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# Introduction to User-Centred Design Sprint

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**Abstract.** This course will introduce attendees to the challenges and benefits of integrating User-Centred Design (UCD) methods into the Google Design Sprint (GDS) process. The course will introduce this new User-Centred Design Sprint process, and participants will practice selected methods from the process during the course. By the end of the course, participants will know why, when and how to use User-Centred Design Sprint. Delivered by experienced members of IFIP TC13, this course will appeal to researchers and developers working in the early stages of designing software products.

**Keywords:** User-Centred Design methods, Google Design Sprint, Software Design.

## 1 Introduction

The Google Design Sprint process [1] has gained popularity in the software industry for being suitable for analysing user needs and designing a running prototype for a software system in five days. A team of 7 - 10 people collaborates through one week to better understand the users' needs and the suitability of the design for users. At the beginning of the process, the team has a relatively vague idea for the user needs for the software product, but on the fifth day, a running prototype is evaluated in think-aloud evaluations with five users to evaluate the users' experiences and the usefulness of the product.

This course's proposers have taught the Google Design Sprint process in an international, 2-week intensive course in 2018 and 2019 [2], [3]. During these courses, we combined the Google Design Sprint process, with User-Centred Design (UCD) methods, in a process called User-Centred Design Sprint, or UCD Sprint in short [3]. We developed the process through three editions of the intensive course, focusing on UCD methods in the first edition of the course [4] and integrating the Google Design sprint and the UCD processes in the second and third edition of the course [2], [3]. In the last version of our course, we saw that conducting three days of UCD activities before the Google Design Sprint process and two days after it significantly extended the course attendees' understanding of the user needs.

We want to introduce the challenges and benefits of integrating user-centred design methods into the Google Design sprint process to course attendees. The course will introduce the User-Centred Design Sprint process, and participants will practice four methods from the process during the course. At the conclusion of the course, participants will be introduced to how they can use the process professionally.

## 2 User-Centred Design and Google Design Sprint

User-Centred Design (UCD) is a rich and varied discipline. The primary aim is to combine design and evaluation in developing a software system and focus these activities on the prospective users of the system that is being developed. The literature includes extensive research on UCD concepts, principles and methods. One of the classical references provides an overview of the discipline [5]. Other references focus on the principles behind UCD [6] or identify how software practitioners define and work with UCD [7].

Teaching UCD is of crucial importance to increase its influence in software development. Software development will not change towards a more user-centred approach unless there are practitioners available with UCD skills. Nevertheless, the literature on the teaching of UCD is minimal. An early workshop aimed to produce a list of skills that are necessary and important for UCD practitioners. They see UCD as a process that should yield a high utility and usability level by developing good task flows and user interfaces. Therefore, UCD practitioners should have the knowledge, skills, and other characteristics needed for considering and involving users [8].

Created to better balance his time on the job and with his family, Jake Knapp optimized the different activities of a design process by introducing a process called the Google Design Sprint (GDS) [1]. Knapp noticed that despite the large piles of sticky notes and the collective excitement generated during team brainstorming workshops, the best ideas were often developed by individuals who had a big challenge and not too much time to work on them. Another key ingredient was to have people involved in a project all working together in a room, solving their part of the problem and ready to answer questions. Combining a focus on individual work, time to prototype, and an inescapable deadline, Knapp called these focused design efforts “sprints”.

The GDS is a process to solve problems and test new ideas by building and testing a prototype in five days. The central premise for the process is seeing how customers react before committing to making an authentic product. It is a “smarter, more respectful, and more effective way of solving problems”, one that brings the best contributions of everyone on the team by helping them spend their time on what matters [1].

## 3 Description of the Course

Total duration of the course is 3 hours. The course will be scheduled in three sessions and the content of each session is described below.

The learning objectives are that:

- participants will gain knowledge on how the User Centred Design sprint process could be used in software development
- participants will gain skills in using four methods from the process
- participants will gain knowledge on how to further study the process

### **Content and structure of the course:**

#### *Session 1 (50 minutes):*

- Introduction to the course schedule and the presenters (10 minutes).
- Introduction to the User-Centred Design Sprint process (20 minutes).
  - How is the process?
  - How does it relate to the Google Design Sprint process?
  - How does the process relate to User-Centred Design?
  - How can it be used on software development?
- Introduction to the User Group Analysis method - one of the methods in the UCD sprint process. Participants do a short exercise in using the User Group Analysis method (20 minutes).

BREAK (15 minutes)

#### *Session 2 (50 minutes):*

- Introduction to UX goals, which is another UCD method in the UCD sprint process. Participants do a short exercise on stating UX goals (30 minutes).
- Introduction to the Mapping method. Participants do a short exercise on that method (20 minutes).

BREAK (15 minutes)

#### *Session 3 (50 minutes):*

- Introduction to the design and evaluation methods used in the User-Centred Design Process. Participants do a Crazy-4 exercise (30 minutes).
- Introduction to how the process could be used in industry and research. Q/A session at the end (20 minutes)

### **3. Intended audience**

Our intended audience are lecturers, IT professionals, researchers and students at the INTERACT conference who have done prototyping and evaluations with users. It is beneficial if the participants are familiar with the Google Design sprint process, but it is not a prerequisite.

Participants can be:

- Lecturers in interaction design, interested in including a User-Centred Design Sprint approach in their teaching,
- IT professionals that are interested in learning about the user-centred way of running a design sprint,
- Researchers and students interested in rapid user-centred design methods.

## 4. Reading List

Recommended reading is:

- About GDS: <https://www.thesprintbook.com/the-design-sprint>
- Also about GDS: <https://www.gv.com/sprint/>
- About UCD:  
<https://www.interaction-design.org/literature/topics/user-centered-design>

Additionally, we would like to point your attention to a long paper published at INTERACT 2021 describing a study on the User Centred Design Sprint process [3].

## 5. Proposers

### **Marta Larusdottir, Reykjavik University**

Marta Larusdottir is an associate professor in the Department of Computer Science at Reykjavik University. She has taught HCI courses in Iceland for over 20 years, and participated in teaching HCI courses internationally. She was one of the developers of User-Centred Design Sprint and the responsible teacher of a two-week course when it was taught in Iceland in 2018. In her teaching she wants the students to be active in solving projects and understanding the material through developing skills. Lately she has integrated lectures and exercises so the students stay active during the course sessions and see the value in attending and taking part. Marta is an expert member of the TC 13 committee and an active member of WG 13.2.

### **Virpi Roto, Aalto University**

Virpi Roto is a Professor of Practice in Experience Design in the Department of Design, Aalto University, Finland. She has 20+ years of experience in user-centred design both in industry and academia. She was one of the developers of User-Centred Design Sprint and the responsible teacher of a two-week course when it was taught in Helsinki in 2019. Virpi is the national representative of Finland in IFIP TC13 committee and an active member of WG13.6.

### **Åsa Cajander, Uppsala University**

Professor Åsa Cajander is leading the multidisciplinary research group Human Technology and Organisations with around 15 members, and is a part of Uppsala Computing Education Research group. Her research spans user-centred design, gender, work engagement and professional competencies. For 20 years she has been teaching HCI including user-centred design. Based on her teaching skills Åsa Cajander has been awarded the title Distinguished University Teacher.

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