

Session 19. Digital Preservation: A New Framework Based on a Capability Maturity Model

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Session Objective

- ▶ Enable each participant to learn how to develop a roadmap for a strategic, sustainable digital records preservation capability that is customized to specific organizational requirements and resources.



Session Overview

- ▶ Introduction
- ▶ Digital Preservation Capability Model[©] Framework
- ▶ Four Step Approach
- ▶ Case Studies
- ▶ Conclusions
- ▶ Team Digital Preservation (video)





Introduction

Scope of Our Challenge


Key Findings

- The problems of logical and physical retention
 - Practitioners are struggling – information is at risk long-term
 - Problems are real and generally understood
- Long-term generally means over 10-15 years.
 - IT can manage to migrate and retain readability for about this long. For longer periods, processes begin failing, become too costly, and the volume of information becomes overwhelming.
- Long-term retention requirements are real.
 - Over 80% of organizations reporting have a need to retain information over 50 years and 68% report a need of over 100 years.

"This is the problem with 'Digital Archive', you are not thinking long enough into the future." (Source: Respondent)

- ▶ Long-term, by consensus, came out to be anything beyond 10-15 years because that is the time-frame beyond which they begin to lose control of logical and physical migration.

SOURCE: SNIA 100 Year Archive Study Requirements Survey, January 2007.



Digital Preservation Trends

- ▶ 2009 Electronic Records Management Survey
- ▶ 2007 Electronic Records Management Survey
- ▶ Audience digital preservation demographics



Noteworthy Digital Preservation Initiatives

- ▶ Electronic Records Archives (ERA)
- ▶ Keeping Emulation Environments Portable (KEEP)
- ▶ Digital Object Record Identification (DROID)
- ▶ JSTORE Harvard Object and Validation Environment (JHOVE)
- ▶ FOrmat CUration Service (FOCUS)
- ▶ Auditing Control Environment (ACE)
- ▶ Distributed Archival Custodial Preservation Environment (DCAPE)
- ▶ Digital Repository Audit Methodology Based on Risk Assessment (DRAMBORA)
- ▶ Library of Congress National Digital Information Infrastructure and Preservation Program (NDIPP)



