ERA
Electronic Records Archives

The Electronic Records Archives (ERA)

SAA Presentation

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- To preserve *any* type of electronic record,

- Created using *any* type of application,

- On *any* computing platform,

- Delivered on *any* digital media,

- From *any* entity in the Federal Government and *any* donor,

- To provide discovery and delivery to *anyone* with an
  interest and legal right of access,

- Now and for the *"Life of the republic"*.

System Design Drivers

Evolvability

Obsolescence + Improved Technology + Time Frame

Scalability

Growing Volumes + Special Needs

Extensibility

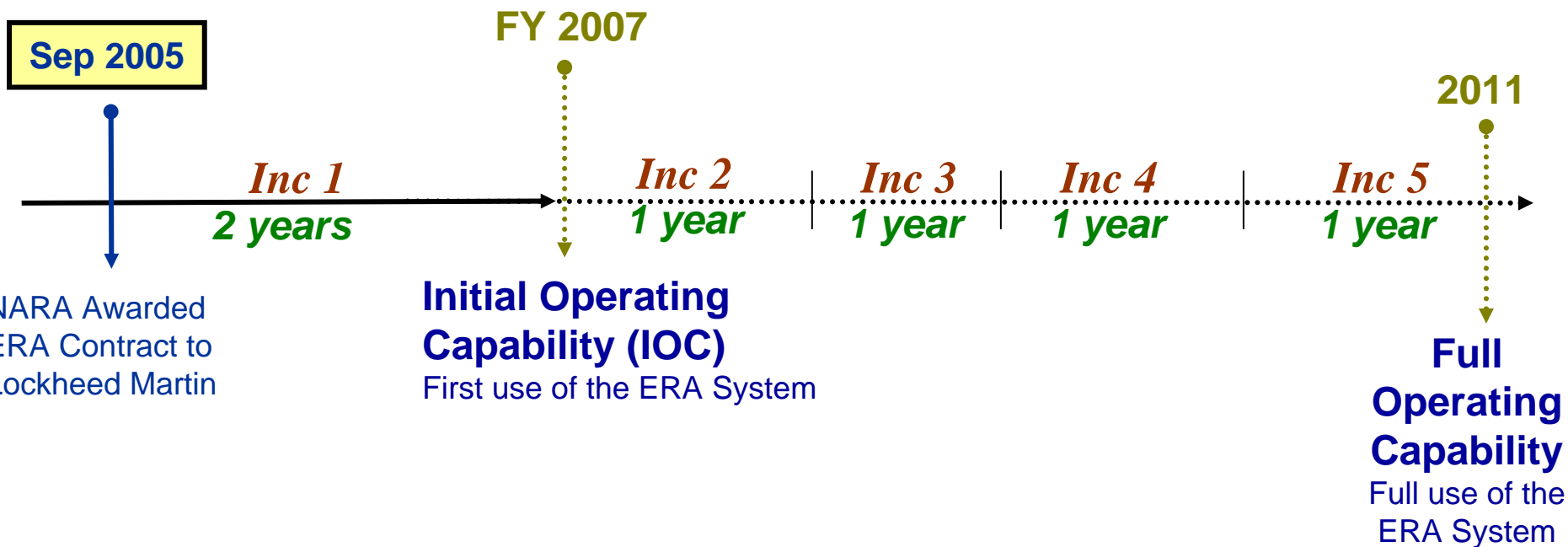**New Data Types + Increasing Complexity**

