Records Management in the Digital Age: People, Process, and Technology

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Take Aways

Effective Records Management requires:

- Simultaneous attention to People, Process and Technology

- Integrating Records Management into Agency Business Processes and IT Governance and Applications

- A Persistent E-Records Preservation and Access Capability-- critical to the future of Government and Society.

Records and Information Management From 30K Ft.

- Decline in number of staff specializing in filing
- Investment in Software functionality that creates records is growing
- Mission critical records are often not sharable, retrievable or useable
- Copies proliferate; data conflicts or is unreliable
- Email often replaces phone conversations, meetings and formal written communication
- Instant Messaging increasingly replaces email
- Litigation and discovery costs skyrocketing
- Authenticity is questioned
- Premature destruction
- Tools to manage electronic records lag far behind

The Challenge of Electronic Records

- Authenticity – Over Time

- Variety – 16,000+ Different Types of E-Record Formats

- Complexity – Increasingly Sophisticated Formats

- Volume – Vast Quantities of Records

- Obsolescence – Constantly Changing Technology

- User Expectations –Evolving, Unrelenting

OUR PAINFUL REALITY

THE RECORDS MANAGEMENT WORLD WE HAVE PREPARED FOR NO LONGER EXISTS

The Big Picture Goals

- Enterprises economically and effectively create and manage records necessary to meet business needs,

- Records are kept long enough to protect rights and assure accountability, and

- Records of archival value are preserved and made available for future generations

