The Importance of Technical Qualification & Continuous Learning

NRC Commissioner William C. Ostendorff

Federal Technical Capability Panel

U.S. Department of Energy

Las Vegas, Nevada

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United States Nuclear Regulatory Commission

Protecting People and the Environment

Agenda

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- Mission and Principles of the NRC
- Position Qualification
- Continuous Learning

Sea Story

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NRC Mission

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To license and regulate the nation's civilian use of byproduct, source, and special nuclear materials in order to ensure the adequate protection of public health and safety, promote the common defense and security, and to protect the environment.

Principles of Good Regulation

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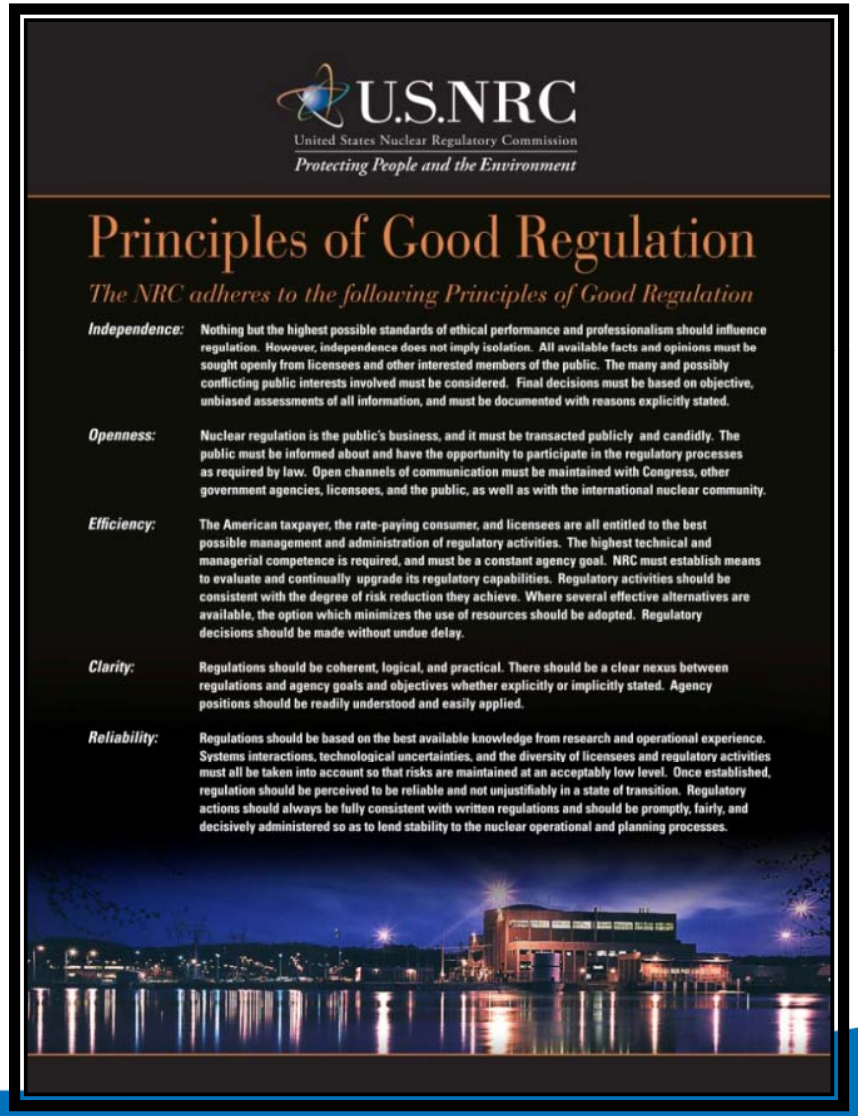

Independence

Openness

Efficiency

Clarity

Reliability

Position Qualification - NRR

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- **Goal of Qualification Program** – prepare employees to perform regulatory duties and implement the agency's policies, programs, and activities
- There are multiple different qualification programs for employees at the NRC.
- Qualification plans are not always intended to ensure or validate staff's technical skills.

Position Qualification - NRR

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Example – NRR Policy

- **Employees:**
  - Will have the necessary admin. resources
  - Will possess the knowledge and skills necessary
  - Will be credited for relevant previous work experience and training
  - Must pass an oral qualification board
  - Qualification needs to be maintained and enhanced
- **Qualification Program** will be maintained.

