U.S.NRC

United States Nuclear Regulatory Commission

Protecting People and the Environment

Knowledge Management
at the
U.S. Nuclear Regulatory Commission

IAEA International Conference on Human Resources Development
for Nuclear Power Programmes
May 12-16
Vienna, Austria

Jody Hudson
Deputy Chief Human Capital Officer
U.S. Nuclear Regulatory Commission

Prior to KM as a Discipline:

- KM is not new; we just didn't call it KM
  - NRC Policy Documents
  - NRC Management Directives and Standard Operating Procedures
  - Guidance Documents
  - Training, workshops, seminars using expert staff
  - Mentoring
  - On the job training with a more experienced employee
  - Records and files
  - After Action Reviews and Lessons Learned
  - Community of Practice networking

What Changed?

- Workforce demographics – projected retirement wave meant projected sudden loss of knowledge

- Projected rapid growth in the NRC workforce: compress time to competency of new employees

- Advances in Information Technology

  – Increased storage and accessibility of information

  – More rapid communications and collaboration
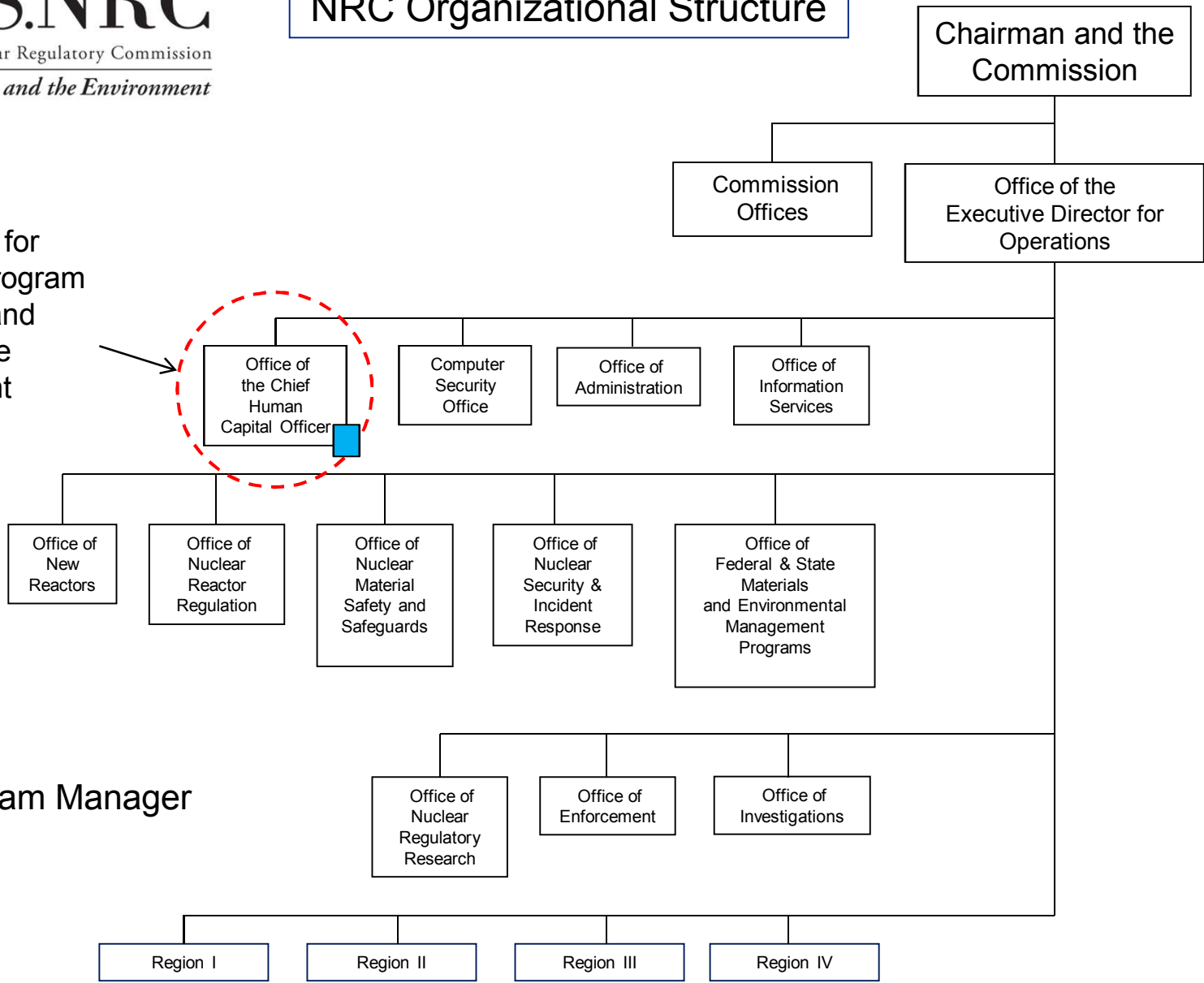
NRC KM Policy:

- Created NRC's KM Program: Policy (SECY-06-0164), July 25, 2006

  - Governance

  - Roles & Responsibilities

  - Initial KM Program Goals

Governance and Roles & Responsibilities

- Distributed Model
  - Centralized infrastructure management and KM Program coordination
  - Decentralized networked implementation
- Created 5 new roles:
  - Senior-level KM Executive Champion
  - KM Executive Office/Regional Champions
  - KM Steering Committee (SC)
  - KM Program Manager
  - KM Staff Leads
  - KM Community of Practice

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NRC Organizational Structure

Chairman and the Commission

Commission Offices

Office of the Executive Director for Operations

Responsibility for centralized KM Program coordination and infrastructure management

Office of the Chief Human Capital Officer

Computer Security Office

Office of Administration

Office of Information Services

Office of New Reactors

Office of Nuclear Reactor Regulation

Office of Nuclear Material Safety and Safeguards

Office of Nuclear Security & Incident Response

Office of Federal & State Materials and Environmental Management Programs

KM Program Manager

Office of Nuclear Regulatory Research

Office of Enforcement

Office of Investigations

Region I

Region II

Region III

Region IV

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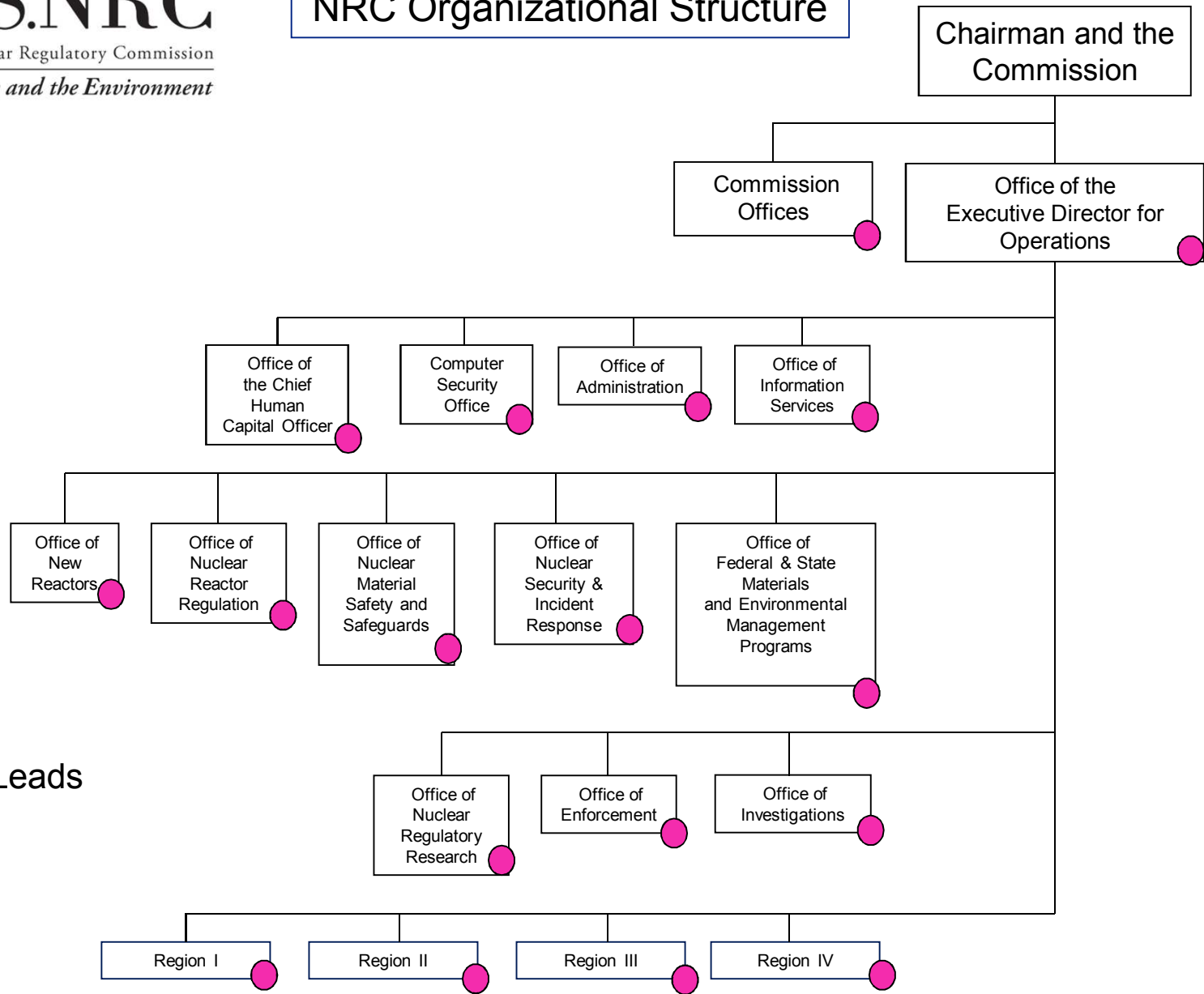
KM Program Manager

