[lasd.pl/XP.pdf](lasd.pl/XP.pdf)

**Overcoming Challenges of Virtual Scrum Teams: Lessons Learned Through an Action Research Study**

**Adam Przybyłek**
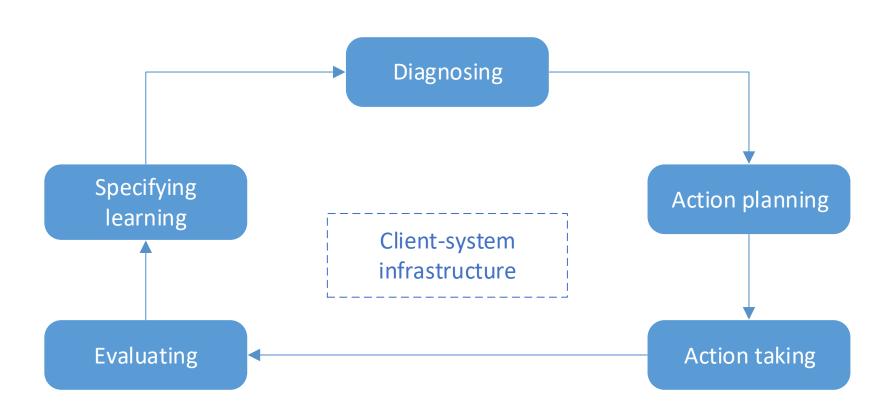Gdansk University of Technology

# Action Research

- an emergent inquiry process in which scientific knowledge is integrated with existing organizational practices and applied to **solve real organizational problems**;

- needs an **industrial context** where the work is embedded
  - □ a precondition for AR is to have a **problem owner** willing to collaborate to both identify a problem, and engage in an effort to solve it;

- a method for **co-development** of research results, where academia and industry can work together
  - □ through this co-development, the researchers and practitioners learn from each other, and thus they develop research results which contribute to both the industrial practice and academic theories, tools, methods, and knowledge development

# Canonical Action Research cycle



Diagnosing

Action planning

Action taking

Evaluating

Specifying learning

Client-system infrastructure

# Initiation of AR projects

- **problem-driven initiation:**
  - ☐ practitioners are confronted by a seemingly invincible problem and looking for help from academics
    - [SAFe transformation](#) (Nordea)
    - [Scaling Scrum with Nexus](#) (Intel)
- **research-driven initiation:**
  - ☐ researchers are in possession of ideas or general theoretical approaches to addressing problem situations
    - [Game-based Sprint retrospectives](#) (OKE Poland, Dynatrace, SentiOne)
    - Game-based requirements engineering (Staples, Intel)

# Research context

- **participating teams:**
  - ☐ Covid-DI
    - has developed a subsystem that provides automation of the process of verifying documents that are required for a flight (https://www.lufthansa.com/ge/en/online-check-in)
  - ☐ GroupApp
    - has developed a mobile app for SWISS, Austrian, and Brussels Airlines
- **problematic situations:**
  - ☐ agile methods provide no guidelines for remote work
  - ☐ several challenges emerged after the rapid shift to remote enviroment
- **objectives:**
  - ☐ revisiting the ad-hoc adaptations to remote work
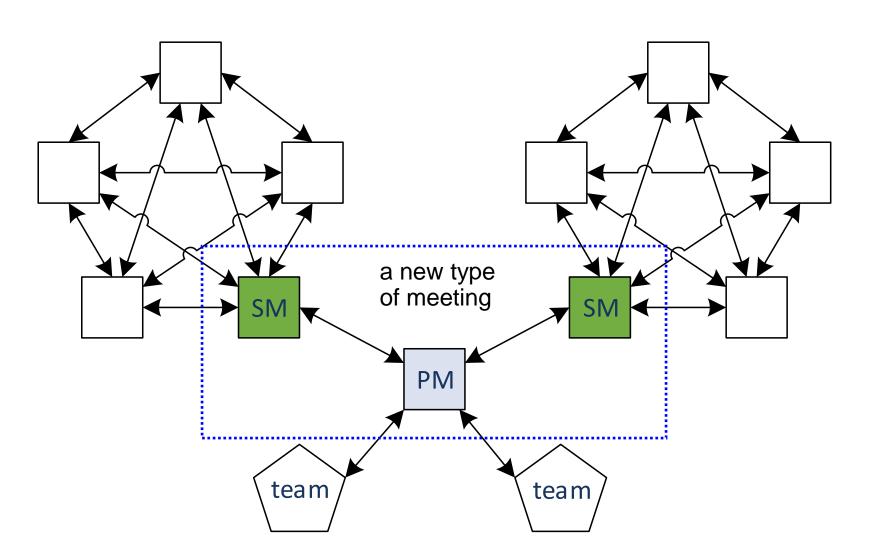  - ☐ elaborating systematic solutions to maintain efficiency in a remote setting

# AR: Diagnosing

- **Interviews:**
  - ☐ to familiarize with the existing adaptations to remote work;
  - ☐ to identify current challenges;
- **Key findings:**
  - ☐ working from home hinders both:
    - communication between teams
    - communication between team members
  - ☐ teams' commitment is lower in remote environment
  - ☐ it becomes increasingly difficult to integrate a new employee into a virtual team
  - ☐ being physically together in the open space office favors the development of innovative solutions
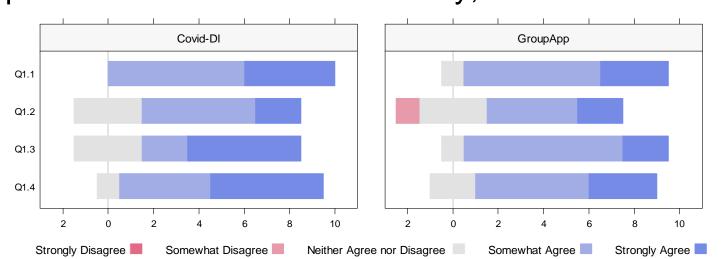
# AR: Action planning and taking

# AR: Evaluating

- Q1.1 – Appointing Service Managers to relay information improved communication between teams;
- Q1.2 – Setting up optional meetings between Service Managers and the Project Manager improved knowledge sharing between teams;
- Q1.3 – Establishing a new, explicit communication model that specifies with whom, in what case to communicate improved communication efficiency;

# AR: Specifying learning

- Scrum can be effectively applied beyond its comfort zone, but the required adaptations should be developed in a structured manner.
- Action Research aligns with the agile way of working, i.e., incremental improvements, feedback loops, and continuous learning.
- Involving employees in SPI enhances their support and acceptance for the change.
- The staff often have knowledge about how to improve their work practices, but they require a trigger as well as facilitation to take actions.

# Takeaway

- When you go back to your workplace, look around and think if there is something that can be improved.
- If so, employ Action Research and do research.
- Good luck!

adam.przybylek@gmail.com