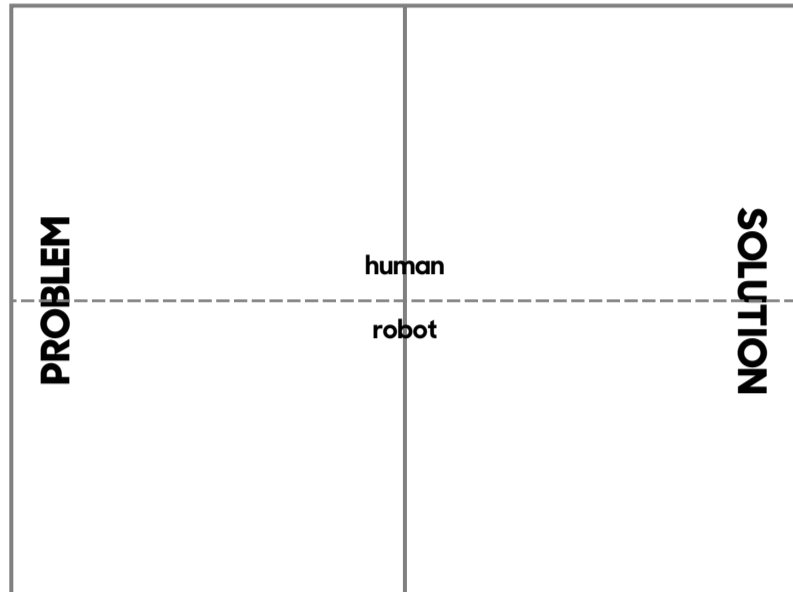


ETHICAL CONSIDERATIONS OF THE ROBOT

Six dimensions of ethical considerations are considered already when defining the problem, in order to embed them into the robot. Both the problem and solution for it are considered, from the human and robot's sides.

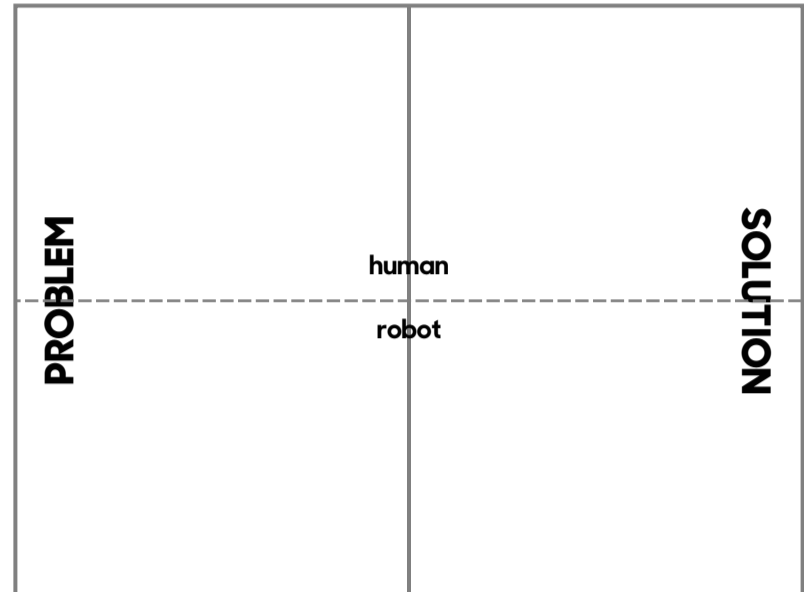
Physical safety

How can we ensure that the user's physical safety is not in danger?
Machinery can pinch or crush when operated recklessly.



