

**BEHAVIOUR  
CHANGE  
INTERVENTIONS  
IN PRACTICE**

**Game of Showers:  
encouraging students  
to save water**

**Local implementer**

Hespul



Funded by:



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# Catalyst project pilots: behaviour change interventions in practice

The Academy of Change is an evidence-based capacity building programme on sustainable behaviour change, designed for leaders working on climate change and sustainability engagement within the NGO sector. The Catalyst programme built upon this by accelerating the integration and use of sustainable behaviour change know-how within NGOs at the organisation level. Participation in the Catalyst was by invitation only, with the opportunity granted to NGO representatives that had successfully concluded the Academy of Change Capacity Building Programme and held the potential to drive organisational change within their NGOs.

The Catalyst programme of tailor-made tools, support for designing interventions and NGO peer exchange concluded with the opportunity for participants to put forward their ideas for pilot projects. The three selected projects received funding and bespoke support from the Academy of Change team to design, implement and evaluate a behaviour change intervention in their organisation.

This series of reports shares the journeys of the pilot projects, through gathering insights and designing their intervention, to evaluating the resulting behaviour change outcomes and impacts. The reports have been written by the pilot projects themselves, in the hope that this can inspire and provide useful learnings for others looking to implement behaviour change projects in their own organisations.

## The pilot projects:

- 1.** Increasing e-bike commuting in “BIKEmode: From cars to e-bikes”, with **CEED Bulgaria**
- 2.** Supporting communities to collect fishing data in “Maintaining OurFish app use”, with **Rare**
- 3.** Gamifying water use reductions with students in “Game of Showers: encouraging students to save water”, with **Hespul**

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***“What I enjoy about the pilot itself is the fieldwork: organising a co-creation workshop where new ideas emerge, solving practical issues that arise along the way, facilitating between different persons that need to collaborate, and meeting the students.”***

– Maite Garnier, Hespul

# Game of Showers: encouraging students to save water



Image of CROUS headquarters in Lyon

**Partner**  
Hespul

**Location**  
Lyon, France

**Date**  
October 2020 –  
August 2021

## 1. The need for an intervention

The CNOUS is a French organisation dedicated to student life: subsidies, dormitories, canteens, access to culture, student jobs. It is composed of 27 regional antennas, called CROUS.

The dormitories managed by the CROUS offer a residence to the students where the rent includes all services: water, energy, internet. The CROUS Lyon has chosen to set a rent per type of dwelling (room, studio, shared flat) that does not take into consideration the actual consumptions of electricity, gas or water of the user. This is because students do not really choose their dorm and because the buildings are very different (year of construction and hence insulation, for example), and this creates differences in the consumptions that are not due to the user.

In that context, **students are not financially encouraged to mind their energy and water consumptions.** With the CROUS Lyon, the intention of the intervention was to see if their energy consumption could be reduced.

## 2. Context in which the intervention took place

Together with CROUS Lyon, we have identified “Résidence Aimé Césaire” as the best fit for the intervention.

**Résidence Aimé Césaire is located in St Priest, a city in the outskirts of Lyon, 20 min from one of the campuses. It has been built in 2015, is composed of 118 studios and 4 shared flats. Two big reasons for choosing this residence is that there is a person working there on a regular basis, which is rare, and it has been equipped with individual meters for hot water, cold water and heating consumptions.**

## Game of showers: encouraging students to save water

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Image of CROUS members who contributed to the project: Martine Bret-Gonnet, Anaïs Montagnat, Nicolas Lusset

### 3. Aims of the intervention

The first idea was to try and run 2 different interventions: one on heating and one on water, in order to reduce consumption.

To benefit from collective intelligence, we gathered stakeholders to a zoom meeting: 3 employees from Hespul, 2 from CROUS, 2 members of Lyon Métropole and 2 others from REFEDD - a national students' organisation dedicated to sustainable development. 4 groups came up with 4 ideas. Of those 4, 1 was let aside, 2 aiming at heating savings were merged, and 1 aiming at water savings kept as it was.

