Information Requirements

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Agenda

Introduction

Requirements for Information Systems

Methodologies

- Project Management
- Service Delivery - e.g. ITIL
- Software Methodologies
- Database Methodologies
- Human-Computer Interactions
- DAMA

Examples

Conclusion

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Introduction

Information System Requirements

- Written, read, by experts from multiple domains
  - E&P experts, IT experts, PM experts…
- Use artefacts describing other systems
  - Legacy systems (often one being replaced)
  - Interacting systems in place.

- How much do those artefacts tell us?

Methodologies

- Project Management
  - PRINCE 2
  - PMI
- Service Management
  - ITIL
- Software Design
- Database Design

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Project Management

- A project is "a temporary organisation that is needed to produce a unique and predefined outcome at a predefined time using predefined resources". (Prince 2).

  – Note the word "temporary" here - this is a very good clue that information managers - whilst needing project management skills - need more if information is to be persistent.

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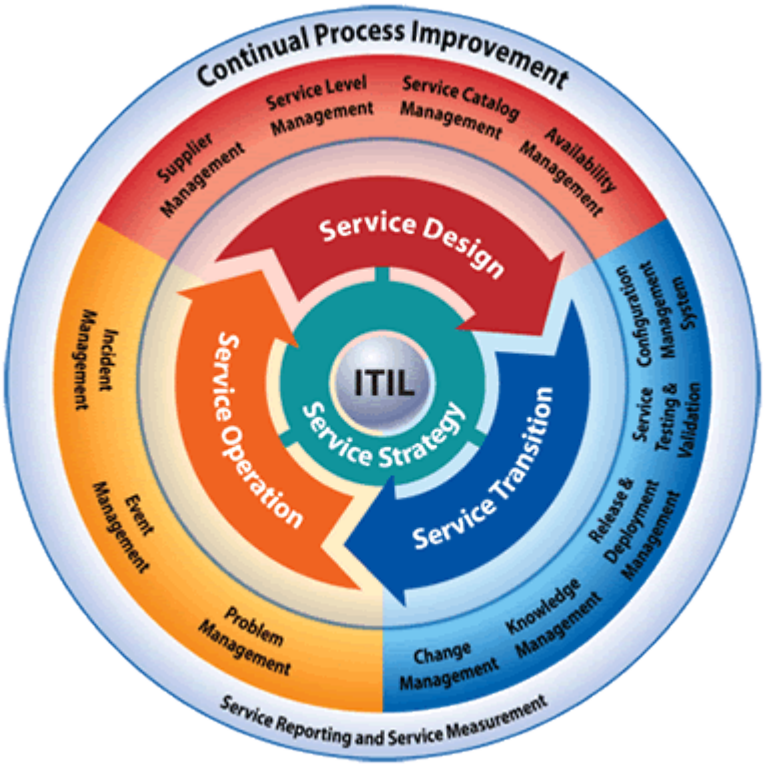
ITIL



- a framework of best practices in IT service management.

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ITIL components

- Service Strategy
- Service Design
- Service Transition
- Service Operation
- Continual Improvement

  - **Service Transition is typically run as a project**

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Software Development

- Plan
- Design
- Implement
- Maintain
  - **SDLC, SSADM or similar, in great variety.**

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Software Development: Plan

- Use Cases
- GUI Design
- Data Structure
- Data types
- Reference Data

Software Development: Design, Implement

- Both are certainly projects
  - Manage using a PM methodology
  - Not always trivial, and the methodology will differ

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Software Development: Maintain

- Ongoing Service
  - ITIL service operation.

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Database Design

- Focus on data and storage
  - Integrity
  - Security
- Not much to say about end-user usability

