NRIC National Reactor Innovation Center

Program Update

What Inspires Us

September 29, 2020

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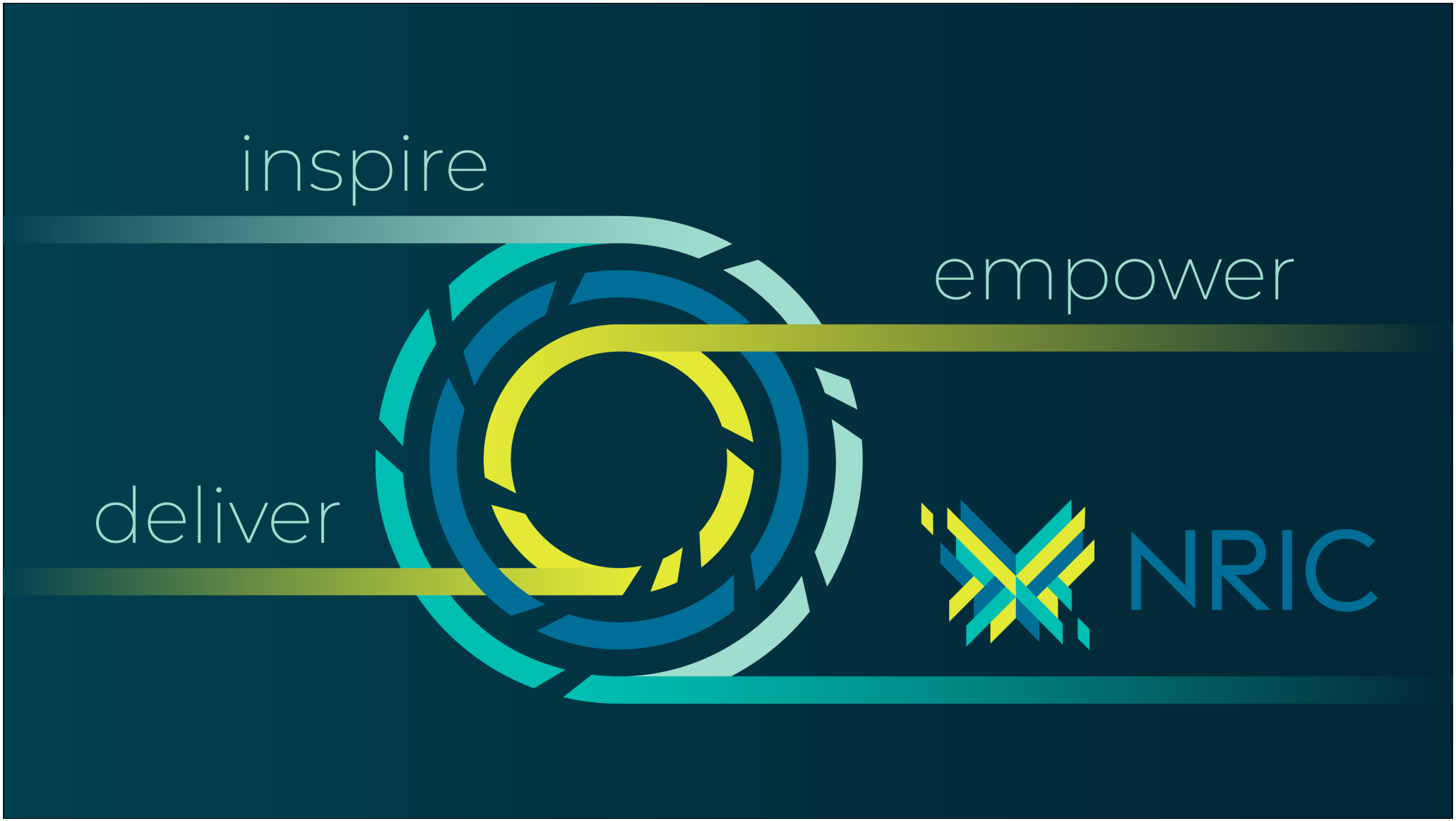
