Sustaining Nuclear Security Regimes through Continuous Learning Experiences: A Case Study in Knowledge Management Systems Supporting Human Resource Development

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Topic Area: Human Resource Development: Knowledge Management

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Abstract:

As Member States plan, implement, and ultimately, sustain their nuclear security regimes, the considerations for developing human resources supporting these regimes are paramount. Human resource development broadly includes programs addressing education, training, and knowledge management. The IAEA's recently published Implementing Guide, Sustaining a Nuclear Security Regime, highlights the importance of national-level support for assigning resources that help ensure States are able to develop and retain sufficient human resources in the short, medium and long term.[1] Determining what resources are needed to support education, training, and knowledge management is no easy task, and in particular, knowledge management is a practice often overlooked when assigning resources for human resource development. This paper will highlight the importance of implementing continuous learning experiences in knowledge management efforts as part of sustaining a nuclear security regime. Further, this paper will offer approaches for planning and implementing knowledge management systems and measures for States considering and actively developing their own nuclear security knowledge management efforts, and more broadly for their human resource development.

The U.S. Department of Energy / National Nuclear Security Administration / Nuclear Smuggling Detection and Deterrence (NSDD) program has devoted considerable resources to developing and maintaining a knowledge management system that supports partnering countries with their human resource development efforts. This paper will focus on the case study of this Knowledge Management Website (KMW), launched in 2015. The KMW was designed to tie together tools and techniques partner countries could access and use to help support the development of their training, maintenance, and operations programs focused on nuclear security detection. Since the launch, over 200 users from more than 50 countries have signed up and actively use the site.

The KMW is a resource that houses materials such as curriculum for training and procedures for how to maintain and/or operate detection instruments. From the beginning, a focus on products which met "Just In Time" needs was adopted to foster continuous learning experiences relevant to sustaining detection equipment deployed in support of their nuclear security regime. This is an effective strategy in the field of adult learning which evolves away from the "One and Done" mentality attributed to in-person instruction. All IAEA Member States and Nuclear Security Support Centers (NSSCs) are welcome to request access through the KMW page on the IAEA Nuclear Security Information Portal (NUSEC).

This paper will discuss key factors to developing the KMW, including planning considerations for launching the KMW, identifying content which met the model of fostering continuous learning experiences, developing a structured taxonomy for managing this content, communicating to potential users the utility of the KMW, and the importance of incorporating configuration management practices. Additionally, this paper will highlight topics to consider for operating the KMW, including maintaining current documentation, collecting end user feedback, the evolution of the KMW and KMW Mobile App, and the importance of maintaining a close relationship with training and curriculum development efforts. Finally, the paper will offer insights into the future of the KMW / KMW Mobile App and provide a summary of lessons learned.

This paper will be structured into sections. The first section will include an introduction and summary of the paper's major points. Section two will include a discussion of the importance of incorporation continuous learning opportunities into knowledge management practices for nuclear security human resource development and introduce the KMW case study. Section three will review the considerations for developing and launching the KMW. The fourth section will review key factors for operating, managing, and evangelizing the KMW, including collecting end user feedback and adapting to training delivery methods and curriculum development needs. Section five will summarize lessons learned from deploying and maintaining the KMW.

And finally, section six will provide a conclusion, highlighting future plans for the KMW and knowledge management practices. The topics explored in the paper will be helpful as other States consider approaches to systems and measures for nuclear security knowledge management, and ultimately human resource development.

State

United States

Gender

Female

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