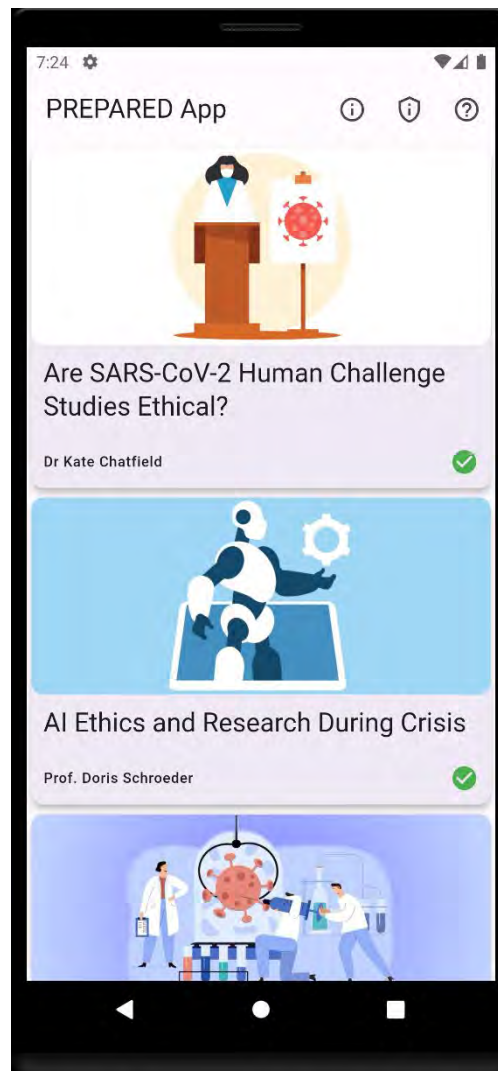




**Case Study App**  
Paspallis and Kasenides  
14 December 2023



**Overview:**

This deliverable summarizes the management, development, and functionality of the PREPARED app.



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## 1. Document Information

<b>TITLE</b>	Case Study App
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## Version control

Date	Edited by	Description of contributions and changes
<b>28/02/2023</b>	Paspallis and Kasenides	Initial version outlining the project management, design, and technical parameters of PREPARED app.
<b>1/3/2023</b>	Nearchos Paspallis	Applied latest Word template for PREPARED deliverables.
<b>2/3/2023</b>	Doris Schroeder	Minor language edit, addition of budget and one substance suggestion (entering a case study from different perspectives)
<b>15/3/2023</b>	Nearchos Paspallis	Accepted all edits and suggestions
<b>25/9/2023</b>	Nearchos Paspallis	Added Appendix with details on the “beta” release of the app on Google Play
<b>27/9/2023</b>	Doris Schroeder	Minor edit – Milestone completed
<b>4/12/2023</b>	Doris Schroeder	Edit to adapt as deliverable
<b>12/12/2023</b>	Nearchos Paspallis	Updated with latest developments in the app implementation, as well as details on the latest release to Google’s Play Store (Android) and Apple’s AppStore (iPhone and iPad).
<b>13/12/2023</b>	Doris Schroeder	Final check before submission

# 1. Executive Summary

The PREPARED App is a tool designed to support the project’s aim to provide “engaging, interactive, training materials”.

At its core, the app is integrating a set of interactive case studies, each one developed to foster the dialogue on topics related to ethical decision making.

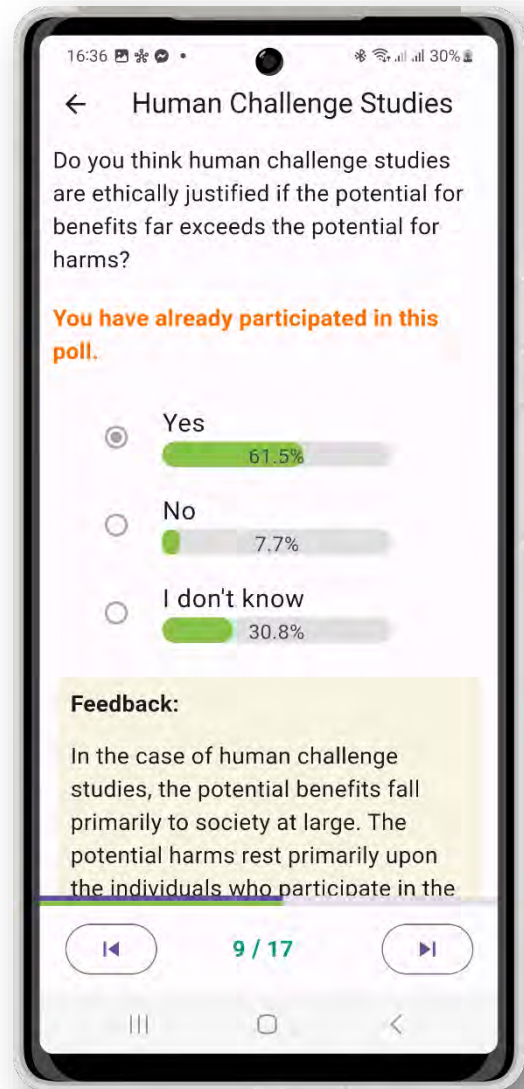
Several static and dynamic features are enabled to allow the formation of media-driven, interactive case studies. This includes support for rich media pages, videos, polls, discussion forms, etc.

The design of the app is based on a component-based architecture, which enables the enrichment of the app with new features. For example, this architecture allows the team to define and implement new functionalities beyond the original specification, to support new case studies and new interaction modes.

From a technical perspective, the app is developed to run on Android, iPhone, and iPad devices, reaching the vast majority of smartphone and tablet users.

This document provides an overview of the process used to develop the app: setting the management objectives, identifying and describing the requirements, providing wireframes to serve the discussion around the app design, and managing the technical specifications.

Lastly, the document appendix contains two important sections: First a table summarising the main milestones linked to the app releases on Google Play and Apple AppStore. Second, guidelines for case study authors, to learn about the functionality available in the app, and how one can make use of the interactive features in case studies.

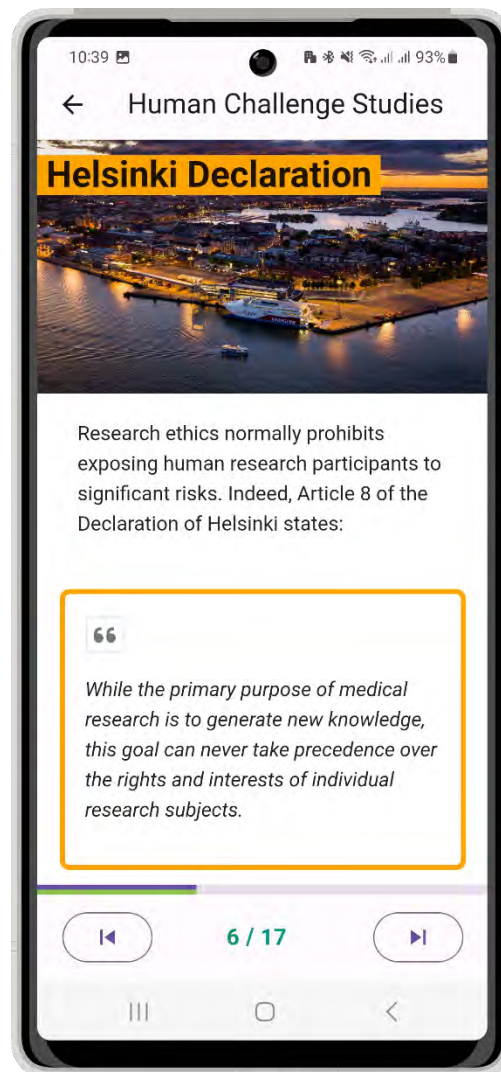


## 2. Introduction

This document outlines the work undertaken for the PREPARED Mobile App up. The objective of this app is to complement and enhance the training material which is developed to meet Objective 5 (i.e., “Foster broad uptake of project outputs through strategic synergy building and the provision of engaging training materials to improve overall preparedness for global crises”). As a deliverable, this document includes details about the project management for the development of the app, it collects and manages the identified requirements, it maintains a prioritized tasks list, it defines the design of the required software, and it identifies and manages the risks related to its development.