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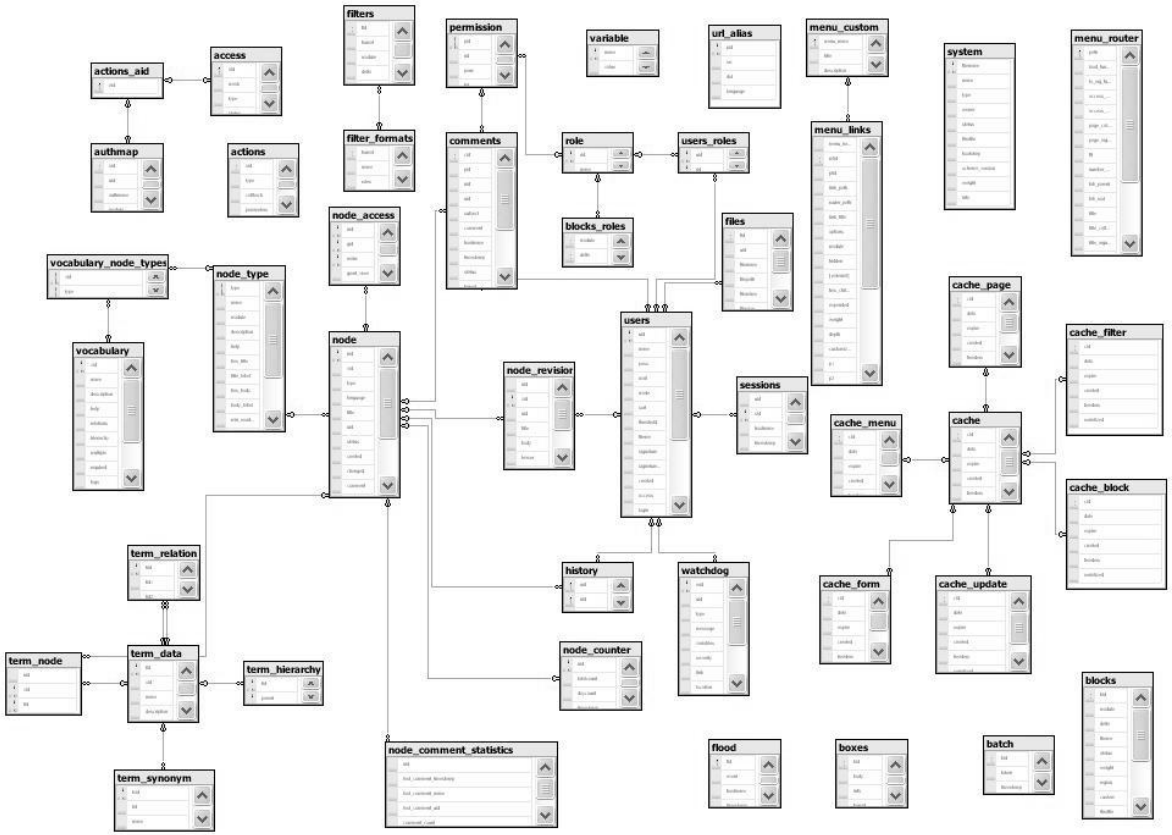
Database Design: E-R diagram



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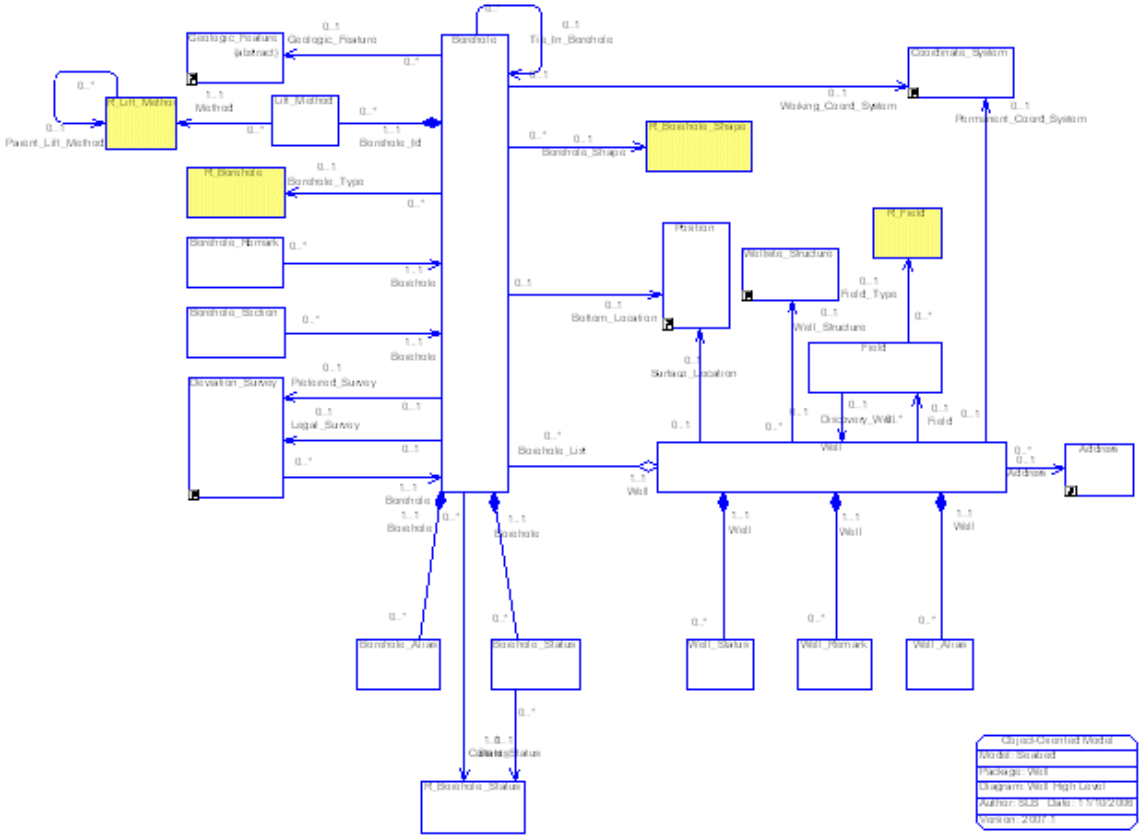
Database Design - UML

