



# The Possible Future of Europeana: The Cloud Solutions

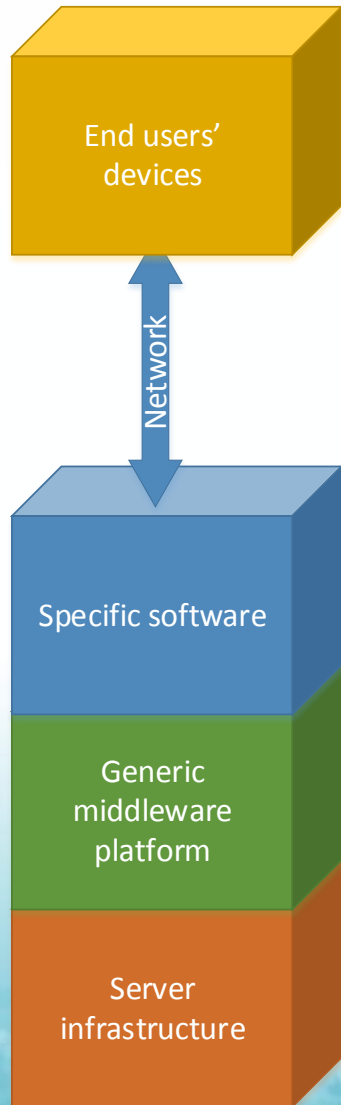
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ECloud and LoCloud are funded by the  
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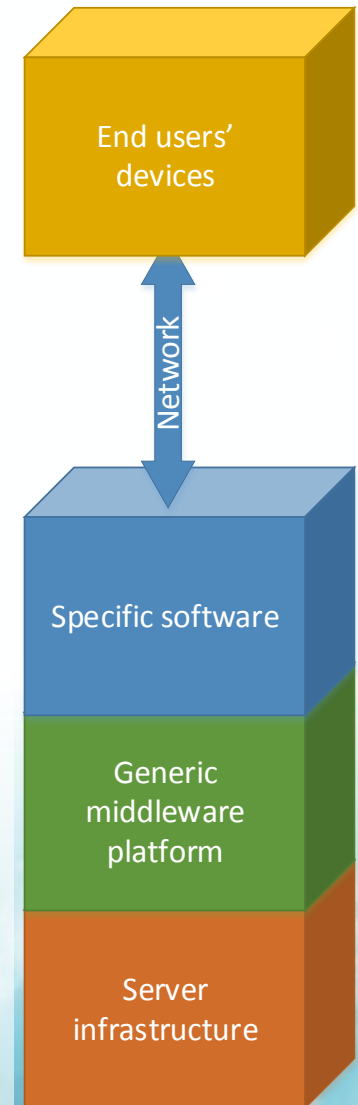
# General architecture of complex IT system



- Are used to interact with the system, often via web browser, sometimes via dedicated applications
- Provides access to the system for (many) remote users
- Provides functionality specific for particular software system (like collections management system etc.)
- Provides generic functionality like database storage, indexing/searching, authentication, ... and is not always present
- Provides data storage and processing capabilities

# Hosting options

- Owned infrastructure
  - Complete control and responsibility
  - Upfront capital costs
- Rented from a hosting company
  - Less control, but fewer responsibilities
  - Lower capital cost, but paid for fixed capacity even if idle
- The Cloud
  - ...

