coordination of researchers, educators, policymakers, and business leaders; a rigorous focus on R&D that yields tangible opportunities for Maine businesses; attention to workforce development; and a transformative funding increase. This is possible through the pursuit of five complementary goals:

Goal 1: Increase R&D to 3% of GDP while focusing on activities that directly support Maine industries

This long-term goal calls for a transformational increase in the amount of R&D occurring at Maine's public, private, and nonprofit institutions. Priority should be placed on work that yields direct economic opportunities for businesses and communities across Maine.

Goal 2: Strengthen pathways to successful commercialization

Turning the research accomplishments of Goal 1 into commercial success requires cultivating entrepreneurship and innovation within enterprises.

Goal 3: Prepare an innovation workforce

Maine residents must have the skills to innovate across a broad range of industries, within companies large and small, and to access high-quality employment opportunities. And Maine businesses need talent to innovate and grow.

Goal 4: Help businesses and communities thrive in the face of climate change

In the coming years, Maine industries and communities will face critical, even existential, challenges due to climate change. Maine's R&D community must be a ready source of knowledge and innovation to help them adapt and thrive.

Goal 5: Strengthen Maine's R&D ecosystem

Lastly, Maine must continue improving its framework for R&D investments and activities, ensuring coordination, collaboration, efficiency, and maximum benefits for all involved. It also must raise public awareness of R&D's role in economic development.

For more information visit: MIEAPlan.net

Advancing Maine's targeted technology sectors

This plan supports and advances the targeted technology sectors that have guided Maine's R&D investments since 1999. The "heritage industries" correspond directly to individual

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target sectors. The "high-growth target sectors" combine elements of multiple sectors in new and creative ways, generating new opportunities across multiple industries.

AGRICULTURE	AQUACULTURE & MARINE SCIENCES	FORESTRY & FOREST PRODUCTS
	High-Growth Target Secto	rs
	High-Growth Target Secto	
AEROSPACE	High-Growth Target Secto BIOBASED ALTERNATIVES Advanced Building Products	HUMAN HEALTH Biomedicine & Engr. Advance Healthy Aging
AEROSPACE	High-Growth Target Secto BIOBASED ALTERNATIVES Advanced Building Products Algae & Algal Products Biochemicals Biomanufacturing	HUMAN HEALTH Biomedicine & Engr. Advance Healthy Aging RENEWABLE ENERGY Offshore Wind Energy

About this plan

State law directs the Maine Innovation Economy Advisory Board (MIEAB) to create a plan every five years to improve Maine's standing in the global economy. This 2023 plan is the culmination of almost 18 months of input from representatives of Maine's public, private, and nonprofit institutions and private businesses. The board used stakeholder recommendations to craft this plan and incorporated stakeholder feedback on multiple drafts prior to adopting the final document. The final plan was approved by MIEAB on March 22, 2023.

Maine Innovation Economy Advisory Board

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