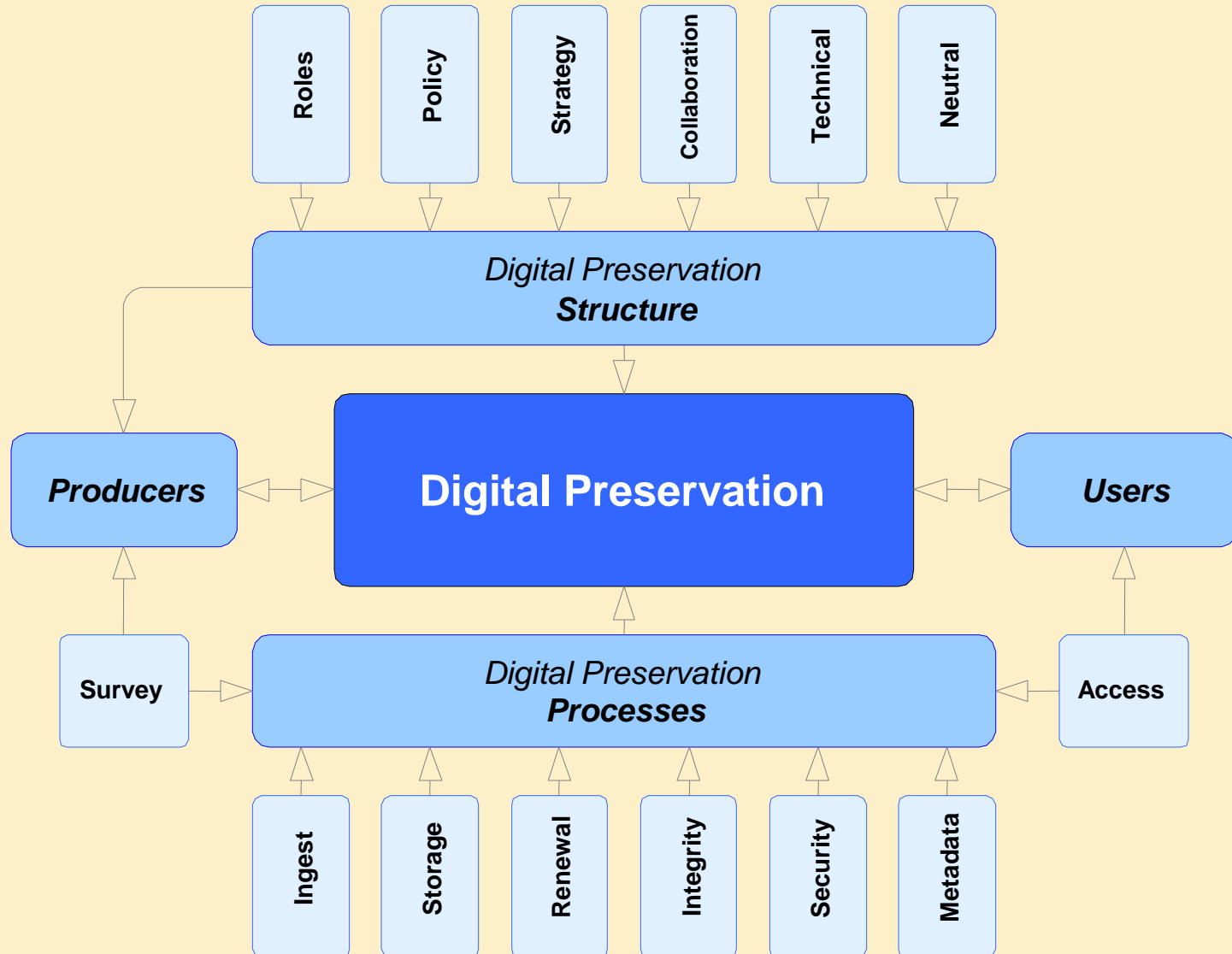
Digital Preservation Framework

Digital Preservation

- ▶ Digital preservation structure and processes
- ▶ Digital preservation capability maturity model[©]
- ▶ Digital preservation performance metrics



Digital Preservation Framework[©]

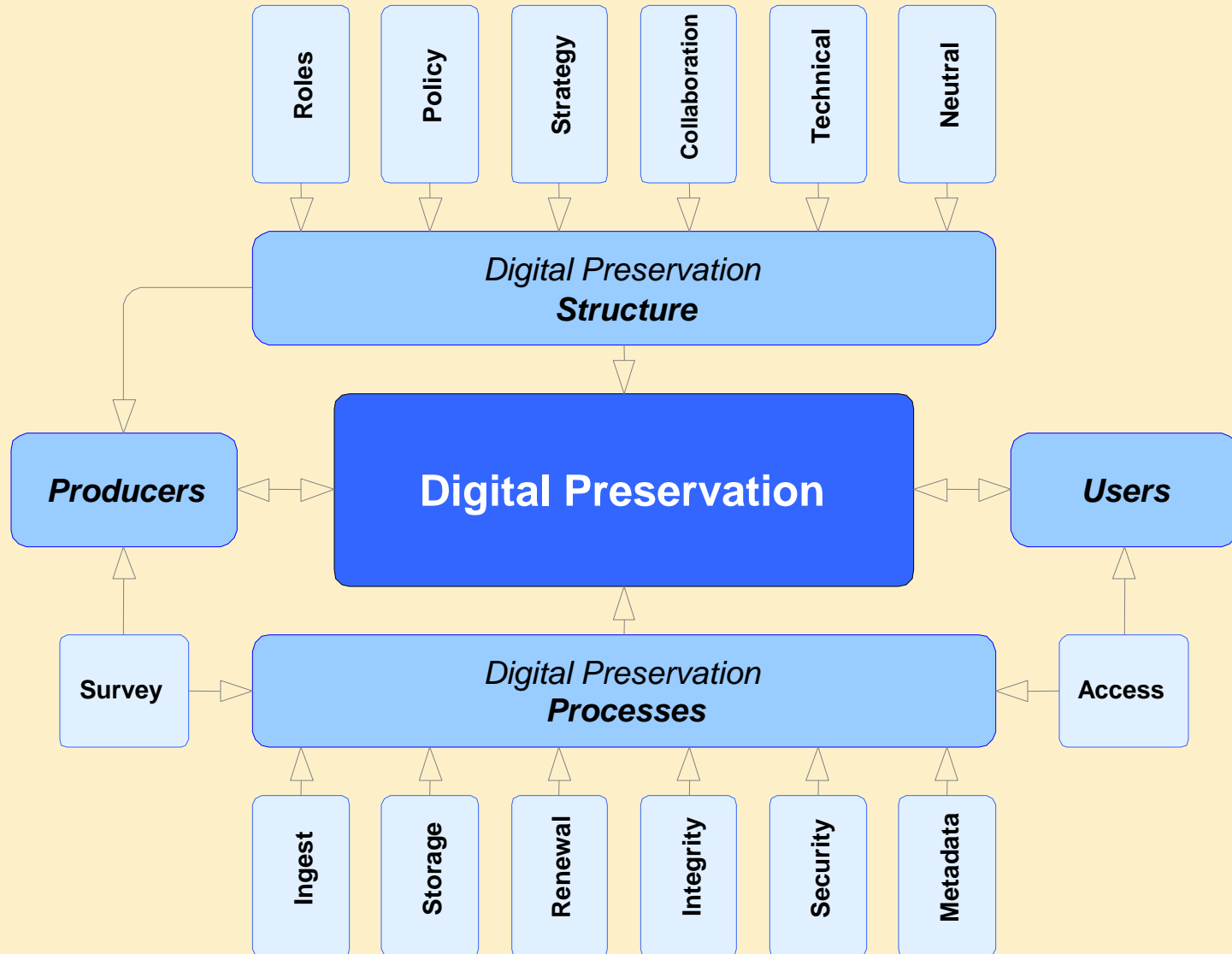


Adoption of Technology Neutral Open Standard Formats

A digital preservation program supports technology **neutral open standard formats** that through backward compatibility can help **mitigate technology obsolescence**.



