

# Definition of a Technological Ecosystem for Scientific Knowledge Management in a PhD Programme

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Education in  
the Knowledge  
Society

Methodology

Dissemination  
Processes

Knowledge  
Management  
Processes

Scientific  
Knowledge  
Management  
Ecosystem

Develop  
Assessment  
Report

The background features a network of light blue, irregular lines that form various polygonal shapes, resembling a molecular or crystalline structure. In the top-left corner, there is a teal-colored polygon with a dark blue border. Inside this teal shape, the text 'Education in the Knowledge Society' is written in a dark blue, sans-serif font.

Education in  
the Knowledge  
Society

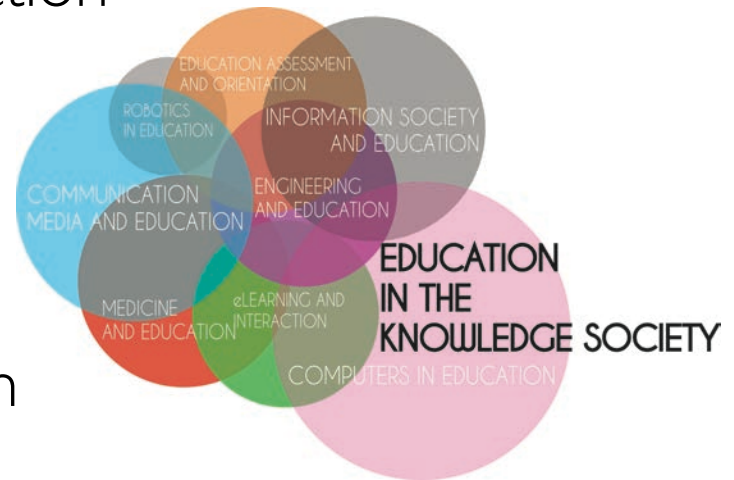
# The PhD Programme

- PhD Programme at the University of Salamanca
- Highlight the teaching-learning processes as driving force of the Knowledge Society
- Interdisciplinary and multicultural approach
- Supported by research groups, individual researchers and international researchers



# Research lines

- Education Assessment and Orientation
- Human-Computer Interaction
- eLearning
- Computers in Education
- Communication Media and Education
- Medicine and Education
- Robotics in Education
- Engineering and Education
- Information Society and Education