Creating The Balance

Order

Deliver

Bill
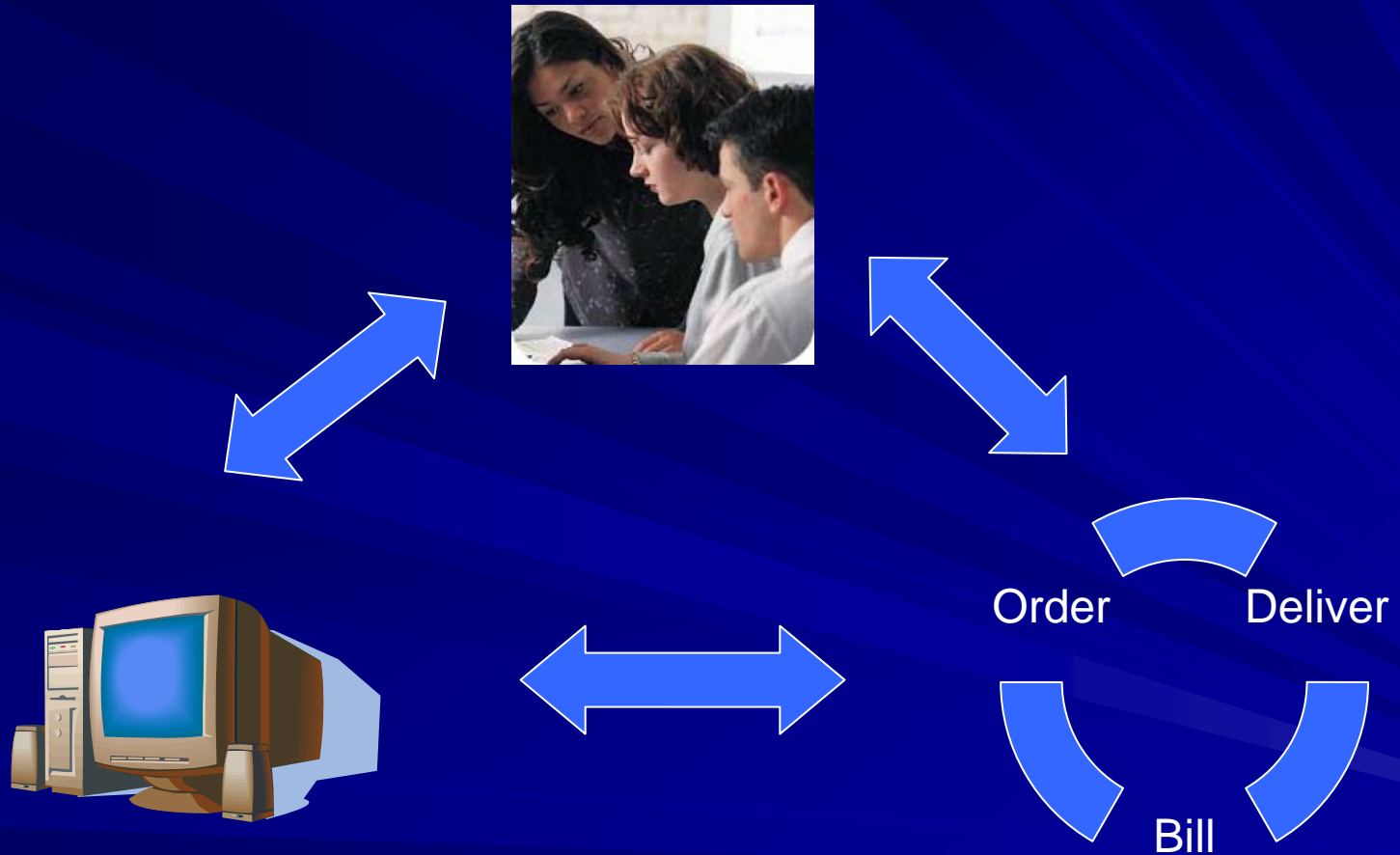
People Dynamics

Program Managers

General Counsel Staff

Information Technology Staff

Records Management Staff

The People Dimension Records Managers

- **Structure**
  - Authority
  - Position Levels
  - Reporting Relationships
  - Development Team Composition
- **Competencies**
  - Electronic Records Management
  - Language
  - Risk Assessment & Management
  - Business Process Design
  - Systems Analysis
  - Requirements Development
  - Project Management

The People Dimension Records Creators

- **Performance Management**
  - Expectations Management
  - Incentives/Rewards
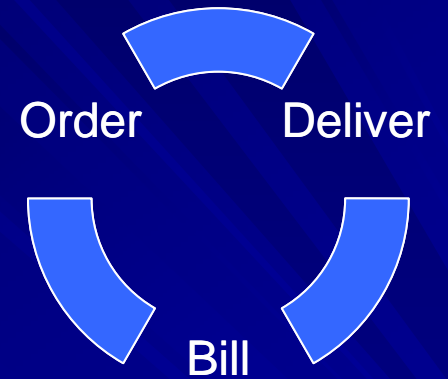 - Performance Plans