inspire
empower
deliver
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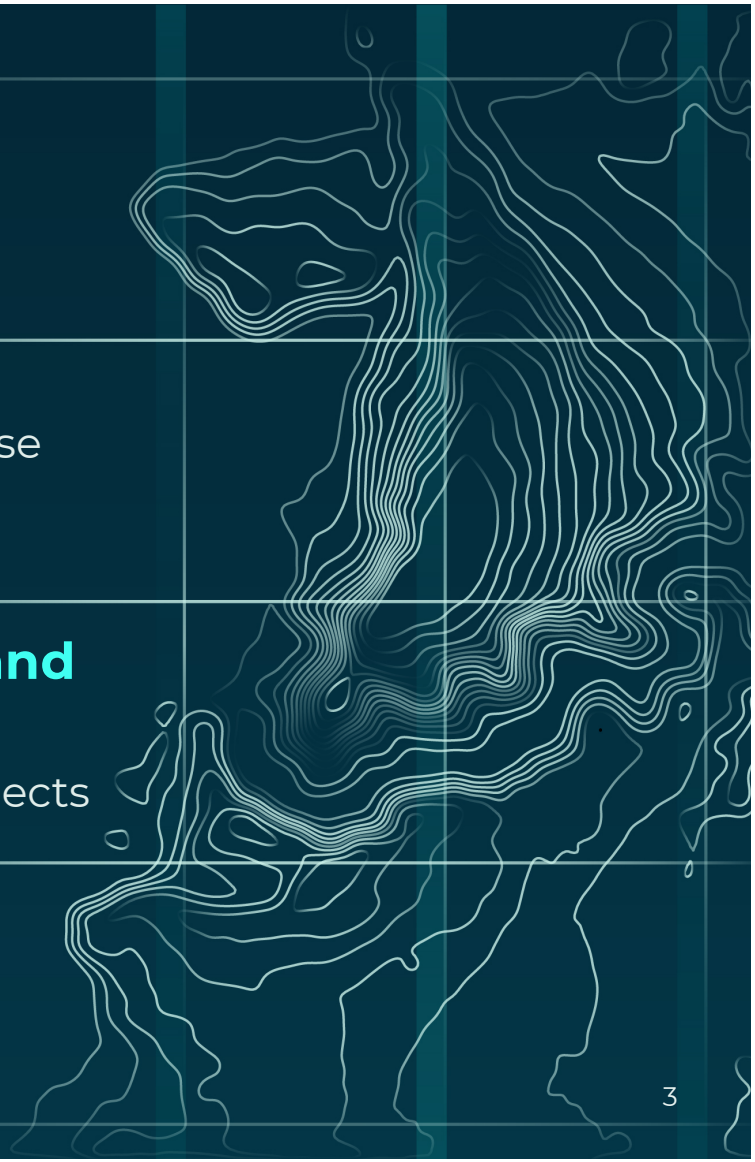
5-Year Program Objectives

