E-CORE RII: Strengthening Maine's Research Ecosystem and Pathways Through Strategic Capacity Building (Maine-SMART)

NSF EPSCoR PI Meeting

May 20, 2024
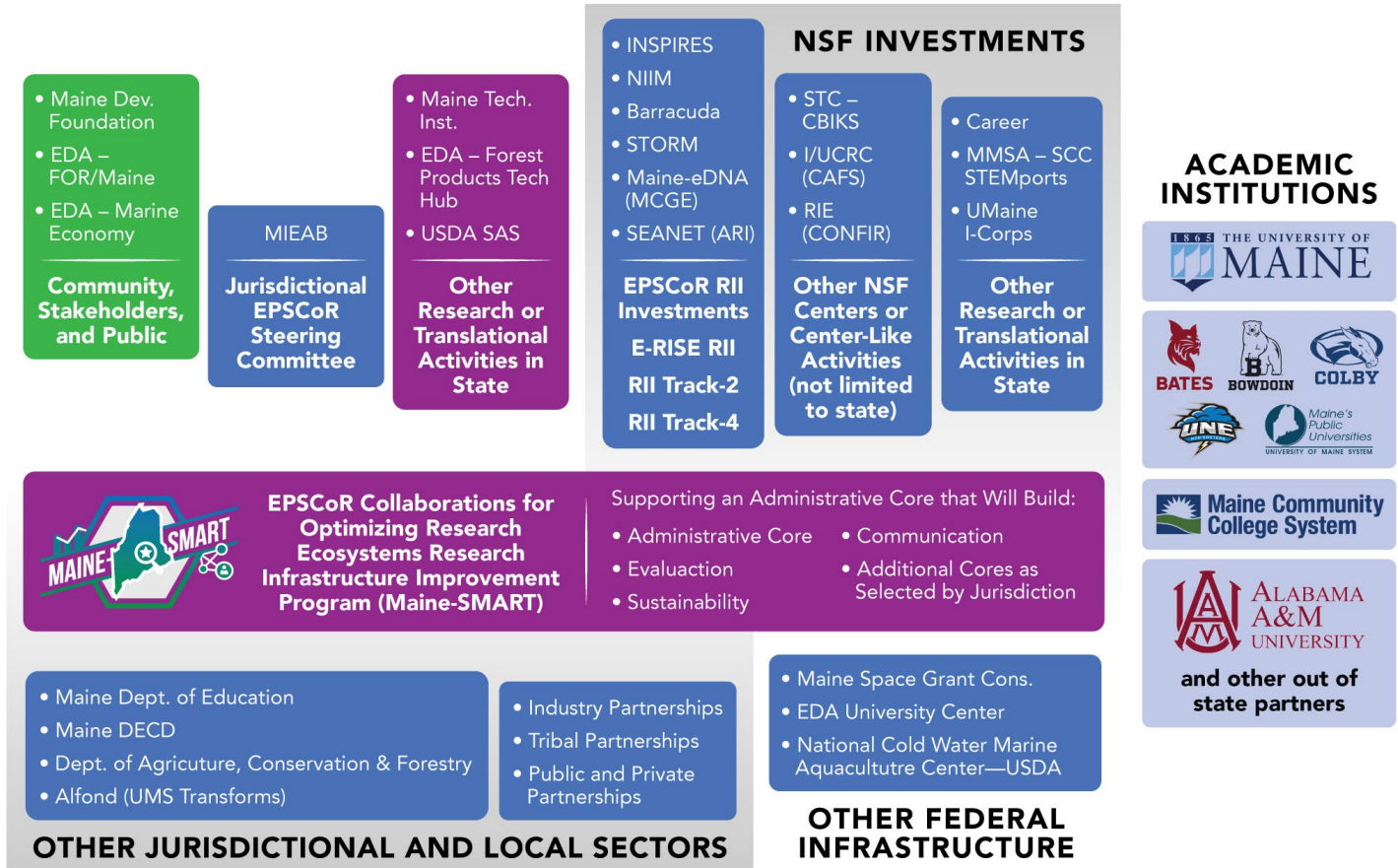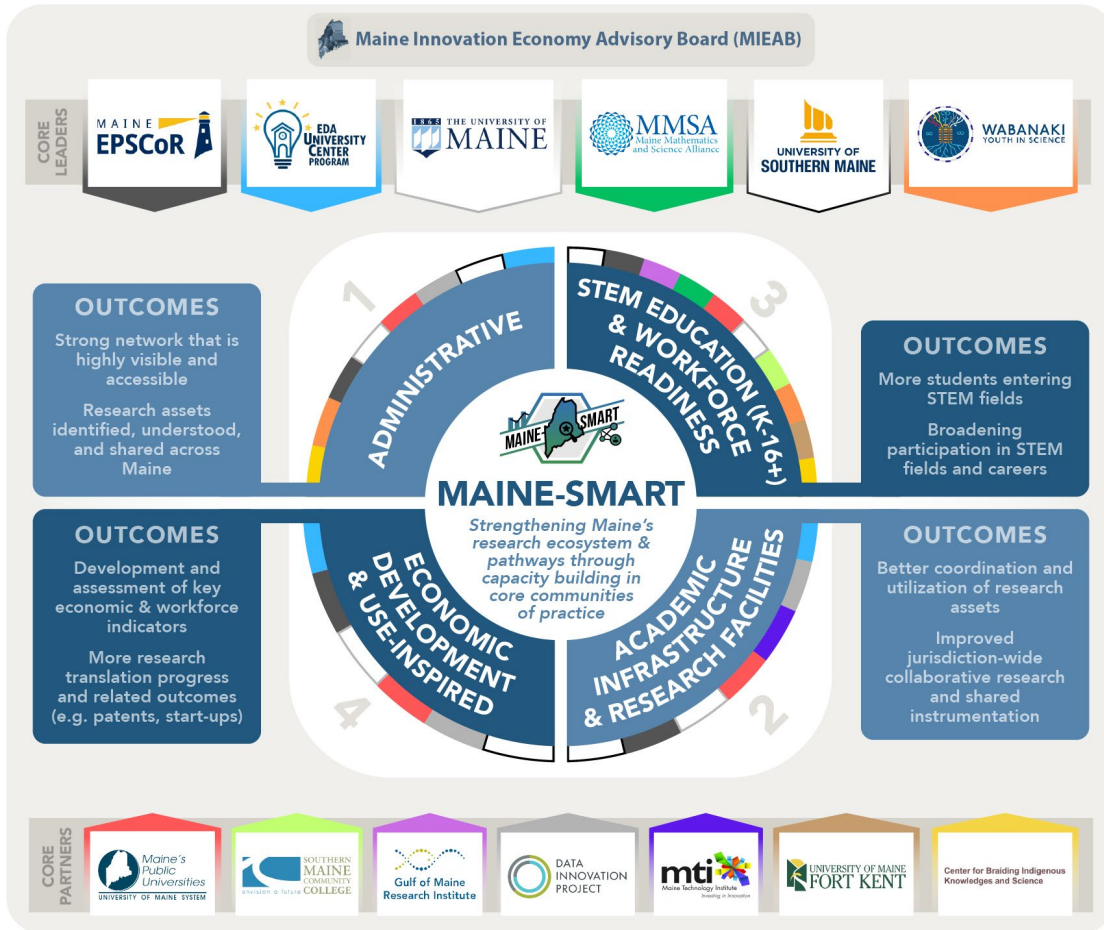
R&D and Education Ecosystem

