The National Archives and Records Administration

Building the Archives of the Future

ERA @ IOC

An Update on the
Electronic Records Archives
(ERA) Program
July 25, 2008

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ERA Communications
National Archives and Records Administration

Overview

- **NARA's History, Mission, and Legal Contexts**
- **ERA Program History**
- **Electronic Records Challenges & Strategies**
- **ERA: Acquisition Strategies and Requirements**

- **Where we are today:**
  - *ERA is Open for Business!*
  - *Training NARA staff to use ERA*

To ensure access to records of three branches of the U.S. Government. Records that:

- Protect citizen's rights
- Hold Government officials accountable
- Facilitate historical understanding of our national experience

NARA's Legal Contexts

- **The Federal Records Act**
  - All agencies of the U.S. Government
- **The Presidential Records Act**
  - The President and Vice President
  - Officials and organizations which advise them
- **Donated Materials**
  - The Congress
  - The Supreme Court
  - Private persons

ERA Program History

- **<u>1960s - Present</u> Over 40 years experience providing access to electronic records**
- **<u>1970</u> First electronic records transferred to NARA, begin preservation**
- **<u>1995</u> NARA is heading for mission failure**
- **<u>1998</u> ERA Research Partners**
- **<u>2000</u> ERA becomes an Official Program**

