DLF Services Framework Overview

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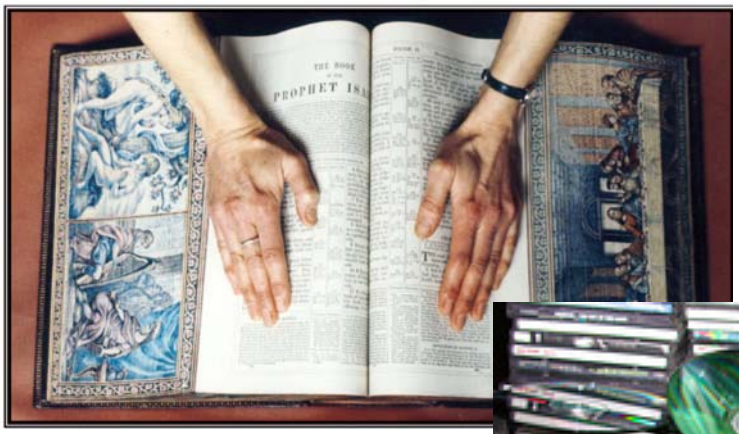
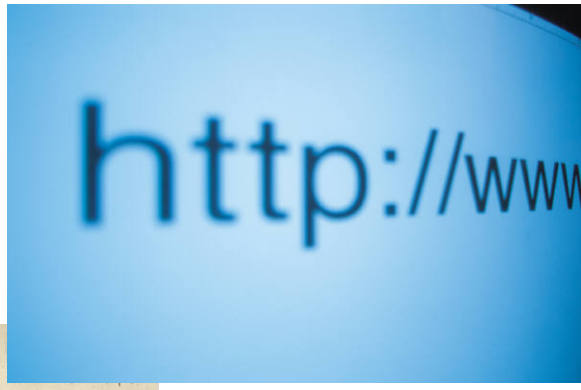
Agenda

- Summary of Motivation
- Business vs. Systems Logic
- Definitions, Approaches and Vocabulary
- Examples
- Determining Services
- Development Phases and Process
- SFG Members

