



CONSIDERATIONS FOR NARA ON LEADING THE FEDERAL GOVERNMENT TO ZERO-CLICK RECORDKEEPING

by Eliot Wilczek, Krista Ferrante, Mike Fleckenstein, and Veronica Martzahl

Introduction

All federal agencies depend on effective recordkeeping systems and practices to support citizen services reliably, equitably, and at scale; protect rights, benefits, safety, and privacy; ensure the appropriate sharing of current and accurate information; and preserve the government's historical memory. Records enable federal agencies to be effective, transparent, and accountable organizations, making reliable recordkeeping an essential part of fostering trust in the government. The National Archives and Records Administration (NARA) is not only the lead agency for ensuring that the federal government carries out effective and accountable recordkeeping practices, but also a thought leader in guiding agencies on best practices.

In July 2022, The MITRE Corporation published a white paper, "Considerations for NARA on the Future of Recordkeeping," that made recommendations to NARA on four areas of opportunity to lead the federal government to the next generation of recordkeeping: fostering cross-professional collaboration, strengthening the recordkeeping workforce, leading the government to zero-click recordkeeping, and constructing a modern infrastructure for records review and release.¹ This follow-up paper further explores the concept of zero-click recordkeeping, which embodies the applied approach of embedding records management rules in electronic information systems, the strategic shift to focusing on implementing systems that natively execute records management rules, and a stronger emphasis on records management programs enabling agency missions.

We define electronic information systems as information systems that "contain and provide access to computerized Federal records and other information."² These include enterprise

systems such as human resources systems and financial information management systems as well as collaborative work environments that have file sharing, chat, and other collaboration capabilities. We distinguish between information systems, which directly support an agency's full range of mission, mission-support, and business activities, and recordkeeping systems, which focus on managing information as records and executing records management rules and are typically used by records management personnel. We make this distinction to facilitate our description of zero-click recordkeeping concepts while recognizing that many solutions blur the line between information systems and recordkeeping systems. We also recognize that the recommendations in this paper to incorporate recordkeeping functions natively into electronic information systems further blur this distinction, as they bring the work of records managers into active work environments.

The MITRE Corporation is a not-for-profit company chartered to work in the public interest to tackle difficult problems that challenge the safety, stability, security, and well-being of our nation. We operate multiple federally funded research and development centers (FFRDCs) on behalf of the federal government and participate in public-private partnerships across national security and civilian agency missions. We invest in independent research and operate a Policy Center to bring data and evidence to policy decisions. MITRE brings to bear a wide range of domain expertise, including records management, data management, privacy, systems engineering, acquisition, and administrative law, to work with government to address its records and information management challenges. We draw on this expertise to formulate zero-click recordkeeping as a conceptual frame for the government, through NARA's leadership, to mature its recordkeeping practices. Table 1 presents a summary of recommendations. Subsequent sections detail those recommendations.

