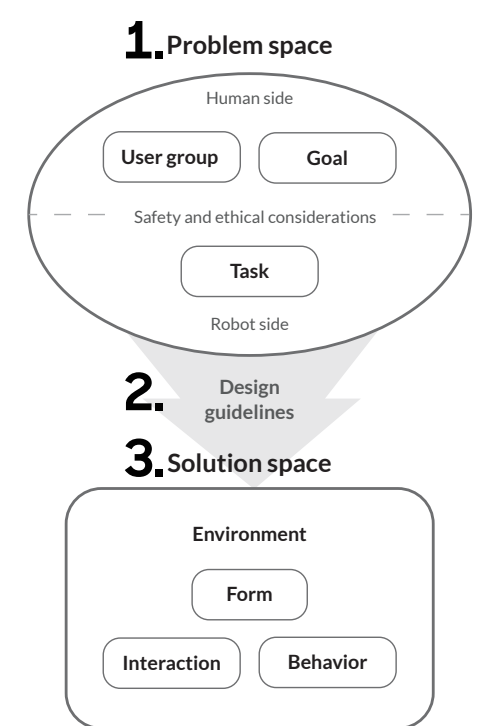


Canvases for the Process of Designing Social Robots



1. The Problem Space

What is the problem worth solving?
Define it clearly through the user
and the robot.

[illegible]

The Problem Canvas

Define who you are building for and why. What are the advantages? Always use this canvas first.

PHYSICAL SAFETY

How can the robot be designed to ensure that it does not harm people?
 How can the robot be designed to ensure that it does not harm the environment?

SAFETY OF DATA

How can the robot be designed to ensure that it does not collect or store data that is sensitive or confidential?
 How can the robot be designed to ensure that it does not collect or store data that is personally identifiable?

TRANSPARENCY

How can the robot be designed to ensure that it is transparent about its actions and decisions?
 How can the robot be designed to ensure that it is transparent about its data collection and storage?

EQUALITY ACROSS USERS

How can the robot be designed to ensure that it is accessible to all users?
 How can the robot be designed to ensure that it is usable by all users?

EMOTIONAL CONSIDERATION

How can the robot be designed to ensure that it is emotionally intelligent?
 How can the robot be designed to ensure that it is emotionally responsive?

BEHAVIOUR ENFORCEMENT

How can the robot be designed to ensure that it behaves in a socially acceptable manner?
 How can the robot be designed to ensure that it behaves in a way that is consistent with its purpose?

The Ethics Canvas

How are ethics considered already in the definition of the problem? Use these six ethical considerations.

ROBOT DESIGN GUIDELINES

What are the guidelines that guide the design of a robot? Below you have to be the author of your problem the robot. Just write and what you think, how, in so as all other considerations, and the robot is.

Ethical guidelines

How do the ethical considerations you defined for the writing of the robot? What are the ethical considerations that the robot has?

Advantage guidelines

What leads to the advantages and which value of writing the robot? What are the advantages and which value of writing the robot?

Environment guidelines

How do the environment guidelines you defined for the writing of the robot? What are the environment guidelines that the robot has?

Form guidelines

How do the form guidelines you defined for the writing of the robot? What are the form guidelines that the robot has?

Interaction guidelines

How do the interaction guidelines you defined for the writing of the robot? What are the interaction guidelines that the robot has?

Behaviour guidelines

How do the behaviour guidelines you defined for the writing of the robot? What are the behaviour guidelines that the robot has?

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The Guidelines Canvas

How will the definition of your problem and the ethics be visible in the final design? Make guidelines for different dimensions of the robot.

3. The Solution Space

It's time to start designing your robot! The solution is visible in four dimensions: environment, form, interaction, and behaviour.

[illegible]

The Environment Canvas

What is the context of the robot's operation?

[illegible]

The Form Canvas

What are the robot's outwardly perceptible qualities?

OR

[illegible]

The MVP Canvas

If you want to prototype rapidly, the “minimum viable product” canvas can act as a replacement for the four dimensions.

4. Iterate

Test your prototype, ask for expert and user feedback, and iterate.