DLF



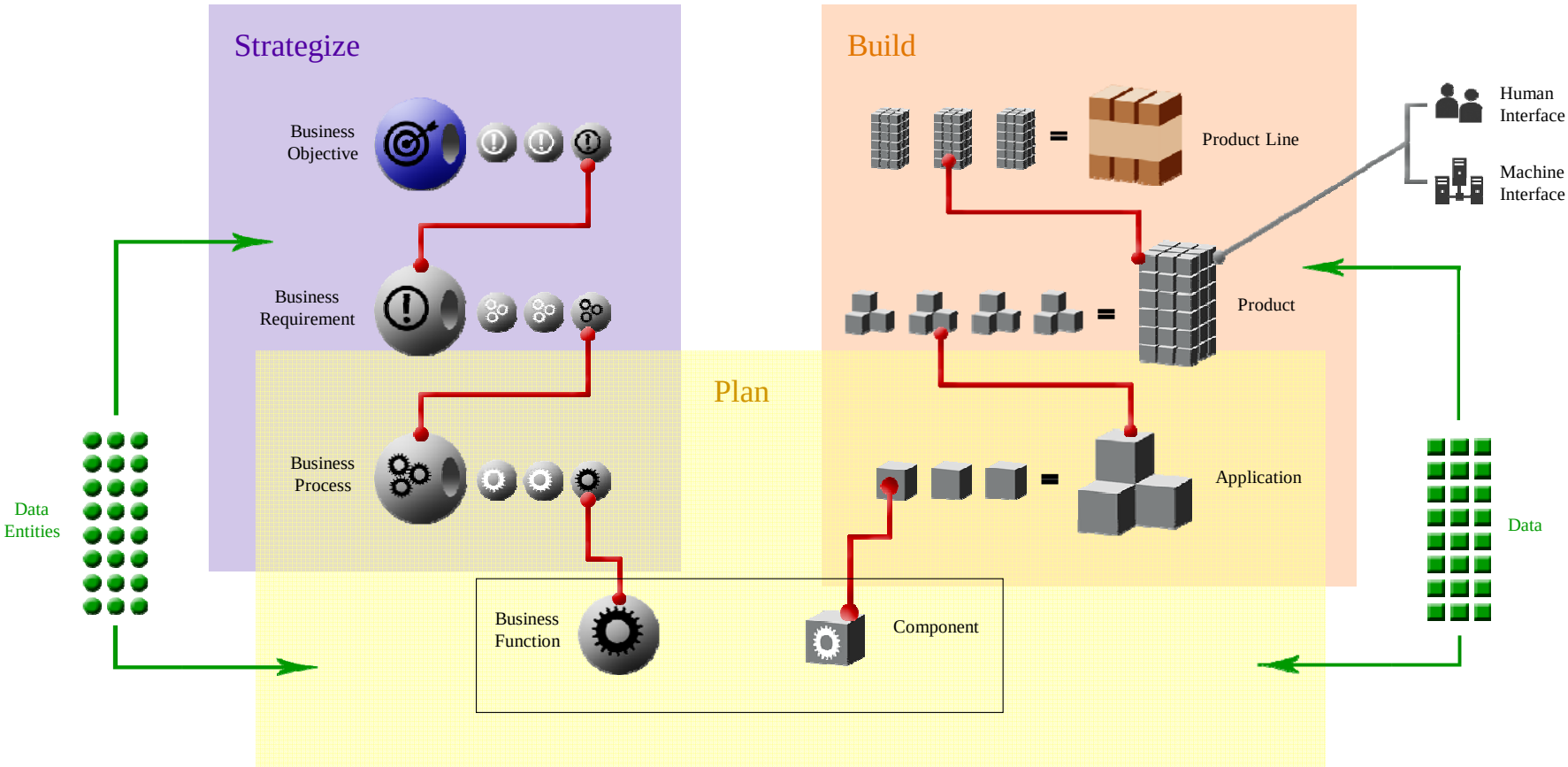


19 April 2007

Services Framework Overview

- Need to clearly understand the business(es) of research libraries as we move aggressively in new directions and what processes and functions are needed to serve that mission
- We are not designing and implementing a system; we are articulating a services perspective
- The systems we run must meet service needs. Libraries should not be held hostage by vendors with nonflexible solutions

Process Driven Services

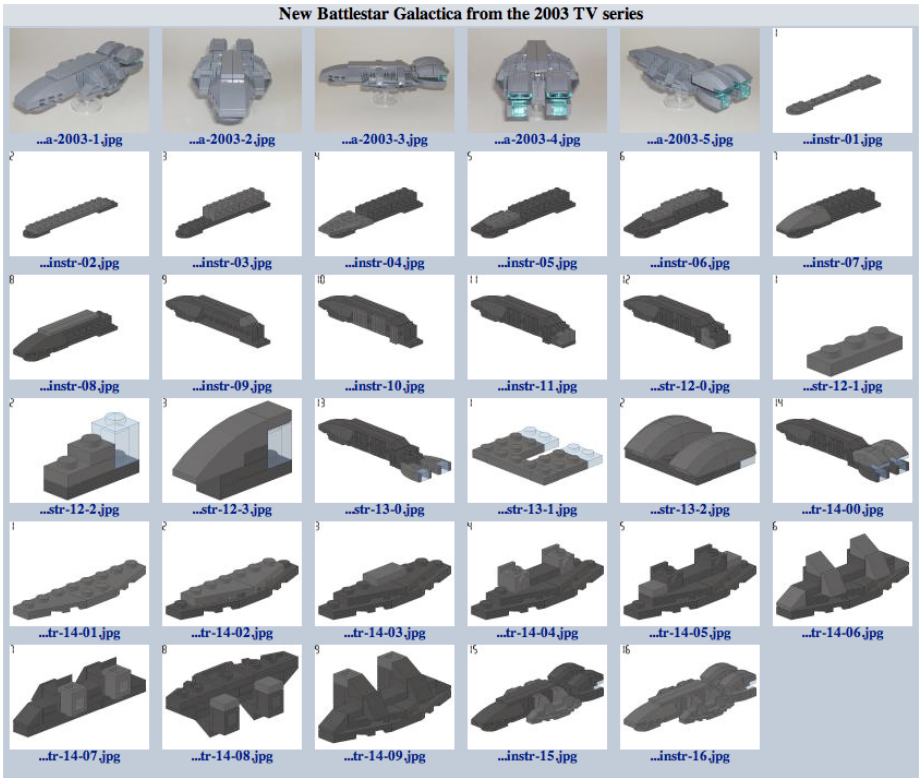


Adopting Existing Models

- Initially looked at adopting an existing framework model
- Close cooperation with UK e-framework initiatives
- Most frameworks focus on systems; we need to look at library business processes as well
- Business Process Models considered (e.g. OMG BPM)

Towards a Service Oriented Architecure (SOA)

Think legos



Not too small, not too big

SFG's Definition of a Services Framework

A service framework is a set of reference models, along with a set of concepts and vocabulary for expressing and relating them. The service framework – i.e., vocabulary and reference models – covers the range of entities relevant to the articulation of library business goals at varying levels of granularity, as well as the services that support these goals.

Approach

- Decision to focus on the business logic first, then look for *service genres* that emerge (automatable, reusable)
- Working group focused on defining an approach that could be further developed and implemented

So Why Should a Digital Curator Care?

- Managing digital knowledge assets = providing the services needed to meet both librarian and consumer needs

- Systems need to adapt to rapidly changing needs, constantly providing improved capabilities
  - Improved efficiency for librarians
  - Improved services for users

