

Week 6

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By Last Week

- **Improve the functionality of the solution:**
 - pick a parameter in the engineering specification
 - Iterate design parameters (size of the pouch / spring length / constant / link dimensions/ etc) to improve the functionality/ engineering specification
- **Schematics** for the working principles
- **Flow chart** for the **control strategy**
 - Sensor inputs: types + range
 - Actuation outputs: types + range
 - Sampling rate? Control rate?
 - Filtering?

By Next Class: Plan for Demo Day

- Demo scenario (fill out `demo_scenario_ME420.doc` on moodle)
 - benchtop prototype?
 - proof of the working principle ? **NO PDF, keep Doc format**
 - See the format online **No bullet points 1-2 full sentences!**
- Full concept – **detailed design**
 - The final design with thorough dimensions (no blueprint necessary)
 - Dimensions may not need to be optimized yet but should be close (no drastic change to the main functionality / component selection)
- Confirm ASAP
 - Actuator and sensor choices – models
 - Test actuator and sensor loop

EPFL **By Next Class: Info for Demo Day Brochure**

- Fill up **Demo_day_brochure_infos.doc** on Moodle
- Project Title
 - One paragraph intro ≤ 150 word
- One rendering photo of your device, in png
- One group picture
- Upload to Onedrive shared later

NO PDF, keep Doc format

No bullet points 1-2 full sentences!

Guidelines for the 1-to-1 session

20min presentation + 25 min Q&A

Your presentation will need to cover:

- What is the objective of your project?
- What is the function of your device?
- How does it fit within the 6Rs?
 - How do you plan to quantify these?
- What is the state of the art?
 - What is the missing gap? What challenge in the SoA are you addressing?
 - In what quantitative way (KPI) will you demonstrate that you have filled the gap?
- What is your technical approach for achieving those functions?
 - How many degrees of freedom (DoF) are required?
 - How do you plan to actuate?
 - How will you close the loop? (input and output?)
- What experiments will you run to collect data that reflect the KPIs?
- How will you demo this on public demo day?
 - Data? Video? Audience interactions?
- What data/plots will you show in the final technical report?
 - What are the X and Y axes (with units) of your plots?

Starting Next Class

- Presentation format for the final presentations
 - No need to show all the aspects of your project, just address the latest updates
 - Update the requested ones from the last week
- **November 20**: check the formats and drafts for the Poster, presentation, and report