D5.5 – ENGAGE Knowledge Platform

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Abstract: ENGAGE aims at linking the informal resilience naturally inherent in citizens with the formal work of authorities to prevent, prepare for, respond to, and recover from disasters. It brings together 14 partners from 8 countries aiming to show how individuals and local practices can interrelate effectively with planned preparedness and response, practitioners, and technology.

Deliverable 5.5 illustrates the process of creation of the ENGAGE Knowledge Platform (KP). The KP is an interactive repository containing the project results in actionable format. It primarily hosts the Catalogue of solutions for societal resilience and actionable advice on how to increase societal resilience. In the document development process and main outcomes are outlined, research and creation processes are described as well as the main technical specification (tools, style guide, contributors). It also presents a mock-up of the platform in the current version. The document also states the reasons for the delay of delivery of D5.5, originally planned for M12.

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*The project uses a multi-stage internal review process, with defined milestones. Milestone names include terms (in bold) as follows:

» **PCOS**

- **proposed:** Describes planned content and structure of different sections. Document authors submit for internal review.
- **revised:** Document authors produce new version in response to internal review comments.
- **approved:** Internal project reviewers accept the document.

» **Intermediate**

- **proposed:** Document is approximately 50% complete – review checkpoint. Document authors submit for internal review.
- **revised:** Document authors produce new version in response to internal reviewer comments.
- **approved:** Internal project reviewers accept the document.

» **External**

- **proposed:** Document is approximately 100% complete – review checkpoint. Document authors submit for internal review.
- **revised:** Document authors produce new version in response to internal reviewer comments.
- **approved:** Internal project reviewers accept the document.

» **Released:** Executive Board accepts the document. Coordinator releases the deliverable to the Commission Services.

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Executive summary

The Knowledge Platform (KP) is a unique interactive repository of the solutions for improving societal resilience. It contains the main project outcomes integrated in a virtual format to facilitate the user's interaction with them. It primarily hosts the Catalogue of solutions for societal resilience and actionable advice on how to increase societal resilience. Both the content and presentation format are tailored to the user's needs. Smart search technology allows to filter the results in customized way.

This deliverable presents the initial definition and concept of the KP. It includes mock-ups and early interactive prototype, used to conduct user research on the interface.

1 INTRODUCTION

1.1 WHY WOULD I WANT TO READ THIS DELIVERABLE?

This deliverable gives the reader an updated overview of the ENGAGE Knowledge Platform by explaining all the different phases of its creation as well as the next steps for the development and release.

1.2 INTENDED READERS/USERS

All project participants that are responsible for, or in any way involved with, the ENGAGE Knowledge Platform.

1.3 STRUCTURE OF THE DOCUMENT

This document is structured as follows:

- Section 2 outlines the main goals of the KP and its concept.
- Section 3 describes all the different phases of the design process and the user-centered approach used to validate and co-create the KP.
- Section 4 outlines the KP development and the release roadmap.
- Sections 5 provides information about the KP maintenance and the different partners' roles and related responsibilities.
- Section 6 describes the next steps and in particular the envisioned activities to guarantee a product that is tailored towards the needs and expectations of the end-users.

1.4 RELATIONSHIP WITH OTHER DELIVERABLES AND WORK PACKAGES

This document builds on and complements the following deliverables:

- D1.1 Preliminary model for assessing and methods for improving societal resilience which summaries results of the case studies and the survey, focus groups and interviews.
- D1.4 Revision of the model assessing and methods for improving societal resilience which will provide modifications, adaptations and improvements made after the validation exercises.
- D2.2 Formal solutions to improve societal resilience which reports all the "formal" solutions identified for first responders and authorities to improve societal resilience.
- D2.3 Informal solutions to improve societal resilience which reports all the "informal" solutions identified for first responders and authorities to improve societal resilience.
- D2.4 Existing communication channels and guidelines that describes all the communication channels and guidelines that first responders and authorities use to communicate with the society with the aim to improve societal resilience.
- D2.5 Revision and update of solutions to improve societal resilience that will report the adaptations and improvements during the final validation process of the project.
- D3.1 Initial catalogue of societal resilience solutions which provides an initial set of selected solutions, description of contextual issues and guidelines for implementation.

- D3.3 Final catalogue of societal resilience solutions that will provide additional solutions, revised description of contextual issues and guidelines for implementation.

- D4.1 Validation plan which identifies the characteristics to be validated, the techniques to be used and plan the validation activities.

- D5.1 Dissemination and communication strategy and plan that outlines the strategies, targets and planning of the Communication, Dissemination and Exploitation activities.

- D5.2 Exploitation strategy and plan that includes consortium and partner strategies and plan for exploitation.

- D7.3 Innovation news and updates that provides an overview on website of new initiatives, new research results, new practices and new user needs that are relevance to societal resilience and citizens engagement.

1.5 ACRONYMS AND ABBREVIATIONS

Table 1. List of abbreviations

Abbreviation	Explanation
KP	Knowledge Platform
WP	Work Package
KI-CoP	Knowledge Innovation Community of Practice

2   ENGAGE KNOWLEDGE PLATFORM

2.1   INTRODUCING THE ENGAGE KNOWLEDGE PLATFORM

The ENGAGE Knowledge Platform is one of the main outcomes expected from the ENGAGE project. It is an interactive repository designed to host the project results and make them easily available to the end-users that the project addresses. In particular, the Knowledge Platform will be used by first responders, policy makers, researchers and professionals' profiles who are interest in gaining knowledge regarding risk awareness, preparedness and intervention in emergencies and solutions for enhancing public participation and societal resilience in crisis management. The platform is planned to be used between critical events but the content provided will serve different purposes connected to the three phases of preparation, mitigation and recovery from an emergency.

2.2   GOALS OF THE KNOWLEDGE PLATFORM

The Knowledge Platform's main objectives are:
- gather the latest theorical and practical knowledge that could enhance societal resilience through better public involvement in disaster management,
- make this knowledge easily available to other professionals in similar or different contexts.

Indeed, the KP aims at gathering different kind of knowledge on the topic of disaster risk reduction and become a repository where different professionals can find what suits their needs. Being societal resilience a long-term goal, the KP can serve as a gathering point of the latest knowledge that is ready to be transferred to other context or to different members of the society.

The short-term goal of the Knowledge Platform therefore is to provide practitioners with the latest operative knowledge that had been proving successful in dealing with emergencies at different levels. Through the KP, ENGAGE project aims at delivering valid tools to first responders, authorities, policy makers, NGOs representatives and researchers for engaging with the society in risk awareness and disaster risk reduction. Our goal is to enable users to effectively understand and implement the project results in their contexts.

The long-term goal of the KP is to enhance the ability of societies to cope with disasters and hazards, by increasing their societal resilience.

In other words, the KP wants to be a valid way to facilitate the exchange of knowledge among different emergency realities from various context. Transferable and cross-knowledge is in fact one of the guiding principles the platform embraces. To provide fruitful connections, several navigation paths and visualization formats are provided to the users.

Concerning the user experience, the main goal of the KP is to provide a user-friendly way to access information.

To this aim, the interaction and information visualization are designed to be tailored on the specific users' needs. The dissemination strategy will aim at addressing selected target users and interaction design will facilitate content fruition.

The primary target users of the KP are: First Responders, Government, National, Regional and Local Authorities, Policy Makers, Companies, Citizens Organizations, Researchers.

Secondary target users are: Communities and Citizens.

2.3   CONCEPT

The core concept of the KP is constituted by an interactive repository that allows advanced search functions to the user on solutions and knowledge for improving societal resilience produced by the

ENGAGE project. The platform can be consulted on-line and is constantly updated by the ENGAGE Consortium with the latest project results.

The KP differs from the project website for the nature of its content and its expected use cases. While the project website hosts all the outcomes produced by the project (Deliverable s, Papers, Publications, Dissemination Materials, Reports), the KP is centered on the project's operational results. The platform aims at being a supportive tool for consultation both before and after a crisis. It provides practitioners with the latest validated knowledge on how to increase societal resilience by including citizens in disaster risk management.

User experience and interaction design play a central role in the concept of the platform.

The attention to the target user is a central element. From the landing page the user can access different navigation paths and explore the content freely or through a guided navigation. The core idea is to offer to the user the most suitable knowledge for their personal or professional interest.

To reach this goal the information architecture of the website was built to constantly prompt new information on a given topic by guiding the user on its possible needs.

2.3.1 INFORMATION ARCHITECTURE

The information architecture of the KP was defined on three main elements: the target audience, the technologies used and the data that will be presented. The landing page host the main access to further layers of content. The main layers are the successful stories on resilience, the list of the hazard, the list of benefits and outcomes and the catalogue of solutions.