Table 1. Recommendations

<div>1. Vision</div> <p>The federal government needs a vision for what records management looks like after agencies have fully transitioned to electronic recordkeeping. This vision, described here as zero-click recordkeeping, closely aligns records management processes and rules with mission objectives and business functions. In practice this means embedding recordkeeping rules in electronic information systems. NARA should articulate this vision in an assessment report and future requirements.</p>	<div>Recommendation 1.1</div> <p>Write a Records Management Assessment report that examines agency and industry best practices for embedding records management rules in electronic information systems.</p>
	<div>Recommendation 1.2</div> <p>Include requirements or expectations that electronic information systems have embedded recordkeeping rules in updated regulations and guidance. Illustrate these requirements or expectations with examples.</p>
<div>2. Tools</div> <p>NARA should lead and facilitate government and industry collaboration in developing technical solutions and implementation strategies for applying recordkeeping rules to records in electronic information systems.</p>	<div>Recommendation 2.1</div> <p>Develop an RFI that asks vendors to demonstrate at a NARA-hosted industry day how their solutions execute records management rules in the flow of mission-focused work while minimizing records management burdens on agency staff.</p>
	<div>Recommendation 2.2</div> <p>Host a policy roundtable meeting among federal records and data management leaders to identify strategies for overcoming barriers to implementing recordkeeping capabilities in information systems.</p>
<div>3. People</div> <p>Embedding recordkeeping rules more extensively in the flow of agencies' mission-based work requires a shift in the skills of records management staff, particularly records officers. NARA should facilitate the skills development of records management staff and records officers necessary for them to implement and support solutions that embed recordkeeping rules in electronic information systems.</p>	<div>Recommendation 3.1</div> <p>Write a Records Management Assessment report on the skills that agency records management staff and records offices will need to implement zero-click recordkeeping capabilities and successfully manage records in the era of digital government.</p>
	<div>Recommendation 3.2</div> <p>Incorporate courses focused on requirements writing, acquisition, and collaboration into NARA's training curriculum to help records officers enable their agencies to implement systems with zero-click recordkeeping capabilities.</p>

Vision

At an applied level, zero-click recordkeeping focuses on embedding records management rules into electronic information systems to integrate recordkeeping actions into mission-based activities. In this vision, as people create, use, and modify records in the course of their work, records management actions tied to business rules are automatically executed. Managing records becomes less of a distinct activity that agency staff must do and more of a thread within the fabric of people’s mission-driven work.³ The goal is to maximize the responsiveness of records

management rules to business actions while minimizing the time most agency staff spend “doing” records management. For agency records programs, this means placing less emphasis on the direct stewardship of records and more emphasis on implementing recordkeeping rules in systems and environments across the agency.

For NARA, zero-click recordkeeping should represent a strategic shift from emphasizing the transition to electronic records to articulating the nature of effective recordkeeping in digital

government. NARA has a long tradition of grappling with electronic records.⁴ For more than 15 years, NARA has made a sustained effort to help agencies modernize their records management practices. This effort has included working with key partners such as the Executive Office of the President, the Office of Management and Budget (OMB), and the General Services Administration (GSA) to develop guidance, direction, and resources to enable agencies to fully transition to electronic records.⁵ This work reached a significant milestone with NARA-OMB Memo 19-21, which required agencies to fully transition to electronic recordkeeping by December 31, 2022.⁶ Due to COVID-19, NARA and OMB extended that deadline to June 30, 2024, in Memo 23-07.⁷

This deadline reflects an inflection point in federal government recordkeeping. This moment marks a maturation from a narrow focus on the transition to electronic records to a broader focus on making electronic recordkeeping effective and central to agencies' work. NARA is already moving in this direction by taking actions such as expanding the role-based strategy for managing email, known as Capstone, to a broader array of electronic messaging modes⁸ and issuing an assessment of and guidance on agencies' use of collaboration tools for interagency business.⁹ Zero-click recordkeeping fits within this focus on the records management capabilities of electronic information systems.

Zero-click recordkeeping also encompasses a shift on the emphasis of records management's strategic value from achieving compliance to enabling mission. Compliance will always be a key strategic underpinning of records management. However, NARA should emphasize that strong records management programs and systems are also essential for the effective, consistent,

and equitable delivery of government services. All agencies must have well-structured, richly described, easily discoverable and shareable, yet carefully controlled records, where immutable final record copies can be identified and set aside, to carry out their core duties. Agencies need effective recordkeeping rules and processes that enable their staff to execute mission-oriented services and free them from burdensome records management tasks. The current administration has made a priority of delivering "excellent, equitable, and secure Federal services and customer experience," particularly services "for key life experiences that cut across Federal agencies."¹⁰ Reinvigorating trust in government is a vital piece of protecting the health of our liberal democracy. Trust in government cannot rely on transparency alone. An agency that operates transparently but ineffectively, unreliably, or unfairly does not merit the public's trust. Trust requires both transparency *and effectiveness*. Electronic records management is at the heart of the dual objectives of effectiveness and transparency that serve the goal of strengthening public trust in the government.