When considering options for the implementation, time was too short to run the heating intervention in winter, so we focused on the **water saving intervention**.

### 4. Target audience and stakeholders

The target audience was quite homogenous as we addressed only students living in a CROUS studio. In Résidence Aimé Césaire, all persons interviewed defined the dorm as quiet, with students that are serious and dedicated to their studies. With scalability in mind, the target became "*all students in a dorm*".

Our main partner in this project has been the CROUS, with different departments involved:

- Students' life service: Anaïs Montagnat and Lucie Gillot-Dumaz
- Residence Manager: Martine Bret-Gonnet

- Property technical managers: Nicolas Lusset and Ophélie Perret-Coutagne
- Informatics: no direct contact
- Communication: Alicia Treppoz-Vielle

The company that developed the software from which CROUS accesses the individual meters at Résidence Aimé Césaire has also been contacted.

At Hespul, Maité Garnier coordinated the project, Thomas Chavanon contributed strongly to it, Anne-Sophie Wert ensured the communication part.



Image of the residence showers

## **5. Target behaviour(s) and behaviour change tools used**

**The aim was to get the students to spend less time under the shower, helping them to identify the time spent and encouraging them to reduce it**

In an average French household, the repartition of the water consumption shows that the most important uses of water are hygiene, with showers and baths first (then toilets). So when aiming at water savings, it seemed logical to target the shower (there are no baths in CROUS dorms). We've focused on the time spent under the shower, as the frequency of the showers is a touchy subject where hygiene, culture and habits meet.

At Hespul, when organising workshops about water and energy savings at home, we show sand clocks that can be used under the shower. We systematically tell our audience that to make it more fun, they can choose a song on their phone, and shower during the time of the song. So, we tried to design an intervention that builds on that idea: 1 song = 1 shower.

Here are the different tools we've used to make it simpler and to add pressure:

### **Adding pressure**

#### **Geographical proximity**

On each communication, we highlighted the fact that the intervention was taking place at and for Résidence Aimé Césaire.

#### **Regular communication and interaction**

We used all available and scalable means at our disposal to reach out to the students before, during and after the intervention.

#### **Before**

Posters and email by CROUS, kick-off stand in the hall of the dorm for individual exchanges and distribution of the posters.

#### **During**

1 email by CROUS, regular posts on Résidence Aimé Césaire Facebook group (that already existed prior to the intervention). The posts aimed at:

- Creating interaction: "Have you installed your poster yet?", "Which length have you tried? Tell us how it went!", "Let us know which song you'd like to hear under the shower for the 3d week of the challenge".
- Informing the students of the results. Each week we would gather the general water meter data, and inform the students, giving a comparison with a reference period: "this week, together, you have saved 4000 litres, well done!"

#### **After**

Closing email by CROUS, closure stand in the hall of the dorm for individual exchanges, questionnaire sent by email.

### **Making it simple and fun**

#### **Gamification**

The intervention offered the students the possibility to start easy and challenge themselves to take shorter and shorter showers, with 3 levels of difficulty, i.e. 3 songs.

#### **Poster**

Thomas has designed 3 versions of a laminated poster that was handed out to the students or delivered to their mailbox on d-1, including glu-tac to fix it on the wall and a 1-pager to explain the intervention, prompting to join the Facebook group if not already there.

3 versions of the posters were available in order to evaluate the preferences of the students, and eventually, their impact. The common point to the posters were:

- 3 QR codes linking to the 3 different songs,
- Title and baseline
- 1 motivational text and 1 "how-to" text
- A sense of progression and rewarding through a visual metaphor: video game (each QR code is associated to a coin or treasure), animals on a podium, or smileys on quantities of water.

#### **Changing playlist**

As explained, the songs were accessed by the students through their phones, by scanning a QR code. Each QR code was linked to a playlist on youtube. To avoid the automatic play of another video on youtube, each playlist was composed of 1 song + 10h of silence.