Electronic Records
NARA's Challenges

- **Scope**   **The entire U.S. Federal Government**

- **Obsolescence** **Constantly Changing Technology**

- **Access**   **Ability to view records over time**

- **Volume**   **Large amounts of records arriving to NARA**

- **Variety**   **Different/Complex Types of Records**

- **Complexity**   **and Records Formats**

Examples of
Variety & Complexity

The 9–11 Commission Records

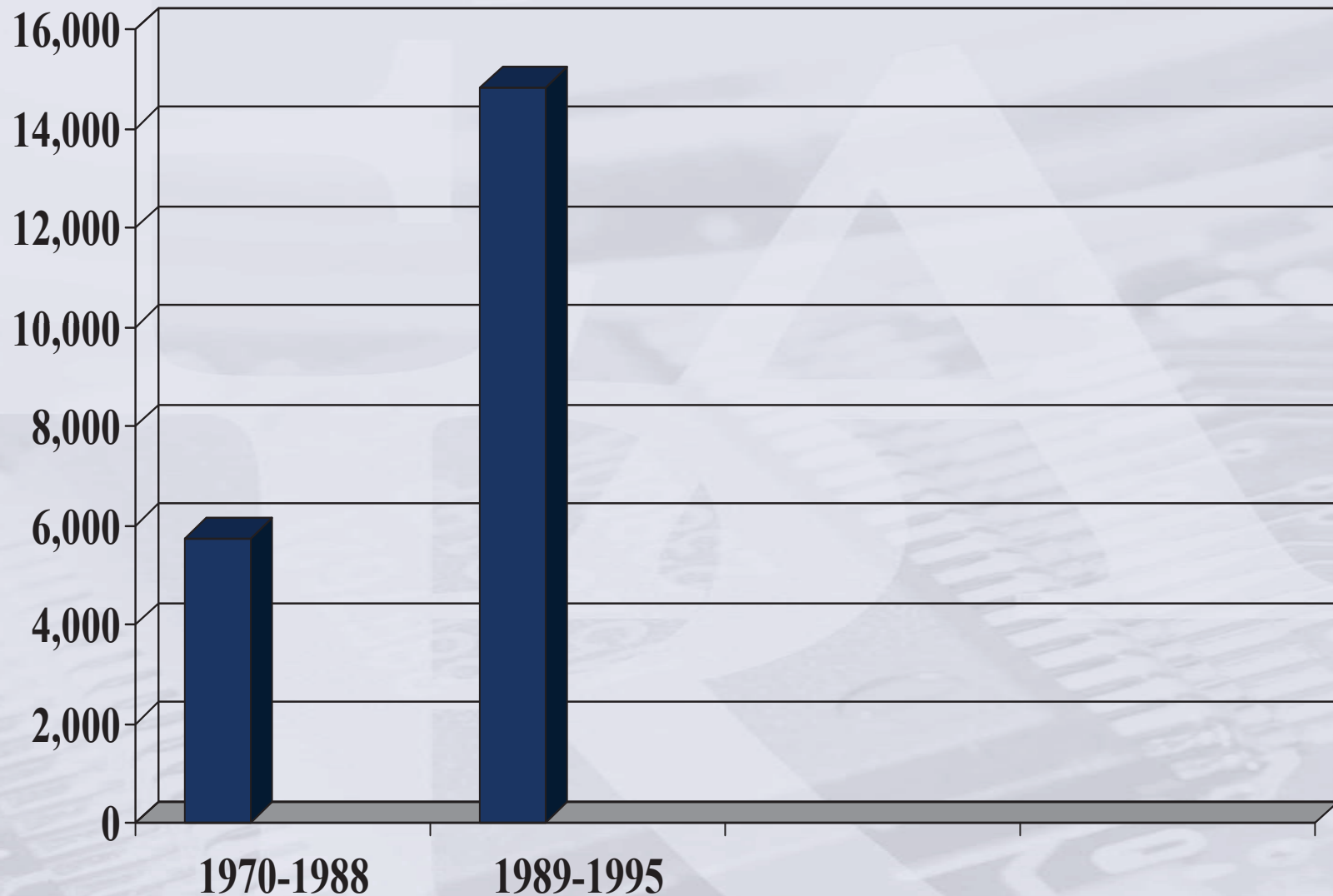### Office Automation Files

- ➢ Word processing documents
- ➢ Spreadsheets
- ➢ Presentations
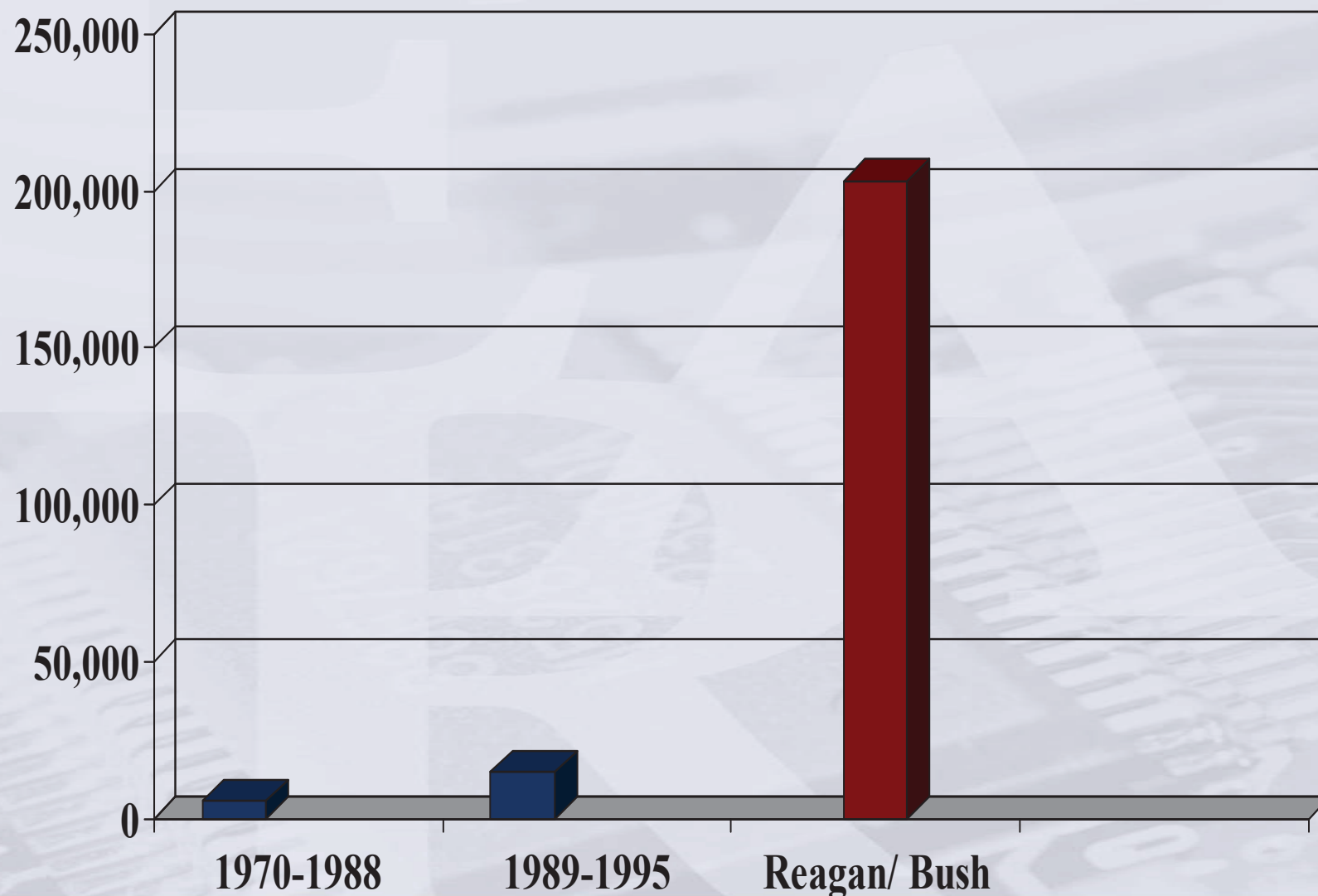- ➢ E-mail w/ attachments
- ➢ Scanned paper documents

Complex Formats

- ➢ Databases
- ➢ Digital Photography
- ➢ Satellite Imagery
- ➢ **Digital audio files**
- ➢ **HDTV**
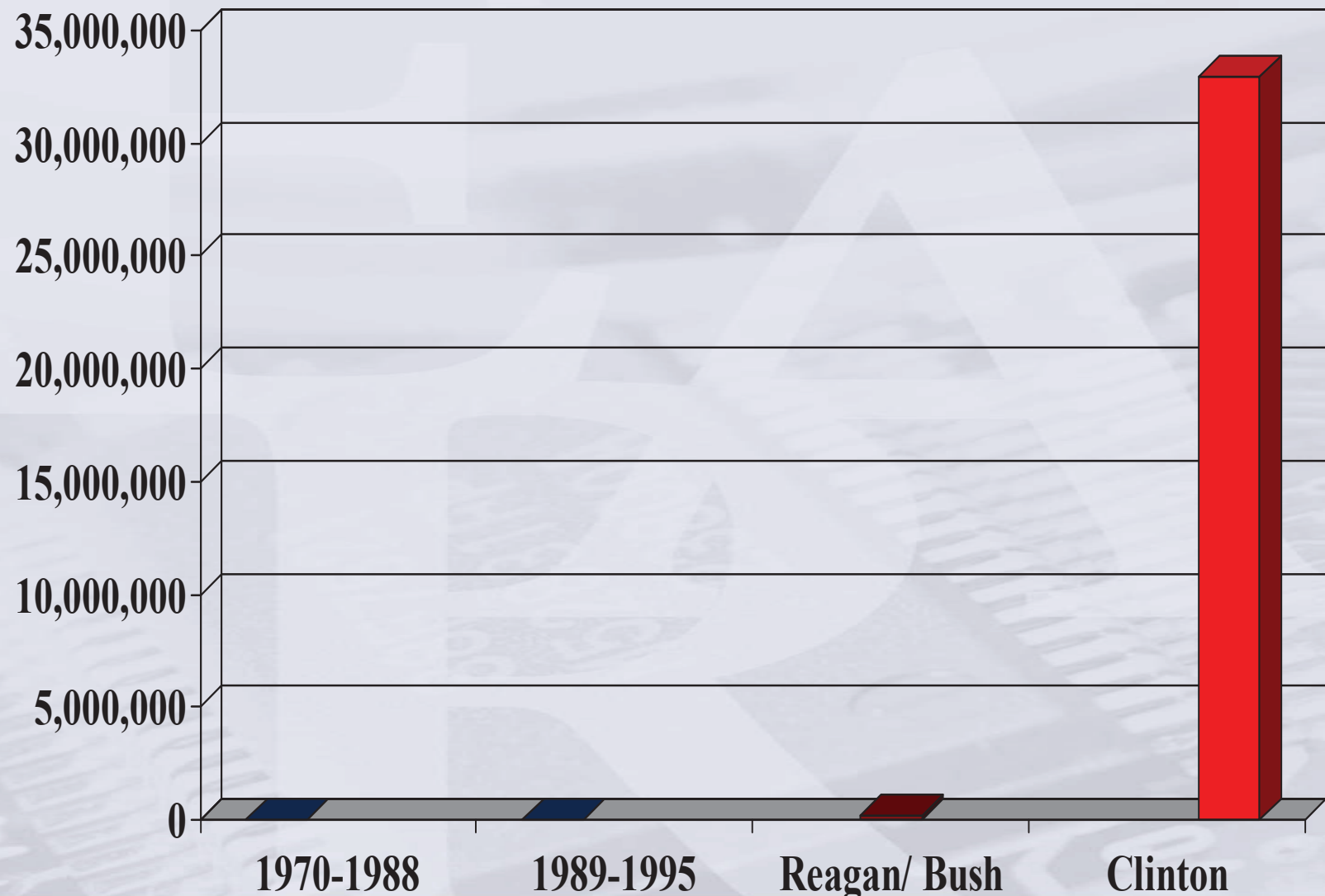- ➢ **Web pages**
- ➢ **Geospatial Information Systems**