Enable demonstration of at least 2 advanced reactors

- Make available infrastructure, sites, materials, expertise
- Provide regulatory support
- Best practices in public engagement

Prepare DOE/labs for continuing innovation and demonstration

- Develop best practices for planning/construction/demonstration of nuclear projects
- Develop enduring infrastructure and expertise
- Establish methods for efficient coordination among laboratories



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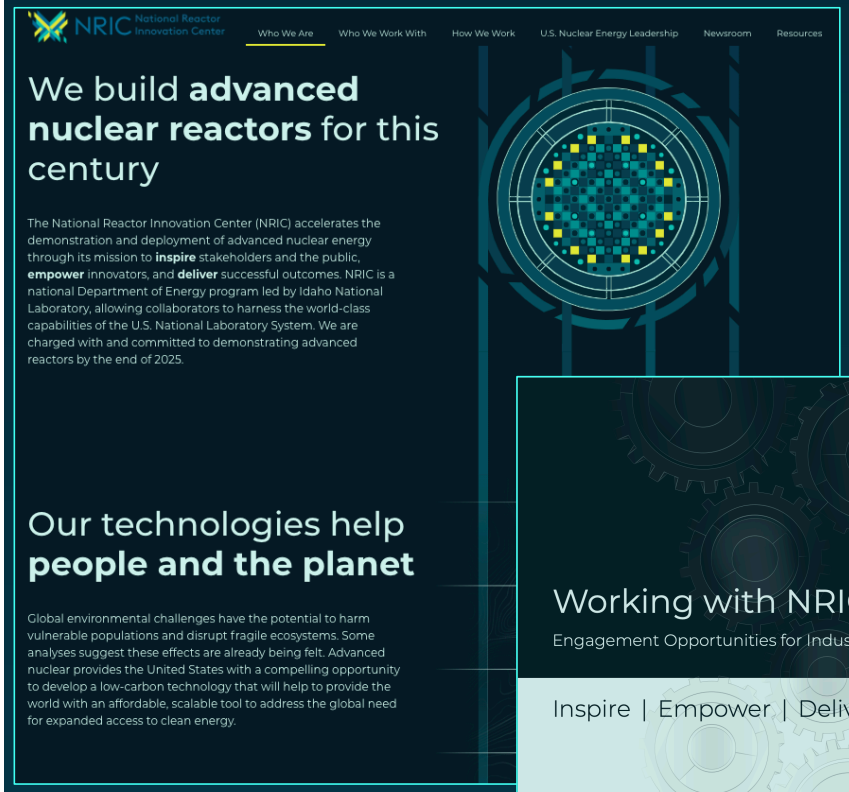
Establishing NRIC – Planning and Engagement