**Game of showers:  
encouraging students  
to save water**



Image of intervention's poster

The songs contribute to a sense of comfort, taking care of oneself, enjoying the shower. This directly counters the effort asked of the participants to reduce the time they spend in the shower. The playlists were changed every week to avoid boredom, with the 3rd week being fed by the ideas of the students, collected on the Facebook group.

## 6. Intervention process

### Place and target group | until October 2020

Hespul and CROUS have already worked together in the past on sensitization workshops about energy use, so Hespul contacted CROUS to see if they could be interested in such a project.

The choice of the exact dorm was done in collaboration with CROUS's "building management" team. The criteria were to work on a dorm that was not a "cold building" where it would not be ethical to ask efforts from the users, with a majority of studios (for scalability, as this is the kind of dwelling that CROUS mostly prioritises for the future) and that we could access rather easily (not too far from Lyon).

This is how "Résidence Aimé Césaire" was chosen. This dorm is situated in St Priest, was built in 2015 and was equipped with individual meters for water and heating as a test.

Individual meters data would be used for evaluation purposes only, as other residencies are not equipped with them.

The cherry on the cake is that, unlike other dorms, this one has an office with one person working there during the week, responsible for the residence.

### Insights | November – December 2020

Several actions were undertaken to gather information about our target group and context:

#### Research

The information we were looking for concerned students' attitudes towards environment and energy, students' dorms energy and consumption data (we could only find general French household data though) or information, about similar projects or interventions. Not surprisingly, the main output was that heating is the main use of energy, and showers the main use of water.

#### Interviews

Exchanges with the CROUS "building management" team, with the person responsible for the residence and with Anaïs, our counterpart in CROUS already gave us good information. We also conducted a couple of interviews with students (3 interviews) to better understand how they relate to heating and water use.

**Game of showers: encouraging students to save water**



Communicating about the intervention: poster in the hallway

**Questionnaire**

A questionnaire was sent out to the students to gather some more data.

Interviews and questionnaires' main outputs were that on heating, **residents had NO information** about the system functioning in their dorm and how to use it, resulting in ill use. Also, they would regulate their heating based on their sense of hot or cold, not on measured temperature. Concerning showers, it was interesting to see that the frequency and length of **showers varies a lot from person to person.**

**Intervention drafts | January 2021**

With the intention of working both on heating and on showers, we've moved forward on those 2 topics towards pinpointing a specific behaviour and a first design of possible interventions.

**Collective intelligence online workshop**

In January, together with CROUS, we've organized an online workshop gathering different stakeholders. We had persons from CROUS Lyon, persons from Hespul, 2 persons from Lyon Métropole (local authority at the metropolitan scale), 2 persons from REFEDD (national students organisation about

sustainable development).

After showing them the main information about the pilot site, the persons were divided into 4 groups, and each group had to come up with an idea.

Not all groups specified which behaviour they intended to change or their target behaviour. Here the four ideas that emerged:

**Heating**

- Lending consumption measurement devices (wattmeter, thermometer, hygrometer...) and offering some sort of coaching about energy savings.
- Offering a « cocooning kit » in autumn, with for example tea and a plaid. The event would be the opportunity for live sensitization about heating savings and handing out information about the heating system. The cocooning kit sends the message "we're taking care of you" instead of "we want you to do extra efforts", at least that's the intention!

Autumn was chosen in purpose as the moment when students get their keys is already stuffed with information and papers, so the choice was to use the moment when heating starts. Using the « right info, right place, right time » tool on the radiator control. The idea is to show what use corresponds to each value (*I'm away for long time = 1, I'm away for a short time = 2 ; I'm home and working = 3 or 4, I open the windows = 0*). To ensure some sort of feedback (*"I've set up the radiator to 3,5 and yes... it is 20°C in my flat, it works"*) and to avoid the students to only rely on their senses, thermometers would

