Retour d'expérience d'un projet sur l'émergence d'une co-conceptualisation
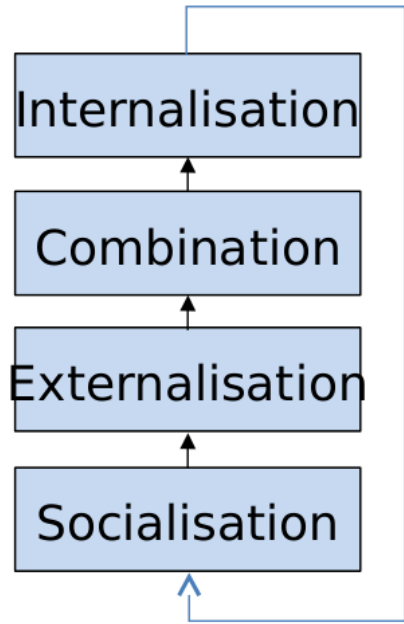
Hadj Batatia, Pascal Dayre

Context

Learning and innovation in knowledge intensive environments : tacit knowledge based framework
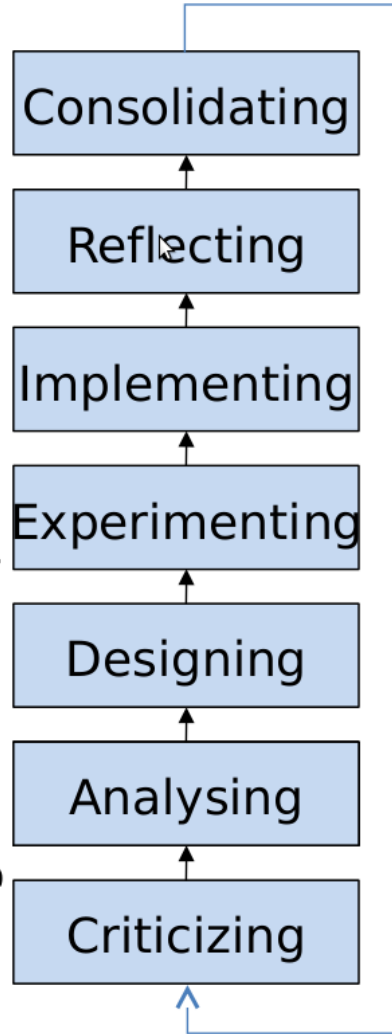
- Domains
  - Innovation in workplaces
  - Learning in higher education
  - **Research processes**
- Collaboration
  - Experts building an artefact
  - Company emproving business processes
  - Teams solving problems
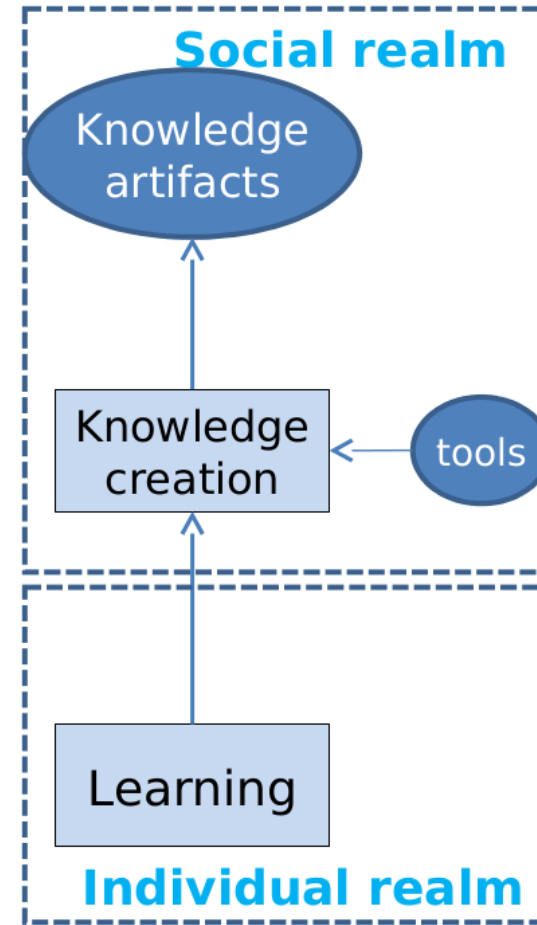
Different theoretical approaches

Knowledge creating company (Nonaka, 1995)

| Internalisation |
| Combination |
| Externalisation |
| Socialisation |

Cultural historical activity theory (Engström, 1999)

| Consolidating |
| Reflecting |
| Implementing |
| Experimenting |
| Designing |
| Analysing |
| Criticizing |

Knowledge building company (Breiter, 2002)