- 1.4M population – 13th least densely populated
- 30,843 square miles – 12th smallest state by area
- University of Maine System – 8 campuses
- Maine Community College system – 7 campuses
- 1 R1 – UMaine
- 1 R2 – University of New England
- Many significant nonprofits (research, educational, hybrid)
- Bates, Bowdoin, Colby & other private 4-year PUIs

Program Structure

Collaborative submission model:

- University of Maine (*R1*)
  - Southern Maine Community College (*PUI*)
- Gulf of Maine Research Institute (*nonprofit*)
- Maine Mathematics & Science Alliance (*nonprofit*)
- University of Maine at Fort Kent (*PUI*)
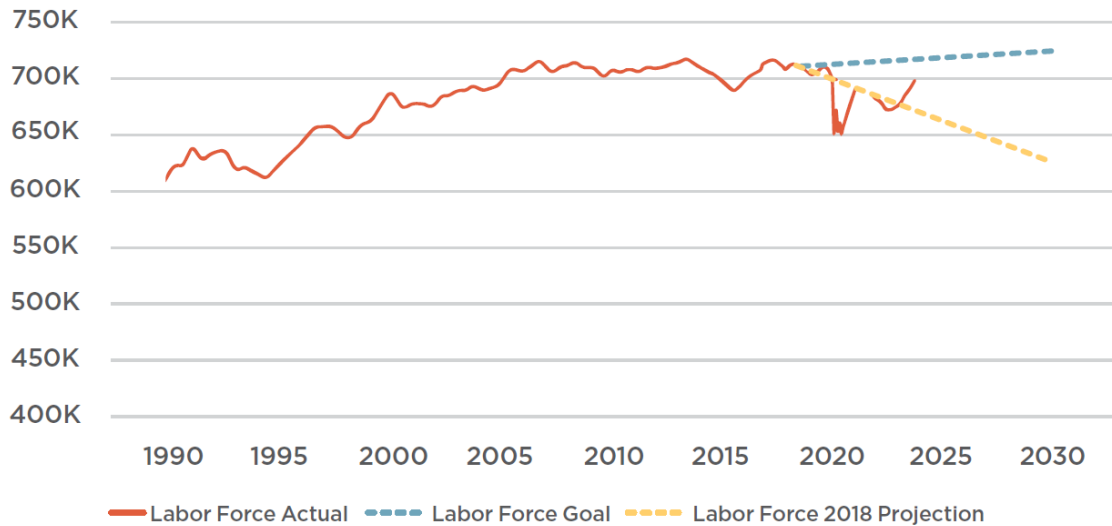- University of Southern Maine (*ERI / Larger Master's university*)

