



NRIC

National
Reactor
Innovation
Center

ARDP FOA Industry Day: NRIC

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NRIC and GAIN are Complementary and Coordinated Efforts to Support the Nuclear Energy Industry



GAIN

- Established in 2015 as a resource for accelerated development of nuclear innovations with lab partners
 - Comprehensive resource to entire nuclear innovation ecosystem at all development stages
 - Provides streamlined access to testing, MASL, experimental facilities, lab expertise, and legacy data
 - Regulatory expertise (e.g. NRC advanced reactor licensing strategy support)
 - Financial support

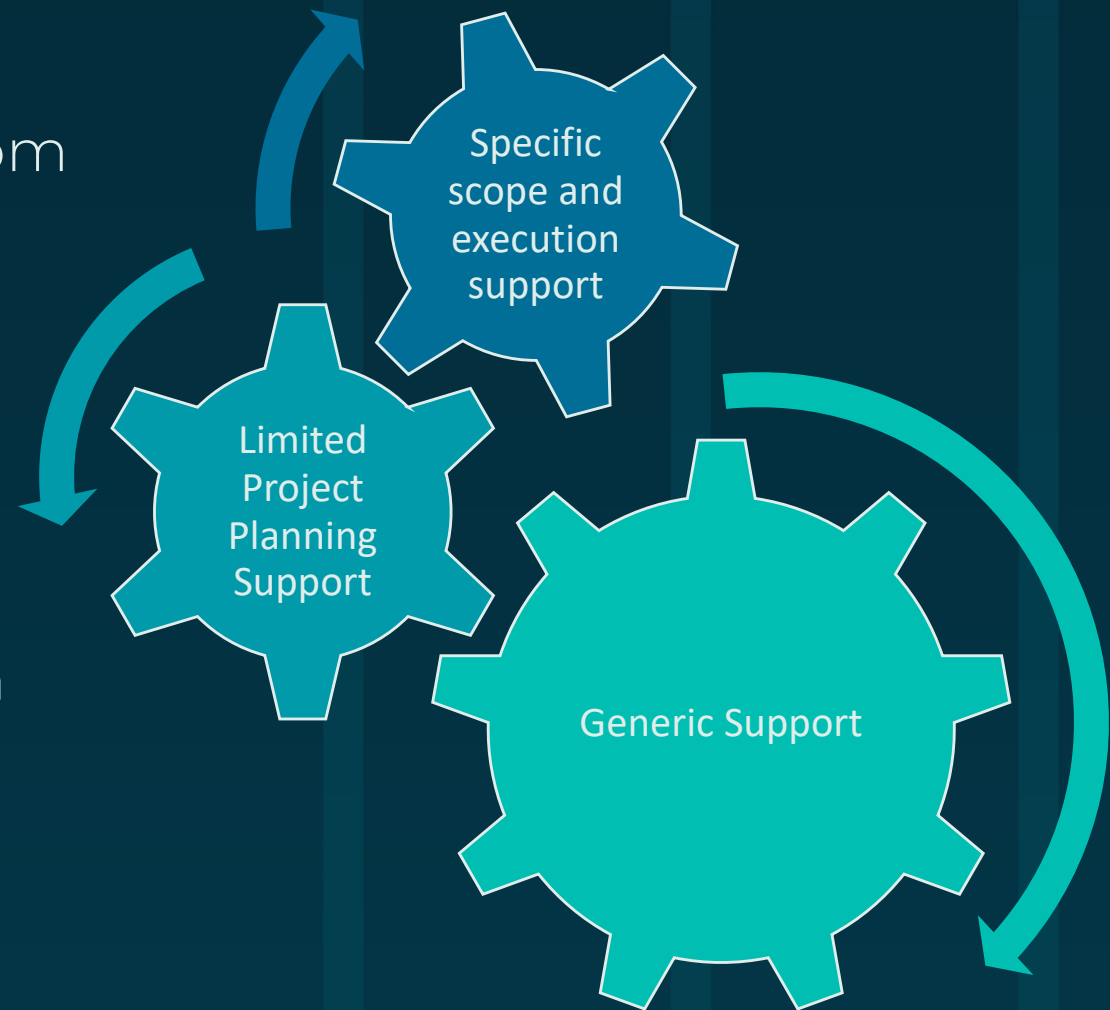


NRIC

- Provides a capability for building and demonstrating reactor concepts
 - Focused program to enable innovators nearing demonstration stage
 - Provides access to sites, required upgrades, site services, fuel material/fabrication facilities, and demonstration process support
 - Provides regulatory assistance related to demonstration
 - Facilitates NRC observation/learning