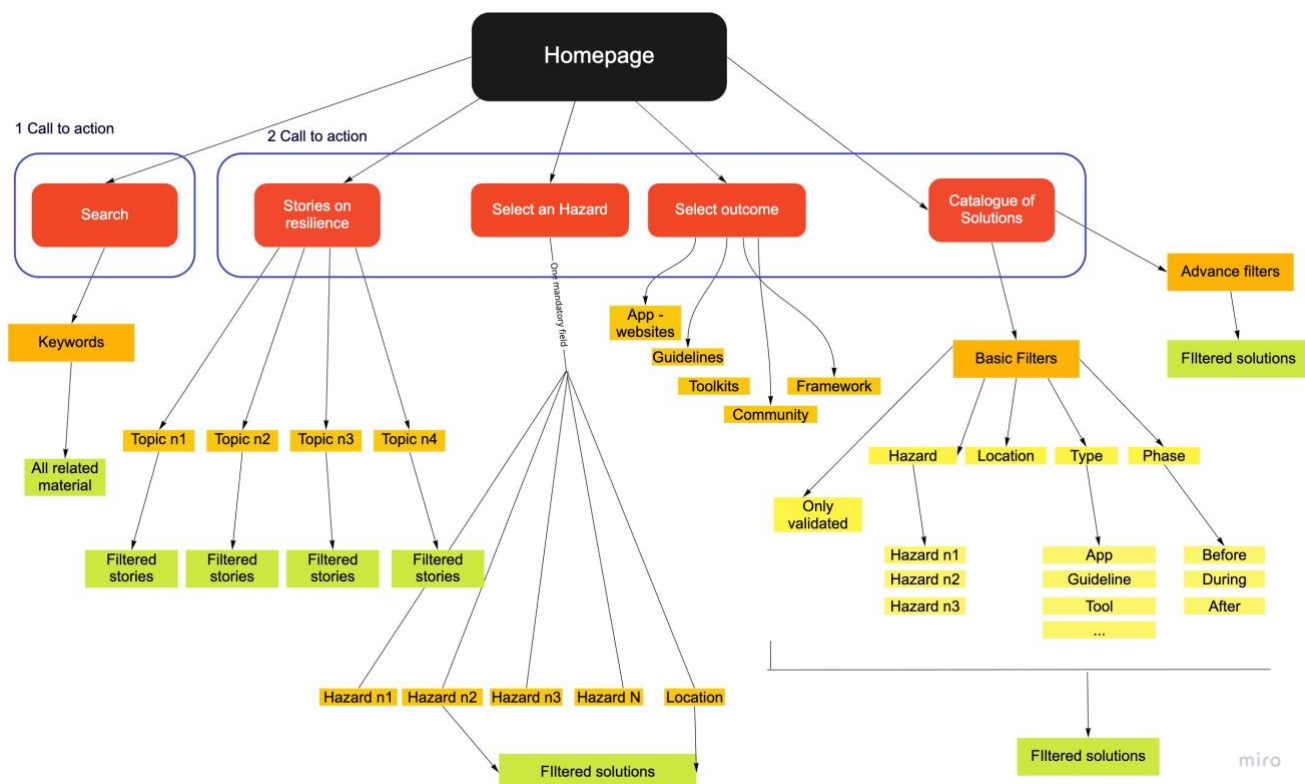The following diagram illustrates the layers composition:

Figure 1. Information Architecture Map

The most important layer is the Landing page. From here, the user can find all the main entrance points to secondary layers according to the following structure:

1.Landing Page

1.1. Search Page. First call to action, it allows the user to start searching for information.

1.2. Entrance Cards with other content: A horizontal slide of content card constitute the second call to action. The content of each card is still under definition and test.

1.2.1 Successful stories: a dedicate banner is dedicated to the narrative on societal resilience. This item is a call to action for the less technical target -I.e citizens.

1.2.2 Catalogue of Solutions + Validation of solutions and examples of application + content from Model for assessing and methods for improving societal resilience, Practices for social media and Communication, Guide for engaging and empowering citizens in research

1.2.3 Outcomes and benefits of the KP: a page dedicated to the exploration of the outcomes that can be found on the platform

1.2. Top page menu: it hosts several pages dedicated to the project results and the general framework of the platform (vision, methodology, and the challenges it tackles).

1.3. Footer It provides links to the social media pages of the ENGAGE project (Facebook, Twitter, LinkedIn, YouTube) and the project website (https://www.project-engage.eu/). It also allows to contact the Consortium for any kind of support.

2.3.1.1 Lading Page architecture

The content available in the landing page can be classified by two levels of relevance. As shown in the image, are more relevant to engage the user in the navigation (yellow items), while others can be considered of secondary importance to this aim (orange items).
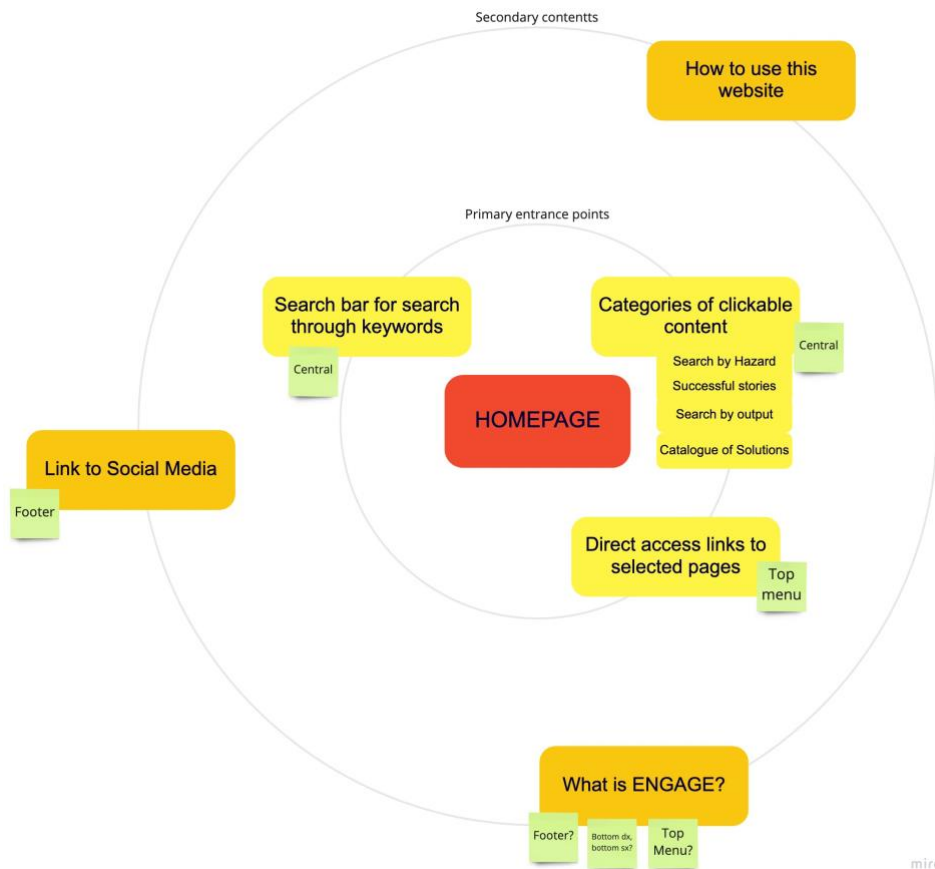

Figure 2. Content on the Landing Page.

The team decided to provide several entrance paths in the landing page to engage the user in the navigation. Different call to actions was designed on different user personas and use cases. See 3.3and 3.4to read more on User Personas and Use cases.

Four main calls to actions are displayed in the landing page:

1. Search by keywords
2. Search by category
3. Narrative content
4. Top bar menu

1.Search by keywords

The search by keywords function addresses the main user need: searching for information. Persona1 is looking for new information that could broader their knowledge on a specific topic. The fastest way to obtain this information to look up on the internet for related knowledge. Similar to the Google search bar, the KP search bar investigates the keyword in the input provided and looks for related items in the database.

This feature can be mostly effective when the user knows what to look for or for an open navigation on a given topic.

2. *Search by category*

The user can select an item in a list of the most common hazards. By selecting a topic, all the material related to that specific situation is accessed.

This call to action is mostly effective for users who are looking for information on a specific contextual factor related to a hazard or a disaster.

3. Narrative content

From this selection the user accesses the list of the successful stories on resilience. The section collects stories, short narratives and case studies on specific emergency scenarios. Goals of the Stories on Resilience section is to use storytelling to better engage the users in the information gathering and to clarify the application of solutions in the best possible way. Stories are presented as blogposts and are filterable by topic or tags. Stories make it easier to contextualize the application of one or more solutions, in and understand the relation between Target and Contextual factors in a given scenario. Stories make use of textual and graphic material. From each story it is possible to open the technical page of the solution involved, including the sections dedicated to its validation and implementation. If available, links to external resources and contact to implement the solutions are provided. See 2.3.22.3.2 to read more about the features available.

4. Top bar menu

The top menu will host other pages including different project outcomes. They will include the model for assessing and methods improving societal resilience, the best practices for communication and social media, and guide for engaging and empowering citizens and the narrative stories on societal resilience. Disposition and visualization format are still being discussed.

2.3.2 FEATURES

KP's features have been classified in two categories: Basic and Advanced.
Basic features will be available in the first release of the Platform (M22).

Advanced features are still to be defined and will go through a user test in the following months. Advanced features that will be approved by the user testing session, will be available in further releases of the KP (M27, M30). To see the planning of future releases, see 4.1.2 Updates and Future Releases.

