



# The e-Framework, SOA & Enterprise Architecture

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- In this first presentation of the session we will look at:
  - ‘service oriented approach’ (soa) and ‘Service Oriented Architecture’ (SOA)
  - The e-Framework
  - How this is being handled in JISC Development Programmes
  - A look at the task of translating JISC soa-related outputs into institutional SOAs

‘service oriented approach’ (soa)  
and  
‘Service Oriented Architecture’ (SOA)

[SOA Animation](#)

[http://www.jisc.ac.uk/news/stories/2007/02/news\\_animation.aspx](http://www.jisc.ac.uk/news/stories/2007/02/news_animation.aspx)

### ■ What are the yellow discs?

The 'Service Layer' can be implemented in several ways:

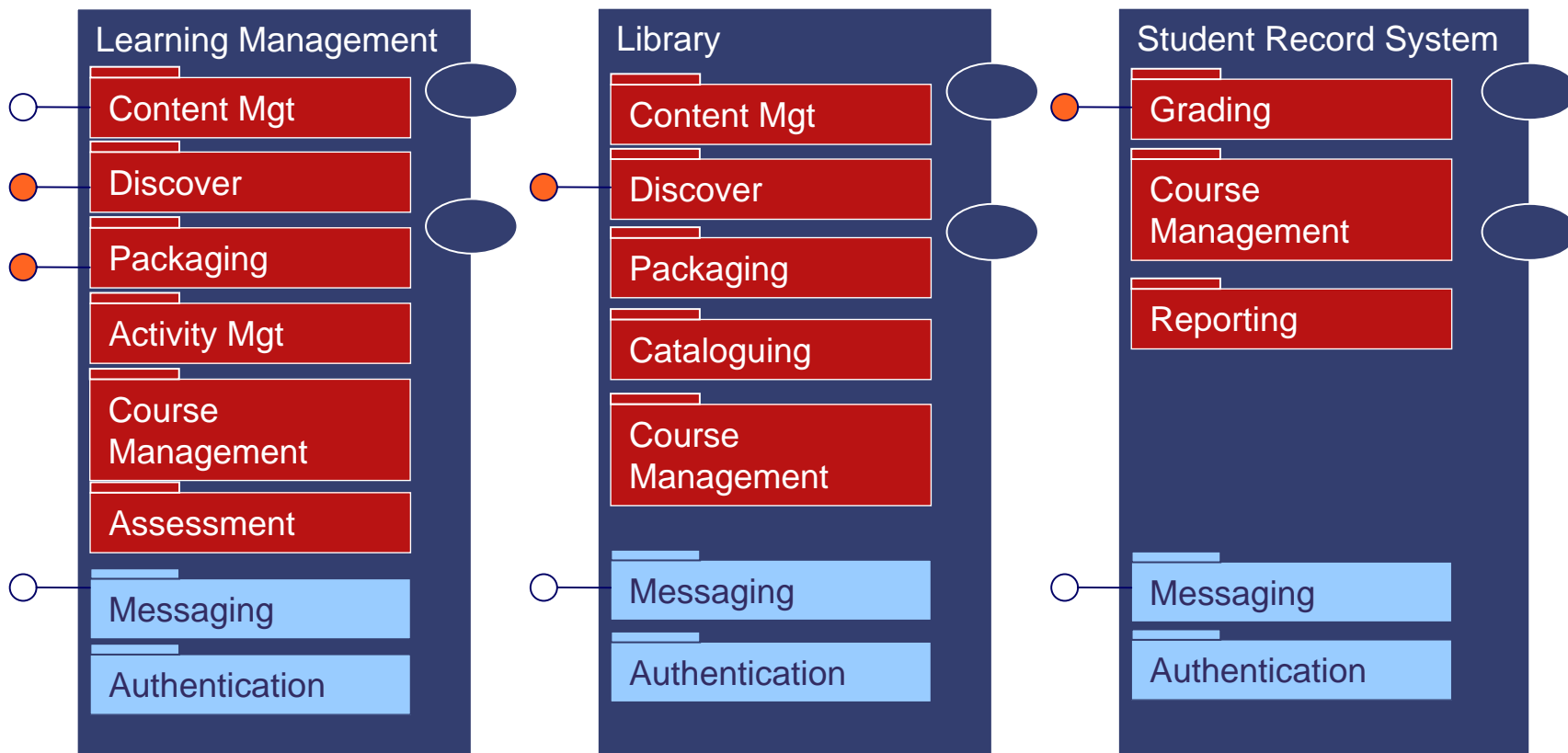
1. A separate application or 'enterprise service bus' that translates between proprietary and open formats
2. A plug-in Adapter that performs the same function
3. Code built into the application

### ■ What does it mean for us as an institution?

Where do we start?

