

## Dear interested in the ACTIVATE project,

In the past year you have had contact in different ways with ACTIVATE.

Perhaps you were involved as an interview partner, took part in a study or became aware of us through public contributions. With this first newsletter we would like to inform you about the current state of the project. Within the framework of the project, a technical system will be developed to support ventilated intensive care patients in their (re-)orientation as well as in their communication with relatives and treatment staff. A special and novel input device in the form of a ball will be developed especially for this purpose.

### User and context analysis

The first step was to analyse the potential users and the overall context. In order to find out how the respective participants would handle the phase of the waking up and weaning from mechanical ventilation in the intensive care units and what demands this places on the ACTIVATE system, an interview study was conducted. In individual interviews, we interviewed 15 intensive care patients, 16 relatives, as well as six physicians. We also conducted three group interviews with a total of 26 nurses, as well as a physiotherapist and a pastor, all of whom have relevant professional experience in intensive care units.

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Especially stressful symptoms such as thirst, pain, anxiety, but also further questions, e.g. after treatment procedures, "What happened to me?" or information about time and place cannot be expressed by the patients, or only with great difficulty. On the basis of these results as well as worldwide research results of other studies, personas and problem scenarios (fictitious but concrete users of the ACTIVATE system) were developed, which can make the developers understand what is really important in the wake-up phase.



In the context of a workshop project partners discuss the results of the interviews.

In addition, general questions about the ACTIVATE system, such as: "Which accessories should be used for the input and output devices? Which materials meet the hygienic and safety requirements of an intensive care unit? In which form (language and/or writing) can patient's best be supported in communication during the awakening phase", were discussed in many meetings of the project participants from different disciplines (including nursing sciences, (media) computer science, hospital IT and product development). Furthermore, solution approaches were debated.

The control and interaction devices for the system are also designed and developed in the project.

The result is BIRDY! With the ball-shaped input device, intensive care patients lying in bed can control the ACTIVATE system.



Potential interactions are analyzed from the perspective of a patient.



Project partners discuss personas and scenarios.

### What can BIRDY do and what does it look like?

BIRDY is a completely new control device. In order that the later user can use it adequately, meaningful external properties had to be specified. Initially, a study with 40 test subjects (twenty adults over 58 and between 18 and 40 years of age), identified preferences regarding the external properties of the BIRDY input device.

During the study, the test persons described their preferred features such as size, weight, shape and surface texture on the basis of a series of predefined objects (see Picture 4) and justified their preference.

The development of BIRDY began on the basis of the results, jointly developed technical requirements and organizational and legal requirements (e.g. hygiene guidelines for hospitals).



Study objects for the BIRDY study.

## Perspective

The system is currently being designed and the ACTIVATE system components (e.g. screen, charging station, BIRDY, receivers, software), are procured and put together.

Above all the software development is - besides the development of the BIRDY Demonstrator - currently a focus of the project work. Once this phase is completed, the ACTIVATE system will be tested in the field (in the intensive care unit). For this purpose, a so-called randomized clinical Study is planned and expected to be executed in 2019.

In addition, within the framework of our public relations work we will present the project and the interim results at national and European congresses.



Photomontage of the ACTIVATE system from the perspective of a patient.

## Information

Every issue of our newsletter can be found on the Internet at [www.projekt-activate.de](http://www.projekt-activate.de).

We look forward to informing you about our current state of the project in the future.

### Consortium leadership

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## Project partners



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