- Class Diagrams
- Use Cases



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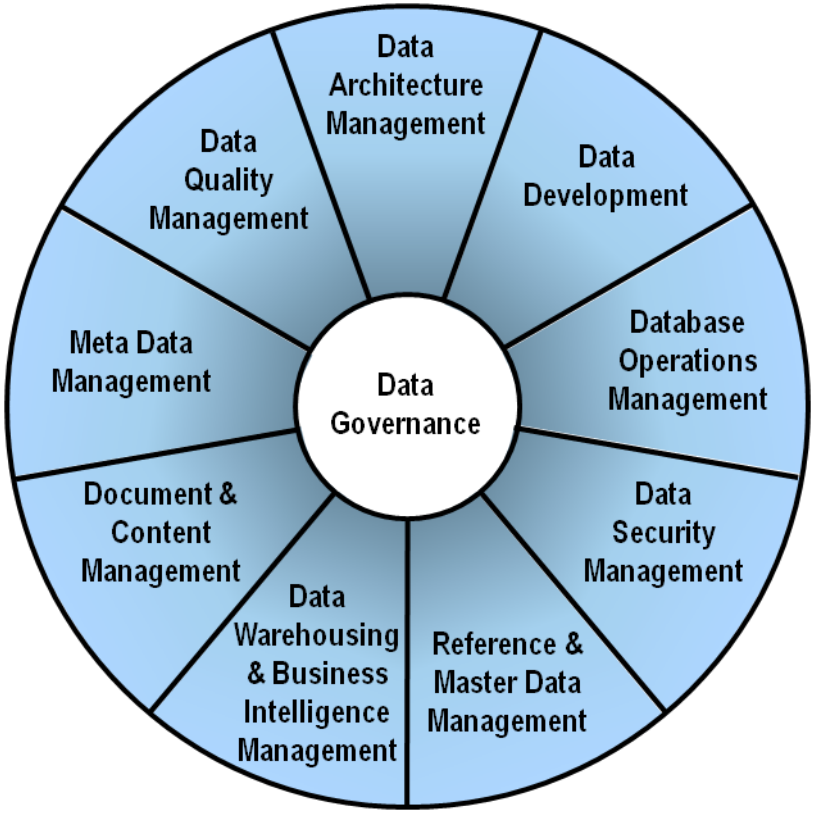
DAMA



- Data Management Association, DAMA
- Data Management Body of Knowledge, DMBOK

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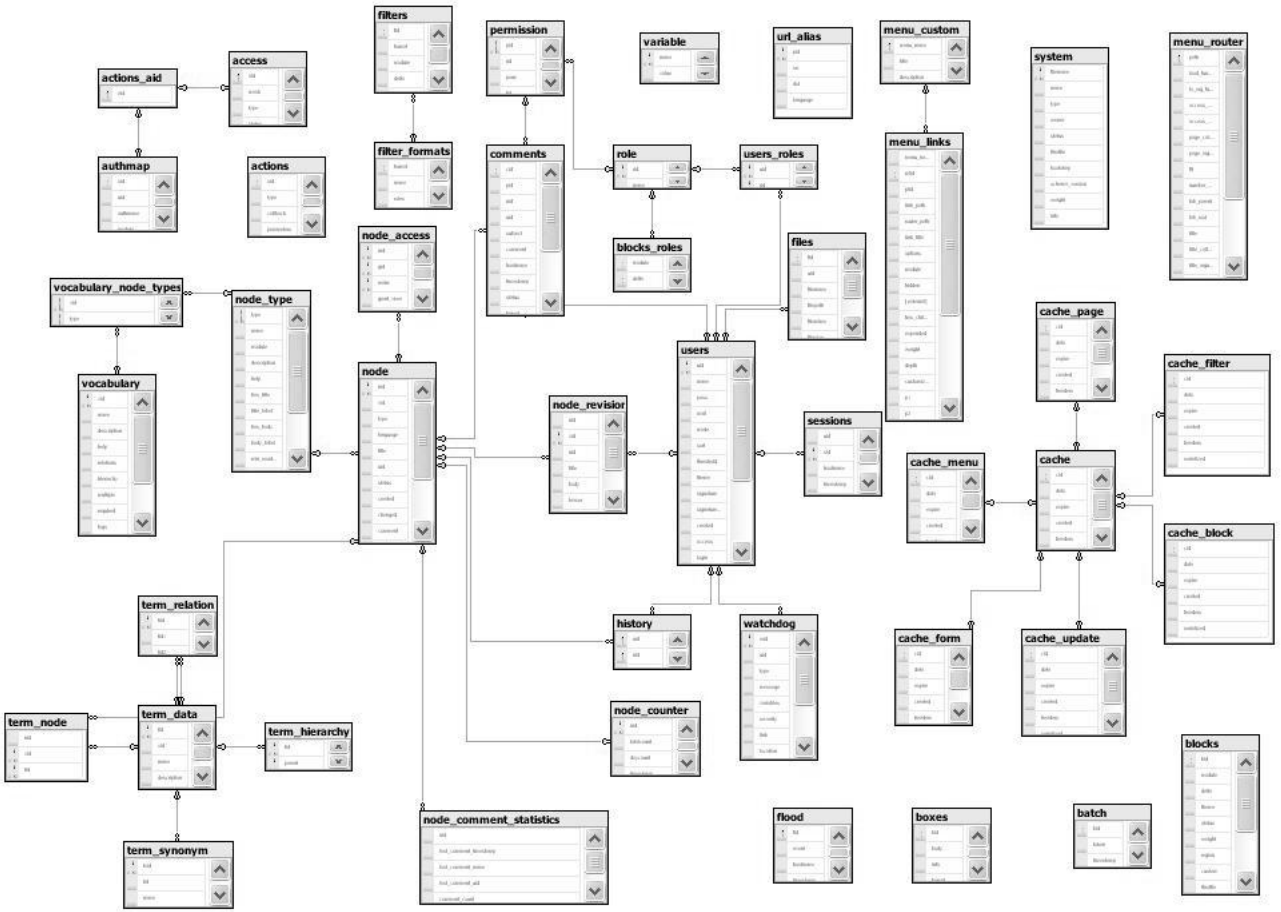
Examples