Persistent Preservation

Authenticity + Accessibility

The ERA System Timeline

Dependent upon funding, ERA will be developed and deployed in five phases, (or increments) spanning from FY2005 - FY2011:
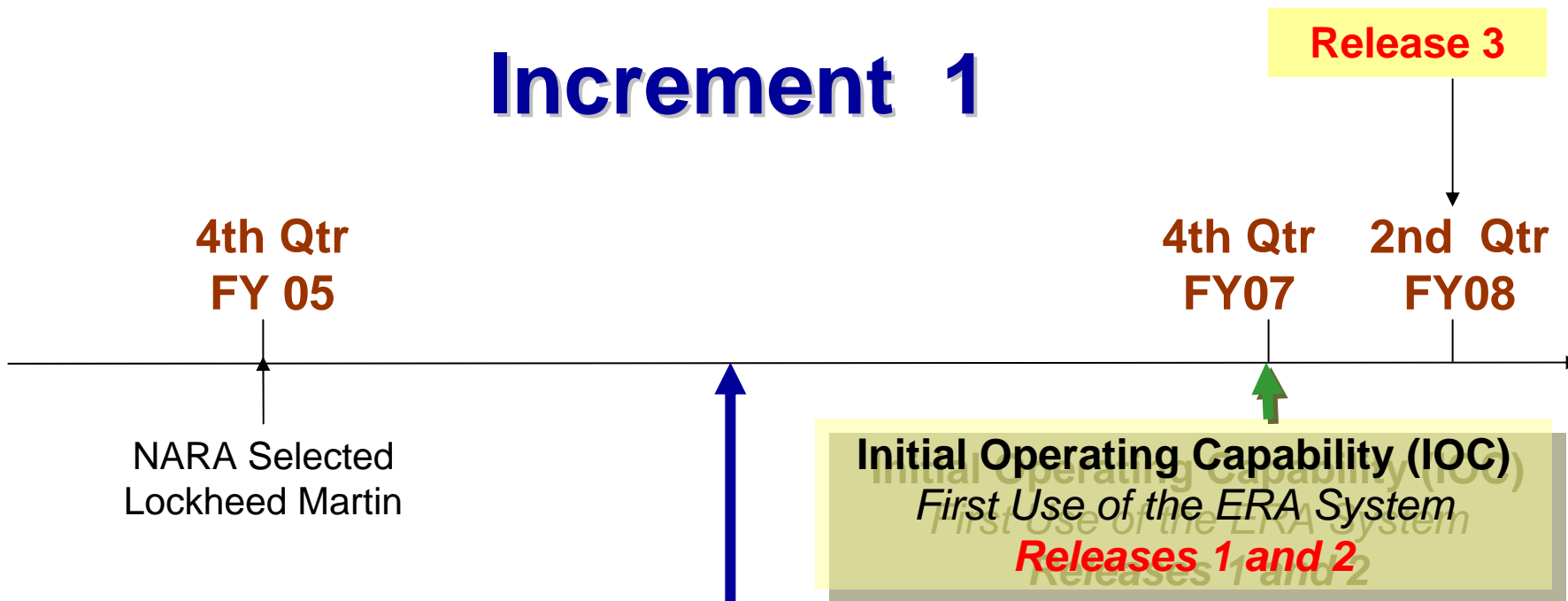
Sep 2005

FY 2007

2011

Inc 1
2 years

Inc 2
1 year

Inc 3
1 year

Inc 4
1 year

Inc 5
1 year

NARA Awarded ERA Contract to Lockheed Martin

Initial Operating Capability (IOC)
First use of the ERA System

Full Operating Capability
Full use of the ERA System

Increment 1 Timeline

Increment 1 will be deployed in two phases with three releases:

Increment 1

Release 3

4th Qtr FY 05

4th Qtr FY07

2nd Qtr FY08

NARA Selected Lockheed Martin

Initial Operating Capability (IOC)
First Use of the ERA System
Releases 1 and 2

**Preliminary and detailed designs for Increment 1
Software development, COTS selection, System integration
HW/SW and Usability Testing**