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- Developed program management documents
- Established crosscutting projects and coordination with programs across INL
- Performed a gap assessment for demonstration capabilities
- Launched website *(nric.inl.gov)*
- Established collaboration with NRC
- Established projects with a spectrum of National Laboratories

NRIC TEAM

Leadership Team

Dr. Ashley Finan
Director

Nicholas Smith
Deputy Director

Brad Tomer
Chief Operating Officer

Key Technical Staff

Greg Core
Technical Lead

Dr. Jon Webb
Senior Engineer

Communications Lead

Donna Spangler
Senior Communications Strategist

Project Management Staff

Stephen Grabinski
Project Manager

Emily Gallegos
Project Coordinator

Christine Williams
Project Manager

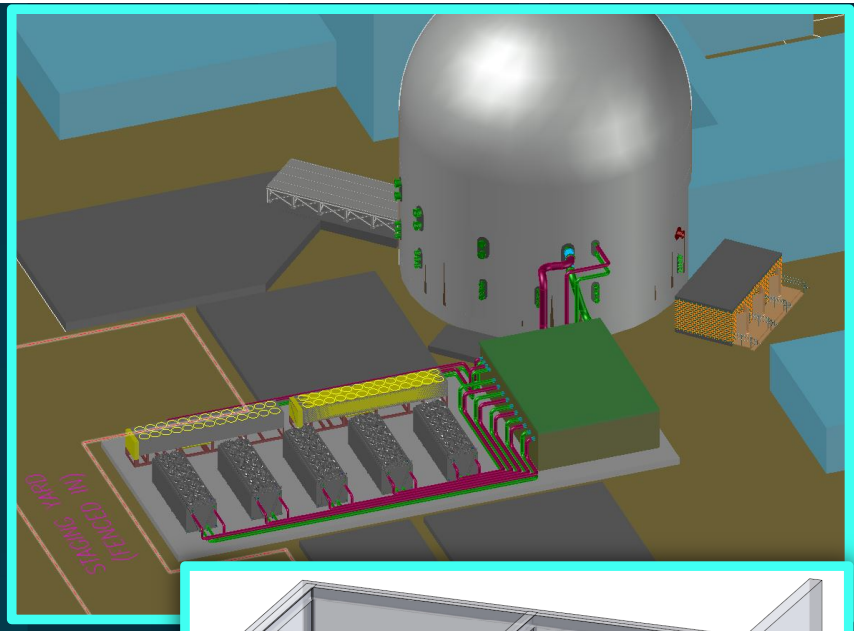
WE'VE DONE THIS BEFORE

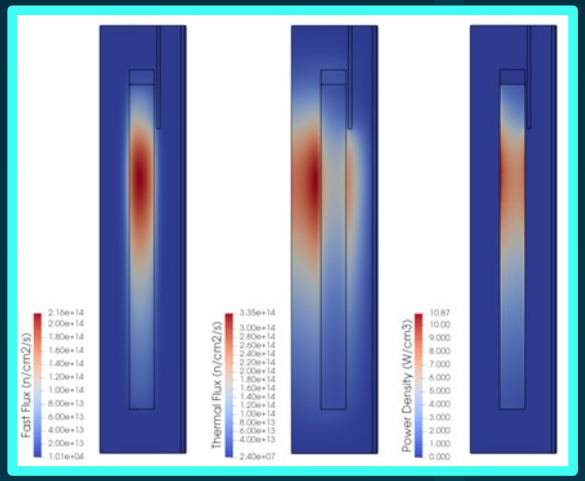
WE'RE GOING TO DO IT AGAIN

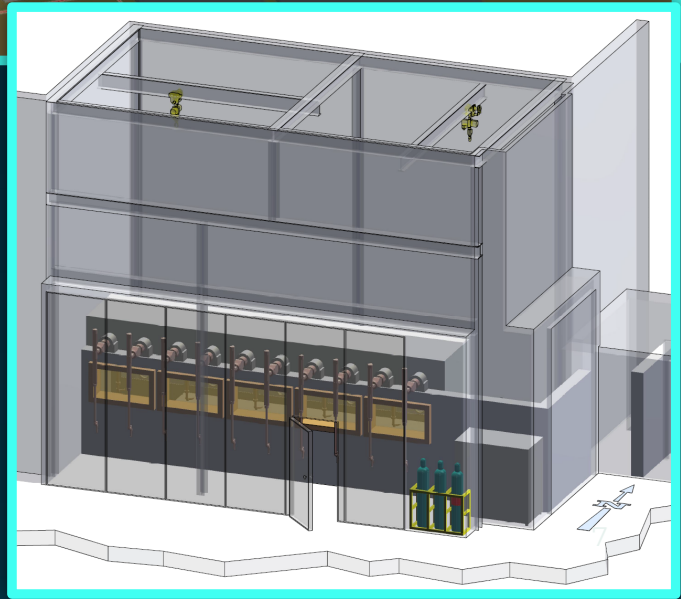
with some refinements

Mod. # 1 Empowering Innovators

- Private Sector Driven Effort
- NRIC Resource Team
- Virtual Test Bed
- Demonstration Resource Network
  - Experimental facilities
  - Fuel facilities
  - Test beds
  - Demonstration sites







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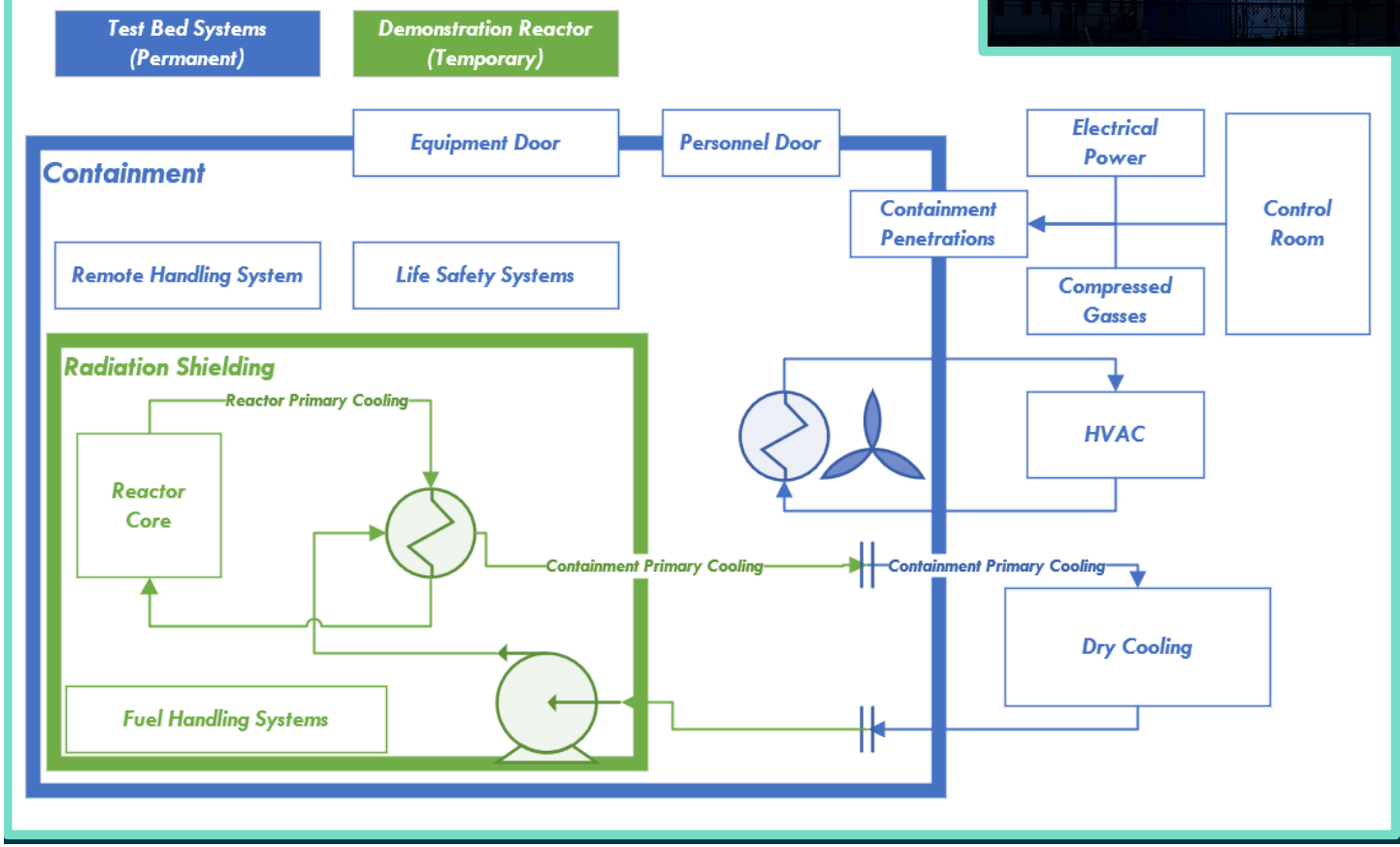
Demonstration Test Beds In Development



