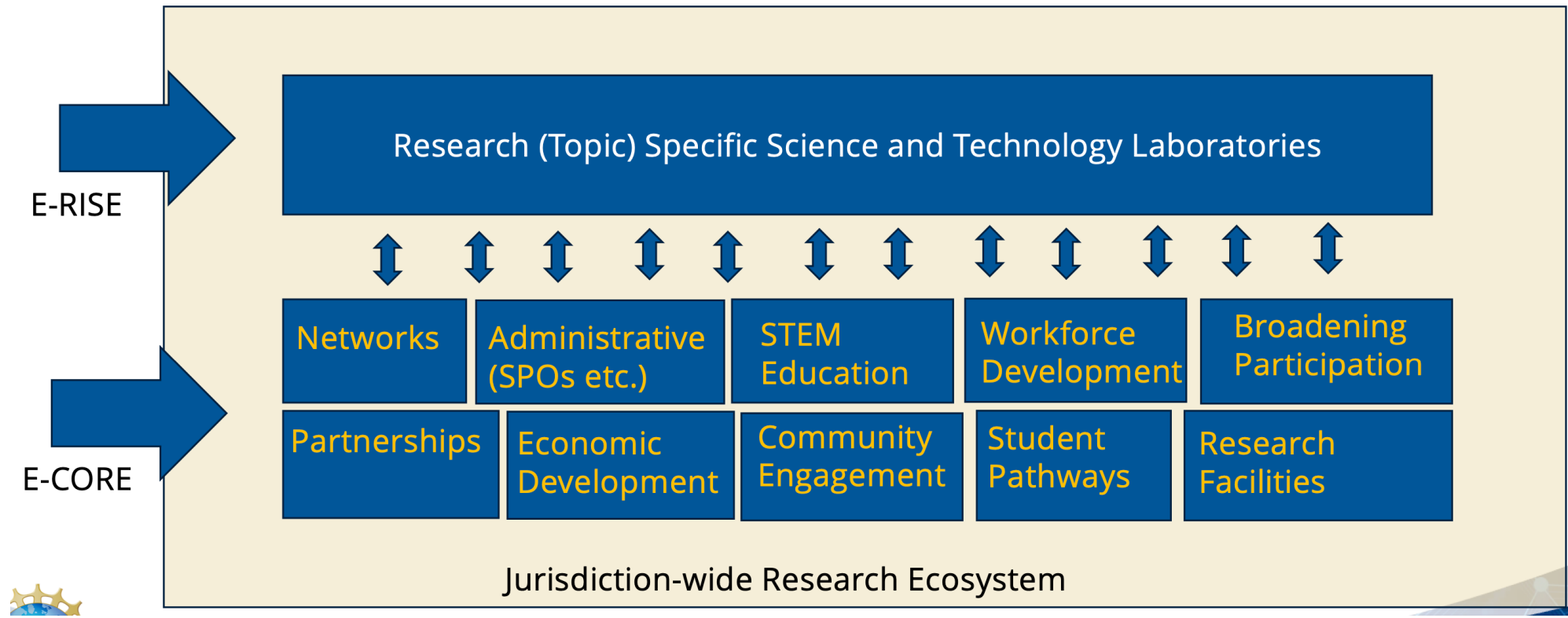


EPSCoR RII Track-1 - \$4M / year, 5 years

RII **E-CORE** \$2M / year, 4+4 years
Submitted: 12/6/2023

RII **E-RISE** \$1.75M / year, 4 years
+\$1.5M / year, 3 years
Submitted: 1/16/2024



Six Key Elements of E-RISE:

(**Bolded terms** have been emphasized multiple times to us by program officers)

- 1) Building of a **jurisdiction-wide** network of individuals, institutions, and organizations to develop high-quality research aligned with **jurisdictional scientific priority areas** and the EPSCoR mission and goals
- 2) Incorporation of Diversity, Equity, Access, and Culture of Inclusion of different institution types and sectors (DEACI)
At least one PUI and/or MSI
- 3) Development of a skilled **workforce that is relevant to the project** and its outcomes (WFD)
- 4) Incorporation of **use-inspired perspectives** and societal impact (SI)
- 5) Building of a pathway to **sustainability**
- 6) Development of a **continual improvement** cycle

Project Description (20 pages)

- I. Research and Capacity-Building Goals and Vision
 - A. Overview:
 - B. Vision:
 - C. Workforce Development:
 - D. Jurisdictional Impact and Sustainability:

- II. Execution, Planning, and Assessment
 - A. Strategic Plan:
 - B. Evaluation Plan:

- III. Organization and Management
 - A. Management Plan:
 - B. Institutional Configuration:
 - C. Diversity and Culture of Inclusion:

- IV. Results from Relevant Prior Support

Microplastics are Ubiquitous - What are their effects in coastal ecosystems?

