RENCONTRE PACCO-PILOTES #2
○ 24/10/16

Puisque la rencontre s'est déroulée en anglais, ce compte rendu es également dressé en anglais

OBJECTIVES AND PLANNING

> update everybody on the technical and locational "issues" the project is facing right now and try to understand what's happening

-the machine is acting like a diva··· Why? How to improve it?
-the Leopold Park's Pond is unexpectedly going to be emptied > where to move our Pacco-Lab?

> discuss the the next steps all together – how to pursue out Pacco-lab dynamic?

RECAP

Data : Because our Pacco-test monitor enjoys watching Sofie and Tim get into the rowing boat, no data interpretation for us Pilotes yet.

Location: quite unexpectedly, we got informed by the pond manager (fishing club) that we would have to move because no water will be left in the pond to test from November onwards, we started to pick your heads about new possible Pacco-lab –locations -> see the result here: https://app.wisemapping.com/c/maps/463357/edit

Despite all those surprises, thing have been moving !

Field observations: a group of children from the cultural center Senghor started to collect additional information about the pond

Tools: pilots are using our collective tools more and more - especially one: our slack! Watch that place – discussions are starting to take off!

DISCUSSIONS

Four main topics discussed in the Pilotes-Lab:

1. Bugs: what happened to the machine and why? What to do to improve it?

2. Field observations: how might we use them? What to do to improve the fill-out-form?

3. Emptying of pond and moving out: alternative places

4. Future of the Pacco-lab: how to continue?

1. BUGS

>1st bug: battery! The first time there was a battery problem, the battery dropped up from 90% to 30% in a few hours, then increased at 70% again etc. So Tim decided to substitute it with a new one. That was probably due to the fact that it has been used (and completely emptied) several times already. So a newer one has been installed. The battery bug also made the circuit boards become unstable. So there again, we tested an alternative: the ones from Libelium instead of Atlas scientific. The new ones seem to be more efficient as well as cheaper! Bingo!

>2nd bug: data! The data the machine sent to the website http://data.paccotest.org/ on the 19th September seemed to be valid while the data the machine sent the 14th of October were quite strange. > "A Ph of 4 for a pond is not possible" Natacha said! (but not after she invented a revolutionary hypothesis to explain a possible pH 4 – a real scientist, she is)
Finally everybody agrees that there is above all a calibration problem, so we did the exercise of calibrating the pH probes all together during the Pilot meeting (a good occasion to understand exactly how it is possible to calibrate the Pacco-test sensors).

Calibration_ collective session

The invalid data (pH of 4, ORP, ⋯) sent by the Pacco-test made clear that the sensors used had not well remembered their calibration. So things were turning bad. Tim and Natacha proposed to recalibrate the better set of sensors during the meeting to show us how to do it and to verify all together what happens
It is really important to have calibration liquids that are not expired!
It is a long and quite boring process, so keep calm and take your time (and have friends around to chatter away)!
How to calibrate the Pacco-test sensors? > There is a program to upload on the waspmote (= waspmote is the Pacco-test-micro-computer). There it is possible to find a pdf which explains all the steps to make it: http://www.libelium.com/downloads/documentation/smart_water_sensor_board.pdf#page=30
In our pilots' meeting we decided to calibrate temperature and pH.
! The temperature is really important to measure pH and conductivity so we do it together.
! pH needs 3 different calibration points (so 3 different solutions with 3 different predetermined pH values). For the other sensors there is just one or two calibration points!

>3rd bug: condensation! Tim: "the 14th of October the machine stopped to send data to the website. We thought this was caused because of water entering the machine (since it rained a lot that evening). But I was quite surprised about that: while conceiving the machine we submerged it in the water completely, and it would continue working without damage! So we realized that the problem was not necessarily one of being waterproof or not, but of condensation on the inside of the casing, due to a change of temperature!"

→ *Alexander and Tim are now figuring out ways to solve this problem⋯ work in progress!*

To go on with our project Tim proposes to prepare a new version of the prototype. The previous version has been manipulated several times, he thought it would be a good idea to re-build it with new/other components to be more sure of the results.

2. FIELD OBSERVATIONS

A group of children from "Ecole des devoirs" of the Senghor Cultural Center went into the park to make field observation on the pond (twice). The children were interested, curious and they asked lots of questions, it was fun to do!
But how might we use the results? What can we improve in the "observation forms" in order to be more useful?

Suggestions to improve the observation form:

- Informative question: "can you see the bottom?" (depending on how deep it is -> from 1m50, if you don't see the bottom, you have a problem -> then you don't need to have a Secchi disc)
- Ask questions on aquatic plants visible and on insects which could be present (useful to know about the biodiversity):
  Are there submerged aquatic plants? (they grow underneath the lentils, they are a good sign -> they need light penetrating the water, so when turbidity, they cannot grow, they are highly valuable for biological reasons, they attract amphibian, insects, ...)
  Are there dragonfly or others?...
- Change the water colour scale> a more realistic one will be proposed on the slack !! (keep in mind that the colour of the water is useful to get information on certain organisms, ex: cyanobacteria = blue-ish)
- Biotic Index: try to do it in winter even if spring and summer are the best moments to check it, since it's getting cold already, lots of species won't be active
- Turbidity: lets' try to make a home made Secchi disc ourselves (wooden disc + weight) ~ 'atelier creatif' in neighbourhood?

