

Fact-Sheet DIRECT

The **D**igital **R**Esearch **C**reation **T**ool (*DIRECT*) is a modular infrastructure for the creation and implementation of internet- and smartphone-based interventions. The platform provides the necessary technical framework for fast prototyping, straightforward app-project realization, innovative clinical psychological research, national and international collaborations, and practice-oriented teaching. *DIRECT* is developed in cooperation, most notably by the Freie Universität Berlin and the Swiss Red Cross, with several years of practical experience in applied research and dissemination projects.

With *DIRECT*, the idea is to develop a universally applicable and sustainable software for information dissemination and interactive content around mental health and psychosocial support (MHPSS). Some of the biggest obstacles for creating a new mobile app are the considerable upfront costs for software development, combined with the dependence on a single software development company. As a community-based software project, *DIRECT* aims to overcome these obstacles by providing a software platform that is versatile enough to be adapted to all kinds of needs with different requirements out of the box, while still offering the possibility to add new features or adapt the software to specific needs.

The software consists of three major components:

- The platform-independent app landscape (i.e., Android and iOS mobile apps as well as a web version), based on the well-established React Native framework.
- The Content Management System (CMS), where all the content of the apps is created and modified (similar to website content management).
- The Admin Panel, where user administration, data management and study coordination (in research projects) take place.

The content concept is modular to provide the most flexibility. Once deployed to a server, any number of projects can be run in parallel as tenants on the same instance, each of which can be a separate app in the stores. For research purposes, there can be parallel studies with different content for certain groups of users.

Where *DIRECT* really shines is in its features. The software provides the most common interventions used in E-Mental-Health (like simple static content, text-, audio- and video-exercises and interactive fields) as well as several complex interventions (such as complex conditions, a lifeline-exercise, an activity planner, a mood- and substance tracker, and a grief altar exercise). Additionally, the software provides functionality for secure communication through an in-app chat (e.g., for peer-guidance or therapeutic council), a dynamic recommendation widget, a wiki-function as well as the ability to save favourite modules to a private list. The software is also capable to support any number of translations, with a special focus on right-to-left languages such as Arabic with a mirrored layout.



The smartphone-based guided self-help app Sui from the Swiss Red Cross providing psychological and psychosocial support for refugees is one of the interventions that runs on the *DIRECT* platform. It can be found in the app stores as «Sui SRK».

DIRECT aims to be a sustainable software project, supported by a diverse group of stakeholders and guided by strong principles, which are:



User-Centred Design: the software is designed by involving users at each stage of development to make sure the user interaction is smooth and tailored to the target groups.



Separation of Content and Structure: *DIRECT* provides the structure to the application so that all content is produced separately and maintained via the content management system. This enables anyone to create and change the content of an application, without the need for specific knowledge in programming.



Versatility: the software is developed with many different applications in mind, so that it can be easily adapted for many different purposes. *DIRECT* offers tools for the configuration of studies and interventions before release, for the creation of roles and rights, and for various options for the registration, guidance and customisation of interventions after release.



Reusability: the software is made so that it provides all kinds of means to re-use what is created. On one hand, the whole code base is progressively developed so that at any point a new application can be launched with the same software and different content, and on the other hand the content created within one installation of the software on a specific server (instance) can be copied between tenants within that instance or exported and imported between different instances.



Open-Source: once the code is satisfactory and there is a stable structure around the project, the software will be released as open-source. This ensures the longevity of the software and enables anyone, especially small entities with few resources, to join the community and provide critical information to vulnerable target groups.



Maintainability: as the development of the *DIRECT*-software progresses, it grows in complexity – The continuous development of the original code base of *DIRECT* is coordinated by a core team with the aim of creating a stable and maintainable version of *DIRECT* that can be used in several parallel projects over a certain period of time before the next version of *DIRECT* is introduced. This approach is outlined in a lifecycle management plan.



Safety, Security & Privacy: in the field of mental health, personal data from users must be treated confidential and are particularly worthy of protection. The related risks must be addressed accordingly. Thanks to the year-long experience of the involved development partners, state of the art protection against most common risks and attacks is secured, as well as compliance with regulations such as EU GDPR.