Increment 1 Highlights

- **System will be put into operation (IOC) will be in September 2007**
- **Single site, accessible by NARA staff and selected agencies nationwide**
- **No public access**
- **Workflow support provided**
- **Security will be developed to a mature level**
  - **Needed to get ERA accredited to operate as a distributed system**
  - **Positions NARA to build a classified system**
- **Ingest**
  - **Accept any electronic record provided to us**
  - **Electronic and a single media type is supported for transfer**
  - **Record processing includes file types NARA supports now**
- **Records Management**
  - **Support a set of records lifecycle data for all ingested records (not extracted from records, mostly forms related)**
  - **Support records schedule creation and maintenance**
  - **Disposition instruction processing via workflow**

Increment 1 Highlights

- **Storage**
  - **Reliable storage for electronic records in any format**
  - **Backup of records provided**
- **Dissemination**
  - **Provide records back to agencies in original format**
  - **Utilize viewers to present records**
  - **Provide search capability on collected records lifecycle data**
- **Local Services and Control**
  - **Electronic connection between ERA site and NARA**
  - **Basic technical help desk functionality and hours**
  - **Basic enterprise services for ERA (directory, asset mgmt, remote mgmt, etc.)**
  - **Electronic interface to select transferring entities/Agencies**

Current Activities (Increment 1)

- **Developing a Preservation Framework**

- **Defining what needs to be preserved as records are transformed to different preservation formats**

  - *Essential Characteristics of electronic records*

Future Activities

- **Identify preservation tools to meet those needs**

- **Implement tools which transform the digital encoding into a one suitable for preservation**

Approach to Preservation

Prerequisites to successful preservation of electronic records in ERA:

- **A System that supports NARA's lifecycle business processes**
  - **Scheduling of electronic records**
  - **Transfer of electronic records to NARA**
  - **Ingest of electronic records into ERA**
  - **Archival Description of records in ERA**

- **A System that is designed to support NARA's Preservation Strategies as they are developed in the near and distant future.**
  - **As NARA takes on the complicated issues of Preservation, need a system that allows us to "program in" the results of the difficult choices and decisions made over time.**

- **Incorporated process improvement with NARA's Electronic Records Management (ERM) initiative and the Records Management Initiatives (RMI)**

- **Designed to increase efficiency and effectiveness of all records lifecycle processes for permanent and temporary records created and transferred in all media.**

- **Documented NARA's As-Is and To-Be business processes for ERA development in the context of the ERA Requirements.**
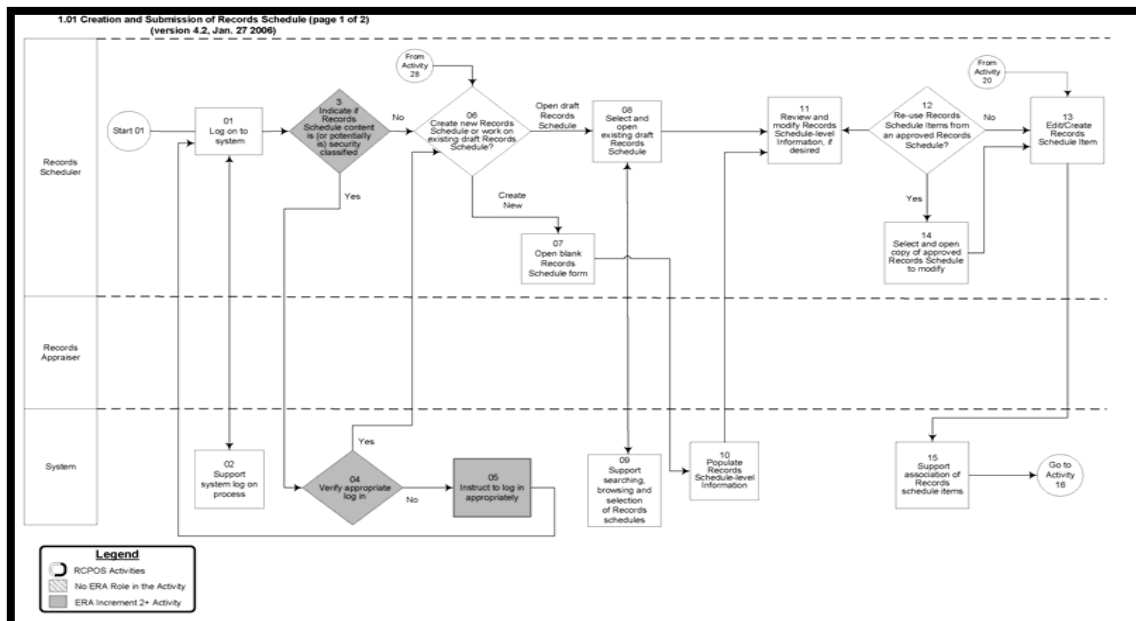
Purpose of the BP IPT