New URI study finds extensive microplastics in Narragansett Bay

First study of its kind shows prevalence of microplastics in the Bay; URI researchers also show their harmful effects

August 24, 2023

Two University of Rhode Island researchers estimate that the top 5 centimeters (2 inches) of the floor of Narragansett Bay now contain more than 1,000 tons of microplastics, and that buildup has occurred in just the last 10 to 20 years.

This news is likely to stun generations of Rhode Islanders who have gotten their first taste of ocean life at the shoreline. From Oakland Beach to Salty Brine Beach, a Rhode Island child's introduction to the ocean often happens first at the water's edge, with a pail and a shovel, digging at the tide line.



Visible microplastics found in the sediment at the most polluted site from the study near Providence, Rhode Island. (Photo by Victoria Fulfer)

Researchers find a massive number of plastic particles in bottled water

UPDATED JANUARY 10, 2024 · 11:59 AM ET

By James Doubek



Researchers from Columbia University and Rutgers University found roughly 240,000 detectable plastic fragments in a typical liter of bottled water.

Jody Amiet/AFP via Getty Images











Science Questions That Guide This Project

Q1. What processes govern the fate and transport of NMPs within coastal ecosystems and how is this dependent upon environmental transformations?

Q2. How do changing environmental variability, anthropogenic stressors, and future NMP sources combine to influence NMPs entry into the environment, food web and trophic cascades, marine organisms, and ecosystems?

Q3. How can socially and scientifically informed approaches be designed to advise policy governing the impacts of NMPs?

E-RISE RII: Socio-ecological Impact of Microplastics in Coastal Ecosystems (SIMCoast)

<p>Daniel Roxbury, URI Assoc Prof Chem Eng</p>  <p><i>Principal Investigator</i></p>	<p>Vinka Craver, URI Prof Civ & Env Eng Assoc Dean Research</p>  <p><i>Co-PI Inter-Theme Lead</i></p>	<p>Anabela Maia, RIC Assoc Prof Biology</p>  <p><i>Co-PI Institutional Lead</i></p>	<p>Baylor Fox-Kemper, Brown Prof Earth, Env, Planet Sci.</p>  <p><i>Co-PI Institutional Lead</i></p>	<p>Stephen O'Shea, RWU Prof Chemistry</p>  <p><i>Co-PI Institutional Lead</i></p>
<p>Andrew Davies, URI Assoc Prof Biological Sci</p>  <p><i>Research Theme 1 Lead</i></p>	<p>Lewis Rothstein, URI Prof Oceanography</p>  <p><i>Research Theme 2 Lead</i></p>	<p>Coleen Suckling, URI Asst Prof Fish, Animal, Vet Sci</p>  <p><i>Research Theme 3 Lead</i></p>	<p>Melva Treviño Peña, URI Asst Prof Sustain Agriculture</p>  <p><i>Inter-Theme Co-Lead</i></p>	<p>Geoff Bothun, URI Prof Chem Eng</p>  <p><i>Research Theme 1</i></p>
<p>Lillian Jeznach, RWU Assoc Prof Engineering <i>Research Theme 1</i></p>	<p>Katherine Lacasse, RIC Assoc Prof Psychology <i>Inter-Theme</i></p>	<p>Daniel Hewins, RIC Assoc Prof Biology <i>Research Theme 1</i></p>	<p>Carla Narzaez Diaz, RIC Asst Prof Biology <i>Research Theme 3</i></p>	<p>Pete Rumsey, URI Chief Bus Dev Officer <i>Inter-Theme</i></p>

E-RISE RII: Socio-ecological Impact of Microplastics in Coastal Ecosystems (SIMCoast)

