

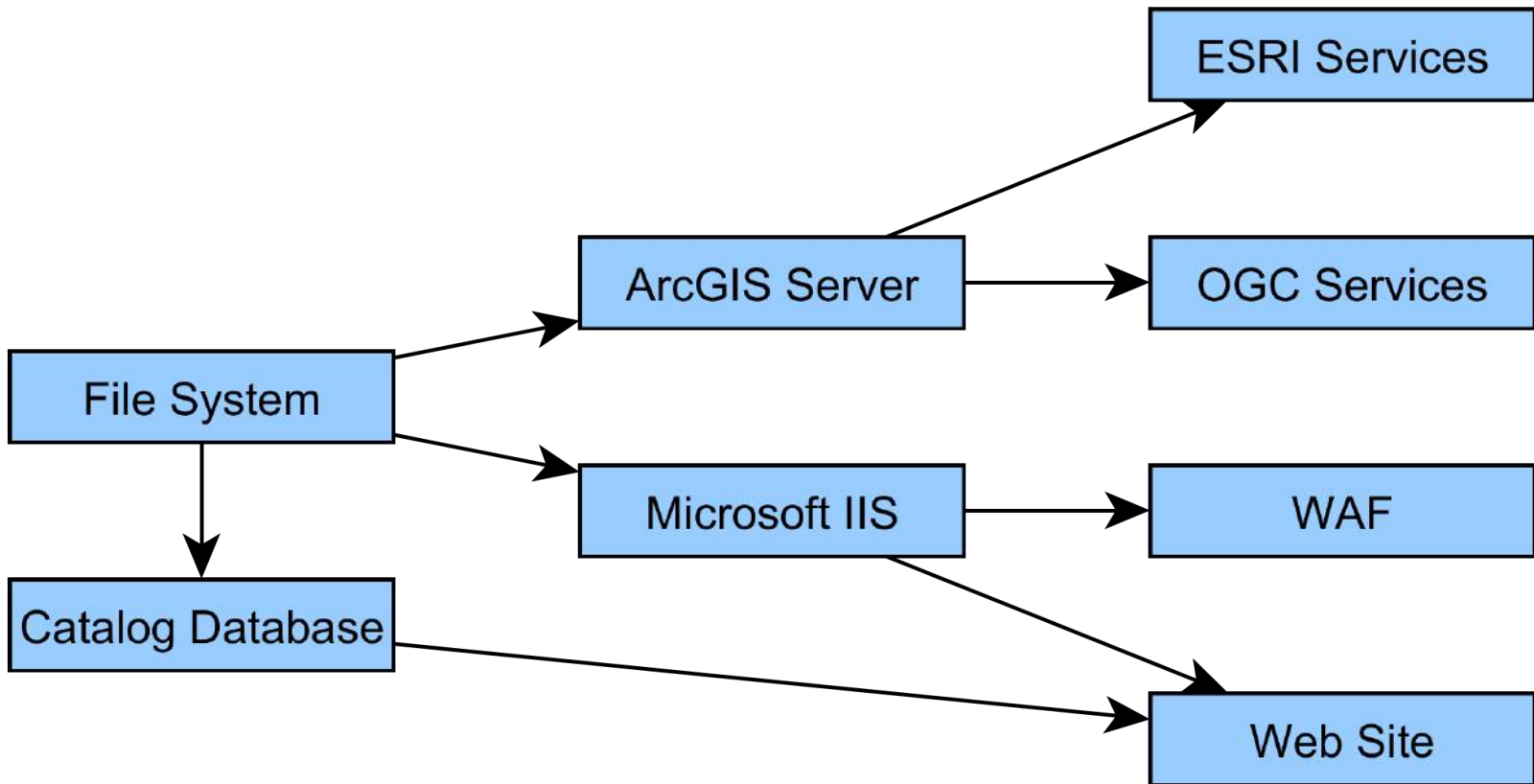
# Implementation of an OAIS Repository Using Free, Open Source Software

