

# Cookbook:

## ideation tools to create successful (smart city) ventures



## ChangeU Student Hackathon

### Abstract

The ChangeU Student Hackathon is an initiative rooted in two developments in the WP5 demonstration in Utrecht. First, in the early stages of the IRIS project, inhabitants expressed their concern that smart energy and smart mobility weren't the pressing issues in their district. Second, the municipality of Utrecht is working on the realization of a City Innovation Platform (CIP), as part of the WP5 demonstration. The aim of the ChangeU Student Hackathon is to develop and incubate ideas that provide solutions to issues in the Kanaleneiland district, while using (open) data. A budget of €3000 was allocated to UtrechtInc Students, who organized a 16-day virtual activity, during which 16 teams of students worked on developing solutions.

### Dish:

hackathon | 0.5 FTE

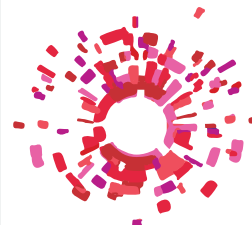
4M preparation + 2.5W execution + 10W incubation

€3.000

### Recipe for:

**13** ideas

**1** startups



**IRIS**  
Utrecht



## The Ingredient List

### • Budget

- €2.500 award money
- €500 out-of-pocket costs (workshops, representation)

### • Time

#### Preparation (12 weeks):

- Challenge definition
- Program outline
- Participant recruitment

#### Hackathon (2.5 weeks):

- Kick-off
- Workshops
- Final

#### Incubation (10 weeks):

- Program: 12 weeks, 1 day per week activities

### • Resources

#### Types of organizations involved

- UtrechtInc Students (hackathon organization)
- Utrecht University (support & business development)
- Municipality of Utrecht (challenger)
- UtrechtInc (incubation)

#### Types of roles involved (mentors, organizing team, experts, etc.)

- Organizing team
- Judges for selection of ideas
- Kanaleneiland residents for validating ideas
- Experts for workshops with participants
- Experts for guiding during incubation program

#### Location(s)

- Registration and selection via [www.changeu.nl](http://www.changeu.nl)
- Virtual meeting room (Zoom) for all program activities



## The Preparation Method

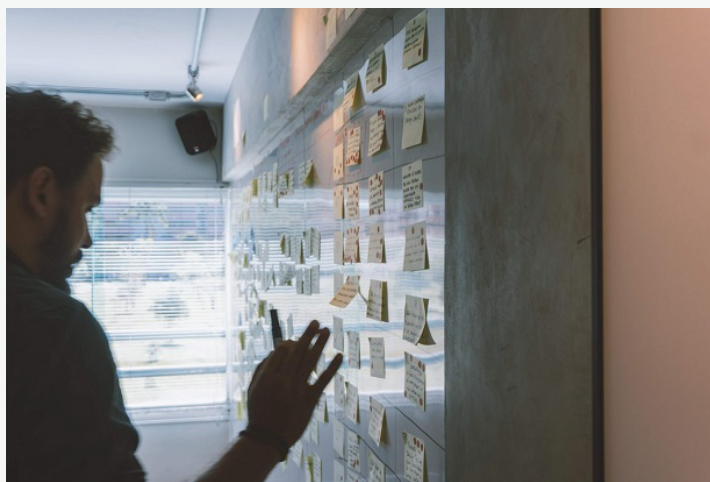
- **Preparation (= Planning)**

The ChangeU Student Hackathon is an initiative rooted in two developments in the WP5 demonstration in Utrecht. First, an underlying contextual factor, is that during an earlier project focusing on Smart Lighting (in TT4 City Innovation Platform), inhabitants expressed their concern that smart energy and smart mobility weren't the pressing issues in their district. ChangeU therefore uses the pressing issues as starting point for the hackathon. Second, the municipality of Utrecht is working on the realization of a City Innovation Platform (CIP), as part of the WP5 demonstration. The aim of CIP is to support the data economy, by matching supply and demand of data through an open data platform with relevant local data. CIP offers an open ICT system and open application program interfaces (APIs) that encourage data sharing. The aim of the ChangeU Student Hackathon is to develop and incubate ideas that provide solutions to issues in the Kanaleneiland district, while using (open) data.



The first step in the preparation of the activity was to attract a local partner with a great network of creative and open-minded 'problem solvers'. UtrechtInc Students (UIS), the student branch of the UtrechtInc incubator, hosted the hackathon, as they have a large local network of students from different study backgrounds. A representative of Utrecht University consulted the students during the organization of the activity and the Municipality of Utrecht joined as a challenger, providing both knowledge and budget for the award structure.

First, UIS simultaneously worked on three critical resources for the ChangeU Student Hackathon: (1) insights in Kanaleneiland district issues; (2) overview of available open data at local, national and European level; (3) program to inspire and engage students to develop ideas. To get insights in the local issues, UIS had several conversations with district stakeholders, both from the perspective of the resident and the municipality of Utrecht. Together, five topics were determined: Inclusive Labor Market; Community Health; Shared Space; Smart Mobility; Local Energy Transition. Next, in collaboration with a representative of Civity, the organization responsible for building CIP, an overview was created of available data. Lastly, the hackathon program was design in cooperation with UtrechtInc, to make sure that resulting ideas would fit the incubation program.



