

# TACIT KNOWLEDGE TRANSFER IN FINNISH MANUFACTURING COMPANIES



Co-funded by  
the European Union

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SASKY

This work is part of the Manufacturing Academy 2.0 project, co-led by TAMK and SASKY and co-funded by the European Social Fund Plus (ESF+).

## Background

- **Tacit knowledge:** experience-based, intuitive know-how that is difficult to articulate, but critical for operational performance.
- In manufacturing, it includes subtle skills, e.g., detecting machine anomalies from sound or making quick production decisions.
- Risk: **ageing workforce** → loss of critical skills.

→ **Manufacturing Academy 2.0 project**, co-funded by the European Social Fund Plus (ESF+).

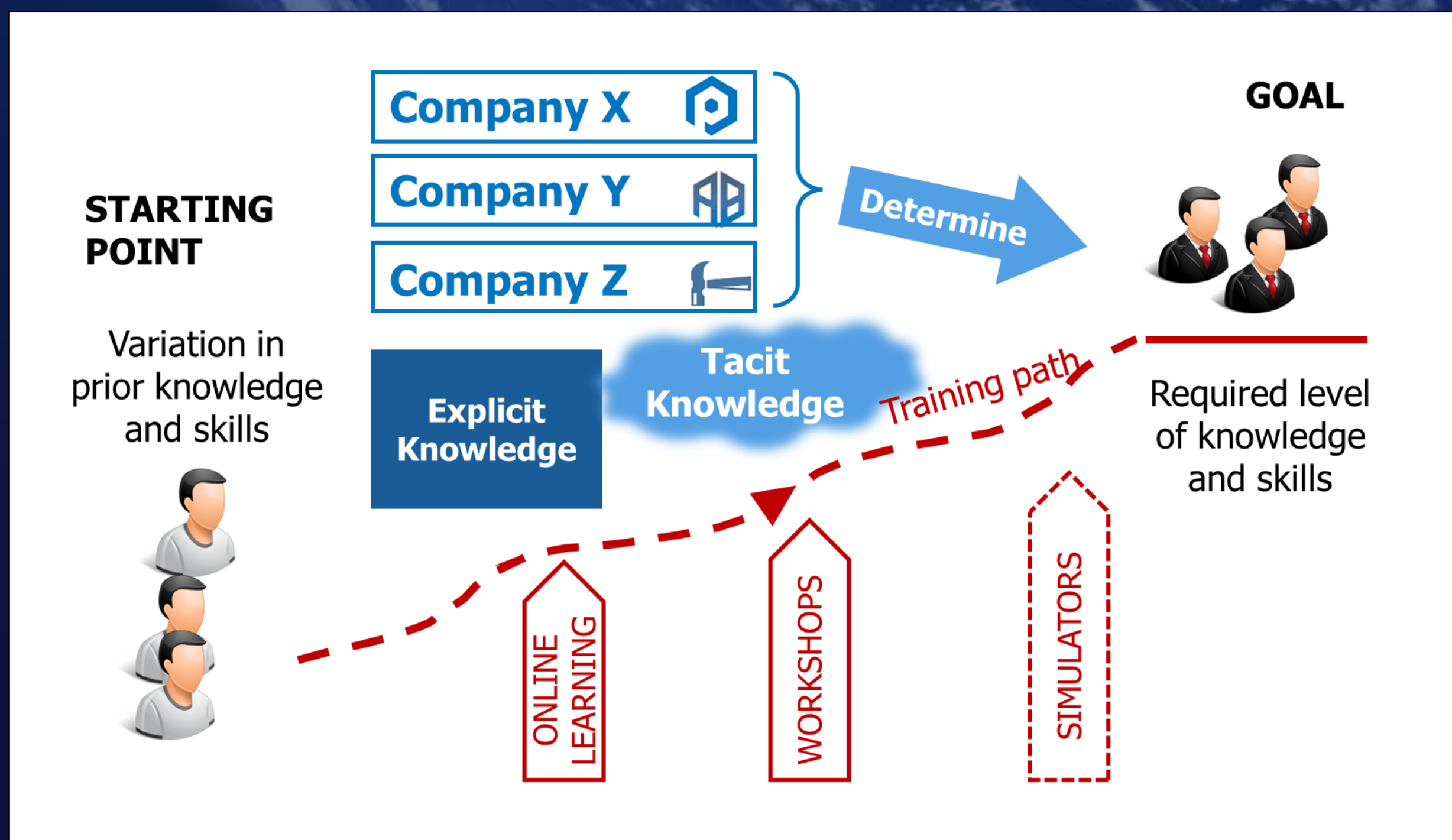


Fig. 1. The basic elements of “Manufacturing Academy 2.0”.

