
Introduction

The constant evolution taking place in the field of Information and Communication Technology (ICT) means that an ever-broader range of users are employing this technology in increasingly flexible, changeable and varied cases of use. In parallel to this trend, owing to our demand for the provision of useful and usable solutions, the design of systems, services and products are becoming more and more complex. In response to this demanding context, the User-Centered Agile (UCA) method, which is presented in this book, is conceived to include both User-Centered Design (UCD) and agile development methods, taking full advantage of the particularities and assets of each of these approaches.

The foundation for the UCD method is the frequent and iterative participation of the user throughout a design project. Generally speaking, projects which operate on the basis of this approach are divided into three phases (see Figure 1.1): an analysis and design phase, a development phase and a validation and evaluation phase. An ergonomist, who is a specialist in UCD, usually makes a contribution at the earliest design stage, and is also involved in the final phase by way of user testing, but has little input during the intervening development period. However, the design phase, which is sometimes rather short, does not always allow for the involvement of real-world users. Furthermore, because the evaluation phase occurs only after the development has already taken place, the possibilities for modifications to be made are limited, for reasons of time and financial costs.



Figure 1.1. *Division of projects into three phases*

In parallel, for a number of years, agile methods (in particular the Scrum method) have become widely used by development teams. These are models which involve iterative and incremental development, intended to respond as faithfully as possible to the needs expressed by the project commissioners, offering a high degree of reactivity to their demands. These approaches facilitate rapidity in the development of a service, and flexibility to apply adaptations which appear necessary to this product during the development phase. Nevertheless, the end-user is not formally involved in the pursuance of these methods, meaning it is of limited use from the point of view of UCD.

UCD and agile methods have points in common: in particular the concept of iterations and the search for feedback. We can, therefore, envisage mutually integrating these two methods, with the aim of strengthening the taking into account of a “user” perspective. If a partial functional product is delivered at the end of each iteration, regular evaluation by users is possible, and, therefore, UCD can continue during the development phase and be present throughout the design process. Agile methods, for their part, can take account of the needs of the end-users, rather than just those expressed by the commissioner of the development project.

Put more clearly, the UCA method which was described briefly in the article [DEU 12] and which we are suggesting here is intended, primarily, to adjust the design phase to include a hybrid method wherein UCD and the agile Scrum method are interlocked, giving an overall view of the product. Then, in the development phase, the aim of the UCA approach is to enable an ergonomist to continue to apply the UCD process by way of regular mini-user testing sessions. Finally, in the validation phase, the method advocates that “conventional” user testing be employed. Figure 1.2 illustrates the logic of these three phases.

This method is presented in the form of rules and formal recommendations. It inevitably involves certain infringements on some of the rules unique to either method, since the aim is to integrate them together, and therefore find a balance in the interlocking of each with the other; and this cannot be done without some compromises on both sides.

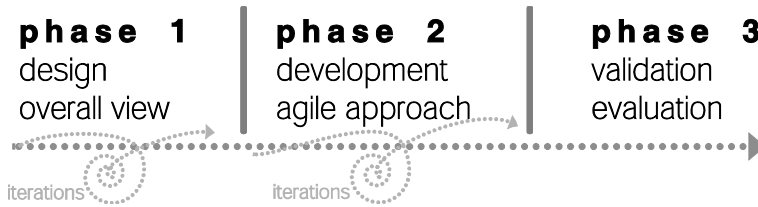


Figure 1.2. *Division of projects into three phases in the context of the UCA method*

In the interests of a full appreciation of the method being proposed here, in Chapter 2, we introduce the methods employed – namely: the Scrum method, the UCD method and the user testing which occupies an important place in our proposed system.

In reviewing the literature, we were able to observe that the combination of UCD and agile methods is not a new topic, and many works highlight the relevance of such an approach. Chapter 3 analyzes the existing body of work published over the past decade on this subject, and also offers a summary of feedback on experiments conducted with the UCA method. We have based our thinking on all of these sources when devising the UCA method.

The UCA method is a working framework based on the logic introduced by Scrum – a project management oriented working framework. The method proposed herein is intended to be a “human-centered” extension of Scrum given the integration of UCD and user testing. It is for this reason that the description of the UCA method given in Chapter 4 is based entirely on the fundamental aspects of the Scrum agile method and employs its terminology and its elements.

The final chapter presents two case-studies which partly illustrate the application of the UCA method. Put differently, the two proposed projects employ the UCA method which we advocate here as closely as possible to its description, in view of the context of each project.