Social realm

Knowledge artifacts

Knowledge creation

tools

Learning

Individual realm

Principles of the proposed framework

- Tacit knowledge in a key factor to innovation and learning
- Learning goes beyond cognitive and social perspectives
- Collaborative Knowledge creation is the ultimate level of learning
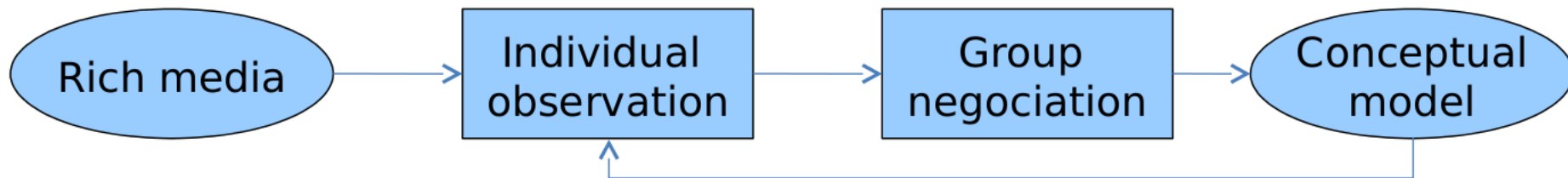- Collaboration must be mediated technologically

SMAT Principles

- Rich media as means of representing activity (story telling approach)
- Semantic schemas and ontologies to represent explicit knowledge
- Semantic annotations, links to capture thoughts, ideas
- Scenario based organisation of collaborative activity
- Group negociation of common understanding
- Capture knowledge practices

Supported processes

Internalisation : making formal knowledge tacit

Conceptual model

Rich media

Individual observation → Group negociation → Practice adaptation
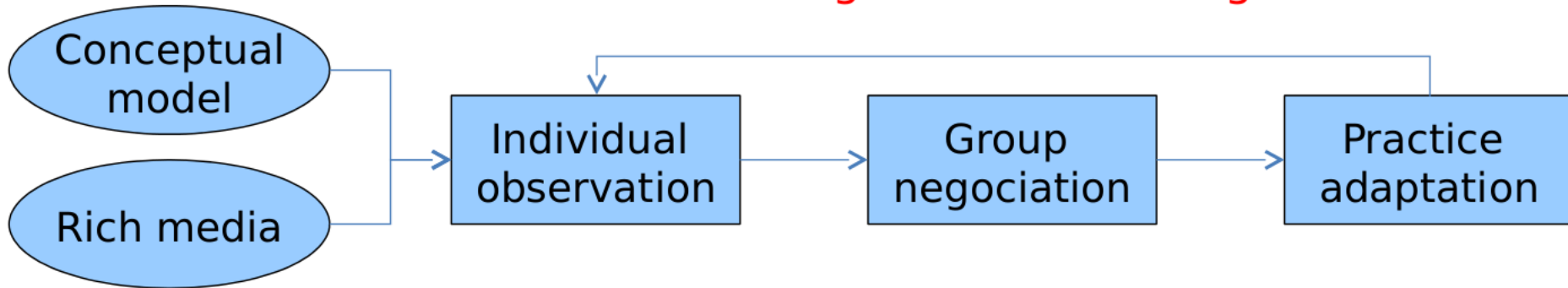
Externalisation: making tacit knowledge explicit

Rich media → Individual observation → Group negociation → Conceptual model

View of the annotation activity

Critical care team training (a SMAT usage scenario)