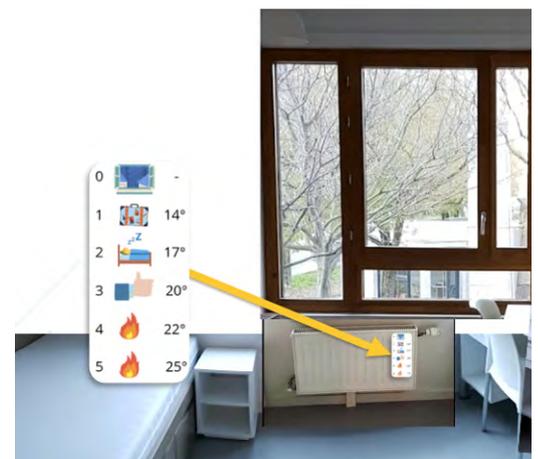


Image of heating leaflet

**Game of showers:  
encouraging students  
to save water**



Image of poster in context

be handed out.

**Showers**

Set up an intervention where musical showers would combine shorter showers and pleasure. Phones could be used to play the music

**Intervention design | February – May 2021**

Following the workshop, with Anaïs from CROUS we started designing 2 interventions, one on heating and one on the showers. The first one would aim at lowering the heating whenever possible (at night, when spending the day out), the second one at reducing the time spent under the shower.

**Heating**

We decided to use the idea 3 from the workshop. The “cocooning kit” did interest us a lot, but autumn was outside of the project calendar. So, the intervention would consist of 3 actions, embedded in communication about the project by email or using the residence Facebook group:

- Giving out a laminated and **magnet memo** to be put on the radiator. This memo would be very visual, showing the use for each radiator control value. Image below.
- Giving out a **thermometer for the room**. The chosen thermometers have a design that shows the expected temperature around 20°C and that above 22°C it is too

hot to heat.

- A series of “**interactive**” posters on the stairs door or lift, asking “have you lowered the heating before leaving?” and offering a way to answer (stickers or other, with the difficulty of being Covid-compatible). The posters serve as a reminder, this is why they are on the same floor and not at the exit of the residence: going back to the room is still possible. If the students really answer on the poster, it also serves as peer pressure. If not, it would be left as just a reminder.

As time went by, we pragmatically decided to concentrate on the showers intervention, as the heating season would end quickly.

**Showers**

We very quickly came to the idea of an intervention composed of:

- A **laminated poster** to be installed in the bathroom, delivered with a 1 pager explaining the intervention, showing where to hang the poster and inviting the students to join the Facebook group if they had not already.
- 3 QR codes pointing to **3 songs of different lengths** to enjoy a short musical shower, respecting each one’s rhythm and motivating the participants to try shorter and shorter showers.

About the choice of the songs: it was quite a headache! We decided to choose a theme for each week, with songs known by many. First week were French songs about water, second week were international songs about water, third week songs chosen by the residents.

- **3 different designs** of poster to see if students had a preference or if a design would have a bigger effect
- **Changing the songs** each week and offering the students to choose songs for the 3d week (Facebook poll on the side). To create novelty and engagement.
- To motivate students to participate in the evaluation questionnaire, **3 prizes** could be won among the respondents: a one-year Deezer account, a Bluetooth loudspeaker, a herbal tea bottle.
- To wrap up the intervention, inform properly the residents and keep the link alive, we designed with CROUS **A3 posters, official emails from CROUS and posts on the**

**Game of showers:  
encouraging students  
to save water**



Image: Delivering the kit to the students on day 1

**Facebook group of the residence  
Intervention | June 2021**

The intervention was set up for 3 weeks, in June 2021, from the 4th to the 25th. Here is the general planning of the different actions undertaken.

**10 days before the intervention starts**

Announcing the intervention on the residence Facebook group & A3 posters on each floor

**Starting day**

Launching the intervention on the Facebook group & 1 stand for 3 hours delivering the "shower kit" in hand and discussing with the students in the residence & all the remaining posters delivered directly to the mailbox

**1st Week**

Communication via the Facebook group: Have you installed the poster? & Have you tried 1 shower = 1 song?