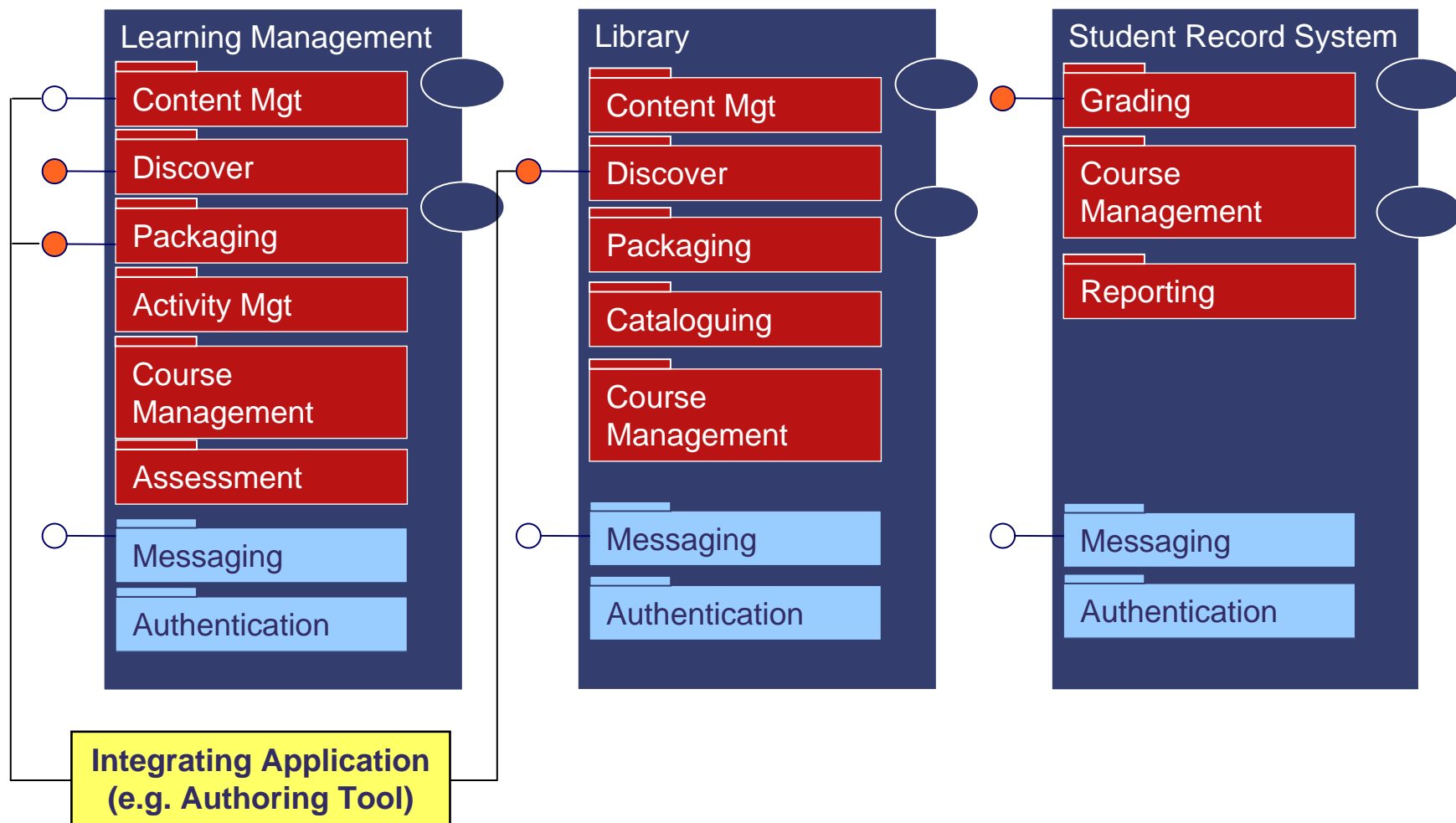
- That is a much bigger question
- The rest of this session seeks to answer it

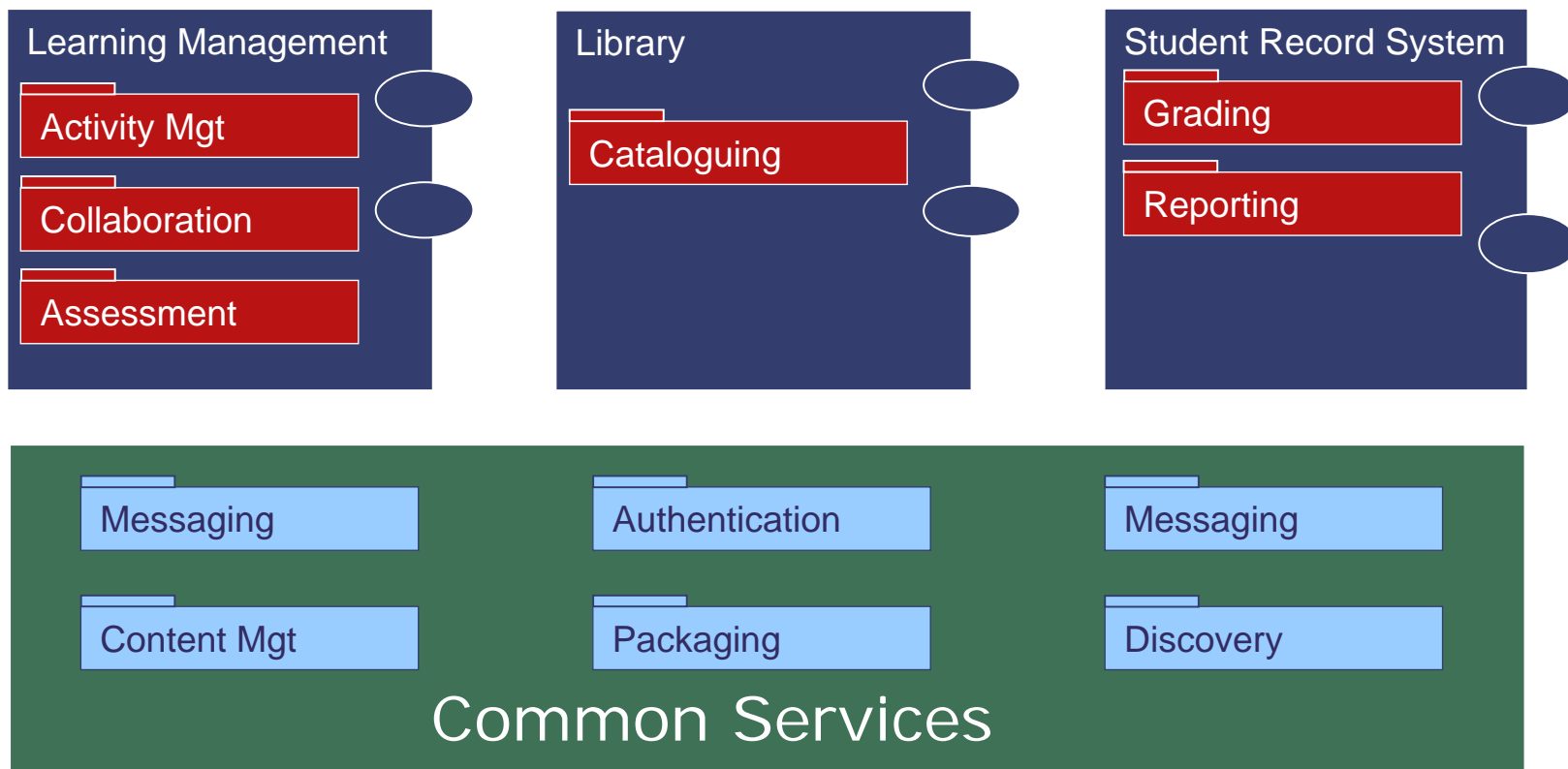
## Application View (common now)