- **Continuous Training**
  - Evolving Development Plans
  - Evolving Curriculum
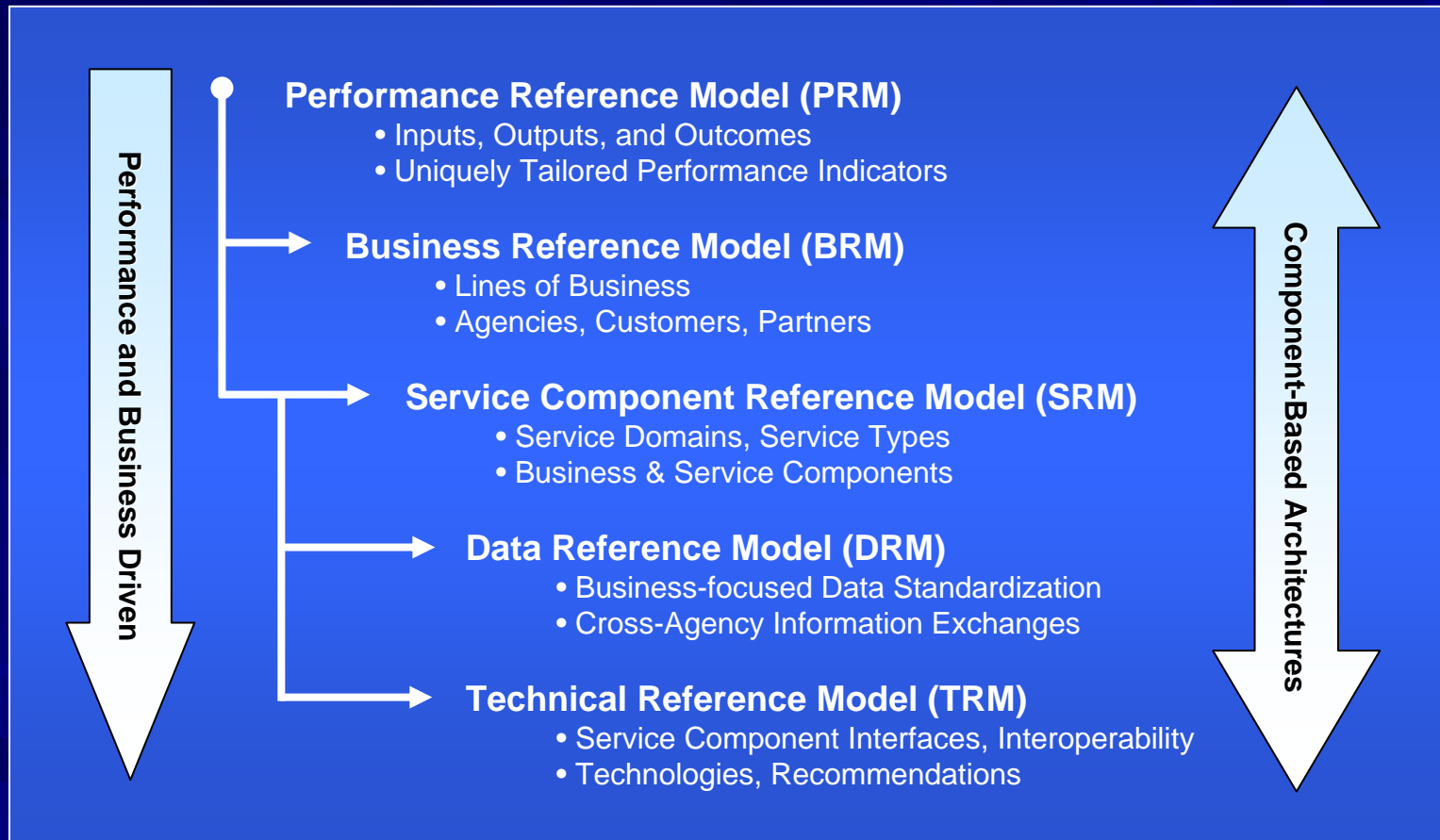
- **Change Management**

Process

- Capital Planning and Control

- Enterprise Architecture

- Business Process Design

- Solution Development Lifecycle

Order   Deliver

Bill

Records Management In Capital Planning

- Will proposed system create records?
- Will proposed system be required to support electronic recordkeeping ?
- Who will represent records management on team?
- Will execution of system business processes result in the generation, management/distribution of intellectual capital, other products, or electronic files across the business and/or extended enterprise?
- Are resulting outcomes/products used in making business decisions?

Federal Enterprise Architecture Reference Models

Performance and Business Driven

Component-Based Architectures

Performance Reference Model (PRM)
- Inputs, Outputs, and Outcomes
- Uniquely Tailored Performance Indicators

Business Reference Model (BRM)
- Lines of Business
- Agencies, Customers, Partners

Service Component Reference Model (SRM)
- Service Domains, Service Types
- Business & Service Components

Data Reference Model (DRM)
- Business-focused Data Standardization
- Cross-Agency Information Exchanges

Technical Reference Model (TRM)
- Service Component Interfaces, Interoperability
- Technologies, Recommendations

NARA Enterprise Architecture Framework

Critical Drivers

- NARA Strategic Planning
- NARA Risk Management
- NARA IT Projects & Programs
- Business Requirements
- IT Capital Planning
- Law, Policy, Directives, & Guidance

Enterprise Architecture

Architecture Overview	Principles, Constraints, & Assumptions	Federal Oversight Alignment

Business Architecture	Data Arch.	Application Arch.	Systems Arch.	Operations Arch.	Sequencing Plan