- These are all INVENTED examples
  - any reference to any real system or organisation is entirely coincidental.
  - But very close to reality!
- Requirements are often stated in terms of artefacts from legacy system(s)
- Requirements touch on all of the methodologies above
  - **none** is sufficient in isolation

Legacy Database



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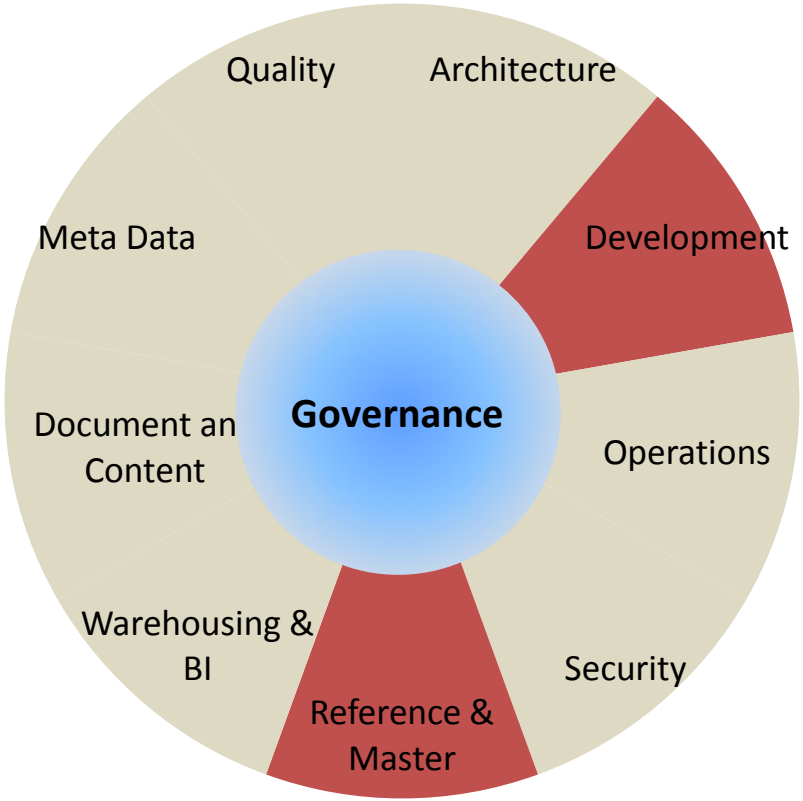
E-R Diagram has:



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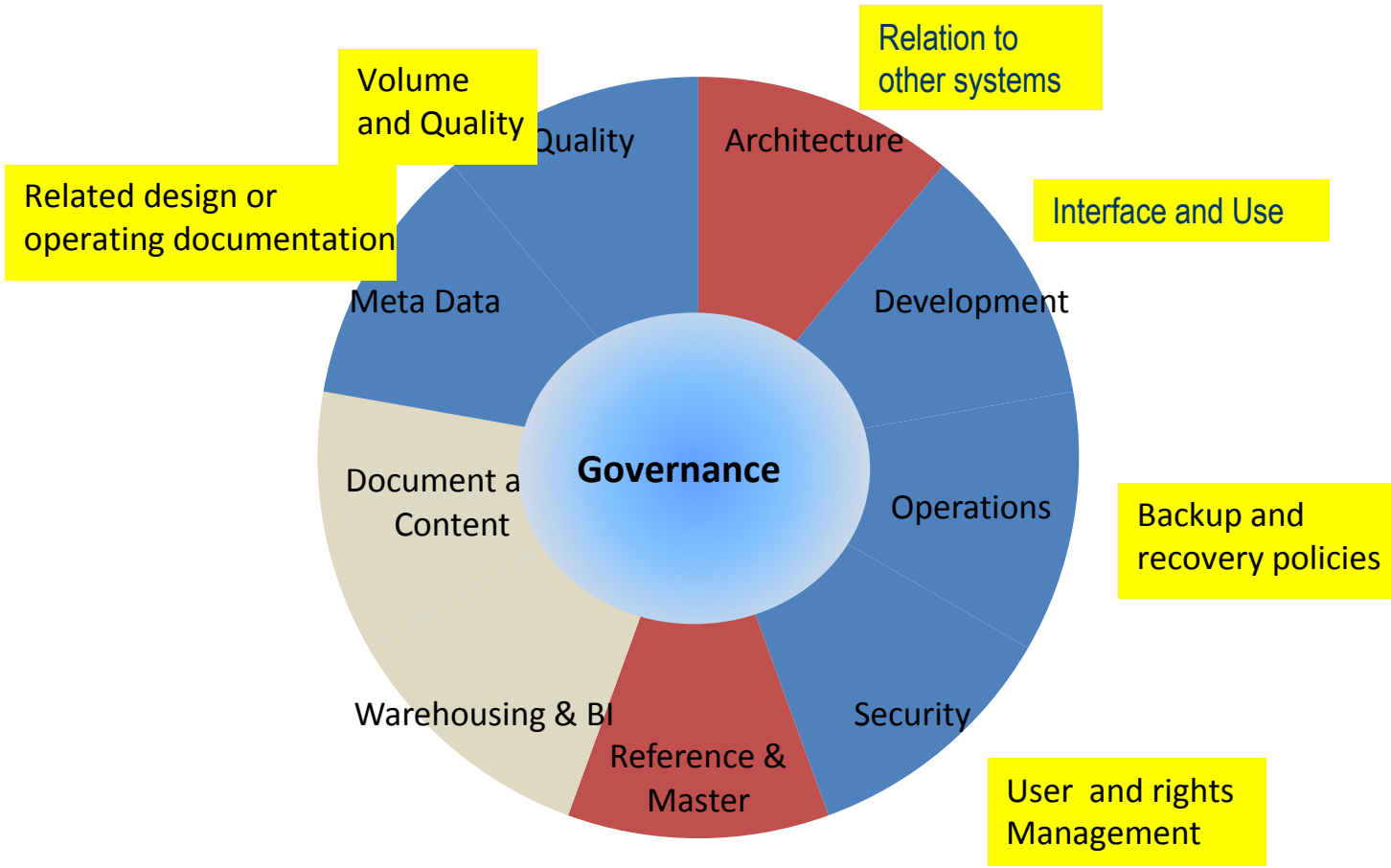
E-R Diagram – Unanswered Questions