Key Business Logic Vocabulary Terms

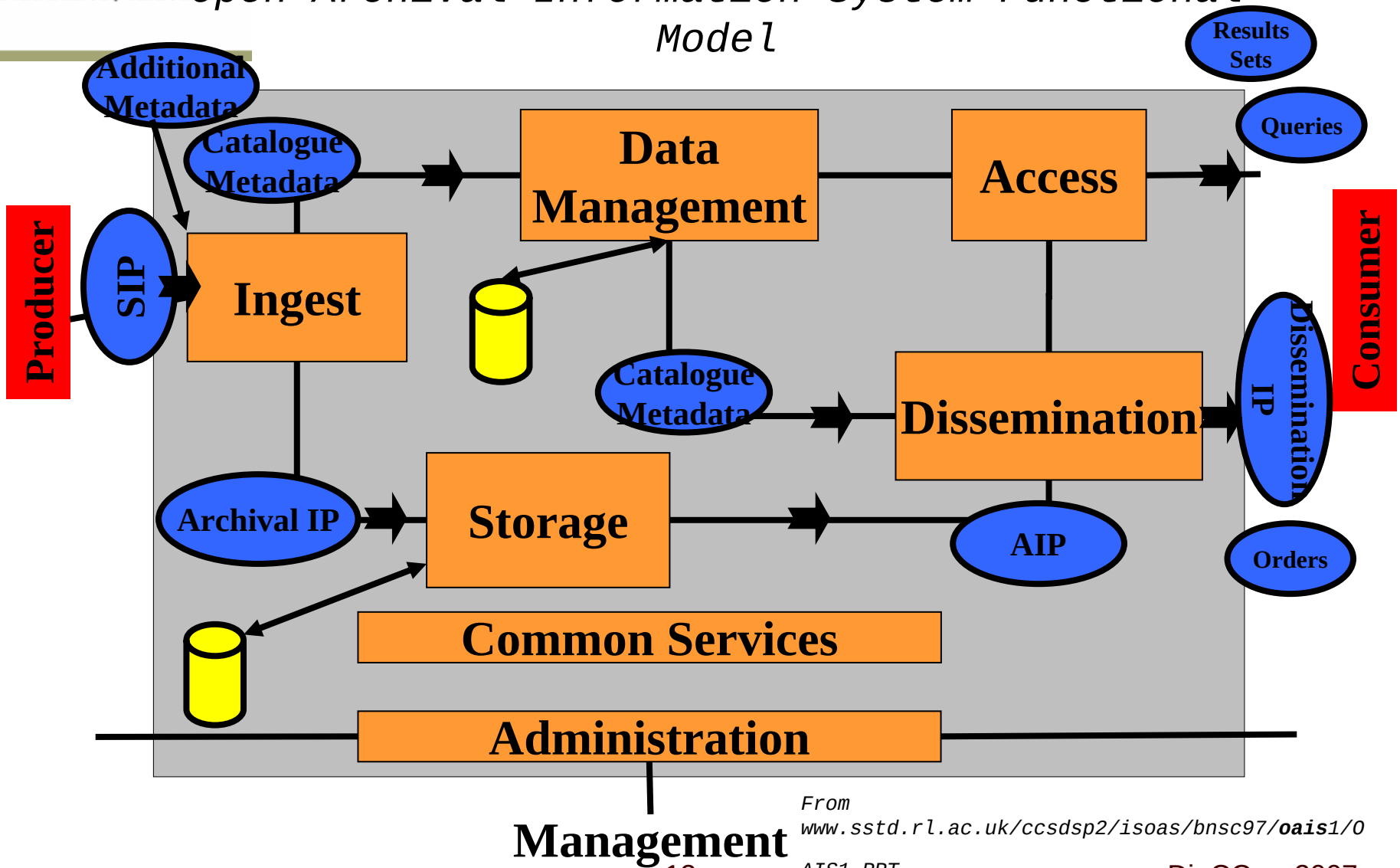
- *Business Requirement:* identifiable segment of an organization's overall mission. *Example: Electronic Resource Management (ERM)*

- *Business Process*: a grouping of