In order to attract as many participants as possible and get the participants to finish all stages of the program, the program was designed as a 'funnel': to get students to sign up, a lot of effort was put into designing a program that would also benefit the participant in terms of personal and professional development; to get teams to submit a solution, a compelling award structure was put in place. Also, students were given the option to either sign up as an individual or as a groups of 3 to 5 participants. Individual sign-ups would then later be joined together in teams, or added to existing teams of 3 or 4.

The activity details were presented on a website specifically designed for the ChangeU Student Hackathon. On the website, the following topics were explained: (1) general introduction; (2) sign up form; (3) explanation of local issues; (4) judges and judging criteria; (5) overview of frequently asked questions and answers; (6) a contact form; (7) terms and conditions of the activity.

## • Serving instructions (= Event)

The ChangeU Student Hackathon publicly launched at January 15, 2021. The details of the activity were distributed via (student) organizations related to the three Utrecht-based higher educational institutions. The deadline to sign up was at February 10, 2021. 72 students signed up for the activity – 32 individually, 40 as a team. In total, 16 teams joined the ChangeU Student Hackathon.

Before the official kick-off of the hackathon, all participants received a participant guide – detailing the activity's program, participating teams, helpful resources, submission guidelines, and judging criteria. At February 12, an icebreaker was organized for individuals to get to know their team.

At February 15, 2021, ChangeU had its official kick-off. During the kick-off, all teams were introduced in the program of the hackathon and the challenges. The kick-off was followed by five workshops:

- Open Data 101 at February 16, 2021, during which Civity introduced participants in the world of open data.
- Ideation Crash Course at February 17, 2021, hosted by UIS to help bridge the gap between having an idea and making the first steps towards a business model.
- Ideating with Data Workshop at February 19, 2021, hosted by the Digital Society School, during which data and ideation were combined.
- Business Model Canvas Workshop at February 23, 2021, during which UtrechtInc explained everything about turning an idea into a business.
- Pitching Workshop at February 25, 2021, hosted by the Pitch Academy, to help participants convince a jury of their ideas.

Before the Grand Finale could take place at March 3, 2021, all participating teams had to submit a one-pager (deadline February 28) and 2-minute video pitch (deadline March 2). In the one-pager, teams were asked to answer 8 questions on their idea in up to 500 words. A template was provided for this purpose.





13 teams, consisting of in total 55 students, submitted an idea that was assessed. The one-pagers and video pitches were judged by 6 entrepreneurship/innovation/data experts and 5 Kanaleneiland residents. The one-pagers were scored on 5 criteria (comprehensibility, realizability, innovativeness, scalability, and benefit for society); the video pitch was scored on 2 criteria (convincingness and clarity). During the Grand Finale at March 3, the jury announced an Overall Winner (highest overall score on all criteria) and Most Convincing Pitch (highest score on the pitching criteria). The Kanaleneiland residents announced their favorite. Next, all submissions were published for an one-week audience vote. The Audience Favorite was announced at March 10.

Following the Grand Finale, all participants were encouraged to join the UtrechtInc incubation program. As UtrechtInc indicated most ideas were a not perfect fit for the program – quality and intrinsic motivation of the team would be a determining factor in order for the teams to succeed and grow into a business with a sustainable business model.



### • Review (= Evaluation)

After the ChangeU Student Hackathon concluded, the program was thoroughly reviewed. Main feedback by the organizing team and stakeholders included:

- ▶ The 16-day program possibly was too short to get students to deliver a detailed plan on the business idea. In general, 'comprehensibility' and 'benefit to society' scored above average. The criteria of 'realizability', 'innovativeness', and 'scalability' were scored below average. An improvement can be to provide participants with feedback half way during the activity, the better guide them into a solution direction.

- If the ideas need to be of better quality in order for the teams to join the incubation program, a 'bridging program' is required to bridge the quality gap between the event and the start of the program. However, this might contradict the 16-day effort that is requested of participants. Therefore, potentially, the event organizers can look into (intrinsic) motivation of students as a way of selecting participants, instead of accepting all students who sign up.
- Due to Covid-19, the event had to be organized virtually. This might have had an impact on teamwork and team dynamics, especially if a team consisted of individuals who did not know each other until right before the event. During a next edition of the event, more focus could be put on the matchmaking of teams, to make sure there is a (better) fit between participants.
- Both in terms of chance of the team making an entry (100% versus 66%), as well as quality of the entry (6.19 versus 5.49 on a 10 point scale), teams consisting of individual sign-ups performed better compared to teams who signed up as a group. A possible explanation for this is that groups of individuals can and will continue if one team member drops out, whereas for teams who signed up as a group, losing one team member can result in the full team dropping out. In terms of quality, teams of individuals have different educational backgrounds. Teams who signed up as a group often stem from the same studies, resulting in a less diverse perspective.
- Thirteen teams is too many teams for the final event. Potentially organize a semi-final and select teams for the final.
- Program quality and award structure were named as most important factors for students to participate.



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