Table 2. List of KP Features

FEATURE	STATUS	Category	RELEASE
Search through keywords on the whole website	Confirmed	Basic	1.0
Successful stories	Confirmed	Basic	1.0
Navigate by hazards	Confirmed	Basic	1.0
Explore the Catalogue of Solutions	Confirmed	Basic	1.0
Search through Tags	Confirmed	Basic	1.0
Discover more about ENGAGE	Confirmed	Basic	1.0
Download sources	Confirmed	Basic	1.0
Advanced filtering of the Catalogue of Solutions	Confirmed	Advanced	2.0
Links to external websites	Confirmed	Advanced	2.0
Save favourites solutions	Confirmed	Advanced	2.0
Log in	To be discussed	Advanced	2.0
Solutions shop	To be discussed	Advanced	2.0
Share on social media	To be discussed	Advanced	2.0
Explore your Area	To be discussed	Advanced	2.0
Maps on the solution page	To be discussed	Advanced	3.0
Leave feedback on a solution	To be discussed	Advanced	3.0
Access to Play Store and Apple Store	To be discussed	Advanced	3.0
Direct contact to the institution	To be discussed	Advanced	3.0
Offline solutions kit	To be discussed	Advanced	3.0

3 DESIGN PROCESS

This section describes the iterative design process that is applied to produce a valuable product to the end-user. First the creation process is explained and depicted in two timelines, one that shows the entire creation process and another one that shows the different concepts of the KP. Then follows a description of the conducted user research that contributes to a user centred design by identifying requirements of the end-users. The next part discusses the content creation. The final part of this chapter describes the visual identity, logo definition and the different stages of the prototype evolution.

3.1 CREATION PROCESS TIMELINE

This section illustrates the general timeline of the creation process of the KP.
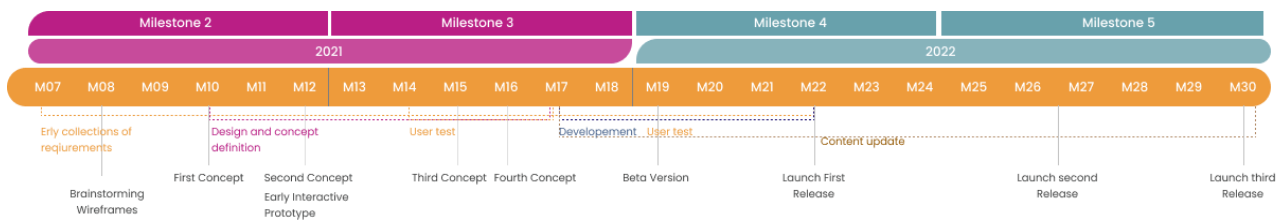
Figure 3. KP Creation process timeline.

The design process for the creation of the KP started in January 2021 with the analysis of the preliminary material for the Catalogue of Solutions. Such material was mainly collected from WP2. It was necessary to understand which information ENGAGE would have been able to provide to the end users for all the solutions collected. The process was then supported by the initial definition of the Catalogue of Solution from WP3. The task allowed to have a clearer view on the content that the KP could provide to end-users.

From Fall 2021 and Winter 2021, Deep Blue conducted some internal brainstorming to identify the possible concepts to explore with the Consortium. Some preliminarily draft models were proposed.

The following image illustrates the evolution of the design concepts. Concepts are illustrated more in details in section 3.8.
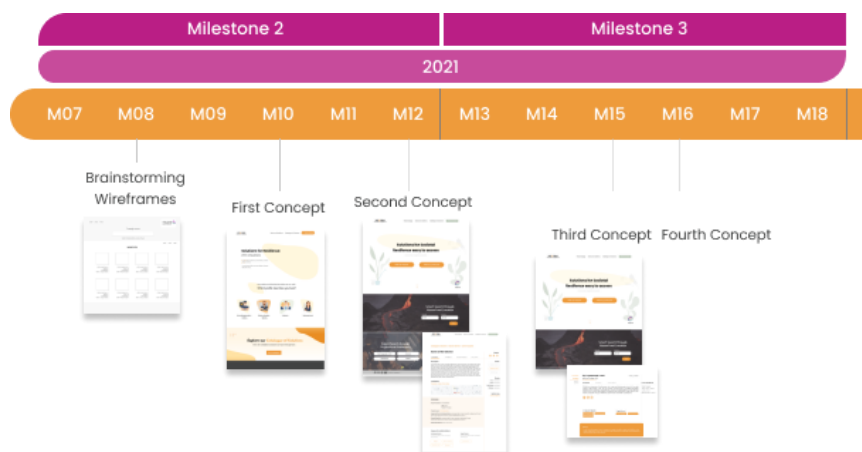
Figure 4. Timeline of the KP concepts.

In M10, April 2021, the whole Consortium gathered on a virtual meeting to discuss ideas and expectation from the ENGAGE KP. The discussion revealed a not adequate maturity of the research outcomes to proceed with the initial user research that was postponed to June 2021. Interesting inputs on expected functions were collected.

In the same month DBL started to develop an initial draft of concept and first wireframes. The team began to visualize some main features into possible layouts. Further research was required to proceed towards the concept definition.

From M10, WP5 team started to collaborate closely with WP3 for the definition of the Catalogue of solutions. Common aim was to get to the definition of the most suitable navigation format for the Catalogue.

In M12, June 2021, a workshop with the KI-CoP was held remotely. The event allowed to gathered clearer insights on user requirements regarding the KP. For further details regarding the Workshop, see 3.4

In July 2021 the interactive mock-up of the first concept of the KP was released within the Consortium. The prototype was designed for user research purposed and was internally adopted before being used for the end-user test. To see more about the interactive prototype, see the section 3.8.3.1

Specific reasons made it not possible to deliver the KP in M12 (July 2021).

- Research outcomes were not strong enough to progress with the definition of the initial concept in month M10.
- Outcomes from other work packages was not allowing yet to identify valuable material to insert in the KP.
- Database of the Catalogue of Solutions to be delivered in M16
- Covid-19 travel restrictions did not allow DBL teams to conduct user research session with end users as planned.

In light of such evidence, the ENGAGE consortium decided to postpone the launch of the KP to a more adequate moment in order to be able to follow a strong research and design process. Conducting research and testing with end-users was consider a strong priority for delivering a valid product.

With the coming of the Covid vaccination and the new travel rules related to the Green Pass, it became possible for the Consortium partners to meet end users to conduct the activity as initially planned. Quarter 3 and 4 was therefore restructured according to the new availability.

In September, DBL and SINTF had a two-days meeting in Trondheim to discuss the definition of the Catalogue of solutions and its integration within the KP.

In the same month, DBL team met Asl Roma Lazio and Trondheim Red Cross to conduct user research and test the first concepts. A more detailed description of the activities can be found in section 3.2.2.1 and 3.2.2.2.

In week 43, DBL will visit Ertzaintza to conduct a usability test on the latest prototype of the KP. Focus of the meeting will be to test the navigability of the website and discuss based and advanced features with end-users from the police department.

After the session, the team will proceed to the implementation and development of the current version of the KP. It will get to the release of the Beta version in M19. Beta version will be a high-fidelity prototype displaying both basic and advanced features.

At the same time, the online version of the KP with basic features will be being developed. The beta version will be used to allow to keep users in the loop during the development and have them contributing to the validation of the platform. For this reason, in Q1 of 2022 DBL is planning to test and validate the final version with end-users. Such session could include members from the KI-CoP.

From M17 the platform will be developed and implemented. Different implementation phases have been planned and will lead to different releases. Development of the platform is described in section 4.0 System Development and Release.

The re-planning of the activities for the creation of the KP did not generate a significant impact on other WPs. This is because the KP does not provide direct input to the other WPs. On the contrary the other WPs provide the content for the KP.

3.2 USER RESEARCH

A core part of the Knowledge Platform design process is the involvement of end-users to ensure a product that is valuable and caters towards the needs of the target users. Design thinking techniques were adopted in order to bring different stakeholders in the loop. DBL took care of conducting the activity with the different actors. The main objective is the integration of the different research outcomes into a common interactive format.

The stakeholders included in the creation of the KP are:
1. Researcher from the Consortium
2. KI-CoP members
3. End-users from the Consortium
4. Developers
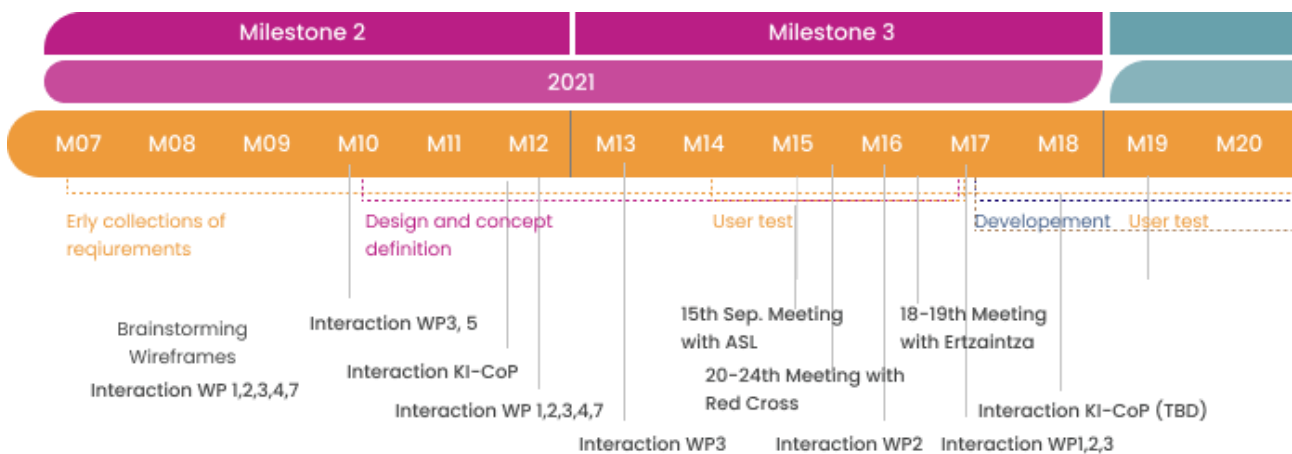
Figure 5. Interaction of the stakeholders on the creation timeline.