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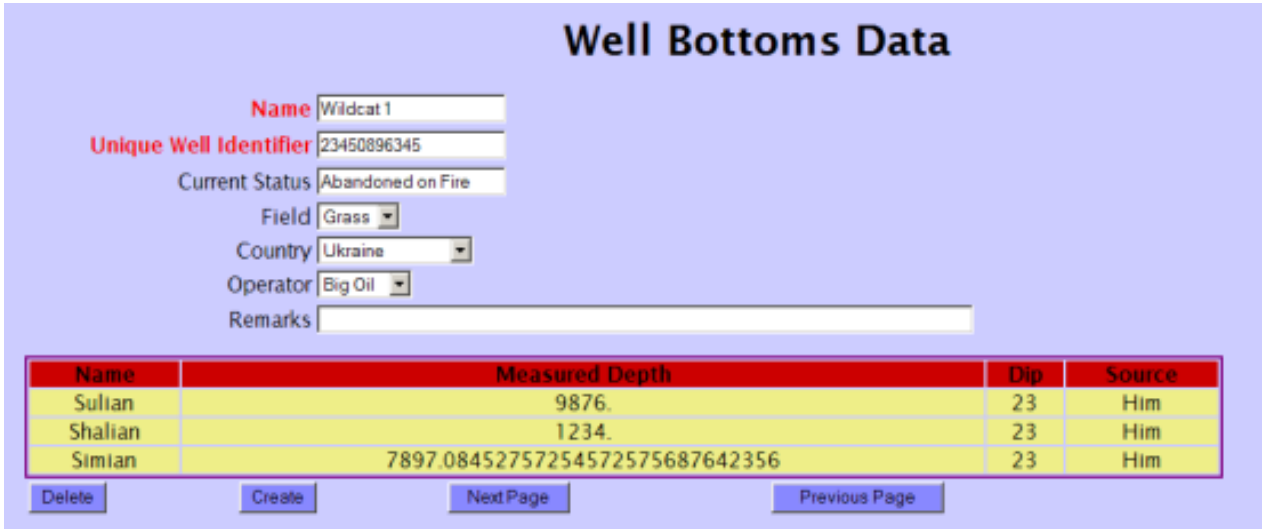
User Interface

Here is one of a set of 1256 screen shots describing an existing system.



