



Data Analytics

Problem

To reduce the risk of living on the coast and adapt to more frequent disruptions, coastal communities seek to utilize data and new/existing sensor networks to improve their ability to:

- Prepare for, respond to, and recover from disruptions.
- Increase knowledge and awareness of interactions between ground-, storm-, and tidal waters and their effects, and understand the economic impact of the use of this information.
- Interface real-time and forecast of flooding information and other environmental hazards with new technologies in a near- to mid- term time horizon (e.g., smart city data, self-driving/autonomous vehicles and traffic control, augmented/virtual reality technologies, etc.).

What We've Heard

Coastal communities seek innovative data analytics solutions to improve their ability to more effectively prepare for, respond to, and recover from disruptions.

Although not meant to be comprehensive, below are suggested areas in need of innovative solutions identified by stakeholders in Hampton Roads and other coastal communities. Submissions do not need to be limited to these areas. However, to be eligible for funding from RISE, entrants **must focus on a Hampton Roads need** while demonstrating the ability to scale to other communities.

- Increased knowledge and awareness of interactions between ground-, storm-, and tidal waters and their effects, and understanding the economic impact of the use of this information.
- Augmented/virtual reality applications for enhanced resilience infrastructure installation, operation, and maintenance.
- "Rainbomb" detection, warning and applications.
- Innovative smartphone apps to enhance residents' quality of life during acute and chronic (nuisance) stresses.
- Integration of climate risk data analysis into transportation infrastructure planning to characterize system-wide effects of disruptions from flooding and help prioritize projects more efficiently and effectively.