- Reports to the Chief Learning Officer

- Manages centralized KM infrastructure and KM coordination
  - Develops and maintains KM policies, procedures and guidance
  - Maintains and updates the KM Web site
  - Conducts and evaluates KM pilot activities
  - Develops, oversees and conducts KM training to NRC employees
  - Conducts focus groups and surveys to determine evolving KM needs
  - Improves KM program based on lessons learned
  - Serves as the community leader for the agency KM Community of Practice (CoP)
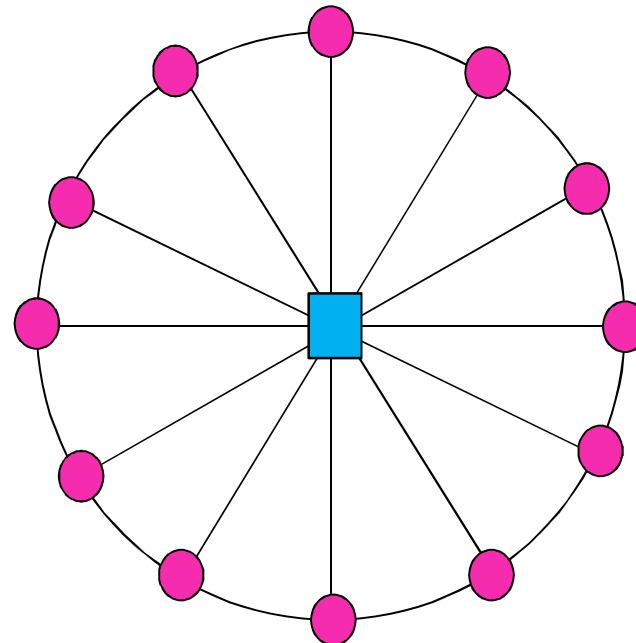
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KM Staff Leads

Region I

Region II

Region III

Region IV

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KM Staff Leads

- Support KM within their respective Office or Region

- Conduct focus groups within their Office or Region to obtain staff input on KM needs, capabilities, and techniques

- Communicate and promote adoption of KM awareness and practices within their respective Offices and Regions

- Participate in and/or lead KM activities to support KM priorities within their Office or Region

- Coordinate with the NRC's KM Program Manager regarding results and lessons learned in their Office's KM initiatives

- Participate as members of the agency's KM CoP

KM Community of Practice

- Serves as KM network that horizontally connects the entire NRC at the staff level

- Share KM best practices and ideas

- Collectively identify KM infrastructure needs and recommendations to improve the KM Program