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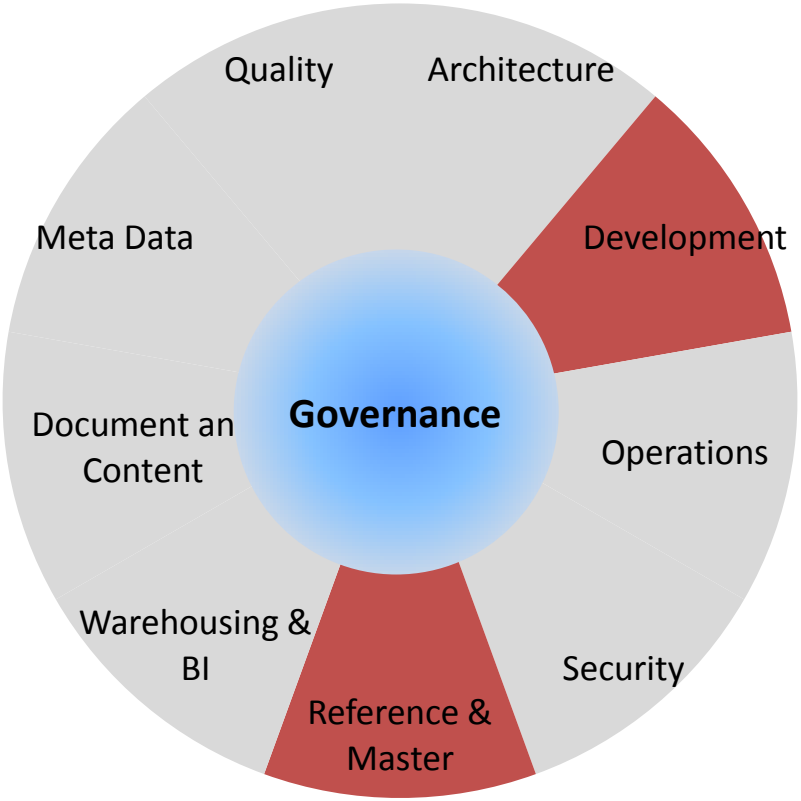
Screenshots – What's Missing?



About 80% of what we need is missing!

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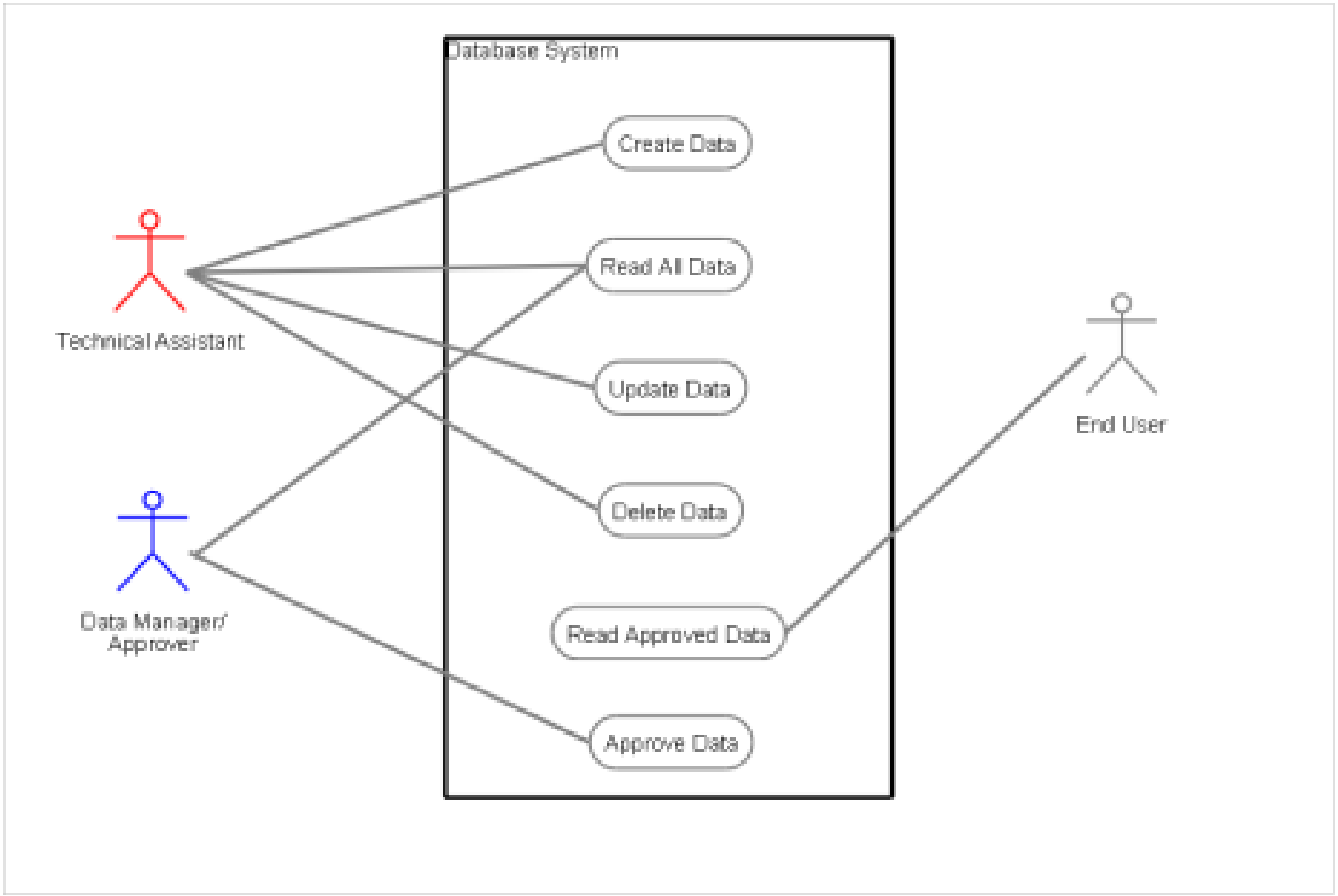
UML: Use Case