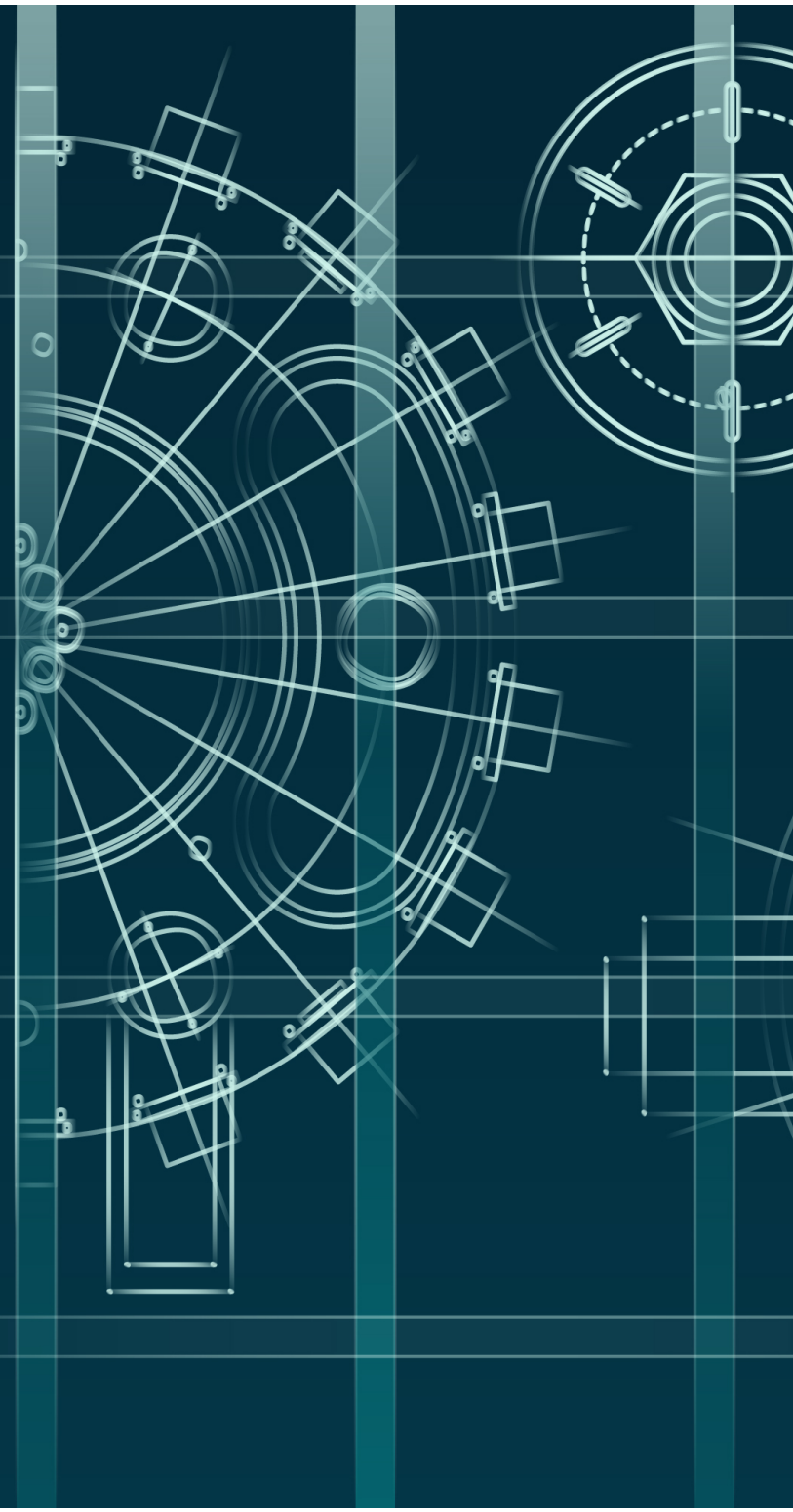
NRIC Enabling Innovators

- NRIC is prepared to enable innovators from start to finish, including support from generic infrastructure and process improvements through specific project scope for experiments and demonstrations.
- A generic MOU has been developed for working with NRIC



Generic Support

- Identify Sites
- Prepare infrastructure and tools
- Regulatory environment
- Stakeholder engagement
- Develop/demonstrate complementary technologies
- NRIC Operations and Management staff help innovators connect to these capabilities
- Direct-funded through DOE



Limited Project Planning Support

- NRIC can serve as a coordinator and assist with identifying, scoping, scheduling, and general planning support for activities with national labs in project plan.
- Direct-funded and limited. Users are screened by NRIC for access to support.
- SMEs and PMs from multiple labs available with NRIC coordinating.
- 50 hours of assistance available per project
- Details available in separate document
- Siting, fuels, licensing, modeling and simulation, supporting infrastructure such as post-irradiation examination, digital engineering, safeguards and security, operations and training

Specific Scope and Execution Support

- Where it is useful, NRIC wants to be a part of the team that makes your project successful.
 - For example, NRIC has project leads that can be made available to provide coordination and project management support for innovator scope at national labs under a funded agreement.
 - These NRIC team members can be incorporated into project scope as a representative of the lab/organization they are employed by (e.g. INL/BEA), and funded through an FOA and/or agreement such as a CRADA or SPP.
- NRIC can assist with developing and executing experimental, demonstration, facility modification and preparation, fuel fabrication, and other supportive work at the national labs. The scope would be funded through an FOA and/or agreement such as a CRADA or SPP, with the appropriate laboratories/contractors.