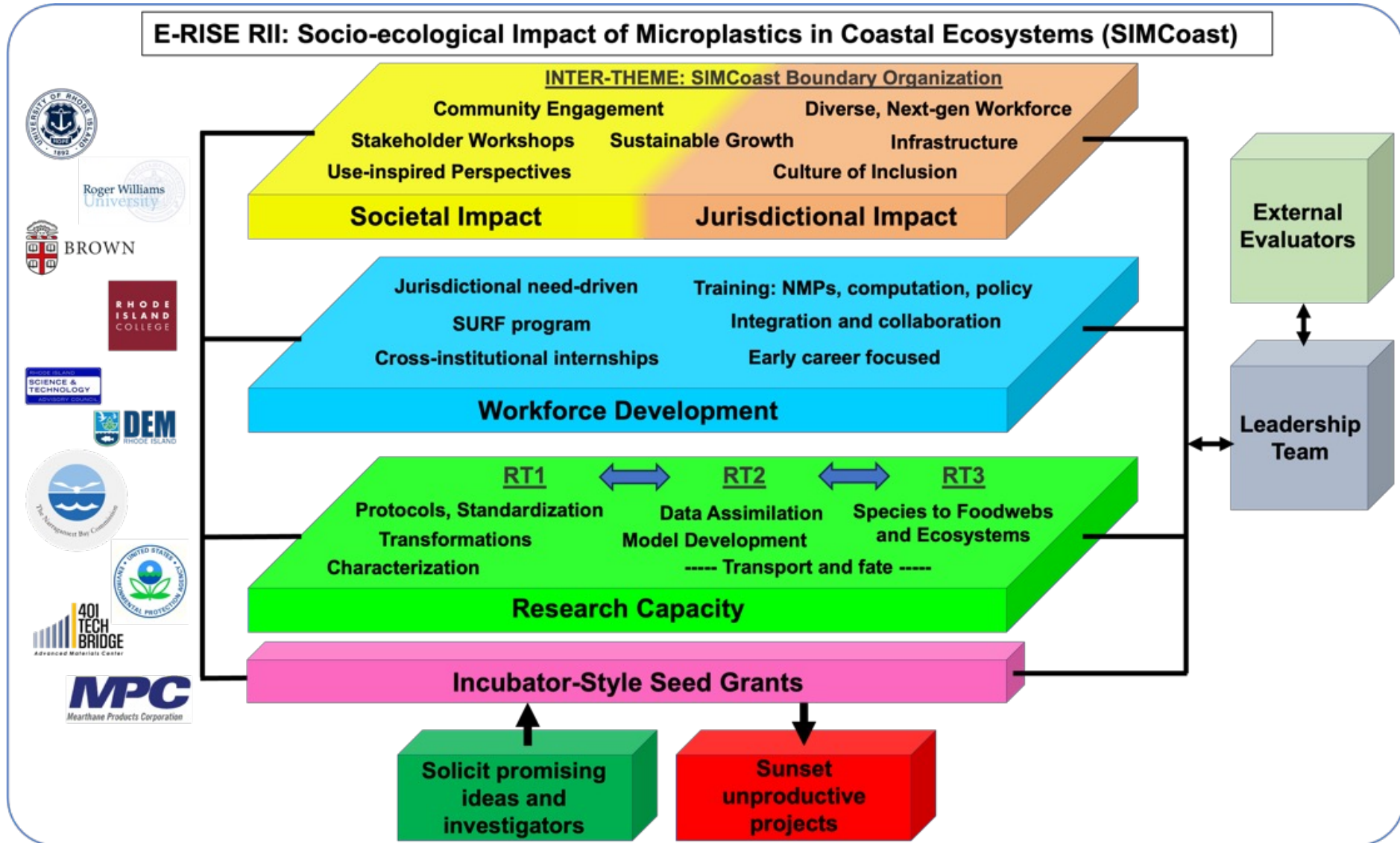


Figure 1. Overview schematic of **SIMCoast** activities, research themes, partners, and inter-connections.