Jurisdiction / Program Goals

Maine Needs to Reverse a Projected Labor Force Decline

The Maine 2020-2029 Economic Development Strategy: The 2024 Reset (Strategies A-C)

- Strategy A: Grow Local Talent
- Strategy B: Attract New Talent
- Strategy C: Promote Innovation

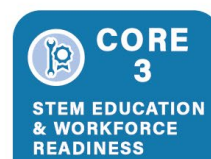| STATE'S S&T (JSC) PRIORITY*	CORE 1 ADMINISTRATIVE	CORE 2 ACADEMIC INFRASTRUCTURE & RESEARCH FACILITIES	CORE 3 STEM EDUCATION & WORKFORCE READINESS	CORE 4 ECONOMIC DEVELOPMENT & USE-INSPIRED
GOAL 1: Increase R&D to 3% GDP while focusing on activities that support Maine industries	Improve collaboration among public, private, and nonprofit research institutions; improve access to R&D capabilities at the state's research institutions	Help develop the critical mass of talent needed for transformational economic growth	Provide targeted STEM education opportunities for grades 6-14 that bolster innovation	Expand R&D and commercialization capacity via training and outreach
GOAL 2: Strengthen pathways to successful commercialization	Build and support a statewide network of innovators to improve "matchmaking"; communicate R&D training and support opportunities	Create seed funding opportunities targeted for early career faculty that increase innovation	Provide targeted STEM education opportunities for grades 6-14 that bolster innovation skills and culture	Strengthen R&D and commercialization support for nonprofits and companies that are ready to grow
GOAL 3: Prepare an innovation workforce	Provide opportunities for undergraduate and graduate students to learn about statewide opportunities; build leadership skills at local companies via SciTS training	Support and retain early career faculty that can mentor students	Remove barriers to education for underrepresented groups; enhance STEM training opportunities for teachers and students	Communicate UMS Pathways to Careers opportunities
GOAL 4: Help businesses and communities thrive in the face of climate change	*This will be addressed by a forthcoming E-RISE proposal led by Aaron Weiskittel.*			
GOAL 5: Strengthen Maine's R&D Ecosystem	Communications strategy for relevant research and education; develop and market a central repository of information about R&D assets; engage and support JSC and S&T plan updating and implementation with R&D prioritization	Improve support of junior faculty to reduce attrition at emerging research institutions	More predictable access to STEM training for grades 6-14; enhance diversity in workforce	Map innovation support ecosystem to identify strengths, gaps, and opportunities; increase public trust in R&D's role in economic development and its value to state businesses and communities