Zero-click recordkeeping also embodies an embrace of risk management approaches to records management. Agencies can no longer depend on manual processes in which humans make recordkeeping decisions one record at a time. Agencies need to build automated and semi-automated processes using artificial intelligence and techniques such as robotic process automation that free people from rote recordkeeping decisions to the greatest extent possible. Zero-click recordkeeping means shifting from attempting to handle every record perfectly (which invariably leads to swaths of unmanaged records that become objects of risk instead of assets of value) to implementing processes that

execute policy decisions on records as they move through their life cycle. Programs should systematically identify and describe the risks within these processes, establish performance targets, regularly test those processes against those targets, correct and adjust the processes when necessary, and monitor their output quality. NARA illustrates what this can look like in its 2023 “Digitization Quality Management Guide,” which includes a description of implementing a quality management approach for digitization that organizes a set of quality assurance and quality control functions and activities.¹¹ Taking similar management approaches can help records management programs operate at scale while still maintaining trustworthy systems and processes that can meet the rigorous demands of maintaining authentic records.

NARA should further articulate the concept of zero-click recordkeeping in a Records Management Assessment report. NARA is authorized to conduct these assessments to “evaluate how specific issues affect [records management] programs, policies, processes, and procedures across the Federal government.”¹² This assessment report should survey agency and industry best practices for embedding recordkeeping rules in electronic information systems, including collaborative environments. Emphasis should be placed on the barriers agency records officers face in implementing embedded records management capabilities that are already available in the marketplace and strategies for overcoming these obstacles. This report could highlight collaborative environments and build directly on NARA’s 2022 report on interagency collaboration tools.¹³

Recommendation 1.1

Write a Records Management Assessment report that examines agency and industry best practices for embedding records management rules in electronic information systems.

NARA-OMB Memo 23-07 requires NARA to “issue updated regulations and guidance to provide clear standards for fully electronic recordkeeping” by June 30, 2024. This provides NARA the opportunity to articulate that effective, fully electronic recordkeeping means embedding recordkeeping rules into electronic information systems. This could include providing examples, either as use cases or case studies, of incorporating records management rules into these systems. These examples can help agencies envision how recordkeeping rules can be embedded in their electronic information systems and directly support mission-focused work.

Recommendation 1.2

Include requirements or expectations that electronic information systems have embedded recordkeeping rules in updated regulations and guidance. Illustrate these requirements or expectations with examples.

Tools

The vision of zero-click recordkeeping manifests itself in agencies’ electronic information systems. In most cases, agencies will depend on industry to build the systems that provide implementable zero-click recordkeeping solutions. NARA has played a central role in articulating records management requirements for information and recordkeeping systems. This includes 36 CFR §1236.10, which defines high-level controls that agencies must incorporate into information

systems or recordkeeping systems, and §1236.12, which requires agencies to plan for these controls to be implemented in systems as part of their “capital planning and systems development life cycle processes.”¹⁴ NARA has further articulated these controls in its Universal Electronic Records Management Requirements (UERM).¹⁵ These requirements have informed NARA’s work as the lead agency for developing business standards for electronic records management using the Federal Integrated Business Framework (FIBF).¹⁶ These business standards for electronic records management include life-cycle components, business capabilities, business use cases, standard data elements, and service measures. Agencies can use these business standards to develop and document their digital recordkeeping needs, evaluate their own records management programs and systems, and inform their evaluation and selection of information management systems and recordkeeping solutions. NARA refers to these UERM and business standards efforts, along with its collaboration with GSA to develop procurement guidance for records management systems and services, as its Federal Electronic Records Modernization Initiative (FERMI).¹⁷