- Monitor status of KM activities and projects

- Support and assist each other

NRC Organizational Structure

- Chairman and the Commission
  - Commission Offices
  - Office of the Executive Director for Operations ▲
    - Office of the Chief Human Capital Officer
    - Computer Security Office
    - Office of Administration
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        - Office of Nuclear Regulatory Research
        - Office of Enforcement
        - Office of Investigations
          - Region I
          - Region II
          - Region III
          - Region IV

▲ Senior KM Champion

Senior KM Champion

- Senior level NRC Executive

- Uses stature and influence to encourages and actively promote KM across the entire NRC

- Helps overcome agency-level obstacles to effective KM

- Co-Chairs the KM Steering Committee
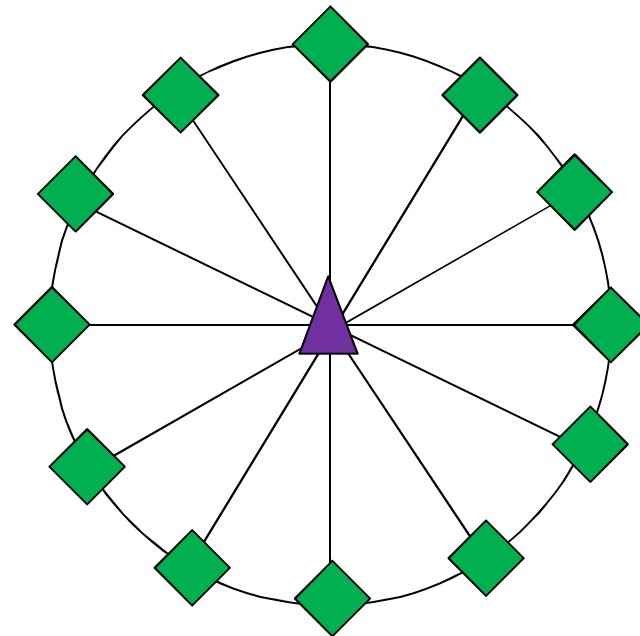
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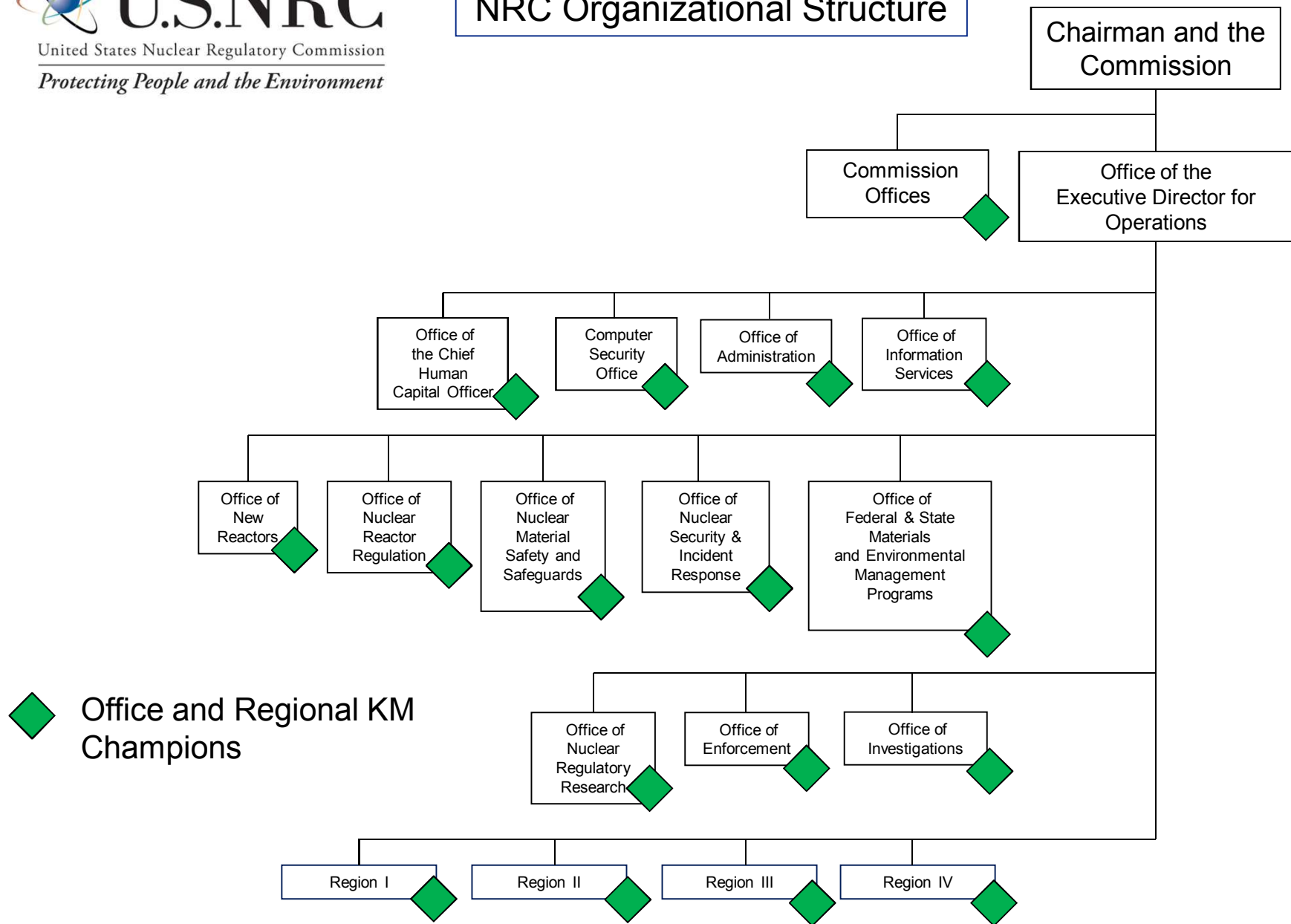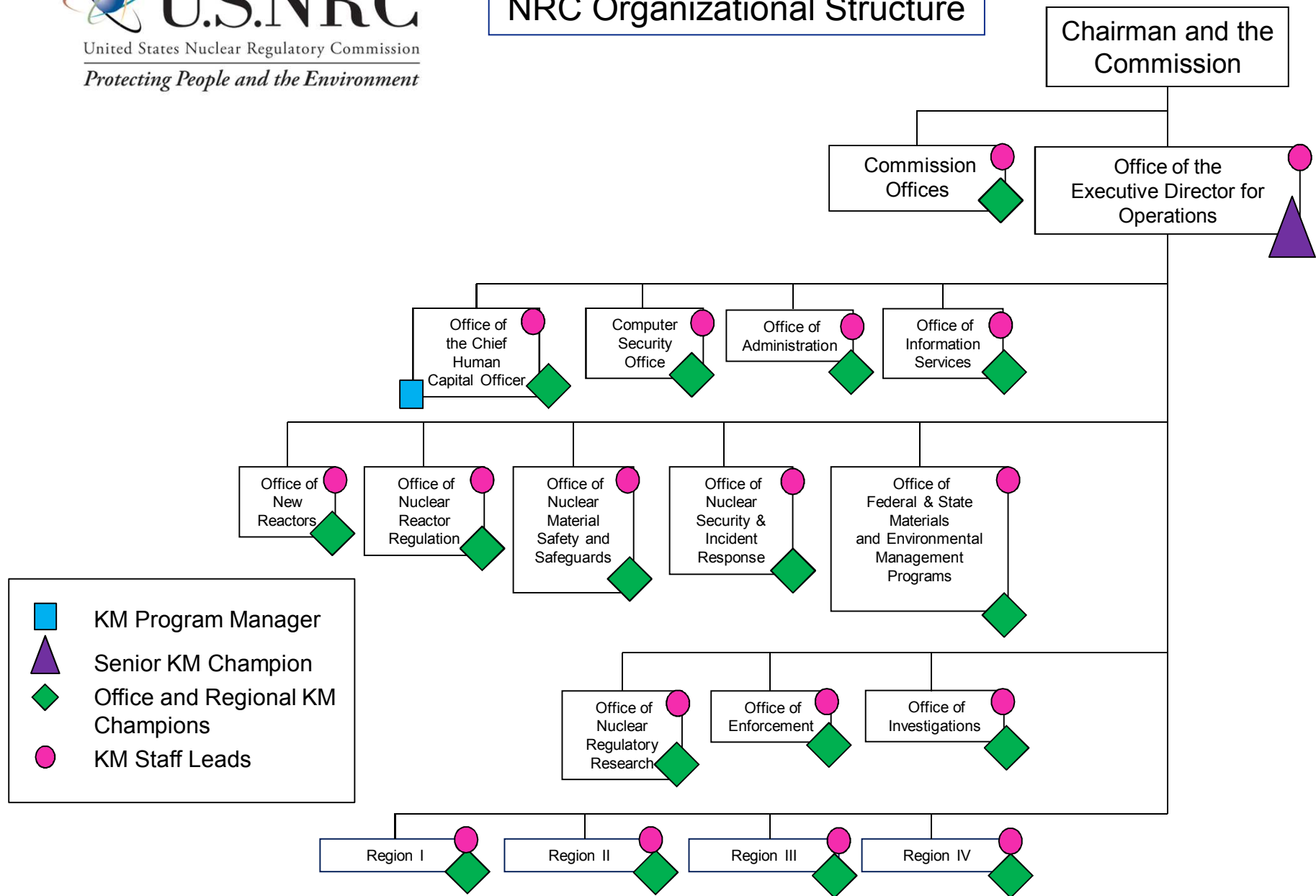
◆ <u>Office & Regional KM Champions</u>

