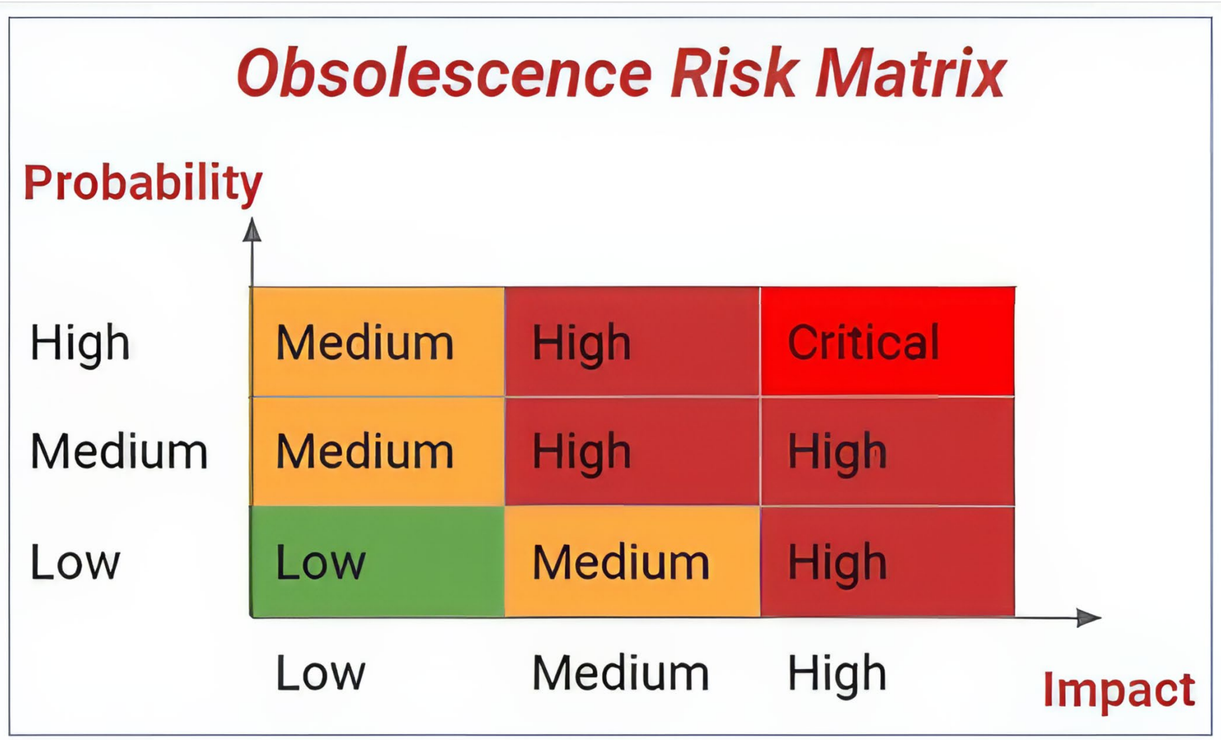
EFCOG PE Equipment Obsolescence

Obsolescence History

- In 1999 Obsolescence was identified as an Industry issue that could affect Equipment Reliability and Vulnerabilities to the Operating Fleet.
- November 1999 an Obsolescence Forum was hosted at Wolf Creek Nuclear Station
- The Nuclear Utility Obsolescence Group (NUOG) was formed in February 2000 to address Equipment Obsolescence.



NUOG Participation

All the North American, CANDU plants worldwide, South America, European, Mideastern and Asian Utilities currently participate in NUOG or INUOG.

Solution providers (suppliers) are fully involved – over 35 suppliers actively participate

