Functionality

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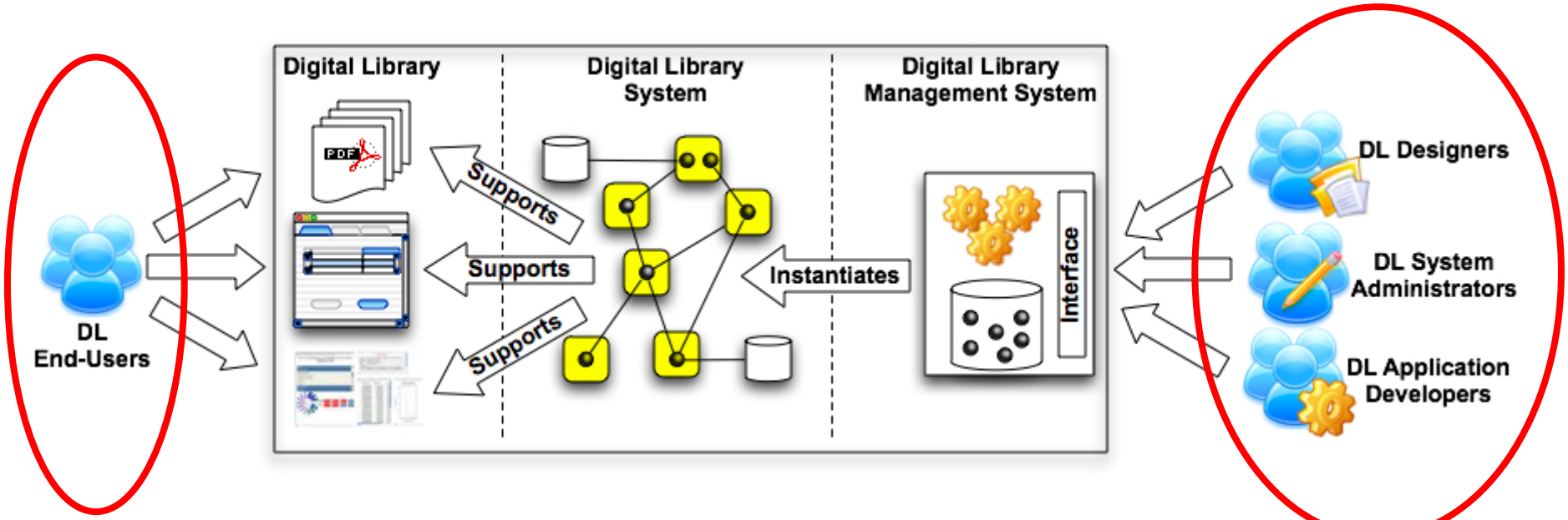
Functionality

- Services that Digital Libraries offer to their users for interaction with the information domain
  - Core functionality: the minimum required by all DLs
  - Additional functionality: depends on the particular needs of a community of users and/or the information it is aimed to manage

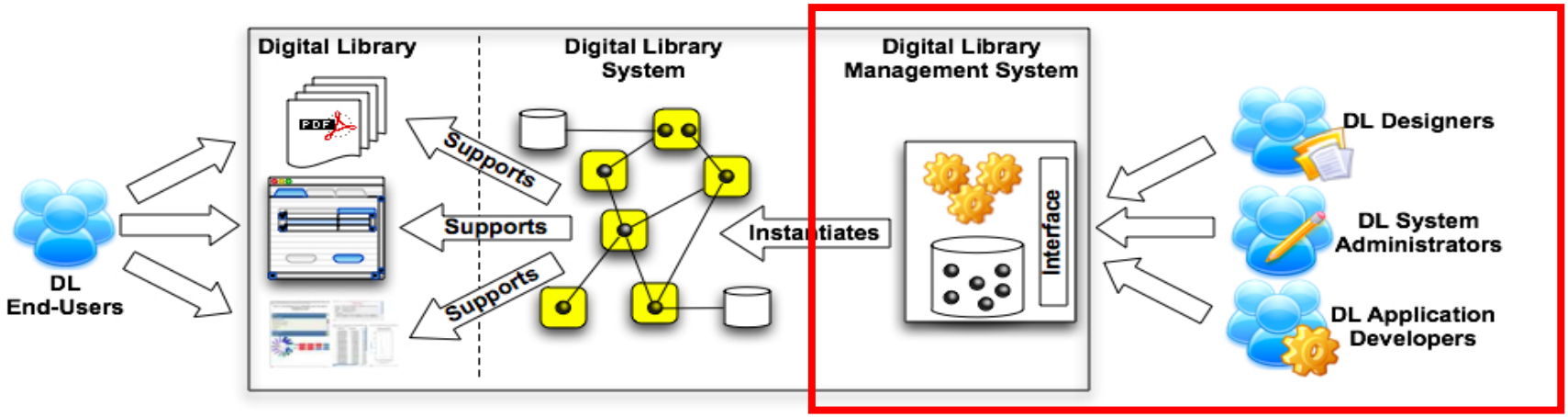
Functionality from Different Perspectives