Collaboration with
    Karolinska institute

Context

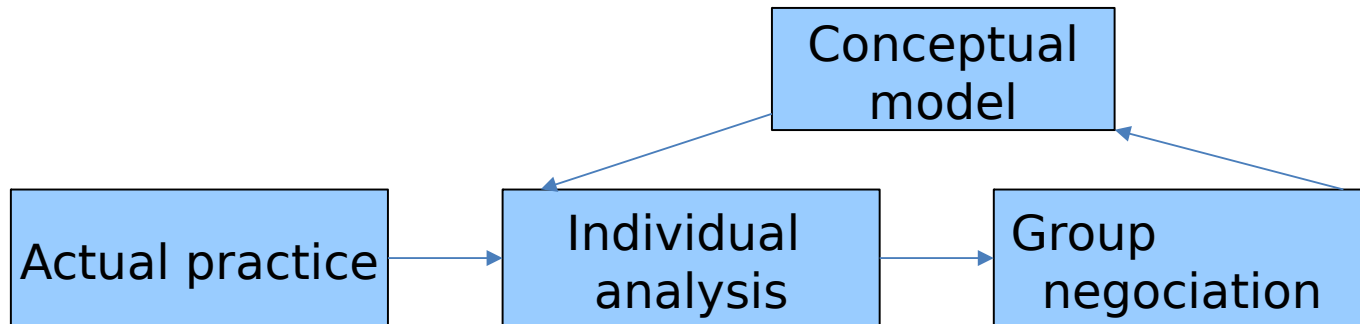# Context

Bloc opératoire

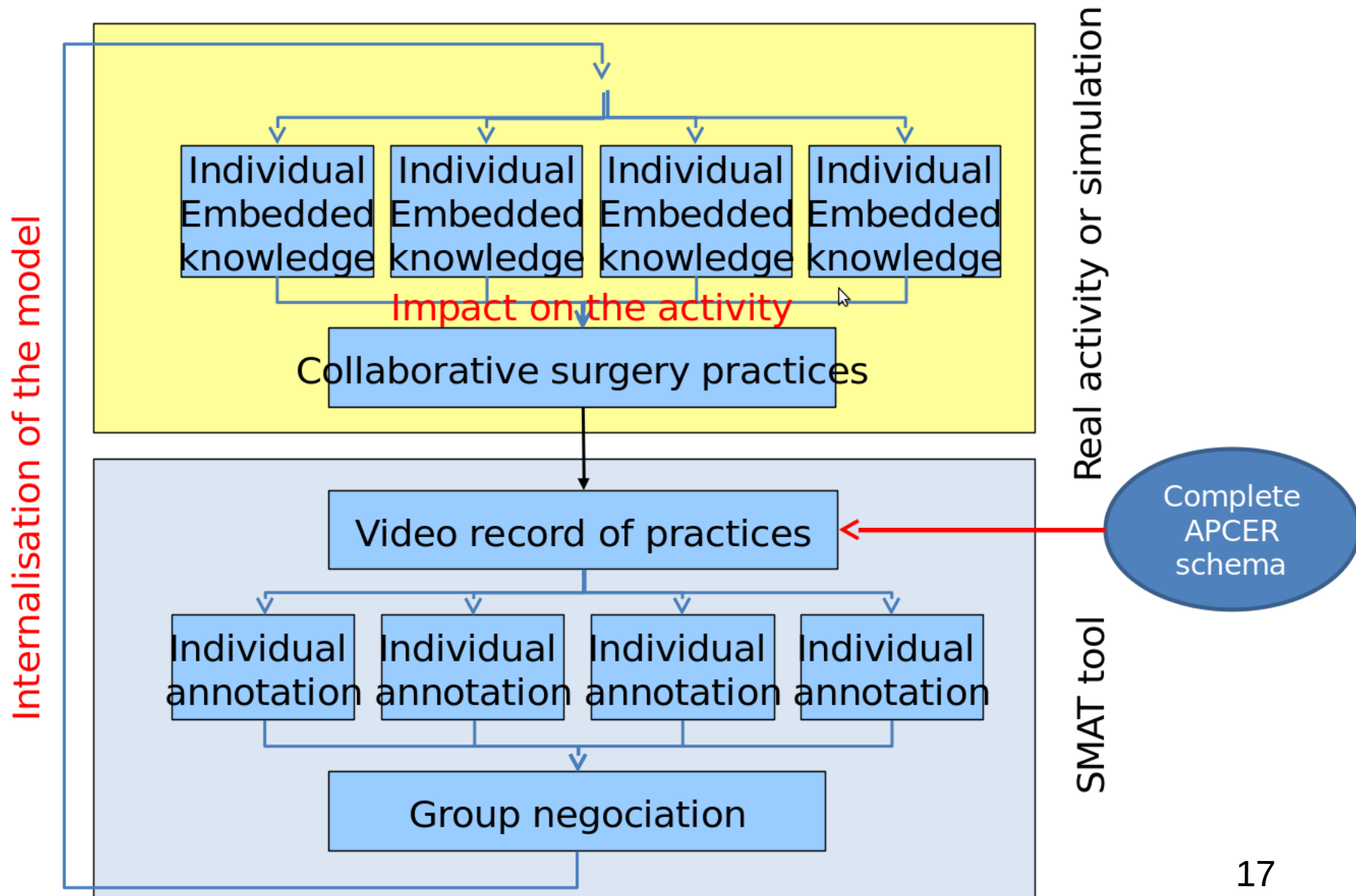# Context

Context

Context

Problem

- The team of trainees does not perform well
- Lack of coordination and understanding of roles and responsibilities
- How to allow changing the practices in order to improve the process?
- How to help the team develop a common understanding of the activity ?

A learning scenario with SMAT

Learning scenario : collaborative knowledge creation

17

View of the annotation activity

Conclusion/Perspectives

- An original conceptual framework for collaborative learning and knowledge creation
- A multimedia tool based on semantics and social interaction to internalize/externalize knowledge
- Application to training medical staff
- Transposable to other workplace processes