

Gartner

Final Report Prepared for
**US Nuclear Regulatory
Commission**

**ADAMS Directional Study IV&V
Assessment**



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Gartner Consulting

8405 Greensboro Drive, 6th Floor, McLean, VA 22102
+1-703-226-4700

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1 Introduction

The U.S. Nuclear Regulatory Commission (NRC) has implemented a comprehensive document management system called the Agency-wide Documents Access and Management System (ADAMS). In February 2001, the NRC engaged a contractor to conduct an ADAMS Directional Study to determine whether ADAMS will support the agency's long term needs for an electronic document/process management system. The ADAMS Directional Study also provides for the consideration of alternative systems and software.

Because ADAMS is integral to the daily business of the agency and the recommendations of the ADAMS Directional Study will be critical to NRC planning and future investments, the quality and accuracy of the study is of utmost importance. In order to ensure the quality and accuracy of this study, the NRC requested that Gartner Consulting perform an independent verification and validation (IV&V) of the ADAMS Directional Study. This document represents the final report for the IV&V engagement.

1.1 Project Objectives

The objectives of this engagement are to verify and validate the ADAMS Directional Study document to ensure that it:

- Follows a rigorous and structured assessment methodology
- Is logically consistent with well-supported conclusions
- Is topically complete in consideration of agency long-term needs
- Is balanced and mainstream in discussion of alternative systems and software.

1.2 Project Approach

Gartner Consulting performed a review of the ADAMS Directional Study report and addendum in order to assess the following:

- Assessment methodology: Has the study utilized a methodology that addresses:
 - Gaining an understanding of NRC business drivers
 - Identification of NRC functional requirements, both near-term and long-term
 - Mapping of current ADAMS capabilities to functional requirements
 - Mapping of current ADAMS shortcomings to functional requirements
 - Consideration of NRC organizational readiness to establish an electronic workplace
 - Consideration of industry trends and directions for document management systems
- Conclusions: Are the conclusions of the report consistent with Gartner's understanding of the NRC environment and the trends and directions of the document management industry

- **Long-Term NRC Requirements:** Are the full scope of NRC long-term requirements considered
- **Alternative Systems:** Are the alternative systems and software considered consistent with Gartner research concerning the leading players in the industry.

1.3 Assessment Basis

The capabilities of these Gartner organizations were utilized to complete this assessment:

- **Research & Advisory Service for Integrated Document & Output Management (IDOM):** The IDOM research team investigates the technologies, architectures, organizational support and user behaviors required to maximize the utilization of document technologies across an enterprise. A Research Director from this team assessed the report to ensure consistency with industry best practices for successful document management implementations.
- **Information Technology Management Consulting (ITMC):** This group assists clients in a variety of engagements, including the development of strategies for document management, e-business and architectural planning for the support of enterprise initiatives. A Consulting Vice President from this group with document management implementation experience and who worked directly with the NRC in the completion of a web strategy and web architecture assessed this report. This ensured that perspectives regarding NRC's organizational readiness to support document management were considered in the assessment.

2 Executive Summary

The ADAMS Directional Study report and addendum contain a recommendation that NRC continue on the current technical path planned for ADAMS 4.0 and 5.0 and a recommendation that a portal product be utilized. Gartner's assessment of the report can be summarized as follows:

- We concur regarding the recommendation to remain on the current technical path for ADAMS. This finding is based upon:
 - The majority of ADAMS issues that have been identified are programmatic rather than technical. The potential benefit of changing technology approaches is limited to addressing the minority of ADAMS issues that relate directly to the technology. These potential benefits do not justify the costs and risks associated with a change in the technology approach.
 - NRC has identified an approach for addressing the technology issues by upgrading the existing systems without changing the fundamental FileNet platform that is in use. Gartner considers FileNet to be one of the leading vendors of Integrated Document Management (IDM) systems (along with Documentum, Hummingbird and Open Text).
- We believe that the benefits of portal products for NRC are overstated and that none of the implementation issues associated with portals are identified as risks. This finding is based upon:
 - The report claims that “The portal will provide a more usable public interface...”. However, a portal product is simply a tool used to build an interface into a collection of information. The usability of the interface is a function of the human designers that use the tool to create the web site.
 - The report claims that “The portal will provide more of the ‘ideal’ functionality in a shorter period of time.” However, because the ideal requirements have not been clearly defined, there is no basis for this conclusion.
 - The report claims that “The application integration capabilities of the portal will make it easier to tie other systems to ADAMS like GroupWise.” Although leading portal vendors are including application integration capabilities in their products, inclusion of this functionality in no way reduces the technical complexity or risk associated with any application integration effort.
- While the methodology utilized was structured and rigorous, the methodology has not captured a meaningful view of NRC functional requirements. This is based upon:
 - The requirements developed are not tied to NRC business processes. For example, “scan document” instead of “Create Official Agency Record”.
 - No mapping of requirements to long or short term needs of NRC
 - No mapping of requirements to current capabilities or weaknesses of ADAMS
 - No mapping of requirements to planned capabilities of future versions of ADAMS.