Scalability: Transfers of Digital Files to NARA (1970 – 1995)

Scalability: Transfers of Digital Files to NARA
Reagan/Bush Presidential records

Scalability: Transfers of Digital Files to NARA
Clinton Presidential Records

Chart showing transfers of digital files, y-axis from 0 to 35,000,000 in increments of 5,000,000. Categories: 1970-1988, 1989-1995, Reagan/Bush, Clinton (~33,000,000).

Building for the Future

1. **Anticipate changes**
   - characteristics of electronic records,
   - Preservation and Access technologies
   - Researcher expectations and behaviors
2. **Recognize those things that will not or should not change**
   - Archival science provides stable principles, concepts, requirements and understanding.
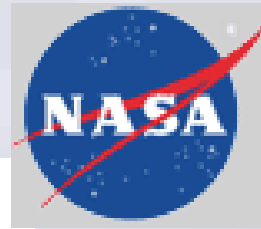   - NARA's mission and the functions
3. **Make reasonable assumptions about the future**
   - Use of computers will continue to become more common
   - Information use and Technology will continue to grow
   - Decline in Information Technology costs
   - The Internet will continue to grow

NARA's Strategic Response: The ERA Program

1. **Research** and exploratory development on technologies that offer promise for addressing electronic records challenges.

2. **Acquiring and building a system** that meets our requirements and our mission for NARA, the Presidential Libraries, and Federal Records Centers

3. Organizational and cultural **Change Management**

Some examples of
ERA Research *Partnerships*

IEEE

NASA

UNIVERSITY OF MARYLAND 18 56

INTERNET 2

Data-Intensive Cyber Environments (DICE) Group

National Science Foundation

OMG OBJECT MANAGEMENT GROUP

Renci Renaissance Computing Institute

UNIVERSITY OF NORTH CAROLINA CHAPEL HILL

NIST

PDES, Inc.

NCSA

National Computational Science Alliance

GGF Global Grid Forum

Georgia Tech Research Institute

WestVirginiaUniversity

MIT

NAVSEA NAVAL SEA SYSTEMS COMMAND

U.S. DEPARTMENT OF ENERGY

NITRD National Coordination Office for Networking and Information Technology Research and Development

ARL *Army Research Laboratory*

The Library of Congress

DIGITAL LIBRARY FEDERATION

InterPARES Project International Research on Permanent Authentic Records in Electronic Systems