Technical Reference Model and Standards Profile

Records Management Services

Security Architecture

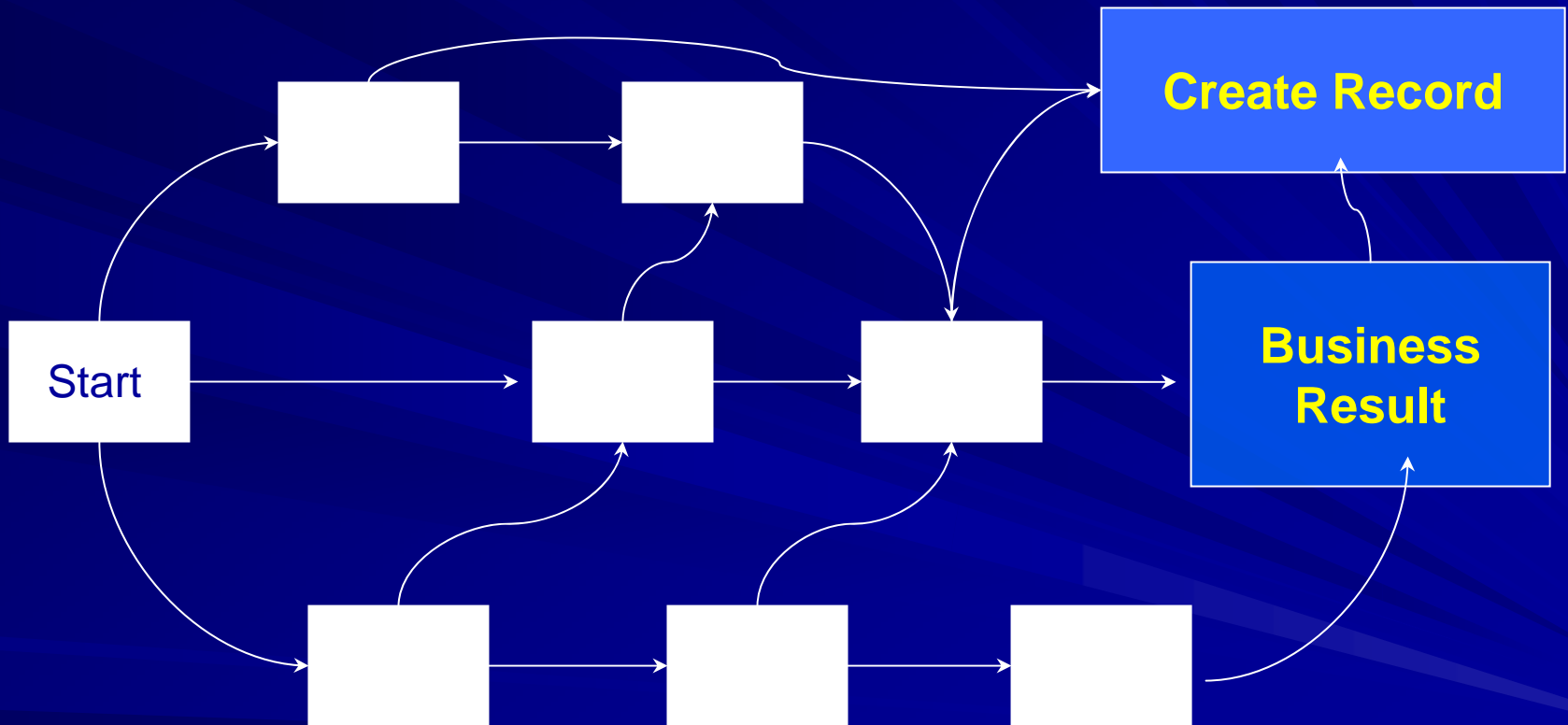## Foundational Elements

- Glossary
- IT Governance, Organizations, & Staffing
- IT Management Processes
- IT Industry Standards & Good Practices
- NARA Enterprise IT Repository

