# A First Attempt at Describing, Disseminating and Reusing Methodological Knowledge in Archaeology

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# Research Goal

To systematically describe *methodological knowledge* in archaeology so that it can be easily disseminated and reused in different situations.

# Motivation

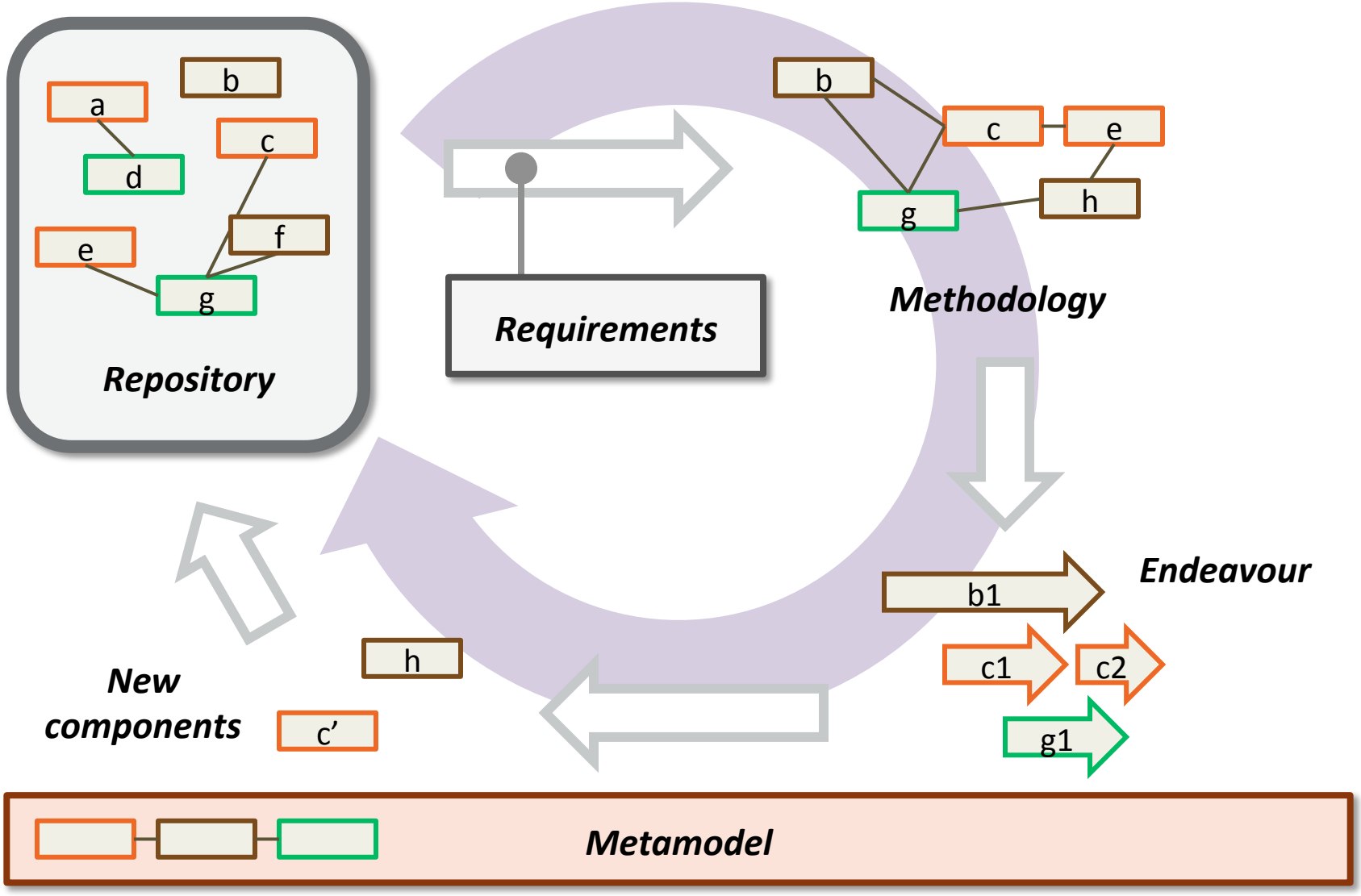
**Practitioners**

- Difficult to communicate ways of doing
- Difficult to deal with contingencies
- Wheel is being reinvented every time
- One size does not fit all
- Poor record of what was done