NARA has hosted industry days as part of its effort to socialize records management requirements among industry and agencies. NARA hosted an industry day in 2013 as part of its mandate from OMB-NARA Memo 12-18 to “investigate and stimulate applied research in automated technologies to reduce the burden of records management responsibilities.”¹⁸ In 2017 and 2018, NARA co-hosted industry days with GSA as part of NARA’s FERMI effort.¹⁹ In 2022, the Technology Committee of the Chief FOIA Officers Council, with support from NARA’s Office of Government Information Services and the Department of Justice’s Office of Information

Policy, hosted a technology showcase to identify solutions that could help agencies meet their FOIA challenges.²⁰ Another FOIA technology showcase hosted by the same committee and offices is scheduled for May 2024.²¹

NARA should examine the feasibility of hosting another industry day to facilitate a conversation among industry and agencies focused on what recordkeeping should look like in a fully digital government. NARA could produce an RFI that further describes zero-click recordkeeping attributes in electronic information systems, including collaborative work environments. Most importantly, the RFI should ask vendors to demonstrate at the industry day how their solutions across licensing options deeply integrate records management rules within the flow of the mission-based work of agencies while minimizing the recordkeeping burdens imposed on agency staff. NARA could use the UERM and the FIBF-based electronic records management business standards as the basis for developing this RFI.

Recommendation 2.1

Develop an RFI that asks vendors to demonstrate at a NARA-hosted industry day how their solutions execute records management rules in the flow of mission-focused work while minimizing records management burdens on agency staff.

Despite the extensive array of records management requirements, standards, and guidance, agencies continue to face challenges in adopting fully electronic recordkeeping and integrating records management rules into information systems. In its analysis of three annual surveys of all agencies’ records management practices during calendar year 2022, NARA found that many agencies still face barriers

to implementing electronic recordkeeping capabilities and solutions.²²

Evidence of these barriers includes:

- > **Only 47%** of agencies have electronic systems that meet requirements to create, capture, manage, and preserve records and have the proven capability to transfer electronic records to the National Archives.²³
- > **Only 22%** of agencies have implemented systems that can manage permanent electronic records via automated methods.²⁴
- > **Only 38%** of agencies have formal processes in place to identify, classify, and schedule electronic records.²⁵
- > **Only 33%** of agencies include records management staff in their system development life cycle for considering, designing, and implementing new systems.²⁶

For NARA to enable the government to meet a vision of zero-click recordkeeping, it must work creatively with key stakeholders, such as OMB and GSA, to identify and overcome these barriers to execution. To that end, NARA should host a policy roundtable meeting of federal leaders—particularly in the areas of records management, data management, data analytics and artificial intelligence, digital services, and acquisition—who are at the forefront of electronic records management and digital government transformation for a discussion describing barriers to and identifying strategies for embedding recordkeeping capabilities within information management systems that enable records management rules to be executed within the flow of agencies' mission-based work.

Recommendation 2.2

Host a policy roundtable meeting among federal records and data management leaders to identify strategies for overcoming barriers to implementing recordkeeping capabilities in information systems.

People

The vision of zero-click recordkeeping also manifests itself in people, especially agency records officers and their staff. Weaving recordkeeping rules into information systems and work environments while minimizing the amount of time agency staff “do” records management changes the nature of work for government records managers. It shifts their work away from direct stewardship of records and toward rule writing, requirements development, and system acquisition. Successful records management programs will depend on the ability of their staff to implement recordkeeping capabilities in information systems across their agencies.

This is challenging work—zero-click recordkeeping happens with effort, not magic. Minimal recordkeeping clicks for the mission-oriented workforce entails thousands of clicks for records managers as they must encode recordkeeping policies and decisions into most of the tools, processes, and workflows that handle agency records. In this zero-click recordkeeping vision, records managers would largely work in the layer of encoded rules that are a step removed from handling records. These rules amplify records managers' decisions and actions to meet the scale of their agencies' records. Instead of making clicks to apply metadata to a record or a folder of records, for example, records managers would be clicking to articulate rules that apply metadata to all records that pass through a particular process.