Position Qualification - NRR

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Reactor Technical Reviewer (RxTR) Study Activities

Activity	**Topic *(time to be completed within)***
RxTR-SA-1	Code of Federal Regulations *(3 months)*
RxTR-SA-2	Current Licensing and Design Basis for Technical Determinations *(3 months)*
RxTR-SA-3	Technical Specifications and the Final Safety Analyses Report *(9 months)*
RxTR-SA-4	Backfit Process *(15 months)*
RxTR-SA-5	Cross-Cutting Technical Reviews *(15 months)*
RxTR-SA-6	Degraded and Nonconforming Conditions and Operability Determinations *(18 months)*

Continuous Learning

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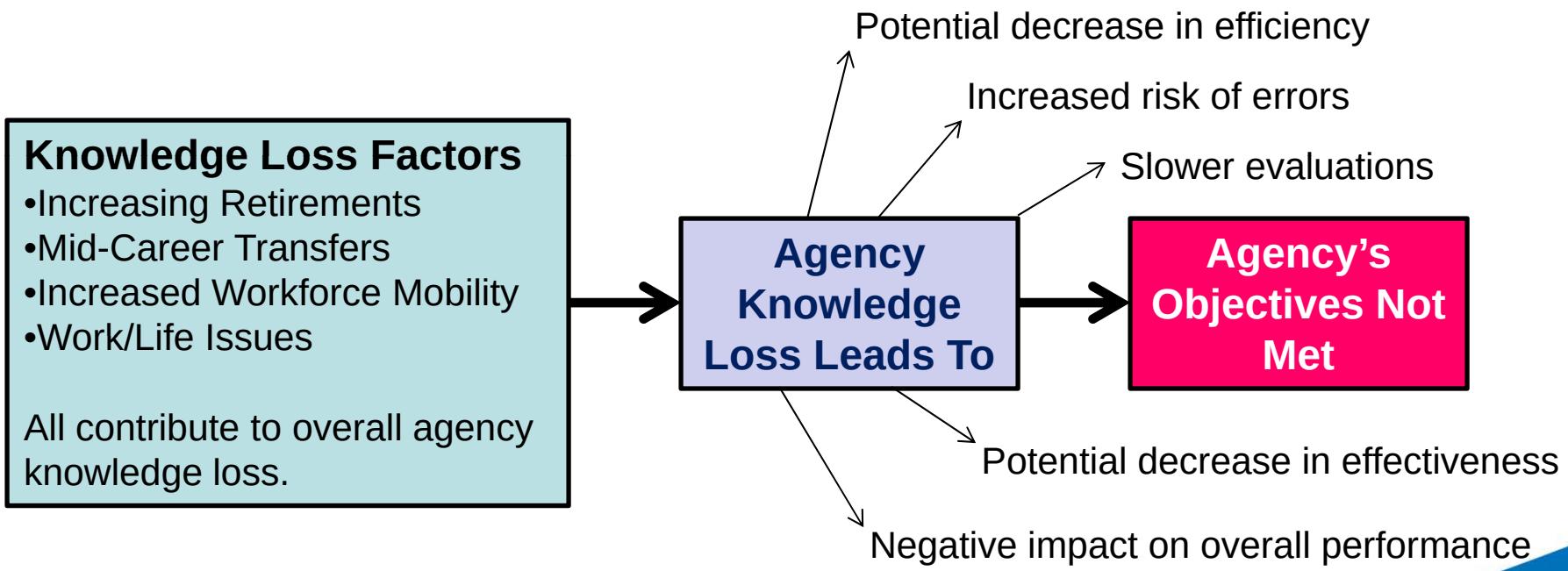
Impact of Knowledge Lost



Continuous Learning

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Four Categories of Interest:

- Human resources processes, policies and procedures
- Knowledge sharing practices
- Knowledge recovery practices
- Information technology applications

Continuous Learning

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- **Rotational Program**
- **Foreign Exchange**

