

D&D Knowledge Management Information Tool

Challenge

Deactivation and decommissioning (D&D) work is a high priority across the DOE Complex. The D&D community associated with the various DOE sites has gained extensive knowledge and experience over the years. To prevent the D&D knowledge and expertise from being lost over time, an approach is needed to capture and maintain this valuable information in a universally available and easily usable system.

Technical Solution

The D&D Knowledge Management Information Tool (D&D KM-IT) serves as a centralized repository providing a common interface for all D&D related activities. It assists users in gathering, analyzing, storing and sharing knowledge and information within the D&D community. This approach reduces the need to rediscover the knowledge of the past while capturing the new knowledge and experiences gained during D&D operations, resulting in enhanced worker safety, schedule efficiencies, and overall reduction of technical risk.

D&D KM-IT is a web-based information tool to manage knowledge, custom-built for the D&D user community, by the Applied Research Center (ARC) at Florida International University (FIU) in collaboration with the Department of Energy, the Energy Facility Contractors Group (EFCOG), and the former ALARA Centers at the Hanford and Savannah River Sites.



D&D KM-IT home page (www.dndkm.org) and mobile web application (m.dndkm.org).

Tech Accomplishment

D&D KM-IT has been developed and deployed to capture and share D&D knowledge both across the DOE complex and internationally. The following modules and features are currently active:

- **BEST PRACTICES** – provides a repository of best practices from the D&D field
- **COLLABORATION TOOLS** – provides an information-sharing mechanism (e.g. news, event calendars, links, etc.)
- **D&D DICTIONARY** – provides D&D keywords and definitions
- **DOCUMENT LIBRARY** – provides a repository of U.S. and international D&D related reports and documents (e.g. historic Innovative Technology Summary Reports) as well as newsletters from the former ALARA Centers
- **EXTERNAL LIBRARY** – provides a collection of descriptions with links to external D&D resources
- **GLOBAL SEARCH** – provides search capability of all documents and webpages within KM-IT
- **HOTLINE** – receives D&D questions and provides solutions from subject matter specialists
- **LESSONS LEARNED** – provides a repository of lessons learned from the D&D field
- **MOBILE SYSTEM** – provides the ability to use D&D KM-IT from mobile devices
- **PICTURE/VIDEO LIBRARY** – provides a repository of videos and photographs from the D&D field
- **SPECIALIST DIRECTORY** – provides a directory of D&D subject matter specialists and their areas of expertise
- **TECHNOLOGY** – provides D&D technology and demonstration information
- **TRAINING** – provides a central location for D&D related conferences, workshops, and training
- **VENDORS** – provides a directory of D&D vendors with descriptions of their products and services
- **WEB CRAWLER** – provides users with a search tool for finding information on D&D KM-IT as well as the web

Site Project & Identifier

DE-EM0000598
D&D KM-IT

Tech Stage: Development

For the deployment of Information Technology for D&D knowledge management

Impact

The D&D KM-IT has been developed through the application of state-of-the-art web technologies in a secured environment to serve as a single point or portal of knowledge for D&D activities. The system consolidates a wide span of knowledge relevant to the D&D community making it available on the web, and in a mobile format, for easy navigation and use by its users supporting a strategic vision of its knowledge base becoming self-sustaining through active participation by the D&D community of practice. By May 2015, D&D KM-IT had 731 registered users, 84 registered subject matter specialists, 902 D&D vendors, and 1,222 technologies (including a recently added robotic database of 471 technologies).

Impact and Features

- Capture, catalog, store, and disseminate experiences gained during D&D operations.
- Enhance worker safety and D&D operational efficiencies while contributing to overall technical risk reduction.
- State of art web based system tailored for the D&D community providing dynamic access to D&D related information over the web.
- D&D user community driven system and will serve as a focused source for D&D related knowledge/activity/information.
- Features include D&D hotline, vendor directory and technology management, directory of D&D specialists, D&D web crawler, lessons learned and best practices, video/picture library, collaboration tools, training module, mobile system, D&D dictionary, global search, document library.

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Challenge Category	Tech Solution Category
D&D challenges categories in - <ul style="list-style-type: none">• Experience Base Retention• Problems• Technologies• Custom Search• Document Repository• Best Practices• Collaboration• Lessons Learned• Knowledge Sharing	<ul style="list-style-type: none">• Knowledge Management• Lessons Learned• Best Practices• Knowledge Sharing• Web Crawler• Hotline• Technology Management