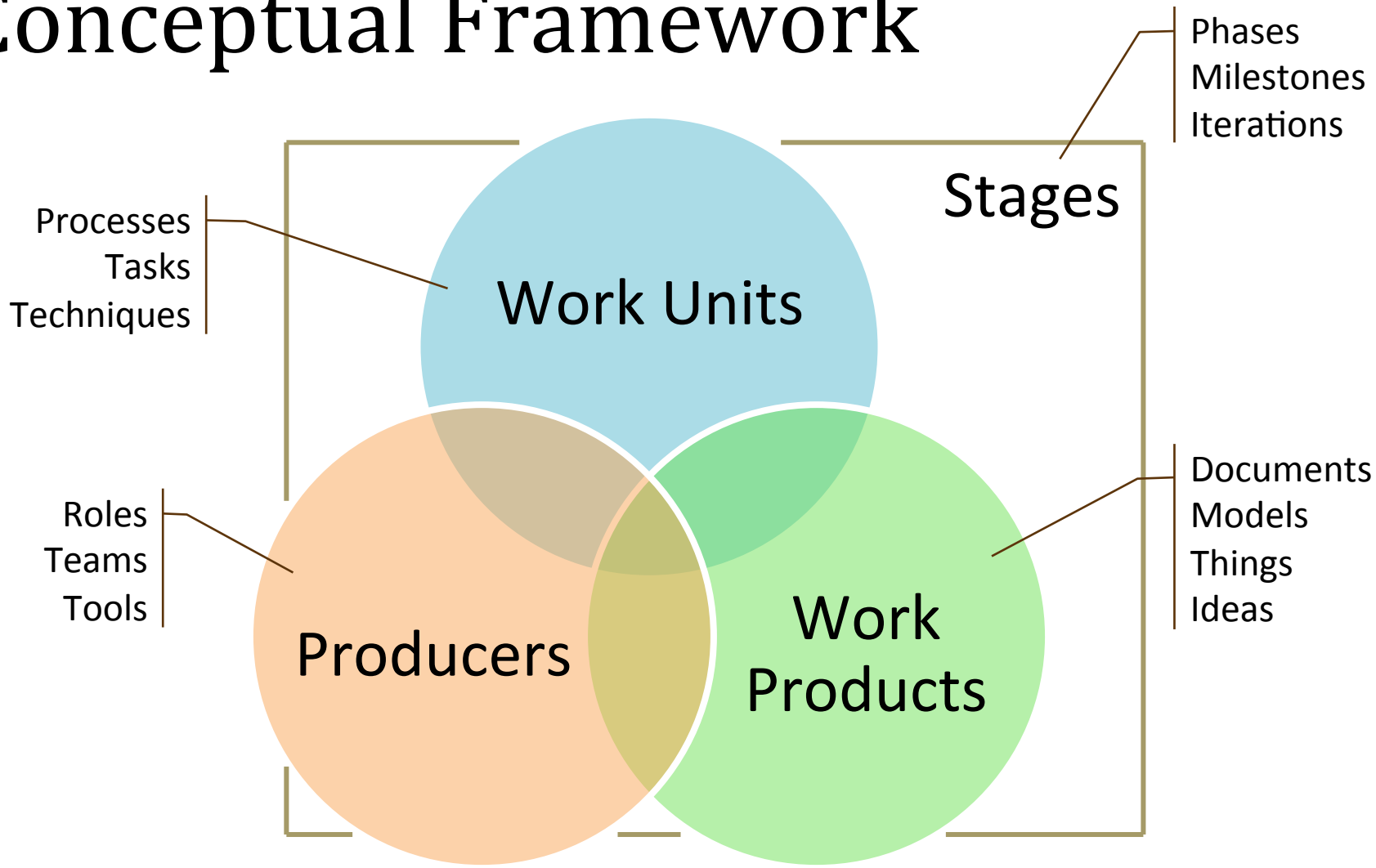
**Researchers**

- No base for the study of cognitive processes in archaeology

# Proposed Approach



# Conceptual Framework



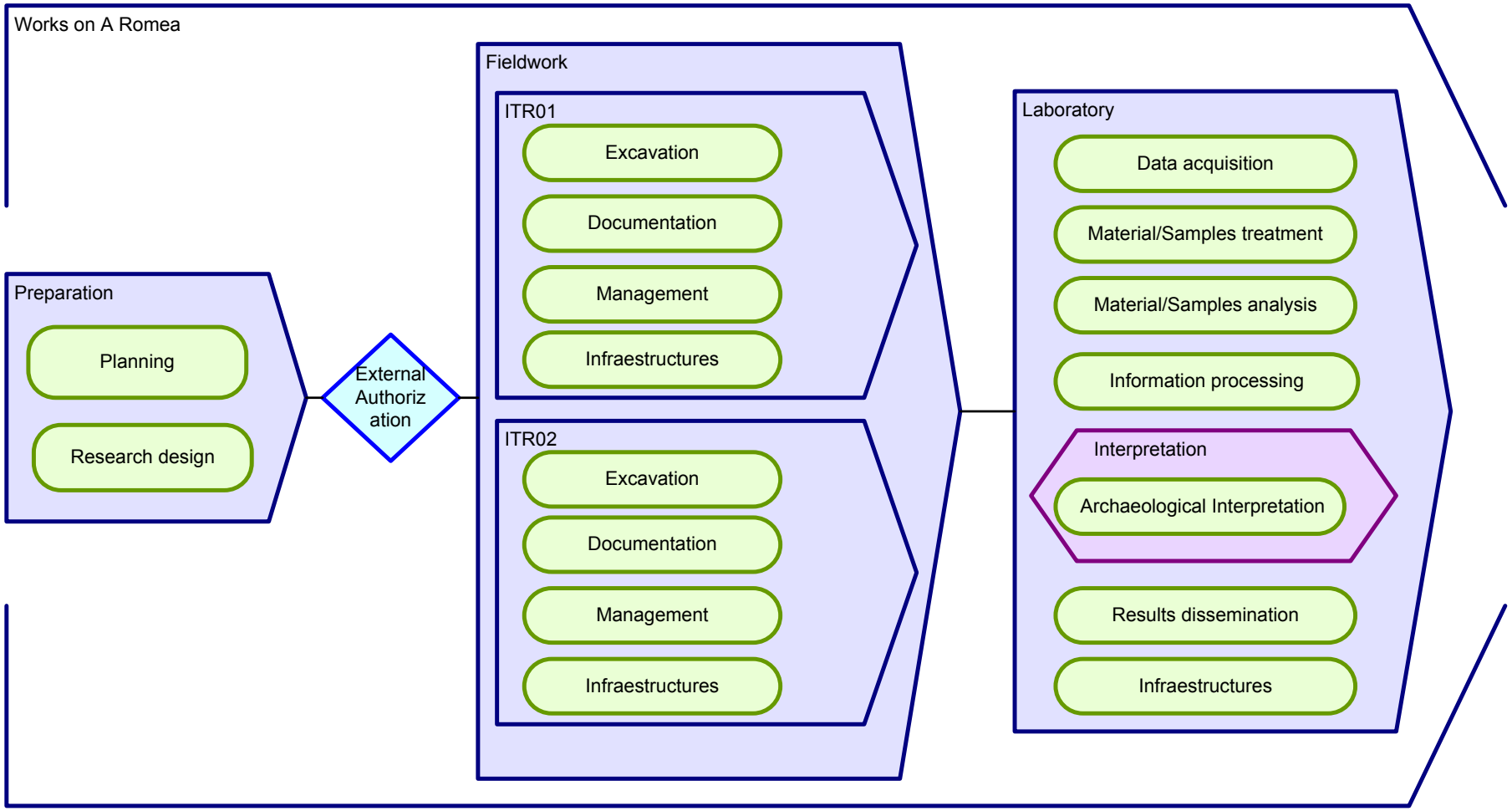

ISO/IEC 24744 metamodel

# Case Study

- Intervention on A Romea megalithic mound
- Planning, parallel excavation plus surveying, lab work, reporting, results dissemination
- Descriptive approach
- Sources:
  - Interviews with project participants
  - Project documentation

