# Exploring the Impact of Agency on Human-Computer Partnerships

Janin Koch, Wendy Mackay - Inria Paris-Saclay Albrecht Schmidt - LMU Munich Kasper Hornbæk - University of Copenhagen Koen Hindriks - Vrije Universiteit Amsterdam Helena Lindgren - Umeå University Ouriel Grynszpan - Université Paris-Saclay

## What is agency?

- The feeling of controlling one's own actions and, through them, events in the external world. [1]
- The sense that I am the one who is causing or generating an action. [2]





Micro-project in: HUMANE



ΑI

#### **Motivation**

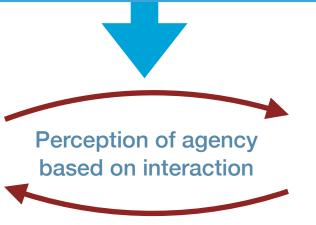
- The understanding of agency is a key factor in achieving realistic collaboration for human-centred AI research
- Investigate theoretical and empirical the role of agency for successful human-computer partnership
- Special focus on interaction and how to build systems with collaborative agency that can be manipulated

#### Research questions

- 1. Identify parameters relevant to the description of the system agency?
- 2. What impact these parameters have on the perceived agency?
- 3. How to modify them to achieve different roles of systems in a process?



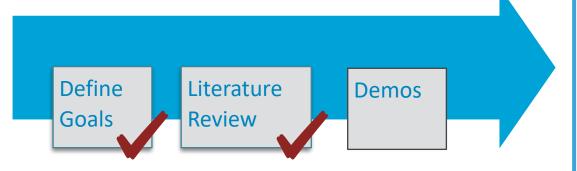
Human agency





Machine agency

#### **Process**



[1] Haggard, Sense of agency in the human brain, Nat Rev Neurosci, 2017

[2] Gallagher, Trends in Cognitive Sciences, 2000

## **Expected results**

- Create usable definitions of human and Al agency (research paper)
- Define a methodology for how to share agency (research protocol)
- Demonstrate examples of successfully sharing agency (video / interactive)