- User input received
- Functional and Operational Requirements Defined
- Concept of Operations Defined
- Digital engineering implemented
- Preconceptual design complete
- Request for Expressions of Interest released July 21 for A-E firm to complete design work in FY21

Siting Preparations Underway

- Completed Initial Siting Evaluation of 8 national sites with ANL, ORNL, U-Michigan
  - Additional sites in FY21
- Identified 9 candidate INL sites and initiated preparation for demonstration projects
  - Seismic; meteorological; grid access; water; environmental; regulatory; cost savings.

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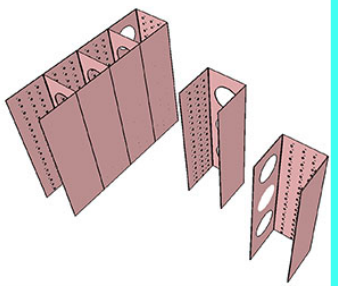
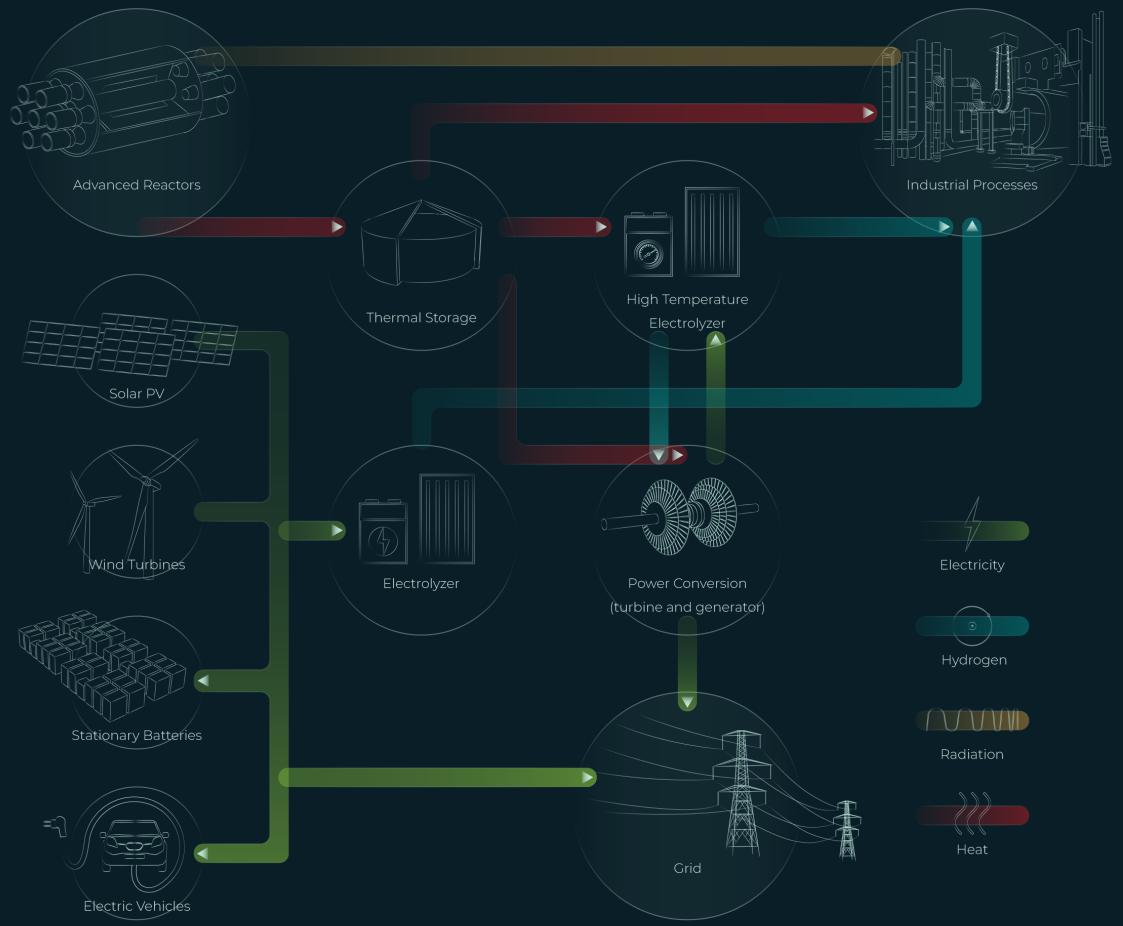
Mod. # 2
Addressing Cost and Markets