**2nd Week**

Motivating the students to participate via Email & ask via Facebook for songs they want to hear during the 3rd week

**3rd Week**

Results of the 2nd week + Reminder: participants to the evaluation questionnaire

may win a prize via Facebook  
**Closing day**

Thanks to all via Facebook & 1 stand for 3 hours collecting the "shower kit" and discussing with the students in the residence

**Some days after**

Thanks, last results, link to questionnaire via email and Facebook



Image: Delivering the shower kit

## Game of showers: encouraging students to save water

### 7. Evaluation

This is the part where we did have a big disappointment: individual meters data was expected, but unfortunately technical problems made the readings unavailable during the time of the intervention. So, here what our evaluation set of data looked like:

#### Number of residents

- Officially occupied rooms / flats
- Planned but not possible: Really occupied rooms / flats (using individual meter readings)

#### Water consumption

- Using the online platform for the general meter of the residence, daily data
- Reference consumption taken over 3 weeks of may, brought back to a 1 week average
- Real consumption during each week of the challenge, to be compared to that average consumption
- Planned but not possible: Using individual meters to see any relation to other consumptions, or to the poster chosen

#### Facebook activity

- Likes
- Comments
- Others

#### Songs/Playlists

- Readings in Youtube

#### Students

- Choice of the poster design, between 3 options
- Final questionnaire



Image of wordcloud from questionnaires

### 8. Outcomes and learnings

#### Impact on water consumption

We observed that compared to the reference period, the **water consumption did decline, mostly during the 1st week of the intervention.** The reference period shows a consumption of 55700 litres a week, for more than 100 students. The exact number of students actually being there is not known, only administrative exits are registered, not temporary vacations (we expected to get that piece of information from individual meters). Here are the water savings for each week:

- 8000 litres for the 1st week
- 3700 litres for the 2nd week
- 2000 litres for the 3rd week

**This amounts to the average consumption of a French person for 1,5 months!**

This tends to indicate that the intervention did play a role in the consumptions. At that period of the year, the residence manager told us that residents are less and less present (going on holidays or on internships). The “logical” tendency would then have been to have lower and lower consumptions, which was not observed.

It seems to show the “novelty” issue of interventions having most impact at the beginning, even if we tried to avoid this by changing songs and keeping a lively communication.

Among our 20 respondents to the final questionnaire, only 1 considers that Game of Showers has not incited them to spend less time under the shower. 80% declare they will be more careful about their water consumption after GoS.

All those conclusions should be confirmed by other trials in other residencies.