activities required to fulfill a business requirement. *Example: Business/License Negotiation*

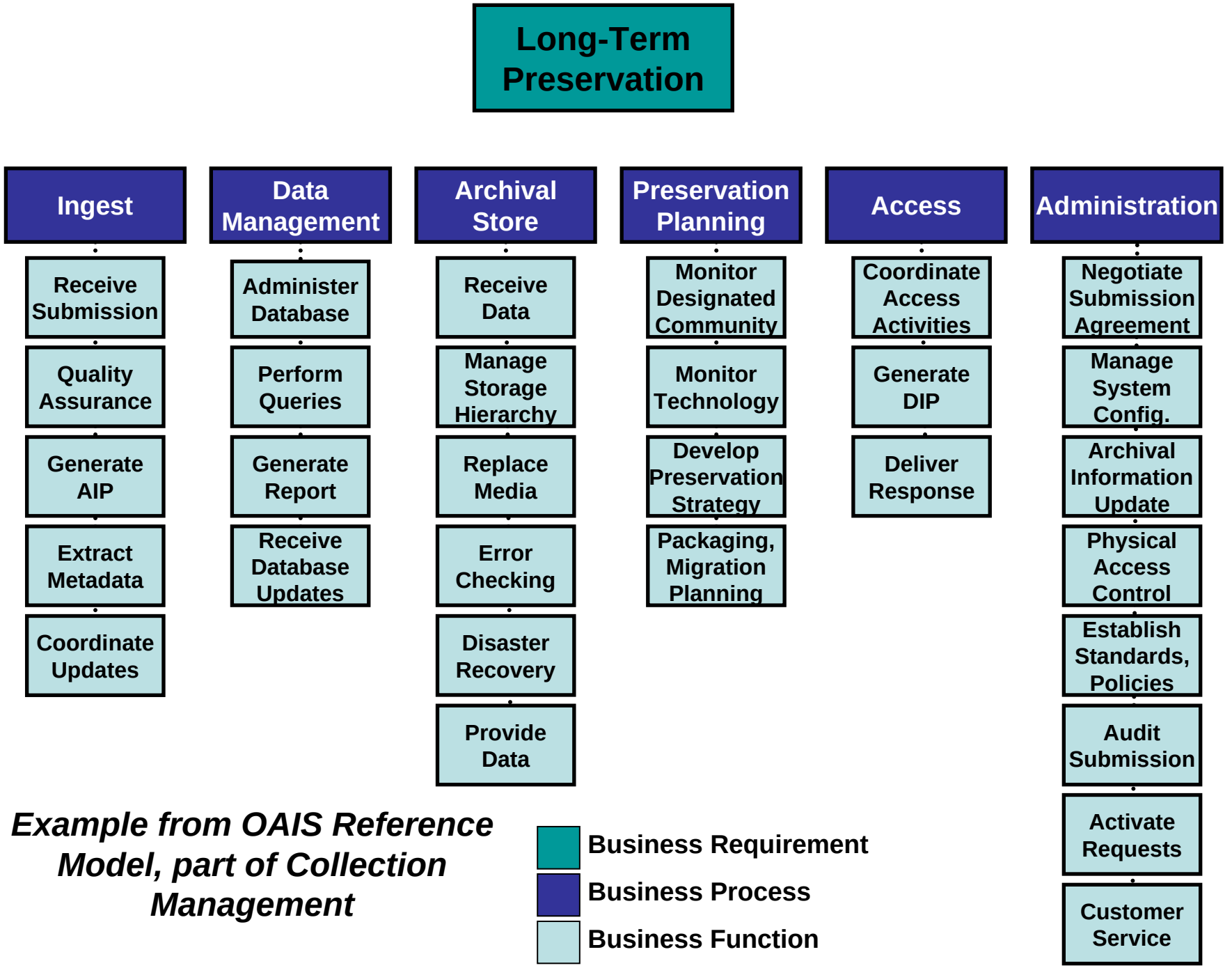
- *Business Function*: identifiable activities that fulfill a business process. *Example: Log Licensing Information*

