



# DL.org

## *Coordination Action on Digital Library Interoperability, Best Practices and Modelling Foundations*



CNR-ISTI



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# Interoperability from the Digital Library Perspective

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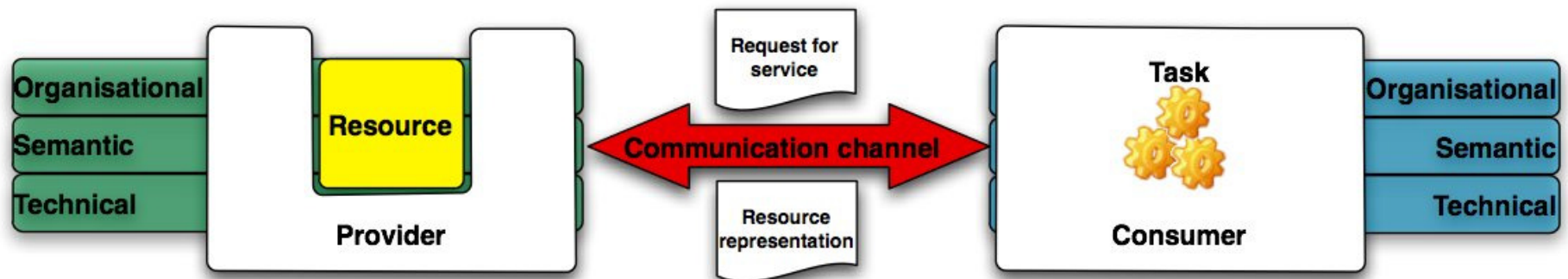
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## DL interoperability

- In many domains DLs rely on **resource sharing**
  - Aggregation in larger information spaces
  - Composition to form richer information objects
- Implementation of resource sharing requires **interoperability**
- Interoperability is a **complex, multidimensional issue**

## Interoperability dimensions (1)

- **Organizational:** Provider and Consumer business goals and processes
- **Semantic:** meaning of the exchanged resource and its context
- **Technical:** technological solution supporting the Provider and Consumer operation as well as the communication among the two



## Interoperability dimensions (2)

### DELOS DL Reference Model

**Content** – information available

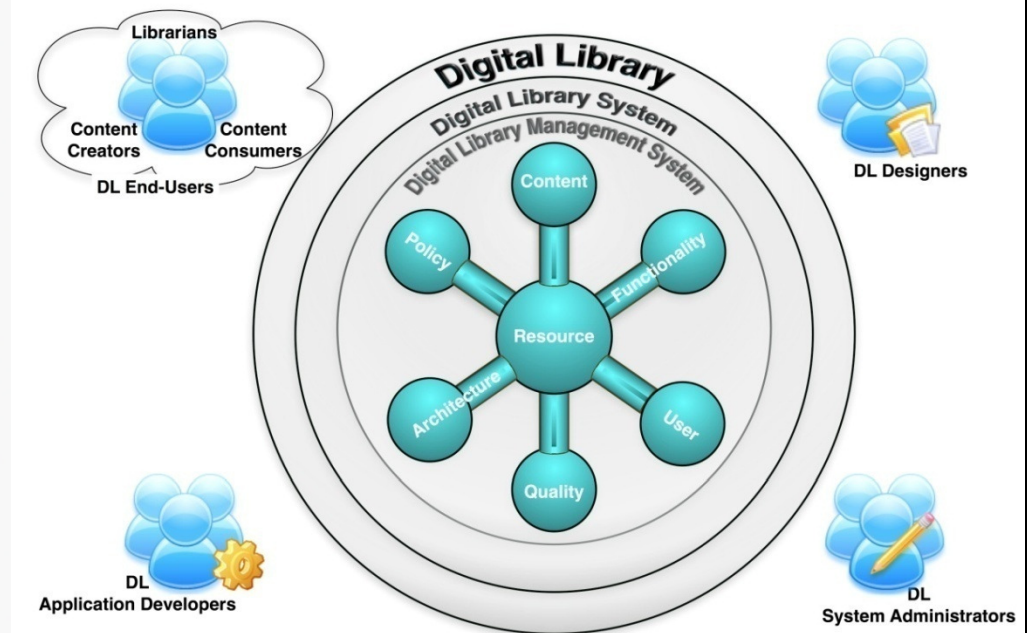
**User** – actors interacting with system

**Functionality** – operations supported

**Policy** – rules and conditions governing operation

**Quality** – qualitative & quantitative characterisations of system

**Architecture** – physical software (and hardware) constituents concretely realising the DL



## Interoperability dimensions (3)

- Possible resources under the Content domain
  - Metadata
  - Primary Information Object
  - Identifier
  - Annotation
  - Provenance
  - Vocabularies
  - .....

## Interoperability needs until now

- **Interoperability needs**
  - Consumer tasks operate on a **small fractions of shared DL resources**
  - Sharing is primarily between **trusted organizations**
- **DRIVER &Europeana**  
Search and retrieval of open access metadata from collaborating institutions
- **Solution:**
  - Guidelines, protocol implementation, standard representations



## Emerging interoperability needs

- **Example:**

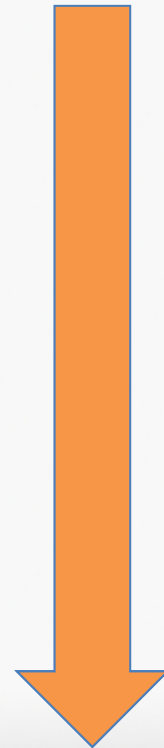
*Creation of a compound document requires access to:*

- parts;
- operation (to derive parts);
- rights;
- provenance;
- users profile;
- quality information;
- .....



# Solutions maturity

- Architecture
- Content
- Functionality
- User
- Quality
- Policy



Better understood

Less understood

# Policy interoperability

- Very heterogeneous domain
- Many organizational assumptions
- No model (s) yet
- No awareness of the needs of such model yet

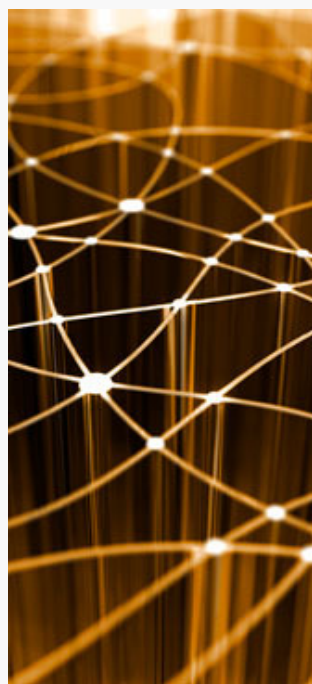
# DL.org recommendations

- Interoperability Framework
  - Clear interoperability problem statements
  - Well described and clean solutions
- DL modelling
- Awareness of best practices
- Assessment of solutions

**DL reference  
Model**

**Interoperability  
Cookbook**

**Teaching  
Material**



[www.dlorg.eu](http://www.dlorg.eu)