- Office/Regional level Executive

- Use stature and influence to encourage and actively promote KM within their respective Office of Region

- Help overcome agency-level obstacles to effective KM

- Participate on the KM Steering Committee

KM Steering Committee

- Executive-level KM network that horizontally connects the entire NRC at the executive level

- Assesses KM Program status quarterly

- Ensures strategic alignment between KM and the NRC's needs

- Assesses recommendations from the KM Program Manager and KM CoP to improve the KM Program

- Support and assist each other

NRC Organizational Structure

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Region I

Region II

Region III

Region IV

KM Program Manager

Senior KM Champion

Office and Regional KM Champions

KM Staff Leads

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Nested KM Network:

- Staff level Community of Practice
- KM Steering Committee
- Connects KM vertically and horizontally

KM Program Manager

Senior KM Champion

Office and Regional KM Champions

KM Staff Leads
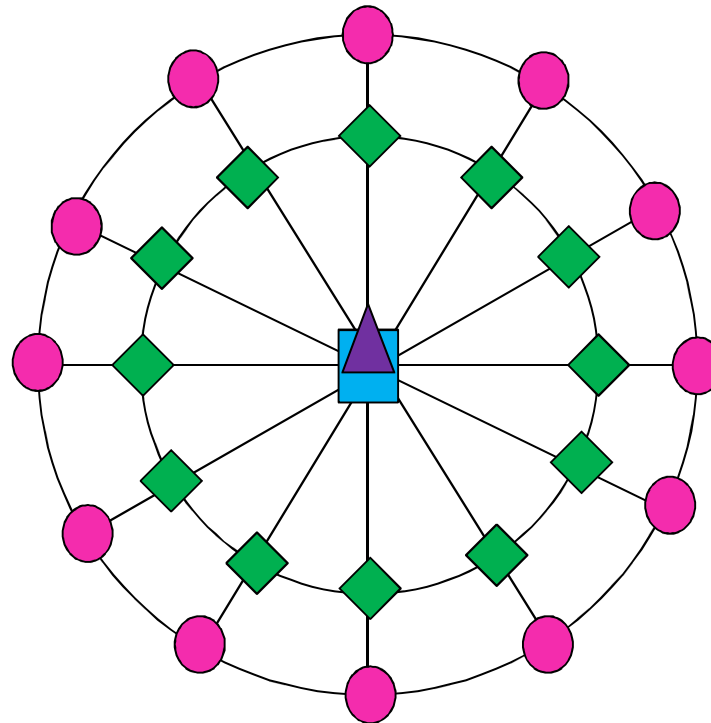
KM Methodologies

- Four categories
  - Human resources processes, policies and procedures
  - Knowledge sharing practices
  - Knowledge capture practices
  - Information technology

Priority focus is on identifying knowledge that is __BOTH__ High Value and High Risk (of loss), then capture and preserve it for access by others