Critical Elements of an IR

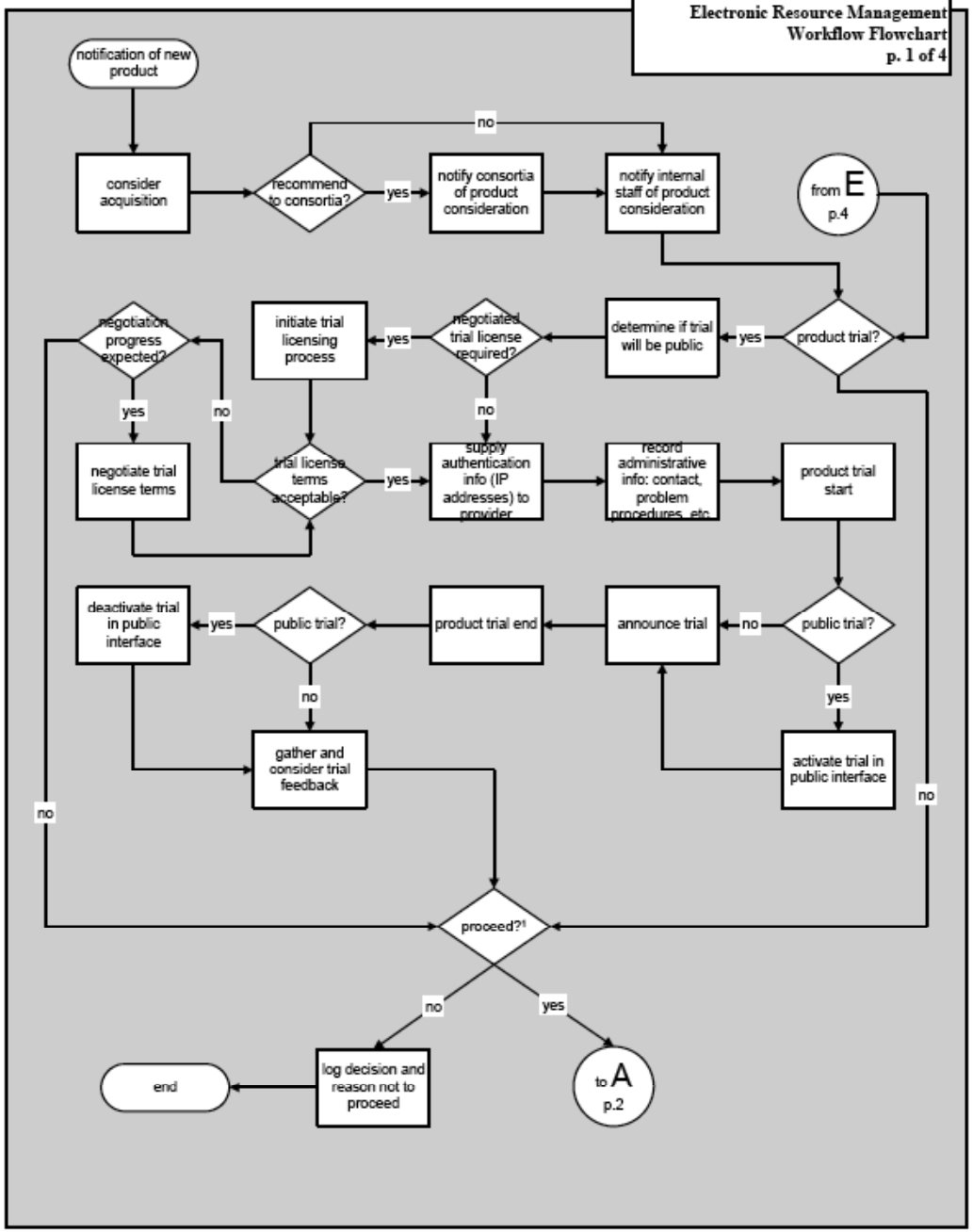
Open Archival Information System Functional Model

