Transforming Plant Operations with Digital Technology
Current Fleet Operating Model

- 70’s Technology
- Large Workforce
- Huge Investment in Process, Procedures, and Training
- Design & Licensing Basis Inertia
- Safe & Reliable Performance
Cautious Approach for Digital

- Like-for-Like Replacements
- Limited Innovation
- Little Impact on Human Performance
Challenge for Sustainability

Practical Performance Limit

Current Operating Point
Future Performance Based on A Digital Transformation

New Operating Point

Substantial Performance Improvement
Digital Transformation

Address long-term operations with innovations in asset management - particularly aging management
Digital Transformation

Develop advanced technologies for operational control, decision support, plant performance, configuration management, and safety oversight/margin.
Digital Transformation

Address future shortage of qualified workers, availability of needed expertise, and job enrichment.

Improve human performance, reduce dependence on human skill for quality.
LWRSP II&C Working Group

- Demonstrate near-term beneficial digital applications for NPPs
- Conduct research on a long-term vision of substantial digital technology integration
- Communicate this work to utility and support organizations for a transformed NPP operating model based on a digital infrastructure
- Coordinate research with major nuclear industry support organizations