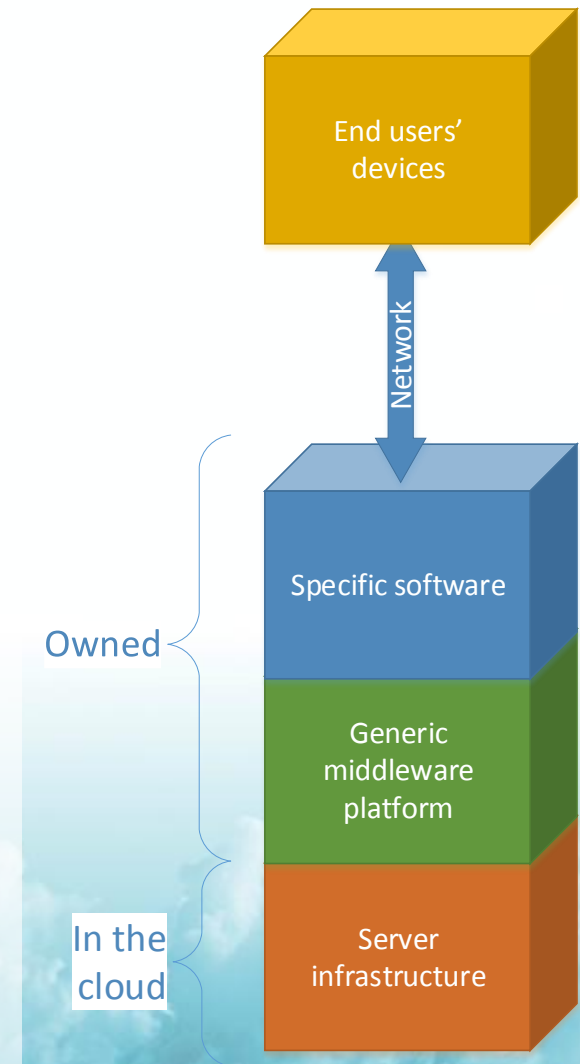


- Type of outsourcing in the IT world
- Selected cloud features
  - Cheap, including very flexible pricing plans (e.g. hourly rates)
  - Robust, fault tolerant, including virtualization
  - Scalable, including automated scaling
- Example “pattern” for using cloud
  - “Burst compute”



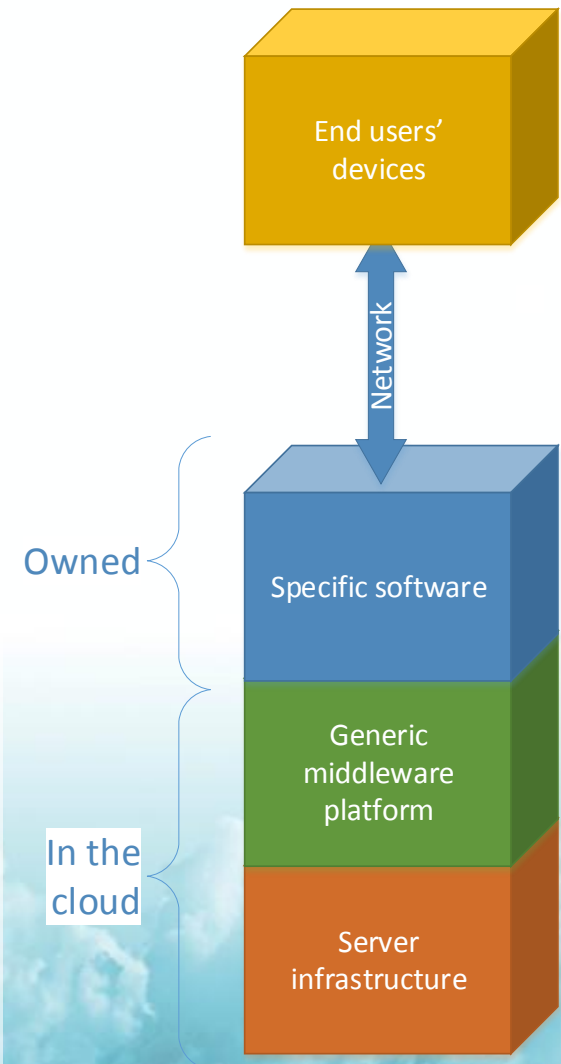
# What can we put into the cloud? ... or types of the cloud

- Infrastructure as a Service (IaaS)
  - Cloud company provides server infrastructure
  - You decide how many virtual machines, how big & fast machines, for how long
  - You build/deploy software on these machines
  - Cost model usually based on hardware/connectivity utilization