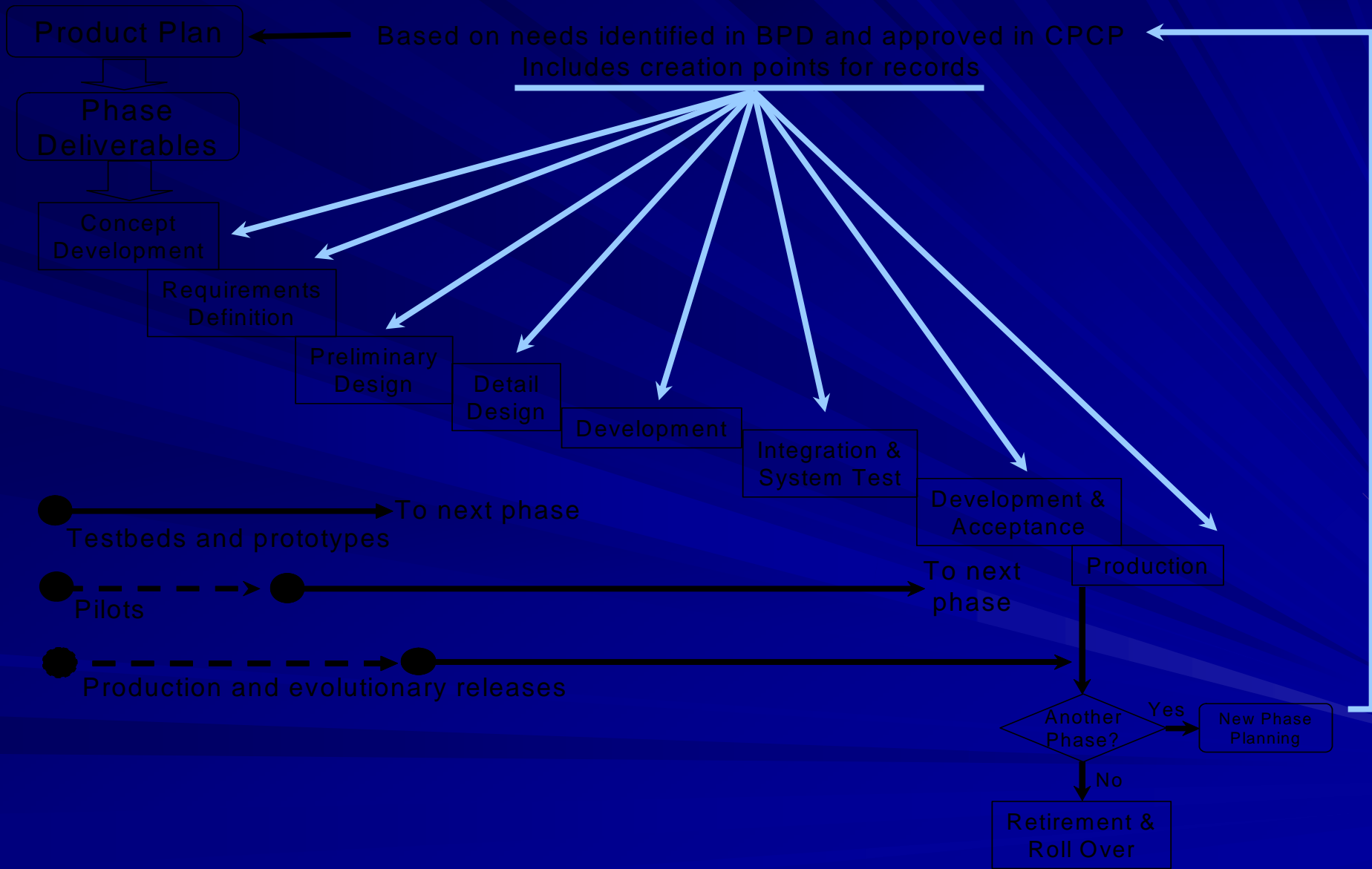# Specify Records During Business Process Design

Business Process Design

Does this transaction require:

- Evidence of decisions or action?

- Evidence of performance?

- Compliance with applicable statutes, regulations, orders, and other directives that require business unit to create records?

- Documentation to enable business unit to protect its interests?

- Accountability for the use of resources?

Solutions Development Life Cycle Method

Product Plan

Based on needs identified in BPD and approved in CPCP
Includes creation points for records

Phase Deliverables

Concept Development

Requirements Definition

Preliminary Design

Detail Design

Development

Integration & System Test

Development & Acceptance

Production

To next phase

Testbeds and prototypes

To next phase

Pilots

Production and evolutionary releases

Another Phase?

