Nuclear Regulator Knowledge Management in a Dynamic Nuclear Industry Environment

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Dynamic Environment .....changes within the UK

- Changes are shifting the UK sector’s outlook from one dominated by plant operations and clean-up, to an outlook dominated by expansion and construction.
- UK nuclear workforce expected to increase from 77,900 in 2015 to 111,300 by 2021.*
- Demographics across the sector mean that a high proportion of staff expected to retire over the period.

* Source: NESA Nuclear Workforce Assessment 2015
Dynamic environment…. for ONR

Changes

• Changes to organisational structure
• ONR became a separate statutory body (previously part of the Health and Safety Executive)

Challenges

• Since 2011 recruited in excess of 70 new inspectors which necessitated changes to the training and assimilation of new inspectors.
• Need to grow from our current 344 inspectors/specialists to around 500 by 2020, to meet the predicted resource requirements to regulate new nuclear.
• Demographics over this period mean the loss of a significant number of experienced staff.
Developing Approach to Knowledge Management - 1

1. Initial review of Knowledge Management using people a process technology approach

Key findings:

- The basic infrastructure components (people, process technology) for KM present in ONR.
- Focus on end of career knowledge capture not on through life knowledge sharing.
- Core knowledge not defined.
- Lack of clear ownership of knowledge within the organization.
- The tacit knowledge of experienced inspectors is key to making effective regulatory decisions.
- Technology under-utilised and sometimes seen as a problem.
- Barriers included – silo working, lack of succession planning, lack of time for reflective practices.
CORE KNOWLEDGE AREAS

- Regulatory and Legal
- Technical
- Industry
- Behavioural
- Organisation Management
- Policy and Strategy

ONR CORPORATE MEMORY

Office for Nuclear Regulation
Developing Approach to Knowledge Management - 2

2. Developing a Knowledge Management Approach

- Trained a group of Knowledge Champions in knowledge elicitation techniques to address the concern of knowledge loss due to the age profile of the organization.
- Identified key owners of knowledge, putting knowledge management into their roles and responsibilities.
- Moved from end of life knowledge capture to a more robust position of through life knowledge transfer by linking knowledge management to organizational resilience activities.
- Identified core knowledge areas for ONR.
- Knowledge management maturity model used to make an initial assessment of where the organization was and where it wanted to be.
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**Key**
- Green: Where we want to get to
- Red: Where we think we are
Developing Approach to Knowledge Management - 3

3. Review progress and revise approach

• A review of progress was undertaken in 2015, which highlighted the scope of the current knowledge management strategy had not engaged the entire organization.

• A revised approach consists of six activity areas is now being implemented,
  • three focused on capturing and sharing knowledge in key parts of the organization: Specialisms, Programmes and Directorates
  • three focused on oversight of the knowledge management and creating the right environment for knowledge management including the right organizational culture, processes and technology.
ONR Wide Knowledge Management Approach

Activity 1: Providing strategic management, co-ordination and oversight

Activity 4: Embedding KM in Specialisms

Activity 2: Creating the right KM Culture

Activity 5: Embedding KM in Programmes

Activity 3: Creating KM Support Systems and Enablers

Activity 6: Embedding KM in Directorates (Policy, International, HR)
Key Learning

Some of the key lessons learned to date are:

- Effective implementation depends on clearly identifying the aims for knowledge management and ensuring consistent senior level ownership for knowledge management. This is particularly important during periods of organizational change.
- Engaging the whole organization is key and is best achieved by identifying activities that enhance knowledge management and are seen to add value in day to day tasks.
- Ensuring the resilience of a regulatory body requires the transfer of tacit knowledge which in turn requires a people centred approach to knowledge management.
- Expect change – be prepared to manage knowledge through periods of organizational and environmental change.