- The report is focused on technology issues and makes no attempt to address the importance of the programmatic issues that have been identified – these will impact successful deployment of document management at NRC regardless of the COTS product utilized or the category of product utilized (e.g. Portal products).

3 Details of Directional Study Assessment

An assessment of the ADAMS Directional Study document was performed in four areas:

- Methodology utilized
- Conclusions reached
- Consideration of long-term NRC requirements
- Alternative technologies and systems considered.

This section describes the results of the assessments in each of these areas.

3.1 Directional Study Methodology

As summarized in the table below, the Directional Study was assessed against several factors that Gartner believes should be addressed by a study of this nature.

Assessment Area	Observations
Identification of NRC Business Drivers	Workshops and interviews were used to capture functional requirements. However, there is no evidence that these requirements have been mapped to NRC business drivers or business processes (e.g. Create Official Agency Record).
Identification of NRC functional requirements, both near-term and long-term	<ul style="list-style-type: none"> • Workshops and interviews were used to capture functional requirements. However, these requirements are defined using a generic document management lifecycle, (e.g. “Retrieve Files”) and are not associated with NRC business processes such as “Create Official Agency Record”. • Document management lifecycle used to capture requirements does not contain elements for “Manage Documents” or “Publish to External Web”. • “Workflow” is defined as a requirement. However, workflow represents a category of requirements, not a single requirement. • Requirements have been prioritized, but there is no specific designation of near-term needs v. long-term needs. • Section labeled as “Ideal” does not describe an end-state vision for document management at NRC. Instead, this section serves to summarize issues identified with the existing ADAMS implementation.
Mapping of current ADAMS capabilities to functional requirements	<ul style="list-style-type: none"> • There is no evidence that this has been done. • There is no discussion of how alternate scenarios address specific functional requirements.

Assessment Area	Observations
Mapping of current ADAMS shortcomings to functional requirements	<ul style="list-style-type: none"> • There is no evidence that this has been done. • There is no discussion of how alternate scenarios address specific functional requirements.
Consideration of NRC organizational readiness to establish an electronic workplace	<ul style="list-style-type: none"> • There are some references to programmatic issues that have impacted the ADAMS deployment. However, the action plan does not contain any elements that address these issues. • There is no discussion of how alternate scenarios address specific functional requirements.
Consideration of industry trends and directions for document management systems	<ul style="list-style-type: none"> • Potential benefits of Portal products are overstated: <ul style="list-style-type: none"> – The report claims that “The portal will provide a more usable public interface...”. However, a portal product is simply a tool used to build an interface into a collection of information. The usability of the interface is a function of the human designers that use the tool to create the web site. – The report claims that “The portal will provide more of the ‘ideal’ functionality in a shorter period of time.” However, because the ideal requirements have not been clearly defined, there is no basis for this conclusion. – The report claims that “The application integration capabilities of the portal will make it easier to tie other systems to ADAMS like GroupWise.” Although leading portal vendors are including application integration capabilities in their products, inclusion of this functionality in no way reduces the technical complexity or risk associated with any application integration effort. • FileNet is not identified as a leading provider of workflow functionality

In summary, while the methodology utilized was structured and rigorous, the methodology has not captured a meaningful view of NRC functional requirements. This is based upon:

- The requirements developed are not tied to NRC business processes. For example, “scan document” instead of “Create Official Agency Record”.
- No mapping of requirements to long or short term needs of NRC
- No mapping of requirements to current capabilities or weaknesses of ADAMS
- No mapping of requirements to planned capabilities of future versions of ADAMS.