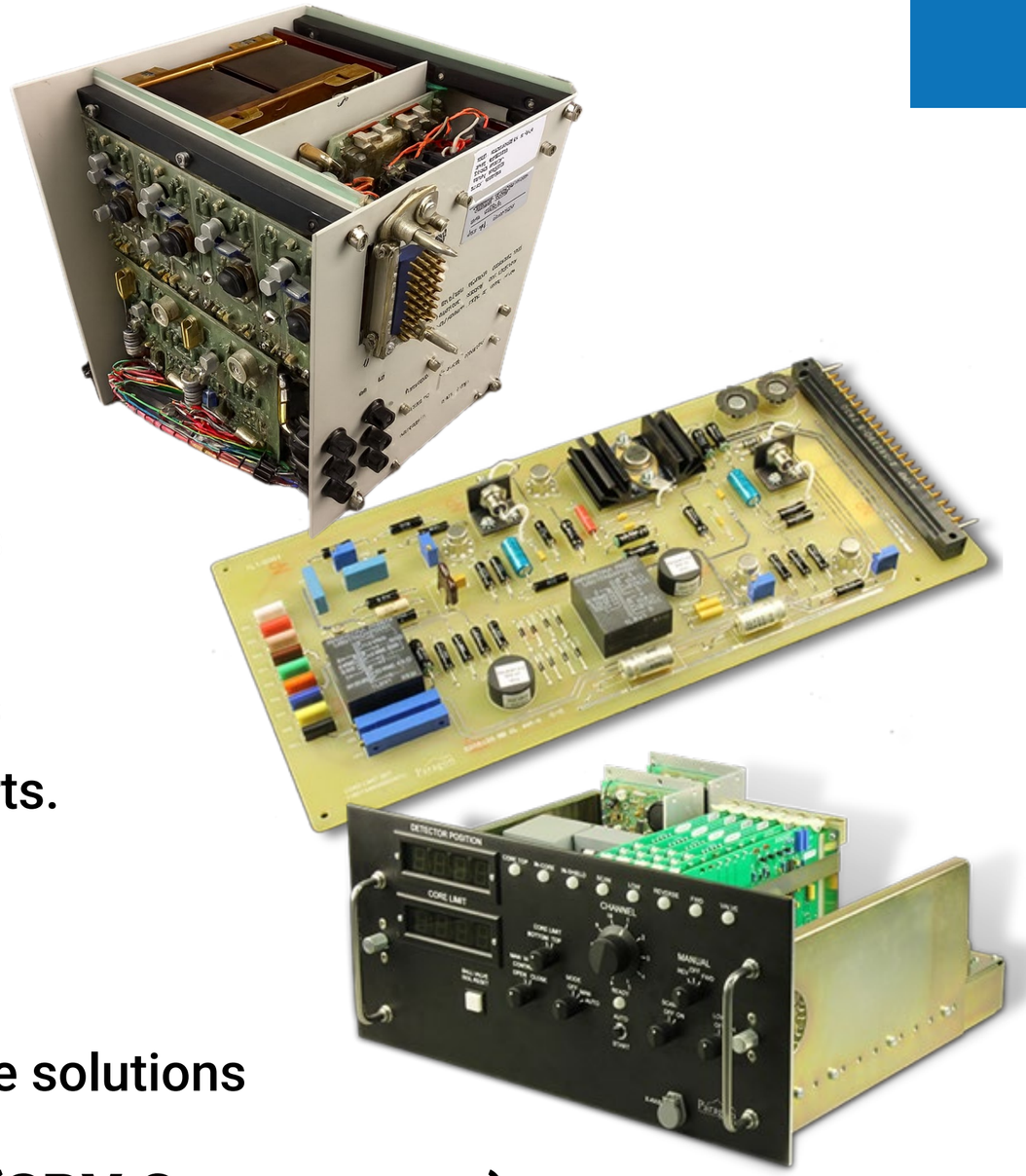
Paragon

2025 Industry Data

Data from 200+ worldwide nuclear facilities

1,979,066 obsolete components

- 10% (191,154) resolved by Engineering Evaluations
- 46% (912,774) with Potential Solution
  - Potential Solutions shared between the facilities
  - Increase in Reverse Engineering and Surplus parts.
- 44% (875,138) with No Solutions identified
  - “No solution” trending down
    - Growing effort by utilities to identify and share solutions



8,170 identified as Single Point Vulnerabilities (SPV Components)

