How to Run a Hackathon

The experiences of GPNL (28-30 Nov 2014)

By Anne Boon (Project Leader) and Marleen van der Zanden (Intern Digital Activism)

A hackathon (also known as a hack day, hackfest or codefest) is an event in which computer programmers and others involved in software development, including graphic designers, interface designers and project managers, collaborate intensively on software projects. Occasionally, there is a hardware component as well. In general, most participants sleep very little and work on during the night.

The Ethics: Transparency and Open Sourcing are the keys to a Successful Hackathon!

A hackathon is about sharing, sharing of data, information and expertise. It is not about smart and creative people working for you for your personal gain. In fact, everything that comes out of the event is public and can be used by anyone interested. Sharing data on an open source platform will attract people with relevant skills. At the same time you/your organisation will gain respect by the external community for sharing knowledge and data.

There is no intention at all to bathe in someone else's glory: the developers of an idea/tool should always get the credits.

Understand Your Goals

The first and most important step is to understand the goals of your hackathon. Do you want to solve a real problem? Do you want a tool to involve the public in your actions? Do you want an open data developer community around your data? By providing a group of developers a forum to meet, inspiring them with hard-to-solve problems and supplying them with as much data as you can to drive their applications, you might just find creative concepts to solve real problems or start 'never thought of' solutions.

In our case we formulated three so-called challenges:

1. How can we track vessels at open sea? Tracking vessels helps us reveal illegal activities. All seaworthy ships have a public tracking system (AIS). However, crews with shady intentions can turn it off manually. Can we use existing tools like satellites, radar or GPS to detect or predict the ships' course and reveal their dirty deeds?

2. How can our supporters actively control, manipulate or participate in live actions and be part of the experience? Create a concept for a new and exciting way to involve people even if they are living on the other side of the world.

3. Mystery challenge (with focus on research of public data).

Planning Your Hackathon

Try to plan on starting this process at least three to four months in advance. That will give you sufficient time to arrange logistics and market your event. Don't forget to appoint a project leader who is able to oversee all the different aspects of the organization of the event.

Pick a date

- Most hackathons are one or two days during weekends.
- Try to find out when other hackathons are running and try to avoid these dates.

Find a location

- Where your hackathon is held can be an important element in its success: in our case the warehouse seemed to be a very inspiring place for people from outside of GP.
- The location should be big enough for the number of participants, with enough chairs, tables, whiteboards etc.
- Have a good mix of spaces. You'll need a big common room with seating and a beamer for the event kick-off, demos and awards. It's also good to have break-out rooms for teams to work together or where people who like a quiet place to work, can put their heads down and focus.
- Make sure your venue has sufficient power and Internet bandwidth for the event.

Build a web presence

Include details about when and where the event will be held, why this hackathon, the challenges, the program, the mentors, terms and conditions, a link to a sign-up form etc. Have a look at the website we created for this event: www.greenpeace.nl/hackathon. This can also be a simple Wiki page.

Market your event

At least one month in advance, and preferably closer to three months, start marketing your event. There are lots of different ways to get the word out:

- Contact local developer/hacker groups and ask them to help. Visit developer Meet-ups to pitch your event and send out details on their mailing lists. Ask first, however, to make sure they're OK with it.
- Spread flyers around local universities.
- Send out teasers about your event on Twitter/Facebook and see if you can get well-connected individuals to spread the word as well.
- Send it around to your network e.g. NRO's, local groups, volunteer community (Greenwire in GPNL), friends etc.
- See if you can get the event on a hackathon announcement website like hackerleague.org.
- Find other people/organisations who organise hackathons to share your event in their networks.
- Post announcements to forums.

Set your rules

There is always a prize connected to a hackathon: a sum of money or a technical fun gadget like Google glass or Oculus Rift. We (GPNL) decided to give the team the opportunity to work with us and further develop the prototype that was made during the hackathon.

If you're going to be judging winners for your event, and especially if you're going to be giving out prizes, it's important to clearly document and share your rules so that everyone can review them before the event. Besides that it is also required when organizing competitions (at least in the Netherlands). We published our "Terms and Conditions Greenpeace Hackathon" on the website (see attachment 1).