Yes

New Phase Planning

No

Retirement & Roll Over

RM in Solutions Development Life Cycle Methods

- Ensure records creation points in the Business Process Design are in the system design
- Re-evaluate records creation points at each iteration of system development/re-design
- Migrate records at system upgrade
- Manage records, including meta-data definitions & attributes at system retirement and roll over
- Transfer records, including meta-data definitions & attributes as appropriate
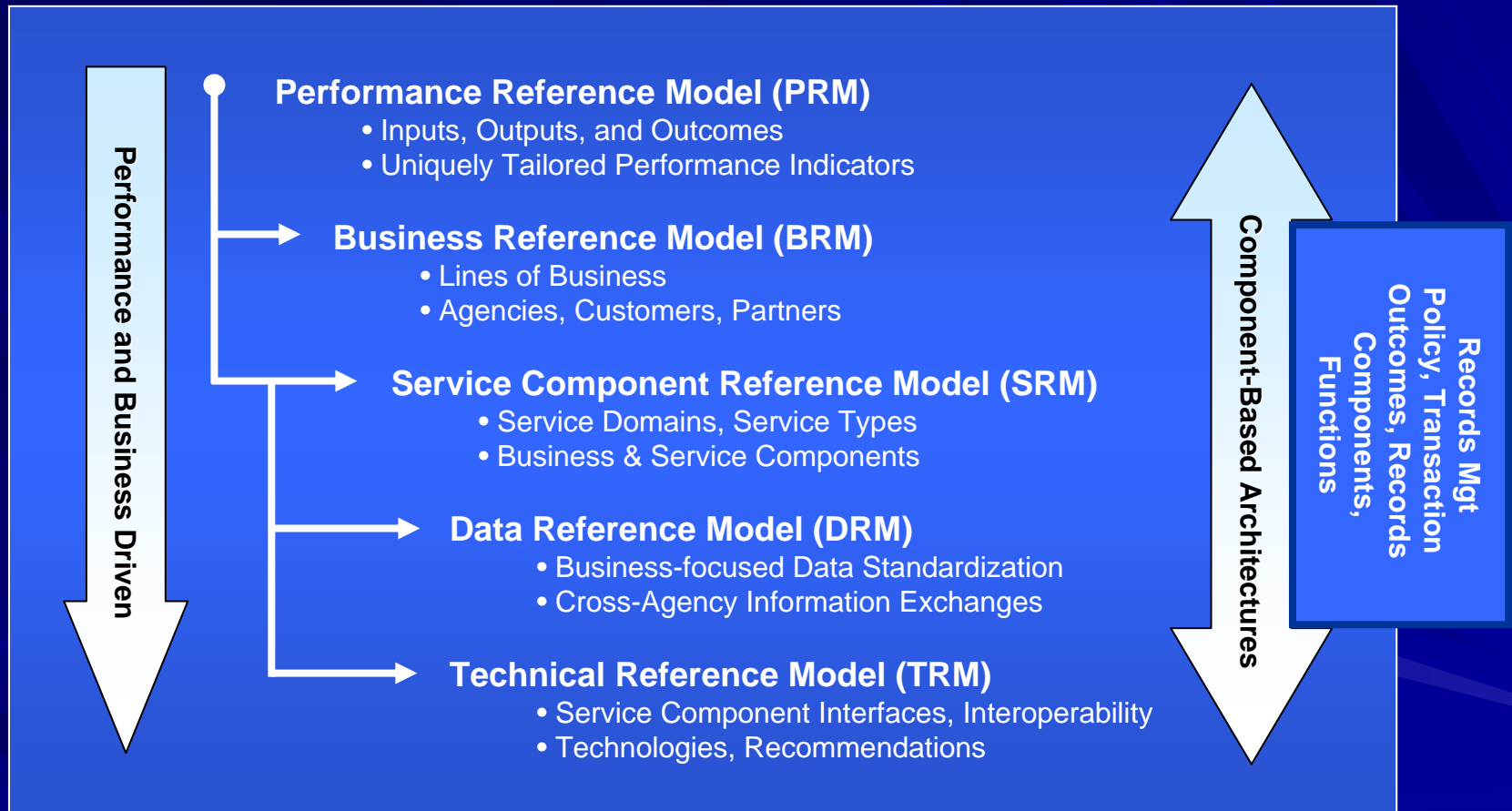
Technology
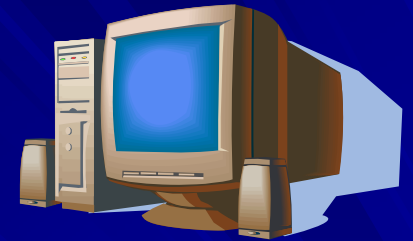
- Enterprise Architecture

- Service Components

- Persistent Object Preservation

Federal Enterprise Architecture Reference Models

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Technical Reference Model (TRM)
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Component-Based Architectures

Records Mgt
Policy, Transaction
Outcomes, Records
Components,
Functions

Component Definition

A self-contained

business process or service

with

predetermined functionality

that may be exposed through a

business or technology interface.

