

MINUTES

Brainstorm Session

Date – 22/11/2012

Venue: CT 2.62

12.00 – 13.30 Hours

Attendees: 22 people

Climate City Campus organized a Brainstorm Session about: ‘How can we make TU Delft the best monitored campus in the world?’ This event took place on 22 of November and 22 people participated, contributing with their ideas in the nice discussion. The Brainstorm was led by the professor [Nick van de Giesen](#) (Water Management). At first, a sub-question was proposed: ‘*What would you like to have in the Campus two years from now?*’ People came up with a lot of brilliant ideas. After discussing this issue, the second sub-question had to be answered: ‘How could students be involved in order to make the above question reality?’ In the following, you can see in detail the minutes of the Brainstorm Session and all the ideas that were discussed.

Title

How can we make TU Delft the best monitored campus in the world?



1st subquestion

What would you like to have in the Campus two years from now?

Balances:

- **Energy (all parts, radiation, wind, electricity, ...)**
 - Web portal with building information: Energy use, performance
 - Energy monitoring (measuring what is going in)
 - How much energy could be produce? Wind, solar, earth, ...
 - Also: comfort info (T, wind, radiation)
 - 3D wind field (direction, stability, RH, T)
 - Wind turbines (measurement + energy generation)
 - Fluxes at boundaries: Energy (electricity, gas, radiation)
 - Power plant monitoring, also nuclear power plant 2MW!
- **Water**
 - Water monitoring
 - Production / use of (grey) water
 - Fluxes at boundaries: water
- **Air quality components (indoors, outdoors)**
 - “Thermometer” with tips on usage reduction?
 - Fluxes at boundaries: air
- **Food**
 - Fluxes at boundaries: food in/waste out
- **Anthropogenic impacts... / people balance**
 - Better climate control system (shades, wind etc.)
 - Advice on new buildings on local climate / resource use
 - Carbon monitoring
 - Relate to carbon footprint + feedback on your actions (app?)
 - Footprint associated with your campus card (private)
 - Recycling
 - Green surfaces (bio diversity, resources) vs hard surfaces
 - Overview of sustainability knowledge generation
- **Traffic**
 - Fluxes at boundaries: traffic
 - Sankey diagram
- **Happiness... / knowledge / money**
 - Health impacts
 - Safety issues (alarms, accidents, ...)

Analysis of correlations/causes between these different factors, model / predict

- Global Reporting Guidelines: www.globalreporting.org
- People moving about with physical information!
- TU Delft app / indoor & outdoor positioning
- Subjective info from people (how comfortable are they?)

There already exist:

- Sensors (some) indoor/outdoor
- Detailed 3D model

2nd subquestion



How to involve students?

- Include in curriculum (every year add to previous work, practical, real)
- Create competition to reduce energy/resource use
- Green university competition
- Design & implement general infrastructure
- Put on pilots, show where work is needed
- Visualize what is there (sensors, models)
- Accumulate carbon & H2O credits

If you need further information or if you have further ideas, you can contact:

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