The ERA Research Prototype:
Data Grid Technology
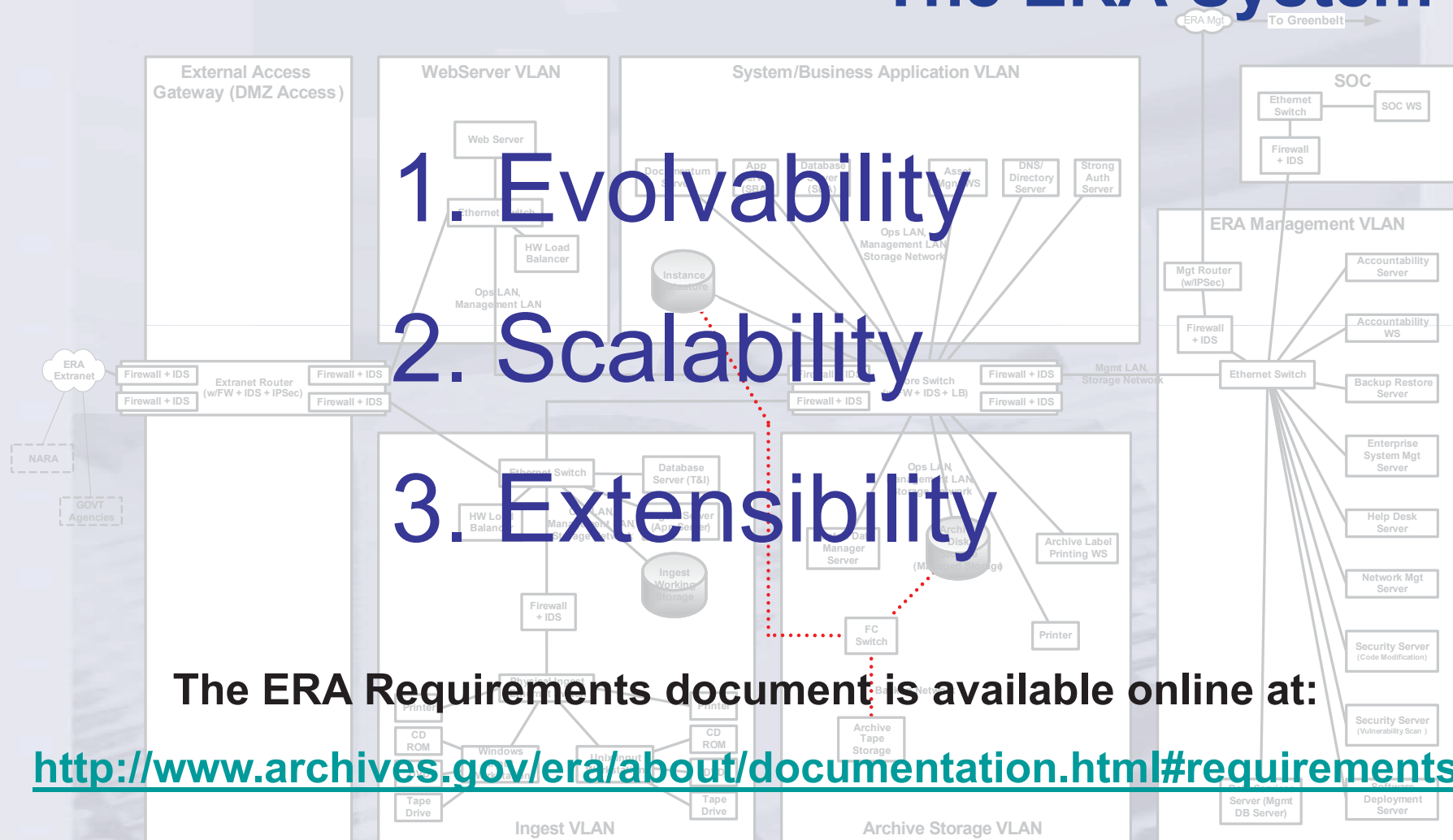

**Electronic Records Stacks
at Archives II**

**The *ERA Transcontinental
Persistent Archive Prototype (TPAP)***

-- or NARA's "Grid"

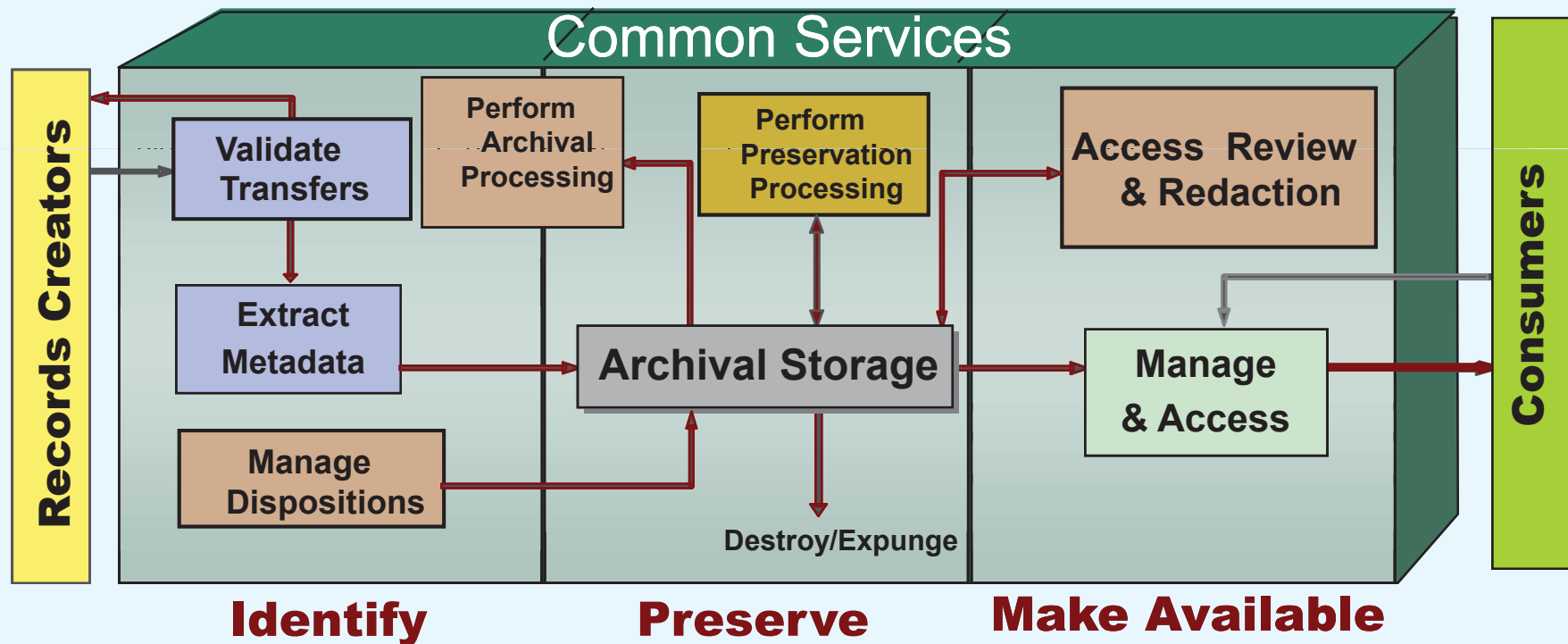# Fundamental Requirements for
The ERA System

1. Evolvability

2. Scalability

3. Extensibility

The ERA Requirements document is available online at:

http://www.archives.gov/era/about/documentation.html#requirements

The ERA System is based on a **Service**-oriented architecture

ERA will be a set of NESTED, mini-systems

Outer system:

- lifecycle management of records of all types

Inner Electronic Records System:

- Ingest, preservation, disposition, and access to electronic records

Search & Preservation Frameworks

- Support a variety of different approaches to different needs.
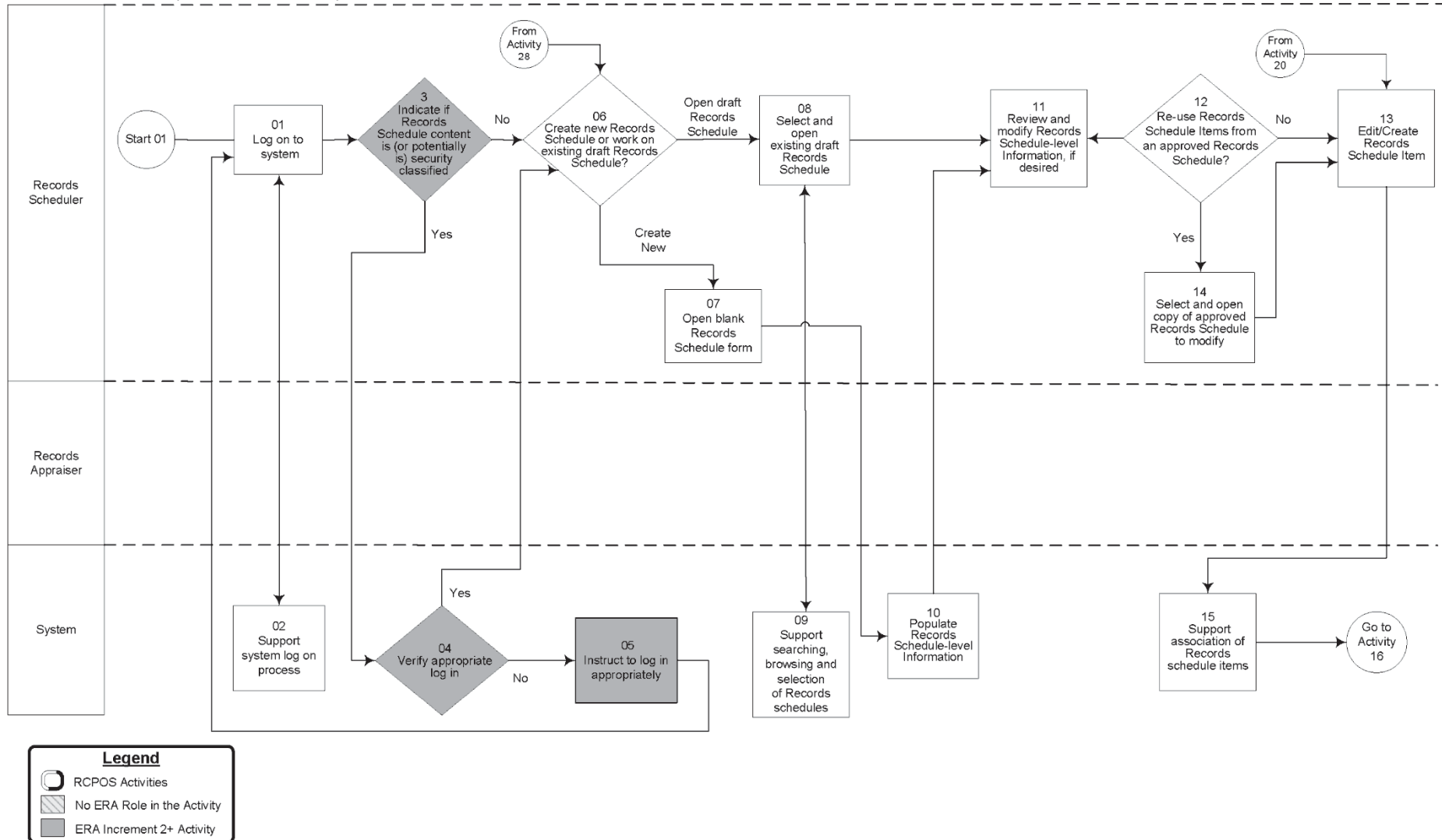
Archival "mini-systems"