The purpose of the PREPARED mobile app is to provide a digital platform to complement the training in terms of research ethics and integrity decision-making during global crises. This will be achieved by populating the app with illuminative case studies that enable transformative learning and bring important information to the learner. The app is considered one of the building blocks of the training material and will be most effective when used in the context of the overall training course on research ethics and integrity in global crises.

The app targets the two most popular and common smartphone platforms: Android and iOS. The design of the app assumes no specialized skills by the users, apart from familiarity with installing and operating common mobile apps in either of the two targeted platforms.



## 3. Project Management

This section covers the main concepts relating to the project management for the development of the app. It includes a discussion on Resource and Schedule Management, on Quality Management, and on Risk Management.

### 2.1. Resource and Schedule Management

To better organise and coordinate our work, this section starts by defining *what* will be developed, *who* will contribute, and the milestones for *when* it will be delivered. It also lists the budget resources other than personnel costs.

#### 2.1.1. What: The Mobile App

The Mobile App will provide an interactive platform where the learners will view content, provide their input, and interact with others, for instance by seeing the outcomes of polls when in individual learning mode or by joining discussions when in group mode (see below).

At its core, the main method used in the app will involve scenarios (in the form of text, accompanied by media like videos, photos, animations, or illustrations) that will present an ethical question or dilemma. The learner will be triggered to *reflect* on the situation, typically by asking them to consider several alternatives, for instance in engaged multiple choice questions with adaptive feedback.

There will be two main modes of interaction: *Individual* and *Group*:

- In the *Individual* mode, the users will be able to go through the interaction at their own pace: They can view the embedded media and interact by reflecting and selecting among a set of predefined answers. An expert's response is then provided, allowing for further reflection.
- In the *Group* mode, the users can create a new, or join an existing *room*. This is ideal for cohorts taking training together as a group. In addition to the features available in the *Individual* mode, the learners can contribute to a discussion, and read/respond to others' contributions too.

#### 2.1.2. Who: The Team

The Mobile App is a responsibility of WP5. The following partners will contribute as follows:

- *ICLAIM*: Overall project management, design, implementation, and publishing of the Mobile App on the Android and iOS app marketplaces. Additionally, coordination of other partners in terms of their contributions, and monitoring additional tasks including translation of user interface or material, testing, and evaluation.


- *UCLan UK*: Oversee the selection and fine tuning of appropriate case studies for the app, as well as the application of suitable educational principles in its design and implementation.
- *UCLan Cyprus*: Create the artwork and media content needed in the app, in line with the selected case studies. Additionally, propose functional and aesthetic improvements to the app's graphical user interface and visual language respectively.
- *All WP5 partners*: All partners will support the selection and definition of the case studies, and provide feedback along the development of the mobile app. The WP5 team will serve as an internal (beta) tester. If needed, individual partners will also contribute translations for the user interface of the app.

### 2.1.3. When: The Milestones

The Mobile App development is an ongoing process, and will continue to evolve, hopefully beyond the lifespan of the project. For the purpose of ensuring that the app can be showcased and evaluated in time, we set the following milestones:

- *Mobile App Plan*: Month 6 (end of Feb 2023) – This Planning document defines the main parameters of the app project and its management, including design prototypes to initiate and drive the discussion in the consortium about the app and how it could develop. This is driven by the ICLAIM team.
- *Mobile App beta version*: Month 13 (end of Sept 2023) – A functional version of the app and the required backend to support its operation, without the final content/graphics/media. This version will demonstrate the technical characteristics of the app and it will be released as a beta app in the Google Play marketplace, so that it can be tested by selected members of the project. The purpose of this version is to further enrich the dialogue on how the app could develop. The development is driven by the ICLAIM team, with support for content from all WP5 partners.
- *Mobile App full release*: Month 16 (end of Dec 2023) – A full version of the app, published for general, public use on Google Play and Apple AppStore markets. This version will include the final User Interface of the app. It will also include non-final content/media/graphics, to further enrich the dialogue on how the app could develop.
  - *App commercial*: Month 21 (end of May 2024) – A very short video clip to entice potential users to download the app.
  - *App demo*: Month 21 (end of May 2024) – A short video demonstrating the use of the app and possible pitfalls to be avoided.
- *Mobile App final release*: Month 36 (end of Aug 2025) – The final version of the app, published as an update for general, public use on Google Play and Apple AppStore markets. This version will include the final content/media/graphics. It is envisioned that it will be incorporated in the training material and will be used beyond the lifespan of the





project. As such, an extended lifetime support is planned, so it can stay in the selected app marketplaces beyond the end of the project.

#### 2.1.4. Budget

The Co-ordinator budget includes the following items for the app development and related training materials:

- Stock imagery and video subscription
- Stock music subscription
- Apple AppStore / Google Play Registration and backend support

### 2.2. Quality Management

The quality of the end-product will be ensured in the following manner:

- Development will be organized in *sprints*. At the end of each sprint, a functional, working app will be developed to ensure that no significant risks are allowed to break the core functioning of the app.
- Development will be managed on a *software management system* like *GitHub*. This will allow application of best practices in terms of versioning and keeping backups of the full history of the project.
- *Unit testing*, *Unit Interface testing*, *Integration testing*, and *System testing* will be planned and applied as needed, for additional quality guarantees in the development and creation of new versions.
- A gradual release of the app first in *alpha* (internal), then *beta* (limited public) versions will gradually expose the app to a selected group of users, allowing the developers to validate that the app is both appropriate and error-free.
- An *expert evaluation* will be performed after the first full release, to focus both on the correctness of the app (bug-free), as well as on its effectiveness (meeting its objectives).

### 2.3. Risk Management

This section lists the main *risks* we have identified relating to the development of the app, as well as indicative actions to avoid, and/or recover from them.

While we have not identified any specific risks for the app development project, a number of common risks that relate to software development and large research projects are as follows:

Table 1: Risk Management Plan

Id	Description	Likelihood	Severity	Actions
1	Failure to meet deadlines. This risk could be triggered by any number of reasons, including failure of contributing partners to submit their parts, e.g. case studies, in time.	Medium	High	This risk can be mitigated by closely monitoring the deadlines and holding regular meetings within the development team, and with the relevant, contributing partners.
2	Unpredicted changes in resource availability, including changes to the team.	Low	High	This risk can be mitigated by ensuring that multiple (at least two) stakeholders can carry out each of the corresponding roles (such as software development, media content creation, graphics design, testing, etc.) Additionally, the development team will utilise an open-source software development approach to keep the code as reusable and maintainable as possible.
3	Changes in the app's original scope. These could be triggered, for example, by varying needs identified by the designers of the case studies and the underlying pedagogic principles.	Medium	Medium	This risk can be mitigated by keeping the app design <i>flexible</i> as much as possible, allowing for changes in the underlying data and software architecture as needed.
4	Communication problems and mistakes. As this is a large project with partners from many locales/languages, and a large variety in terms of expertise, lack of communication could magnify problems, or result in a less effective design.	Low	Medium	This risk can be mitigated by maintaining good and timely communication among the relevant partners. This document itself is one such method, and additional steps are planned, including the release of wireframes and intermediate versions of the app for feedback.

Id	Description	Likelihood	Severity	Actions
5	Budget problems. This could result if, for instance, the app turns out to be significantly more <i>demanding</i> in terms of design and development time. This could relate to any of the contributing partners.	Low	High	This risk can be mitigated by properly planning the design and implementation of the mobile app. On the one hand, the time demands can be placed under control, and on the other hand, the involved partners are highly motivated to work towards an impactful output.
6	Technology-specific issues. For instance, changes in the used software libraries which could lead to delays, or changes in the pricing model of the used frameworks which could lead to budget issues.	Low	Medium	This risk can be mitigated by ensuring the development team works with well-known libraries with a low risk of breaking the app. The development team is experienced with delivering similar projects and will utilize a <i>defensive</i> approach in the selection and use of third-party software. Additionally, changes to the pricing of the underlying frameworks - while unlikely - can be managed by considering alternatives or by shortening the lifespan of support beyond the end of the project.