NUOG Processes

Purpose

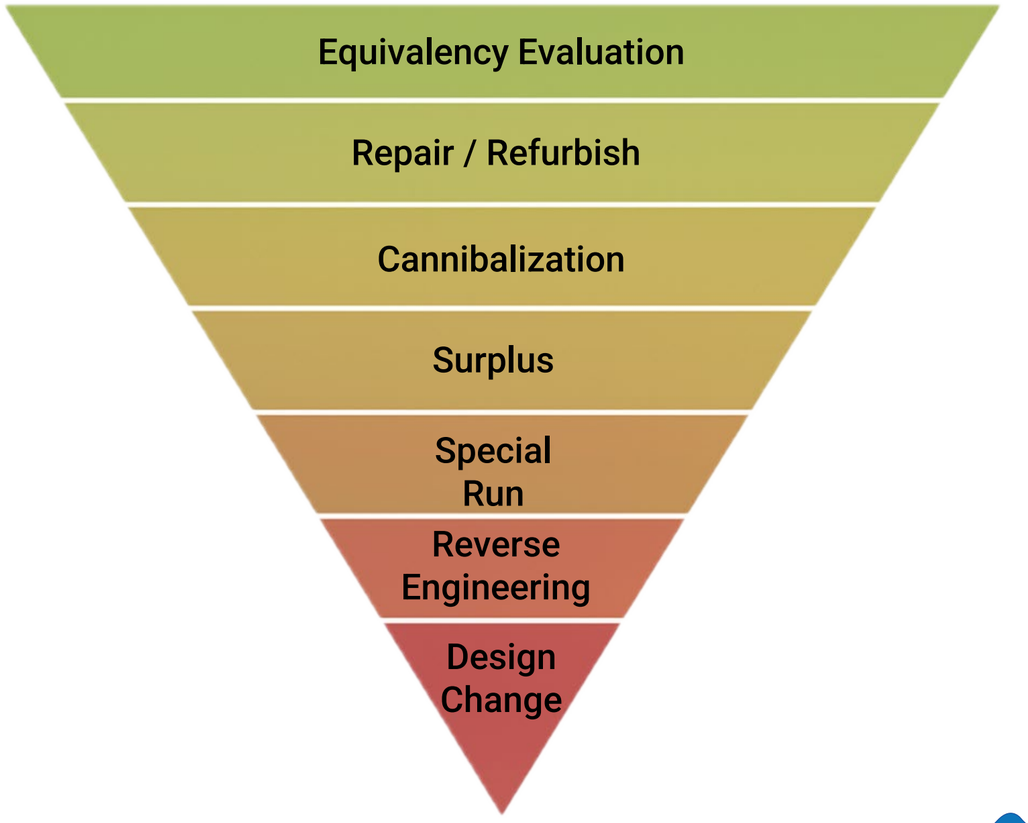
- Create an environment where nuclear utilities can mutually identify obsolete items and potential replacements; provide participants with tools that assist in identifying and solving obsolescence issues to reduce station Risk and Vulnerabilities associated with Equipment Reliability.

5 Stage Approach

- Identification
- Vulnerability Reviews
- Prioritization
- Solution Development
- Program Monitoring

Solutions

- Equivalency Evaluations
- Repair / Refurbish
- Cannibalization
- Surplus Market
- Special Manufacturing Run
- Reverse Engineering
- Design Changes



Paragon

Industry Programs

NUOG

- NX-1037 – INPO Obsolescence Guideline for Nuclear Utility Obsolescence Group

INUOG

- Guidelines for Establishing Management of Obsolescence

IAEA

- Technological Obsolescence Program, IGALL

EPRI

- Obsolescence Management – Program Ownership and Development
- Obsolescence Management – A Proactive Approach
- Proactive Obsolescence Management – Lesson Learned

Utilities

- Obsolescence Program Description

Industry Tools

Curtis Wright – RAPID/OIRD

- The RAPID platform helps the industry solve the challenges related to obsolescence by listing thousands of obsolete items and sharing the solutions for these items.

Paragon – PEAKS / PEAKS +

- Sourcing transactions, CGD, RE, Repair/Refurbish Solution, Obsolescence, Parts Quality Initiative (PQI), and Inventory Health. Obsolescence Program Development and Process implementation.

EPRI – POP / UsOne

- Suppliers input existing solutions, EPRI member utilities identify needed solutions. UsOne provides quick notification of matches and facilitates development of future solutions where multiple members have a need.

Westinghouse – POMS

- Obsolescence identification, solution identification, obsolescence prioritization and management, and automatic obsolescence program reporting and tracking.

NUOG / INUOG Project Centers

- Common location for sharing NUOG & INUOG Obsolescence Solutions and documentation

Design Control Principals

Identical

- An Identical item is one that has the same part, make, and model number which exhibits the same technical, physical (material and configuration) and performance characteristics.

Alternate

- An Alternate item is one which has a different identification but the same physical, material, configuration and performance characteristics as the original item (for example, an administrative part number change). An Equivalency Evaluation is not required to approve an alternate item. However, objective evidence shall be included in the Engineering Evaluation.

