



U.S. DEPARTMENT OF
ENERGY

Nuclear Energy

Nuclear Energy Enabling Technologies (NEET) Advanced Sensors and Instrumentation (ASI)

Suibel Schuppner

Office of Nuclear Energy
U.S. Department of Energy

NE Instrumentation and Control (I&C) Review Webinar

September 16, 2014



U.S. DEPARTMENT OF
ENERGY

Nuclear Energy

Nuclear Energy Enabling Technologies: Advanced Sensors and Instrumentation

■ Vision

Develop advanced sensors and instrumentation technologies that address critical technology gaps for monitoring and controlling advanced reactors and fuel cycle facilities

■ Goal

To provide crosscutting research that:

- Contributes to the success of the DOE-NE R&D programs
- Supports common I&C technology development needs
- Overcomes current and future I&C barriers to nuclear energy system deployments

**A new model of I&C innovative RD&D to overcome
nuclear power's impediments to new I&C technology usage**



Nuclear Energy Enabling Technologies: Advanced Sensors and Instrumentation

■ Goal (cont.)

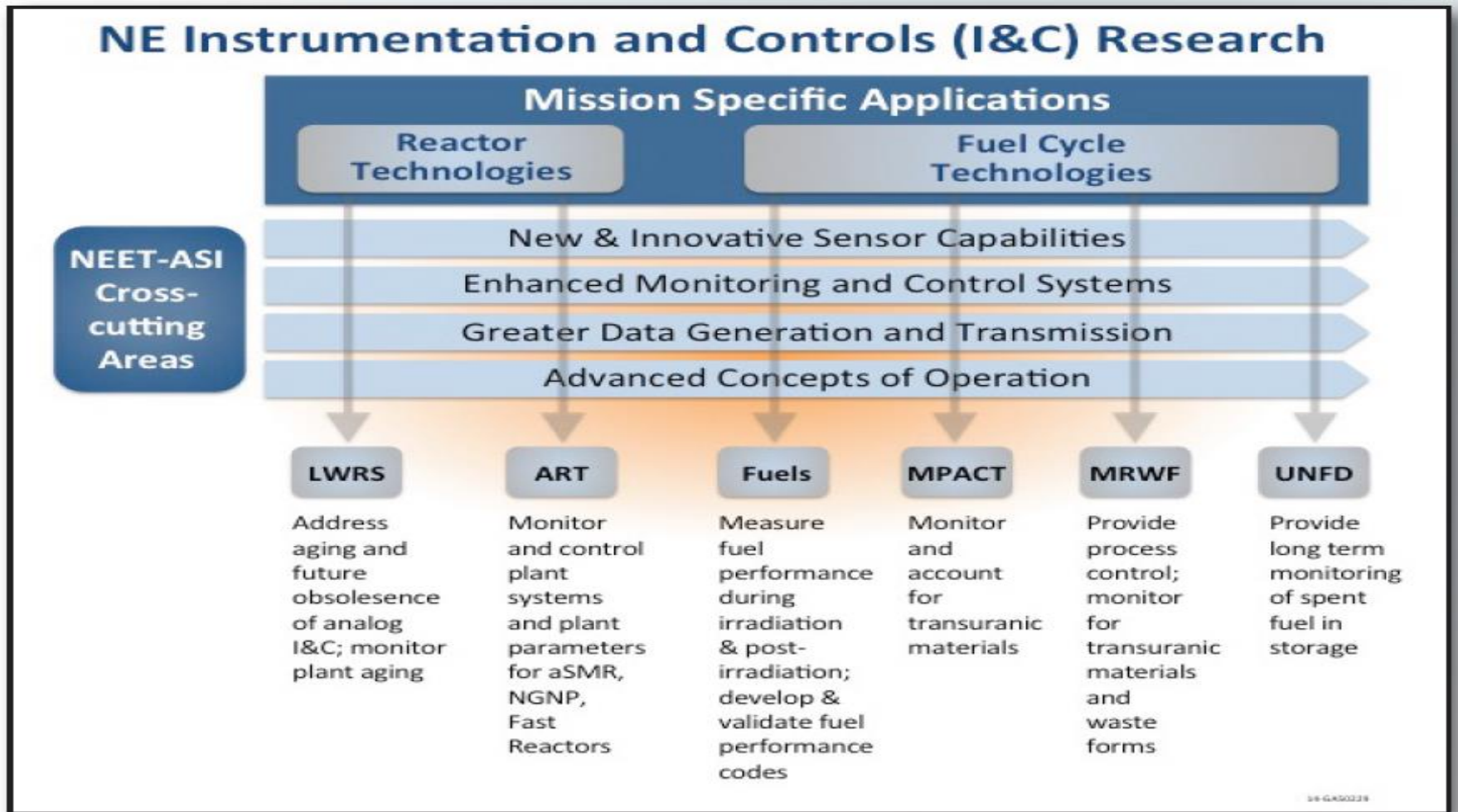
To provide coordination across various DOE-NE R&D programs by:

- Collecting and communicating information about on-going I&C-related RD&D being conducted under each program
- Ensuring that each DOE-NE research program has access to expert knowledge of the state of the art for I&C technologies
- Facilitating more efficient and effective approach to addressing the I&C needs and achieving the full benefits of the technology advancements

A new model of I&C development – one that is more collaborative, coordinated, and designed to meet the needs of many programs at once –



I&C research across NE



[**LWRS**-Light Water Reactor Sustainability; **ART**-Advanced Reactor Technologies; **Fuels** -Advanced Fuels; **MPACT**-Materials Protection, Accounting and Control Technology; **MRWF**- Material Recovery and Waste Form Development; **UNFD**-Used Nuclear Fuel Disposition]



2014 NE I&C REVIEW Webinar

- **Purpose: Review the on-going I&C research across NE through presentations and discussion**
 - Inform participants on NE I&C research
 - Evaluate progress of on-going projects
 - Get the results from concluding projects

- **Outcome: Better understanding of I&C research across NE**
 - Feedback from R&D Programs on current and planned research
 - Coordination of research activities

- **Materials: Summary of the meeting with presentations**
 - Posted on the NE website www.nuclear.gov



U.S. DEPARTMENT OF
ENERGY

Nuclear Energy

ASI Contact Information

Program Manager:

Suibel Schuppner suibel.schuppner@nuclear.energy.gov

Technical Lead:

Bruce Hallbert bruce.hallbert@inl.gov