## 4. Mobile App Design

This section describes the mobile app from the user perspective and includes some wireframes to base the discussion on.

### 3.1. Accessibility and Data Privacy

- The app will be available for free on Google Play (Android) and Apple AppStore (iPhone and iPad). This is expected to cover the vast majority of smartphone users.
- The app will not require any registration and will not collect personal data as it was designed with privacy in mind. The most 'personal' item it collects is the nickname, but the user can choose whichever name they like. The name only stays on the device is not sent to the server. When the users submit data to the server (such as their poll selections) their submission is linked to a random number linked to their installation.
- Each installation will automatically be assigned a unique ID (random number) which will be used simply for keeping the app state consistent with the backend, and for general app-usage statistics.

### 3.2. Functionality

- The main concept in the app is the “Case Study”. The app will be designed so it can include several *case studies*. It will be designed in a way that could facilitate additional *case studies* in the future.
- The starting page of the app will provide brief information about the project and the objectives of the project and the app, as well as a list of the available *case studies*. There will be links to the project website for anyone wishing to learn more. In addition, an introductory animation will explain the purpose of the PREPARED project, i.e. the project which develops the app.
- The *case studies* listed on the first page can consist of just a title and description, and optionally include some graphics (image), and author names.
- The learner will select one of the *case studies*. There are two main modes of interaction: *Individual* and *Group*. In the former, an individual learner can interact with the case study on a stand-alone basis, interacting with the available media, and eventually reflecting on their own learning. In the group mode, the *group initiator* will control the progress of the group, which will additionally include some *Discussion* in the form of a chat.
- If feasible, an additional functionality might allow users to experience a case study from two different perspectives, for instance, as though coming from a low-income or a high-income region. This will allow learners to be sensitized to different perspectives.

### 3.3. Individual learner's journey

- After starting on *Individual mode*, the learner will enter the *case study*. Typically, this will setup an open question, one which highlights the ethical dilemma, as per the selected *case study*. This can include:
  - A written description of the *case study* setup.
  - Graphics and/or animations to increase the interactivity and learner engagement.
  - Optionally, a video in the format of an interview or narrated pictures, etc., again for the purpose of increasing the interactivity and learner engagement.
  - At this point the learner will be asked to reflect and consider a number of alternative resolutions for the case study.
  - After selecting any of the possible resolutions, the learner will have the opportunity to view the resolutions statistics (how many picked which one), and read the expert's review, or if available watch a video of an expert providing their review.

### 3.4. Group learner's journey

- In the *Group mode*, the learner can either initiate a new group, or join an existing one. Again, the same case study material is used and experienced by the group of learners in parallel, with the following differences:
  - Before reaching the point of reflecting and considering the alternative resolutions, the learners will have the opportunity to *discuss* their own thoughts, understandings, and concerns, in a group chat. They can propose their own resolutions, and upvote (e.g., "like") others' suggestions.
  - Once satisfied with the group progress in the discussion, the *group initiator* can trigger the presentation of the alternative resolution, at which point the learners can again reflect and select their own.
  - Similar to the *Individual mode*, after submitting their selection the learners will have the opportunity to view the resolutions statistics (how many picked which option), and read the expert's review, or if available watch a video of an expert providing their review.

### 3.5. Case Studies

At the core of the app is the "Case Study". Some case studies aim for facilitating training activities, while others might be more suitable for raising awareness. The project collects two types of case studies:

- Short case studies that will involve understanding other people's views in the context of relevant (factual) information.

- Longer, more in-depth case studies on specific topics, which require reflective engagement from the learner.

The app will host both types, which will have a template as follows:

Describing the case:

What happened	Where	When	For Whom	With what consequences

Thinking about the case:

Other positions	Values used

Presenting the case:

Infographics	Interviews	Moving pictures	Polls	Animations

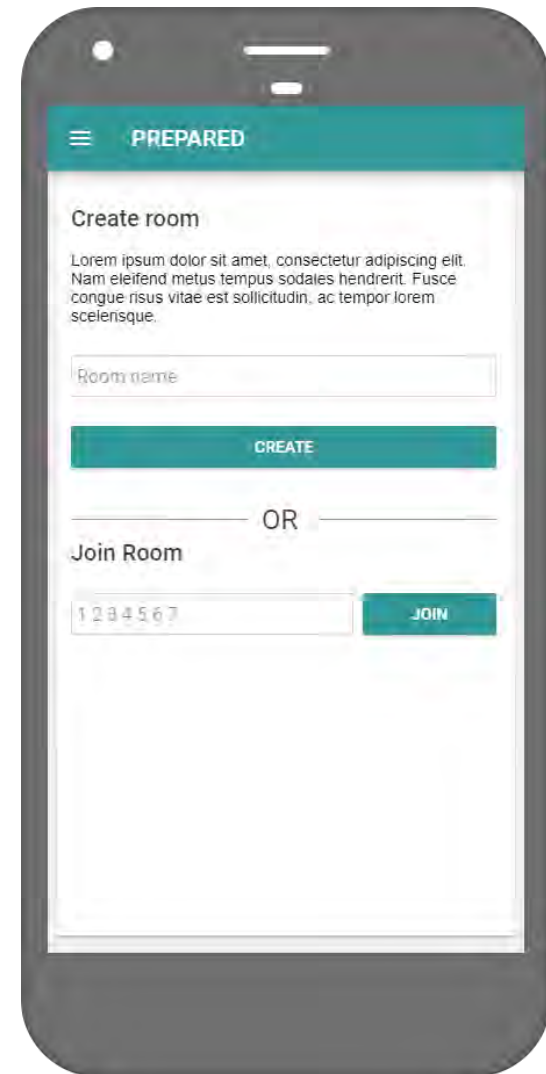
### 3.6. Wireframes



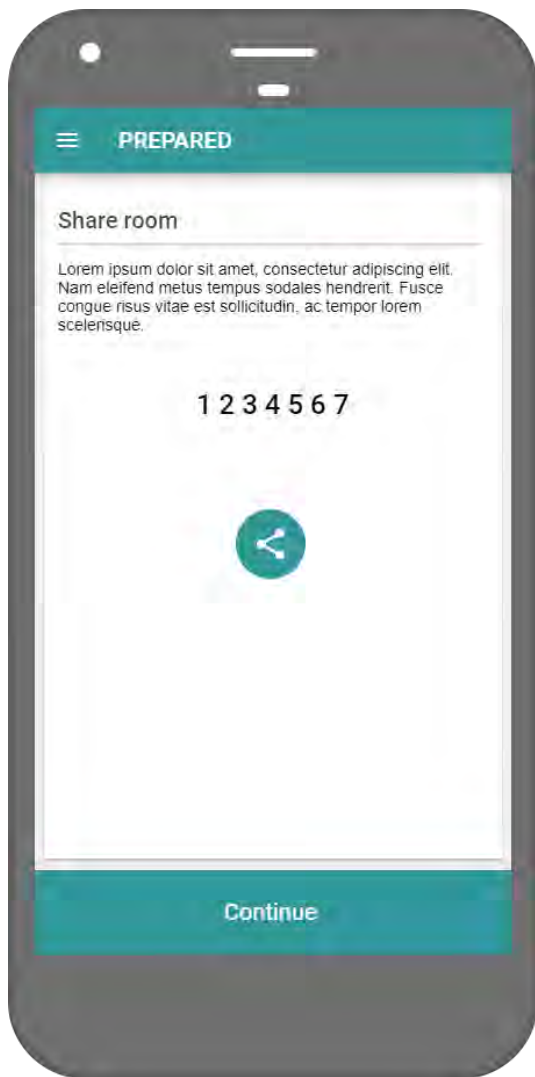
Main screen



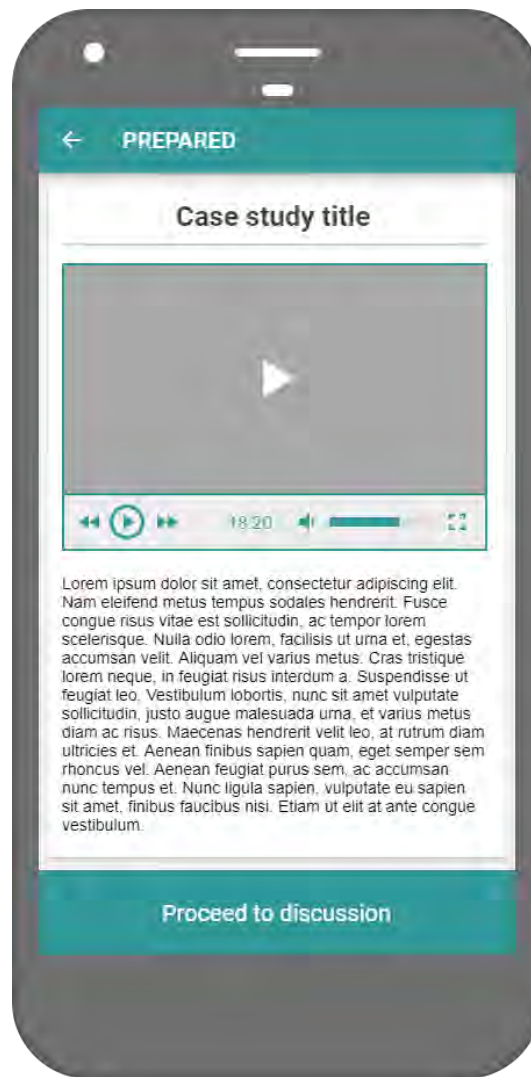
View story screen



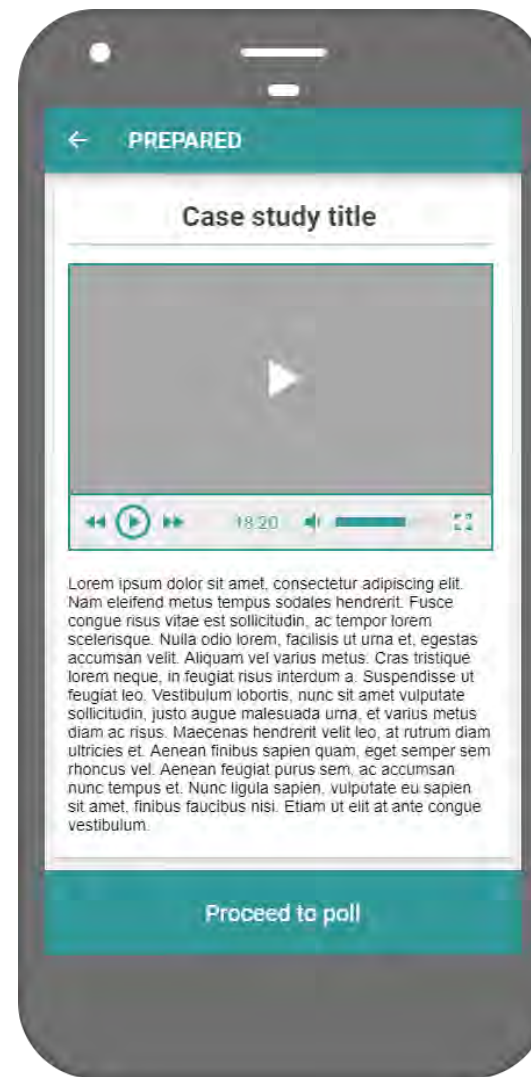
Create/Join room screen



Share room screen



Training Intro screen (Group)

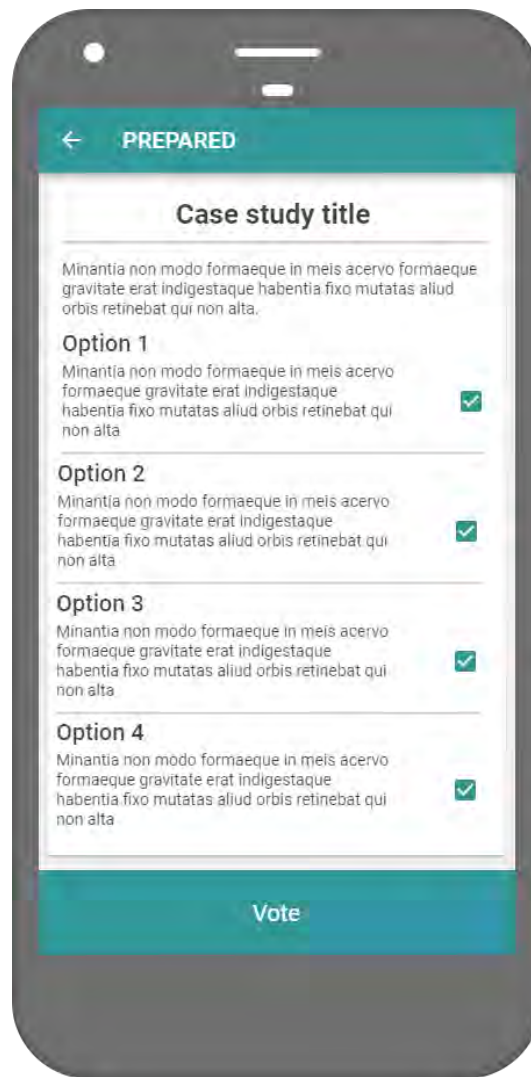


Training intro screen (Individual)