Next Step: Add Service Interfaces to existing systems

## Application View (common now)





... but to do this is not easy and is an important aim of the e-Framework

# The e-Framework

- The 'e-Framework' can mean several things:
    - It began as a 'meta' JISC Programme, with the aim of co-ordinating service-related work in other Programmes
      - JISC Information Architecture
      - e-Research
      - e-Learning
    - It has also evolved into an International Programme, with the aim of sharing the work and the risks
      - JISC, DEST in Australia, SURF in Holland, & the Min of Ed in New Zealand, with interest from others
    - It becomes visible as a Web site over a knowledge base, being created by the partners
- (It is NOT a software framework)*

## Potential Benefits to Institutions of the e-Framework

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- Facilitate systems integration and infrastructure extension
- Enable new applications to be developed more quickly
- Enable ICT infrastructure to be better aligned with needs
- ... and, over time, become:
  - more flexible
  - able to facilitate strategic change rather than hinder it.
- The technical outputs of JISC projects more reusable:
  - More modular
  - Use cross-platform open interfaces
  - Able to be used together...  
and used with commercial products

- A service-oriented approach to system and process integration
- Development, promotion and adoption of Open Standards
- Community involvement in development of the e-Framework
- Open collaborative development activities
- Flexible and incremental deployment

- Taking a Service view of Software,
- and a Service view of organisational Functions and Tasks
- ...makes it easier to align them
  
- But developers need an understanding of the Domain
- ...and a Domain typically has several Applications
  
- Supporting Practitioners map out their Domain helps to:
  - Establish a Shared View
  - Identify Key Issues
  - Engage with Developers based on Reusable Knowledge

How is this applied in  
JISC Development Programmes?

- What is a Domain?
- For our purposes, it is:  
“a recognisable area of work or activity”
- Domains can be at different levels
- ...and nested

The e-Framework Consortium sees a University as composed of five sub-domains:

1. Learning and Teaching
2. Research
3. Libraries
4. Administration
5. Information Services

Each of these in turn breaks down into further sub-domains, e.g.