3.2 Directional Study Conclusions

Gartner does not believe that the business case has been presented thoroughly enough to support the conclusions that have been drawn. In particular:

- As discussed in the previous section, the requirements that have been identified are not well-defined.
- There is no discussion of how the alternate scenarios address the functional requirements that have been defined.
- Gartner believes that the benefits that are attributed to a portal product are significantly overstated in the report. This finding is based upon:
 - The report claims that “The portal will provide a more usable public interface...”. However, a portal product is simply a tool used to build an interface into a collection of information. The usability of the interface is a function of the human designers that use the tool to create the web site.
 - The report claims that “The portal will provide more of the ‘ideal’ functionality in a shorter period of time.” However, because the ideal requirements have not been clearly defined, there is no basis for this conclusion.
 - The report claims that “The application integration capabilities of the portal will make it easier to tie other systems to ADAMS like GroupWise.” Although leading portal vendors are including application integration capabilities in their products, inclusion of this functionality in no way reduces the technical complexity or risk associated with any application integration effort.

3.3 Long-Term NRC Requirements

- Requirements have not been categorized as near-term or long-term. Although requirements have been prioritized, it is important to recognize that there may be some high-priority requirements that should be categorized as long-term, given the current organizational readiness to implement these requirements. Workflow is the best example of this type of requirement.
- The report appears to be focused entirely on identifying a technology approach. However, Gartner believes that a critical success factor for implementation of enterprise-wide document management systems is to take a business approach. This approach should include:
 - Completion of a document inventory: to identify different classes of documents and varying requirements associated with each class
 - Utilization of the document management system as a vehicle to examine, redefine and optimize processes. Gartner research indicates that simply automating paper-based processes often results in even greater organizational inefficiencies.

3.4 Alternative Systems

The report identifies several alternate vendors. The vendors identified represent the mainstream of document management vendors. However, the assessment of capabilities of these vendors appears to be focused on functionality. Gartner believes that assessment of alternate vendors should address these areas:

- Functionality
- Sales, service and support
- Cost
- Company viability
- Company vision.

The report strongly endorses the use of a Portal product to support the implementation of document management at NRC. As noted above, Gartner believes that the benefits attributed to portal products are significantly overstated. In particular, the report makes assumptions about the ability of portal products to address collaboration and workflow requirements, without identifying that FileNet provides industry-leading workflow capabilities.

The report and addendum recommend that the NRC migrate to the Microsoft Office suite. The justification given is that this will “reduce existing usage and integration inefficiencies”. However, there is no detail regarding these usage and integration inefficiencies or how they will be addressed by a migration to Microsoft Office.

3.5 Summary

The report and addendum contain a recommendation that NRC continue on the current technical path planned for ADAMS 4.0 and 5.0 and a recommendation that a portal product be utilized. Gartner’s assessment of the report can be summarized as follows:

- We concur regarding the recommendation to remain on the current technical path for ADAMS. This finding is based upon:
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 - NRC has identified an approach for addressing the technology issues by upgrading the existing systems without changing the fundamental FileNet platform that is in use. Gartner considers FileNet to be one of the leading vendors of Integrated Document Management (IDM) systems (along with Documentum, Hummingbird and Open Text).

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 - The report claims that “The portal will provide more of the ‘ideal’ functionality in a shorter period of time.” However, because the ideal requirements have not been clearly defined, there is no basis for this conclusion.
 - The report claims that “The application integration capabilities of the portal will make it easier to tie other systems to ADAMS like GroupWise.” Although leading portal vendors are including application integration capabilities in their products, inclusion of this functionality in no way reduces the technical complexity or risk associated with any application integration effort. Integration with products like GroupWise can include many different types of functionality, none of which are described in the report.
- While the methodology utilized was structured and rigorous, the methodology has not captured a meaningful view of NRC functional requirements. This is based upon:
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 - No mapping of requirements to long or short term needs of NRC
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- The report is focused on technology issues and makes no attempt to address the importance of programmatic issues that have been identified – these will impact successful deployment of document management at NRC regardless of the COTS product utilized or the category of product utilized (e.g. Portal products).

4 Contact Information

William Corrington
Gartner Consulting
+1-703-226-4778 (voice)
+1-703-226-4702 (fax)
bill.corrington@gartner.com