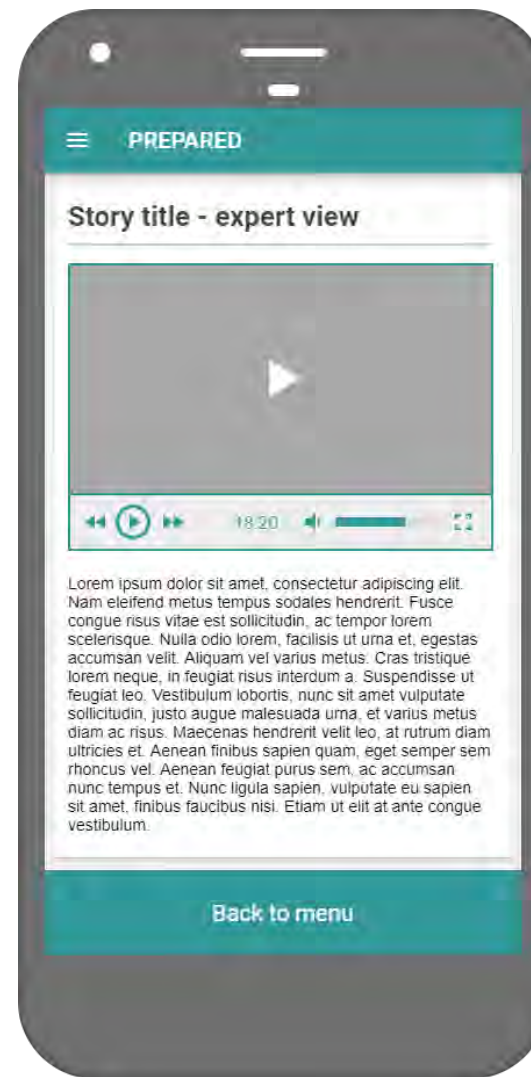




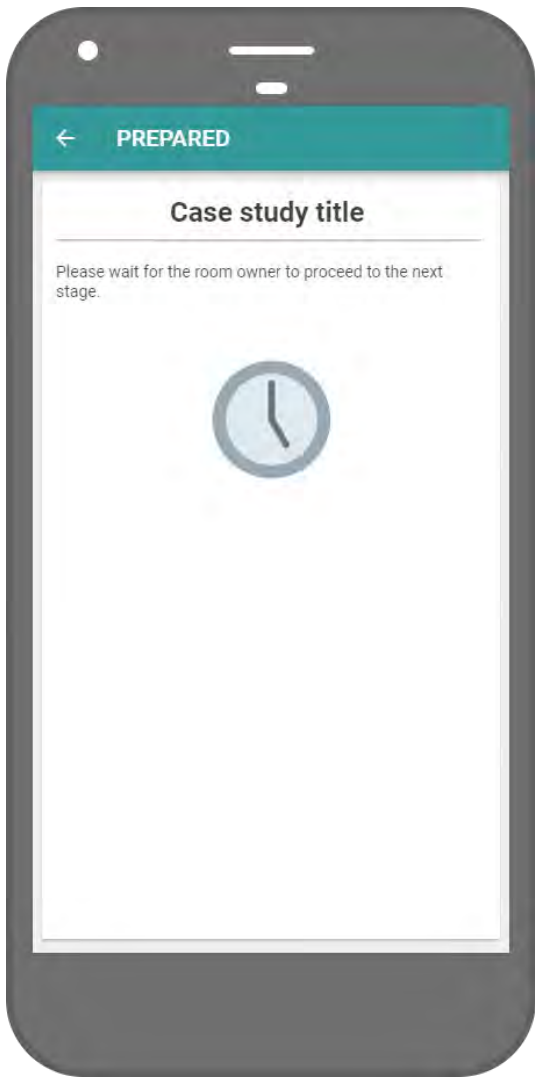
Training Discussion screen



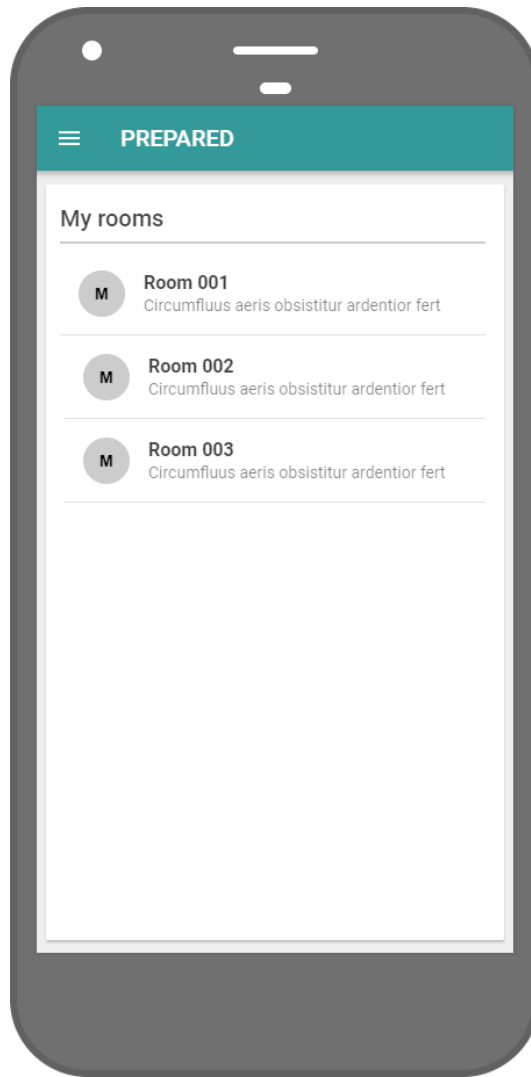
Training Poll screen



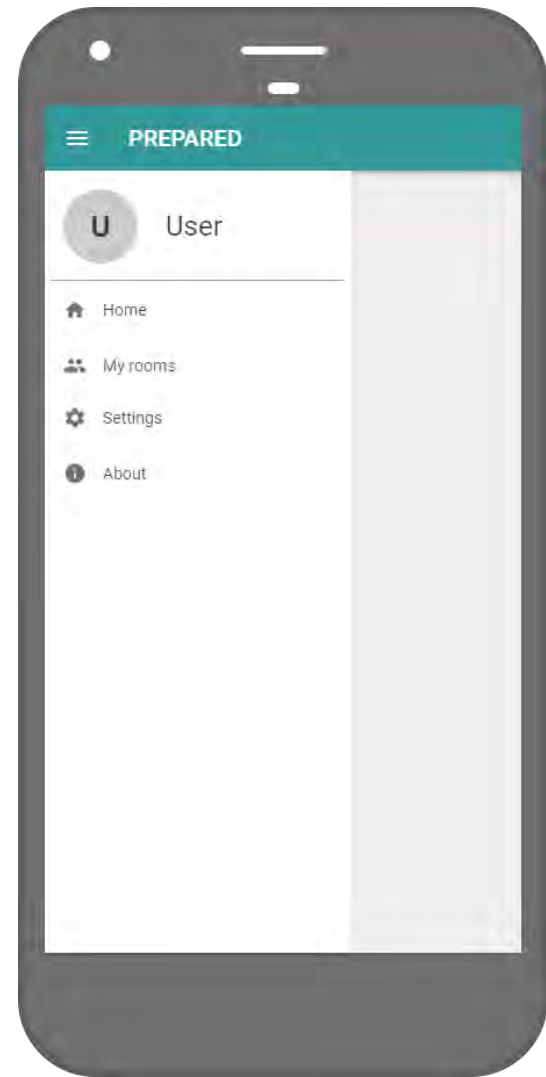
Training Expert view screen



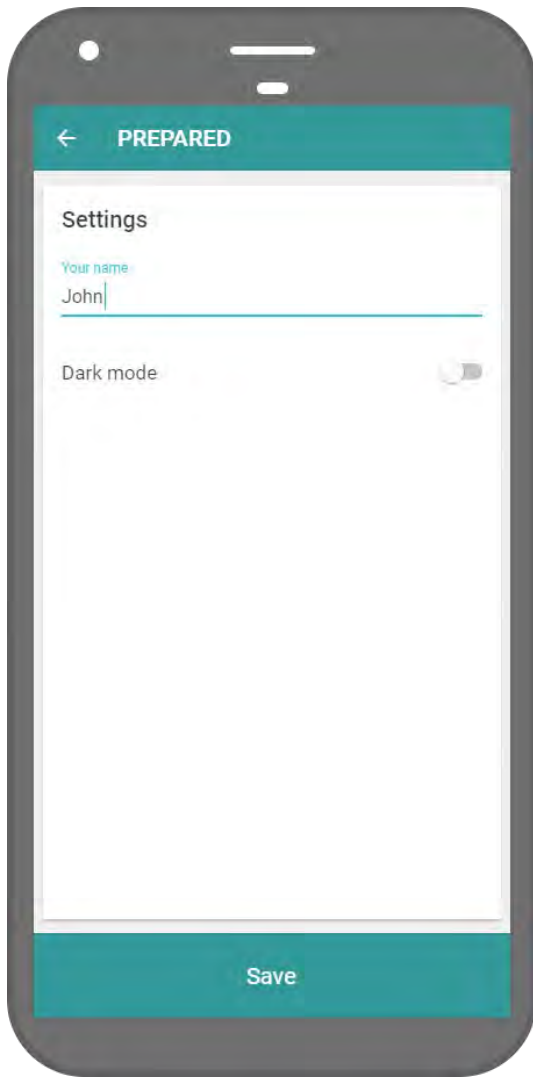
Holding screen



View rooms screen



Navigation menu



Settings screen



About screen

## 5. Technical Specifications

### 4.1. System requirements

The following section describes the requirements gathered so far. These requirements may change during the development process, and the methodology used will allow these changes to be easily and quickly incorporated.

#### 4.1.1. Functional requirements

- FR1.** Users should be able to view a list of stories/dilemmas, which portray or describe a situation in which they must make a decision.
- FR2.** A story must contain some text and can optionally contain multimedia (icons, images, videos).
- FR3.** Users can participate in a story alone (Solo).
- FR4.** Users can participate in a story by joining an online room (Group).
- FR5.** When participating in a story, the following sequence of steps will be made:
  - a. Introduction – presentation of the scenario
  - b. Discussion – allowing a real-time, chat-like discussion between users to take place online.
  - c. Poll – asking the users to provide their responses.
  - d. Expert view – hearing from an expert about the presented issue.
- FR6.** Once at step FR5c, users may not go back to previous steps.
- FR7.** Only the group/room owner may enable users to move to step FR5d.
- FR8.** The app should be translated (internationalized) to multiple languages (pending resource availability).
- FR9.** The videos presented in the app could have subtitles to make translation easier and to provide higher accessibility (pending resource availability).
- FR10.** The app should allow a full view of live results during the discussion (FR5b) and poll (FR5c) stages.
- FR11.** Users should be able to view and manage their data.
- FR12.** Users should be able to create an account and sign in to use more advanced features:
  - a. Creating rooms and trainings
  - b. View a list of case studies that have been selected by users and their responses in solo mode.
- FR13.** System administrators must be able to review newly created training and groups and approve them before they are made publicly available.