→ DL application functionality

→ System functionality

Functionality from Different Perspectives



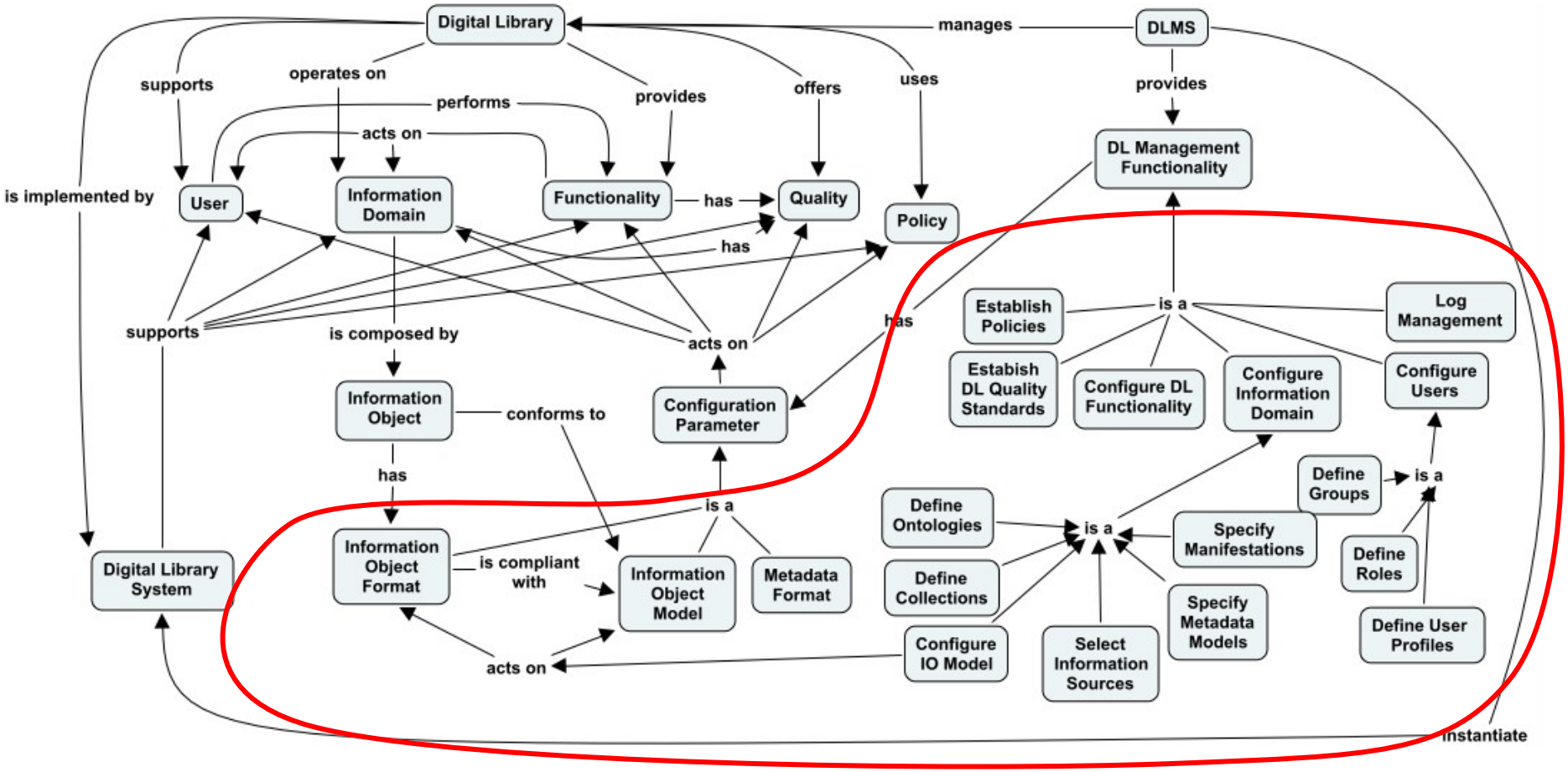
Digital Library Management System (DLMS)

- *generic software system with all functionality foundational for DLs*
- *provides the appropriate software infrastructure to*
  - *produce a basic DL System*
    - *Which allows to integrate additional software (advanced functionality)*
  - *Includes a "DL Administrative Tool" to*
    - *choose the needed functionality*
    - *(semi-)automatic installation, deployment, and (re)configuration*

DL Designer Functionality …

- **DL Designers**
  - Define, customize, and maintain the DL
  - Provide functional configuration parameters to the DLMS
    - Result set format
    - Query language
    - User profile formats
    - Document model, etc.
  - Provide content configuration parameters to the DLMS
    - Repositories of content
    - Ontologies
    - Classification schemas
    - Authority files, etc.