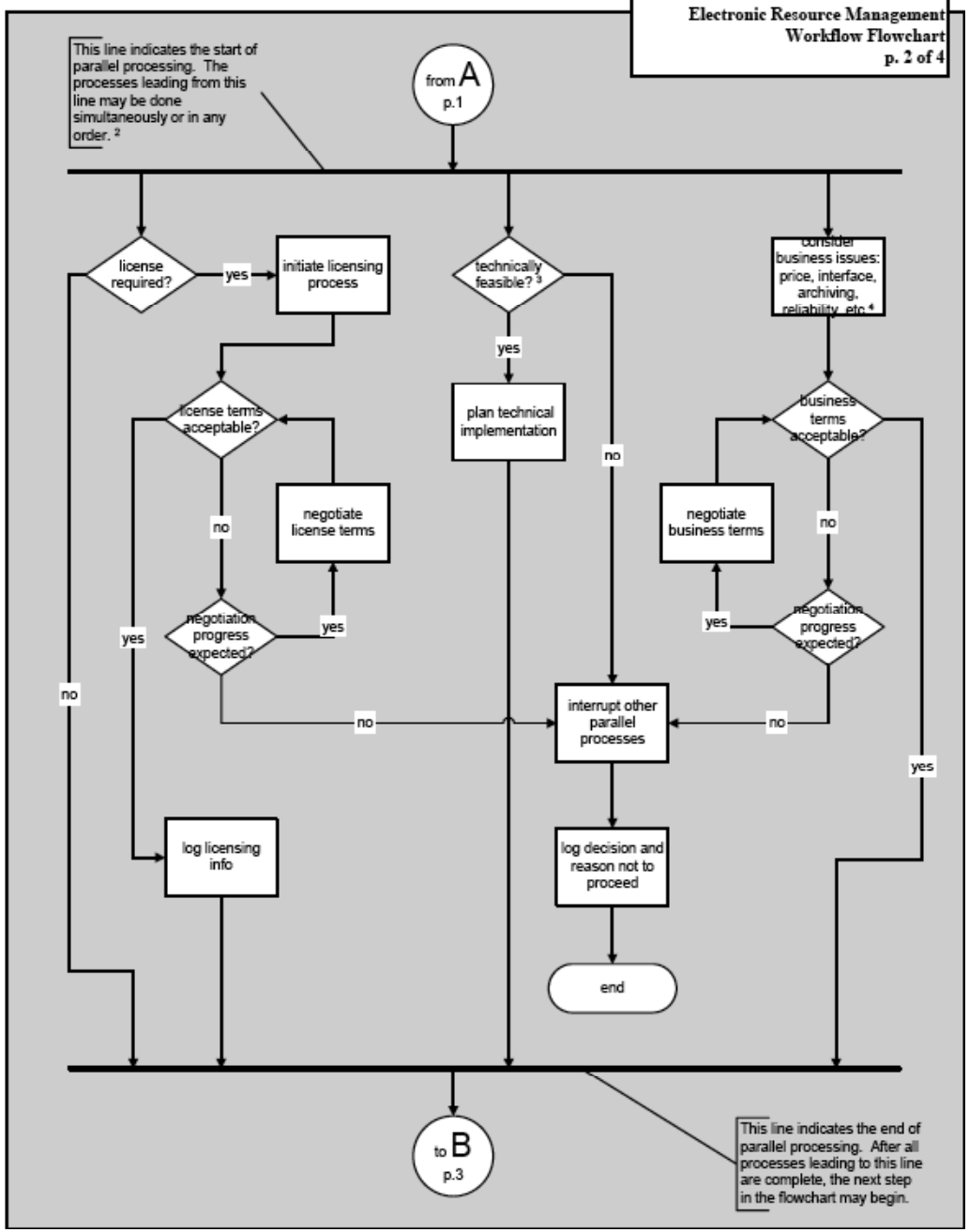


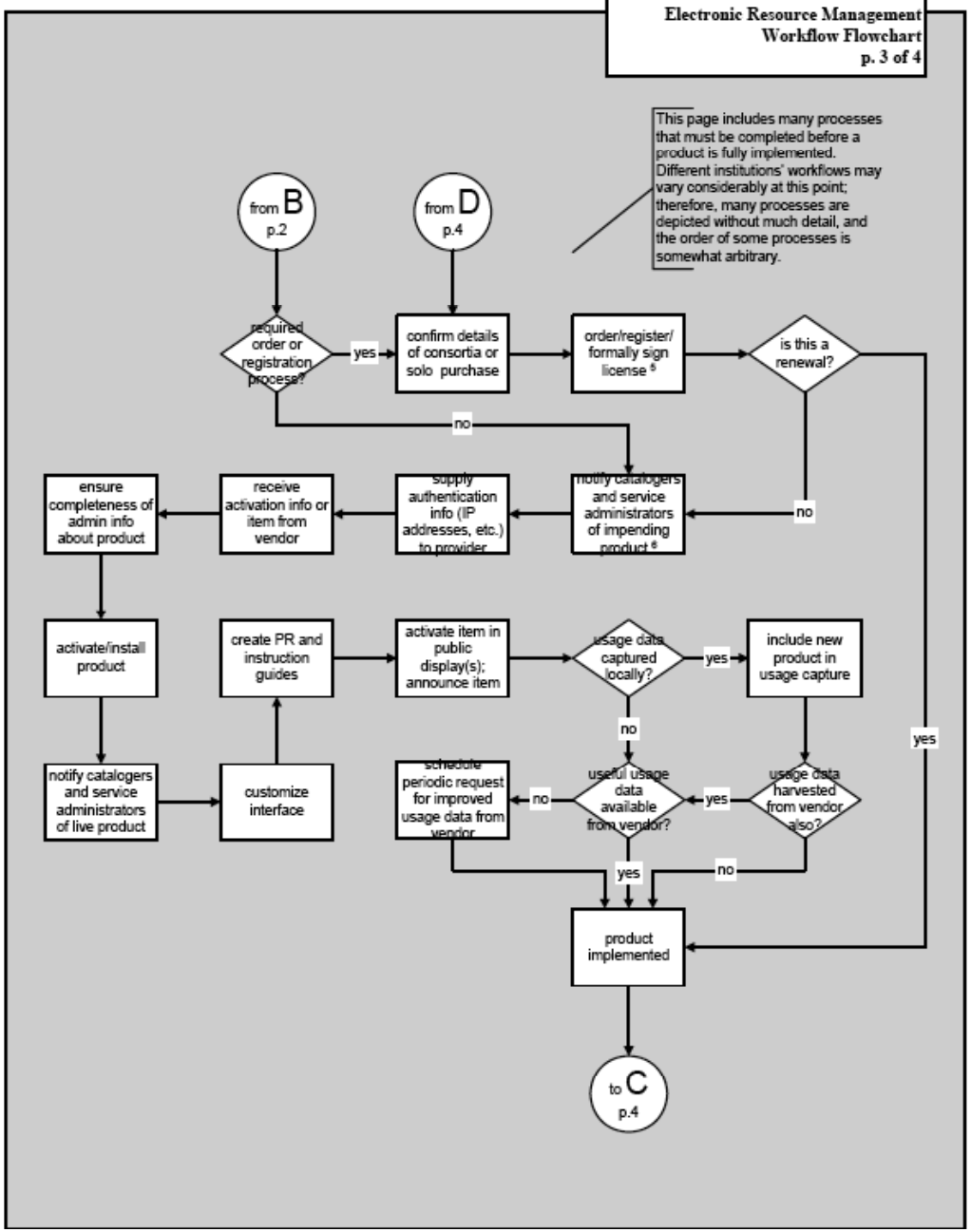
*From www.sstd.rl.ac.uk/ccsdsp2/isoas/bnsc97/**oais**1/OAIS1.PPT*

