# The UCD Sprint: Bringing Users Along to Sprint

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**Abstract.** One of the most important aspects of software development is that the software is suitable for the intended users. Software professionals often tailor software development to their own needs, resulting in the software being unsuitable for many users. The course will introduce a User-Centered Design Sprint (UCD Sprint) process, which aims at extending the understanding of users' needs and wants. Participants will 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-centred progressive and concise step-by-step process.

**Keywords:** User-Centred Design · User-Centred Design Methods · Design Sprint · Software Design · Concept Design

## 1 Background

A design sprint procedure was presented in a book by Knapp and colleagues in 2016 [3]. Those design sprints consist of a 5-day collaborative design process where seven or fewer people work together, who have different backgrounds, for example from management, finance, marketing, customer research and technology. The sprint manager should have experience with the methodology and lead the team through the methodology with specific instructions and timing for each method. The process includes both group discussions and individualized idea development In design sprints from Knapp and colleagues, users participate in the process once, on the last day of the sprint.

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 methodology was developed to introduce more user-centered methods into design sprints [1]. In the UCD Sprint methodology, considerable time is used to understand the needs of the user groups. The UCD Sprint methodology provides a clear framework that explains step-by-step what needs to be done for each phase of the design process, making it a good fit for teaching user-centred methods [7]. The UCD Sprint methodology includes phases to define user groups, understand their needs, define user experience goals for the project,

develop a design solution and evaluate it with users through prototype testing [1]. The initial methodology is two weeks long, with time also taken for the teaching of the methods and the final presentations of each team. When the methodology is applied by professionals familiar with user-centred methods, the process can be shorter. One advantage of user-centred design sprints is that the methodology is more flexible than Knapp's methodology, so it is not necessary to understand that certain methods are used on certain days.

An introductory course on the UCD Sprint process was given at the INTERACT 2021 conference [5], the NordiCHI 2022 conference [6], and the CHI 2023 conference [7]. In the UCD Sprint, the step-by-step process of Knapp's design sprint [1] is modified and combined with methods and techniques from User-Centred Design and Experience-Driven 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 development are explored while conducting the UCD Sprint, it fits particularly well for user-centred exploration of innovative projects in their first stages.

## 2   Course Aims, Learning Outcomes & Intended Audience

We propose an in-person course at INTERACT 2023 on the UCD Sprint, 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.

By the end of the course, participants:

- will understand why and when to use the UCD Sprint process
- will understand the structure of the UCD Sprint
- can apply two steps in the UCD Sprint process, user group analysis, and UX goals
- can utilize the ucdsprint.com website to work independently on the UCD Sprint

We envision that INTERACT 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. A similar version of the course has been given at INTERACT 2021, NordiCHI 2022 and CHI 2023 [5–7].

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.

We assume the participants to have some prior knowledge of user-centred design. Ideally, the participants have participated in the first steps of idea discovery for software projects. Participants familiar with design sprints will learn how to focus more on users and involve them more frequently in the design sprints.

## 3   Course 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 Fig. 1.
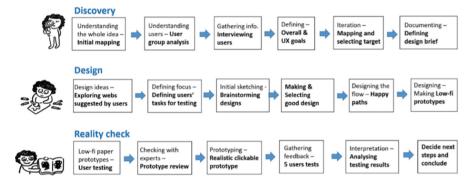


**Fig. 1.** An overview of the 3 phases and the 18 steps in the UCD Sprint (images © Might Could Studios)

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. Methods have been developed and integrated into the UCD Sprint to pay thorough 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. 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.

The UCD Sprint is based on a number of studies on UCD methods and aims at discovering user needs and design preferences [1]. UCD Sprint guides software professionals through the methodology step-by-step in a concise manner. The objective is to implement a precisely selected part of the system and test it with users in a fast and efficient way in order to test the software concept early with the users themselves before embarking on costly development [1, 5].

In this INTERACT 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: 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 min sessions and the content of each session is described below.

**Session 1:**

- Introduction to the course schedule and the presenters.
- Introduction to the UCD Sprint process.
- Introduction to the user group analysis method – Discovery - step 2 in the UCD Sprint process.
- Participants do a practical task using the user group analysis method.
- Discussion of the benefits of the user group analysis and how best to adapt it to individuals and teams.

**Session 2:**

- Introduction to UX goals – Discovery – step 4 in the UCD Sprint process.
- Participants do a practical task on exploring and deciding UX goals.
- Discussions on how UX goals could be evaluated.
- Introduction to how the process could be used in the industry and research.
- Q/A session and open discussion at the end.

Participants will 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.

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.

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