For this purpose, three workshops have already been held and a next one will be carried out mid-October 2021. On the basis of the performed workshops, it was possible to identify and refine user requirements in an iterative process. Below the different workshops and derived requirements are presented.

3.2.1 2ND SOCIETAL RESILIENCE HUB WORKSHOP

On the 14th of June the second KI-CoP workshop was held online. During the session participants were asked to discuss a specific scenario and consider different solutions that were shown in a "mini-catalogue of solutions". The aim was to identify how a solution has to be presented and what information is required when selecting a solution. The focus of the workshop was not explicitly on the creation of the Knowledge Platform but on the format and content of the Catalogue of Solutions. As this catalogue will compose a big part of the Knowledge Platform the information gathered during the workshop is integral for the creation of the Knowledge Platform. More detailed information on the structure and content of the Catalogue of solutions can be found in Deliverable 3.1. From this workshop it was possible to derive how solutions should be present and what additional information should be included.

Some relevant results for the design of the Knowledge Platform were:
- Facilitate a contextual comparison by indicating where a solution has been applied and within which context.
- Including use cases in the description of solutions. This facilitates an understanding of the important aspects of the context.
- Decisions towards how to choose a solution depends on factors like applicability for own organization, resources needed, weighing cost-benefit, track record of success.
- There is a need to balance presenting the sufficient in-depth information with an attractive easy to read outline.

Following the results of the KI-CoP workshop adjustments to the Knowledge Platform prototype were made.

3.2.2 USER REQUIREMENT IDENTIFICATION

3.2.2.1 ENGAGE end-user partner: ASL Roma Lazio
On the 15th of September a user assessment was held in person with ASL Roma Lazio, one of the end-user partners of ENGAGE. This assessment consisted of two phases. The first phase included deepening the understanding of the end-user profile and requirements. The second phase included showing a preliminary prototype of the Knowledge Platform and collecting user feedback on the presented features.

Some relevant results obtained from the user assessment with ASL Roma Lazio:
- Further definition of the target user profile that feed into the creation of personas (see section 3.3).
- The language of the presented contend needs to be easily understandable.
- Important to provide links to valuable source of the presented information.
- A sharing option should be provided to easily refer to and promote the content. For example, to make policy makers aware of solutions that ASL sees worth implementing.

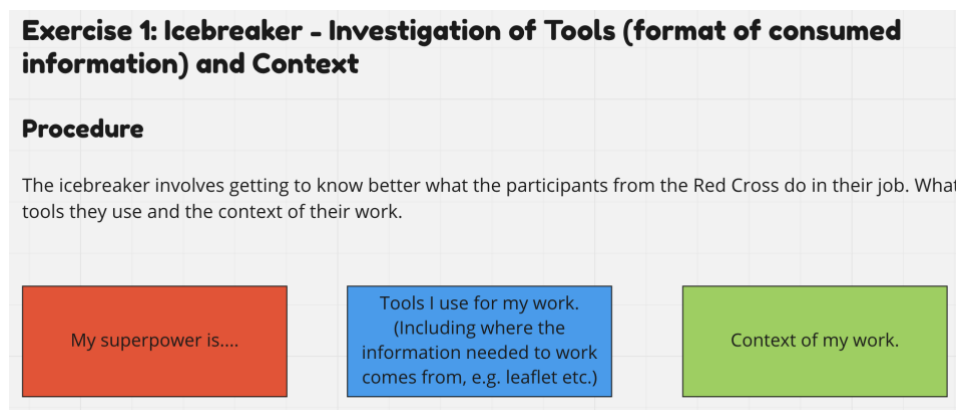#### 3.2.2.2 ENGAGE end-user partner: Trondheim Red Cross
Following a user cantered cyclic design process a third user assessment was organized to further deepen the understanding of user requirements and test the adapted Knowledge Platform prototype. For this third user assessment an in-person workshop was held in week 31 of 2021 with the Red Cross Trondheim, who is one of the end-user partners in ENGAGE. Additionally, the ENGAGE partner

SINTEF joined the workshop as they lead the creation of the Catalogue of Solutions which is closely related to the design of the Knowledge Platform.

Similar to the user assessment with ASL, the workshop with the Red Cross Trondheim had the aim to increase the understanding of the target user profile, to gather user requirements and to present an adapted Knowledge Platform prototype.

During the workshop a total of five exercise was performed. The first exercise aimed at identifying the main activity and goal was intended as an icebreaker and to get to know

In the first exercise the participants were asked to indicate what their superpower at work is. This was asked to summarize with what intention they perform the tasks during their work. Participants were further asked to list the tools they use and the context within they perform their work. Identifying these points enabled the better definition of the target user. **Error! Reference source not found.** shows the setup of the first exercise.

Figure 6. Exercise 1 performed during the workshop with the Red Cross Trondheim.

During the second exercise participants were asked to think of an emergency their were faced with but for which they had no predefined solution, procedure, method or tool. They were asked to describe how they solved the situation and what they did in the aftermath to adjust the solutions they had or introduce new once. Participants were then asked to envision how the Knowledge Platform could have been of use for them. This exercise provided further input in the use cases of the Knowledge Platform (see 3.5).

In exercise three user needs regarding the content, the visualization, format and interaction were identified. In a next step those needs were then matched with specific function that should be implemented in the knowledge platform.

In the fifth exercise participants were shown the newest version of the Knowledge Platform prototype. They were encouraged to indicate doubts about presented features and propose other functions deemed important but not present.

The prototype was purposely only shown at the end of the workshop in order to not bias the input the participants provided during the first four exercises. This ensured that the received information truly reflected the needs of the participants.

Some relevant results obtained from all exercise are:
- First responder end-users are identified as professionals who are in the position to propose, promote or put in place new solutions.
- When applicable offering downloadable material when presenting solutions was indicated as helpful addition.

- The content of the solution should be described in a short summary that can be understood by non-professionals. It was also indicated that this would make it easier to disseminate and promote specific solutions.
- Expressed requirement is presenting guidelines for implementation of proposed solutions.

3.2.2.3 ENGAGE end-user partner: Ertzaintza

For the next phase a user testing with Ertzaintza, another ENGAGE end-user partner, is planned for week 43 in 2021. The previous user-assessments were focused on generating user requirements which influence the design of the next version of the Knowledge Platform. The workshop at Ertzaintza will focus on testing this new protype of the Knowledge Platform. The police officers at Ertzaintza will be asked to evaluate the interface and interaction features of the new prototype.

3.3 TARGET USERS (PERSONAS)

For the Knowledge Platform primary and secondary target users were identified. Primary target users are first responders; governmental, national, regional and local authorities; Policy Makers; Companies; Citizens Organizations; and researchers. Secondary target users are communities and citizens.