Tailor your rules to encourage the kind of results that you're looking for. For example, if you are looking for your participants to solve a particular set of problems, or you have particular issues you'd like them to address, tie the judging criteria to those goals. A suggestion is to use the following criteria:

- Impact – Would the application have real social impact? Does it solve a stated goal of the hackathon?
- Innovation – Is the solution novel? Does it solve a problem or start a solution in a creative or never-seen-before way?
- Technical Achievement – Did the participant(s) solve a hard technical problem? Did they get a working demo completed within the available time?
- Developing costs.

Using those four criteria to judge teams at the end of the event will provide you a good, balanced way of assessing the teams' output. It allows you to recognize teams that may have come up with an innovative and impactful idea which was too hard to complete in a single weekend (or day).

PS: do not forget to create an award that you can give to the winner(s) at the end of the hackathon.

Round up your judges/mentors

Three to six judges with different skills and expertise (campaign, action and technical etc.) works very well. Take enough time to find well-skilled mentors that fit your challenges. We had external and Greenpeace judges and mentors: an oceans campaigner, the action unit head, an action coordinator, a software developer/GIS specialist, a scientific programmer and a graphic designer/web developer/teacher of information design.

Set your schedule

Set and publish your schedule so that everybody knows how the event will proceed. We published our "Program" on the website (see attachment 2).

The Day(s) of the Event

Setup and logistics

Make sure you have a detailed script and go through it with all the organisers involved (see attachment 3).

Specifics of what you'll need will depend on your venue, but here are some guidelines:

- Make sure you've got lots of power outlets.
- If the event is in your own warehouse or office make sure the internet connection you offer is fast enough and secure. Make it impossible (or at least very difficult) for the hackers to hack your own database, Intranet or network. Involve IT for this.
- Print out the following signs and post them conspicuously:
    1. Directions: if it's not immediately obvious how to get into the rooms for the event, post a sign with directions and a contact number if there are problems.
    2. Wifi: details on how to get on the wireless network. Include the network name along with any temporary user name and password or registration details needed.
    3. Time line: The event schedule needs to be easy to find. It's critical to keep everybody on task.
    4. Directions to toilets, sleeping places, showers etc. (remember most participants have never been in this place before).
- Make sure the projector works and will connect with your laptop. You'll likely need adaptors (dongles) for Apple laptops to connect to the projectors.
- Set up any audio or PA equipment that you need.
- Provide name tags stickers and markers.

The event kick-off

Preferably you have a facilitator for the duration of the event. The kick-off sets the tone for the whole event. A structure like the following works pretty well:

- Welcome by the facilitator.
- Introduction of the organizers, judges, mentors, cooks etc.
- Give the participants a chance to introduce themselves. One way to keep this from going out of control is to have everyone say three things: their name, where they are from and in one sentence to summarize their interests or goals.
- Program of the event.
- Presentations on the theme by the experts (campaign issues, action issues), clarification of the challenges, some information on the data available.
- In our case: a tour of the warehouse (including house rules, safety issues etc.).

Pitches and team formation within each challenge

Some more enterprising individuals may already have an idea what they want to build. This phase gives them a chance to pitch their idea and recruit participants for their team. Ask people to pitch their idea(s). After pitches, give everybody a few minutes to self-select what teams they want to join. If a team doesn't reach a critical mass, the individual who pitched the idea can be given the chance to "go it alone" or join another team.
Before people start to work ask the teams to present the idea their team is going to work on and their team name.

Keep things moving

Once people start working, keep them focused:

- Have mentors (experts on the theme, data owners, technical advisors) around and make sure people aren't stuck or have questions.
- We also arranged a skype call with our lawyer in which teams could ask legal questions.
- Keep everybody well-fed, hydrated (energy drinks!!) and caffeinated.
- Don't break for lunch. Announce that lunch/food is available all day.
- Have a hard stop when development should be completed and make sure people know that it's coming.
-

Team demos and judging

Get your judges ready, call everybody back into the main room and get ready for teams to show off their work.

- Each team should receive a certain amount of time (between 5 and 15 minutes) to demonstrate what they came up with.