- Specific, systematic management for each series or aggregate of electronic records.
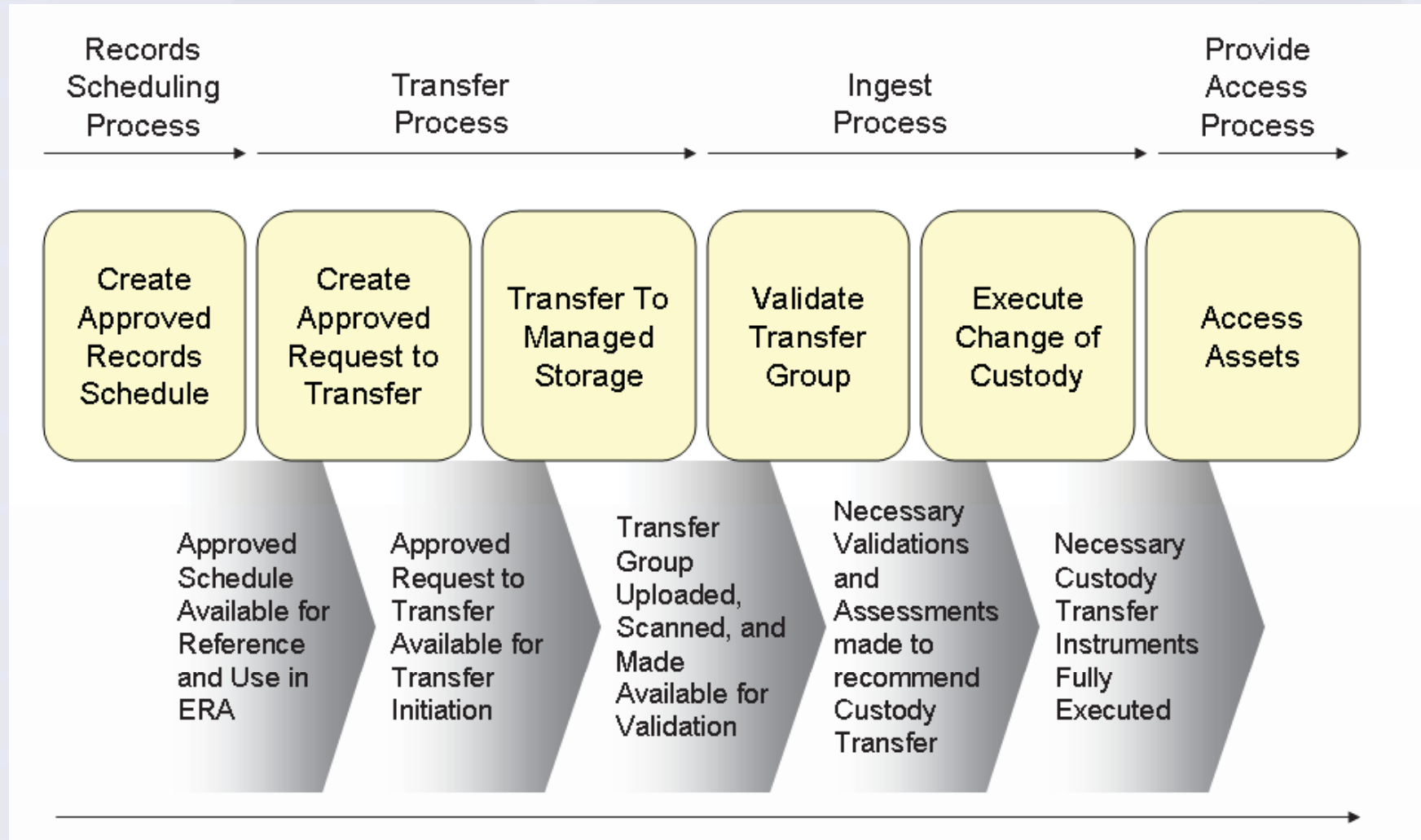
Acquiring and Building ERA in Increments

12/03   9/04   9/05   **6/08**   **2010**

Request For Proposals

Design Competition, 2 Contracts

Design Selected

Increment 1

3 Pilot Drops

NARA reaches ERA Initial Operating Capability IOC on June 27 2008!

Increment 2

Increment 3

Increment 4

⁂ System Deployment

Operation & Maintenance

Increment 5

Full Operating Capability
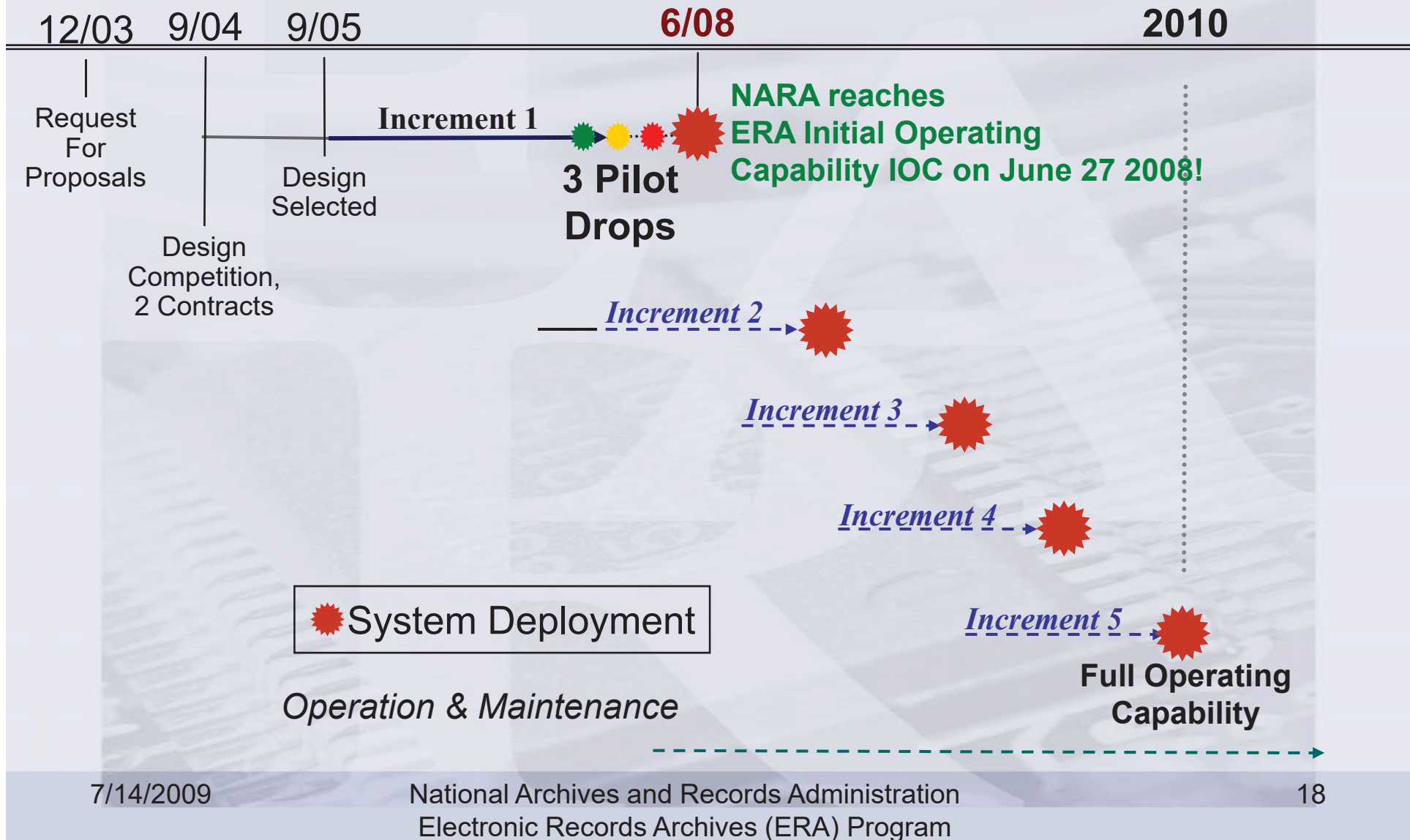
Business Process Re-engineering:
Studying The Lifecycle of a Record