Digital Preservation Framework[©]

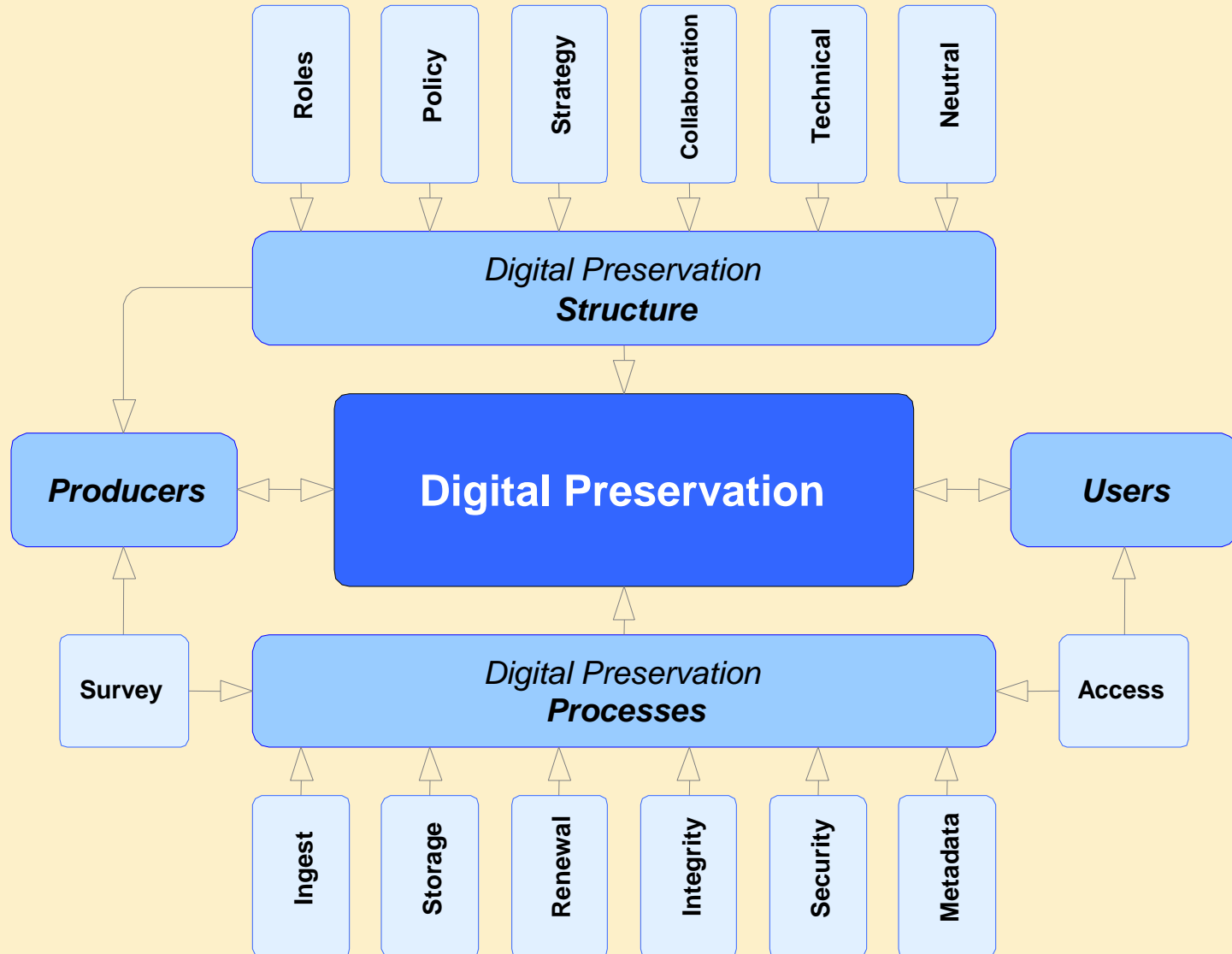


Ingest of Digital Records

A digital preservation program supports the ingest of digital records in accordance with the requirements of **ISO 14721 and ISO 18492 and related best practices.**



Digital Preservation Framework[©]



Digital Record Integrity

The bit streams underlying digital records are vulnerable to alteration when preservation activities (e.g., media renewal) occur over time. A digital preservation program must be able to **demonstrate that the integrity of the content, context, and structure of digital records has not been compromised**. This process describes the controls and mechanisms that should be implemented to **protect the integrity** of digital records.