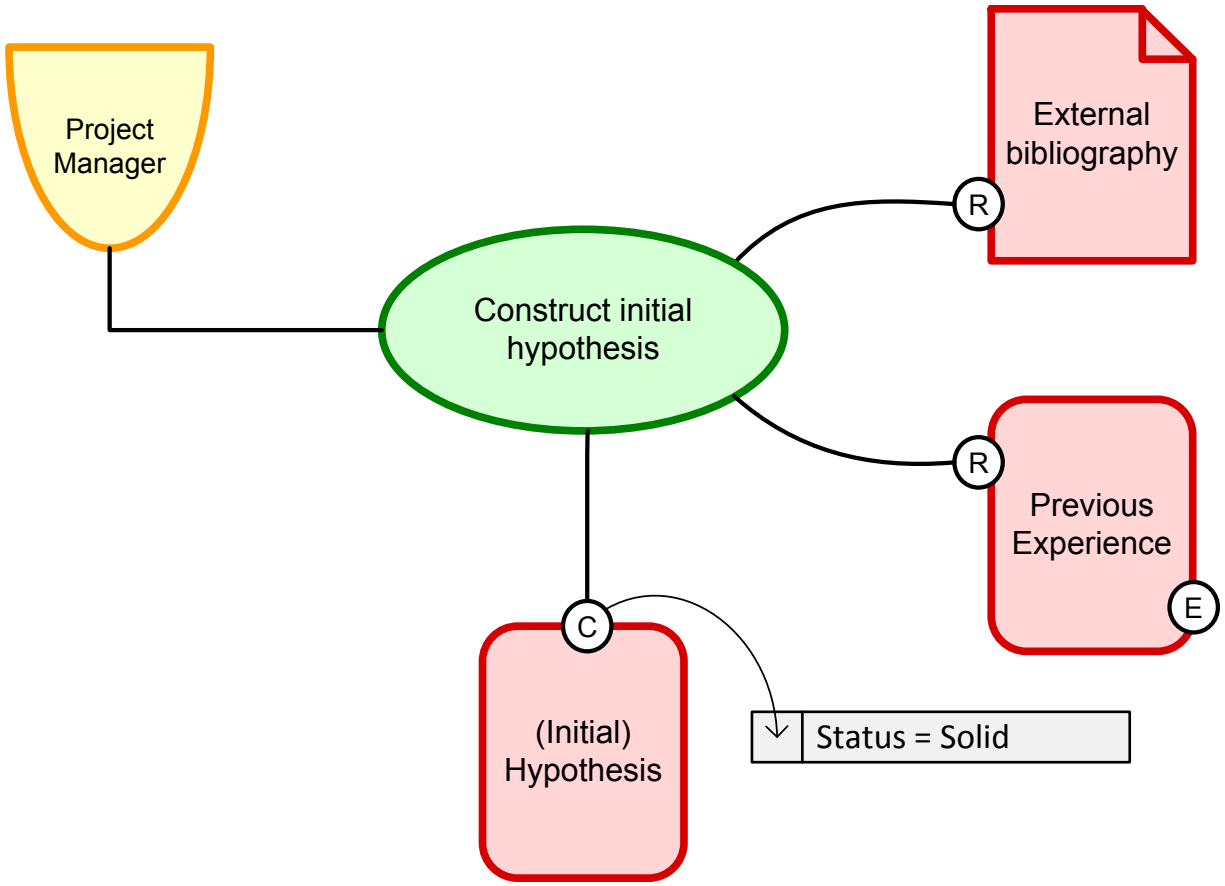
# Case Study

## Enactment overview



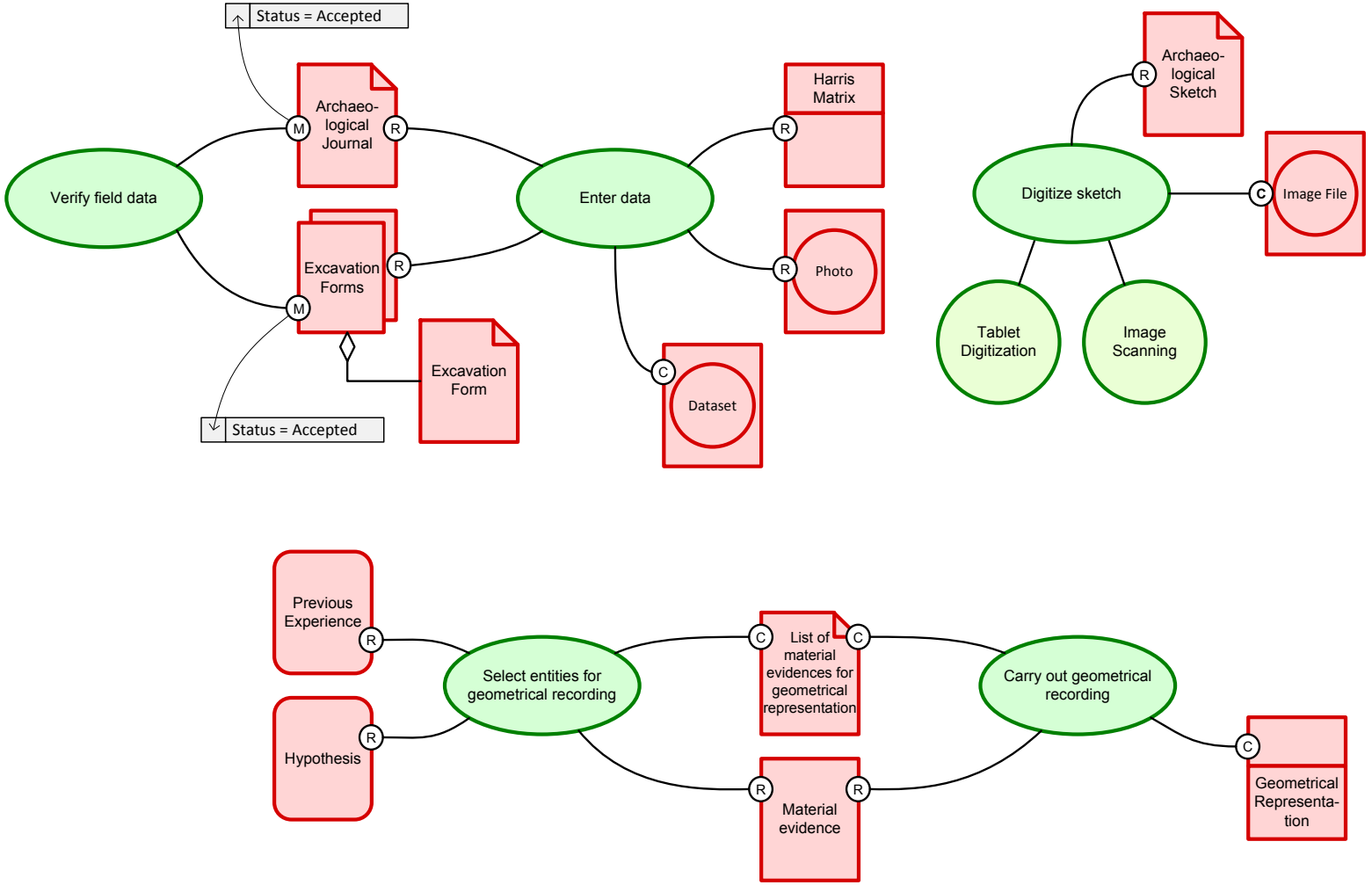
# Case Study

*Preparation* phase
*Research Design* process



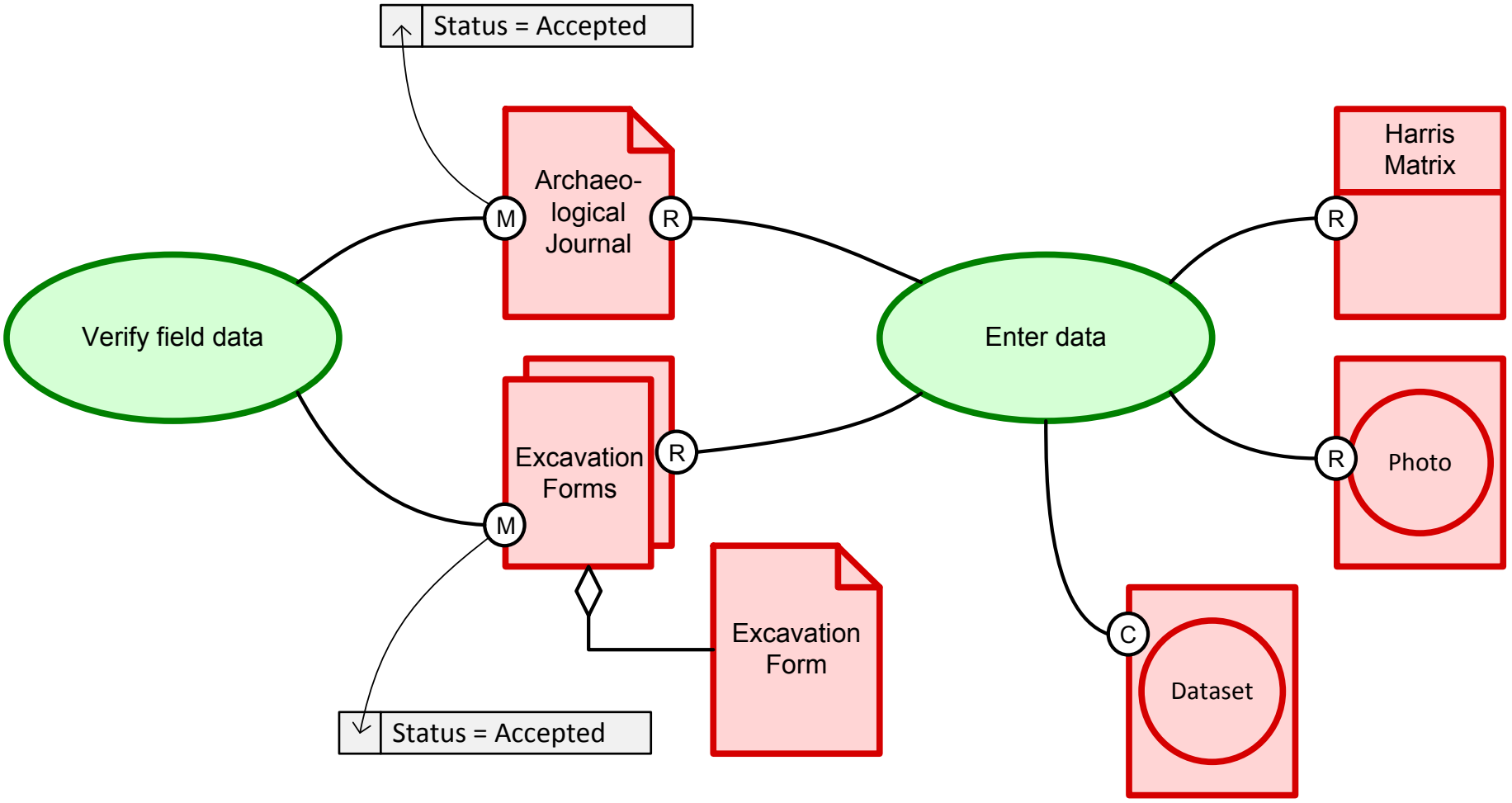
# Case Study

*Laboratory* phase
*Data Acquisition* process