- **Define one set of NARA's business processes for ERA development.**

- **Define the business objects (e.g., Records Schedule, Legal Transfer Instrument) and associated business rules to drive ERA.**
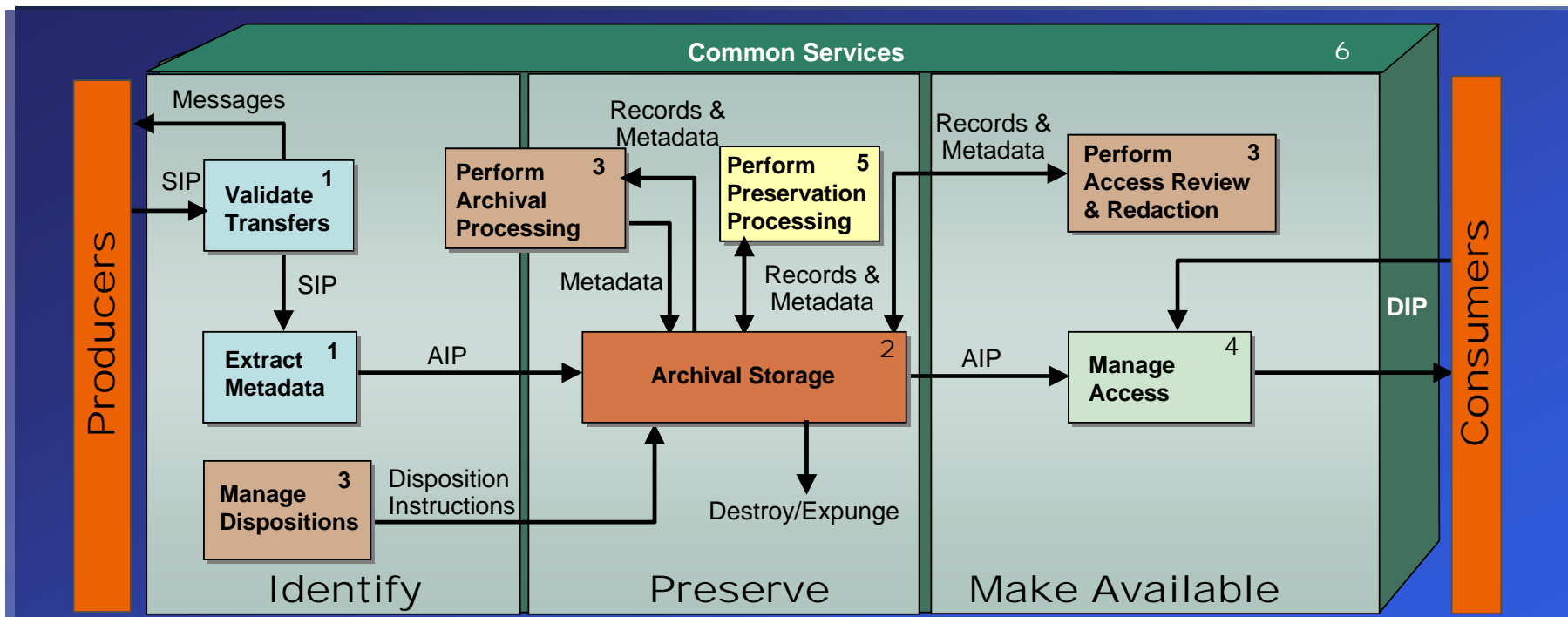
  "Transfer Method" in a Request to Transfer Physical Custody is pre-populated with one of the following values from "Transfer Method" in the Transfer Plan, if "media type" is set to "electronic":
  - *Push*
  - *Pull*
  - *On Media*

