

Arctic Engineering Research Center (ERC)

The University of Alaska Fairbanks (UAF) has been funded by the National Science Foundation (NSF) for a planning grant to develop an Engineering Research Center (ERC) proposal. The ERC will develop integrated solutions for communities threatened and displaced by climate change. The goal is to facilitate the creation of communities and economies based on sustainable use of local and renewable resources.

<http://erc-assoc.org/>

NEED

Over 30 isolated coastal Alaska communities are threatened with erosion, flooding, and the loss of clean water and infrastructure in the next decade due to the amplified effects of climate change in the Arctic. Similar climate changes and their effects are occurring throughout the world. Alaska can serve as a microcosm for coordinated and sustainable energy and infrastructure development for human displacement challenges and resilience worldwide.



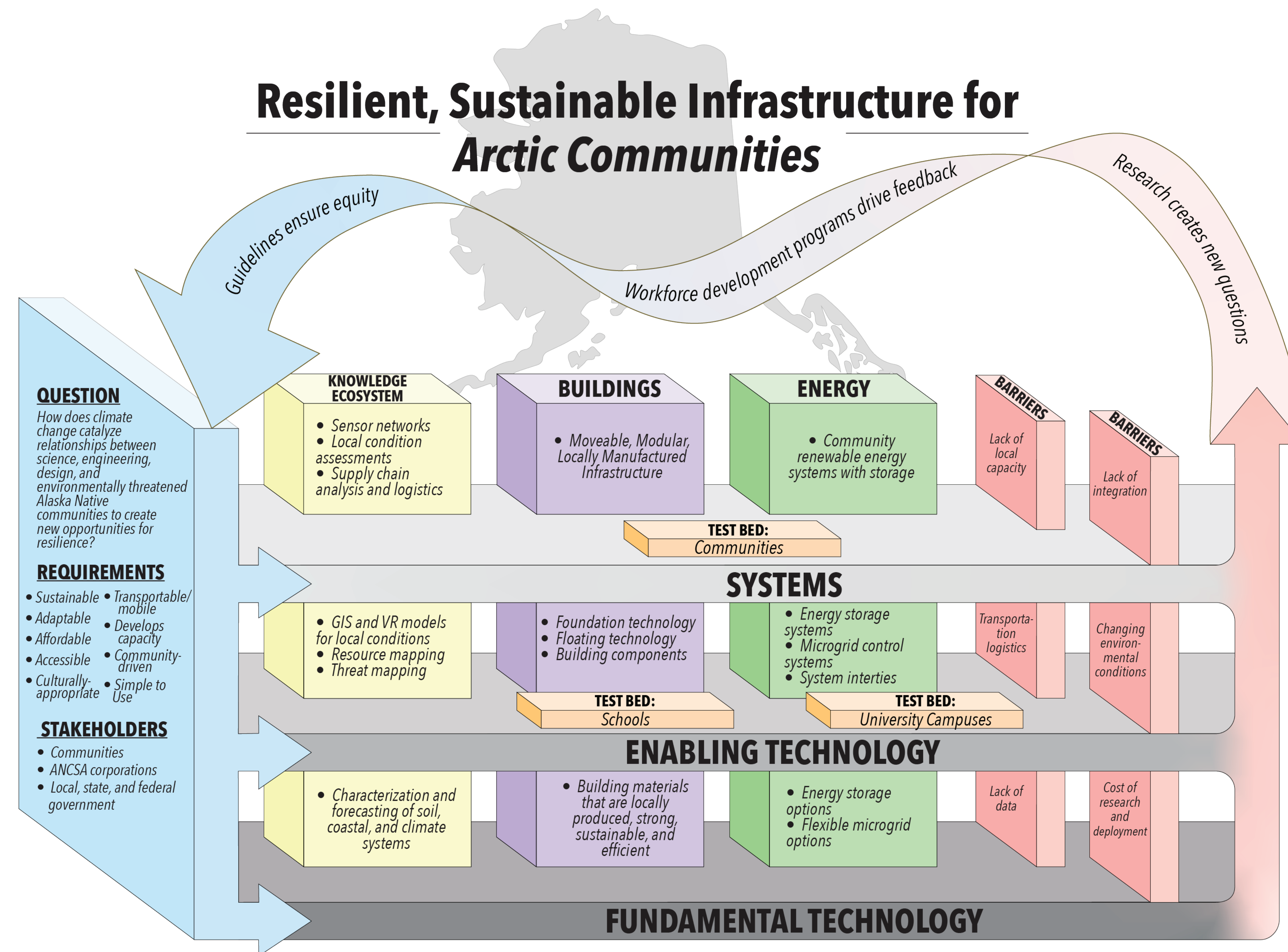
Erosion has forced the village of Newtok, Alaska to relocate.

PARTNERS:

- Alaska Native Tribal Health Consortium
- Arctic Slope Regional Corporation
- Arizona State University
- Cold Climate Housing Research Center
- Oak Ridge National Laboratory
- George Washington University
- University of Alaska
- University of Tennessee
- University of Virginia Arctic Design Group
- Washington State University

VISION

Working with communities and leaders at the forefront of climate change, the Arctic ERC will improve Arctic community resilience, adaptability, and sustainability by engineering integrated technologies and systems that are equitable and applicable worldwide.




STRATEGY

The Arctic ERC will recognize ongoing efforts to help threatened communities and will seek to complement them in a manner that adds value and results in long-term sustainability and new approaches that can translate across the world. This will take the form of integrated engineering research and education with technological innovation to transform national prosperity, health, and security.

MORE INFO



 For more information, please contact:



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THE FUTURE

The Arctic ERC will include education, workforce development, and innovation processes alongside the research and technology innovation components. The Arctic ERC will act as an umbrella organization to connect and coordinate various organizations currently working in Alaska in these areas, including the Alaska Native Science and Engineering Program (ANSEP), Upward Bound, Launch Alaska, industry partners and ANCSA corporations, and the state's career technical colleges and rural campuses. The ERC will organize and conduct projects to encourage local STEM education, workforce development, and businesses and use this experience to develop a framework for these activities that can be adapted and deployed anywhere in the world. Example projects are expected to include team-based education programs, mobile technical training centers, grouping of communities to facilitate larger markets and local resources for product testing, and regional competitions to spur innovations that can address local issues.