After performing above-described user-assessments two personas were created that belong to the group of primary target users. Personas represent different types of users. They are fictional characters that possess integral characters of a group of identified target users. Creating personas during a design process serves the purpose of displaying and understanding key characteristics of the target users and their needs, motivations, expectations, behaviours and goals. Well defined Personas support a user centred design approach. Figure 7 presents Paul a who is a first responder and senior advisor whose aim is to increase preparedness throughout all first response branches.
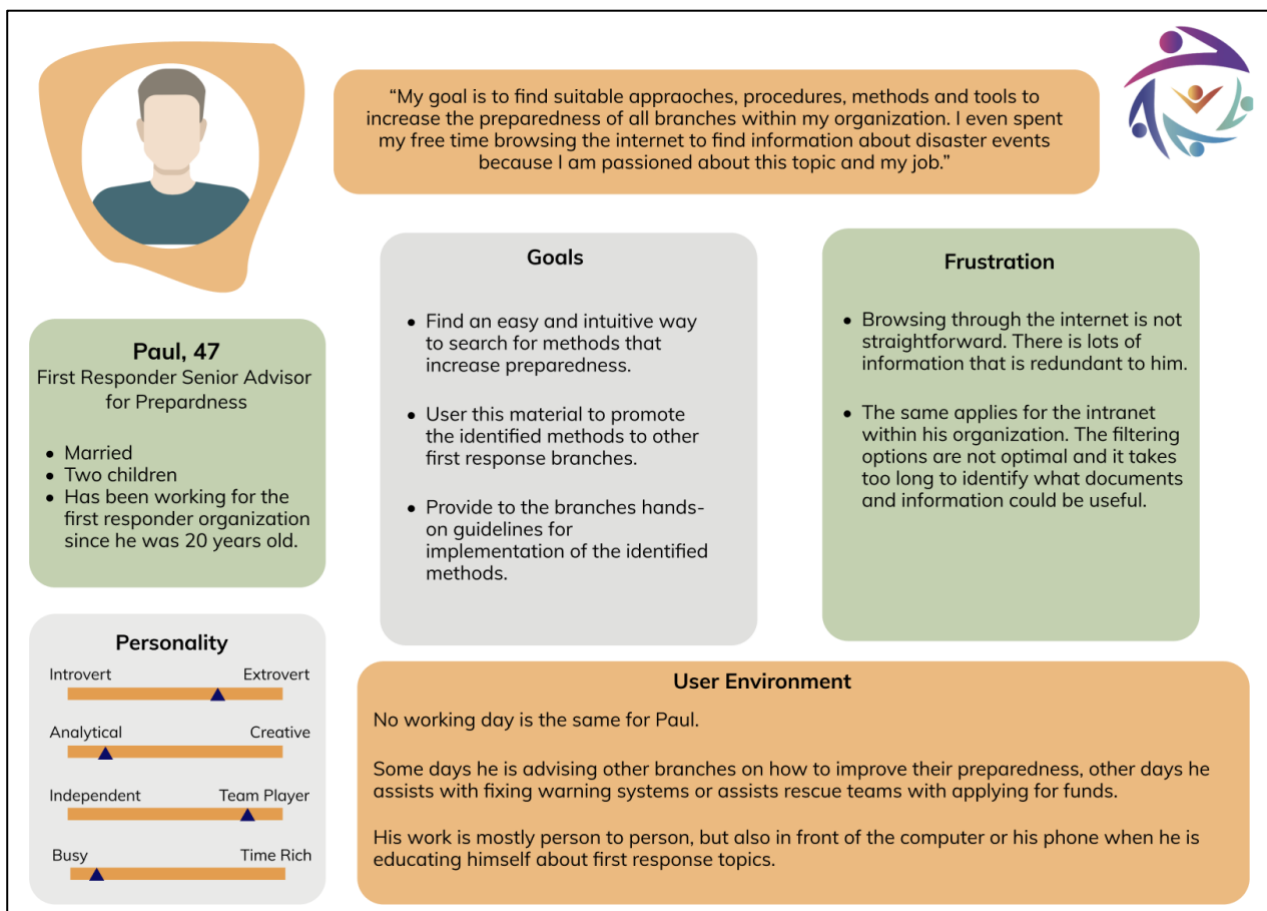
Figure 77. Persona 1 describing one of the primary target users.

Figure 8 presents Carla who works for a regional health authority. Her goal is to assure that her team is employing the most recent and validated approaches to deal with public health issues.
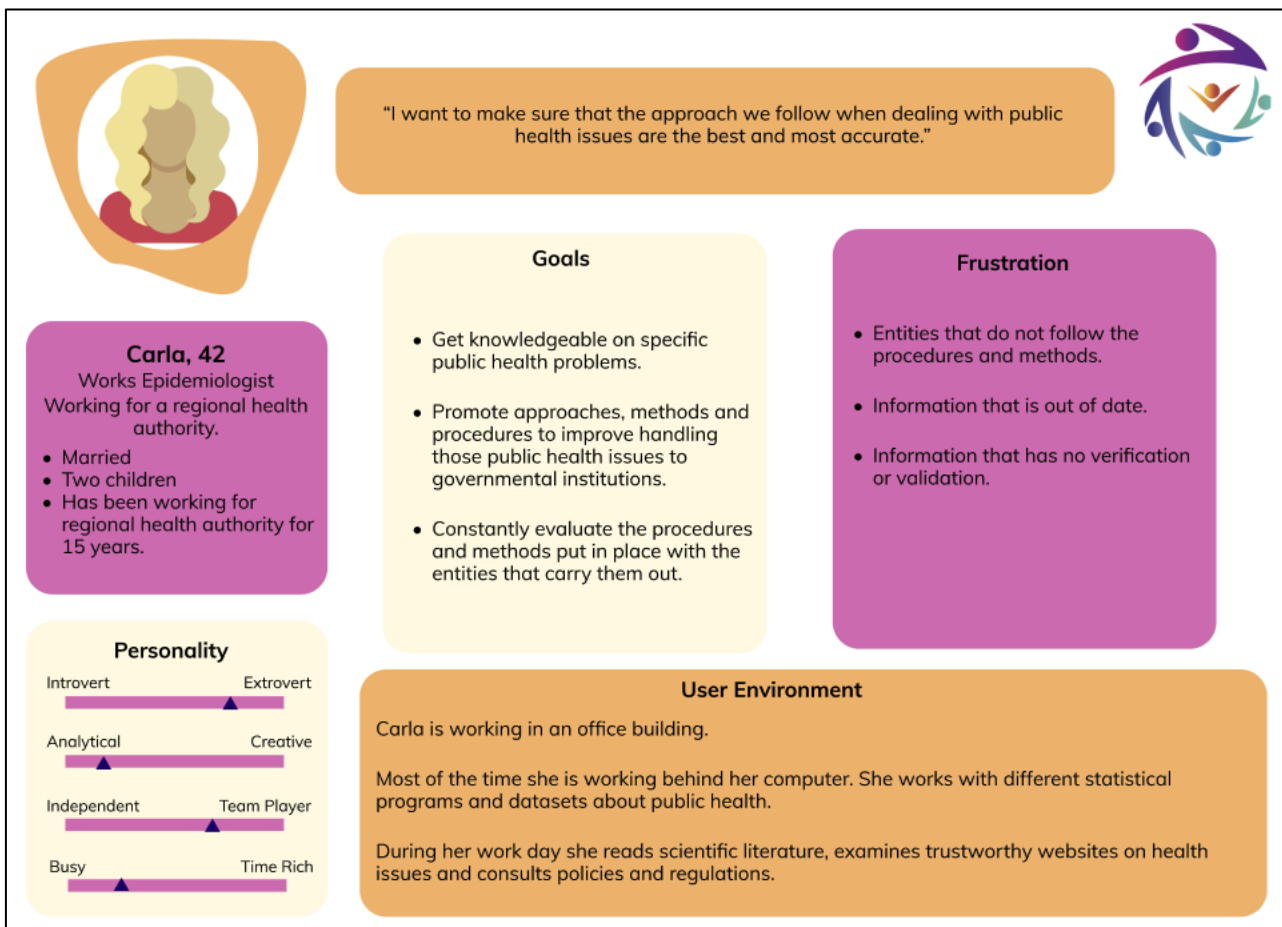
Figure 88. Persona 2 describing one of the primary target users.

3.4 USE CASES (USER JOURNEY)

Based on the different user-assessments and workshops it was possible to identify different use cases. Some examples are:

- A primary target user who has identified a specific problem visits the Knowledge Platform to find more information and possible solutions to that specific problem (e.g., managing volunteers).
- A primary target user has heard from a colleague about an emergency that happened and for which a specific solution was used. The user visits the Knowledge Platform to find more information about that specific solution.
- A primary target user visits the Knowledge Platform to brows its content and get inspired.

Based on identified use cases we were able to create user journey maps. User journey maps serve the purpose of illustrating the path the user takes to reach his/her goal. Additionally, they enable the designers to identify and create different ways through which the user can achieve his/her goal easy and quickly. One example of a created user map is shown in Figure 9.
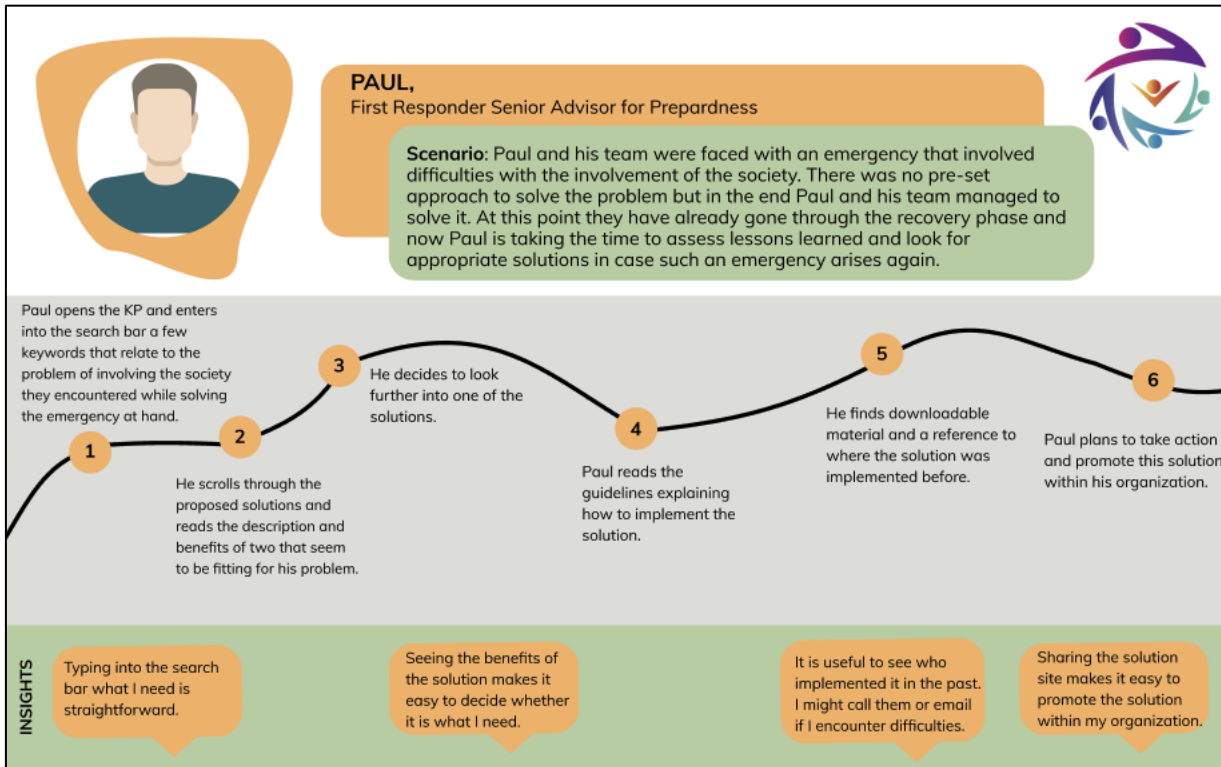
Figure 99. Example of a produced User Journey map.