Core RM Capabilities

- A "core" set of records management capabilities includes:
  - Capture Record
  - Assign Disposition
  - Categorize Record
  - Search Repository
  - Retrieve Record
  - Ensure Authenticity
  - Associate Record
  - Execute Disposition

IT Management Processes

Capital Planning &
Investment Process

Enterprise
Architecture

Business Process
Design Methods

SDLC
- Concept
- Requirements
- Design
- Develop
- Test

Records Management
Components

The Challenge of Electronic Records

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- **User Expectations – Evolving, Unrelenting**

The Electronic Records Archives

NARA's Current Electronic Records System

- NARA has 30 years of experience with electronic records
- Simple Files
  - Comma delimited
  - ASCII
  - Flat Fixed Length
- Does not meet the need

Electronic Records Archives

The Archivist's Directive:

ERA is NARA's Strategic Response

The Electronic Records Archives (ERA) is a comprehensive, systematic, and dynamic means of preserving and providing continuing access to authentic electronic records over time.

The goal of ERA is to enable NARA to preserve and provide access to **any type of electronic record** created anywhere in the Federal Government.

ERA's Vision Statement

"ERA will *authentically preserve and provide access to any kind of electronic record*, free from dependency on any specific hardware or software, enabling NARA to carry out its mission into the future."

John W. Carlin, Archivist of the United States

Who Else Needs This Capability?

- Aerospace
- Pharmaceuticals
- Energy
- Transportation
- Electronics
- Services
- Actually, every enterprise and individual who has need to access electronic materials beyond 5-10 years.

Create a Capability That Will:

- **Preserve authentically any type of electronic record,**

- **Created using any type of computer application,**

- **On any computing platform,**

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

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

- **Now and for the life of the republic and beyond**

What Will the System Do?

- **Protect the system and the records with state-of-the-art security.**

- **Accommodate growth in volume & variety.**

- **Support the collection, integration, and sharing of information about records.**

- **Support the workflow associated with business processes.**

- **Interoperate with other systems.**

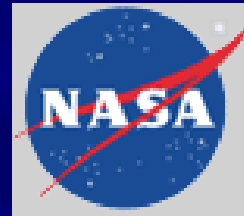- **Maintain a complete audit trail.**

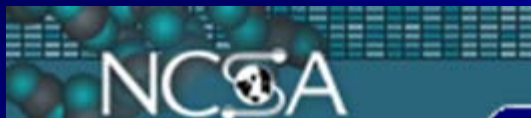- **Evolve**

Government and Private Sector Partners

National Science Foundation

Global Grid Forum

NASA

University of Maryland

SDSC
San Diego Super Computer Center

InterPARES Project
International Research on Permanent Authentic Records in Electronic Systems

IEEE

NCSA

National Computational Science Alliance

Georgia Tech Research Institute

Army Research Laboratory

NIST
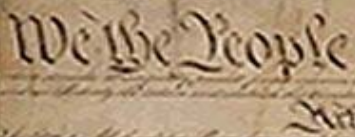National Institute of Standards & Technology