- Digital Engineering
- Advanced Construction Technologies
- Integrated Energy Systems





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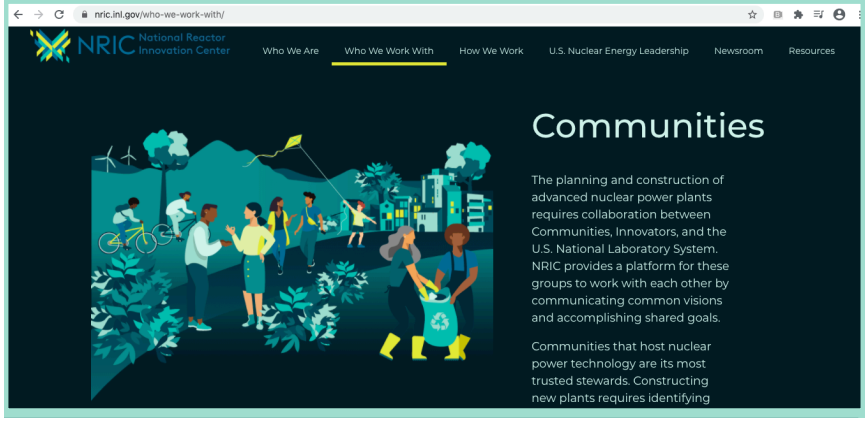
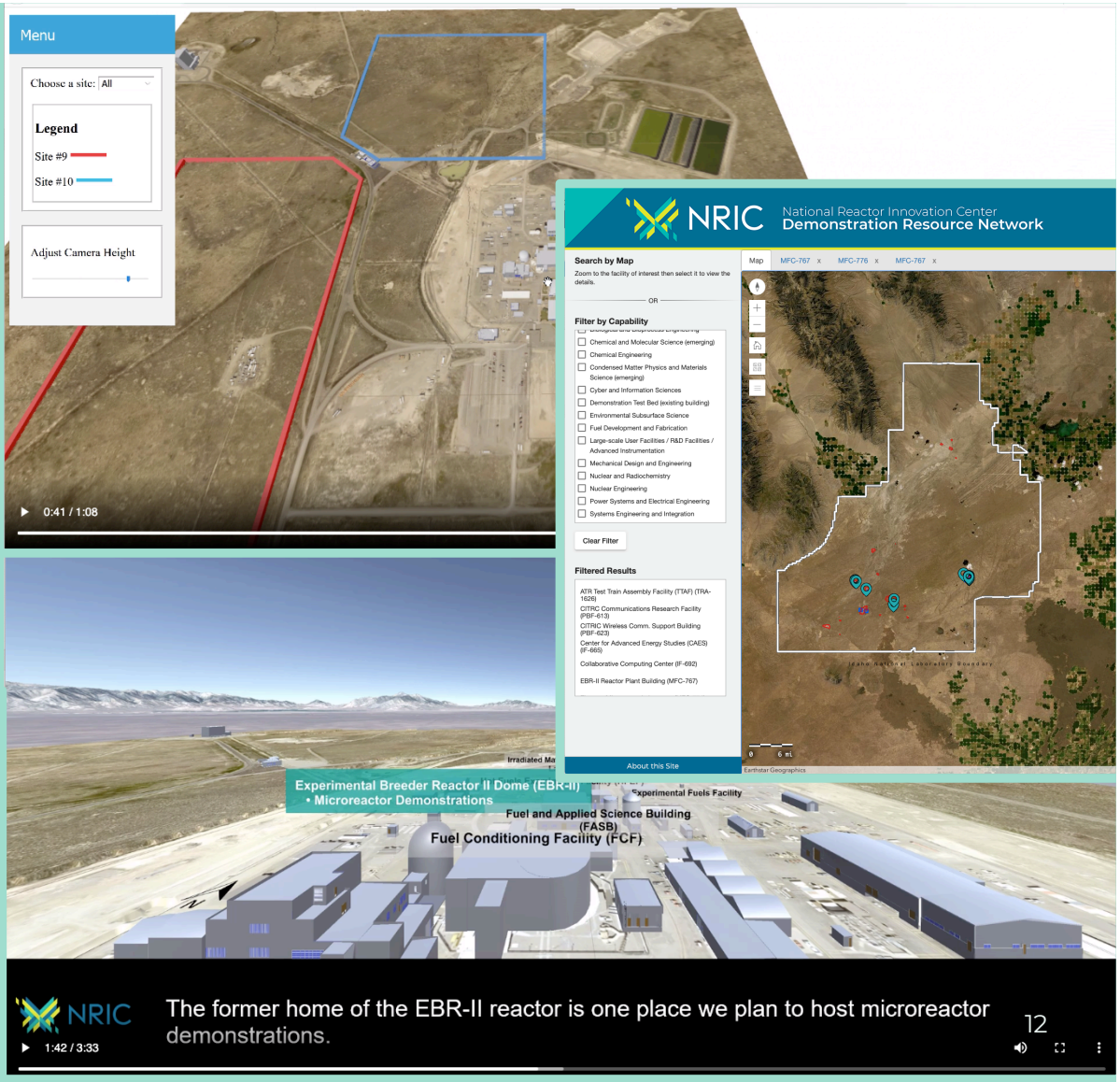
Mod. # 3
Proactive Impact Management

- Environmental impact assessment
  - Cultural and biological surveys
  - Plant parameter envelope
  - Water use
- Packaging, storage, transport, and disposition