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- **Expertise Exchange**

High-Level Experience —(Knowledge / Skills)→ Low-Level Experience

- **Seminars**

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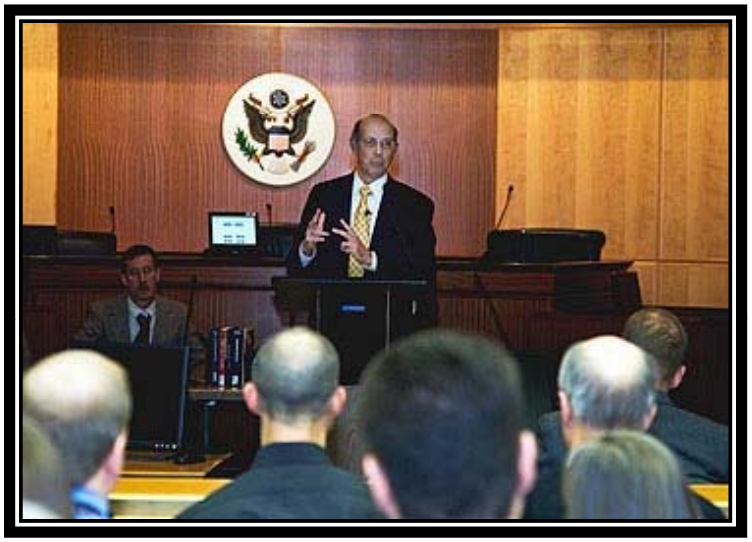
- **Brown Bags**



- **Lectures**

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Davis-Besse Nuclear Power Station

Oak Harbor, Ohio

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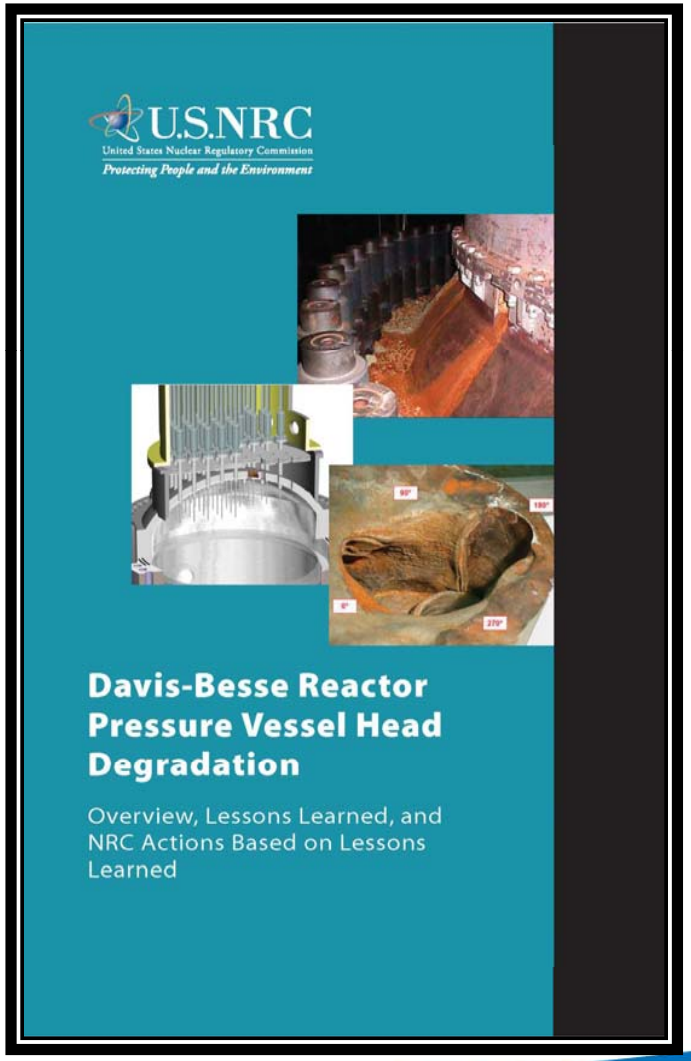

2002 Davis-Besse Lessons-Learned Task Force

•Performance and programmatic issues were a repeat of similar issues from previous lessons-learned reports

2004 Effectiveness Review Lessons-Learned Task Force

•Corrective actions from previous lessons-learned reports not effective

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Objectives of NRC Lessons-Learned Program:

- Establish a formal and rigorous process to ensure correction of significant agency deficiencies
- Provide reasonable assurance that major organizational problems identified by lessons learned will not recur
- Institutionalize the knowledge gained through the corrective action processes and develop solutions for long-term organizational retention
- Confirm the long-term effectiveness of corrective actions