3.5 CONTENT CREATION

The content of the KP is based on all the main outcomes produced by the project.
While in the project website all the outcomes are available independently, in the KP their division is not presented to the user but it constitutes only an internal reference.
The biggest source of information is the Catalogue of solutions, which allows to navigate in details all the most valuable solutions for resilience. Knowledge from the model for assessing societal resilience, the practice for communication and social media and the guide for empowering citizens in research are distributed on the KP on several levels. Part of the information can be included in the Catalogue if related to given solutions or can be provide as results from other search fields.
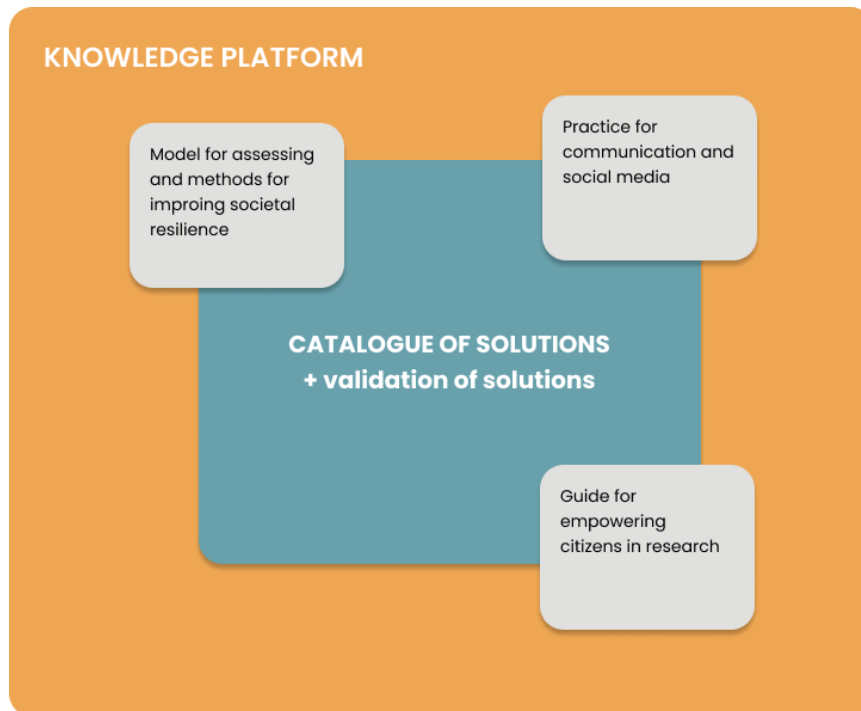
Figure 10. Content classification in the KP.

3.5.1 CATALOGUE OF SOLUTIONS

In WP3 there is ongoing work with regards to the catalogue of solutions, both with defining the catalogue information structure and the content creation. The catalogue of solutions will consist of existing solutions that have either been implemented or has been planned. The process of developing the initial catalogue of solutions will be described in detail in D3.1.

As described in D3.1, we are using AirTable as a database to store information about each solution. AirTable is an online collaborative tool which gives all project participants the updated information about the solutions and cases. AirTable is chosen as the documentation platform as it is an environment that allows for a useful overview of the solutions, as well as the possibility to insert new solutions as the project continues. AirTable also allows gathering information from external actors, through forms that directly updates the information in the catalogue.

3.5.1.1 Database structure and content

For the content in AirTable, all selected solutions for the catalogue will be characterized with basic information, such as solution name, type, target end-user, applicable disasters/hazards, and phases of disaster management. In addition, a selection of these solutions will be characterized more in-dept, where we will collect and analyze information with regards to target and outcomes, lessons learned and guidelines for the implementation and use of the solutions.

T3.1 is currently piloting the process of data collection and analysis, which will be described in D3.1. The purpose of this is to ensure that the content in the catalogue is relevant according to what we seek to describe, namely basic information, target and outcomes, lessons learned, and guidelines. The next steps will be to collect more data on selected solutions, which will be analyzed and inserted into AirTable.
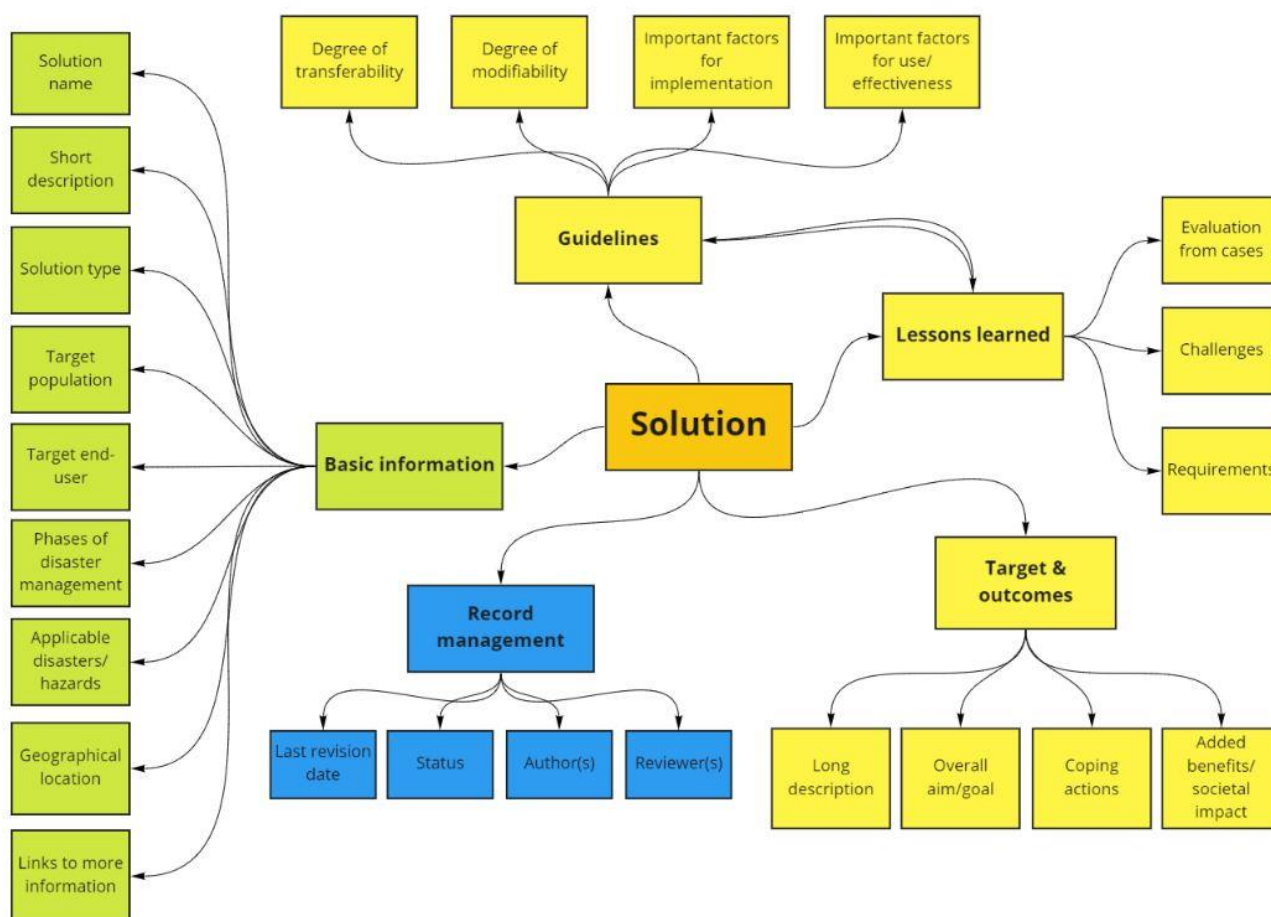
Figure 1111. Main categories of the information structure of the ENGAGE catalogue of solutions (taken from D3.1)

3.5.2 RESULTS FROM OTHER WPS

In its final release the KP will hosts all the operational results from the project. In future releases, partners from WP1, WP2, WP3 and WP4 will be in charge of producing content for the second and third release of the KP. All the outcomes will be available within the database and will be searchable through the navigation in the KP.