- **Develop the conceptual data model for ERA.**
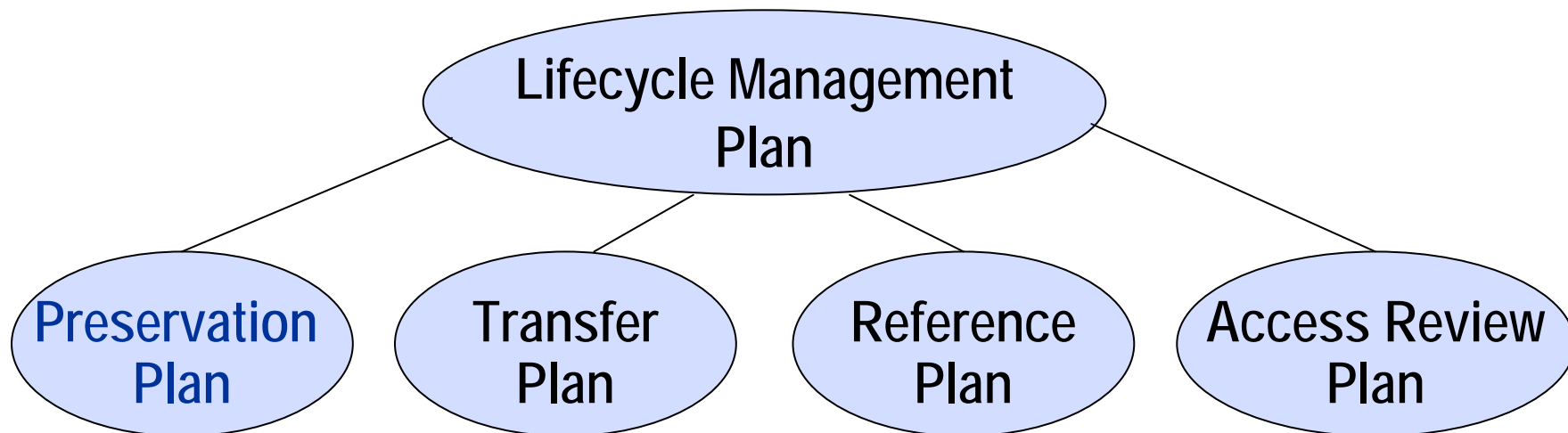
ERA Architectural Overview

Essential Characteristics of Electronic Records

- **Defining what needs to be preserved as records are transformed from one format to another.**

- **The nexus between Record Types (Intellectual Form) and Data Types (physical encoding) tells us what we need to preserve across transformations.**

Record Type	Data Type	Essential Characteristics

Correspondence	**MS Outlook .pst file**	**Appearance/ Layout**
		   – **Text/Font**
		   – **Structure ("To:" & "From:")**
		   – **Association w/ Attachments**
		Behavioral
		   – **None**