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Fukushima Near-Term Task Force Report

Systematic and ***methodical*** review

- 90-day effort
- Short- and long-term recommendations

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- External hazard design
  - Seismic and flooding
- Prolonged loss of AC power
  - "Station Blackout" coping
- Reliable containment venting
  - Boiling water reactors (BWRs)
- Multi-unit events
- Spent fuel pools

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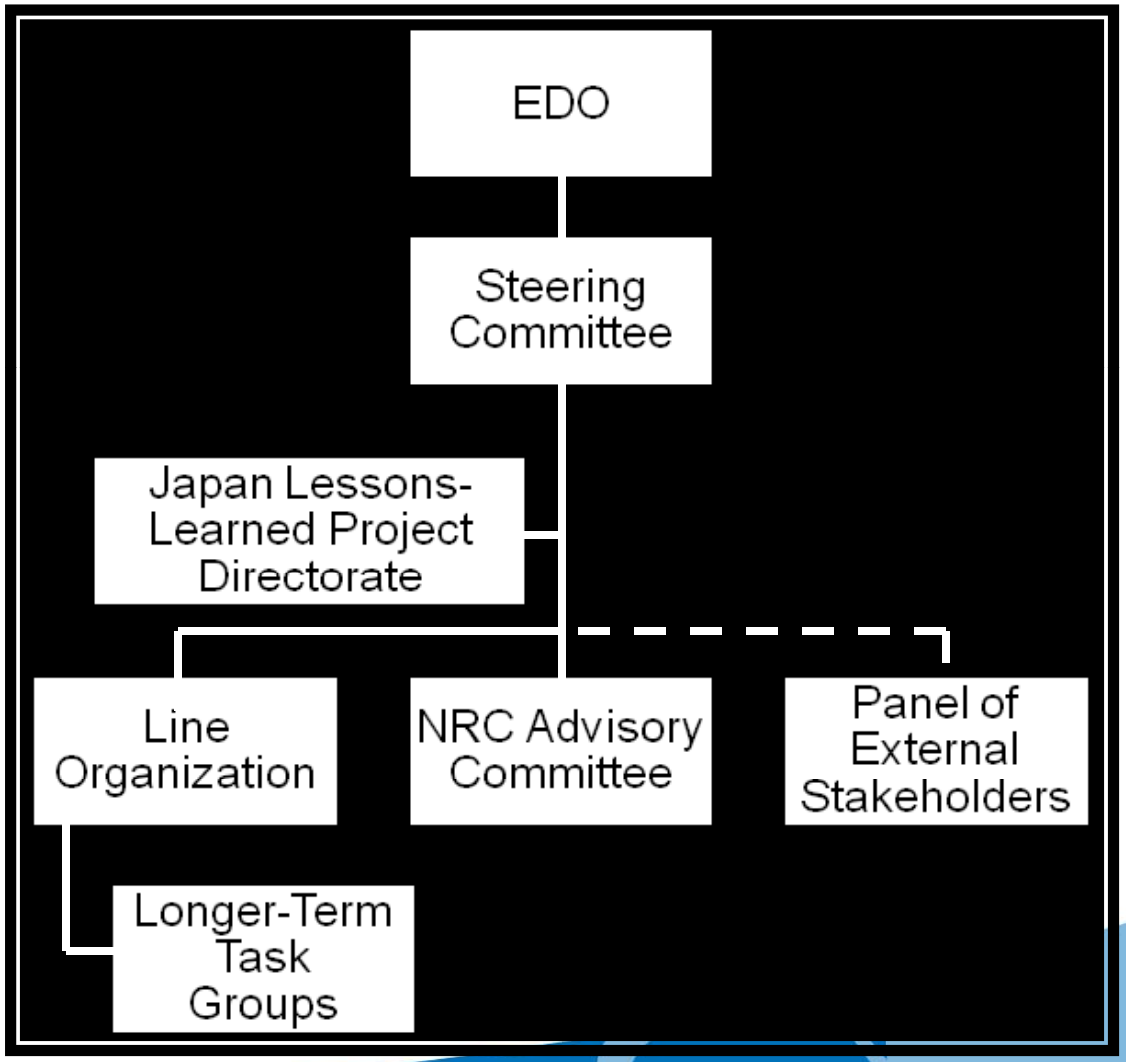

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- **Where do we go from here?**
  - Keep it up and do more
  - Support the KM Center and work to upgrade
  - Continue to interview subject matter experts and employees who plan to retire
  - Compile and catalogue best practices from subject matter experts and make them accessible to the staff

Thank You

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Questions?