### 4.1.2. Non-functional requirements

- NR1.** The system should have a satisfactory performance.
- NR2.** The system should support a lecture-sized crowd (e.g., ~70) of simultaneous participants.
- NR3.** The system should have high availability.
- NR4.** The system should not store any sensitive personal data about its users except for their name, email address, and hashed password.
- NR5.** The data stored by the system must always be kept secure.
- NR6.** The system should enable all users to retract their information and delete their account (and all information associated with it) at any time.
- NR7.** The system must provide clear notices and warnings where data may be used for research or other purposes and link to potential ethical clearances that are obtained.
- NR8.** The system must enable its administrators to inspect its status and state at any time and make any steps necessary to ensure its smooth operation.
- NR9.** The app should be usable and provide a good user experience in a variety of device types such as mobile phones, tablets, and desktops.
- NR10.** The app must be compatible with as wide a range of devices as possible.

## 4.2. System architecture

Based on the above requirements the system will be developed as a cloud-based, distributed, real-time application following the client-server model.

### 4.2.1. Client (mobile application)

The first component of the architecture is the mobile app client, which will be deployed on Android, iOS, and Web systems.

The client will be responsible for:

1. Presenting the app state (dilemmas/stories, options, discussions, etc.)
2. Allowing users to manage data items (own groups, stories, personal information, etc.)
3. Presenting illustrations/visualizations, and other media to enrich the user's experience.
4. Communicating with the server to retrieve information.

The client apps will be released in the respective stores for each mobile OS.

### 4.2.2. Server (Backend)

The second component of the architecture is the server, which must support the operations of the system, including:

1. Host an Application Programming Interface (API), which will enable clients to communicate with the server to exchange information and execute business logic.
2. Incorporate the necessary tools/features to enrich the client app experience.

3. Connect to a database system to manage data.
4. Provide the facilities to host large files (for videos).

Communication between the client and server will occur through the Internet, using the client-server model. The web hosting costs associated with the server must be kept as low as possible, and some options can offer a low-cost approach.

### 4.2.3. Database

The third component of the architecture is the database system, which is responsible for:

1. Securely and efficiently storing the state of the system.
2. Allowing communications from the server to allow data to be retrieved and managed.
3. Allowing the execution of data queries, as efficiently as possible.
4. Enabling back-ups and data restoration.
5. Maintaining consistency.

## 4.3. Data model

The data model presents an organization of the data needed for the system to work. Data is organized into *data entities*. The attributes and relationships between these data entities are described in the tables below:

Story		
id	String	PK / Document ID
title	String	Not null
descriptionText	String	Not null
imageUrl	String	
introText	String	Not null
introVideoURL	String	
expertViewText	String	Not null
expertViewVideoURL	String	
createdOn	Long Integer	Not null
pollID	String	Not null
groupIDs	List<String>	Not null

<b>Group</b>		
id	String	PK / Document ID
code	String	Unique, not null
createdOn	Long Integer	Not null
discussionID	String	FK, not null
state	Enum [voting, voted]	Not null
storyID	String	FK, not null

<b>Discussion</b>		
id	String	PK / Document ID
groupID	String	FK, not null
state	Enum [open, closed]	Not null

<b>Message</b>		
id	String	PK / Document ID
discussionID	String	FK, not null
sentOn	Long Integer	Not null
sentBy	String	Not null
likes	Integer	Not null, default: 0

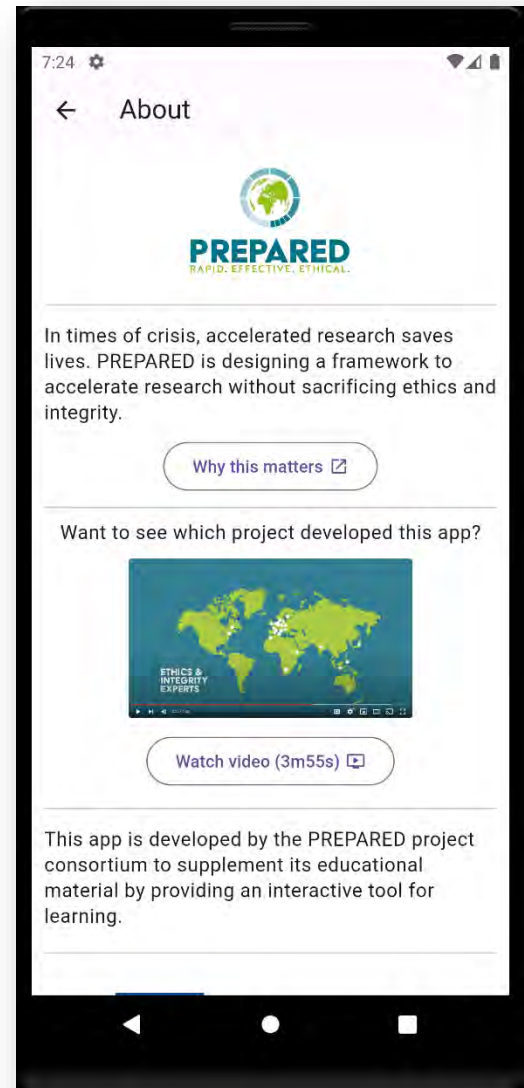
<b>Poll</b>		
id	String	PK / Document ID
storyID	String	FK, not null
options	List<String>	Not null
votes	List<Integer> (Option indices)	Not null, default: empty list

## 6. Conclusions

This document provided an overview of the plan for the development of the PREPARED Mobile App. Its main purpose is to provide a common tool for discussion and moving things forward in terms of developing the PREPARED Mobile App.

As such this document focuses on project management aspects and the app design, in a non-technical manner, to encourage the discussion around its development process. The document also lists a number of technical specifications which are primarily aimed at the developers to coordinate their own work.

Finally, the appendix includes an overview of the main releases of the app, and a guideline for case study authors so they can be aware of what is supported by the app and how to define their own content.





## Appendix I – Release History

The PREPARED App is developed and released by the project consortium. The app is formally presented and described on the project website: <https://prepared-project.eu/app/>.

Additionally, the app is made available via official pages on the corresponding app marketplaces.

The following table summarises the main milestones in the release history of the Case Study App:

Date	Description
2023-09-25 Version 0.3.0-3 Android	This marks the release of the first “beta” version of the app for Android devices, on <a href="#">Google’s Play Store</a> . This release includes the following functionality: <ul style="list-style-type: none"><li>- A welcome screen</li><li>- A view which includes the list of available case-studies</li><li>- A sample case study (titled “Human Challenge Studies”)</li><li>- Functionality for text, video, and discussion-like pages</li><li>- Functionality for interactive polls</li></ul>
2023-11-18 Version 1.1.0-9 Android	A polished “production” version of the app for Android devices. This version includes the following updates: <ul style="list-style-type: none"><li>- Two additional case studies</li><li>- An onboarding sequence of screens</li><li>- Welcome animation</li></ul>
2023-11-27 Version 1.1.0-9 iPhone & iPad	The first release on Apple’s AppStore. <ul style="list-style-type: none"><li>- Latest version with three case studies</li></ul>
2023-12-11 Version 1.1.0-9 iPhone & iPad	A release which includes the three pilot case studies, complete and updated, as well as fixes to multiple of the issues reported by the beta testers. <ul style="list-style-type: none"><li>- This is the first release which is concurrently sent to Google Play and Apple AppStore marketplaces.</li><li>- It is also the release to be used during the first milestone of the project (M16)</li></ul>

## Appendix II – Guidelines for Case Study authors

This section provides guidelines on how to develop case studies which can be added in the PREPARED App. The primary aim of this document is to inform authors about the capabilities of the app, and to enable them to define a case study in a way that can be easily added to the app. The case studies consist of some general information (like a title, authors, and a banner image), plus a sequence of pages. Individual pages can be plain (i.e., containing text, images, or video) or interactive (i.e., containing live polls, or chats).