In addition to setting up recordkeeping rules and workflows, agency records staff must become adept at defining requirements, navigating the acquisition process, advocating for implementation of recordkeeping capabilities, and building strategic alliances with key figures such as chief data officers.²⁷

NARA must take an active role in helping agency records officers and records staff successfully tackle zero-click recordkeeping. NARA can help prepare the federal records management workforce for the full transition to digital government by defining the skills needed for zero-click recordkeeping and digital government.

Recommendation 3.1

Write a Records Management Assessment report on the skills that agency records management staff and records offices will need to implement zero-click recordkeeping capabilities and successfully manage records in the era of digital government.

NARA already plays a prominent role in shaping the knowledge and skills of agency records staff and sustaining a community of these professionals. It supported the Office of Personnel Management's (OPM's) establishment of a job series for federal records managers in 2015, a crucial step for strengthening the records workforce.²⁸ NARA works to foster a federal records management community through supporting groups like the Federal Records Officer Network (FRON) and the Microsoft 365 User Group, hosting regular meetings for records managers at the Bimonthly Records and Information Discussion Group (BRIDG),²⁹ and communicating important information through its Records Express federal records management blog.³⁰

NARA also provides an extensive catalog of training materials for records custodians, liaisons, and officers, and for senior agency officials for records management.³¹ All agencies are required to designate an agency records officer who holds an Agency Records Officer Credential, ensuring that all agency records officers have a common baseline of records management knowledge.³² NARA provides training for records custodians and liaisons on a wide range of records management topics that focus on the stewardship of records, such as managing and creating records inventories and schedules, generating metadata, and executing the disposition of records. NARA also delivers training material targeted for records officers that includes lessons on developing strategic plans and goals; conducting program self-evaluations; coordinating with agency information technology organizations; and developing requirements for electronic records management systems, creating agency records, and storing records in the cloud. Building on that curriculum, NARA should incorporate courses for agency records officers that focus on such skills as requirements writing, acquisition, and collaboration that will help records officers enable their agencies to acquire and implement systems with zero-click recordkeeping capabilities. This would likely involve partnering with the OPM or GSA to leverage their expertise in these skill areas.

Recommendation 3.2

Incorporate courses focused on requirements writing, acquisition, and collaboration into NARA's training curriculum to help records officers enable their agencies to implement systems with zero-click recordkeeping capabilities.

Conclusions

Zero-click recordkeeping is a vision that aims to enable agency staff to make the right records management decisions in the course of their mission-based work, minimizing the time they spend making records management decisions and clicks. This fits within the effort to build the recordkeeping capacity agencies need to operate effectively and transparently and earn the public's trust.

This paper discusses zero-click recordkeeping in terms of vision, tools, and people. Zero-click recordkeeping involves articulating a vision of what effective records management looks like in the age of digital government. It requires the development, acquisition, and implementation of tools that can execute records management rules in the course of mission-based work. Additionally, it involves fostering a records management workforce that has the skills to implement this zero-click recordkeeping vision and enabling tools.

While we recommend that NARA look for opportunities to include requirements or expectations, illustrated with examples, for embedded recordkeeping rules in electronic information systems when it updates regulations and guidance (Recommendation 1.2), we do not believe that merely adding more requirements and recommendations is the main vehicle for implementing zero-click recordkeeping. Existing regulations, guidance, and requirements already articulate many of the attributes of zero-click recordkeeping. NARA should focus on establishing consensus on the primary barriers and challenges for agencies in realizing the goals of zero-click recordkeeping. In describing these challenges, NARA should also foster identification of cross-

government strategies to overcome those barriers. This work includes writing Records Management Assessment reports to describe the processes and practices of zero-click recordkeeping (Recommendation 1.1) and articulating the kind of workforce needed to implement and sustain zero-click recordkeeping (Recommendation 3.1). It also includes fostering cross-government focus on these challenges (Recommendation 2.2) and partnership with industry (Recommendation 2.1).