Comments?

Discussion?

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Extra Slides

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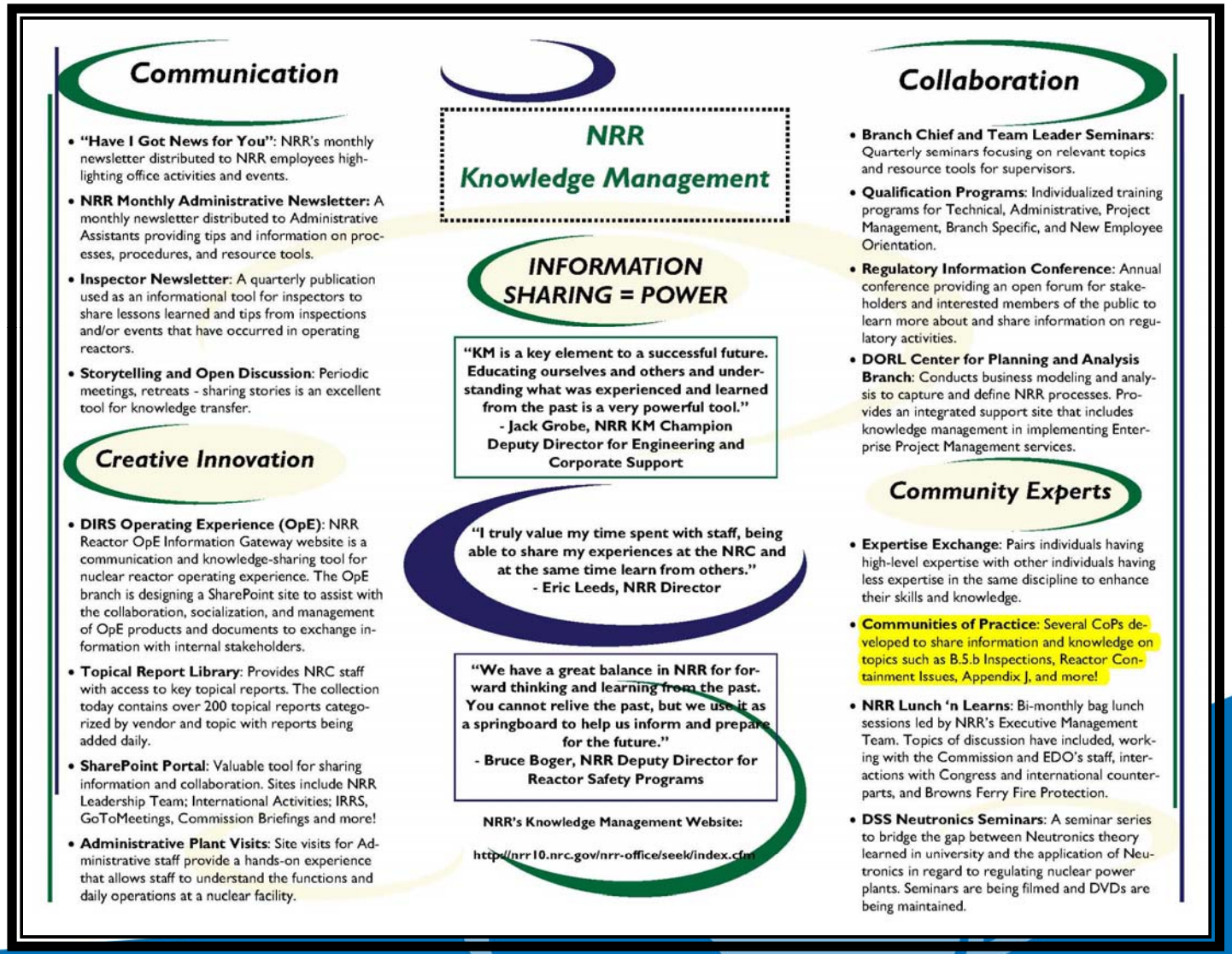
Implementing Knowledge Management

NRR Example



Safety Culture

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Questioning Attitude

Safety Culture

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