Breaking up the Monolith

Edward Flathers

# Where We Were

Legacy Institutional System



# Selection Criteria

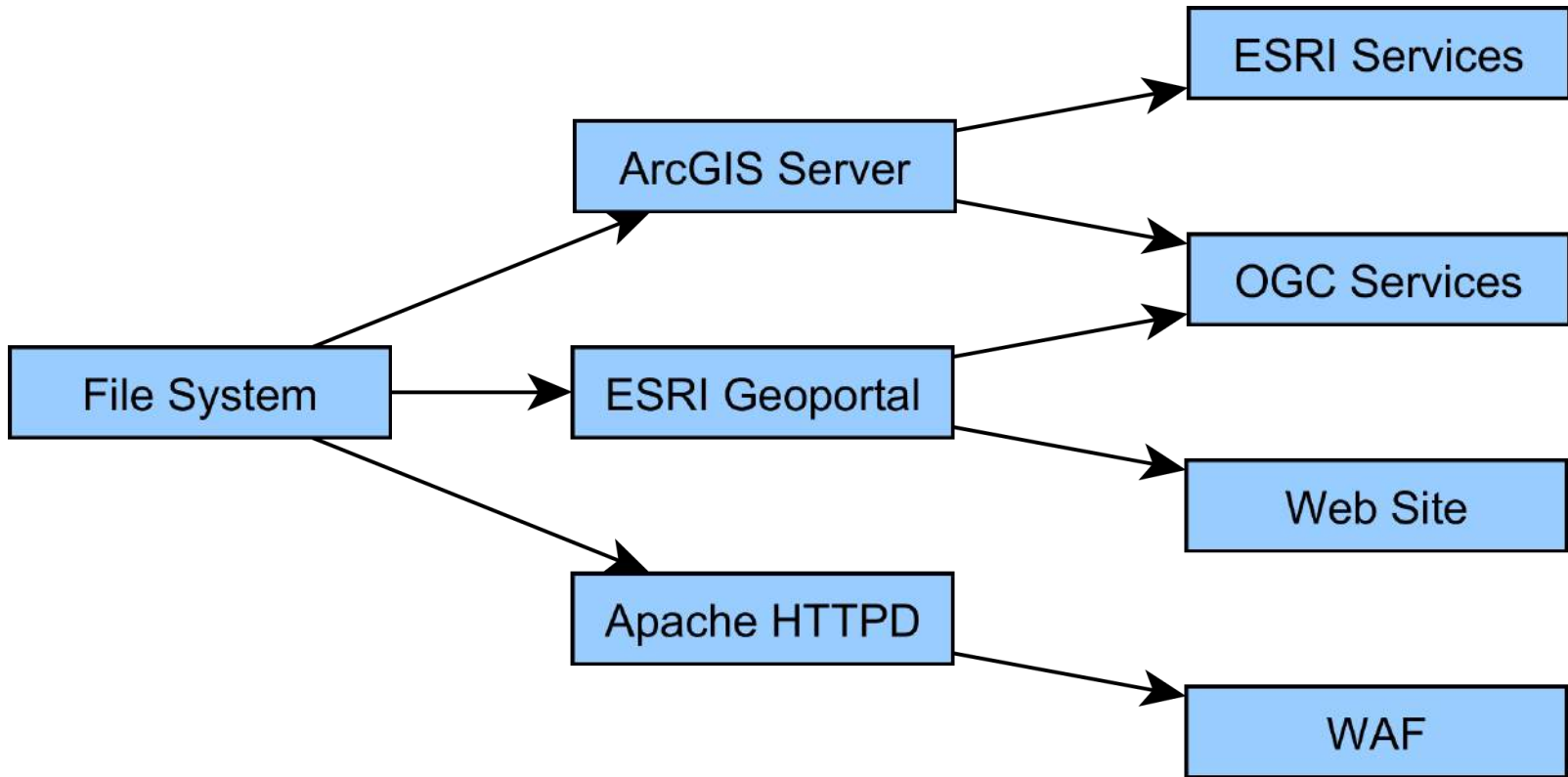
- Preserve legacy access methods
  - ArcGIS, Web Accessible Folder (WAF)
- Enable new access methods
  - Catalog Service for the Web (OGC-CSW)
  - THREDDS
- Simplify administration and maintenance
- Quick deployment
- Embeds in our CMS: Drupal
- Free, open-source software (FOSS)?

