

Collective problem-solving, Part 2 & 3: Information gathering, cross-validation and final proposals

CS-234: Technologies for democratic society, Fall 2021

NOTE: If you have **any questions regarding this assignment**, please **do not hesitate to contact us** by starting a [discussion on Moodle](#) so that (1) we can help you and (2) your classmates who might potentially have the same questions benefit from our answers. You can also always contact the **CS-234 staff** at: cs234@groupes.epfl.ch

Introduction

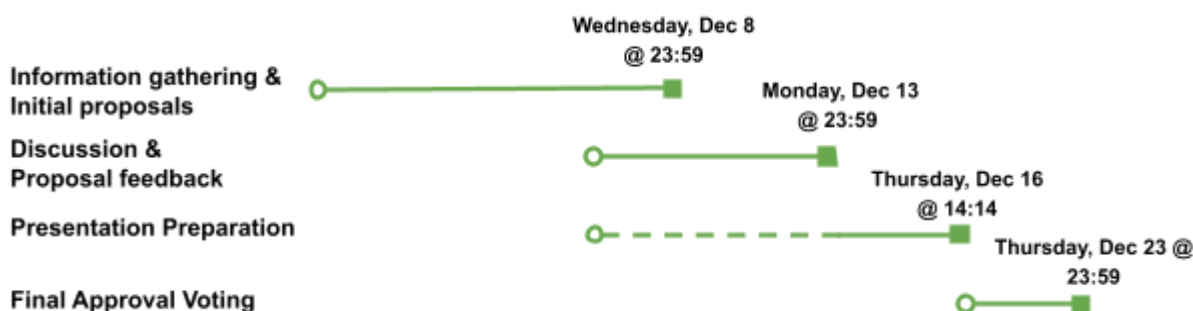
You have collectively decided to work on one these proposals:

- [Fall Semester: the no break problem](#)
- [Too many classes per semester](#)
- [FOOD AT EPFL : A Bigger problem than you think](#)

You are going to **work in teams** on **one of the three problem proposals** to come up with a solution for it. To this end, you are going to: (1) gather information about the problem, (2) propose an initial potential solution to the problem, (3) engage in discussions over both your and other teams' proposals (and optionally merge your proposal with others'), (4) refine your proposal by incorporating feedback that you receive from other groups, (5) present your final proposals, and (6) participate in an approval voting over all the proposed solutions.

Your first task is to form teams of **five** students. Please form your teams as soon as possible and fill out this [spreadsheet](#) by **Thursday, November 25 @ 23:59**.

Timeline for Part 2 & 3



Information gathering and initial proposals

Before you start the information-gathering stage, your team needs to decide on which one of the three proposals that you want to work on and how you are going to investigate and address the chosen problem. For example, for the food problem at EPFL, you can focus on the availability of vegan options, food prices, food quality, sustainability or something else.

After you have decided which problem and on what aspect of the problem you want to focus on, you can start gathering expert information that will help you come up with a proposal for a potential solution to this problem. Information gathering is a standard process in problem solving, e.g., data collection in science. For this assignment, you can choose from a variety of sources of information, such as interviews with experts, questionnaires with EPFL students & staff, literature studies (e.g., magazine articles, academic papers, etc.), surveys, etc. **Although you are free to choose from any of the aforementioned sources of information, in your proposal, each team member has to contribute information from at least one source.** So, in a team of five, each student can either gather data individually from different sources, or all team members work together on all five sources to collect the information. It is a good idea to choose your sources such that the collected data can justify different parts of your proposal, e.g., you can find out the severity of the problem in one part, search for its root cause in another part, and finally support your solution with the data from a third source. Note that conceptual separation is not a requirement, you could as well use all three sources to refine your solution. **Also note that the list of suggestions we make above is neither comprehensive nor restrictive.** You can choose whatever aspects of the problem you are interested in and collect information in a way that helps you justify your proposed solution the best.

When you have gathered all the precious information and come up with a proposal for a solution, it is time to prepare a write-up so that other teams can also learn about your findings and provide you with feedback on your proposal. **The write-up must include half a page of introduction where you state what aspect(s) of the problem your team is looking into and describe your motivation. It must also include: (1) the information you collected, (2) an analysis/description of the information you collected, and (3)**

your proposed solution. The length of this part must be between 1-1.5 page(s) PER team member.

Please create a thread on Loomio and attach your write-up and any additional supporting material that you have. You should name your thread as: **[Team Name]: [Title of your proposed solution]**. The deadline for submitting your solution proposal is **Wednesday, December 8 @ 23:59**.

Discussion and feedback on proposals

Once every team has created a thread on Loomio with their write-ups and the supporting materials, the discussion about the proposals can start. The goal of this stage is to discuss and argue about the proposals presented by the different teams. The requirement is that each team must give feedback on **all the other proposals**. To do so, you are going to comment under teams' threads that contain write-ups with their proposed solutions. You can either split the proposals between the team members or go over all of them together. The feedback should be **constructive** and **argued**. You are supposed to ask questions, to suggest improvements and to link the proposal with your own proposal (if possible) or with other proposals.

This stage is not limited to participating in discussions on other teams' proposals. You should also interact with others to discuss your own proposal. As a team, you are supposed to moderate the discussion about your own proposal, to answer questions and to provide any necessary detail about your solution. This will allow you to improve your proposal, by taking into account the feedback from other people.

To summarize, the crucial point of this stage is to use the insights that you have learned during the information gathering stage to: (1) help other teams with their proposals and (2) use the information gathered by other teams to improve your proposal.

During this stage you can also merge your proposal with another team's proposal. If the two directions are close and you realize that the approach and the solutions are compatible, you can propose to work together and merge the proposals.

The deadline for this stage is **Monday, December 13 @ 23:59**.

Presentation

After the discussion phase is over, you can finally present your solution proposal to your classmates and the CS-234 staff. Each team is going to do a **10-minute presentation** (there will be an additional 3-4 minutes for Q&A) with a summary of your information gathering approach and results, your proposed solution and the results of the discussion/feedback phase. In the overview of the discussion/feedback phase you can, for example, answer the following question: Was the feedback phase useful for my group? Did we incorporate

feedback from others into our proposal? Did the discussion on other proposals help us to improve our own proposal?

The presentations are on **Thursday, December 16 @ 16:00-17:00** and on **Friday, December 17 @ 08:15-10:00** during the exercise sessions. **Please try to attend both sessions unless you have an important conflict.** We will send out a spreadsheet for scheduling the presentations soon.

The deadline to upload your slides to Loomio (under the same thread as your write-up and supporting material) is **Thursday, December 16 @ 14:14.**

Final voting

We conclude this assignment with a final poll over your proposals for solutions. This time, we are going to use approval voting so that you can express whether you approve the presented solution proposals or not. We are going to use Loomio for the poll.

The deadline to submit your vote is **Thursday, December 23 @ 23:59.**