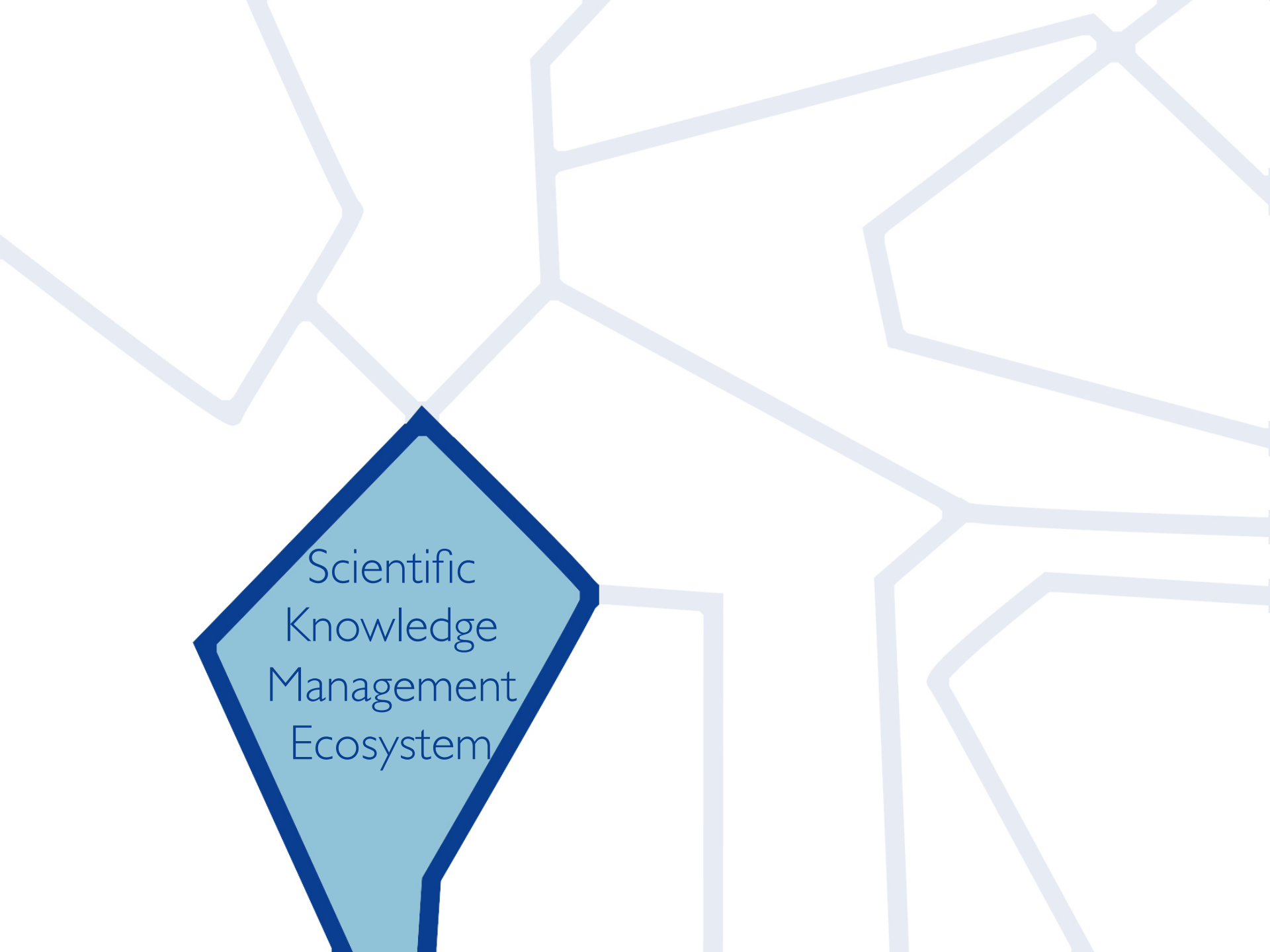




Methodology

# Scrum+Kanban

- The development of the technological ecosystem for the PhD Programme is based on a combination of two agile methods
  - ✓ Scrum is a methodology based on prioritized tasks depending on the benefit that provide to the final user of the product
  - ✓ Kanban is an approach to introducing change to an existing software development lifecycle or project management methodology



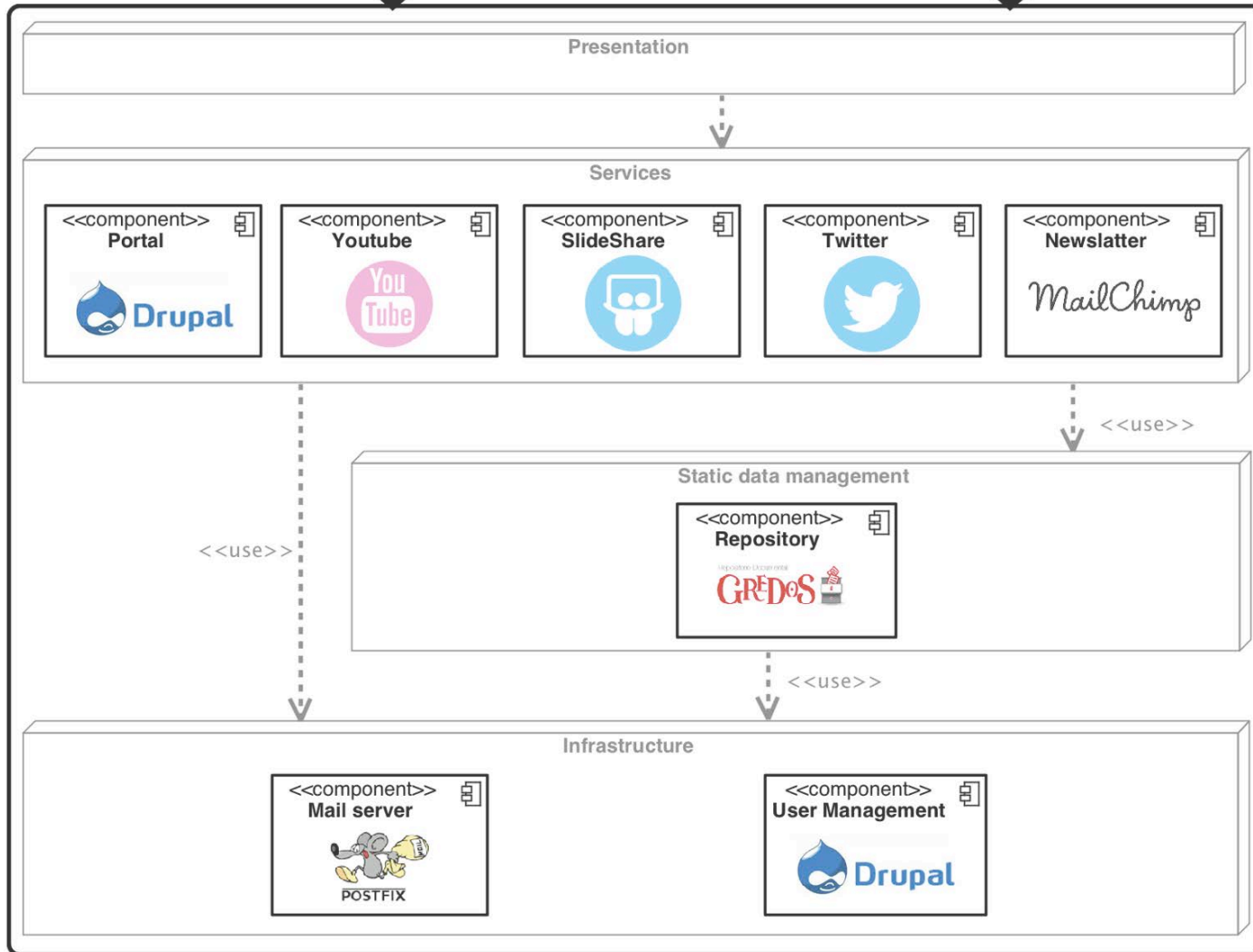
Scientific  
Knowledge  
Management  
Ecosystem

