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The UCD Sprint: A Process for User-Centered Innovation

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ABSTRACT
Exploring innovative ideas for interactive software has its challenges. A new process called the User-Centred Design (UCD) Sprint process has been suggested to support teams in exploring users’ needs and the future usage of the software with the active involvement of users. Research study results show great benefits for the sprint participants. The course introduces the UCD Sprint process, and participants practice two steps from the UCD Sprint: the user group analysis and stating user experience goals. This in-person course appeals to researchers and developers interested in exploring their innovative ideas through a user-centered step-by-step process.

CCS CONCEPTS
• Human-centered computing → Human computer interaction (HCI); HCI design and evaluation methods; Human computer interaction (HCI); HCI theory, concepts and models.

KEYWORDS
User-Centred Design, User-Centred Design methods, Design Sprint, Software Design, Concept Design

ACM Reference Format:

1 BENEFITS
We propose an in-person CHI course, where we explain the structure of the UCD Sprint process, why and when to use the process, and whom to invite to attend the UCD Sprint. Participants practice two lesser-known steps from the process: a user group analysis method and setting UX goals by using our support material provided on the ucdsprint.com website. At the end of the course, we discuss the benefits and possible hindrances of using the process in both industry and educational settings in academia.

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By the end of the course participants:
• understand why and when to use the UCD Sprint process
• understand the structure of the UCD Sprint
• can apply two steps in the UCD Sprint process, the user group analysis, and the UX goals
• can utilize the ucdsprint.com website to work independently on the UCD Sprint

We envision that CHI attendees would want to take this course to learn how to involve users in a structured step-by-step way in the early phases of innovative research or software development projects. While it is possible to run UCD Sprint online, the process can be used for motivating teams to come back together after working remotely during Covid-19 to attend in-person activities.

2 INTENDED AUDIENCE
The intended audience of this course includes:
• Researchers and students interested in design sprints that integrate user-centred design methods
• Educators interested in including the User-Centred Design Sprint approach in their teaching
• IT professionals that are interested in learning about a user-centred way of running a design sprint

3 PREREQUISITES
We assume the participants to have some prior knowledge of user-centred design. Ideally, the participants have taken part in the first steps of innovative software projects. It is beneficial if the participants are familiar with design sprints, but it is not a prerequisite.

4 CONTENT
The UCD Sprint process has a well-defined structure of 18 steps in 3 phases: Discovery phase, Design phase, and Reality Check phase as shown in Figure 1.

Unlike in many design sprints, representatives of the user groups are involved three times during the UCD Sprint: First during interviews in the Discovery phase and twice during the Reality Check phase: during paper prototype testing, and while user testing a realistic clickable prototype. Specific methods have been developed and integrated into the UCD Sprint to pay ample attention to the users’ needs during the early stages of the software development project, such as the User Group Analysis method, setting UX goals, and prototyping. Prototypes are tested with users two times during the process, first as sketches on paper and then later as clickable prototypes to gather feedback. Each step of the process builds on
the results of the previous steps. The ucdsprint.com website gives instructions on how to conduct the UCD Sprint process.

In this CHI course, we explain the structure of the UCD Sprint process, when to use the process, and whom to invite to attend the UCD Sprint. The process is adaptable and provides a flexible schedule that works for remote and in-person teams, experienced or beginners alike. Participants practice two steps from the process that are less-known methods: the User Group Analysis method (Discovery - step 2) and Setting UX goals (Discovery - step 4). These steps focus on a deep understanding of user and system needs and goals, addressing one of the main issues that lead to failure in new software launches – misunderstanding of users. At the end of the course, there is time for discussions on how to use the UCD Sprint in various types of projects. The course is scheduled in two 75 minutes sessions and the content of each session is described below.

Course schedule:

Session 1 (75 minutes):
- Introduction to the course schedule and the presenters (10 minutes).
- Introduction to the UCD Sprint process (20 minutes).
- Introduction to the user group analysis method – Discovery - step 2 in the UCD Sprint process (5 minutes).
- Participants do an exercise using the user group analysis method (25 minutes).
- Discussion of the benefits of the user group analysis and how best to adapt it to individuals and teams (15 minutes).

BREAK

Session 2 (75 minutes):
- Introduction to UX goals – Discovery – step 4 in the UCD Sprint process (15 minutes).
- Participants do an exercise on exploring and deciding UX goals (25 minutes).
- Introduction to how the process could be used in the industry and research (15 minutes).
- Q/A session and open discussion at the end (20 minutes).