3.6 VISUAL IDENTITY

The visual identity of the KP was designed to recall the main elements of the ENGAGE Project graphic style. Font, color palette and illustration style are the same for both the website and KP. Consistency will help the user in identifying ENGAGE visual style. ENGAGE identity and visual style are described in Deliverable D5.1

Main font family: Poppins, Mulish
Main icon style: flat and realistic
Colors palette: EE9B3B, EE9B3B, B9C7B6, E0E0DE

3.7 LOGO DEFINITION

A first logo for the KP was produced during the first concept definition. It illustrates the title "ENGAGE Knowledge Platform" with the claim "Solutions for societal resilience easy to access".

Figure 12. First version of the KP Logo.

It adopted ENGAGE visual style with the goal of creating consistency in the communication.
The first logo was used on the project website for preliminary communication aims on the KP.
A second concept version of the KP logo is currently being produced and will tested with end users in different versions. The most promising versions of the logo will be then discussed within the Consortium to come to the definition of the final one.
Final logo will be adopted for all the communication and dissemination activities regarding the KP.

3.8 PROTOTYPING

For the creation of the KP several prototype, both interactive and not, were developed. This chapter illustrated the different prototypes created throughout the process from M8 until the actual one in month M16

By "prototype" is meant an early release of a product built to test an early concept or some functions of a product. The tool adopted for the prototyping of the KP user interface is *Figma.*

3.8.1 EARLY WIREFRAMES EXPLORATION

The first wireframes were created during the initial brainstorming on the knowledge platform.
They explore different possible layouts for the main content.
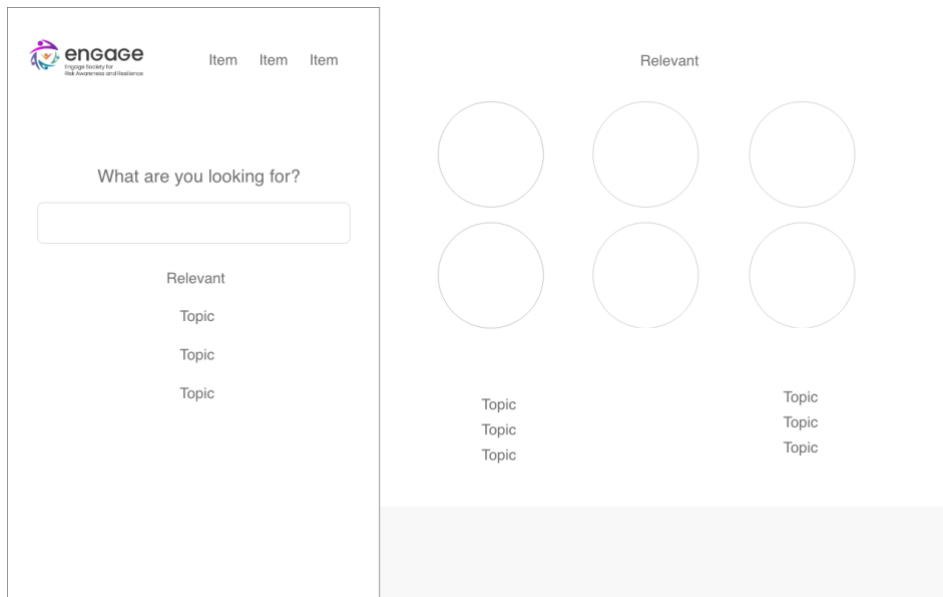
Figure 13. Wireframe Nr. 1
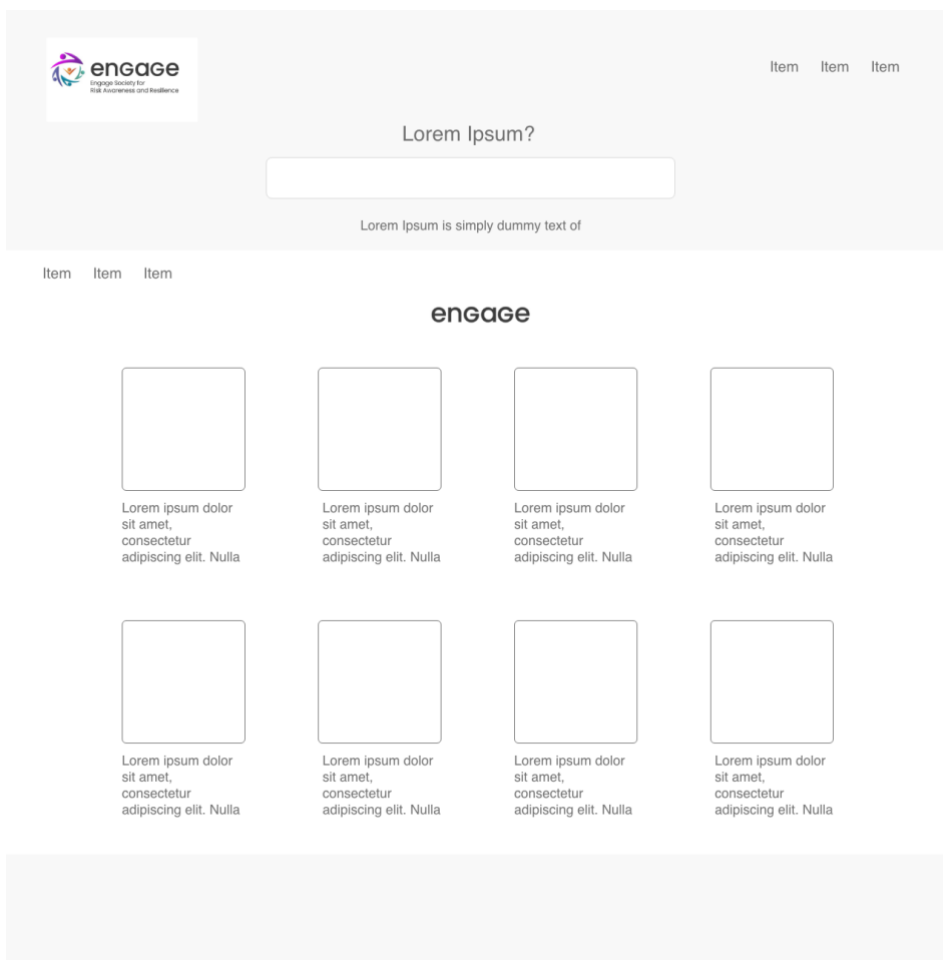
Figure 14. Wireframe Nr. 2
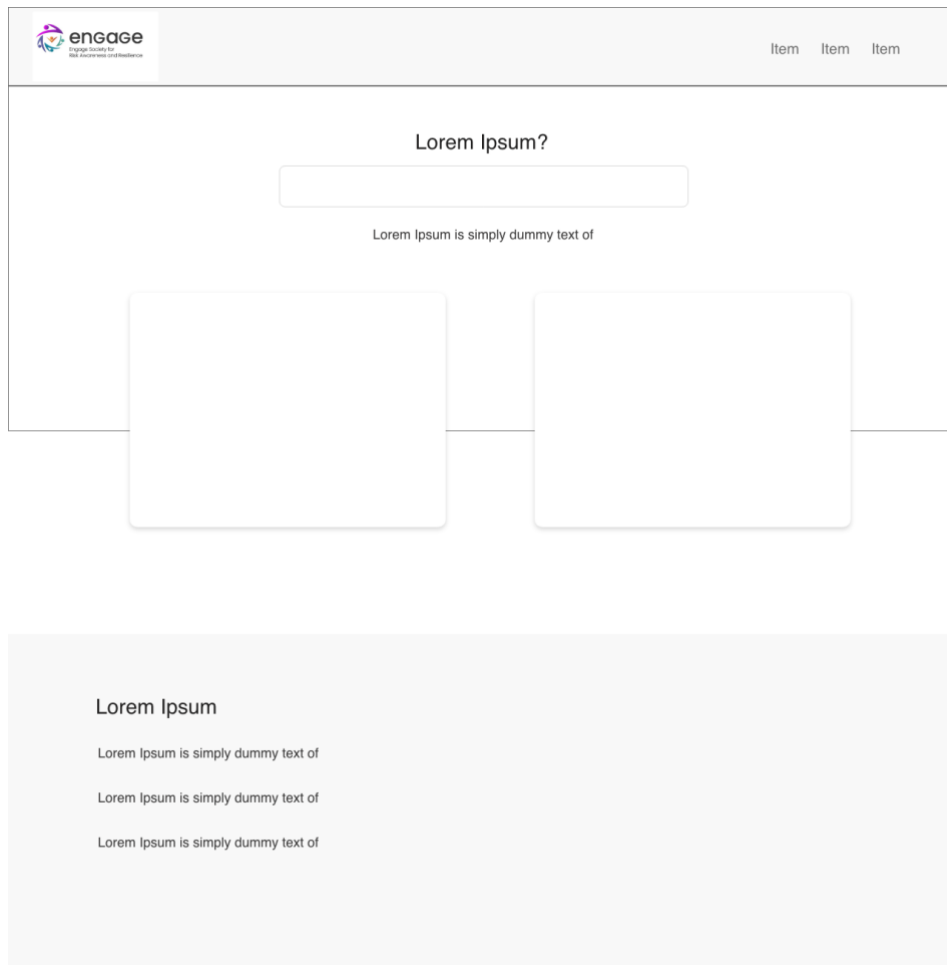
Figure 15. Wireframe Nr. 3
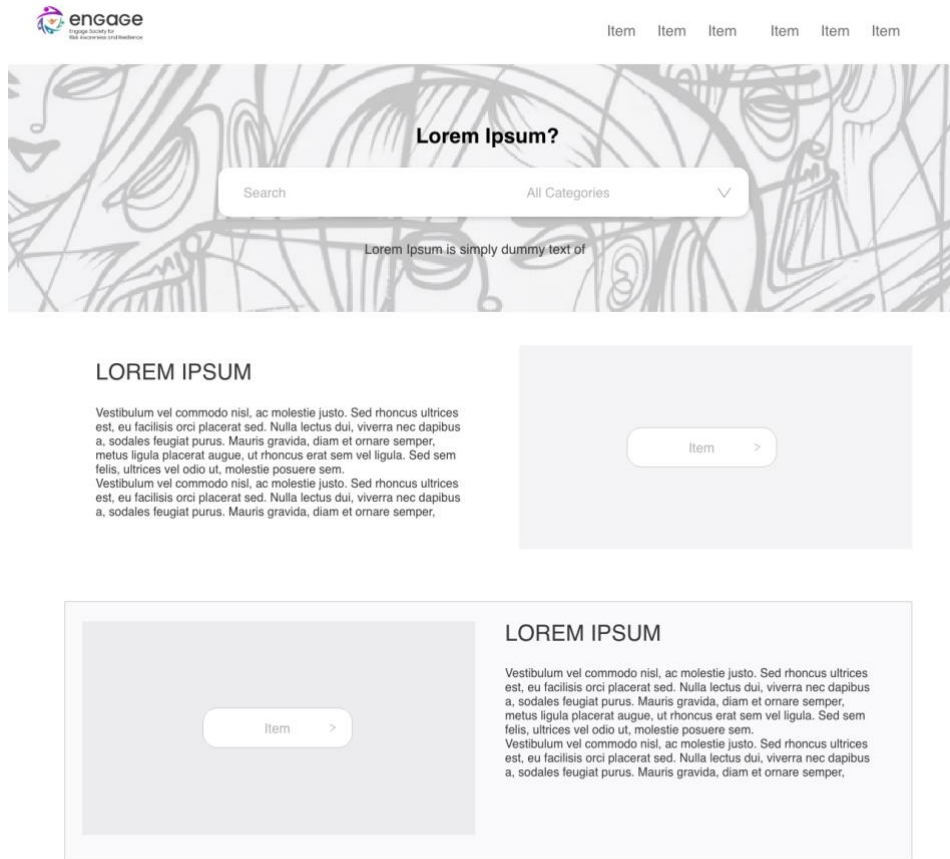
Figure 16. Wireframe Nr. 4

