

## Product design team 8

### Minutes meeting 7, 11.11.2016

Present: Cyril, Loic, Micha, Dominik

Excused: Tamara, Louai

Communication channels used for this project:

Trello : <https://trello.com/b/pVXtibGt/magnetic-inductive-headlight>

Drive : <https://drive.google.com/drive/u/0/folders/0B7IF6TarFXPeZUJkdIZTMDMwQjA>

Blog : <http://blogs.epfl.ch/productdesignteam8>

Order address for components:

Office of Isabelle Schäfer, BM

Send an email before

link: pcb-pool

#### Points to discuss:

1. Time planning:
  - a. Start production! Plans have to be sent to the ateliers starting now. Front part ok, are we running late for the back (harvesting part) ?
2. Administrative:
  - a. Budget: Put your orders (also possible future orders) in the budget, we need an estimation of the money spent:  
<https://docs.google.com/spreadsheets/d/1ia4HwptgQsI9jIC8UbB7MIjW6SiCqLqLRF62BuRJfFI>
  - b. OpenSource PCB design software : **KiCad** / Eagle / Altium EPFL licenses
3. Updates about the separate divisions
  - a. **LED part (Head : Loic)**  
PCB ready. Verify the place of the button with Tamara.
  - b. **Harvesting part ( Cyril, Dominik)**  
Decision: Produce 2 of them  
Can the design be made next week? We need the dimensions in order to produce the housing.  
Look for the spring / cautchouk damping part
  - c. **Harvesting PCB and storage (Micha)**  
Defined size of the PCB: 70 x 32mm, will be placed next to the supercaps  
start working on monday after the Systems Engineering test.  
Needs 2 circuits on the same PCB, one for each coil!  
The circuit is not optimal. Add a small capacitor and 2nd boost in order to charge the capacitor uniformly.

**d. Mechanical and structure (Tamara, Louai)**

Start printing and testing the front design. Can we have a first prototype by next week?

Start working on the back box:

- 2 supercapacitors have to be fixed mechanically  
<http://eu.mouser.com/ProductDetail/Panasonic/EEC-HL0E107/?qs=sGAEpiMZZMsCu9HefNWqpn%2fiL%252bA0OdUhWtSPjPkFp1ZFkiS0riXJMg%3d%3d>
- 2 coils of 70mm and 32mm of diameter
  - the coils could also be 35mm long and stacked one over the other, ask Dominic and Cyril!
- PCB of 70mm x 32mm, idea: long the 2 capacitors

**e. Intellectual property and certification of the product (Loïc)**

Look up which certifications are necessary and possible for our product (IP waterproof, CE, etc...)

**f. marketing**

A production cost and market analysis has to be done! Know how many pcs are sellable per year → calculate the cost

4. Tasks for next week

- a. Loïc: help Micha with PCB, order PCBs, lookup certifications
- b. Cyril: help Dominic,
- c. Dominic: Design the coil, give the dimensions!
- d. Louai: 3D printing and testing, preparing the headband
- e. Tamara: 3D printing and testing
- f. Micha: draw the harvesting PCB