## Research Aim

To explore how tacit knowledge is currently transferred in Finnish manufacturing companies and how these practices align with the **SECI model** (Socialization, Externalization, Combination, Internalization).

## Methodology & Data:

- 163 structured interviews at Machinery & Subcontracting Fairs (2024)
- 13 company visits with semi-structured interviews
- 2 co-creation workshops (industry + education stakeholders)

Analysis mapped practices onto **SECI phases**.

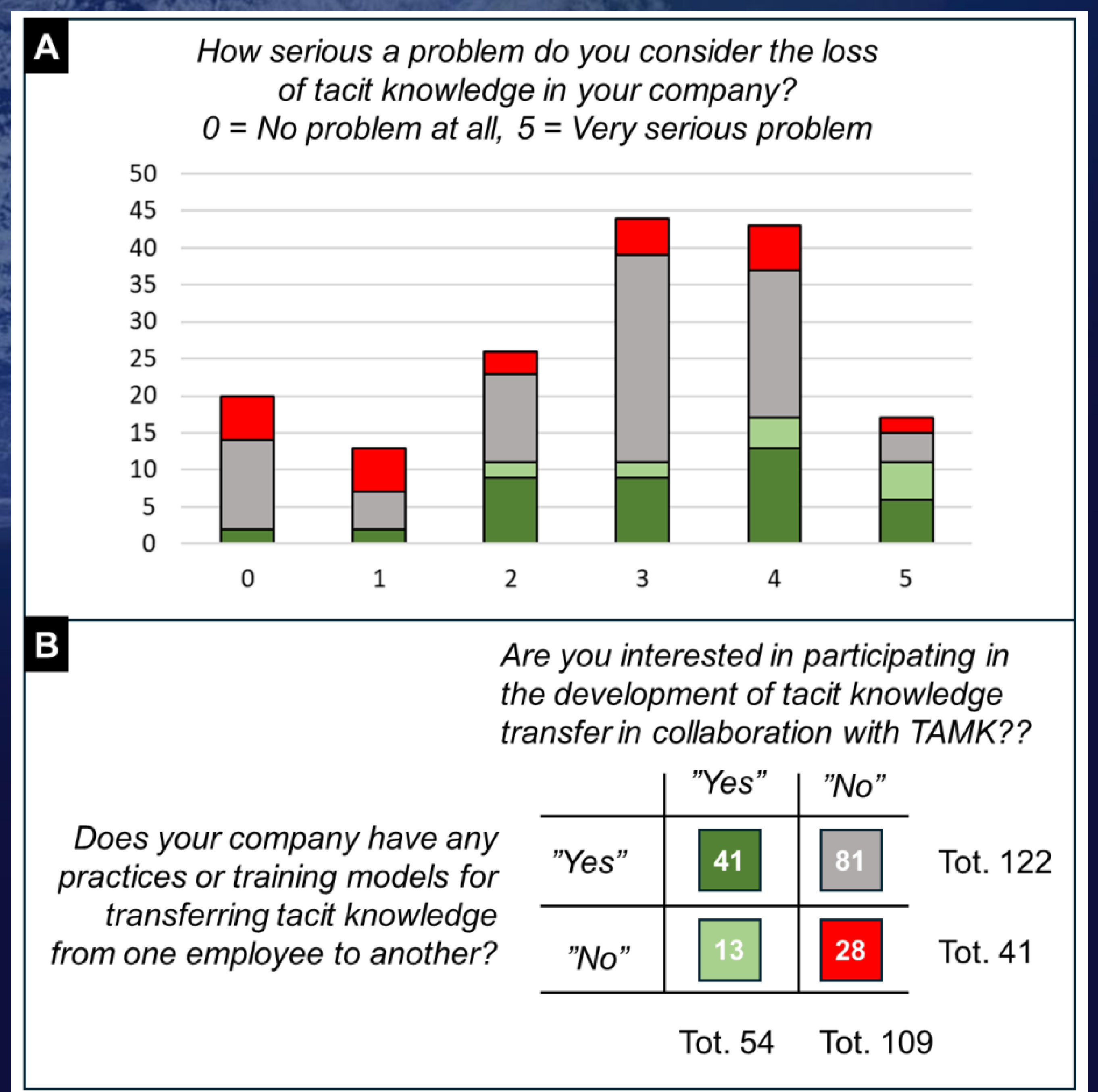
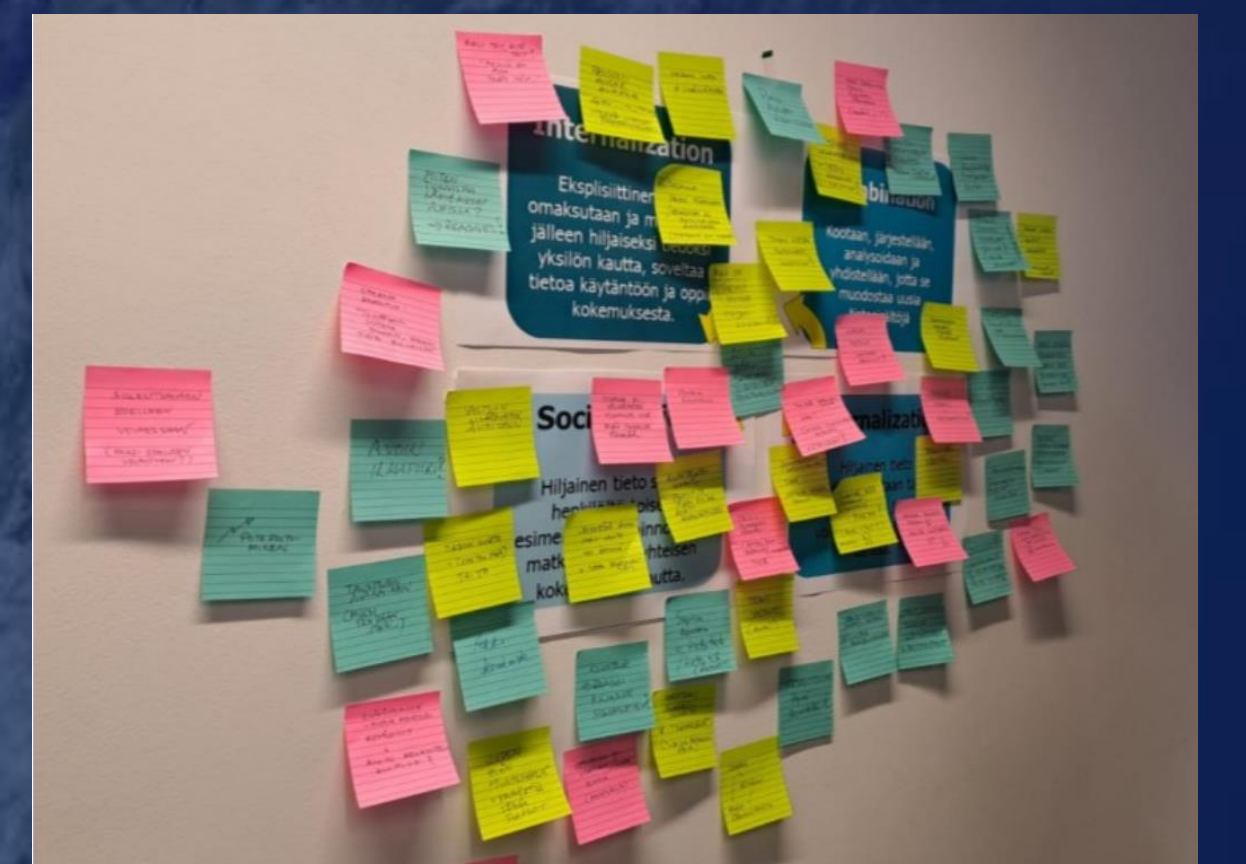


Fig. 3. Responses on the perceived severity of tacit knowledge loss (A) and on the presence of a transfer method and interest in co-developing training with TAMK (B). Color coding is identical in A and B.

## Key Findings

Majority see tacit knowledge loss as a problem.