# The technological ecosystem

- Based on the architectural pattern defined by the authors in previous works
- Combine technological and human elements
- Four layers compose this pattern - presentation, services, static data management and infrastructure
- Two input streams related to management and methodology

Academic Committee  
(Management)

Quality Committee  
(Methodology)





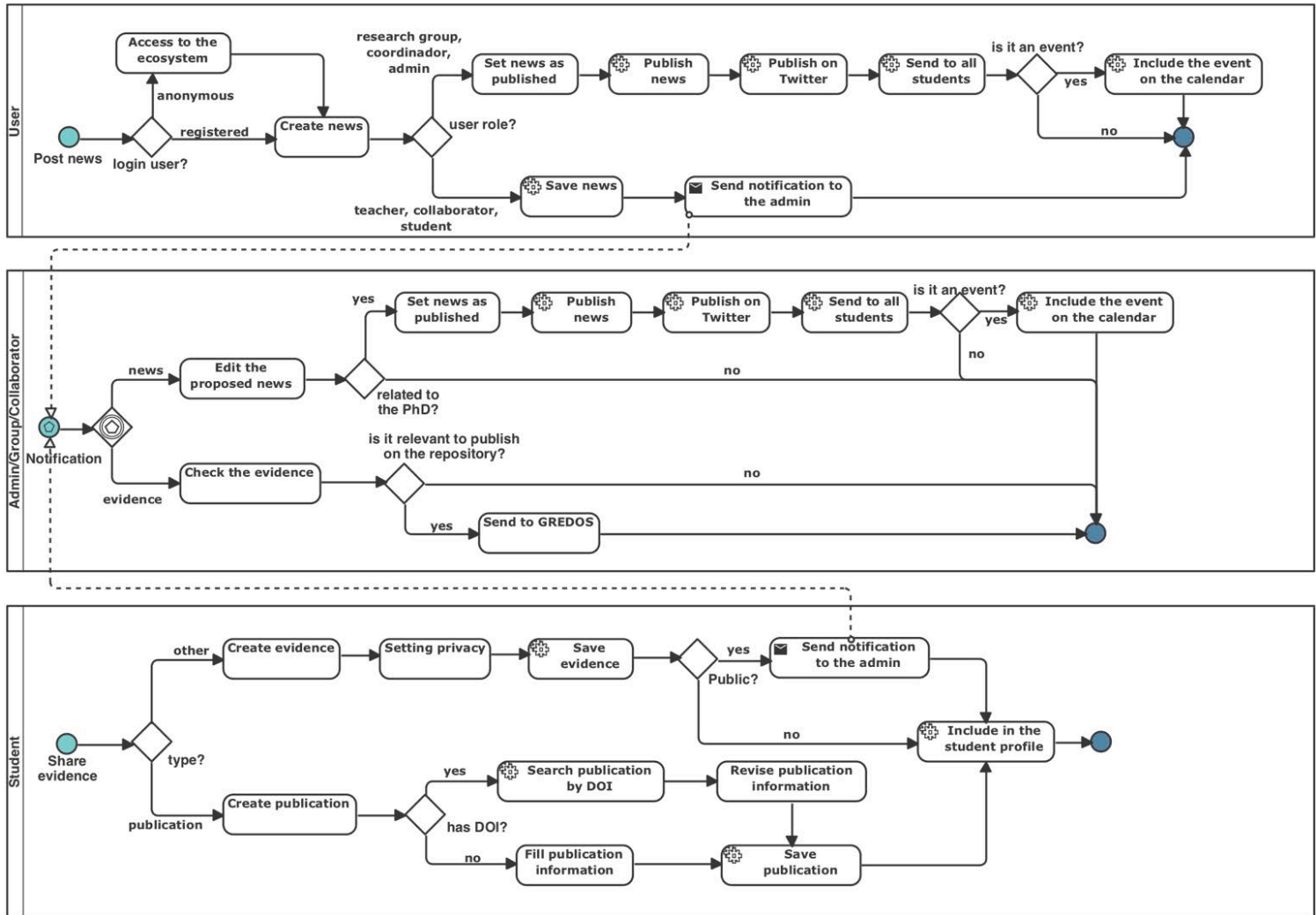
Knowledge  
Management  
Processes

# Bussines Process Model and Notation

- The technological ecosystem of the PhD Programme should provide the mechanisms required to support the scientific knowledge management processes
- The use of BPMN diagrams allows describe the processes with a high abstraction level
- The ecosystem supports the knowledge distribution and knowledge creation from different points of view