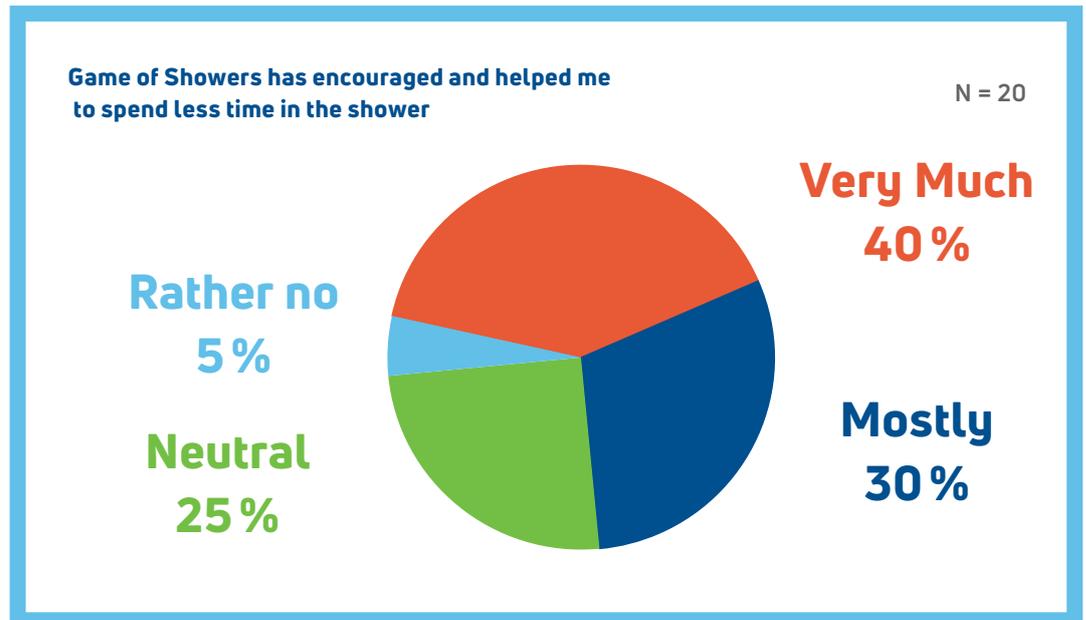
#### Evaluation of the tools

##### “Game of Showers” live delivery

Standing in the residence entrance for 3 hours to meet students going in or out was a real must. We’re convinced that face to face interaction increases engagement. However, we also observed that a big number of the envelopes delivered in the mailbox laid there the whole 3 weeks (around 20!). It seems some students just don’t open their mail or even mailbox.

**Game of showers:  
encouraging students  
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Graphic: Students Questionnaire

There might be no way to reach them on an active engagement intervention. Some explained us on the closing day that they would not stay long in the residence, that they did not have time or that they just didn't know of the intervention.

**Posters' design**

We offered the students we could meet to choose their poster. The one that was most often chosen was clearly the one with animals, the cute factor seems to seduce. Still, some of the people who chose the video game one were very motivated by that visual: *"I love video games!"*

Unfortunately, we've been unable to see if there is any relation between the design chosen (or not chosen for those who had it delivered to their mailbox randomly), and the water savings.

No reported problem on the QR code use, meaning the *"system"* invented does work.

**Music**

It is very hard to choose songs that will please everybody! Some students told us that once they had "got the concept", they'd choose a song they like and put it on their phone. This means that the playlist readings do not reflect the total number of *"1 shower = 1 song"* actions in the residence. For some others, it may have discouraged them from engaging in the action. Last but not least, questionnaire respondents were quite positive about the idea of finding

such a feature on their music platform, that would be personalized with their own songs: **95% would use it!**

**Facebook posts**

As often, participation on the Facebook group was lower than expected. Posts views were quite satisfying though: between 30 and 40 views generally, for a Facebook group reaching 70 to 80 members, out of 118 flats in the residence. Participation to the poll and comments were much less significant.

**Prizes for questionnaire respondents**

With Anaïs from CROUS, we wanted to motivate students to answer the questionnaire (and participate to the Game of Showers) by offering 3 prizes to the questionnaire respondents (drawing lots). This was announced from the beginning of the Game of Showers and reminders were posted on Facebook and on the last email. However, we only got 20 respondents, and after we drew the lots and contacted the winners, only 1 prize was collected!

## Imprint

**The Academy of Change** is a non-profit initiative of the **Collaborating Centre on Sustainable Consumption and Production (CSCP)**, **Behaviour Change** and the International **Civil Society Centre (ICSC)**, funded by the **KR Foundation**.

You can find more information on the initiative on its website <http://aochange.org>

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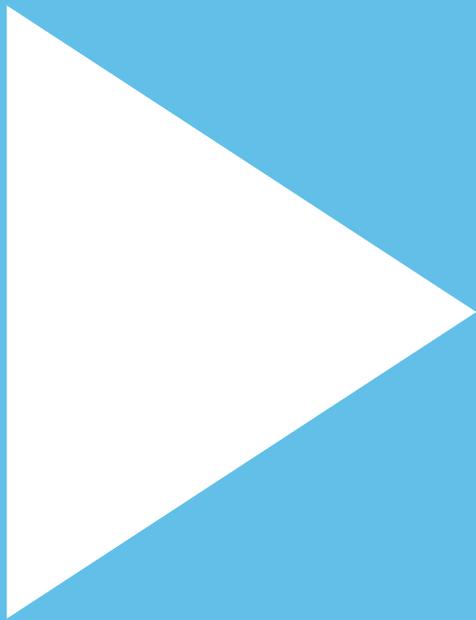
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