Zero-click recordkeeping represents the effort to weave records management rules within the course of agency business to build the capacity agencies need to operate effectively and transparently. This capacity is essential to earning the public's trust. This effort requires cross-government collaboration and NARA leadership.

About the Authors

Eliot Wilczek is a records and knowledge management engineer at MITRE. He has worked as a records manager and archivist for more than 25 years.

Krista Ferrante is the Corporate Archivist at MITRE and Group Lead of the Global Knowledge Assets team. She has two decades of experience in the records management, archival science, and knowledge management fields.

Mike Fleckenstein has more than 30 years' experience leading data management initiatives. His range includes founding a data solutions company and acting as a trusted adviser to CDOs. As Chief Data Strategist at MITRE, Mike supports numerous efforts, including shaping the Federal Data Strategy. Mike teaches and holds workshops in data management and CDO strategy inside and outside MITRE. He is a known speaker and author on data management topics. In 2018, he co-published the book "Modern Data Strategy."

Veronica Martzahl is the Information and Governance Lead at MITRE. She is a certified archivist and certified information governance professional with more than 15 years of experience supporting records management and archival work for local, state, and federal government.

About the Center for Data-Driven Policy

MITRE's Center for Data-Driven Policy brings objective, evidence-based, nonpartisan insights to government policymaking, bolstered by the expertise of MITRE's ~10,000 workforce of scientists, researchers, and engineers. MITRE operates federally funded research and development centers and has an unwavering commitment to scientific integrity. We work in the public interest. We are prohibited from lobbying and have no owners or shareholders. We don't develop products and do not compete with industry. Our unique position empowers the Center to conduct research and policy analysis free from political and commercial pressures, ensuring that our recommendations remain genuinely objective and data-driven.

Connect with us at policy@mitre.org.

Endnotes

¹ Eliot Wilczek, Krista Ferrante, Mike Fleckenstein, *Considerations for NARA on the Future of Recordkeeping* (The MITRE Corporation: McLean, VA), 2022, <https://www.mitre.org/news-insights/publication/considerations-nara-future-recordkeeping>.

² 36 CFR § 1236, <https://www.ecfr.gov/current/title-36/chapter-XII/subchapter-B/part-1236>.

³ The Department of Defense provides an example of a records strategy that focuses on weaving records management into mission-focused work by emphasizing the centrality of well-managed records in effective decision making. See “Records Strategy: Deploying the Full Spectrum of DoD Information for Decision Advantage,” December 2022, <https://dodcio.defense.gov/Portals/0/Documents/Library/DoDRecordsStrategy.pdf>.

⁴ Bruce I. Ambacher, ed., *Thirty Years of Electronic Records* (Scarecrow Press: Lanham, MD), 2003.

⁵ This collaboration has included NARA supporting the Office of the President’s issuance of “Presidential Memorandum—Managing Government Records,” November 28, 2011, <https://obamawhitehouse.archives.gov/the-press-office/2011/11/28/presidentialmemorandum-managing-government-records> and collaborating with OMB to jointly publish Memo 12-18, “Managing Government Records Directive,” August 24, 2012, <https://www.archives.gov/files/records-mgmt/m-12-18.pdf> and Memo 14-16, “Guidance on Managing Email,” September 15, 2014, <https://www.archives.gov/files/records-mgmt/m-14-16.pdf>. NARA partnered with GSA to develop an Electronic Records Management Solutions category in GSA’s Consolidated Schedule.

