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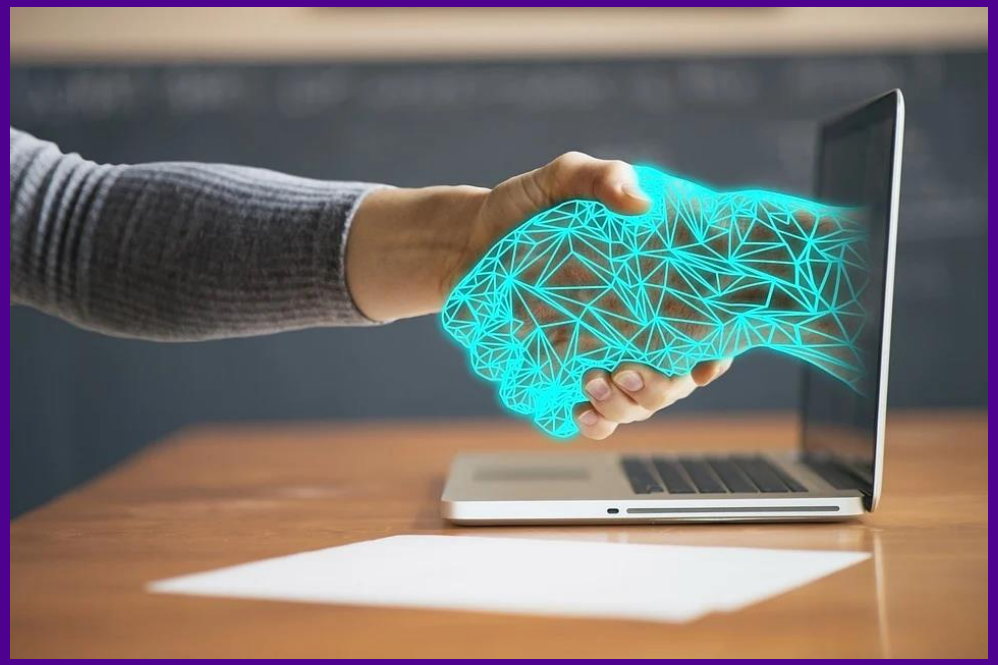
Coming to terms with robots: the integration of software robotics into work



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Background

- Task and process automatization through RPA (robotics process automation)

  →changes job descriptions, work methods and practices

  →affects various aspects of organizational life (e.g., organization of work, collaboration, interaction, interdependence)

  →the importance of paying attention to how software robotics are integrated into everyday work and work communities' practices

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Introduction of the study

Communal workplace learning in financial administration robotization

- Qualitative action research project (November 2018 - April 2021) funded by The Finnish Work Environment Fund
- Objective: to study robotization-related communal workplace practices, e.g., how robotics are adopted into work communities' practices and how organizations can support communal learning
- Participants: three municipally owned financial administration service centers in Northern, Southern and Eastern Finland

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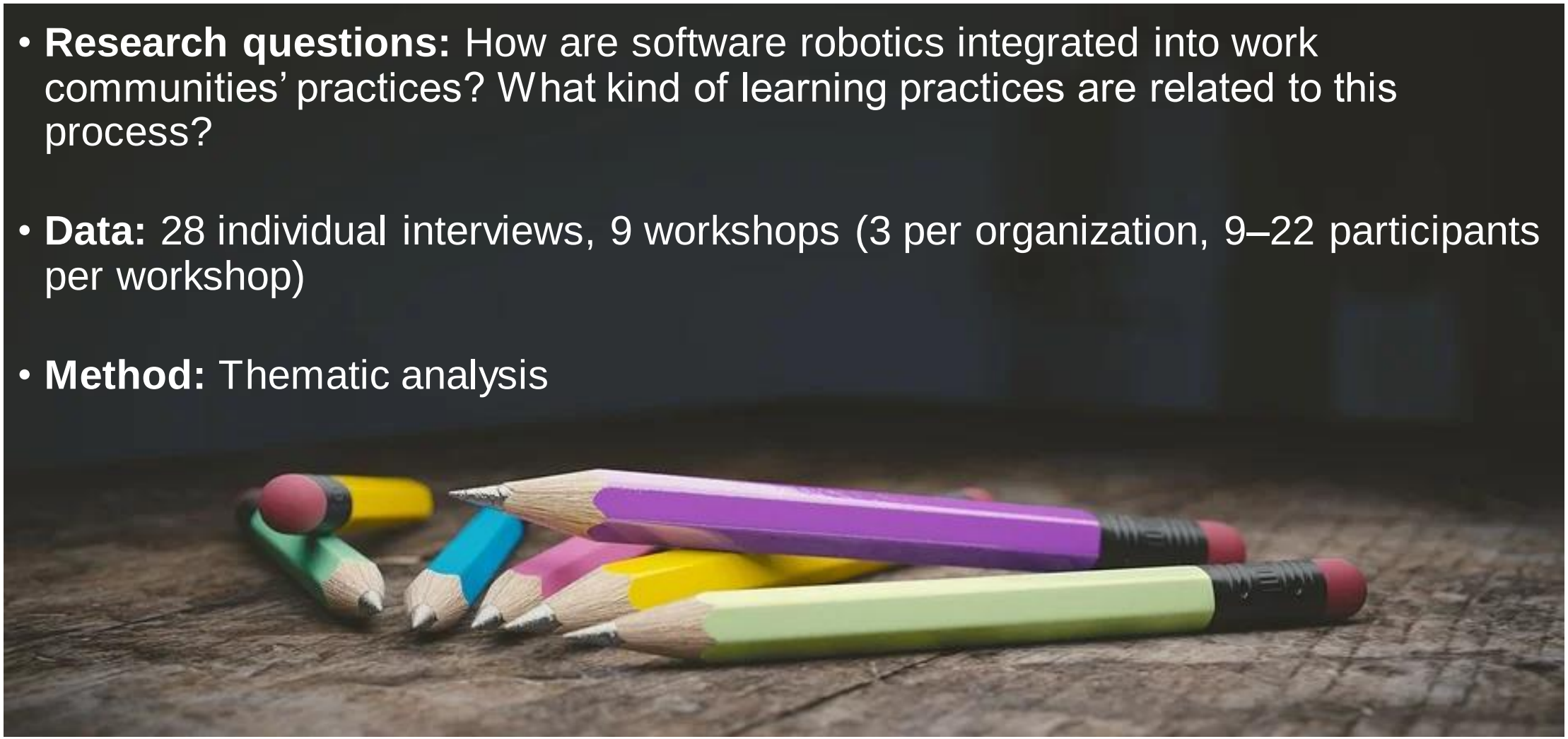
Research questions, methodology & data