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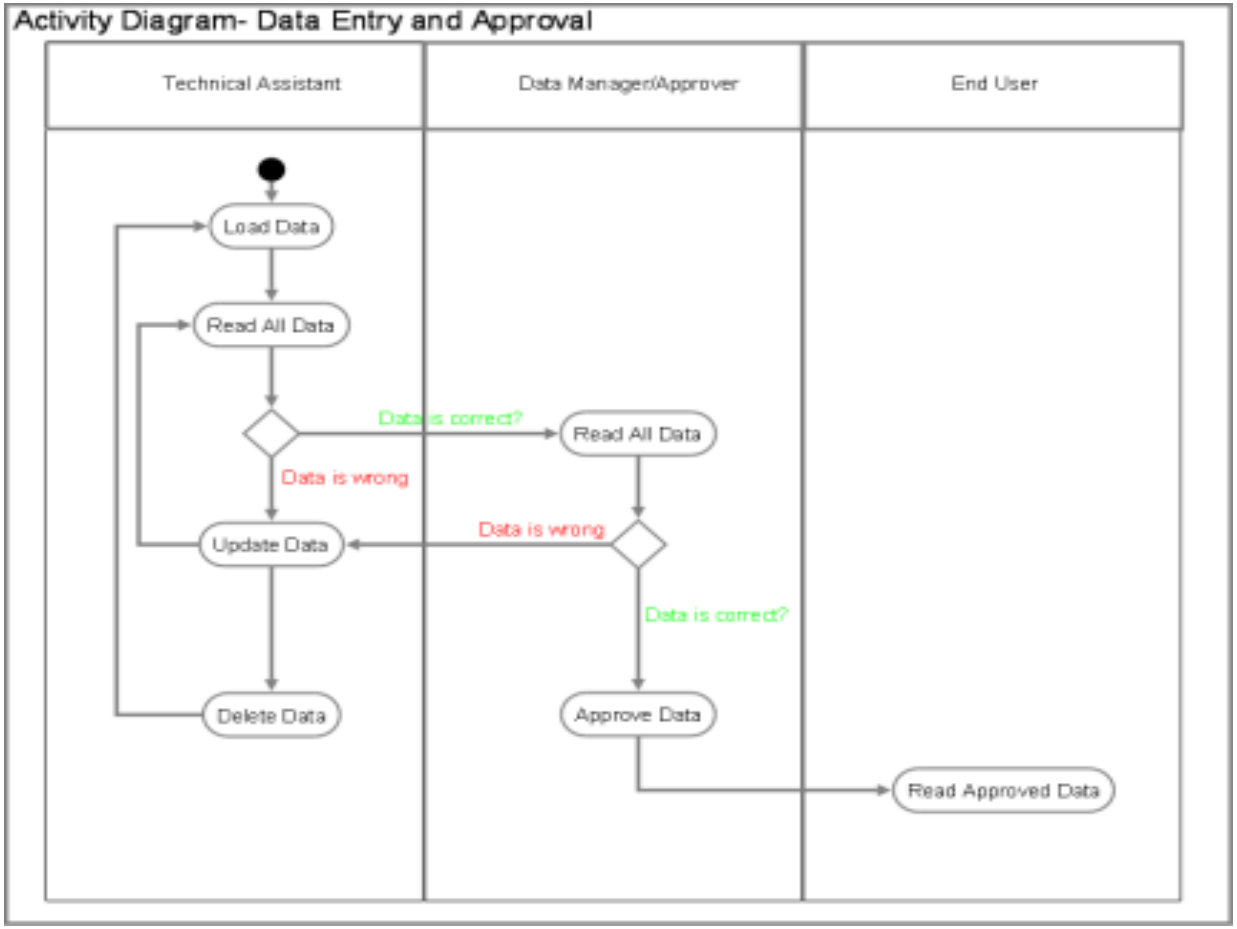
UML: Activity Diagram



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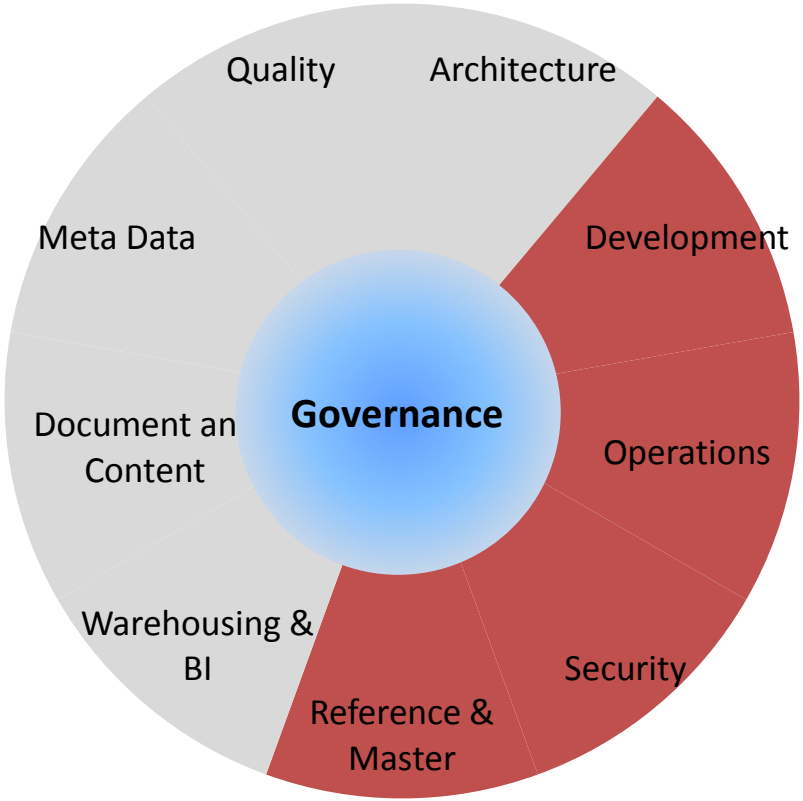
Use Case (UML)



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Use Case: What's Missing?