NPACI
National Partnership for Advanced Computational Infrastructure

The Library of Congress

Defense Advanced Research Projects Agency DARPA

DIGITAL LIBRARY FEDERATION

Accessioning Workbench

- Accession
- Verify
- Transform, Wrap & Containerize
- Describe

Archival Repository

- Collection
- Collection
- Collection
- Metadata

Reference Workbench

- Query
- Rebuild
- Present

Tapes

Disks

Internet

Records Schedules

Archival Research Catalog

Order Fulfillment System
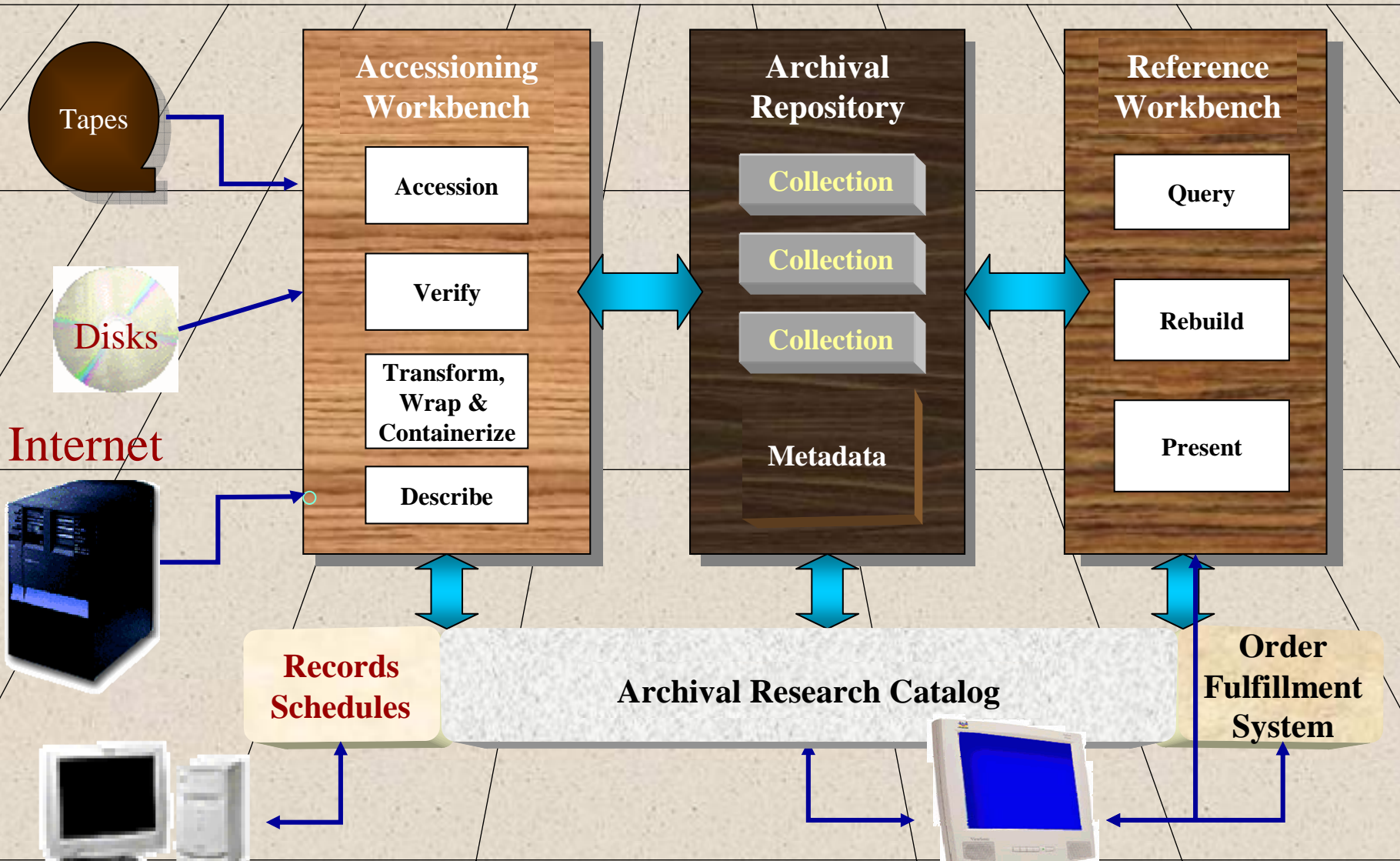
The Electronic Records Archives
Major Milestones

Where are we now?

- Awarded Two Design Contracts – 3Q04
- Select a Single Developer – 3Q05
- Initial Operating Capability – FY 2007
- Five Increments w/ Multiple Releases
- Full Operating Capability - 2011

12/03	3rd Qtr. 2004		I1		I2		I3		I4		I5
		1 year		2 years		1 year		1 year		1 year	

12/03 — Released Request for Proposal

3rd Qtr. 2004 — Contract Award

3rd Qtr. 2005 — Select Single Developer

FY 2007 — Initial Operating Capability (IOC)

2011 — Full Operating Capability (FOC)