A network diagram consisting of light blue lines forming a complex web of interconnected nodes. One node on the right side is highlighted with a dark blue, irregular pentagonal shape. The text "Dissemination Processes" is written inside this highlighted node in a dark blue font.

Dissemination  
Processes

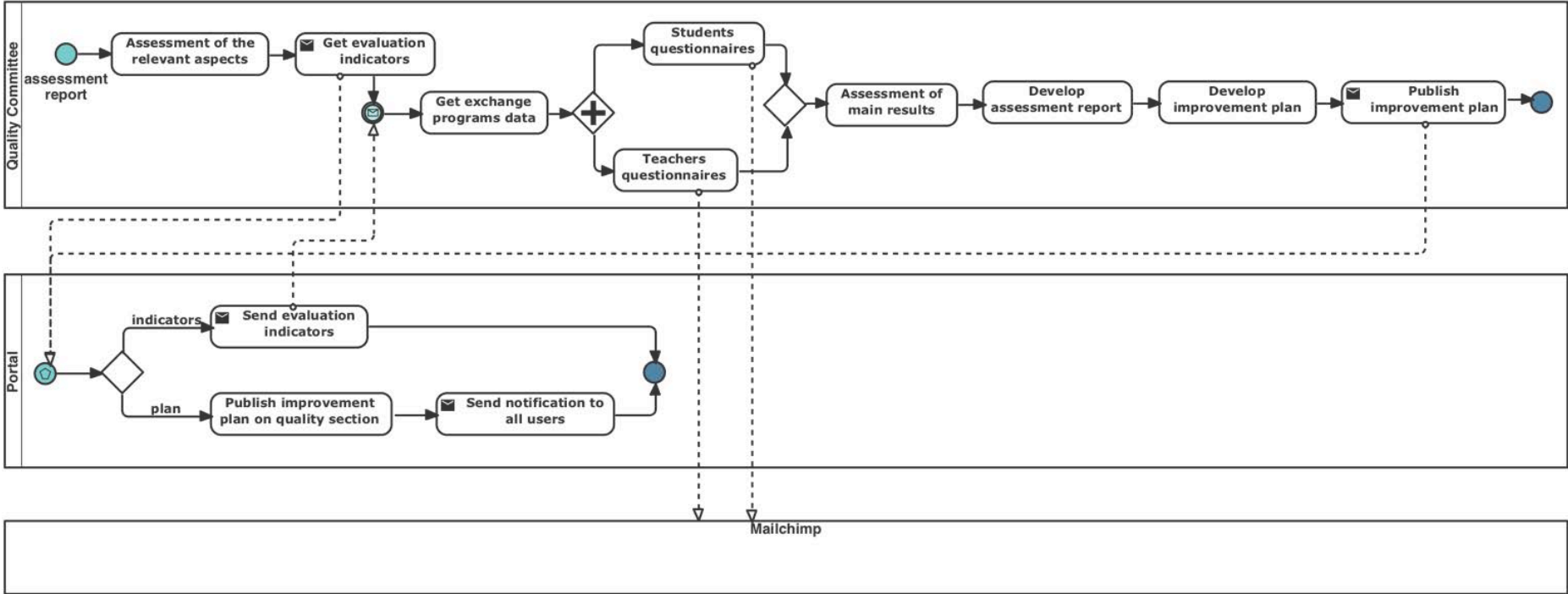




Develop  
Assessment  
Report

# Quality Plan

- The evolving processes of the PhD ecosystem are supported by the Quality Plan developed by the Quality Committee
- The plan includes several processes to ensure the quality of the Programme
- The internal assessment report includes an analysis of the Programme and defines a set of improvement tasks to resolve the identified problems and mismatches for the next academic year





Conclusions

# Conclusions

- Successful knowledge management is one of their main challenges if it wants to be part of the Knowledge Society
- The PhD Programme on Education in the Knowledge Society has the same knowledge management goals and problems than any kind of organization
- The Quality Plan is a key factor inside the technological ecosystem as the most important mechanism to evolve the ecosystem
- The technological ecosystem can reuse in other contexts

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# Thank you!



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