- **Research questions:** How are software robotics integrated into work communities' practices? What kind of learning practices are related to this process?
- **Data:** 28 individual interviews, 9 workshops (3 per organization, 9–22 participants per workshop)
- **Method:** Thematic analysis



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How are software robotics integrated into work communities' practices?

Strategic dimension

- Strategic emphasis & communication
- Determening the robotization process (e.g., internal vs. external developers)
- Securing appropriate resources

Work practices' dimension

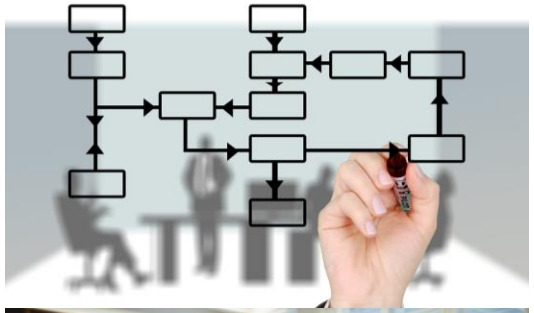
- New or adjusted / modified tasks
- Identifying potential tasks / processes for robotization
- Process and task descriptions
- Standardizing work processes

Interactional dimension

- Integration of technological knowledge and financial administration expertise
- Interaction within and between work communities: discussions, information sharing, peer support

What kind of learning practices are related to the integration / adaptation process?

Strategic dimension
Mostly formal: e.g., courses and training, job rotation, new positions / job descriptions



Work practices' dimension
Formal & informal entwined: e.g., "critical approach" to one's work, documentation, standardization, unlearning previous practices and habits

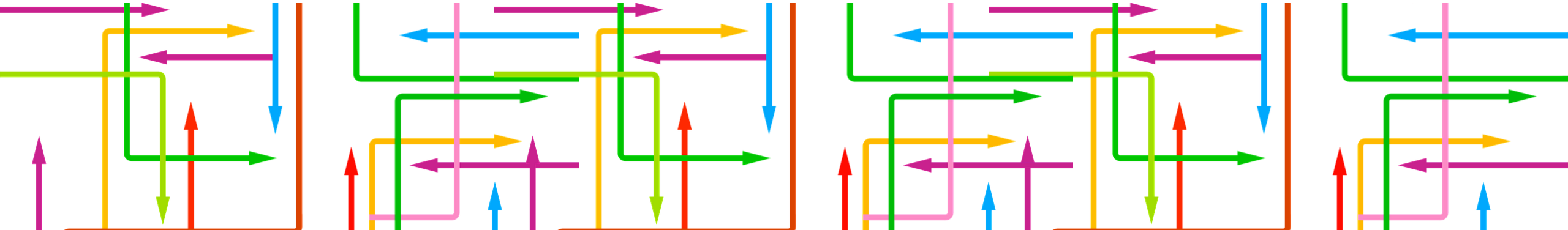
Interactional dimension
Formal & informal entwined: e.g., structured meetings and workshops, peer learning, information seeking, solving problems together

- Mostly informal interaction within teams and formal / structured between teams → the need for more informal encounters

Conclusions

The integration of software robotics is constructed in intertwining adaptation processes and learning practices:

- **Strategic dimension** determines framework and resources.
- **Work practices' dimension** covers integration in process level: impact on tasks and interdependence (human-computer + human-human).
- **Interactional dimension** depicts how work communities together navigate, negotiate, and process the changes.
- Fostering opportunities for collaboration is key → Collective understanding of robotization is constructed in continuous interaction.



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Thank you!

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