

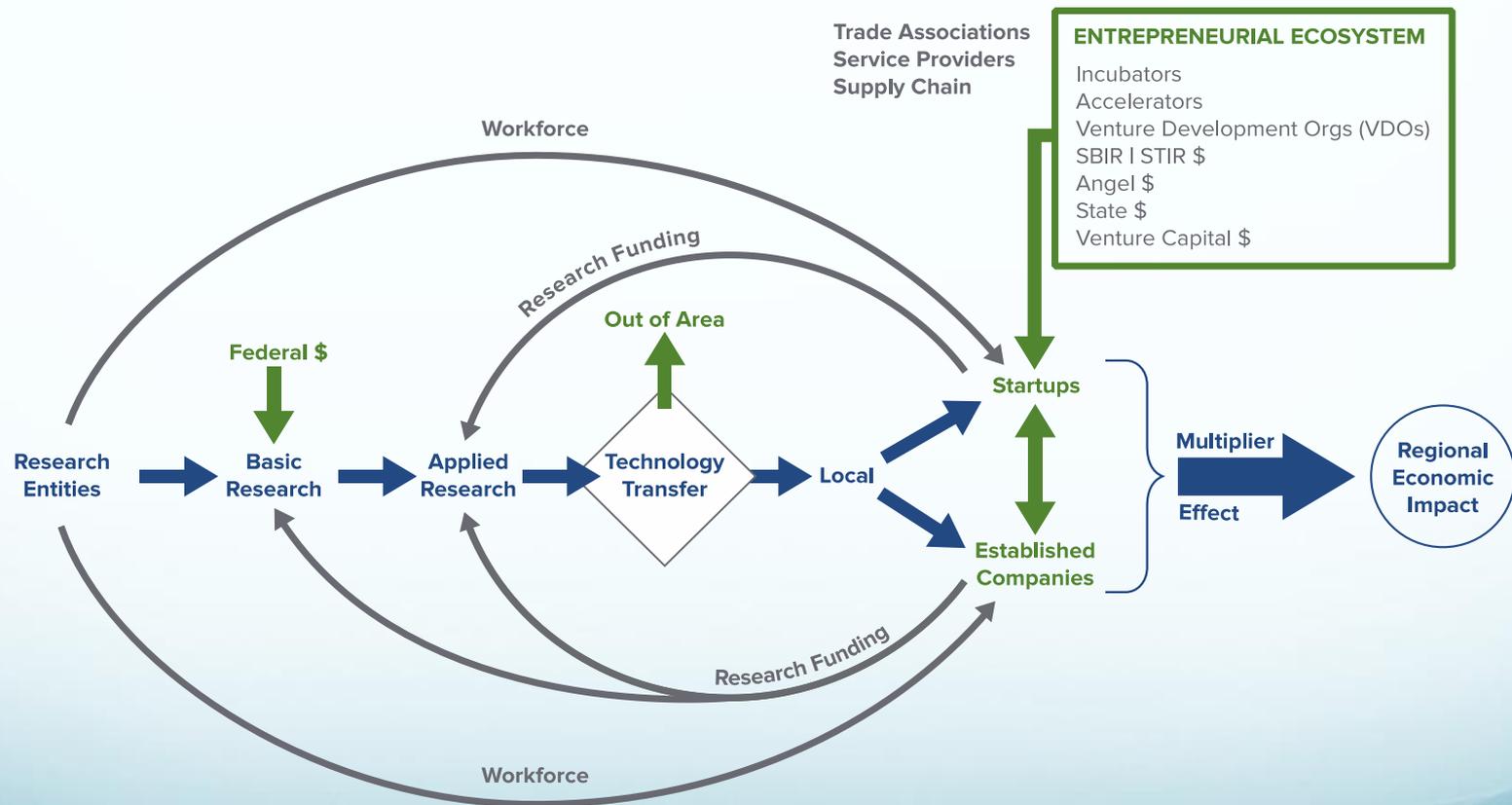
# Selling Maine's Future Economy

