

# ICLife: Tools for inclusion

How to make life on a campus for higher education more inclusive.

## Toolkit Socially Ingenious



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### What's in a name?

The Socially Ingenious track brings together students from different faculties and persons with intellectual disabilities. The focus is on engineering students who are challenged to design technical solutions for problems that the persons with intellectual disability face in everyday life. Students from other faculties are invited to join and bring in their own expertise in order to make the design more appropriate for the problem at hand.

The Socially Ingenious track is offered as a 5-credit optional course to all students at university, including international students. This course is designed for all participating technological minors, but other faculties can join. To give it an extra international dimension, the course language is English. The course is structured around a number of web lectures with associated tasks and starts with a Design Thinking weekend.



During this weekend design groups of 4 to 6 students from different faculties work together. In each group, one person with an intellectual

disability is the client to be served. Design Thinking methods are introduced to the teams. A general type of problem is presented to the teams e.g. "I want to make a desert this evening, so I will need a recipe and shopping list; I will need to go to a shop to find the ingredients, pay for it, get back home and into the kitchen" etc.



The teams then start working with the client using Design Thinking methods and try to define one of the bottle neck problems in this path to the making of a desert. Once the main problem is

identified, they use Design Thinking methods like brainstorming, storytelling, personas, mock-ups, prototyping and testing solutions. The students from social science faculties act go-betweeners for clients and engineering students. The proof of the pudding is in the eating, so the teams go to a real shop, buy what they need, get into the kitchen and make the desert. The suggested prototype fits somewhere in this path and is tested and evaluated. By the end of the weekend, teams present their work and suggest improvements for a next version of the prototype. Parents and/or coaches of the persons with an intellectual disability are invited to this presentation.

This experience is much appreciated by all team members. Students get to know and appreciate their clients. The persons with an intellectual disability enjoy being a full part of this student group and value the fact that these young people

try their best to listen to them and create a solution for a problem they face.

In order to pass for the course Socially Ingenious, students have a number of additional tasks to finish during the rest of the academic year:

Take an online course on the topic of community service engineering

Do an additional small Design Thinking project and report on it.

For engineering students an additional option is offered. They can get the diploma supplement "socially ingenious" when graduating as bachelor's in engineering under the following conditions

They choose during the 1st or 2nd phase of their study courses that they carry the label 'socially ingenious'.

These courses labelled 'socially ingenious' part of the normal program but they are coloured with a social dimension. This means that the related projects have a social objective. They work in a team and carry out a preliminary study of a technical solution to a social problem. Needs from social organisations or projects for socially vulnerable groups can be the topics.

Their traineeship has a clear social dimension. In working on a project, attention is also paid to the contact with the target audience: the organization or persons who will be end users.

## Target group

- Persons with an intellectual disability
- Engineering students
- Students from other faculties, including social sciences

## What do you need?

- Willingness of different departments to participate and assign required staff to take responsibility for the project
- Supporting staff members: The responsible staff have expertise in Design Thinking and coach the students during the weekend and during the rest of the academic year.

Participating staff have experience in working with persons with an intellectual disability.

- Persons with an intellectual disability: during the start-up weekend, one person with an intellectual disability acts as client for that group. The more groups, the more clients will be necessary.
- A mix of students from different faculties including at least engineering and social science students
- A residence to organise the start weekend including meeting room with space for 5 to 8 teams
- A place to sleep and eat for everybody. The persons with an intellectual disability share the meals and dormitories with the rest of the students. It is advised to assign social science student as a buddy.



## Budget

### Costs

- cost of stay for the weekend, including meals and overnight costs. The persons with an intellectual disability do not pay for themselves.
- Staff cost: we estimate the required staff cost for organisation, coaching, examination at about 15% FTE.
- A small budget will be required to provide for paper, post-its, markers, scissors, glue, carton board and other materials to make mock-ups and prototypes during the start-up weekend.

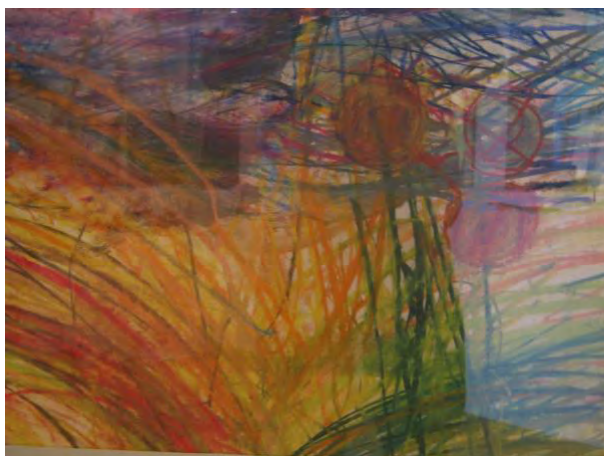
### Income

- Students pay for cost of stay and meals during the weekend. The staff costs are included in their university enrolment fee.

## Expected results

The persons with intellectual disabilities enjoy being a full part of the student group. The attention and careful listening of the other students is a very intense experience. Sharing the room, having dinner together and spending the evening cooking with all the other students is an experience that is much appreciated. Although the mock-ups made by the teams during the weekend rarely lead to real products, sometimes even small adaptations to existing tools or good and simple ideas can make a difference. Some examples:

- a simple simulation of a bank card terminal was created to train the use of a bank card to pay in the shop
- the use of a structured shopping list, ordered in the way products are presented in the store help finding the products
- a step by step recipe, with pictures and plain language support active participation in the kitchen



The engineering students learn to listen and explore before turning to action. They learn that they cannot take themselves as the reference and that Design Thinking techniques help them to better understand the real challenge, search for possible solutions and develop tools that make a difference in the lives of people with an intellectual disability. This ability to listen to clients that are far away from their own comfort zone and turn their requirements into technological solutions enhances their engineering skills. They also get to know their clients with intellectual disabilities during the weekend. For some of the students, it is the first time they interact so closely with them.

Students in social sciences can practise their role in supporting persons with a disability to participate and express themselves. They act as buddies and make sure that the persons with an intellectual disability are better understood, that they get the space and time to express themselves and are fully participating. On the other hand, these students get more in touch with the engineering world and the benefits technology can bring to the lives of persons with a disability.

The participation of international students makes the experience richer. International students tell about the living conditions for people with intellectual disabilities in their home countries. Communication with local students is in English, communication with the client is in the local language. This raises translation issues that need creative solution in order to move forward in the development of the developed solutions.

At university level, these kinds of projects offer educational opportunities to prepare students from faculties to practice in multidisciplinary skills in a very engaging way. At the same time, it offers natural and inclusive ways to mingle regular students with persons with an intellectual disability.