# Evaluating Options

- Monolithic options offer quick deployment and a variety of features
- c. 2008—not as many options as there are today
- Decision: ESRI Geoportal Server (GPT) as a stopgap measure

# Where We Were

## ESRI Geoportal Times



# Selected Limitations of GPT

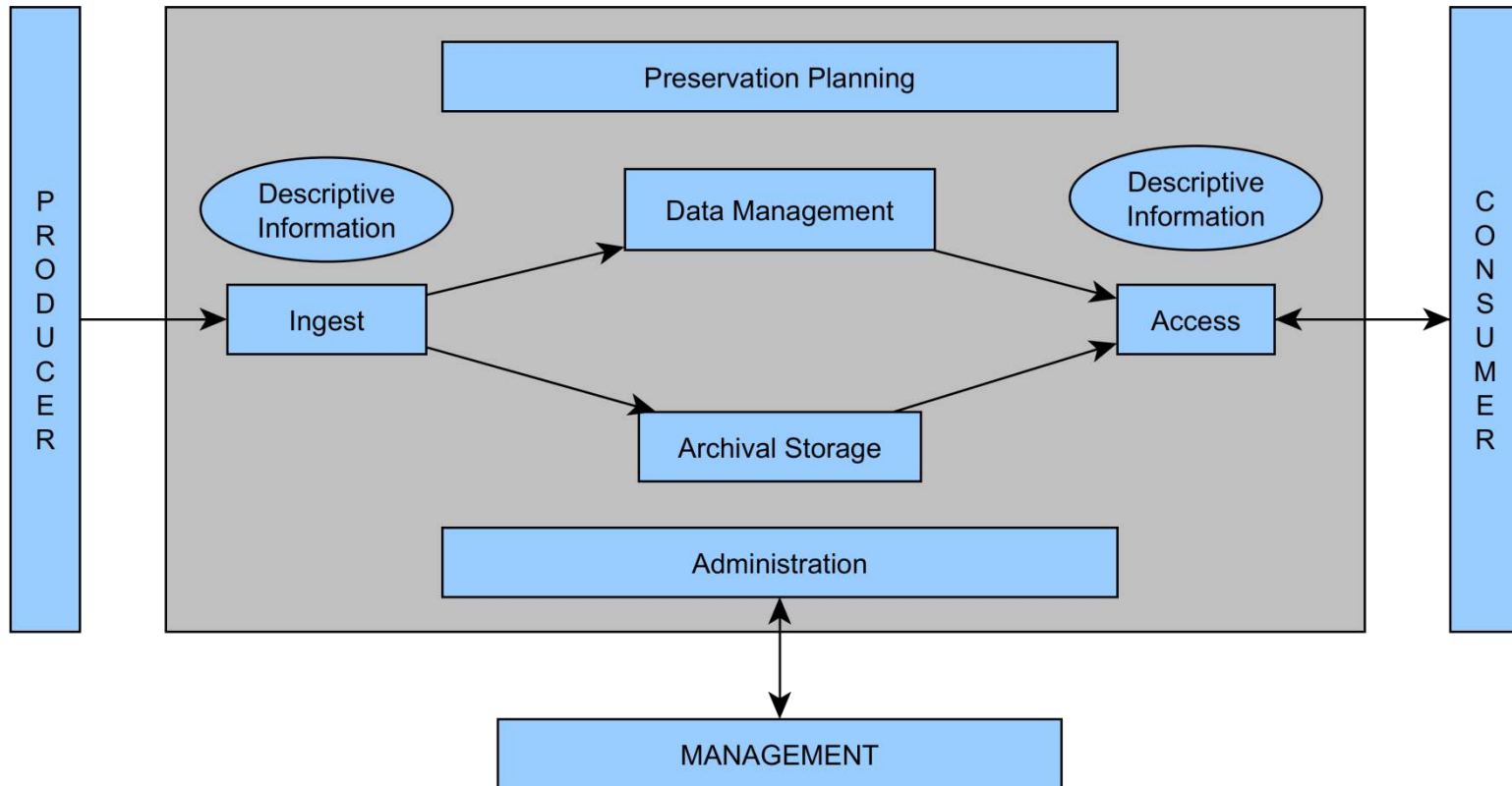
- Only tracks metadata, unaware of data
- Limited metadata standards support
- Complex user interface
- Customizations often involve recompiling
- Difficult to gracefully embed in existing site
- Stores metadata in a database
  - Multiple copies leads to consistency problems