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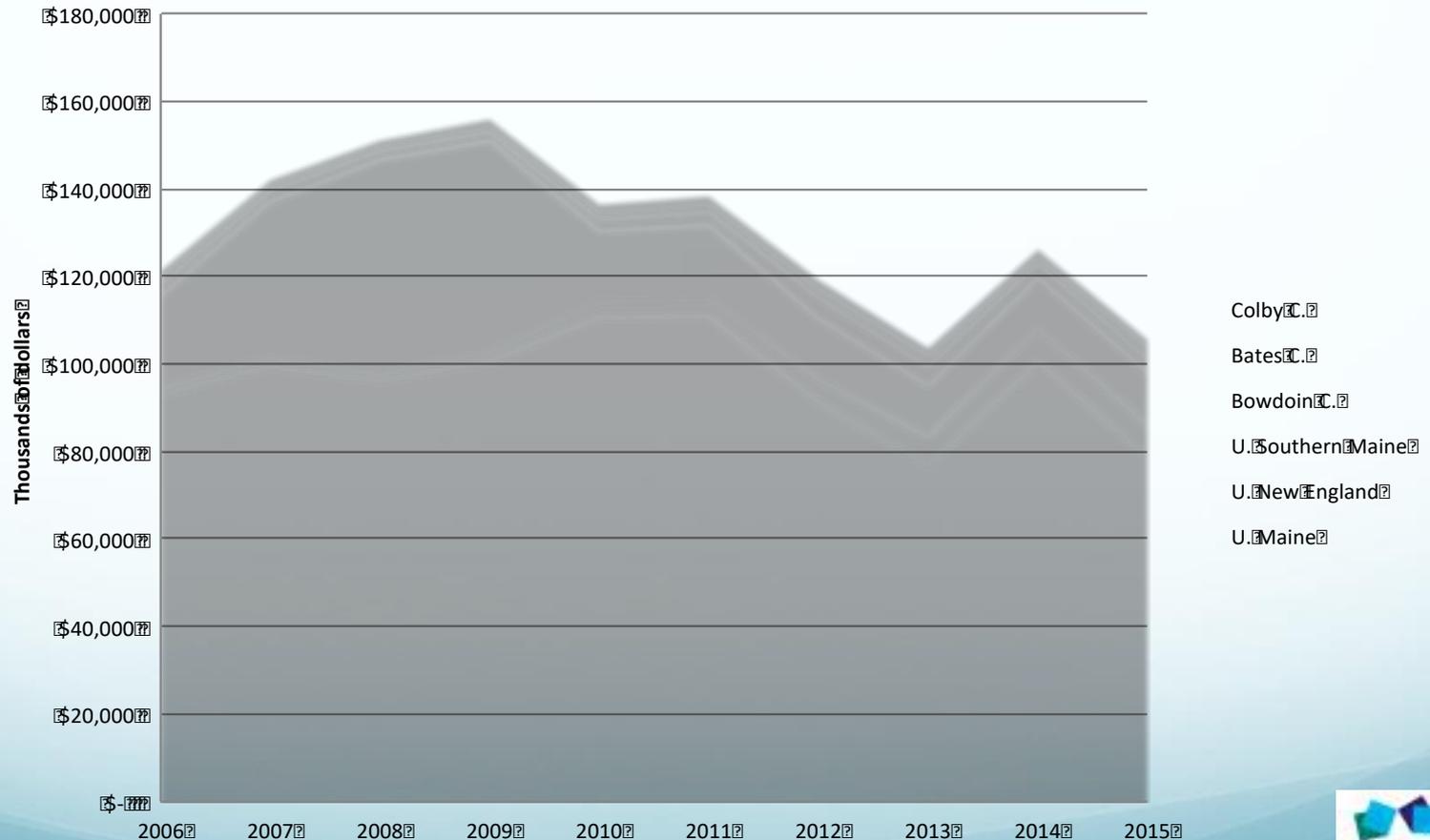