⁶ Specifically, Memo 19-21 declared that agencies would create all permanent records electronically by the end of 2019, manage permanent electronic records with proper metadata by the end of 2022, and stop operating records storage facilities by the end of 2022, while NARA would stop accepting permanent and temporary records in analog formats by the end of 2022. OMB-NARA Memo 19-21, “Transition to Electronic Records,” June 28, 2019, <https://www.archives.gov/files/records-mgmt/policy/m-19-21-transition-to-federal-records.pdf>.

⁷ OMB-NARA Memo 23-07, “Update to Transition to Electronic Records,” December 23, 2022, https://www.whitehouse.gov/wp-content/uploads/2022/12/M_23_07-M-Memo-Electronic-Records_final.pdf.

⁸ National Archives and Records Administration, NARA Bulletin 2023-02, “Expanding the Use of a Role-Based Approach (Capstone) for Electronic Messages,” January 5, 2023, <https://www.archives.gov/records-mgmt/bulletins/2023/2023-02>.

⁹ National Archives and Records Administration, “Inter-Agency Collaboration Applications,” April 2022, <https://www.archives.gov/files/records-mgmt/resources/collaborative-assessment-report-2022.pdf>; National Archives and Records Administration, NARA Bulletin 2023-04, “Managing Records Created on Collaboration Platforms,” September 29, 2023, <https://www.archives.gov/records-mgmt/bulletins/2023/2023-04>.

¹⁰ See Priority 2, Strategy 2 in “The Biden-Harris Management Agenda Vision: Toward an Equitable, Effective, and Accountable Government that Delivers Results for All,” undated, https://assets.performance.gov/PMA/Biden-Harris_Management_Agenda_Vision_11-18.pdf. Well-managed records are also vital to the aims of Executive Order 14058, “Transforming Federal Customer Experience and Service Delivery to Rebuild Trust in Government,” December 31, 2021, <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/12/13/executive-order-on-transforming-federal-customer-experience-and-service-delivery-to-rebuild-trust-in-government/> and many of the goals outlined by the Executive Office of the President in the “Fifth U.S. Open Government National Action Plan,” December 2022, <https://open.usa.gov/national-action-plan/5/>.

¹¹ National Archives and Records Administration, “Digitization Quality Management Guide,” October 2023, <https://www.archives.gov/files/records-mgmt/policy/digitization-quality-mgmt-guide.pdf>.

¹² National Archives and Records Administration, “Records Management Assessments,” undated, <https://www.archives.gov/records-mgmt/resources/rm-assessments>.

¹³ “Inter-Agency Collaboration Applications,” April 2022, <https://www.archives.gov/files/records-mgmt/resources/collaborative-assessment-report-2022.pdf>.

¹⁴ 36 CFR § 1236, <https://www.ecfr.gov/current/title-36/chapter-XII/subchapter-B/part-1236>.

¹⁵ National Archives and Records Administration, “Universal Electronic Records Management (ERM) Requirements,” undated, <https://www.archives.gov/records-mgmt/policy/universalermsrequirements>. In June 2023, NARA released version 3 of the Universal Electronic Records Management Requirements.

¹⁶ U.S. General Services Administration, “Electronic Records Management: Federal Integrated Business Framework (FIBF),” undated, <https://ussm.gsa.gov/fibf-ERM/>.

¹⁷ National Archives and Records Administration, “Federal Electronic Records Modernization Initiative (FERMI),” undated, <https://www.archives.gov/records-mgmt/policy/fermi>.

¹⁸ OMB-NARA Memo 12-18, “Managing Government Records Directive”; Arian D. Ravanbakhsh, “A Grand Challenge for Industry,” *Records Express* (blog), National Archives and Records Administration, September 20, 2013, <https://records-express.blogs.archives.gov/2013/09/20/a-grand-challenge-for-industry/>; Arian D. Ravanbakhsh, “RFI Responses Available to Federal Agencies,” *Records Express* (blog), National Archives and Records Administration, December 5, 2013, <https://records-express.blogs.archives.gov/2013/12/05/rfi-responses-available-to-federal-agencies/>.