Preservation Planning

Lifecycle Management Plan

Preservation Plan

Transfer Plan

Reference Plan

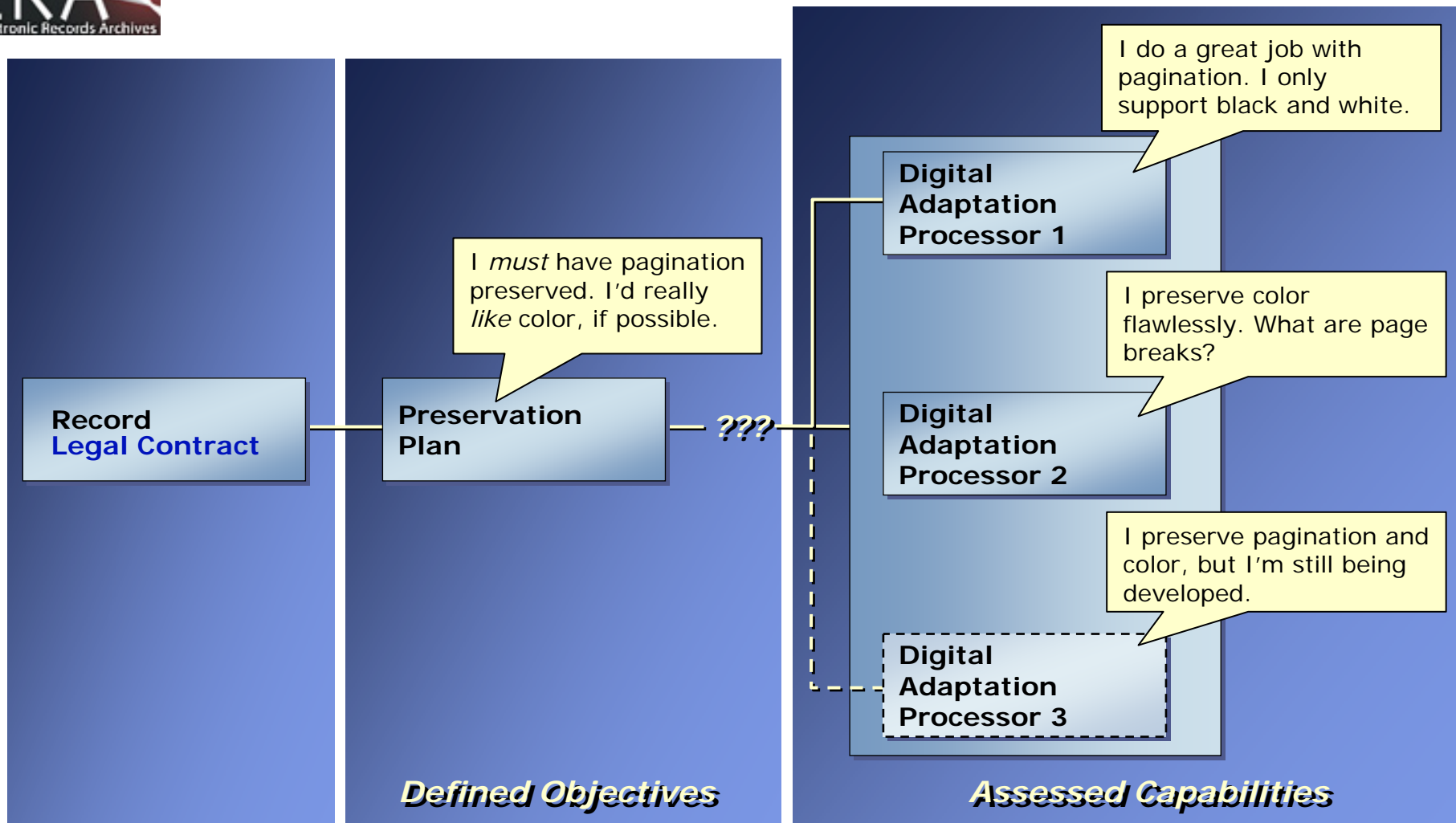Access Review Plan

For a series of records, a Preservation Plan captures:

- **The identification of Essential Characteristics**

- **The Record Types and Data Types for a given series of records**

- **The Preservation Strategy selected for a given series**
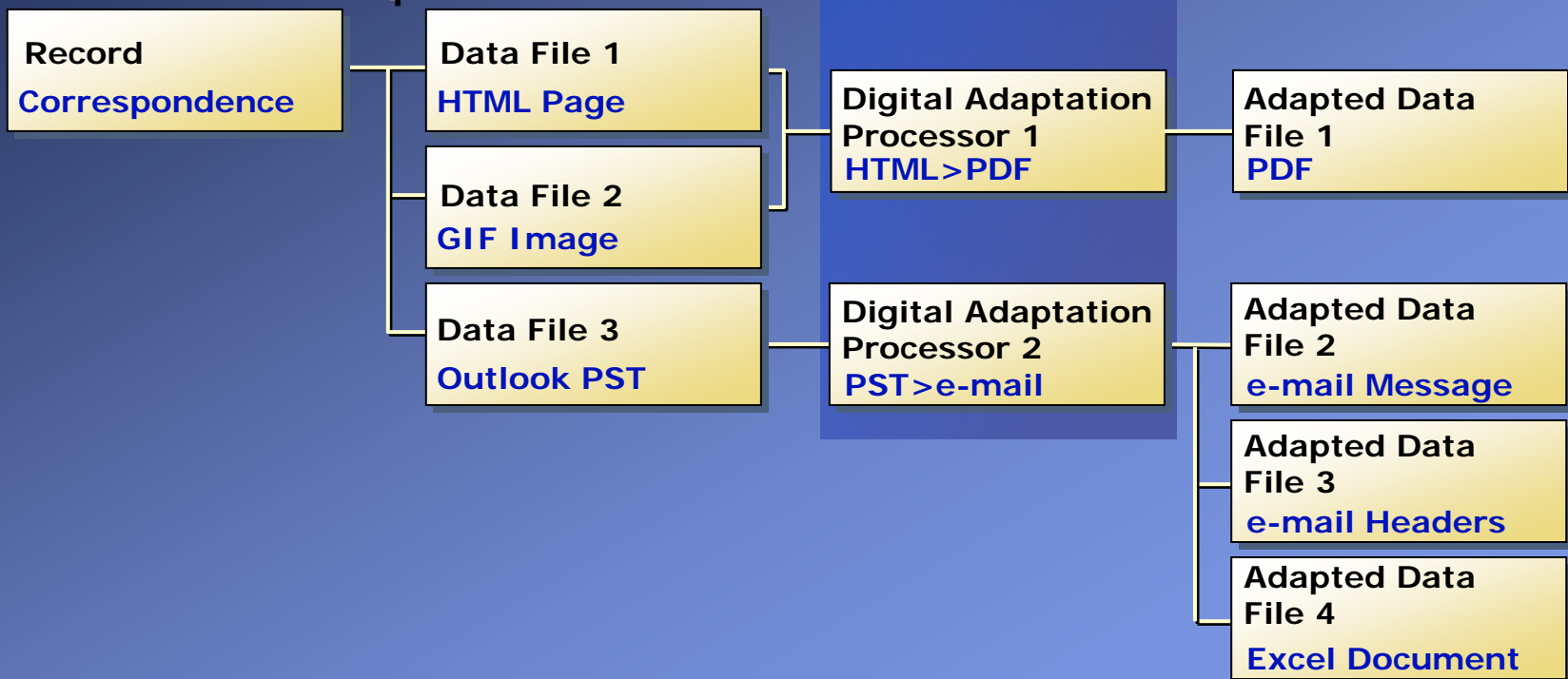
Preservation Planning

**ERA Matches System Capabilities
to Archival Objectives to Maximize "Best-Fit"**

Preservation Processing

If it were only simple...

Digital Adaptation Framework

Record	Data File	Digital Adaptation Processor	Adapted Data File
Memorandum	**Word Document**	**DOC>PDF**	**Adobe PDF-A**

Real world is more complex....

