5. PROBLEMS and CONCLUSIONS

5.1 Problems

During the pilot study, the maintenance of the sensor kits was minimal and in only two occasions I had to visit the school for quick interventions:

- the blackout in Amsterdam on the 17th of January. Two gateways had to be rebooted.
- the migration to the new dashboard of TTN: the staging dashboard has been moved to the more complete console.thethingsnetwork.org/ dashboard. The migration to the new platform was easy, https://www.thethingsnetwork.org/docs/network/migrate.html. I only paid the choice to personally identify my kit, I didn't use OOTA configuration. I had to create new address ID per each device and programmed them again.

5.2 Conclusions

During this project I had the pleasure to work with LoraWAN and the services offered by TTN. The choice to communicate through Lora network and The Things Network was good for several reasons:

- fast and open support from TTN experts!
- friendly configuration of the devices on the dashboard,
- no need to access to private local networks,
- connection process smooth,
- stable network.

Our case was facilitated by the fact the application was in-door and not-mobile. I'm willing to develop a portable solution.

Many aspects could be improved, especially with the aim to create a portable air quality sensor kit: optimization of the code for power consumption, upload link only under trigger event, extra memory support to guarantee the collection of the data.

I'm happily surprised by the fact that we could run a 4 months study using a technology (hardware and software) under developments and diffusion.