Substitute

- A substitute item is one which has different physical, material, configuration and performance characteristics as the original item. Substitute items require an Equivalency Evaluation or Design Change based on the organization Design Control program.

DOE Opportunities

Program Evaluation

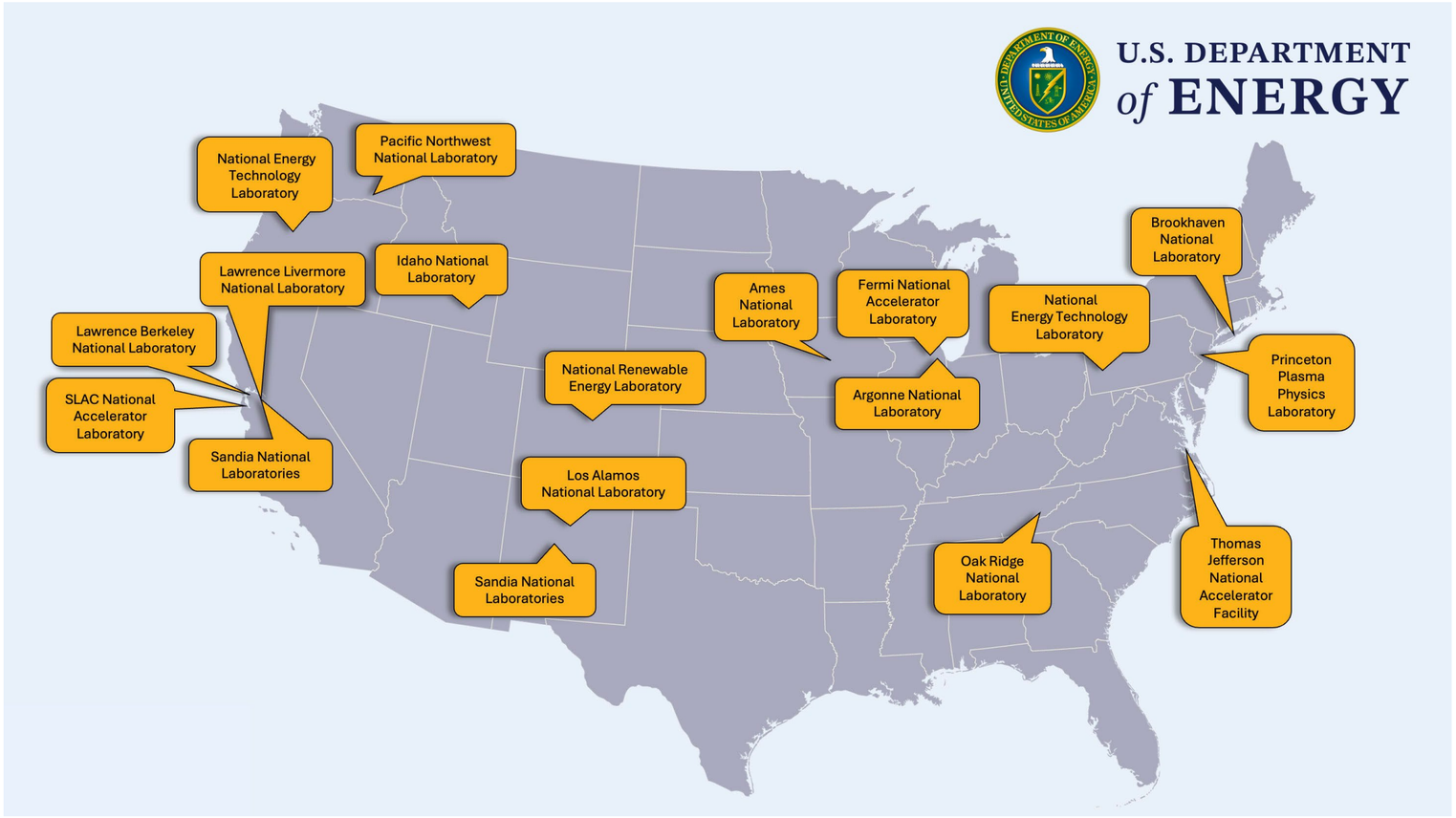
- Evaluate the Programs / Processes used at the various location around Obsolescence.

Gap Analysis

- Evaluate the Gaps identified and provide solutions for a Standardized process.

Standardization

- Build an Obsolescence Program / Process that can be used throughout the Organization.



Bridging Nuclear's Present and Future