# Innovation-based Economic Development Framework



# Flat Inputs for R&D

Research and Development by Higher Education in Maine,  
2006-2015

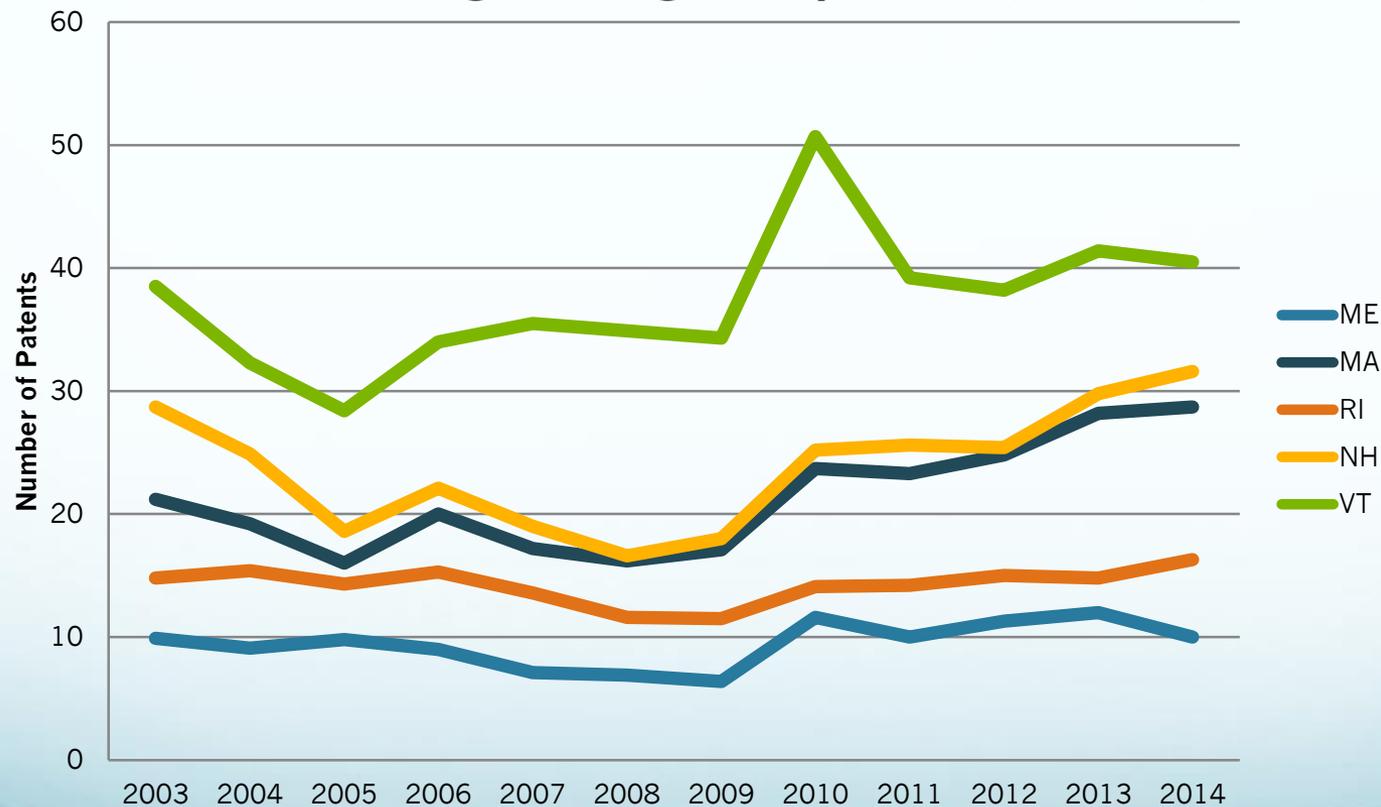


Source: Higher Education Research and Development Survey, National Science Foundation, Fiscal Year 2015.



