In this week's lab, we will focus on visualisation design alternatives. For this assignment, we will not use the computer. Instead we will work with pen and paper.

The goals of this lab are:

- Explore multiple ways to represent a given data set
- Consider the different tasks supported by different visualisations
- Use sketches to explore design alternatives

There are three parts to this exercise. The first two should be done *individually*. The last one will be done with the members of your group.

With that in mind, let's get started.

Part 1: Design exploration (20 minutes)

Dept.	Q1 Budget	Q1 Actual	Q2 Budget	Q2 Actual	Q3 Budget	Q3 Actual	Q4 Budget	Q4 Actual
Distribution	390 000	375 000	395 000	382 000	400 000	390 000	410 000	408 000
Facilities	675 000	693 000	800 000	837 000	750 000	713 000	750 000	790 000
Human Resources	350 000	346 000	350 000	342 000	350 000	340 000	350 000	367 000
Information Systems	950 000	925 000	850 000	890 000	875 000	976 000	900 000	930 000

Working *individually* using paper and pencils, sketch as many different representations of the above data as you can think of within 20 minutes. The goal here is to come up with many ways of showing the same data. You will be graded based on the number of different designs that you come up with and on your originality.

Remember: sketches (*esquisses* en français) are about quickly conveying the *idea* of what it is you're trying to show. They should be clear to read, but they do not need to be perfectly faithful to the data. You probably don't need to use a ruler or perfectly calculate proportions and such.

If you prefer working with a tablet and stylus (and you have one), you may use that instead of paper and pencil as long as it's consistent with the idea of *sketching*.

When you have finished this part of the assignment, scan (or take a photo with your pocket computer) and upload it to the Moodle (https://ecampus.paris-saclay.fr/mod/workshop/view.php?id=160601). Once all assignments have been submitted, you'll then evaluate the work of your peers.

This first part of the lab should take about 20 minutes.

Part 2: Ideation worksheets (about 30 minutes)

For this part, we'll continue to work *individually*, but this time on the data set you have chosen for your group project. Here we will create design worksheets for *at least* three design requirements for your project.

Think about the different questions someone working with your data might have. What are the challenges associated with answering those different types of questions? (You may find it useful to draw upon what we saw in this week's lectures about tasks & interaction.)

For each question:

1. Describe the task or the requirement you are addressing.
2. Draw a sketch of how you might address that task or requirement. Focus on the *big idea* rather than the specific details of the design.
3. Draw another sketch that addresses the same requirement from a different perspective. This should be a new representation and/or a different interaction; do not just build off the previous sketch.
4. Draw *yet another* sketch that addresses *the same requirement* or task.
5. (If you have more ideas, feel free to add more sketches.)
6. Make a table at the bottom that shows what works well (+) and what doesn't work well (-) for each of the 3+ designs.

You should have at least three sheets of paper, each of which focusses on a different task or design requirement. Here is an example of a blank design worksheet (images/ideation-worksheet.pdf) to give you an idea of what we're looking for (you don't need to use pre-printed worksheets for this exercise).

Part 3: Comparing ideas (about 30 minutes)

At some time over the next week or so, go through each of your design worksheets with your group members. Can you identify ways to combine the different designs? You may use the Big Blue Button or Mozilla Hubs to work together with your group. These design worksheets will help as your prepare your group's Milestone 2: Design Document.

What to hand in

There are two parts of this assignment that you will hand in. For the first part of this assignment, you will hand in (via the Moodle) a scan of the different sketches you made in Part 1 (https://ecampus.paris-saclay.fr/mod/workshop/view.php?id=160601).

You will use Parts 2 & 3 to help prepare your design document for Project Milestone 2 (https://ecampus.paris-saclay.fr/mod/assign/view.php?id=146177).