1.01 Creation and Submission of Records Schedule (page 1 of 2)
(version 4.2, Jan. 27 2006)

ERA Functional Flow

Records Scheduling Process → Transfer Process → Ingest Process → Provide Access Process

| Create Approved Records Schedule | Create Approved Request to Transfer | Transfer To Managed Storage | Validate Transfer Group | Execute Change of Custody | Access Assets |

Approved Schedule Available for Reference and Use in ERA

Approved Request to Transfer Available for Transfer Initiation

Transfer Group Uploaded, Scanned, and Made Available for Validation

Necessary Validations and Assessments made to recommend Custody Transfer

Necessary Custody Transfer Instruments Fully Executed

Create and Approve a Records Schedule

Records Scheduler

Certifying Official (CO)

NARA Appraiser

| Records Scheduler Creates RS/RSI | → | Submit RS/RSI to Certifying Official | → | Certifying Official reviews if approval is granted submits to NARA |

Appraisal Mgr. 1

NARA Appraisal reviews/ modifies RS for approval, if granted submits to Appraisal Mgr. 1

Appraisal Mgr. 2

Appraisal Mgr. 2 reviews for approval, if granted submits to Appraisal Mgr. 3

Appraisal Mgr. 3

Appraisal Mgr. 3 reviews for FINAL approval, if granted RS is released into managed system → **Approved RS in managed storage awaiting action**

User Roles

Records Scheduler (non-NARA staff):

- **Prepares and submits the Records Schedule** to the Certifying Official.

Records Scheduler NARA (NARA staff):

- Authorized to create and submit **Records Schedules** for Certification on behalf of an Agency or
- Authorized to create and submit **Legacy Schedules** for Certification on behalf of NARA.
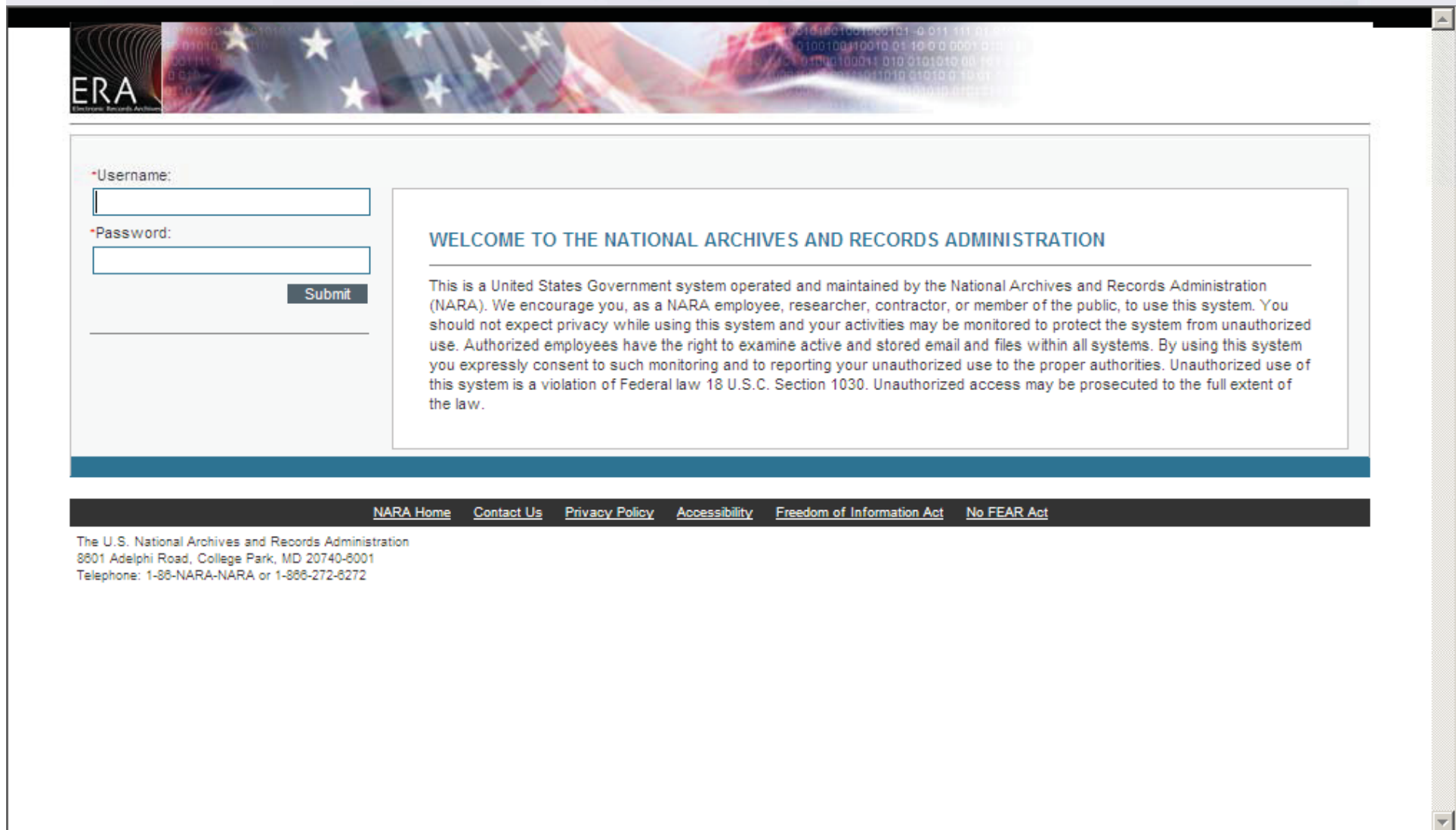
Certifying Official (Federal Agency Representatives):

- **Designates the official status** of the Records Schedule before submitting it to NARA for review and approval.