## Learning & Teaching:

- Course Management

- Content Preparation and Management

- Student Enrolment

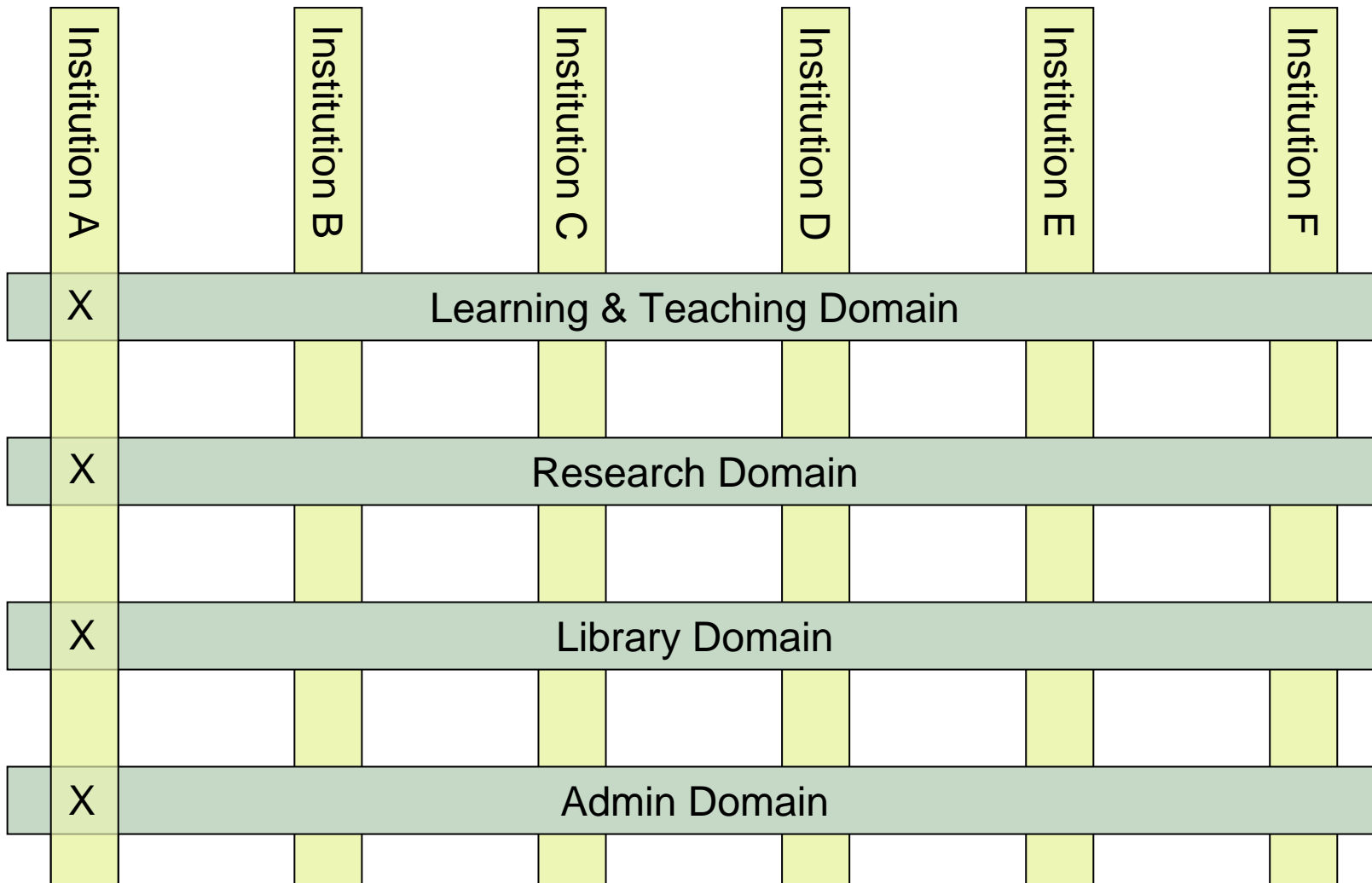
- Course Delivery (lectures, seminars, projects, etc.)

- Assignments and Activities

- Assessment

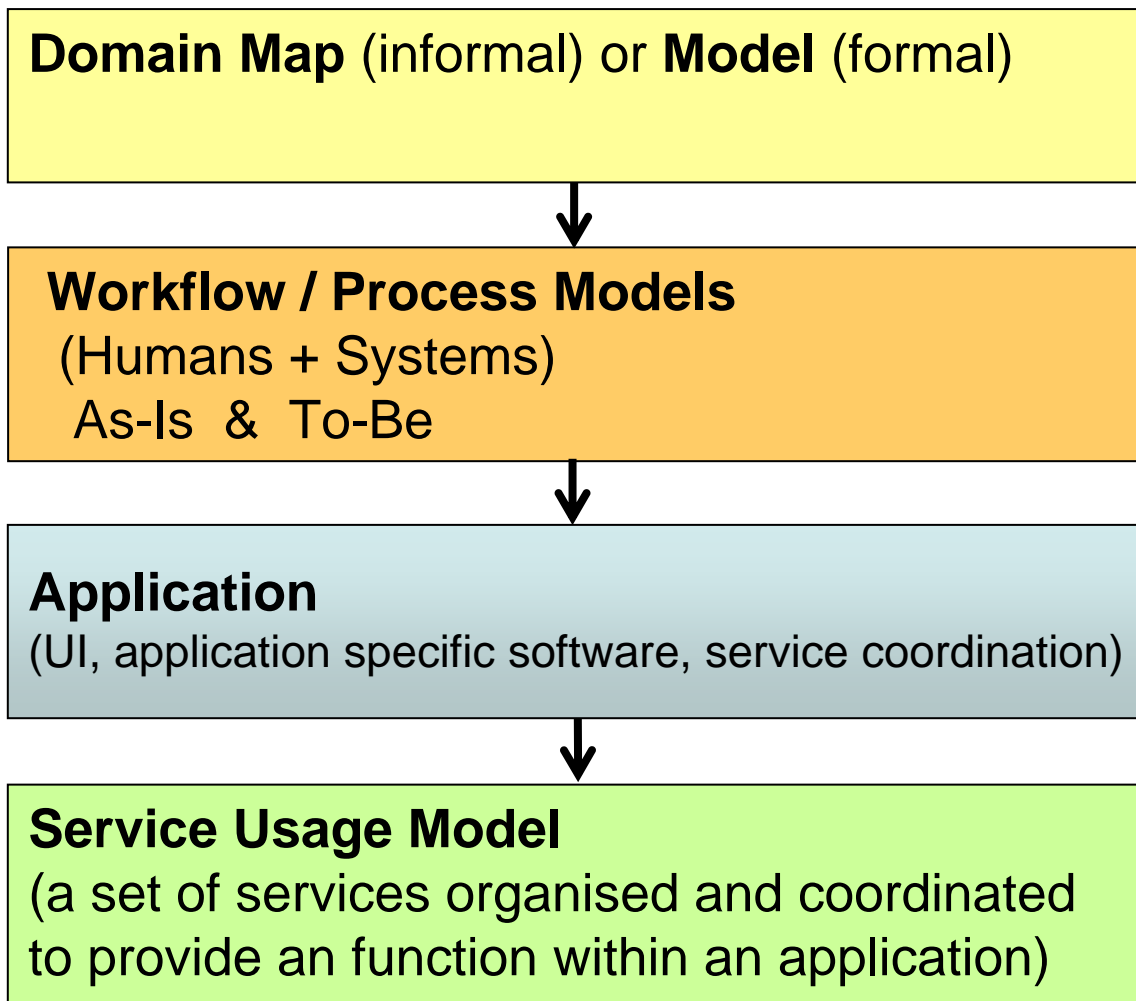
etc.