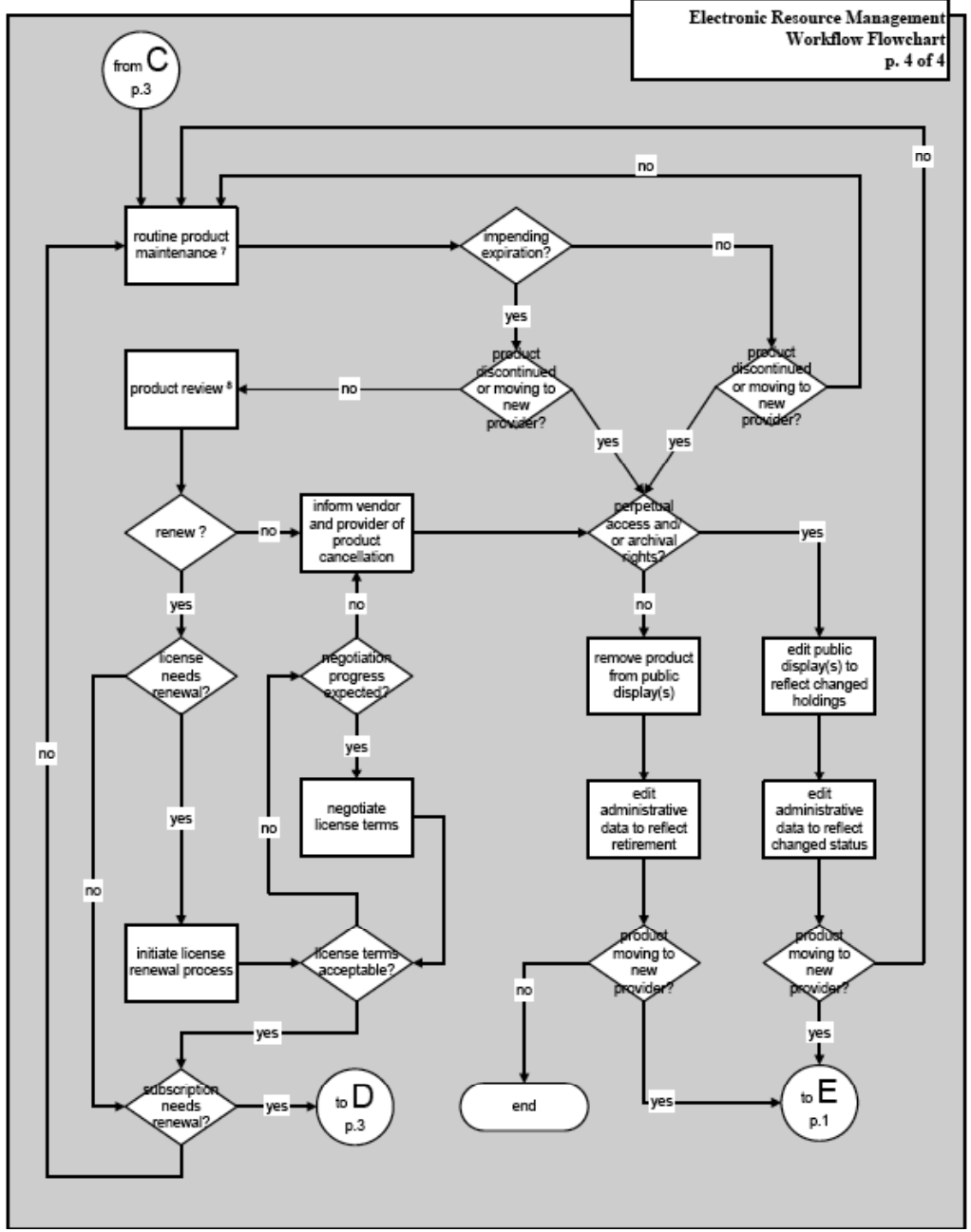


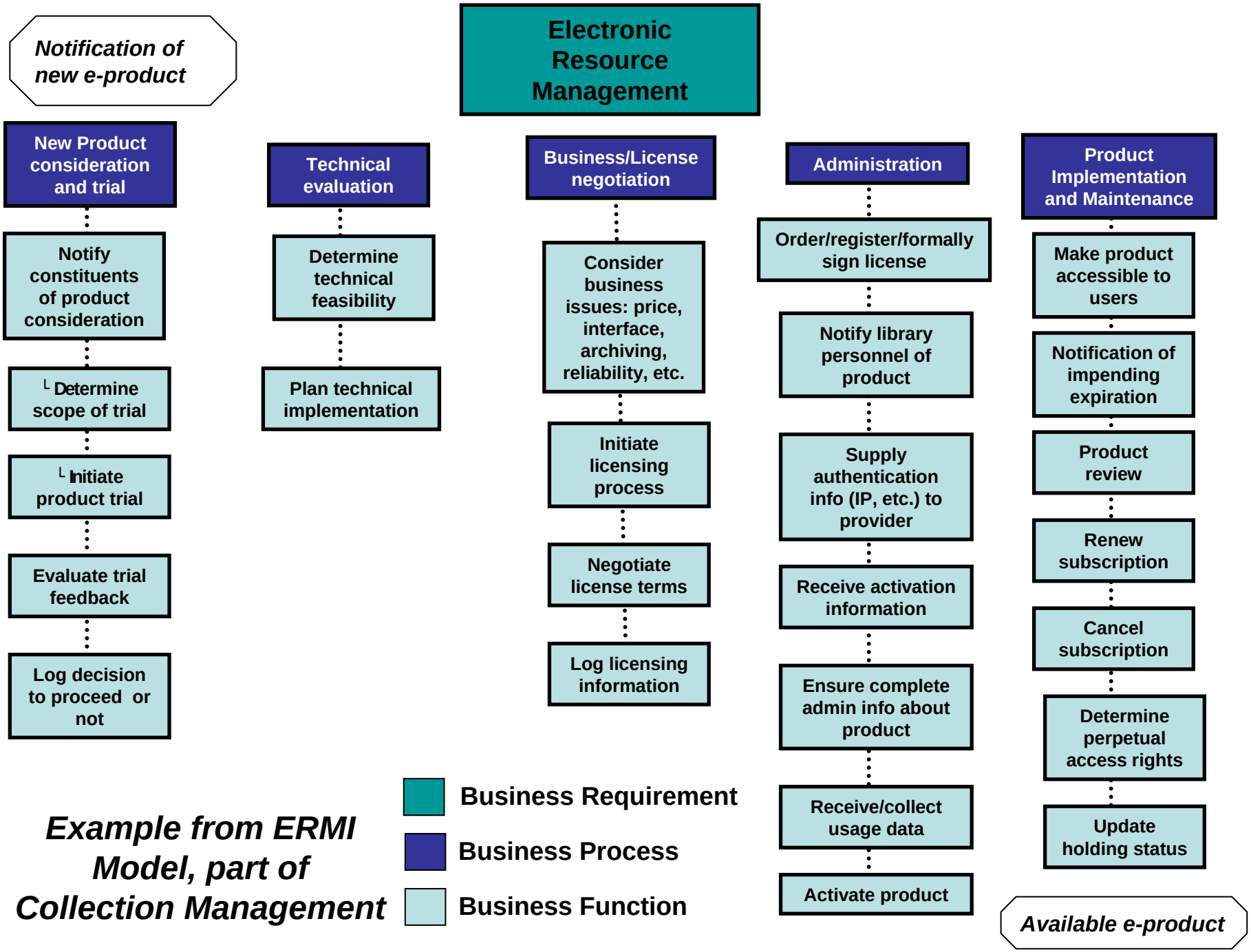
Example from OAIS Reference Model, part of Collection Management