Record	Data File 1		Adapted Data
Correspondence	**HTML Page**		

Data File 1: **HTML Page**

Data File 2: **GIF Image**

Digital Adaptation Processor 1: **HTML>PDF** → Adapted Data File 1: **PDF**

Data File 3: **Outlook PST** → Digital Adaptation Processor 2: **PST>e-mail**

Adapted Data File 2: **e-mail Message**

Adapted Data File 3: **e-mail Headers**
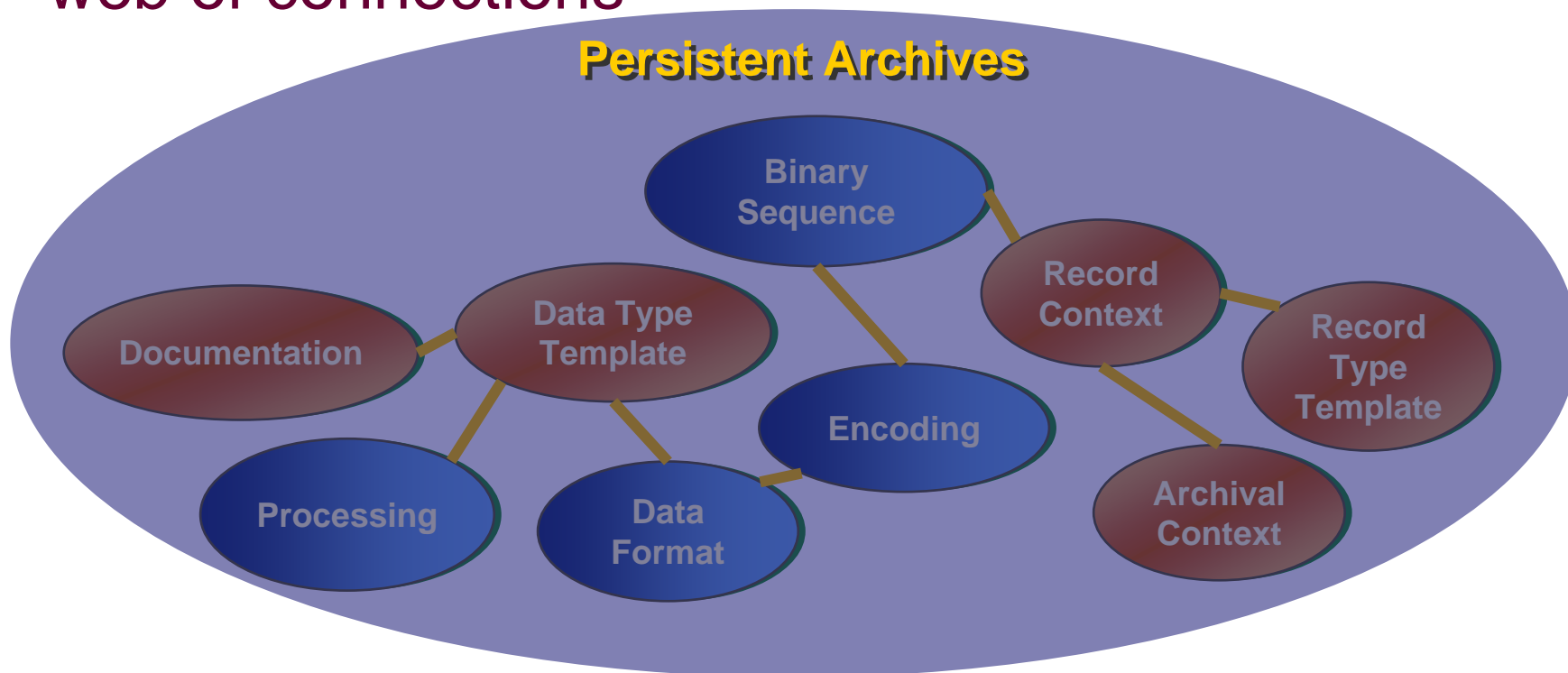
Adapted Data File 4: **Excel Document**

Prototype Tackles Complex Records and Complex Data Types

Making the Connections

•Making sense of the 0s and 1s is dependent on a web of connections

Persistent Archives

The Persistence of an Archives is Only as Strong as its Weakest Link