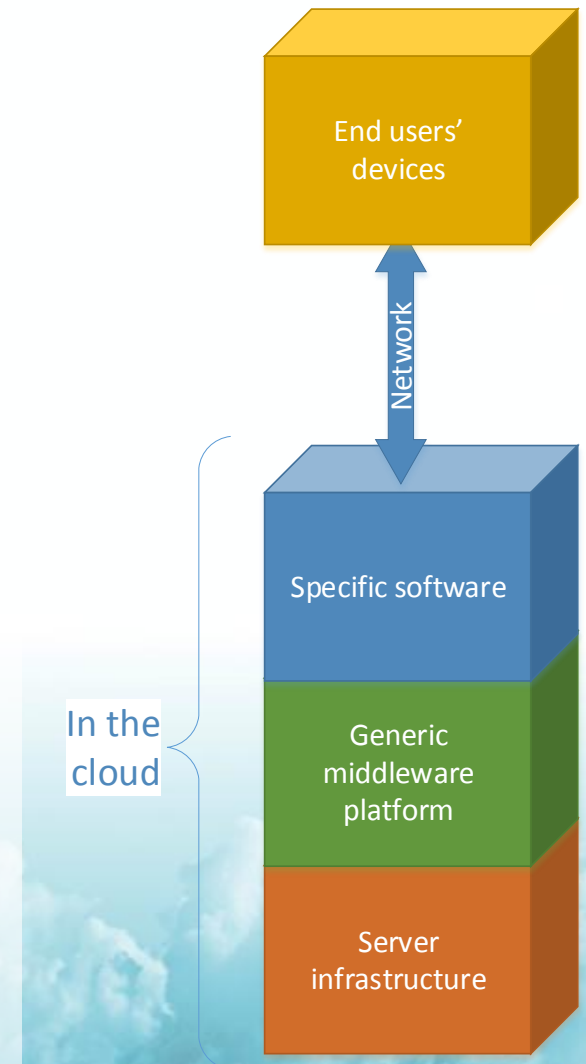
# What can we put into the cloud? ... or types of the cloud

- Platform as a Service (PaaS)
  - Cloud company provides middleware services running on necessary hardware/middleware
  - You build/deploy software on top of that middleware
  - Your software can run on different hardware infrastructure than the platform
  - Cost model usually based on hardware/connectivity utilization or simply on the amount of data



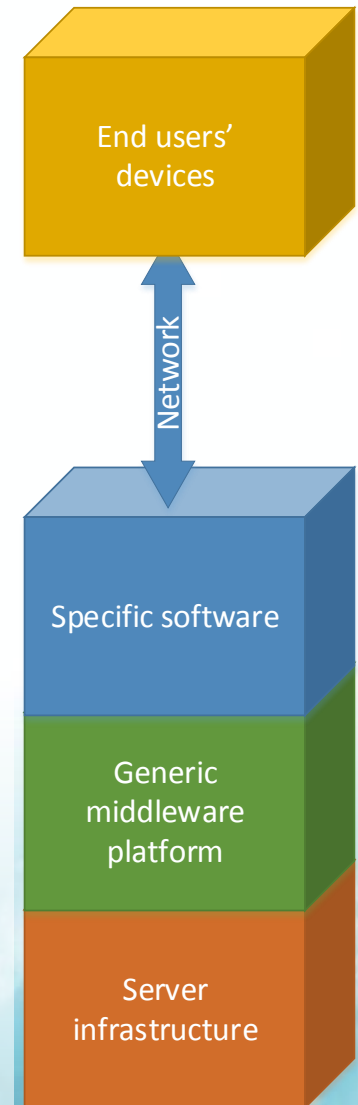
# What can we put into the cloud? ... or types of the cloud

- Software as a Service (SaaS)
  - Cloud company provides ready for use software running on necessary hardware/middleware
  - You simply use the software
  - Cost model depends on the nature of the software
    - Flat (and cheap) monthly fee
    - Fee depending on the amount of stored/processed data