Roadmap

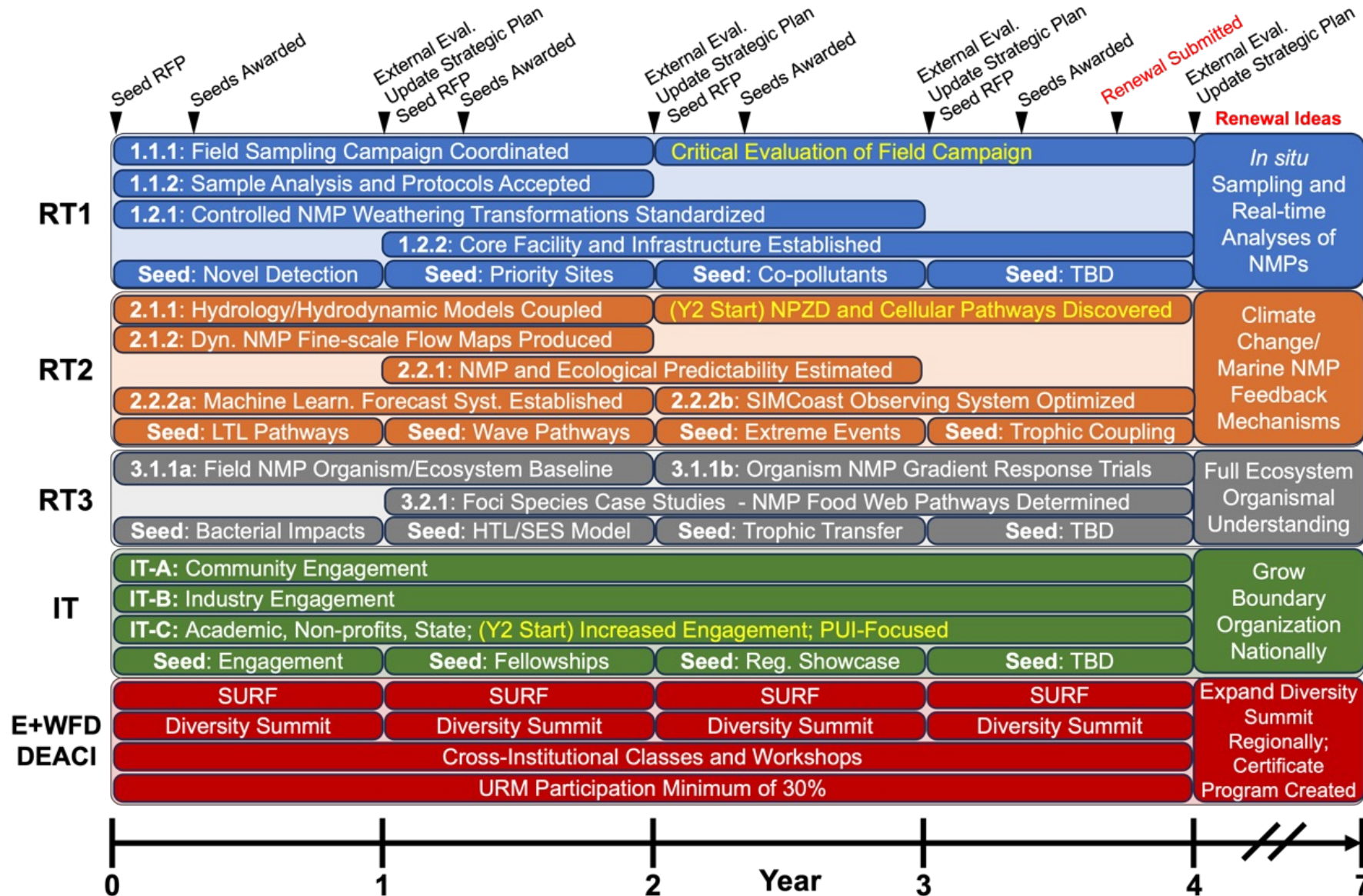


Figure 6. Roadmap of **SIMCoast** Milestones by Years. Yellow letters represent continued projects of successful first year seeds. Preliminary ideas for the years 5-7 renewal are presented in the last column.

Other E-RISE Tips I've Learned...

1. Needs to be able to stand alone from E-CORE
Budget for administrative support, seed grants, workforce development needs to be included
2. 4-year and 7-year goals need to be clearly defined.
3. Direct alignment with Jurisdiction Science and Technology Plan.

“Marine sciences, mitigation of contaminants from land to sea”
4. Use-Inspired Perspectives and Societal Impacts cannot be an after thought. Needs to guide the research from the beginning.
5. Incubator, not Research Center. Needs to be able to continuously adapt and change.
6. Does not have to be even split of funds. Any institution/entity should be justified.
7. Start Early! Weekly meetings for SIMCoast started in September (4 months prior to submission)