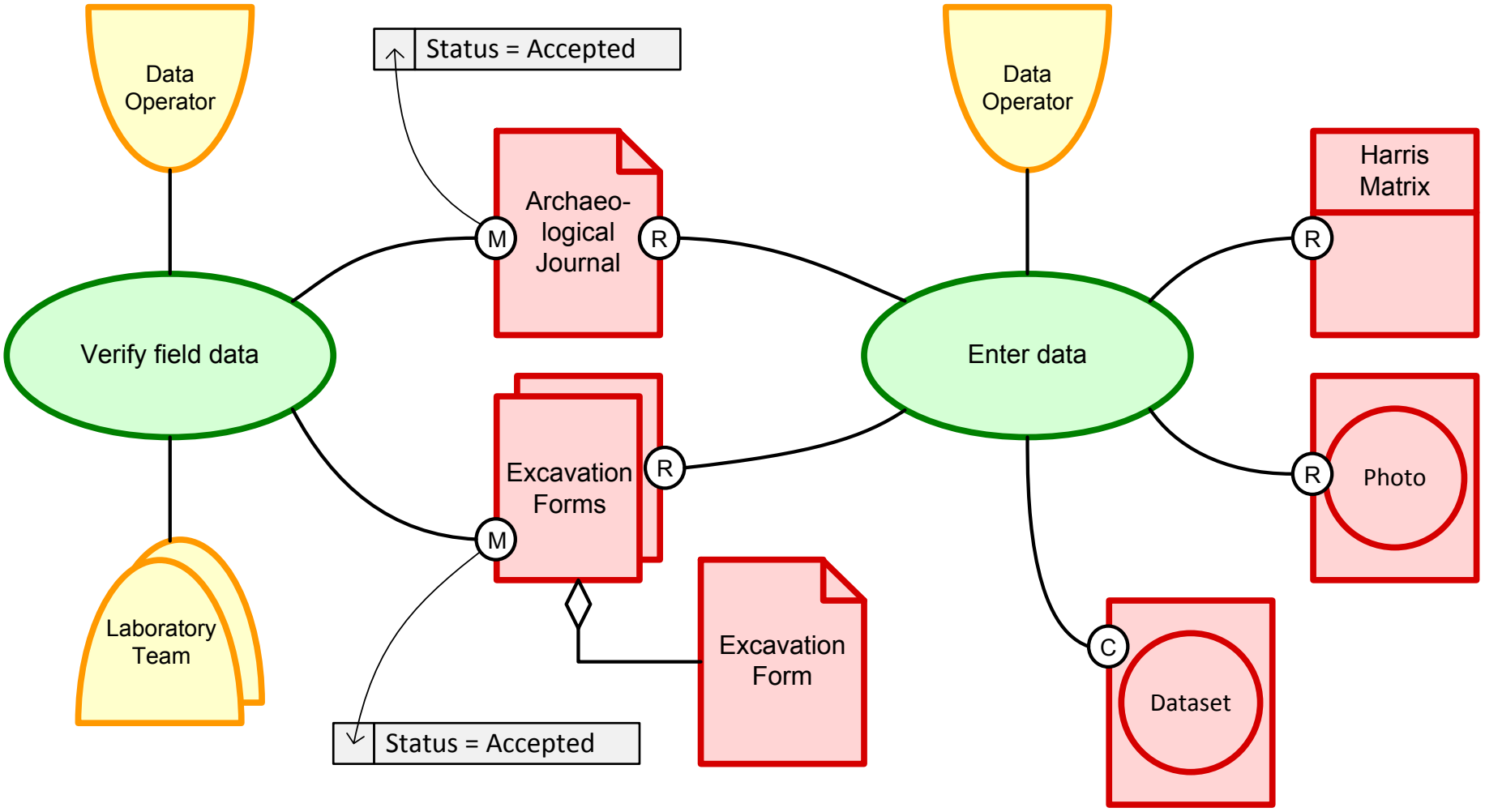
# Case Study

*Laboratory* phase
*Data Acquisition* process



# Case Study

*Laboratory* phase
*Data Acquisition* process



# Case Study

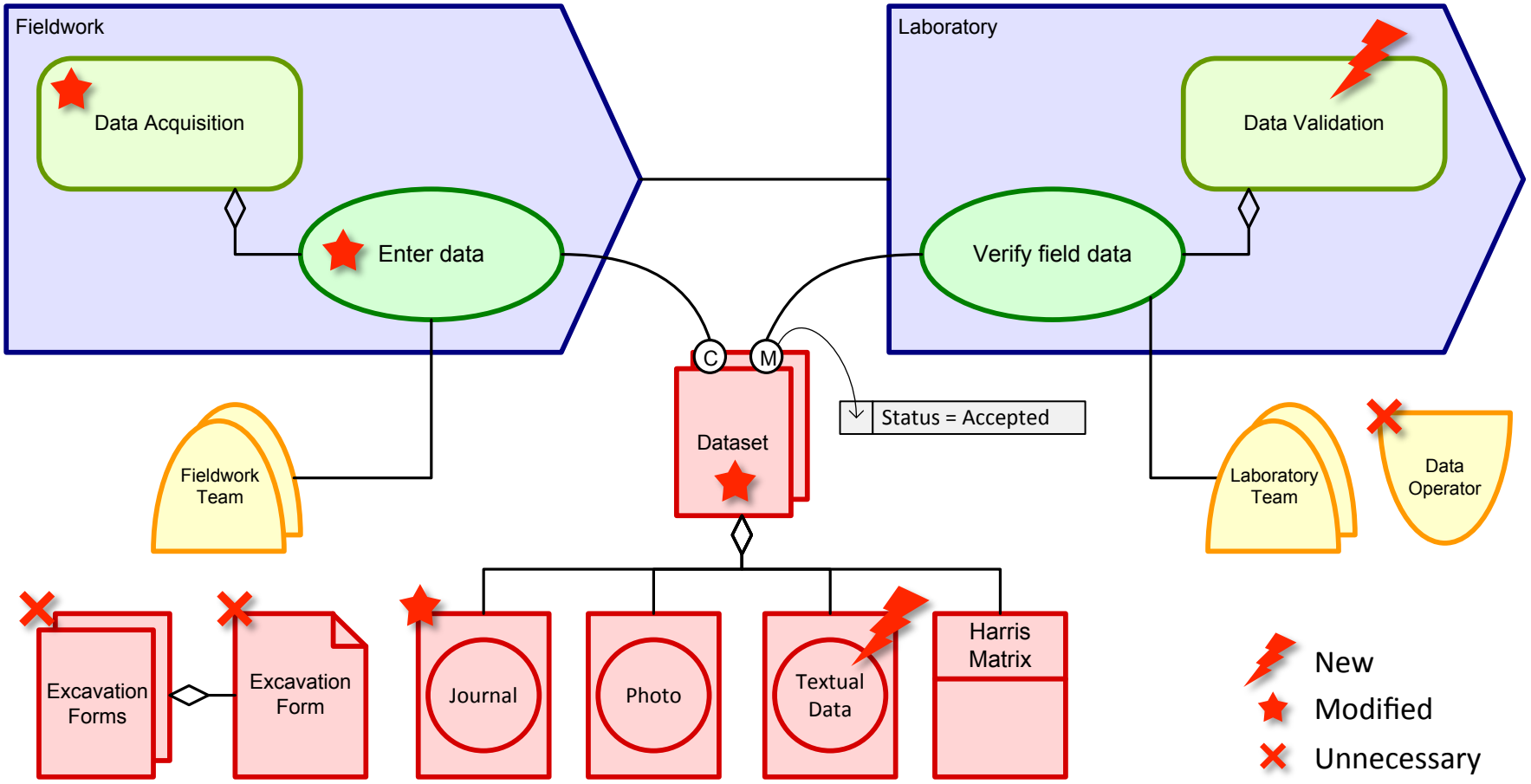


- Network of entities stored and described in database
- Following ISO/IEC 24744 plus extensions
- 227 method components, majorly:
  - Processes and tasks
  - Work products
  - Roles
  - plus the connections between them

# Case Study

Tests

Let's put together a paperless *Data Acquisition* process.



# Benefits

- High-quality record of what was done
- Checks on lifecycle of work products
- Facilitates replanning
- Reuse of knowledge in new situations
- Base for research on cognitive processes in archaeology

# Open Issues

- Moving from description to prescription
- High reliance on “previous experience”; little coding of knowledge
- Very hard to reconstruct methodology employed

# Conclusions

- Description is not easy but can be done
- Dissemination and reuse seem possible
- ISO/IEC 24744 extensions necessary and in progress
- Open issues need to be tackled

# Thank You

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