# Defining the Problem

Why is it important to start with defining the problem?

We want to start with **a real user need and a real problem** because that's how you can make a real impact in the world. No matter how "cool" an idea may be, if a project is created without investigating a problem or need first, then the project by definition will not be socially impactful.

It's easy to discount now, but you might be surprised how often we forget to **define the problem** and jump straight to crafting the solution, especially when innovative technology is involved.

We always go from defining the problem first, which includes **understanding who the user is and their needs,** then to brainstorming solutions (ideating), designing (prototyping), and implementation and testing.

This is why the computational action process starts with defining the problem:
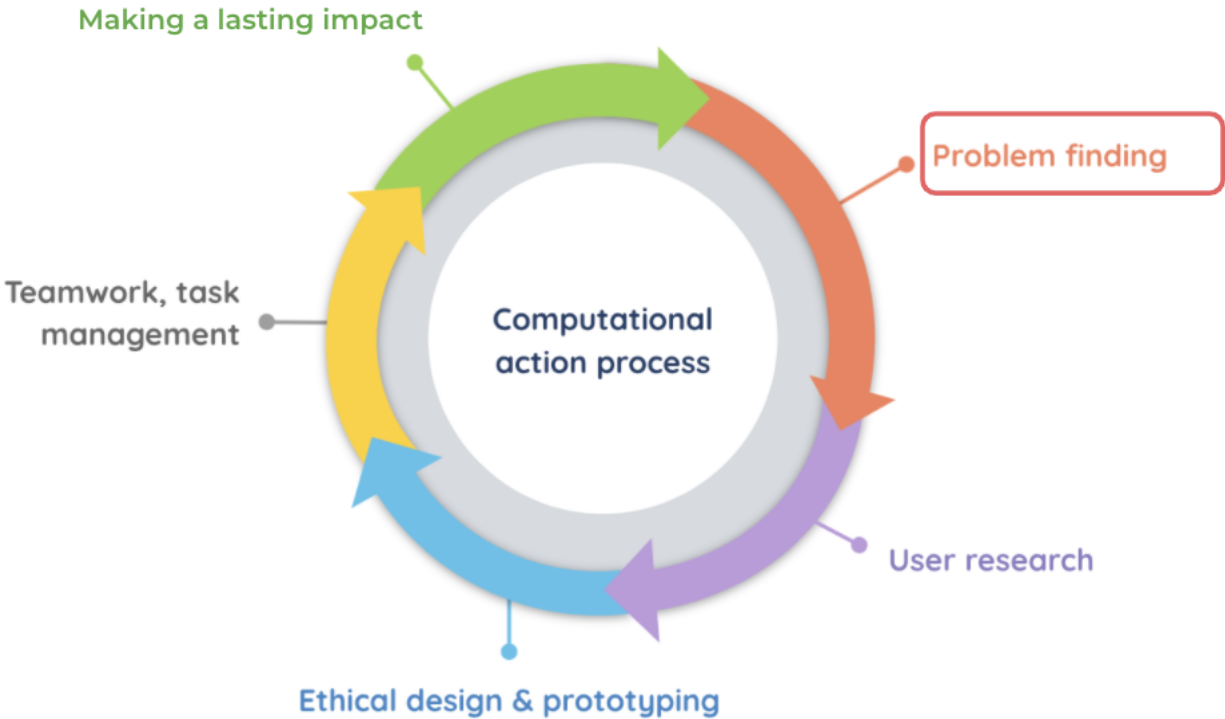
How can we understand the problem?

Above: an example of sticky note brainstorming using Jamboard (www.jamboard.google.com)

1. Brainstorm what you're passionate about (this includes team brainstorming on shared passions and ideas after individual brainstorming)

   Do this with **sticky note brainstorming**:
   a. Take time (10-15 min) to put any idea down on a sticky note related to the general topic. Do this individually. You can use Jamboard (jamboard.google.com) to easily have a shared whiteboard with all team members. No idea is a bad idea. This stage of the process is for getting all your ideas down.
   b. Discuss together as a team all the ideas. As you read each sticky note, common themes will start forming. Move the sticky notes that share a common theme together into a group on the (virtual) whiteboard. At the end, the whiteboard should have some distinct groups, each with different ideas sharing a theme.
   c. Discuss together whether one particular theme of the problem space is most interesting to your group to investigate further for the problem you're interested in solving and the product you want to build to address the problem.

2. In the problem space you've brainstormed that you're passionate about, figure out:
   a. Who are the people with this problem? (Who are the users?)

Try to **scope** the users, which means: figuring out the target audience. The group of people with this issue is usually not "all people" or "the entire world." What defines your target user audience? Are they pet owners? Senior citizens? People with a particular illness or disability? Owners of alarm clocks? People interested in fitness or losing weight? Cooks and bakers? Doctors? Lawyers? Etc.

3. Perform user research once you have a target and scoped audience of users by asking questions to understand their problems. We want to answer:
   a. What is the issue they have? What isn't working for them? What is their need?

We do this by empathizing with the user and listening. Step into their shoes to understand their day-to-day life surrounding the issue (called the **"user journey"**). We will discuss *how* to do user research well in the next section of computational action.