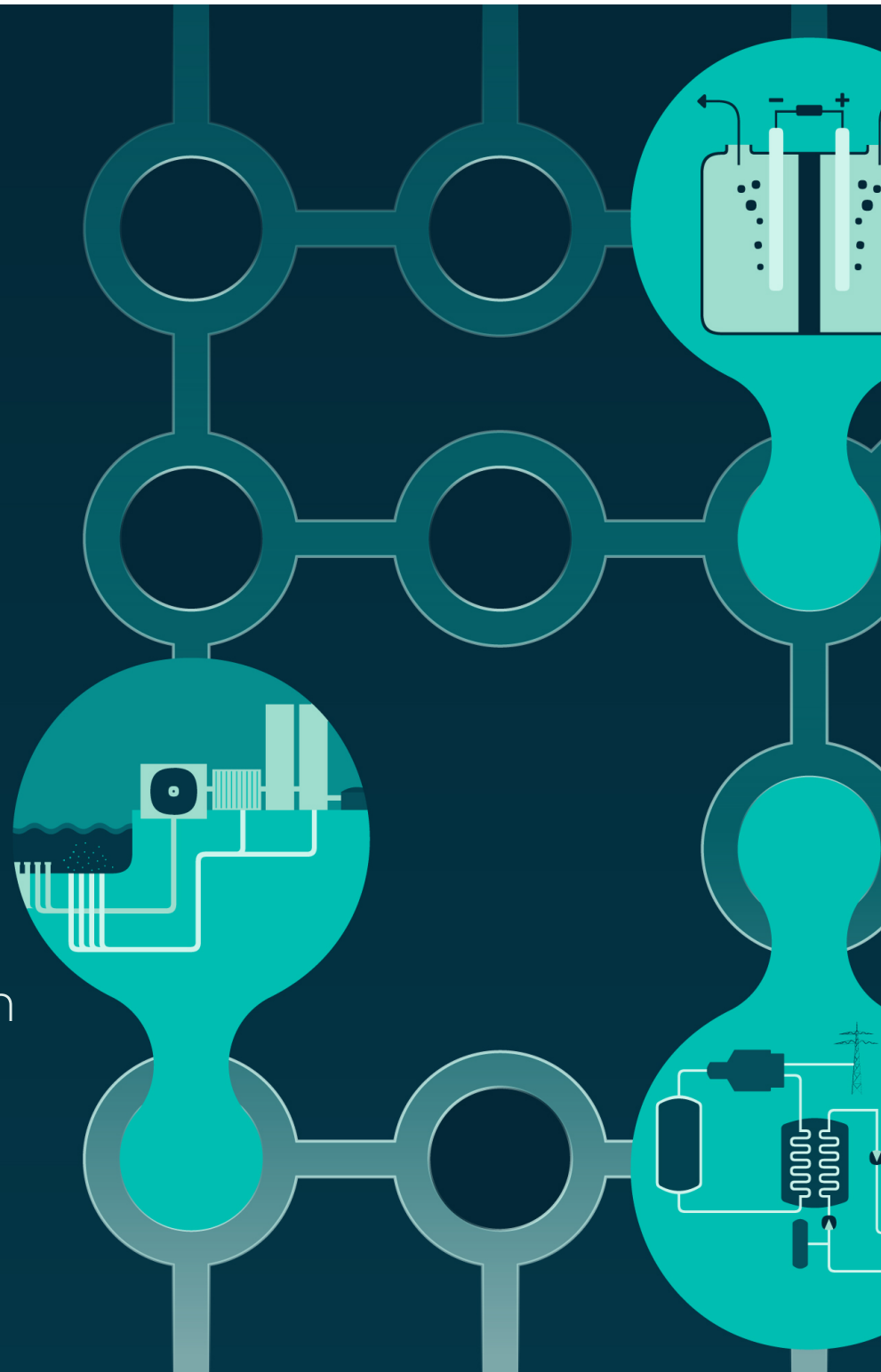
Siting and Infrastructure



- National siting evaluation (ANL, ORNL, U Michigan)
- INL siting evaluation, environmental impact assessments (INL, PNNL)
- Fuel material and fabrication space (PNNL, INL)
- Demonstration Reactor Test Beds (EBR-II, ZPPR)
- Virtual Test Bed (NEAMS-NRIC)
- Spent fuel transportation and disposition (INL)

Supporting Technologies and Capabilities

- Digital Engineering (MBSE)
- Advanced Construction Technologies Initiative
- Integrated Energy Systems
- NRC Coordination
- Experimental infrastructure
- Safety and environmental analysis
- Project Planning & Coordination
- Outreach and communications



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