- Allow the judges to ask questions.
- After the demos, move all the judges into another room and have them discuss each team and rank them. It's okay to be a little subjective – it's hard to judge based on scores alone.
- While the judges are busy, hand out an evaluation form to the participants with questions like: your name, the challenge you have worked on, your background /expertise, your tips/tops/remarks and would you like to join a Greenpeace hackathon again?
- Once the judges are done, gather everybody together again and announce your winners! Take a picture of the winning team.
- Have a drink together and take some group pictures.

Post-Event and the Winning Team

After the event, follow up with an email and group picture(s) to all participants thanking them for their time, energy and fantastic ideas. Make sure you provide information about any follow-up events that might occur such as future hackathons, Meet-ups or awards events. Ask the external mentors for feedback (see feedback we received in attachment 4).

About a week later we had a meeting with the winning team. We offered them a concrete case that they could work on and in which they could use the research they had done during the hackathon on AIS. After the meeting we emailed them a file where they each filled out their details: what they want to do, with whom, the approximate time they would need and how much they would like to get paid for the job.

Some Tips for an Excellent Hackathon

Action team as a host and warehouse as location:
- experience with trainings and groups
- activist vibe quickly passes on to participants, "the action is in the air"
- knowledge of available action tools
- support of participants' questions regarding Greenpeace actions

Involve IT:
- enough bandwith (the participants will probably collect huge amounts of data) and a backup wifi system
- knowledge about e.g. green hosting
- Secure the internet connection. Don't let the hackers into your own database or intranet.

Involve Database team:
- better understanding of new knowledge and practice

Involve Web team:
- support of online communications
- knowledge of available web tools
- support of participants' questions regarding Greenpeace online practice / platforms

Prepare data:
- collect useful data (e.g. start harvesting live data months in advance)
- create a Github/Wiki with prepared datasets and how to use these
- communicate useful data/information in advance: it gives the participants time to prepare and deepen their knowledge

Provide hardware:
- e.g. GoPro, satellite phone, anduino, depending on challenges
- participants will want to test and build during the weekend

Challenges:
- present challenges beforehand
- the way you describe the challenge(s) is of the utmost importance.

(External) Mentors/jury:
- expertise and variation of mentors/jury is extremely important

Organization:
- appoint a project leader
- write a script for the total event
- if you have no experience in organising a hackathon at all, find someone with experience to help and/or advise you

Privacy:
- watch out with cameras and taking pictures, because some of the participants may not want to be in the picture due to privacy and being posted on Facebook etc.
- sign-up platform should be secure and participants should have the opportunity to sign up anonymously.

Attachment 1 "Terms and Conditions Greenpeace Hackathon"

General information
Date: 28 November 2014 19.00 - 30 November 2014 16.00
Location: Greenpeace NL warehouse, Amsterdam
Organiser: Stichting Greenpeace Nederland
Participants: natural persons
Registration: www.greenpeace.nl/hackathon
Maximum amount of participants (related to safety and available space): 24

Costs: joining the Hackathon is free for all participants. Travel costs are not reimbursed, food and drinks will be provided for by Greenpeace.
The following terms and conditions apply to this Hackathon. By participating in this Hackathon the participant accepts the terms and conditions and declares to agree with the content of the terms and conditions.

Conditions for participation in the Hackathon
We can accommodate a maximum of 24 participants. If more than 24 people register, the organizer will make a selection on the basis of motivation and background of the registered participants.
The activities during the whole weekend are legal.
The participants have a duty of confidentiality towards possible future actions of Greenpeace.

Criteria of the judging process
- Impact – Would the application have real social impact? Does it solve a stated goal of the hackathon?
- Innovation – Is the solution novel? Does it solve a problem or start a solution in a creative or never-seen-before way?
- Technical Achievement – Did the participant(s) solve a hard technical problem? Did they get a working demo completed within the available time?
- Developing costs

What happens after the Hackathon
The winning idea will be further developed by the winning team. Associated costs will be covered by Greenpeace. Participating in the further development of the winning idea is not obligatory for the members of the winning team.

Personal information
Personal information of all participants will be registered in the administration of Greenpeace Netherlands. Participants will receive an e-mail every two weeks in which they will be asked to engage in other Greenpeace campaigns. Unsubscribing to these e-mails is possible by clicking the unsubscribe link that is present in each email. When you unsubscribe this is processed immediately.