Records Appraiser (NARA Officials):

- **Assesses agency records** with respect to informational value, artifactual value, evidential value, associational value, administrative value;
- Recommends which records should be accessioned into NARA's legal custody and which records should be disposed of by the Transferring Entity after a period of retention specified in the Records Schedule.

The ERA Log-On Screen

The ERA Records Schedule *Workbench*

Search   Scheduling

ERA Workbench

Customize My Portal

Notifications

Title	Created Date	Created By
Records Schedule DAL-0029-2008-0001 certified.	06/18/2008	ERA System
Records Schedule DAL-0029-2008-0001 certified.	06/18/2008	ERA System
Records Schedule DAL-0029-2008-0001 certified.	06/18/2008	ERA System
Records Schedule DAL-0029-2008-0001 approved.	06/18/2008	ERA System
Records Schedule DAL-0029-2008-0001 approved.	06/18/2008	ERA System
Records Schedule DAL-0029-2008-0001 approved.	06/18/2008	ERA System
Records Schedule DAI-0029-2008-0002 certified.	06/18/2008	ERA System
Records Schedule DAI-0029-2008-0002 certified.	06/18/2008	ERA System
Records Schedule DAI-0029-2008-0002 certified..	06/18/2008	ERA System
Records Schedule DAI-0029-2008-0002 approved.	06/18/2008	ERA System
Records Schedule DAL-0059-2008-0001 certified.	06/18/2008	ERA System
Records Schedule DAL-0059-2008-0001 certified.	06/18/2008	ERA System

Inbox

ID #	Type	Agency	Created By	Status	Due Date
TR-0029-2008-0008	TR	Bureau of the Census	Karuna.Sodhi	Draft	06/26/2008
TR-0241-2008-0004	TR	Patent and Trademark Office	Karuna.Sodhi	Draft	06/26/2008
TR-0241-2008-0005	TR	Patent and Trademark Office	Derica.Carty	Draft	06/26/2008
TR-0241-2008-0006	TR	Patent and Trademark Office	Derica.Carty	Proposed	07/01/2008
TR-0241-2008-0007	TR	Patent and Trademark Office	Derica.Carty	Draft	06/27/2008
TR-0029-2008-0001	TR	Bureau of the Census	kenneth.kang	Approved	07/18/2008
TR-0241-2008-0002	TR	Patent and Trademark Office	kenneth.kang	Approved	07/18/2008
TR-0059-2008-0003	TR	Department of State	kenneth.kang	Approved	07/18/2008
TR-0029-2008-0002	TR	Bureau of the Census	kenneth.kang	Approved	07/18/2008
DAI-0059-2008-0003	RS	Department of State	Jerome.Nashorn	Proposed	06/21/2008
TR-0059-2008-0001	TR	Department of State	kenneth.kang	Approved	07/18/2008
TR-0241-2008-0001	TR	Patent and Trademark Office	kenneth.kang	Approved	07/18/2008

Help

Help - Main
FAQ
Glossary

The e-115: Records Schedule

Records Schedule

* Required fields

General Info

General

*Records Schedule ID:	
Schedule Subject:	
*Agency or Establishment:	
*Legacy Data:	
Default Schedule:	☐
Status:	

*Internal agency concurrences will be provided:

*Record Group:

Records Schedule applies to:

⦿ Major Subdivision   ○ Agency-wide   ○ General Records Schedule

*Major Subdivision:

Minor Subdivision:

Background

Background Information:

GAO Concurrence

⦿ Not Required   ○ Requested   ○ Received

Items:

Records Scheduler

*First Name	*Last Name	*Title
EndUser1	Rsn	

Functions   Contact Persons

☑	First Name	*Last Name	Title	*Phone	Email
☐					

Save   Cancel

Capturing Information about the records

Request to *Transfer Records* to NARA using ERA

National Archives and Records Administration
Electronic Records Archives (ERA) Program

The first four
ERA Pilot Agencies

UNITED STATES PATENT AND TRADEMARK OFFICE

U.S. Bureau of Labor Statistics

NNS
National Nuclear Security Administration

NAVAL OCEANOGRAPHIC OFFICE
John C. Stennis Space Center

We maximize America's Sea Power by applying relevant oceanographic knowledge across the full spectrum of warfare
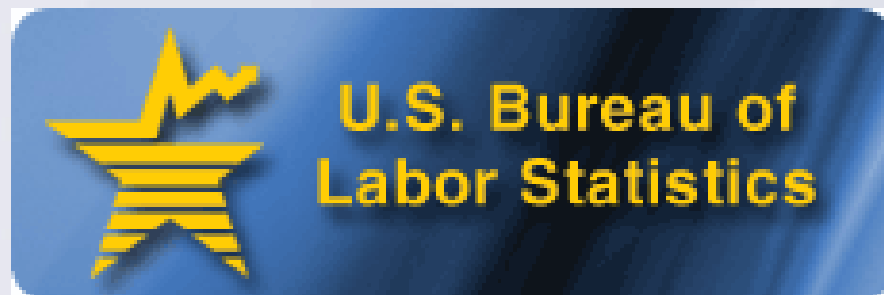
Immediate Next Steps

- **Summer 2008**: Move 3.5 million computer files to ERA

- **September 2008**: Begin taking in records from the 4 selected federal agencies

- **January 2009**: ERA is ready for the records from the administration of George W. Bush

<u>ERA Communications</u>

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(301-837-1564)

The ERA Web site is:
http://www.archives.gov/era