# We're Still Low on IP

**Patents Awarded per 1000 Individuals in Science & Engineering Occupations (Patents)**

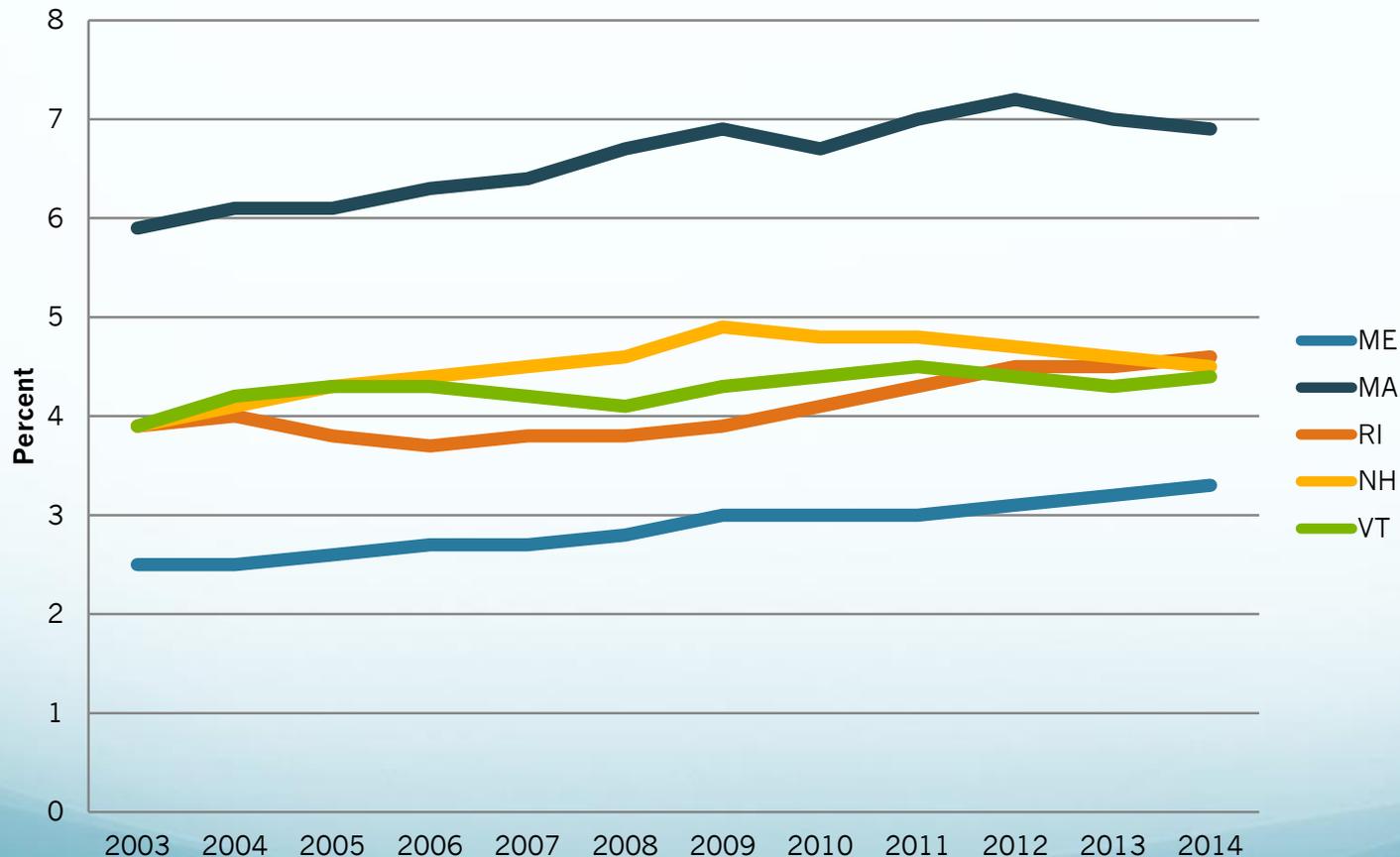


Source: National Science Board. 2016. Science and Engineering Indicators 2016. Arlington, VA: National Science Foundation (NSB-2016-1).