… DL Designer Functionality …



… DL Designer Functionality

The process of setting-up a DL

Info Domain

- Configure Info Domain
- Select Information Sources
- Configure Info Object Model
- Define Collections

DL Functionality

- Select DL Functionality
- Configure DL Functionality
- Define Ontologies

Users

- Configure Users
- Define User Profiles
- Define Roles
- Define Groups

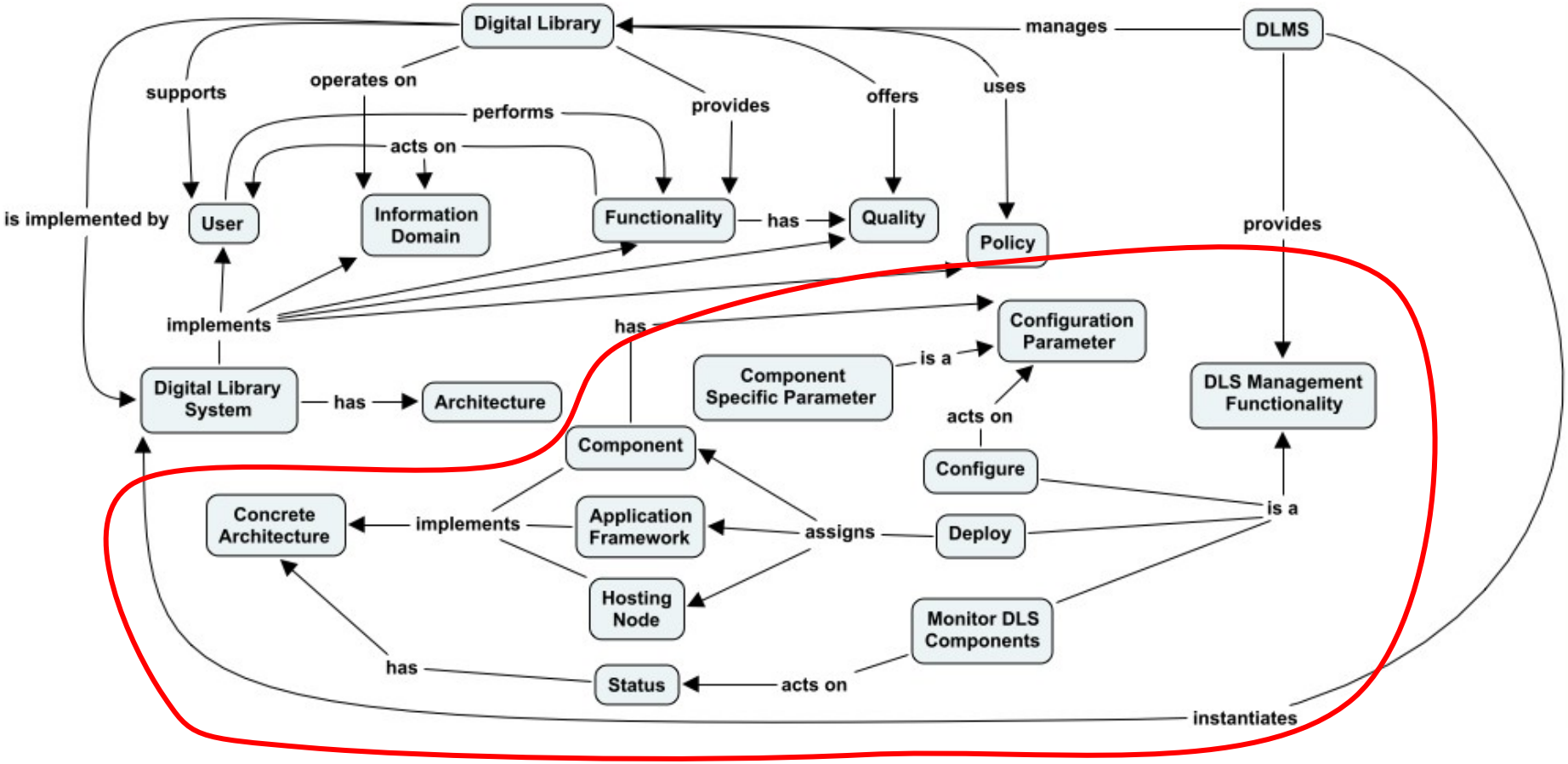
Policies & Quality

- Establish DL Quality Standards
- Establish Policies

DL System Administrator Functionality …

- **DL System Administrators**
  - Select the software components necessary for creating a DLMS
  - Decision where to deploy the components
  - Provide architectural configuration parameters
    - selected software components
    - hosting nodes
    - components allocation, etc.
  - Identify the architectural configuration (concrete architecture) that best meets the desired level of quality