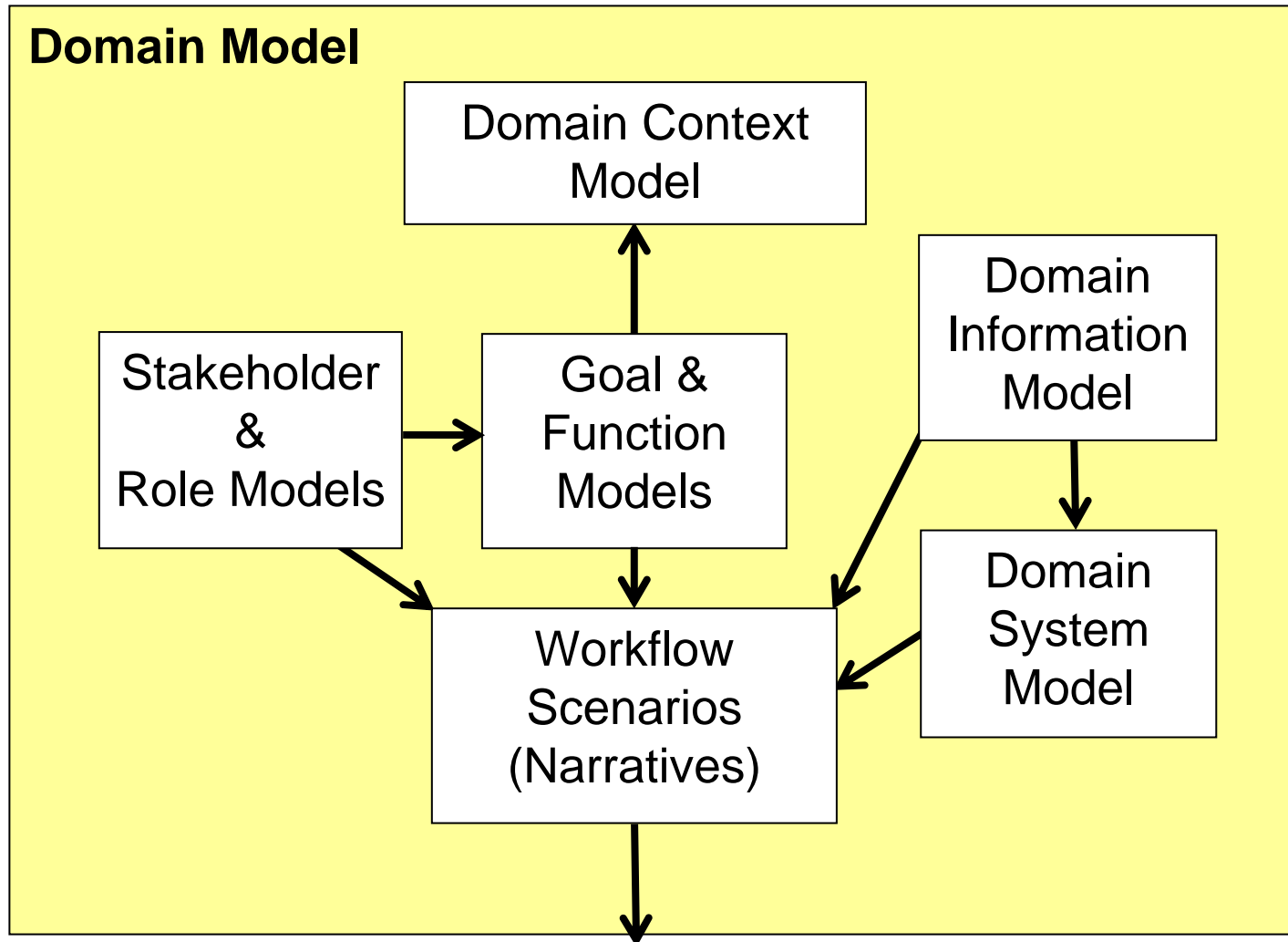
## Domains Cut Across Institutions