# Employment Growth is Slow

**Individuals in S&E Occupations as a Percentage of All Occupations (Percent), 2003-2014**

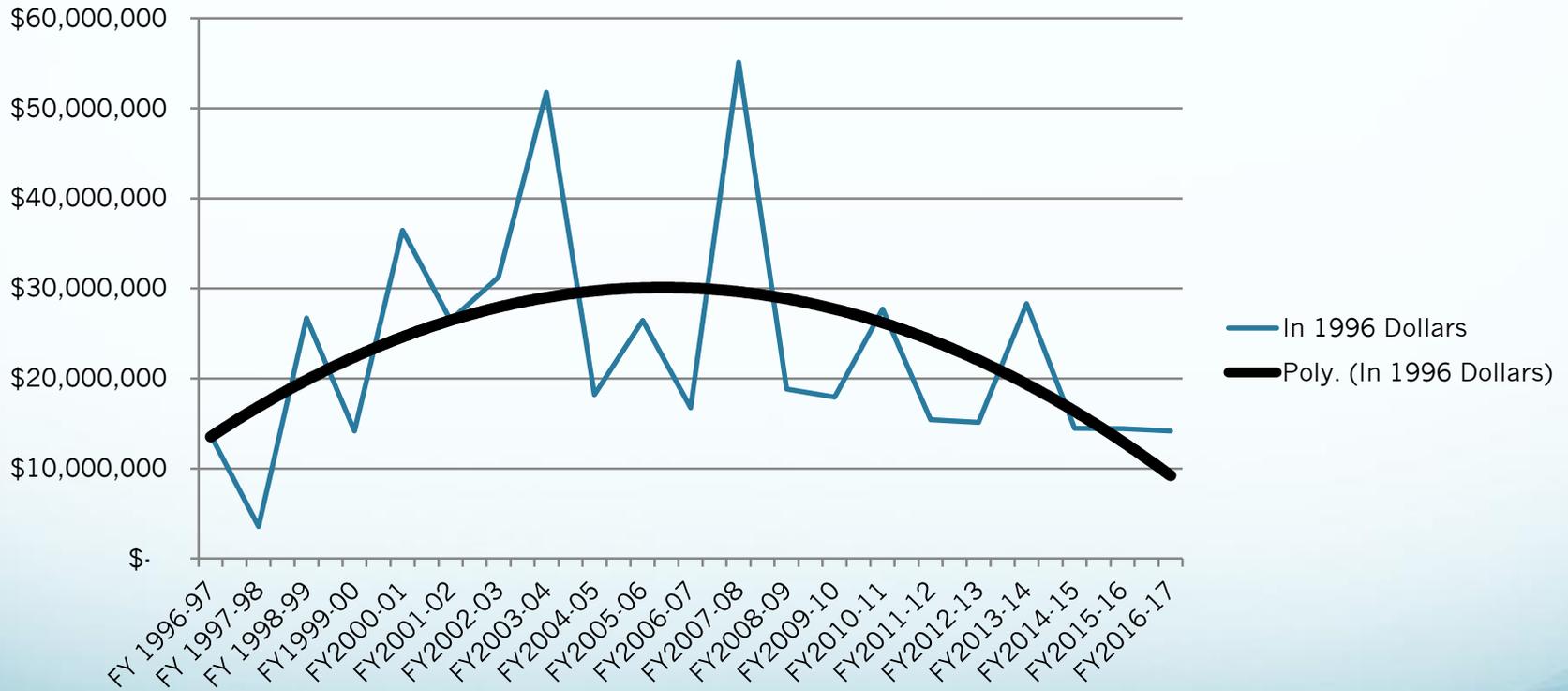


Source: National Science Board. 2016. Science and Engineering Indicators 2016. Arlington, VA: National Science Foundation (NSB-2016-1).



# Episodic, Low Investment

**Maine's Total Public Investment in R&D In 1996 Dollars,  
with Trend Line, 1996-2016**



Source: Innovation Policyworks and PolicyOne calculations based on state budget documents.