Attachment 2 "Program"

Friday
19.00-20.00 Doors open, check-in participants, soup and salad is served
20.00-22.00 Event kick-off (introduction, presentations, tour of the warehouse)
22.00-23.00 Team formation (choose your challenge, pitch your idea, form a team)

Saturday
07.30-08.30 Breakfast is served (food and drinks will be available all day)
08.30-09.00 Presentation of the teams and today's schedule
15.00-15.30 Teams present their concept to the mentors
15.30-18.30 Consultation with and feedback from the mentors
18.30-19.30 Dinner is served

Sunday
07.30-08.30 Breakfast is served (food and drinks will be available all day)
08.30-09.00 Presentation of today's schedule
14.00   30 minute warning! Presentation of the demos starts at 14.30!
14.30-15.00 Presentation of the demos
15.00-15.30 The jury sits down to choose a winner
15.30-16.00 And the winner is....! How to proceed from here
16.00 Thank you all for being here! Lets have a beer together

Attachment 3 "Script"

*Script Hackathon 28-30 November 2014 **(internal use only)***

Friday

19.00-20.00 ***Doors open, check-in participants begins, dinner is served***
- *checking participants (in/out-list). people who got lost or want to sign out can call the phone number that they have been given by e-mail. (**Action team member**).*
- *Everyone (organizers, participants and others) wears a name tag.*
- *Show the sleeping rooms to people who stay the night (**Action team member**).*
- *Dinner is on the counter for everyone to help themselves.*

20.00-22.00 ***Event kickoff (introduction, presentations, tour of the warehouse)***
- *Welcome. Tell everyone that this is the first hackathon we organize, that we really look forward to it but that it is also a challenge, because we may have missed crucial things in the preparation. Ask everyone for feedback on the organization of the event. It is a pilot project, and mistakes can be made at this stage (**Facilitator**).*
- *Introduction of organizers, mentors, cook, volunteers and others present (**Facilitator**).*
- *Introduction of participants (max 1 minute/pp: name, where do you come from/function/expertise and in a few words why you want to join (**Facilitator**).*
- *Short overview of the rest of the evening (**Facilitator**).*
- *Presentation about the oceans campaign, explanation of challenge 3, the mystery challenge (15 min) and show part of the Zembla documentary (15 min) (**Oceans campaigner**).*
- *Presentation about some ships actions, like the 2014 actions against Arctic oil transports to Rotterdam (15 min). Explaining challenge 1 and 2 (**Action coordinator Oceans**).*
- *House rules. Also mention: except for dinner, all other meals can be taken whenever you like. There will be food available all day. It is up to each participant when he/she wants to work on his/her idea. Please write on the in/out list when you leave or enter the warehouse because of safety. Tell participants who they need to warn in case of emergency and that there will be watchmen present during the night (**Warehouse manager**).*
- *Tour of the warehouse (mention: escape routes, fire extinguishers, first aid kits etc.) (**Warehouse manager**).*
- *Explain what happens the next hour (i.e. forming teams = choosing a challenge, and then form separate teams for the different ideas within one challenge if necessary; think of a team name) (**Facilitator**).*
- *Explain briefly what happens the next morning (i.e. presentation of the teams) and where they can find the available data (**Facilitator**).*

22.00-23.00 ***Team formation (choose your challenge, pitch your idea, form a team)***
- *When the forming of teams is difficult, help of mentors and facilitator may be requested (**Facilitator and Mentors**).*

Saturday

07.30-08.30   Breakfast is served (food and drinks will be available through the day)
- *Breakfast and lunch is on the counter during the day and anyone can take whenever he/ she feels like eating. Make sure there is enough drinks/snacks/fruit/etc. and that the dishes are being done during the day (**Action team members and volunteers**).*

08.30-09.00   Presentation of the teams and the schedule for today
- *Teams tell in a few minutes what their idea is and announce the name of the team (**Facilitator**).*
- *Tell the participants the criteria of the jury: feasibility, innovative, affordable, would the team like to develop it further (**Facilitator**).*
- *Announce the availability of the mentors (some will be there all the time, others partly) (**Facilitator**).*
- *Tell participants that the mentors will give feedback to each team after the short presentations (not plenary) and that they will provide help when there are problems (**Facilitator**).*
- *When teams have legal questions they should write them down. We will send questions we can not answer to our lawyer through Skype. Give a few examples of possible legal questions (**Facilitator**).*
- *Around 2 PM legal issues will be collected and send to the lawyer. He will answer the questions between 4 and 5 PM through Skype (**Action Unit Head**).*