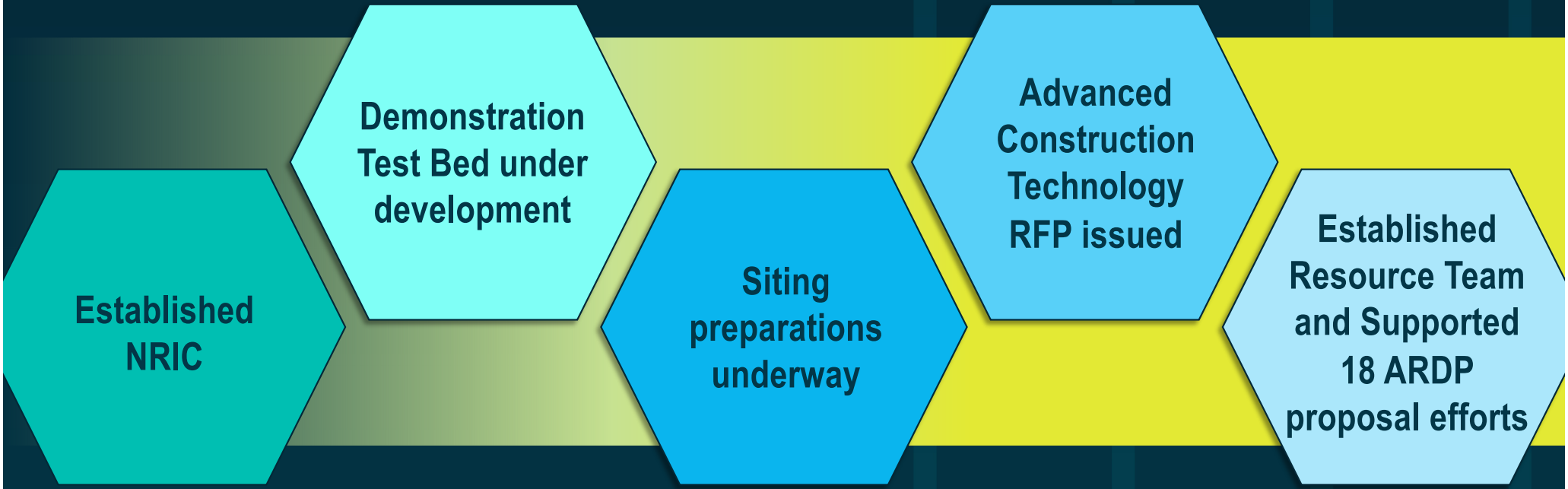
Mod. # 4
Engagement

- Tools
  - Web/Social
  - Flyover, Mapping, Videos
- Best practices development





NRIC Key Accomplishments FY20



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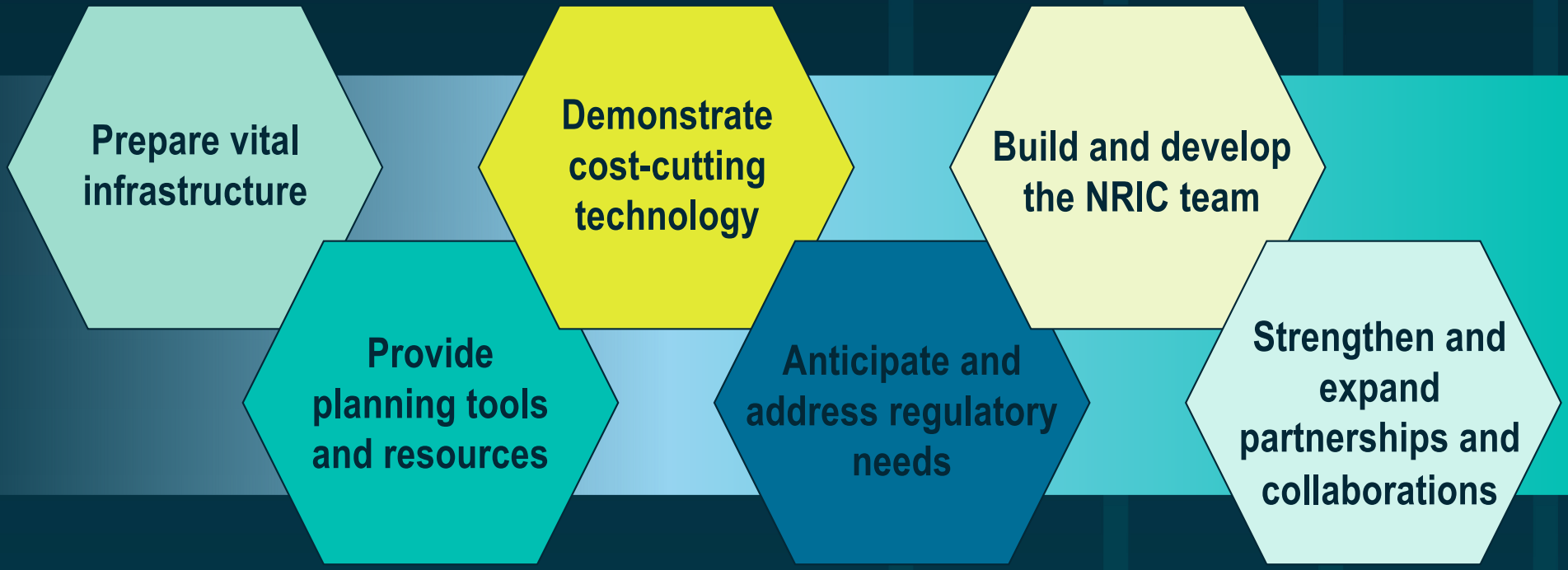
Goals for FY21 – Maintain progress to support demonstrations by the end of 2025 and sustained innovation



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Thank you!

Questions?

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