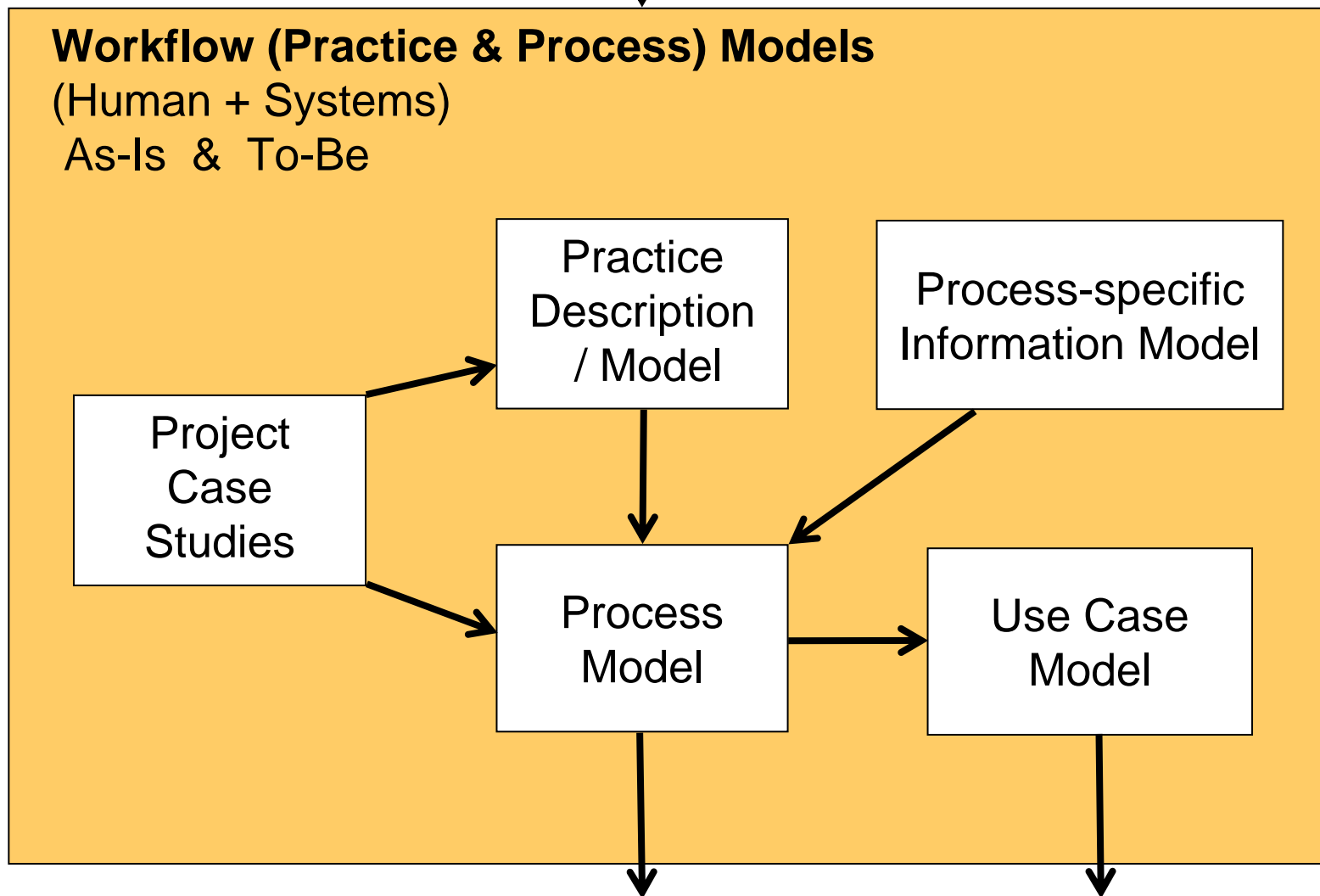


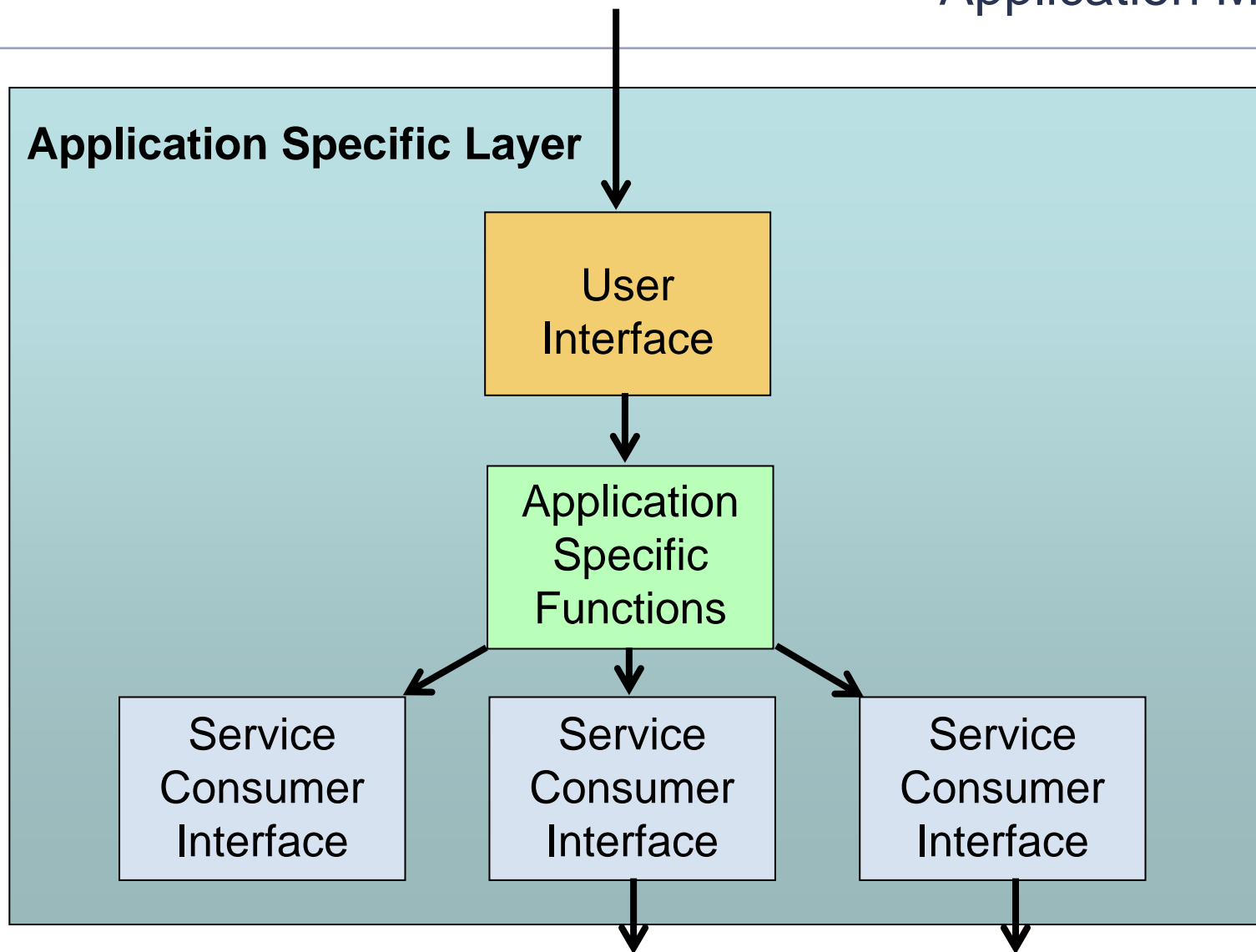
Typically a domain has:

- Practitioners
- Specific Functions and Expertise
- Specialised Vocabulary
  - with associated inter-related concepts
- Tend to form (professional) Communities
  - to exchange ideas, share problems & solutions

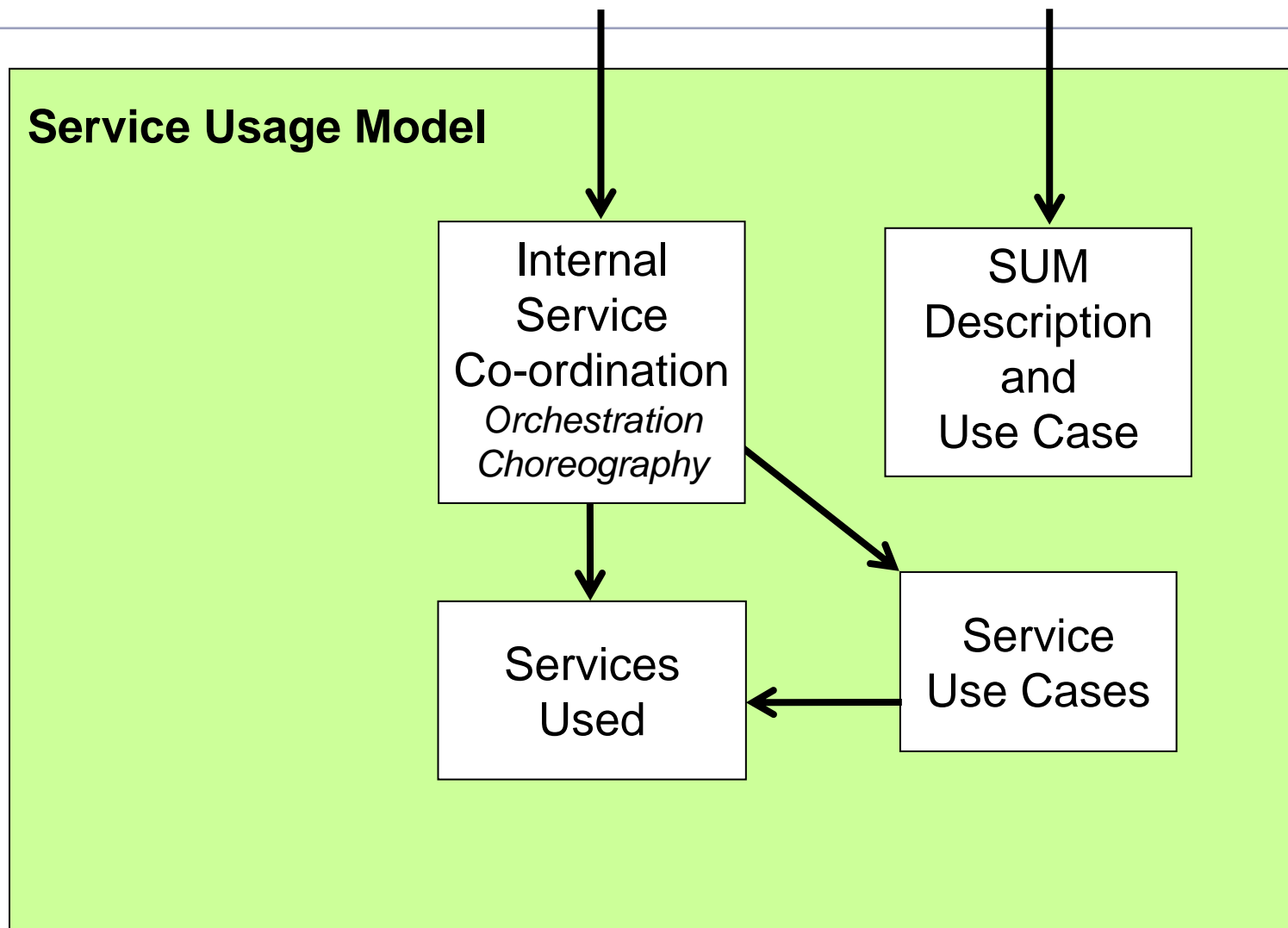








## Service Usage Models (SUM)



International e-Framework Web site currently supports technical information:

Service Usage  
Models

- Service Usage Models (which may be derived from and link back to Domain, Information and Process Models)

Services

- Services: definitions and descriptions

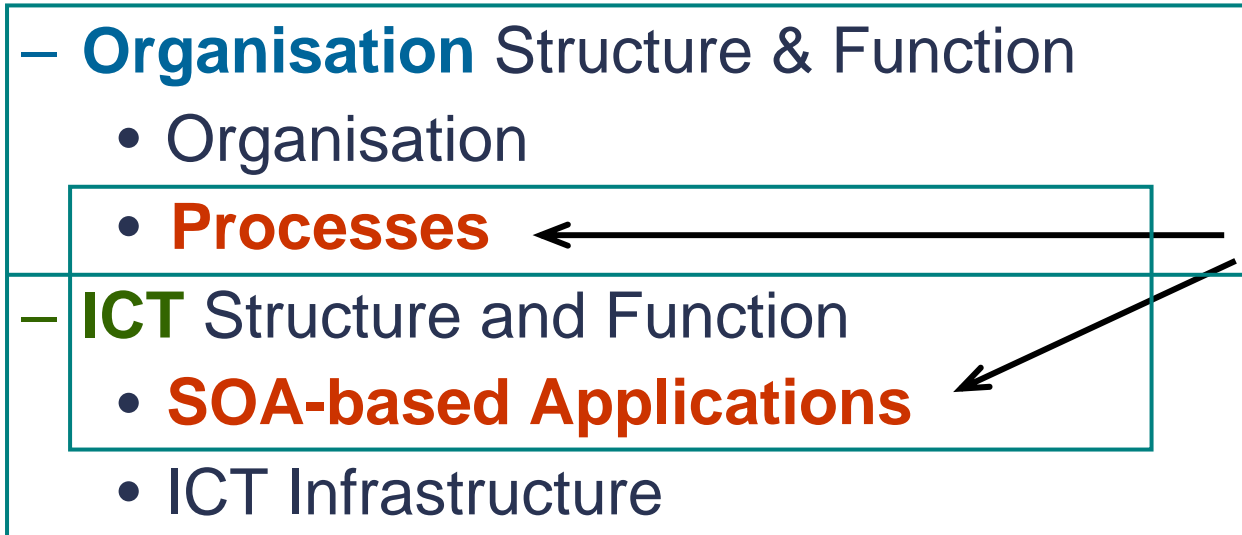
Guides  
Methodologies  
and Analysis

- Guides, Methodologies, Analyses

## Translating JISC soa-related outputs into Institutional SOAs

- **IT Strategy** has to be aligned with **Organisational Strategy**

- **Enterprise Architecture** seeks to align architectures for:



Enterprise Architecture looks at the whole

**e-Framework**  
SOA & e-Framework focus on the interface between the Organisation and ICT

- **SOA / e-Framework** focus on:
  - Practices & Processes
  - Service-Based Applications,

So the e-Framework can support EA as well as SOA

- JISC can Programmes and Projects can
  - Help identify Services needed across the sector
  - Develop and Pilot them
  - Help establish Open Service Interface Standards
- But each F/HEI is responsible for developing its own Architecture, based on their:
  - Strategy
  - Context
  - Priorities
  - Budget

- Two approaches can be adopted:
  - Top-down, driven by organisational strategies and policies
  - Bottom-up, driven by immediate needs and priorities
- Both have advantages, but also risks:
  - Pages of documents may never result in anything
  - Many ad hoc developments may end up in a mess

- The best approach seems to be a combination of both:
  - Top-down architecture:
    - broad, but not detailed to begin with
  - Incremental, bottom-up delivery by priorities
  - Each project fills out some aspect of the Top level
  - The Top level model may change in the light of:
    - Completed Projects
    - New Organisational Aims
    - Changing Environment

- Which ever balance of Top Down and Bottom Up, realising the potential benefits of soa needs new understanding and new skills
- Enterprise Architecture provides a basis for both approaches
- ...and is the subject of the next part of this session by Chris Greenslade of The Open Group Architecture Forum



# The e-Framework, SOA & Enterprise Architecture Next Step?

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- JISC has been asked to consider whether, and if so how, it should take forward Enterprise Architecture for F/HEIs
- Use this opportunity to discover whether there is interest
- Proposal: to pilot and Enterprise Architecture group
- Evaluation of the Benefit of EA for F/HEIs
- Professionally supported
  - Training for participants
  - Meetings and Forum to discuss problems and solutions
- Fund members costs

What it would do:

- Ensure a good understanding of EA
- Develop skills in Methods
- Consider how EA and Methods may need to be adapted
- Write up and publish Case Studies
- Evaluate the benefits of EA for F/HEIs
- Make Recommendations

Who it would be for:

- Those already engaging in EA type activities
- Those about to engage in EA type activities
- ... with institutional support and institutional readiness
- ... and will actively apply EA over the following year

Anyone interested, please meet me on the JISC stand  
or email: [b.olivier@jisc.ac.uk](mailto:b.olivier@jisc.ac.uk)