¹⁹ Courtney Anderson, “Save the Date: Industry Day at GSA, November 2, 2017,” *Records Express* (blog), National Archives and Records Administration, October 6, 2017, <https://records-express.blogs.archives.gov/2017/10/06/save-the-date-industry-day-at-gsa-november-2-2017/>; Courtney Anderson, “November 2 Industry Day Agenda,” *Records Express* (blog), National Archives and Records Administration, October 27, 2017, <https://records-express.blogs.archives.gov/2017/10/27/november-2-industry-day-agenda/>; U.S. National Archives, “Industry Day for Electronic Messages on August 6,” *Records Express* (blog), National Archives and Records Administration, July 13, 2018, <https://records-express.blogs.archives.gov/2018/07/13/industry-day-for-electronic-messages-on-august-6/>; U.S. National Archives, “FERMI Industry Day,” *Records Express* (blog), National Archives and Records Administration, August 9, 2018, <https://records-express.blogs.archives.gov/2018/08/09/fermi-industry-day/>.

²⁰ Office of Government Information Services, National Archives and Records Administration, “NexGen FOIA Tech Showcase,” undated, <https://www.archives.gov/ogis/about-ogis/chief-foia-officers-council/nexgen-foia-showcase>.

²¹ Office of Information Policy, “NexGen FOIA Technology Showcase 2.0: Now Seeking Vendors,” *FOIA Post* (blog), Department of Justice, March 5, 2024, <https://www.justice.gov/oip/blog/nexgen-foia-technology-showcase-20-now-seeking-vendors>.

²² The three annual reports completed by all agencies are the Senior Agency Official for Records Management report, the Records Management Self-Assessment, and the Federal Electronic Records and Email Management form. National Archives and Records Administration, “Federal Agency Records Management Reporting,” undated, <https://www.archives.gov/records-mgmt/resources/reporting>.

²³ National Archives and Records Administration, “Federal Agency Records Management: 2022 Annual Report,” July 2023, <https://www.archives.gov/files/records-mgmt/resources/federal-agency-records-management-annual-report-2022.pdf>, p. 19.

²⁴ “Federal Agency Records Management: 2022 Annual Report,” p. 19.

²⁵ “Federal Agency Records Management: 2022 Annual Report,” p. 28.

²⁶ “Federal Agency Records Management: 2022 Annual Report,” p. 28.

²⁷ The Department of Defense articulates a vision of a multidimensional workforce for meeting the records management challenges of digital government that provides a useful illustration of the capacities and capabilities records managers will need to sustain strategically impactful records programs in the 2020s. “Records Strategy: Deploying the Full Spectrum of DoD Information for Decision Advantage,” December 2022, <https://dodcio.defense.gov/Portals/0/Documents/Library/DoDRecordsStrategy.pdf>.

²⁸ Office of Personnel Management, “Position Classification Flysheet for Records and Information Management Series, 0308,” March 2015, <https://www.opm.gov/policy-data-oversight/classification-qualifications/classifying-general-schedule-positions/standards/0300/g0308.pdf>.

²⁹ U.S. National Archives, “Bimonthly Records and Information Discussion Group (BRIDG),” undated, <https://www.archives.gov/records-mgmt/meetings/index.html>.

³⁰ U.S. National Archives, *Records Express* (blog), undated, <https://records-express.blogs.archives.gov/>.

³¹ National Archives and Records Administration, “Records Management Training Catalog,” undated, <https://www.archives.gov/records-mgmt/training/training-catalog>.

³² OMB-NARA Memo 19-21, “Transition to Electronic Records,” June 28, 2019, <https://www.archives.gov/files/records-mgmt/policy/m-19-21-transition-to-federal-records.pdf>; NARA Bulletin 2019-02, “Agency Records Officer Credential Training and Renewal Policy,” September 25, 2019, <https://www.archives.gov/records-mgmt/bulletins/2019/2019-02>.