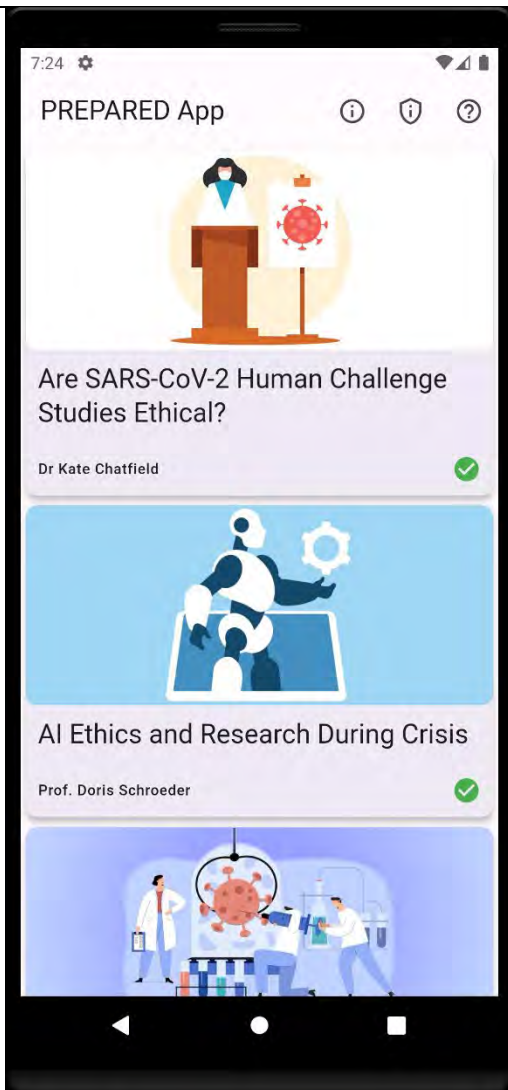


Figure 1: List of case studies as shown in the app

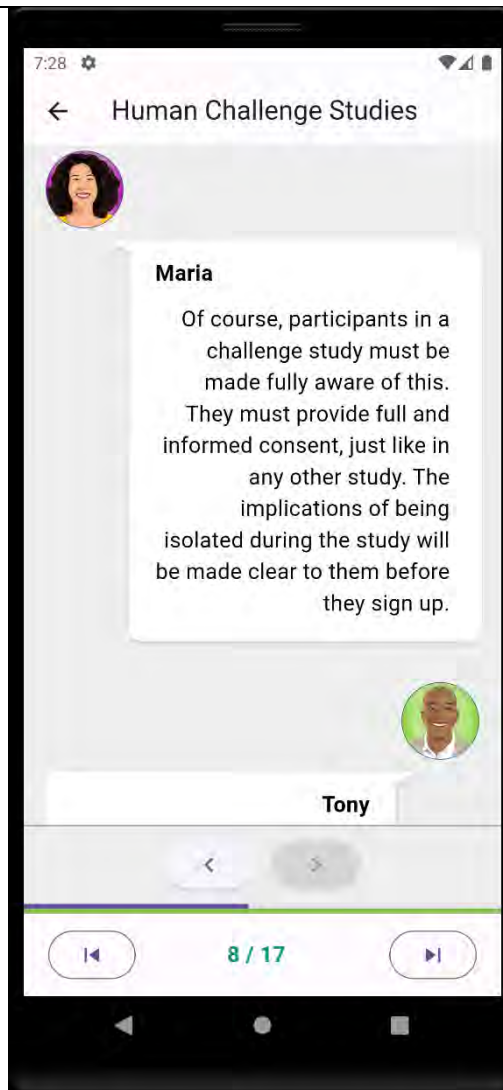


Figure 2: A page of type "dialogue" and the buttons controlling the progression of the case study

The following paragraphs provide a succinct overview of these types of information.

## Case study metadata

The metadata characterises the case study as a whole. They are used to display the case study in the general list of case studies, and to provide an introduction.

Attribute	Description	Example
Title	The title should be a short description of the case study (typically less than 50 characters long).	Are SARS-CoV-2 Human Challenge Studies Ethical?
Short title	The short title should be a succinct version of the title. This is used to present it in the list of case studies that are available in the app (typically up to 25 characters long)	Human Challenge Studies
Authors	A list of authors (by first name and surname) that have developed the case study. Author names should be separated by comma. This is used to provide credit to the authors.	Kate Chatfield
Banner image	An image (as a .png or .jpg file) which is to be shown as the case study's banner in the list of case studies. Ideal aspect ratio is 21:9. Aim for a high resolution such as 1720x720.	N/A (see Figure 1)

## Pages and page types

A page is a part or stage of a case study. A typical case study consists of multiple pages of different types, some of which are static and some interactive. Pages in the app can be accessed sequentially, by completing each page in the order defined by the case study. Only one page is shown to the user at a time. The user can navigate forward to the next page, or backward to the previous one, using the bottom navigation bar (see Figure 2).

The user can choose to return to the main screen at any time, and then return to resume at the point where they left.

The following paragraphs enumerate the types of pages supported by the app, and define the data required to create each one of them. The available types are:

- Static content page
- Video page
- Dialogue page
- Poll page

Custom page types are also available and will be developed on demand. For example, currently a Bucket page type is being developed to prompt the learner to study a set of terms and properly group them in a number of buckets, while providing feedback for each choice.