# Strawman: iSTEP Framework

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*“Converting our strength in research into new businesses and jobs and bringing the benefits of American innovation to the American people.”*

- Increased \$ for research
- Convert research into new companies and jobs
- Streamline regulations to make it easier to bring new innovations to the market without sacrificing safety
- Increase access to financing for startups
- Make smart STEM investments to ensure American talent continues to be the best in the world



# Survey Says...

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- 90% agreed that iSTEP would keep our children and grandchildren in our communities
- 84% said iSTEP would change our economy for the better
- ***BUT ONLY*** 65% said iSTEP would be good for people like me



# The folks who think they won't benefit may be right.

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- New research shows that innovation intensity is responsible for 56% of income segregation
- Driven by the clustering of employment and residence of workers in knowledge-based occupations
- Richard Florida comments:  
*“The same clustering of knowledge and talent that powers innovation and economic growth also generates the divides that tear us apart. Those divides have led to the anti-urban, anti-innovation, anti-immigrant backlash from the right and an anti-tech-industry backlash from the left.”*



# Inclusion is Key

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- Disconnected Americans, including minority, youth, and rural populations will be vital to maintaining a robust economy
- They:
  - Lack awareness of the Innovation Economy
  - Are missing skills and competencies, and
  - Lack education attainment necessary to participate
- Disconnected Americans must pursue and acquire the skills needed to CREATE jobs, not just fill them



# Science and Technology not Perceived as Helpful

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- Disconnected Americans suspicious of technology
- Low optimism about science. Only 12.6% of Americans completely agree that “Science and technology are making our lives healthier, easier and more comfortable.”
- Academia, the source of much S&T, perceived to be at odds with mainstream America
  - Suspicion of capitalism and business
  - Embrace of left-wing political correctness and demonization of conservatives



# Revival of Neo-Luddism

- “Half of the jobs...might be eliminated by innovation.”  
*Larry Summers*
- “Highly educated workers are as likely as less educated workers to find themselves displaced.”  
*Paul Krugman*



CartoonStock.com



# What Does This Mean for Maine?

## Inclusion Is Critical

- Two Maines is real when it comes to innovation and entrepreneurship policy
- Need to connect with Disconnected Mainers

## Policies Needed

- Strategic Plan for Maine's Economy that Builds on Innovation and Entrepreneurship
- Consistent, higher level of investment beyond R&D to include STEM/STEAM and entrepreneurship
- Internet expansion



# How Do We Get There?

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## Who Needs to be Involved

- Traditional economic and community development organizations
- Business and trade groups
- Education – K-16 and up

## What Needs to be Done?

- Educate
- Find our Voice
- Be Inclusive
- Advocate for a Big Idea



# Education is Never Done

- Term limits in State House and citizen legislators means we need to educate over and over again.
- Rank and file, not just selected committees and leadership.
- Agencies, Governor's Office too.
- Individual entrepreneurs testifying are incredibly effective.



# Find Our Voice

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- Right now, no one speaks for innovators and entrepreneurs.
- UMaine, JAX, others, sometimes talk about R&D
- Non-profits like E2Tech are generally small, limited staff, often don't want to do advocacy
- State Chamber, other business groups generally don't have innovation and entrepreneurship on their legislative agendas



# Be Inclusive

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- Raise awareness of innovation in Maine's economy
- Show how this creates jobs for children and grandchildren in Maine
- Start with entrepreneurial thinking early in K-12
- Broad rollout of high speed Internet will enable folks to experience the opportunities
- Celebrate entrepreneurs of all backgrounds



# Advocate for A Big Idea

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**Suggestion: A \$250 million Bond for Maine's Future Economy** including:

- Internet Expansion
- R&D \$
- Innovation education
- STEM and STEAM
- Entrepreneurship Ecosystem Expansion
- Tax Credits for Patents, R&D investments, Equity
- More Investment \$



# Thank you

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