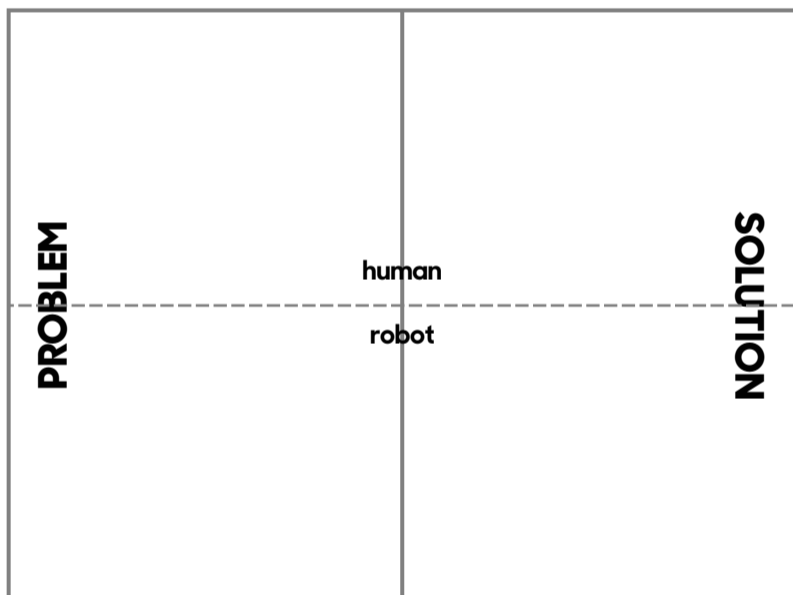
Safety of data

Is the robot used in an especially vulnerable task? Is it in a unique data collection position due to emotional reactions? How to shield the user from revealing unintended personal information?



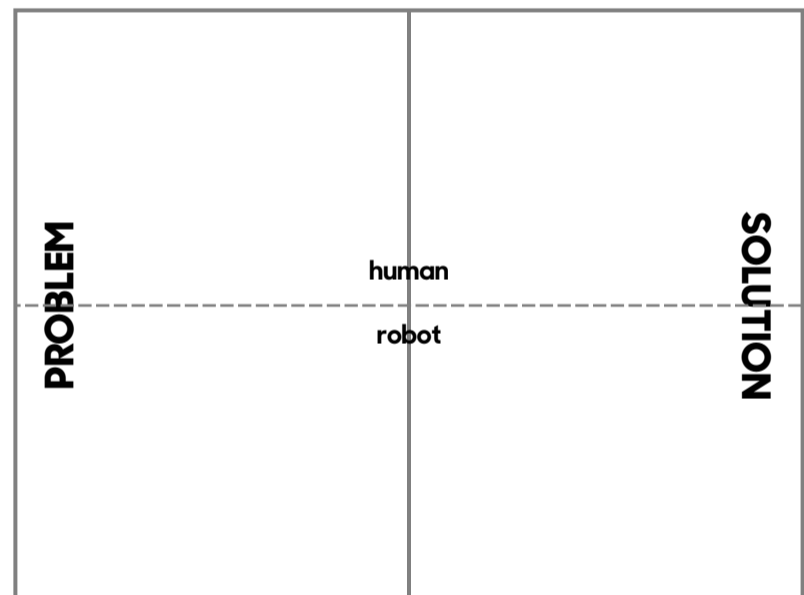
Transparency

The robot should share an accurate perception of its abilities, intentions and constraints, so the user can calibrate their trust in the robot.
What problems potentially affect transparency?



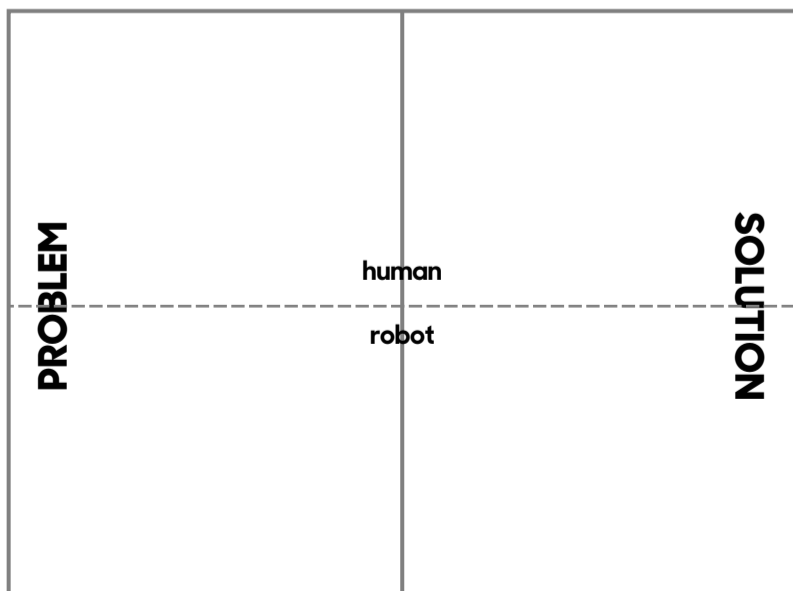
Equality across users

Robot's algorithms can be potentially biased, or its appearance could reinforce harmful sexist or racist stereotypes. What are potential issues?



Emotional consideration

Humans have been shown to form emotional attachments to robots as if they were alive. How can this be taken into consideration?



Behaviour enforcement

Humans could transfer inappropriate behavior, such as rudeness, from robots to humans. How to mitigate this?