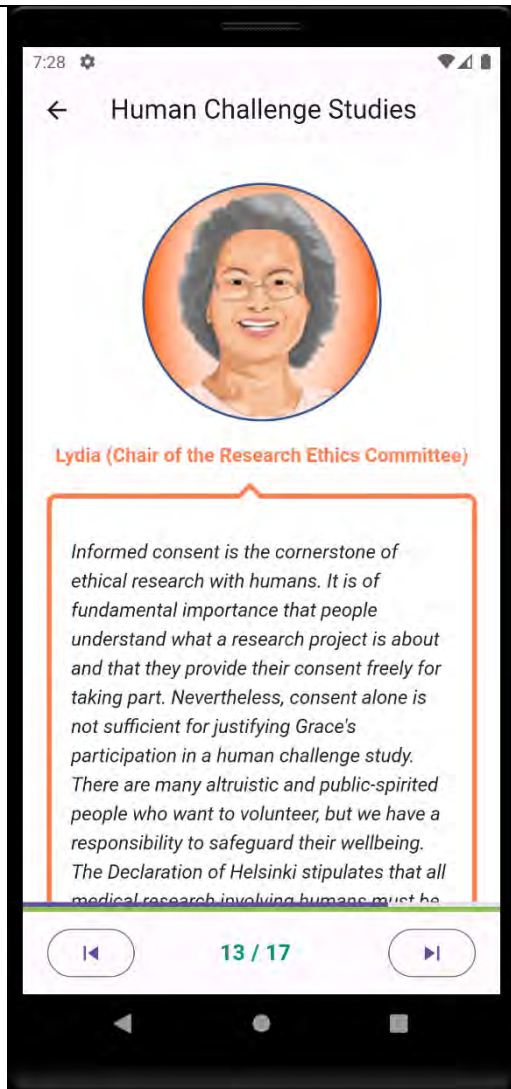


Figure 3: Example of static content page

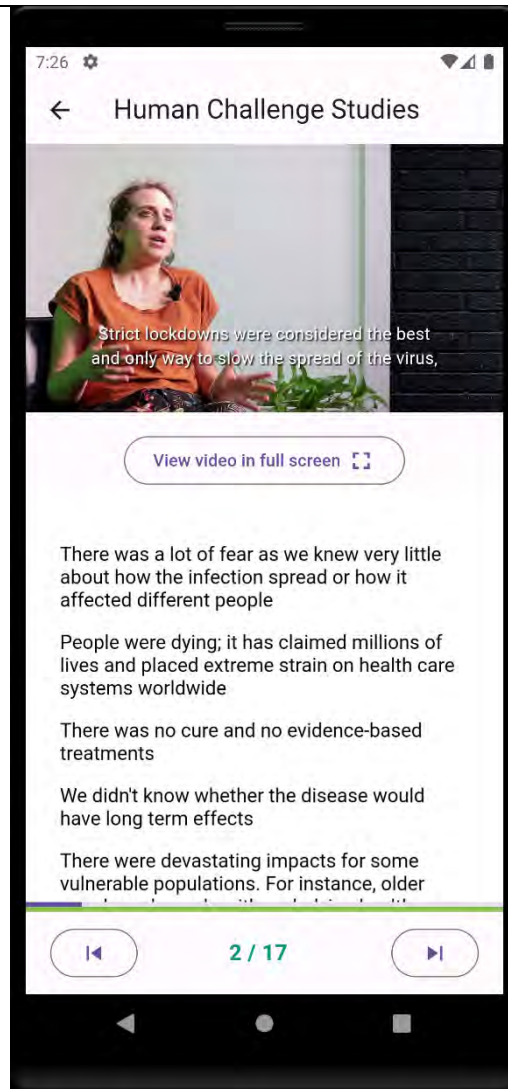


Figure 4: Example of video page

### Static content page (text and images)

This type of page supports displaying static content such as text, images, links, and more. The interactions supported with this content are minimal. For an example, see Figure 3.

For this kind of page, please provide:

- A title
- Its content, in the form of a Word document or drawing
- If your page includes pictures, please ensure you have included a large size, high density picture, and that you have acquired the usage rights (for pictures where only attribution is needed, make sure to include the required attribution).



## Video page

A video page is used to show video content (including animated films) to the user. Videos must be uploaded online before they can be shown. A video may be accompanied by static content, which is displayed at the bottom of the page, and optionally, subtitles. For an example, see Figure 4.

For this kind of page, please provide:

- A title
- A link or attachment to the actual video file (e.g., as a YouTube video link or an MP4 file)
- Optionally, a subtitles file (an SRT file) or the video transcript in text form

## Dialogue page

A dialogue page simulates a discussion between two individuals. The discussion is presented using a chat-like display, allowing the user to progress through the discussion at their own pace using next and back buttons to read the messages. For an example, see Figure 2.

For dialogue pages, please provide:

- A title
- Names of participant 1 and participant 2
- Optionally, an image for each participant (preferably with 1:1 ratio and a size that does not exceed 500KB)
- Provide the discussion in a form so that it is clear who is saying what, and in what sequence—for example:
  - Allan: “I do not believe that we should conduct human challenge studies with new pathogens...”
  - Barbara: “I appreciate that there is a small risk of harm to some people, but...”
  - Allan: “...”
  - Etc.

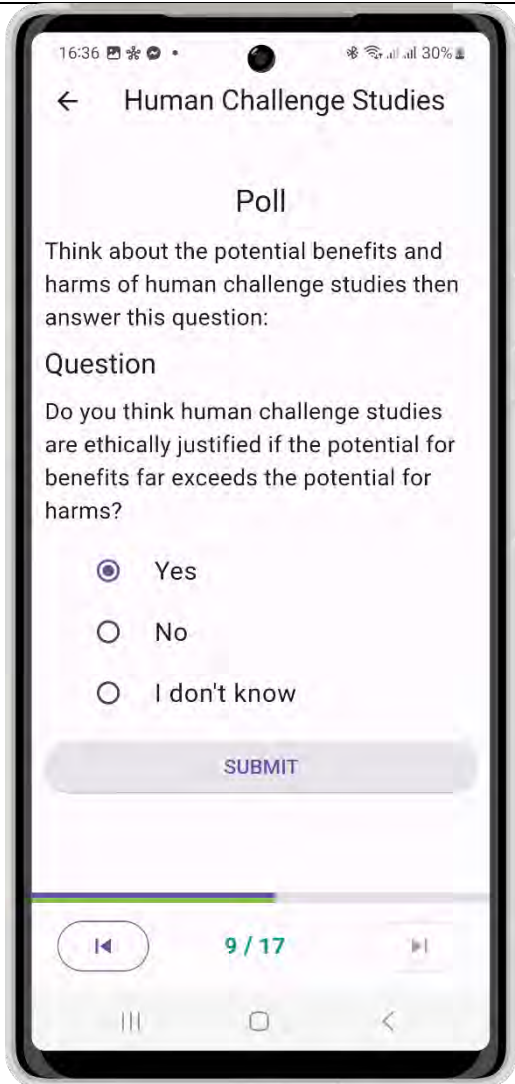


Figure 5: Poll page with options

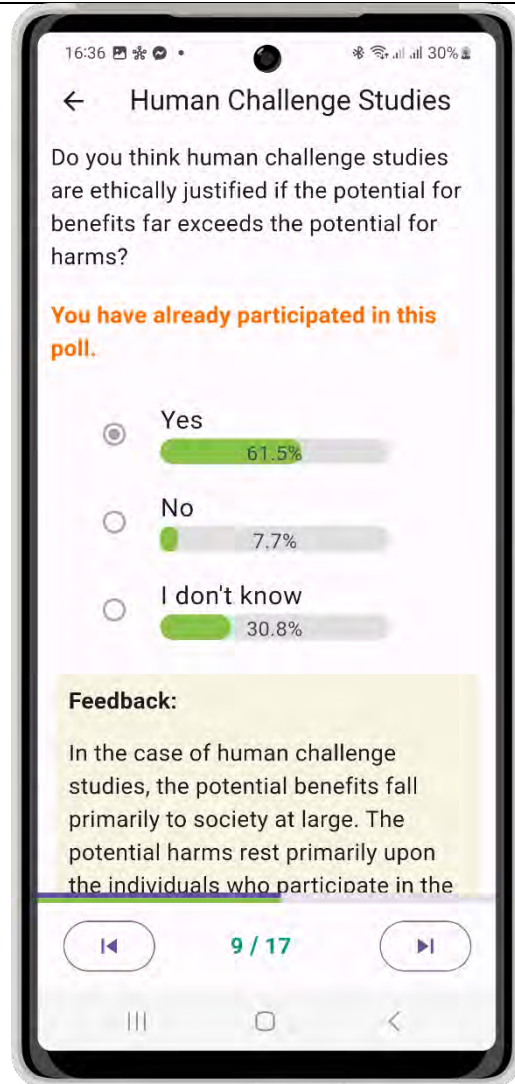



Figure 6: Poll page with selection and feedback

## Poll page

A poll page allows the user to participate in a poll by first reading a piece of text, and then interacting with controls to select an option to a prompt (question). Each poll has a set of options which are presented to the user as radio buttons. Only one option may be selected, and the user must confirm their answer by pressing the Submit button.

Depending on their selection the users view some predetermined feedback. You can define individual feedback responses for each option, as well as general feedback to be provided in any case.

The poll page requires that users respond to the poll before they can proceed to the next page. Their responses are persistently recorded in a database, linked with an anonymous random number stored in the mobile device.



An example of the poll page can be viewed in Figure 5 (options presented to the learner) and Figure 6 (feedback shown after selection).

For poll pages, please provide:

- A title
- The initial content (text to set the context of the poll)
- The prompt text
- The options (which must be two or more)—for each option provide:
  - Title (e.g., “Yes” or “I don’t know”)—this is required
  - Description (provides further information if needed)—this is optional
  - Feedback (when this option is selected, then the corresponding feedback is shown)— this is optional
- General feedback (i.e., text to be displayed regardless of selected option)—optional

### General guidelines

Apart from the case study metadata, and the various page types, the following provides guidelines that can be used to design compatible case studies.

- When it is beneficial to making your case study clearer, aim to use *personas*. These represent specific viewpoints and can appear in multiple pages across the case study. Personas typically consist of a consistent name and are preferably accompanied by an image (see for example “Grace” in Figure 3).
- When you create images and videos ensure you only use freely available clipart and footage, or material that we have the license to use.