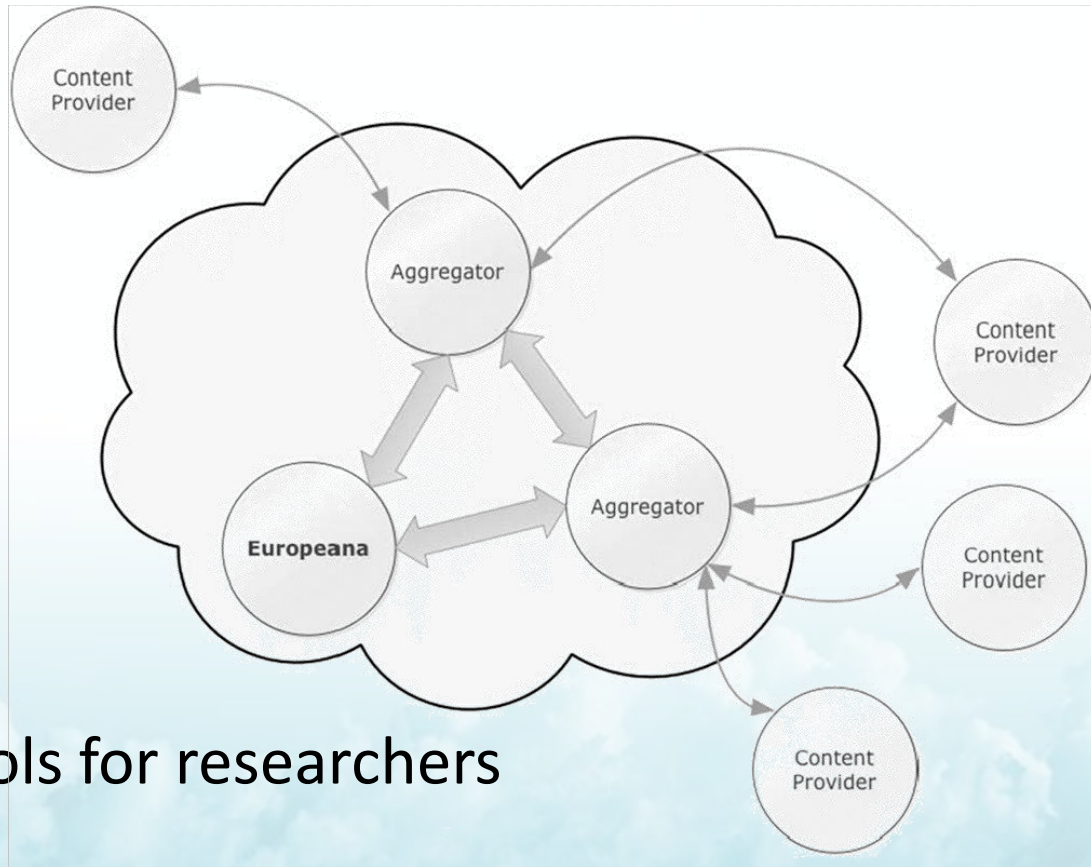
# The Cloud in LoCloud

- Software as a Service
  - Aggregation infrastructure
  - Lightweight digital library
  - Microservices for metadata enrichment
- Platform as a Service
  - Microservices
- Infrastructure as a Service
  - Collaborative test laboratory

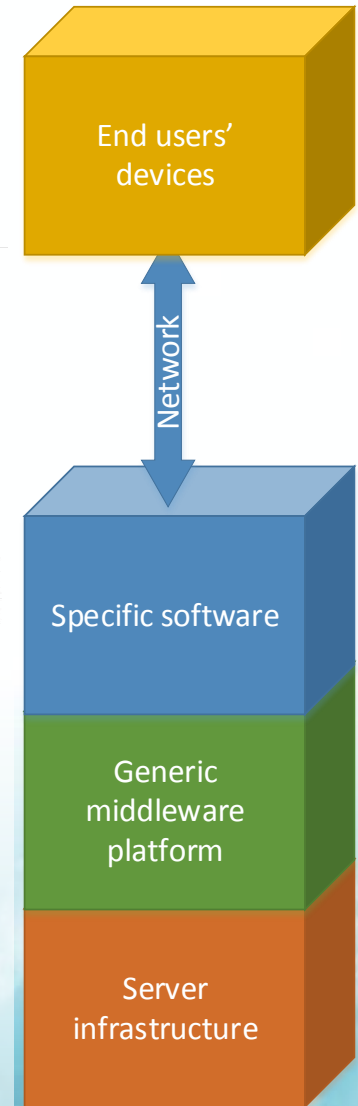




- Software as a Service
  - Aggregation and data exchange



- Tools for researchers





**Thank you**  
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