# Re-evaluating Options

- One size fits all—doesn't
- CKAN, DKAN, GPT, etc.
- All of the systems we evaluated implemented some of our needs well, other needs not as we wished, and some needs not at all
- We don't want to roll our own—but if we view the system as a collection of modules rather than a monolith, we can use existing software

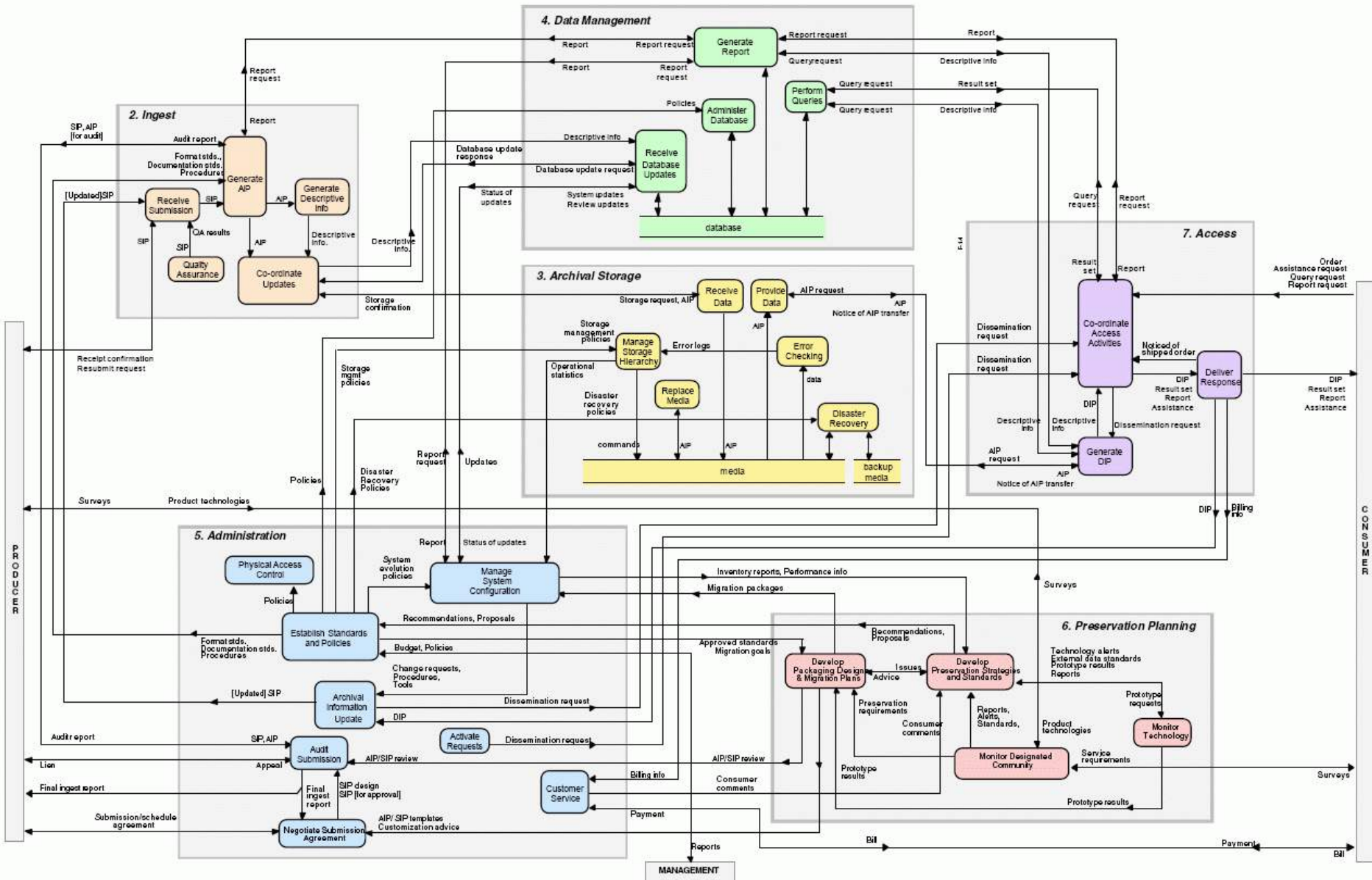
# Where We Want to Be

## Open Archival Information System (OAIS) Model



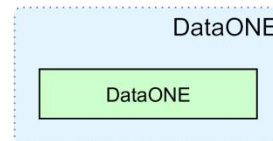
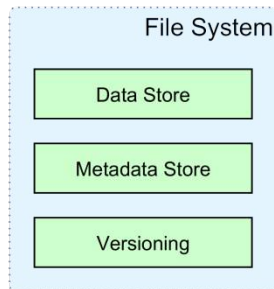
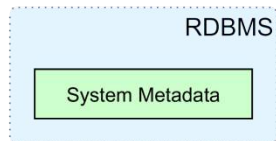
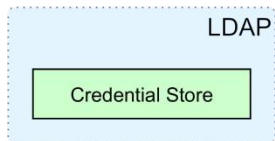
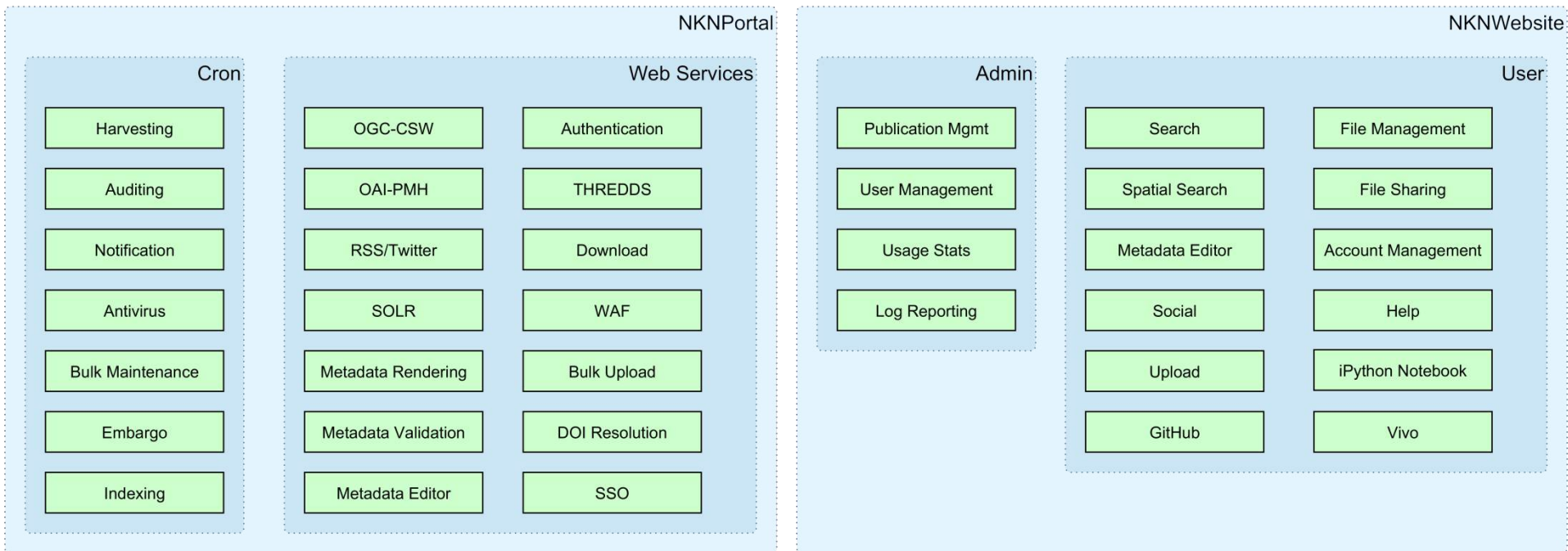