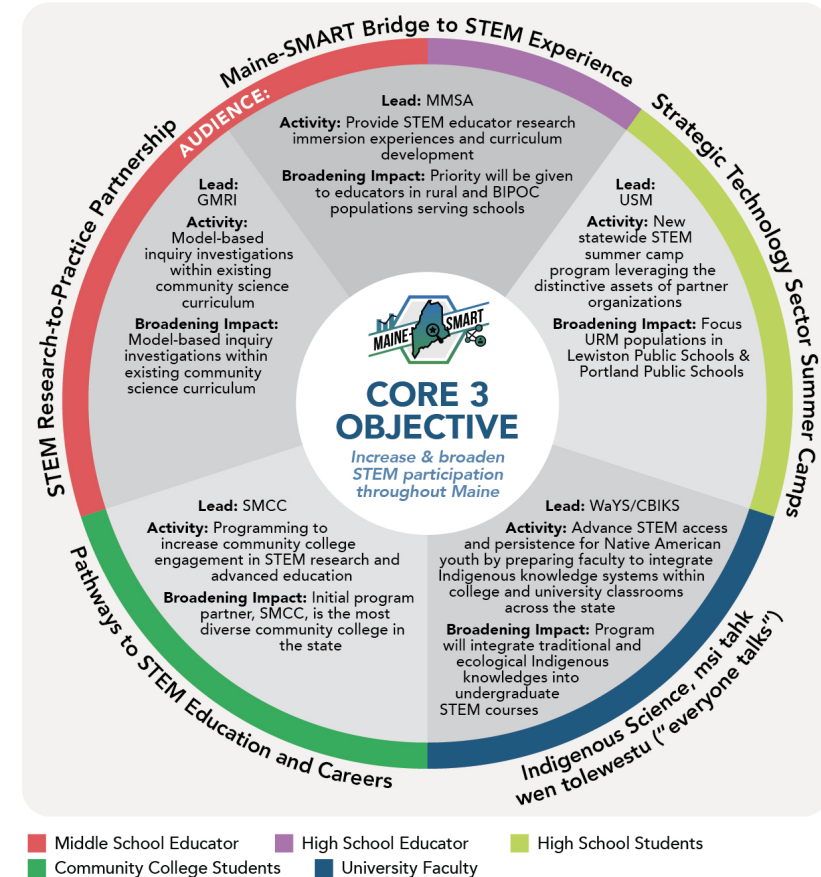# Challenges and Opportunities

Challenges

- E-CORE RII ≠ Track-1
- New solicitation
- Vast needs of the jurisdiction
- Cost share & budget design
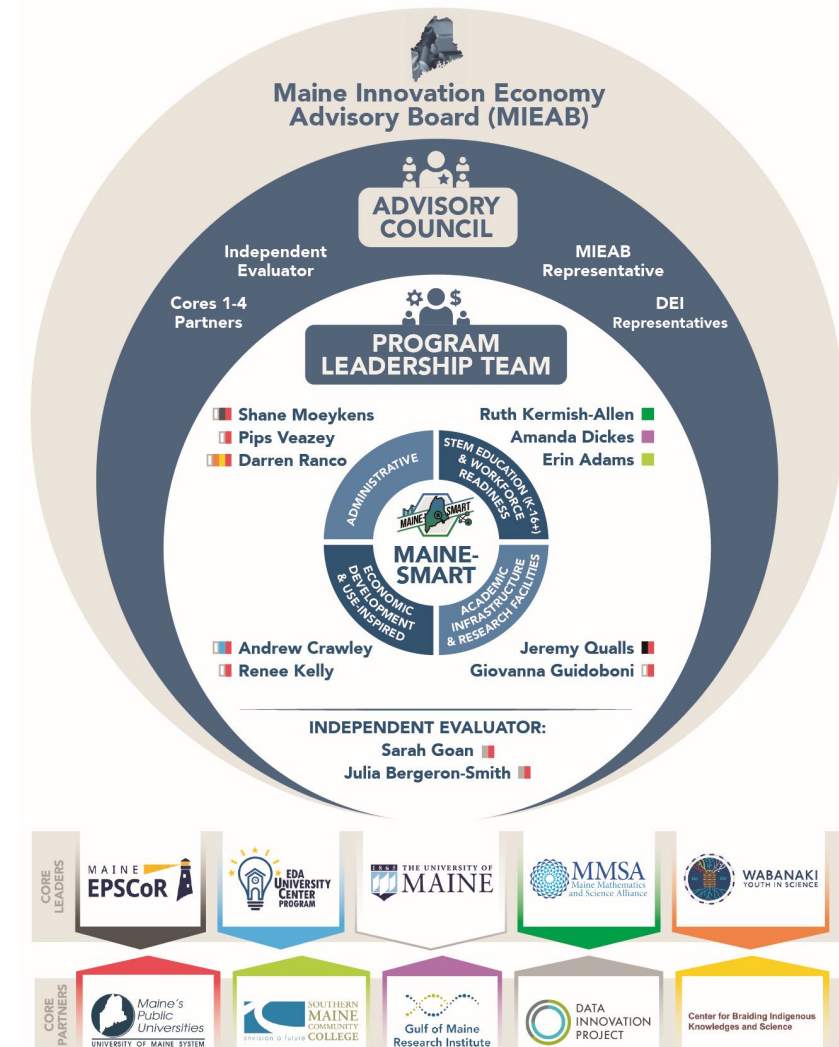
Opportunities

- Planning grant outcomes
- Smaller institution engagement
- Reinvigorated JSC

CORE 3—STEM EDUCATION & WORKFORCE READINESS FOCAL PARTNERS AND PROGRAMMING

Going Forward

- JSC oversight and a jurisdiction-wide strategy
- S&T plan
  - Minor and major updates
  - Cadence of updates
  - Progress reporting
- R1 land grant as a resource
  - Research administrative practices leading to higher research capacity
- Maine EPSCoR office support
- Extending the UMaine Graduate School to support E-CORE RII and E-RISE RII proposal development

Thanks!

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