- **Strong:** Socialization (side-by-side work, mentoring), Internalization (progressive onboarding).
- **Weak:** Externalization (documentation often partial/unsystematic), Combination (explicit knowledge integration limited).
- Barriers: Lack of resources, reluctance to share, cost of master–apprentice model.

## Acknowledgements

The European Social Fund plus (ESF+) is acknowledged for cofounding the “Manufacturing Academy 2.0” project.

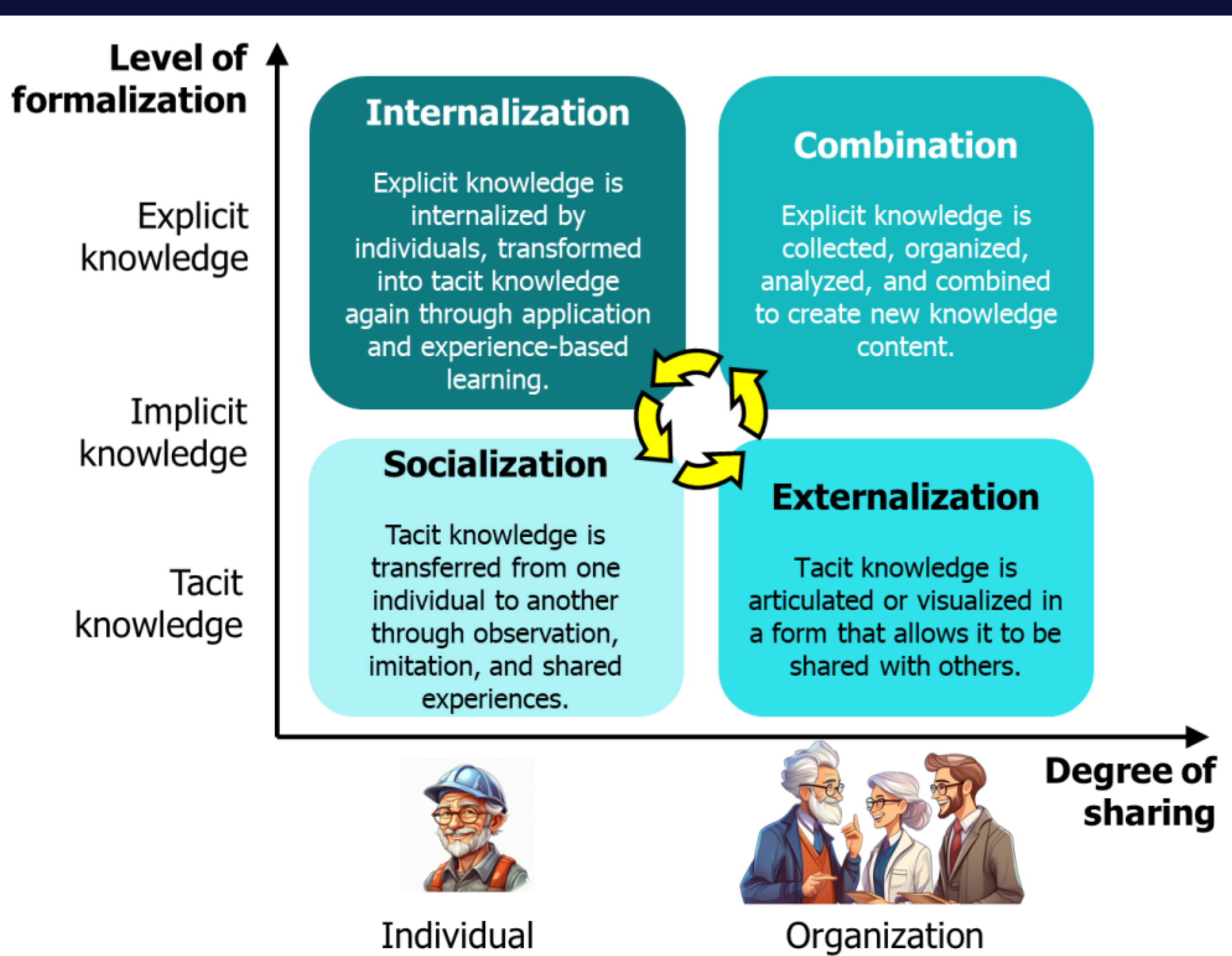


Fig. 2. The SECI Model of Knowledge Conversion (Nonaka & Takeuchi, 1995).