5 PRACTICAL WORK

Participants work on two practical tasks.
- In session 1, participants are asked to use the ucdsprint.com website and download a template to analyze the context of use for one chosen user group for a provided case. They first work individually on analyzing and then have the opportunity to discuss in pairs their analysis and ask questions to the course instructors.
- In session 2 participants are asked to use the ucdsprint.com website and download a template to define user experience goals for a provided case. They first work individually on defining 3 UX goals and then discuss in groups of three and make a joint decision on 3 UX goals for the entire group. At the end of this session, participants get the opportunity to ask questions to the course instructors and discuss.

6 BACKGROUND

The User-Centred Design (UCD) Sprint was proposed by HCI researchers from Finland, Iceland, Denmark, and Estonia in 2021 [1]. It is a cost-effective process to define what to design in the early stages of software development, especially focusing on exploring big and innovative ideas.

The UCD Sprint process was developed through three editions of an intensive interaction design course. In the first edition, the focus was on introducing and practicing UCD methods [1]. In the second edition, the Google Design Sprint process was conducted by the book during the first week of the course [2] and UCD methods in the second week. In the third edition of the course, UCD methods and GDS methods were more integrated [3].

In all course editions, students with different backgrounds worked on design challenges in teams with ideas that were brand new to them. The UCD Sprint process is based on the experiences gathered through these three editions of the course by asking students to give both quantitative and qualitative feedback on the course content, the structure, and the learning environment. Additionally, an introductory course on the UCD Sprint process was given at the INTERACT 2021 conference [4] and the NordiCHI
In the UCD Sprint, the step-by-step process of Knapp’s design sprint [1] is modified and combined with a user research phase that the HCI community knows from User-Centred Design. It is an inclusive process, as the step-by-step process allows team members with various backgrounds to participate in the initial analysis and design process. Since new ideas for software development are explored while conducting the UCD Sprint, it fits particularly well for user-centred exploration of innovative projects in their first stages.

7 INSTRUCTORS’ BACKGROUND

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. In her teaching she wants the students to be active in solving projects and understanding the material through developing skills of using UCD methods. She was one of the proposers of UCD Sprint and the responsible teacher of a two-week course when taught in Iceland in 2018 [2, 4]. She was also one of the instructors of the UCD Sprint course at INTERACT 2021 [5] and NordiCHI 2022 [6]. Marta is responsible for introducing the UCD Sprint and the User Group Analysis method. She will also coach the practical work on using that method.

Virpi Roto is a Professor of Practice in Experience Design in the Department of Design, at Aalto University, Finland. She has 20+ years of experience in user-centred design both in industry and academia. She was one of the original proposers of the User-Centred Design Sprint and the responsible teacher of a two-week course that was taught in Helsinki in 2019 [1]. She was also one of the instructors in the UCD Sprint course at INTERACT 2021 [5] and NordiCHI 2022 [6]. Virpi is responsible for introducing the UX goals and coaching the participants through practical work on setting UX goals.

Rosa Lanzilotti is an associate professor in the Department of Computer Science at the University of Bari (UNIBA), Italy. She teaches and has taught HCI courses both for bachelor’s and master’s degrees. She is also a member of the IVU (Interaction Visualization Usability and UX) Lab at UNIBA, where she coordinates the research on Usability Engineering and UX, which aims at promoting the use of usability and UX practices in software development processes in industry and public institutions. Rosa was one of the instructors in the UCD Sprint course at NordiCHI 2022 [6]. Rosa will be responsible for extending the accessibility for participants.

Ioana Visescu is a PhD student in the Department of Computer Science at Reykjavik University under the supervision of Dr. Marta Larusdottir. With a background in business and technology, and an interest in user experience, her research focuses on design sprints and design methodologies and their applications in academia. Ioana was one of the instructors in the UCD Sprint course at NordiCHI 2022 [6]. Ioana will be responsible for assisting participants during practical work.

8 RESOURCES

During the course, the participants explore the ucdsprint.com web for additional support in conducting the practical sessions. Additionally, a website explaining the course is available.

9 ACCESSIBILITY

Rosa Lanzilotti devotes her attention during the course to participants with special needs. The course is designed to be accessible to anyone, including students who are blind, deaf, or have physical disabilities. All online materials provided to the students are accessible according to the most accepted guidelines, for example, the WCAG 2.1.

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REFERENCES