Going out to make additional observations with children (or other observers) can serve a double goal:
→ *complete the information of the machine, verify and check observations with data taken on the same day/ same moment.*
→ *involve other people in what we are doing, let them know about the project and about our goal to get to know more about our city and everything that surrounds us*

3. EMPTYING THE LEOPOLD POND AND MOVING OUT

We'll have to move out of the Léopold Park pond. After a Pilote-consultation by phone, a map of possible alternative places has been realized https://app.wisemapping.com/c/maps/463357/edit

3 elements seem to be really important to take into account:

- different Pilotes advised to remain in a pond / stay in a similar context > it facilitates future interpretation of the data + in a stream you risk to lose the machine, it should be much more robust to cope with the flood
- everybody agrees we should keep on working in an urban environment (not in remote area's without local residents)
- we want to keep the link with local Pilotes and local organisations

Among all the possible place the Ixelles ponds seem to be the place everybody prefers
→ *no negative arguments up till now*

- people are close to the Pacco-test,
- high visibility
- most of the organizations involved now, are ok to go as far as place Flagey
- we also have a bit of a local network there (to be completed by you!)
- the Communal services (plantations) are favourable to the project
  the "Echevin" is welcoming the idea, is very attracted by the fact that he could be part of a Smart City Project! + he's also interested in having more data about his ponds

Ixelles's pond, some info

it is a recreational pond for fishing (fishing season ends from end of October until end of march) > most of the time the the goals of ecological restoration and fishing are mutually exclusive…the recreation of fishing causes problems (cyanobacteria etc) > it would be good to open up the discussion with the fishermen and the communal pond managers about the desired future use of the pond - water is coming from La Cambre source, there is a 'moine' close to the church

Just a little problem: it seems that there is crocodile in this pond, so the question is: is the Pacco-test crocodile proof?

→ *Everybody agrees on the place > an official demand for authorization will be introduced asap!*
→ *When we'll have the official permission, we will start to involve the local network > schools, organisations, NGO's, citizens' movements, collectives etc… we pro- pose to put together our local networks and add it to the wise mapping https:// app.wisemapping.com/c/maps/469926/edit*

4. FUTURE OF THE LIVING LAB

Due to the fact that we need a certain time to repair and test a new version of the proto-type, some questions concerning the next steps of the living lab needed to be discussed:

- Is it interesting to collect data in winter?
- Should we take a Pacco-lab winter break?

Apparently winter "is still interesting -since things are also occurring :

→ *"sometimes, even in winter, you can have oxygen drops, if you have a big contamination by organic materials (because of bacteria). Even if nothing happens, winter is the often the initial situation from which everything develops –It could give us some kind of 'baseline knowledge'. Ex: nutrification: in winter is the moment that all the nutrients (nitrogen, phosphorus) are recycled and are in the water and ready to be used, so if you measure at that moment, you can have an idea of the biomass that can be growing*

It is not necessary to take a winter break, what is important is to let Tim enough time to rebuild a stable and efficient version of the prototype in order to meet again once we have a functional tool which gave some stable data.

=> proposition:
- we go to the ponds of Ixelles by the beginning of December with a Pacco-test we trust
- we take a break at Christmas - new year – January
- end of February we relaunch the Pilote-lab
- during the pause-phase we can work on more theoretical things (data-interpretation, possible interventions in case of emergencies, alerts? etc.

→ *this is preferable than to continue until January as first scheduled*
→ *in spring, we can test with cheaper probes in order to have a device as low-cost as possible*

Next meeting:

Not before our pond-moving and not before having fresh new data to treat!

Rencontre Pacco Pilotes #3

→ 14 DECEMBER 18H30 ?

to be confirmed

BIG QUESTIONS

Toutes les questions n'ont pas de réponse immédiate! Dans cette partie on reporte les questionnements soulevés lors de la rencontre auxquelles au quels il faut veiller le long de tout le processus.

KEVIN :
Faut-il se concentrer sur la compréhension détaillée de l'étang ou bien sur le processus participatif ?

GEORGE:
On veut un outil précis, mais cher ? Ou plutôt un outil peut-être mois précis mais plus facilement reproductibleet moins cher ?

PACCO-PILOTES

Qui est la et qui est qui ?

- Sofie et Lucia, City Mine(d)
- Kevin De Bondt, geologue VUB dépt Géochimie Environmentale
- Natacha Brion, biologiste VUB,
- Tim Vandenbergh, hardware and software developer chez Bagaar
- Stijn Van Onsem, biologist VUB,
- Ronnie Raeymaekers, Coder Dojo coach and collaborator of InduTec

Here's the link to the wisemapping of the pilots' network we realized during the first meeting. It gives an idea of who the pilots are and what their wishes and expectation about this process. https://app.wisemapping.com/c/maps/454147/edit

Qui voulais venir, mais n'a pas pu être là ?

- Lien Nauwelaerts, Collectif Pool is Cool
- Monique Paulus, habitante du quartier
- Antoine Pacco, eponyme du Pacco-test et chimiste
- Lorent Pirotte, GreenFab
- Nicolas de Barquin, Fablab Ixelles