

# Collaborative Knowledge Engineering via Semantic MediaWiki

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# Outline

- Motivations toward collaborative Knowledge Engineering
- Our contribution: an approach and a tool to support it (MoKi)
- Short demo of MoKi
- Experiences with MoKi
- Future Works

# The APOSDLE project

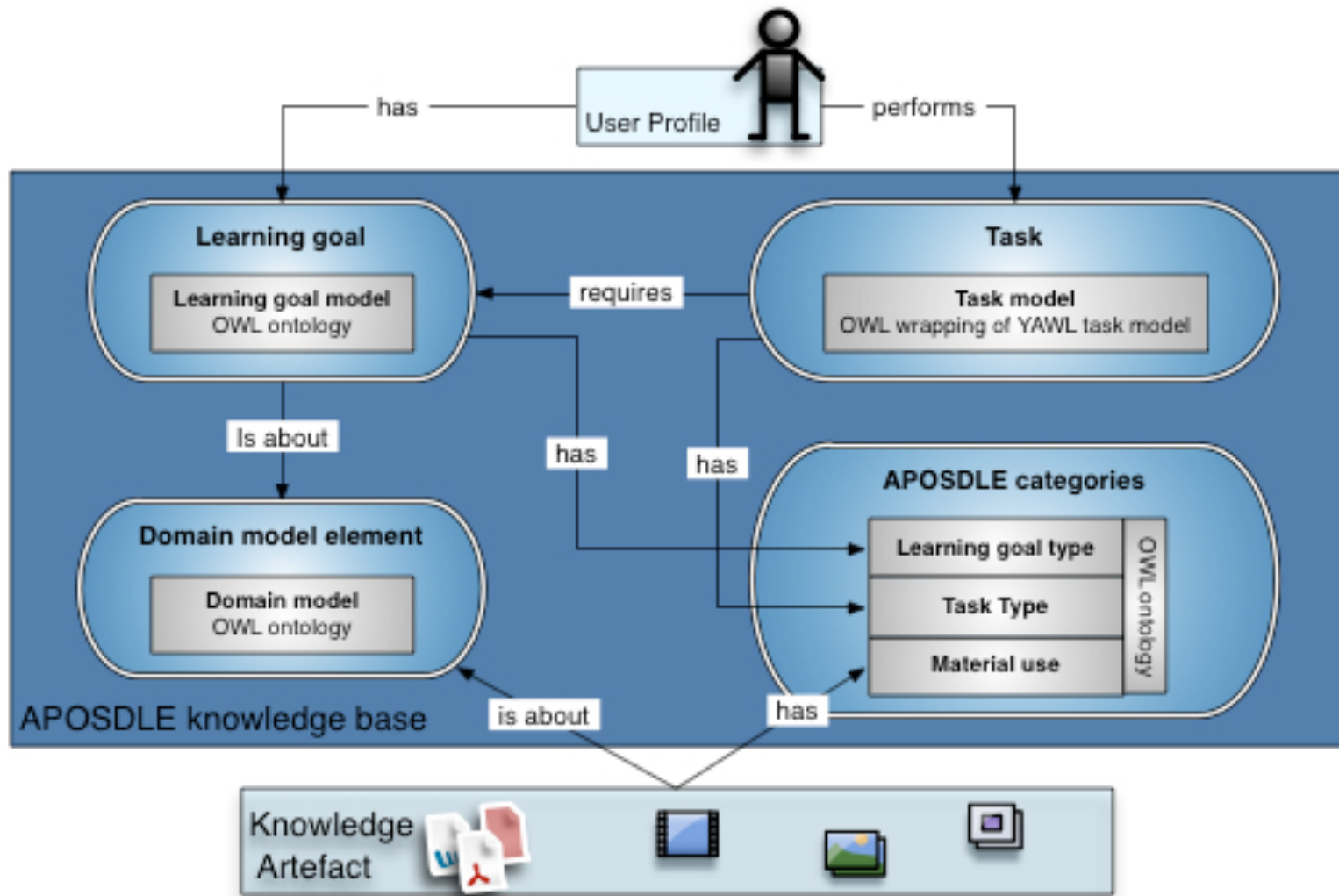


APOSDLE aims at developing a software platform to support the process of learning@work, that is learning within the context of the immediate work of a user and within his/her current work environment.

Website: [www.aposdle.org](http://www.aposdle.org)

APOSDLE is a 48 months research and development integrated project partially supported by the European Community under the Information Society Technologies (IST) priority of the 6th framework programme for R&D (contract no. IST-027023).