- Roles and Responsibilities
- Workflows

- Nothing said about the data itself.
  - Approval process itself?
    - "Accept only good data"
    - What is "good" data?
      - Data Quality!
- Very generic!

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Conclusion

- Artefacts from legacy systems cover individually perhaps 20% of what is required.
  - All together, these artefacts cover most DAMA functions
- Missing:
  - Data Quality – nothing seen here covers
    - Data volume
    - Data quality
  - Data Warehousing and Content Management
    - These are perhaps of less interest to Upstream E&P….

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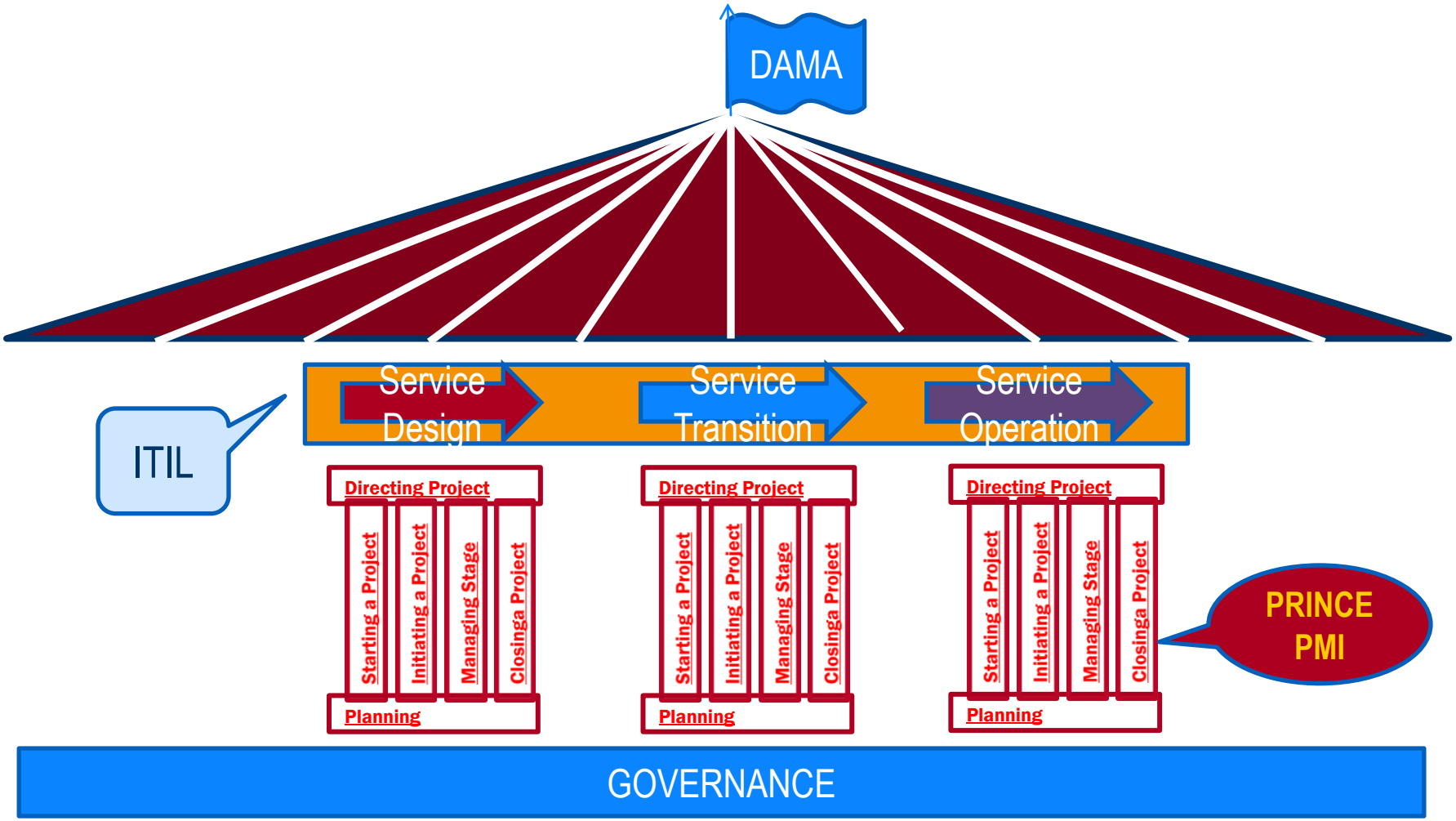
Conclusion



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Questions

Thank you!

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