… DL System Administrator Functionality …



… DL System Administrator Functionality

The process of deploying a concrete DLS

Architecture

- Define concrete DL architecture

Functionality

- Select components for DL functionality
- Select components for system functionality
- Determine hosts for components
- Deploy components

Build-time

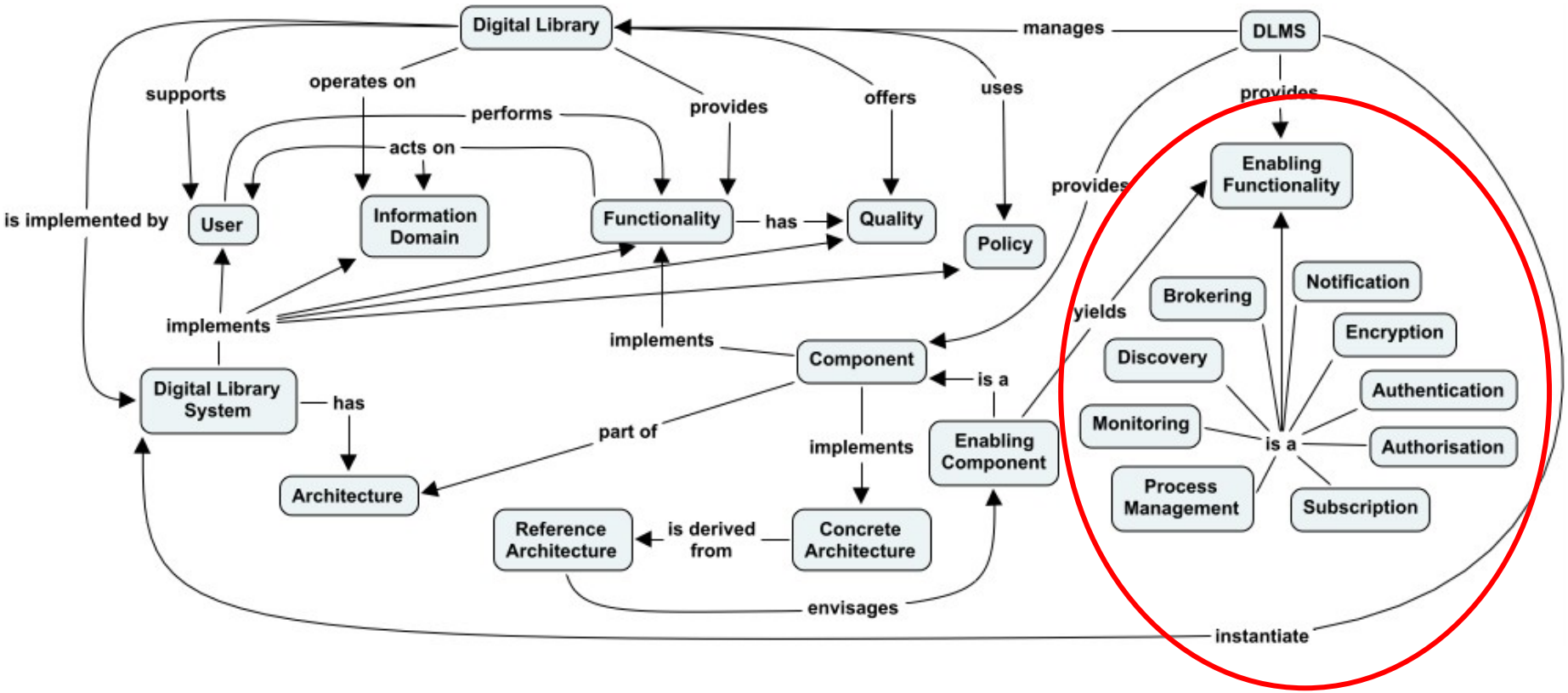
- Monitor the state of components
- Monitor the state of hosting nodes

Run-time

DL Application Developer Functionality …

- **DL Application Developers**
  - Develop the individual software components
  - Realize special DL functionality
  - Provide reusable DL application components that can seamlessly be deployed and/or combined

… DL Application Developer Functionality …



… DL Application Developer Functionality

Have a toolbox that supports

- **Definition and implementation of basic DL functionality (components)**
- **Definition of new complex functionality (combination of components) process of deploying a concrete DLS**

Build-time

System support for

- **Process Management**
- **Monitoring**
- **Discovery**
- **Brokering**
- **Subscription**
- **Notification**
- **Authentication**
- **Authorisation**
- **Encryption**

Run-time

DL Functionality – Summary