15.00-15.30   Teams present their idea (not plenary) to the mentors
- *Do not forget to introduce mentors who have arrived later (**Facilitator**).*
- *Mentors receive from each team an update about the concept and its progress (**Mentors**).*

15.30-18.30   Consultation with and feedback from the mentors
- *All mentors are available for questions and to give feedback to the concept (**Mentors**).*

18.30-19.30   Dinner is served (Cook)

Sunday

07.30-08.30   Breakfast is served (food and drinks will be available throughout the day)
- *see Saturday*

08.30-09.00   Presentation of the schedule for today
- *Be clear about the deadline! Tell them that a warning will be given 30 minutes before the deadline (warning at 2 PM). The presentation can be in any form. And remind them of the criteria of the jury! (**Facilitator**).*

14.00-14.00   30 minute warning! Presentation of the demos begins at 14.30!
- *A clear signal to warn that the last 30 minutes have started (**Action team member**).*

14.30-15.00   Presentation of the demos
- *Announce the names of the jury (**Facilitator**).*
- *Call the teams one by one to present their idea to the group (max 15 min/team) (**Facilitator**).*

15.00-15.30   The jury sits down to decide on the winner
- *Provide participants with an evaluation form and ask the to fill it out (**Facilitator**).*

15.30-16.00   And the winner is....! How to proceed from here
- *Announce the winning team (eventually choose a second winner because the demo is worthwhile to develop further) (**Facilitator**).*
- *Hand out the award and take pictures of the winning team and the whole group (**Action team members**).*
- *Announce next steps: next week we want to make an appointment with the winning team to discuss what is necessary to further develop the concept (**Facilitator**).*

16.00 -17.00   Thank you all for being here! Let's have a beer together

Attachment 4 "Feedback from 2 external mentors"

Feedback Bert Spaan (*software developer and GIS specialist, working mainly on open data related projects*)

In contrast with other hackathons that I know, the Greenpeace hackathon aimed at resolving real problems. That made it even more interesting, because the results could be implemented in real life, while the results of other hackathons are often (only) nice websites or apps, or try out or combine new techniques. I guess a hackathon can be more successful when the teams are smaller, because then the results can be more diverse and surprising. But I was satisfied with the result, and I think the winners had a really good idea. In the winning team several good developers/researchers are grouped, who can help Greenpeace find their way in the open source and data field. It would be great if they could also come up with more ideas, more data, data sources or collaborations for a new hackathon.

Feedback Maurits de Bruijn (*graphic designer, web developer and former teacher of information design*)

A short response to the hackathon: first of all I am very positive, both about the organization and about the quality of the participants. What stood out for me, was the remark of one of the participants: 'I am a technician, I can calculate things, but you need to give me a problem first'. This hackathon, I think, shows the opposite. Technicians are super-creative and much better able than anyone else to make their own assignments and understand them. Very special was the way in which the teams operated fragmented, and even switched between the different teams. By doing this, the competitive element was no longer present. Normally, pitching your idea (what you are working on to achieve) is more about marketing your ideas than about the ideas itself. Bert's feedback was that that makes people more focused, which is right, but as far as I have experienced here, it is good to focus as much as you can on the process. I do not even remember what the winner would get (normally it is a sum of money) but maybe it is good to get rid of this idea of a sum of money. When the reward is, that good ideas will be further developed, it is a win-win situation. I already said that it could be worthwhile to give a digital think tank a permanent status, for both marketing and recruitment (team go-pro and micro activism app), operational devices (team MASH/AIS data analysis) and data research (fishing data) and connected European laws and regulations. Greenpeace actions are despite its robust character always media actions, used to influence policy makers through public opinion. Each of the above angles could highly influence the impact of physical actions. If we look at the latest presidential elections in the US, the digital campaign (fact checkers, data analysis, social media, etc) was as effective as the conventional one. It can be expected that the digital side will become even more important in the years to come. Last thing I would like to add: if Greenpeace would organize another hackathon I would love to be involved again and I would certainly clear my agenda to be able to join. Thank you for the invitation!