# The enterprise model in APOSDLE



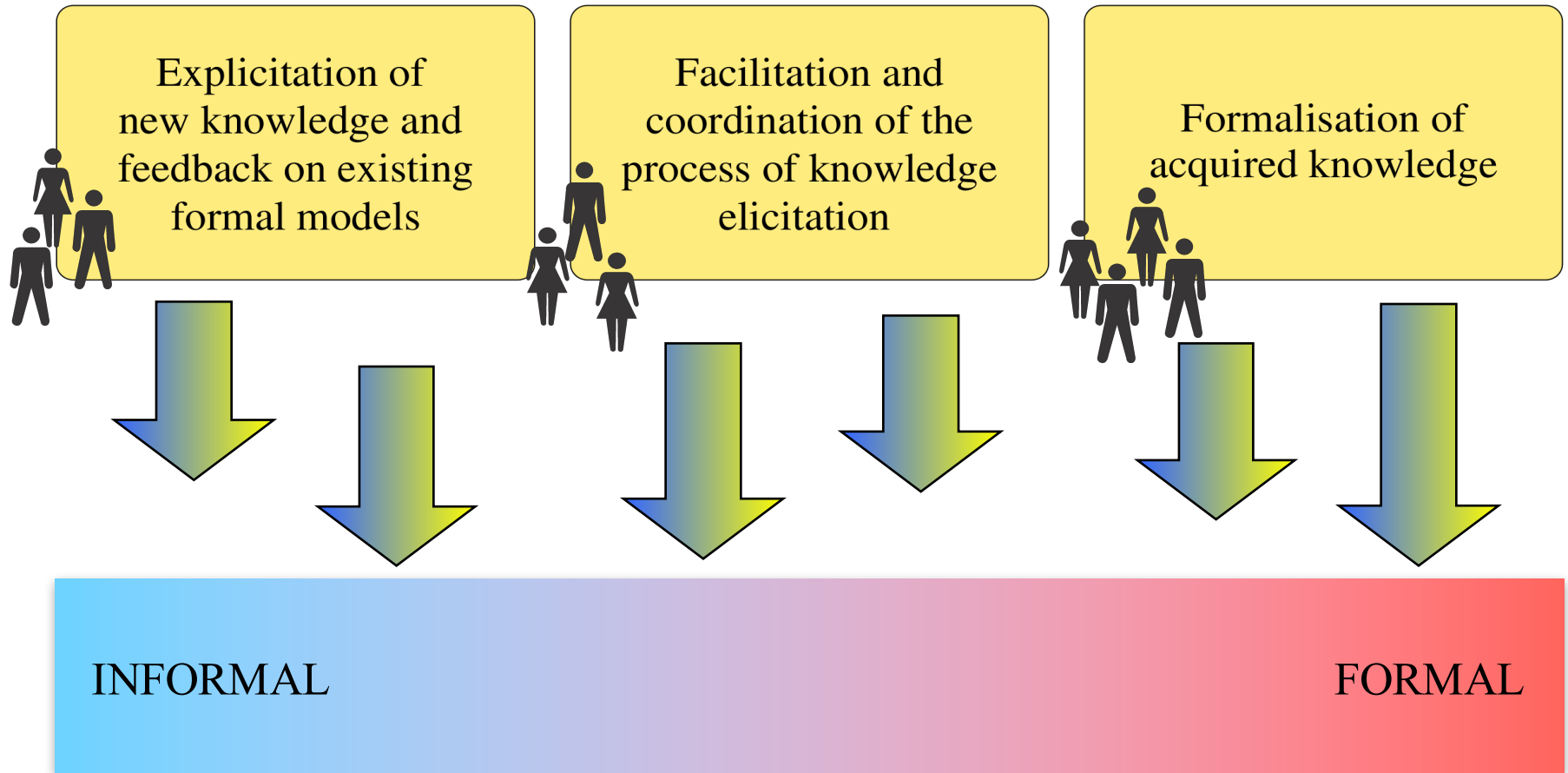
# Building the enterprise model

- Models creation difficulties to face:
  - Models not already available in the enterprise;
  - Different types of formal models (and tools to produce them);
  - Modeling teams in enterprise were composed of several domain experts and possibly people with some limited knowledge engineering skills;
  - Lack of motivations within the enterprise to acquire the missing knowledge engineering skills;
  - Needs to collaborate both among the team and also with external actors able to provide the knowledge engineering support.
- Most of these difficulties hold in general, not only for APOSDLE.