Electronic Resource Management
Workflow Flowchart
p. 1 of 4
notification of new product
consider acquisition
recommend to consortia?
yes
no
notify consortia of product consideration
notify internal staff of product consideration
from E p.4
product trial?
yes
determine if trial will be public
negotiated trial license required?
yes
initiate trial licensing process
negotiation progress expected?
yes
no
negotiate trial license terms
trial license terms acceptable?
yes
no
supply authentication info (IP addresses) to provider
record administrative info: contact, problem procedures, etc.
product trial start
public trial?
yes
no
activate trial in public interface
announce trial
product trial end
public trial?
yes
no
deactivate trial in public interface
gather and consider trial feedback
no
proceed?1
yes
no
to A p.2
log decision and reason not to proceed
end


Electronic Resource Management
Workflow Flowchart
p. 2 of 4
This line indicates the start of parallel processing. The processes leading from this line may be done simultaneously or in any order. 2
from A
p.1
license required?
yes
initiate licensing process
technically feasible? 3
consider business issues: price, interface, archiving, reliability, etc. 4
yes
license terms acceptable?
plan technical implementation
business terms acceptable?
no
negotiate license terms
negotiate business terms
no
no
negotiation progress expected?
yes
yes
negotiation progress expected?
yes
no
no
interrupt other parallel processes
no
yes
log licensing info
log decision and reason not to proceed
end
to B
p.3
This line indicates the end of parallel processing. After all processes leading to this line are complete, the next step in the flowchart may begin.


Electronic Resource Management
Workflow Flowchart
p. 3 of 4
This page includes many processes that must be completed before a product is fully implemented. Different institutions' workflows may vary considerably at this point; therefore, many processes are depicted without much detail, and the order of some processes is somewhat arbitrary.
from B p.2
from D p.4
required order or registration process?
yes
confirm details of consortia or solo purchase
order/register/ formally sign license [5]
is this a renewal?
no
yes
notify catalogers and service administrators of impending product [6]
supply authentication info (IP addresses, etc.) to provider
receive activation info or item from vendor
ensure completeness of admin info about product
activate/install product
create PR and instruction guides
activate item in public display(s); announce item
usage data captured locally?
yes
include new product in usage capture
no
notify catalogers and service administrators of live product
customize interface
schedule periodic request for improved usage data from vendor
no
useful usage data available from vendor?
yes
usage data harvested from vendor also?
yes
no
product implemented
to C p.4


Electronic Resource Management
Workflow Flowchart
p. 4 of 4
from C p.3
routine product maintenance 7
impending expiration?
no
yes
product discontinued or moving to new provider?
product review 8
no
product discontinued or moving to new provider?
yes
yes
no
no
renew ?
no
inform vendor and provider of product cancellation
perpetual access and/or archival rights?
yes
yes
no
no
license needs renewal?
negotiation progress expected?
remove product from public display(s)
edit public display(s) to reflect changed holdings
yes
no
yes
negotiate license terms
edit administrative data to reflect retirement
edit administrative data to reflect changed status
no
no
initiate license renewal process
license terms acceptable?
product moving to new provider?
product moving to new provider?
no
yes
yes
subscription needs renewal?
yes
to D p.3
end
yes
to E p.1


Notification of new e-product
Electronic Resource Management
New Product consideration and trial
Notify constituents of product consideration
Determine scope of trial
Initiate product trial
Evaluate trial feedback
Log decision to proceed or not
Technical evaluation
Determine technical feasibility
Plan technical implementation
Business/License negotiation
Consider business issues: price, interface, archiving, reliability, etc.
Initiate licensing process
Negotiate license terms
Log licensing information
Administration
Order/register/formally sign license
Notify library personnel of product
Supply authentication info (IP, etc.) to provider
Receive activation information
Ensure complete admin info about product
Receive/collect usage data
Activate product
Product Implementation and Maintenance
Make product accessible to users
Notification of impending expiration
Product review
Renew subscription
Cancel subscription
Determine perpetual access rights
Update holding status
Available e-product
Example from ERMI Model, part of Collection Management
Business Requirement
Business Process
Business Function

Systems Logic

- Identifying business functions that repeatedly occur across business areas provides a strong indicator of a good services genre candidate
- These can be further examined for deriving service genres that are reused
- Approach from a systems perspective is *service oriented -- logical components that perform a set of operations consistently, lending themselves to reuse across multiple applications*
- With this it is possible to design for open systems of reusable components that can be mixed and matched to achieve the necessary business logic

Development Phases

- Phase 1, 2006
  - Definition of services framework and approach
  - Process and templates for developing business functions
- Phase 2, 2006 - 2007
  - Detailing of library/digital library workflows and their business requirements
  - Provide *Service Usage Models* (SUMs) of library activities
  - Begin identifying candidate *service genres*
    - Activities that can be discretely automated
    - Coordinated with JISC/DEST e-Framework
- Phase 3, 2007 - 2008
  - Prototype Service Oriented Architecture (SOA) components for identified services
  - Begin flexible systems development for production use

Working Group Members

- Lorcan Dempsey, OCLC (chair)
- Brian Lavoie, OCLC
- MacKenzie Smith, MIT
- Dale Flecker, Harvard
- Krisellen Maloney, Georgetown University
- Andy Powell, Eduserv
- Peter Brantley, CDL
- Geneva Henry, DLF Dist. Fellow
- David Seaman, DLF
- Jim Michalko, RLG
- Sayeed Chaudry, JHU
- Dan Rehak, Univ. of Memphis

DLF
Digital Library Federation

Thank You and THINK SMALL

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