# Open Archival Information System (OAIS) Model



# Where We Want to Be

## Repository Services

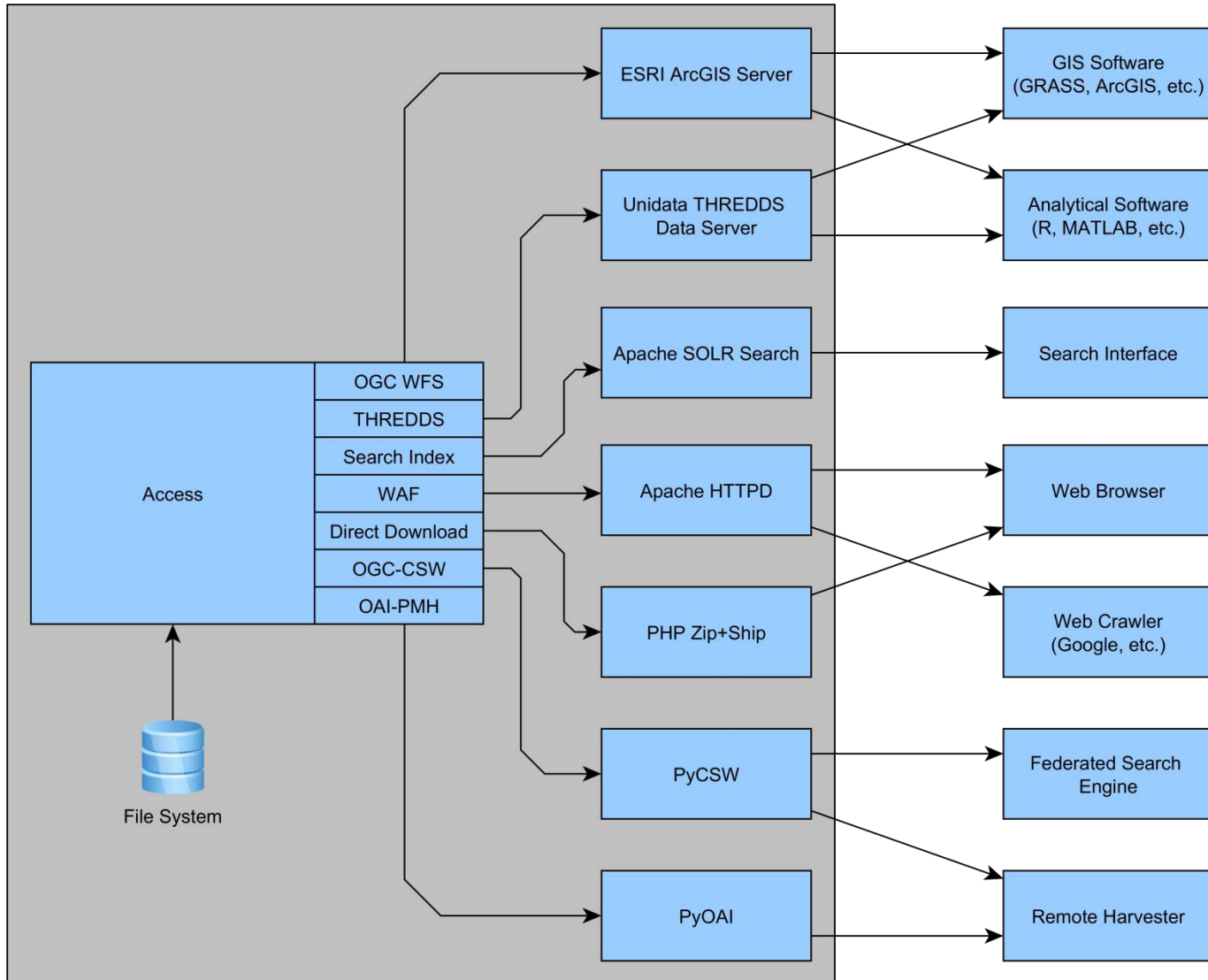


# FOSS vs ArcGIS

- FOSS is a Good Idea, but:
  - Existing infrastructure
  - Institutional expertise
  - Industry standards (compatibility)
  - Total cost of ownership (site license)
  - Getting the job done

# (Part of) Where We Are

## Data Access for Consumers



# Breaking Up the Monolith

- Front-end code is HTML/CSS/JS
  - We can use most front-end CMS—or none
- Roll out upgrades incrementally
- Maintain support for legacy systems
- Convenient development encapsulation
- Granular stability

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