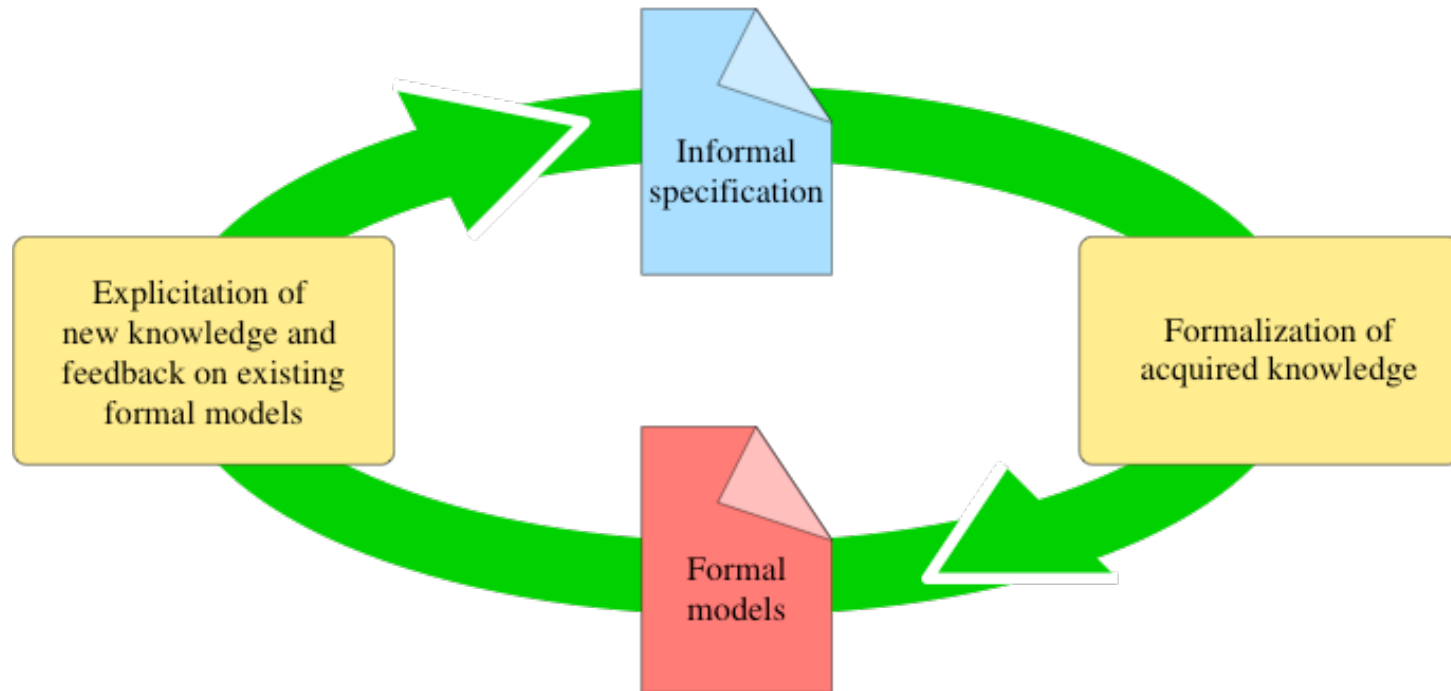
# Our Contribution

- A new approach for modelling based on two main pillars:
  - The usage of a Semantic MediaWiki as a uniform layer for modelling different aspects of an enterprise
  - Tight integration with formal modelling tools
- Collaborative modelling
- Informal/formal alignment of knowledge

# Collaborative modelling



# Informal/formal alignment of knowledge





# MoKi: the **Modelling** **WiKi**

- Built to support our approach
- Built on top of Semantic MediaWiki
- Why a (semantic) wiki?
  - wikis support collaborative editing;
  - users are quite familiar with wikis;
  - wikis do not require any software installation on the client side;
  - Semantic information provided in the wiki can be automatically extracted to create the formal models.

## Ideas behind MoKi

- Facilitates an informal but structured description via templates
- Allows import/export of formal models
- Insert/reuse of already existing techniques for modelling (Aim: to obtain a complete suite of features covering the entire modelling process)
- Let me show you a short demo of the APOSDLE MoKi!

# Usage of MoKi

- APOSDLE:
  - environmental consultancy domain (REACH area):
    - 144 concepts and 42 tasks;
  - electromagnetism simulation domain:
    - 43 concepts and 24 tasks;
  - innovation and knowledge management domain:
    - 132 concepts and 40 tasks;
  - RESCUE (requirements engineering) domain:
    - 78 concepts and 78 tasks;
  - Statistical data analysis domain:
    - 71 concepts and 19 tasks.
- Oncocure – modeling medical guidelines encoded in ASBRU protocol language
- TreC - Personal Health Record in the Province of Trento.

## Things we are working on...

- Improve the support for process modelling:
  - Support the modelling of a workflow
  - Support the modelling of processes with an adequate graphical interface;
- Strengthen the integration between informal and formal models.

## This is the end...

- A basic demo version of MoKi is available on line. (If you would like to try/test it we can grant you access to it.)
- For any question/info feel free to contact me at:

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- Thank you!

Questions?

# References

- C. Ghidini, M. Rospocher, L. Serafini, B. Kump, V. Pammer, A. Faatz, A. Zinnen, J. Guss, and S. Lindstaedt. **Collaborative Knowledge Engineering via Semantic MediaWiki**. International Conference on Semantic Systems (**I-SEMANTICS '08**), Graz, Austria, 2008.
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