	Relatively Lower Value	Relatively Higher Value
High Risk (of loss)		X
Low Risk (of loss)		
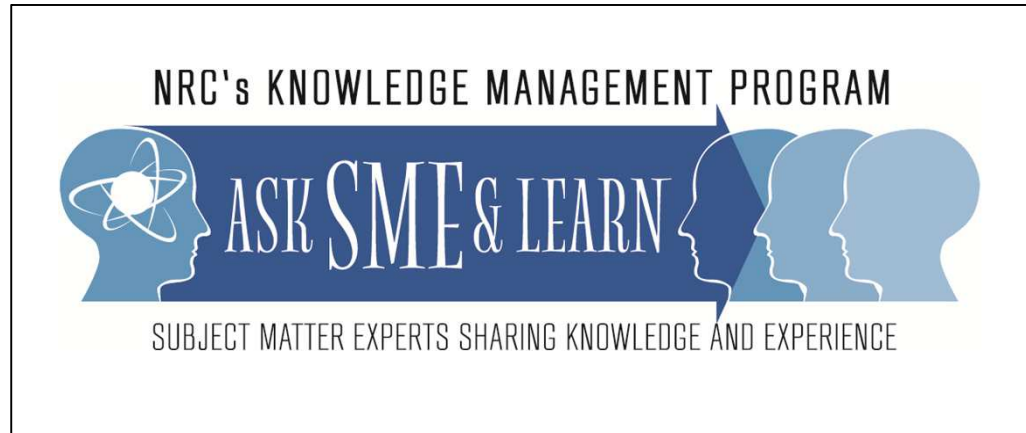
NRC Knowledge Management Fair
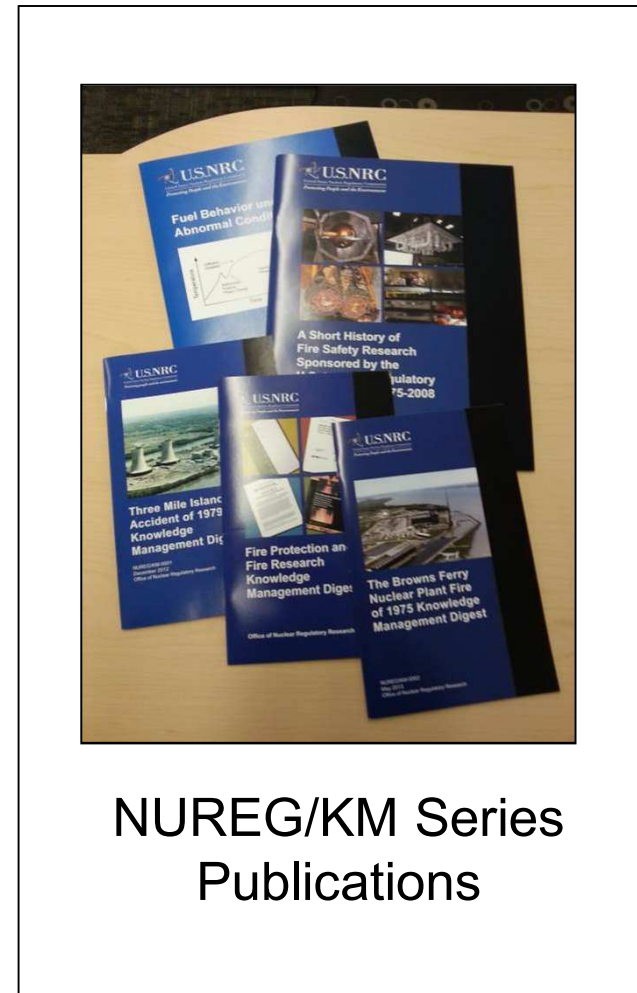
NUREG/KM Series Publications

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NRC's KNOWLEDGE CENTER

| Welcome | Documents & Videos | Questions & Answers | Experts & Members |

Charter

Welcome to the site!

Welcome

Welcome to NRC's Knowledge Center (NKC) - Please review the **NKC Draft Governance Document** to learn about the various roles and responsibilities and how to become a Community Leader.

Materials
- Academic and Research Material Uses
- Decommissioning
- Enforcement
- Incident Response
- Packaging & Storing Radioactive Material
- Part 70 Overview
- Sealed Sources and Devices (SSD)

Reactors
- B.5.b Inspections
- Engineering Mechanics
- HTGRs
- Inspector Newsletter
- LMRs

Cross Cutting Issues
- Expertise Exchange
- Holding Bin CoP
- Human Factors
- Internal Safety Culture
- International Standards
- Operating Experience
- Project Manager Information
- Nuclear Fuels

Professional Development
- Leadership Potential Program
- 📁 NSPDP
- 📁 Qualification

NRC Management & Support

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(7 items)

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(7 items) NRR, Human Capital Branch

Haile Lindsay ▼
(5 items)

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conditions"   licensing
management   materials
meeting   "mitigating
strategies"   "nei 06-12"   ngnp
nspdp   nss   pbmr   process
quiz   "r&d plans"   requirements
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sfst   "spent   fuel"   standards
track   training   video
wassc   wassc27   welding

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...become a Community Leader, see the ⬛ NRC Governance Document

Our Communities

- 10CFR50.65 Maintenance Rule
- Academic and Research Material Uses
- Administration
- Advanced Training Methods Project
- Agreement State Programs
- Appendix J, Containment Penetrations and Isolation, Hydrogen Control, and Secondary Containment
- Best Practices for Reactor Inspector Qualification Activities during Site Visits
- Combustible Gas Control
- Communications Council
- Containment Penetrations and Isolation
- Counterfeit, Fraudulent Suspect Item (CFSI) Response Community
- Decommissioning
- Division of Contracts
- EDO
- Educational Seminars
- Enforcement (Materials)
- Engineering Mechanics
- EPAD Leadership CoP
- Exempt Consumer Product Uses
- FCSS Project Manager Information
- FMB & ECB Qualification Program (License Reviewer)
- Gas Accumulation Temporary Instruction 2515-177

- 21st Annual RIC
- ADAMS P8 Champions
- Advanced Reactors
- Agency Enforcement
- Appendix J
- B.5.b inspections
- Benefits and Services for Families and Parents
- beta FTPA
- Branch Chief & Team Leader Resource
- Commission on Safety Standards
- COMMUNITY
- CoPs Under Development
- Courses
- Critical Heat Flux
- Demo Community for Administrative Assistants
- DS379 - Basic Safety Standards
- EDO Admin
- Electrical Systems
- Enforcement (OGC Only)
- Environmentally Assisted Cracking
- Events and Operational Experience (Materials)
- Expertise Exchange
- Fire Protection
- Fuel Cycle Information Exchange FCIX
- General NRC Travel Information

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Bio

Jody Hudson currently serves as the Chief Learning Officer for the U.S. Nuclear Regulatory Commission (NRC) where he has held that SES position since May, 2009. Mr. Hudson is the responsible executive for the full breadth of workforce learning and development, Knowledge Management, and Organizational Development programs at NRC. Prior to that, he served for four years as the SES Chief Learning Officer at the U.S. Department of Energy (DOE). At DOE he had enterprise-wide executive responsibility for organizational learning and development, recruiting and internships, and human capital business automation programs. While at DOE he led important initiatives such as the department's implementation of the White House initiative on National Security Professional Development, the new business start-up of the competitively sourced enterprise-wide training services organization with offices in seven different geographic areas across the country, transformation of learning and development programs to a competency-centric model, implementation of a centrally managed corporate intern program as an important talent pipeline, and gained national recognition for developing best practices in Supervisory Development, SES Candidate Development Programs, and Recruiting. Prior to joining DOE, Mr. Hudson worked for the U.S. Environmental Protection Agency (EPA) for twenty-one years where he led a broad range of regional environmental program management, regulatory, scientific, and administrative programs. While at EPA he earned an EPA Gold Medal in the area of Training, and earned EPA's most prestigious scientific award, the Scientific and Technology Achievement Award for his work in environmental monitoring. He has authored or co-authored more than fifteen publications addressing environment-related scientific and technical

KM Success Factors at NRC:

- Clear governance, and roles & responsibilities is important
  - Strong leadership support
- Distributed networked model is effective
  - Centralized KM infrastructure management
  - Decentralized, networked implementation
  - Nested KM networks connect the NRC horizontally and vertically
- Priority focus on High Value/High Risk knowledge
- Keep KM practical - focus efforts on major work functions
- Encourage Communities of Practice and networks
- Use KM to advance informal workforce learning & development
- Leverage technology
- Keep evolving and improving

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