3.8.2 PROTOTYPE 1.0

Prototype 1.0 is a mock-up version of the KP. It allows the user the select the navigation path according to the professional role. The core concept of Prototype 1.0 is to provide the user with content tailored on their professional need. Additionally, in the lower part of the page, the user can enter the Catalogue of solutions directly.

User research identified the main problem of this version in the entrance point by professional role. It resulted to be complicate for users to select a category and it was not clear If the content provided is directly related to the professional role.

A first layout for the solution page was provided.
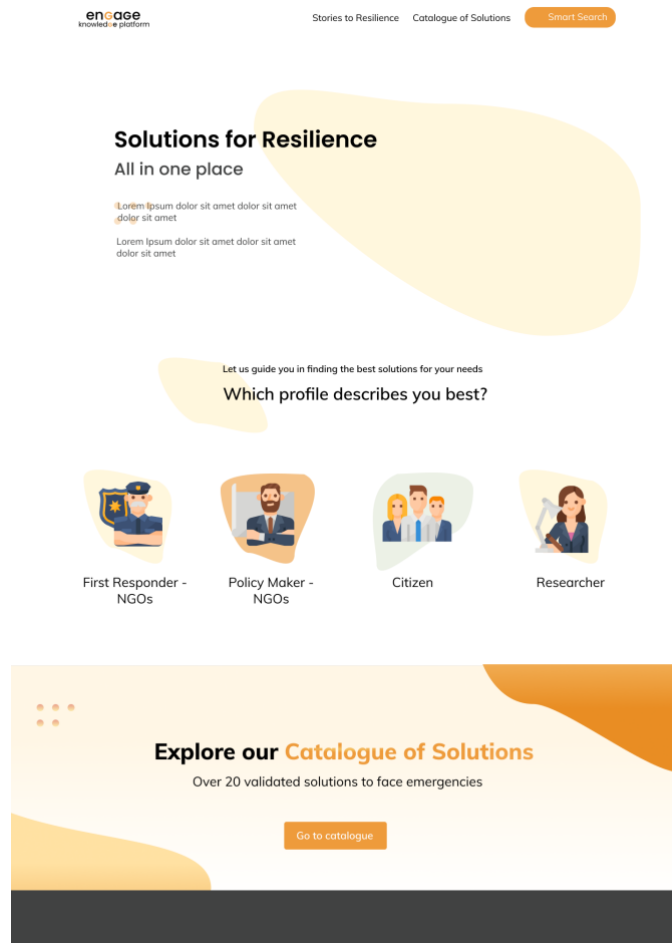
Figure 17. Mock-up of landing page in Prototype 1.0
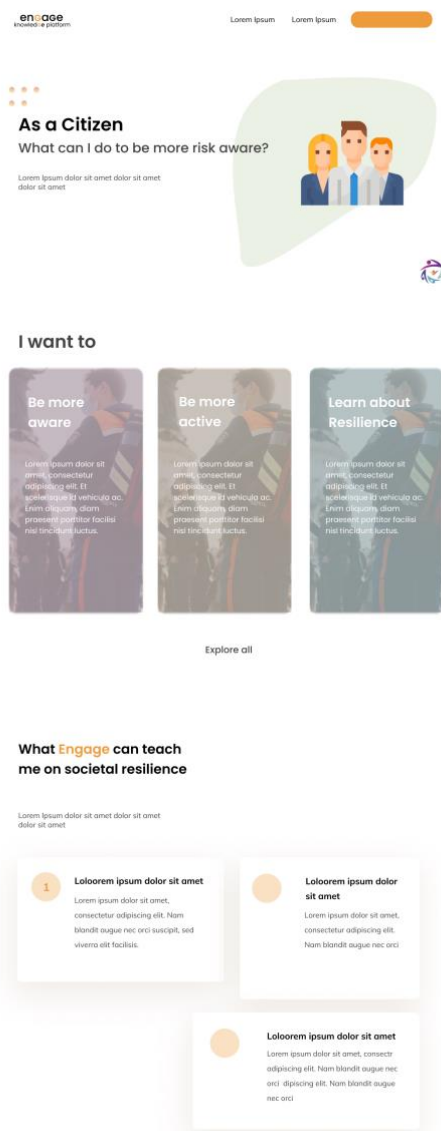
Figure 18. Mock-up of content page in Prototype 1.0
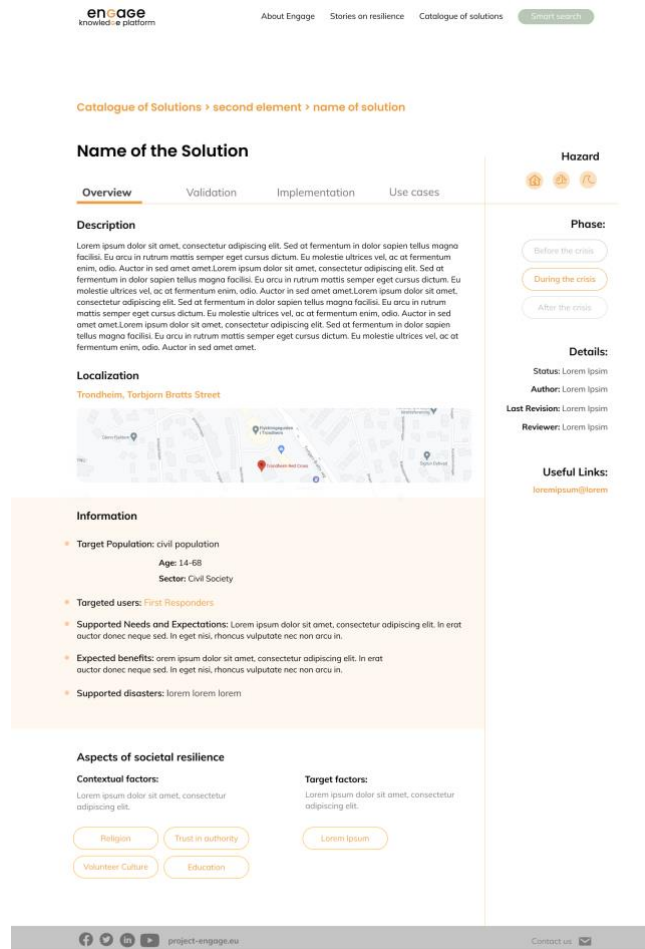
Figure 19. Mock-up of solution page in Prototype 1.0

3.8.3 PROTOTYPE 2.0

Prototype 2.0 is an evolution of Prototype 1.0. The entrance is now divided into two main calls to actions. The user can select to navigate by hazards or by profession. From the top menu, it is possible to access the smart search where information can be found by keywords.
User test on this model showed confirmed how it is not useful to enter the material by profession. Search by hazard and smart search tested effective.
A new layout for the solution page was provided.
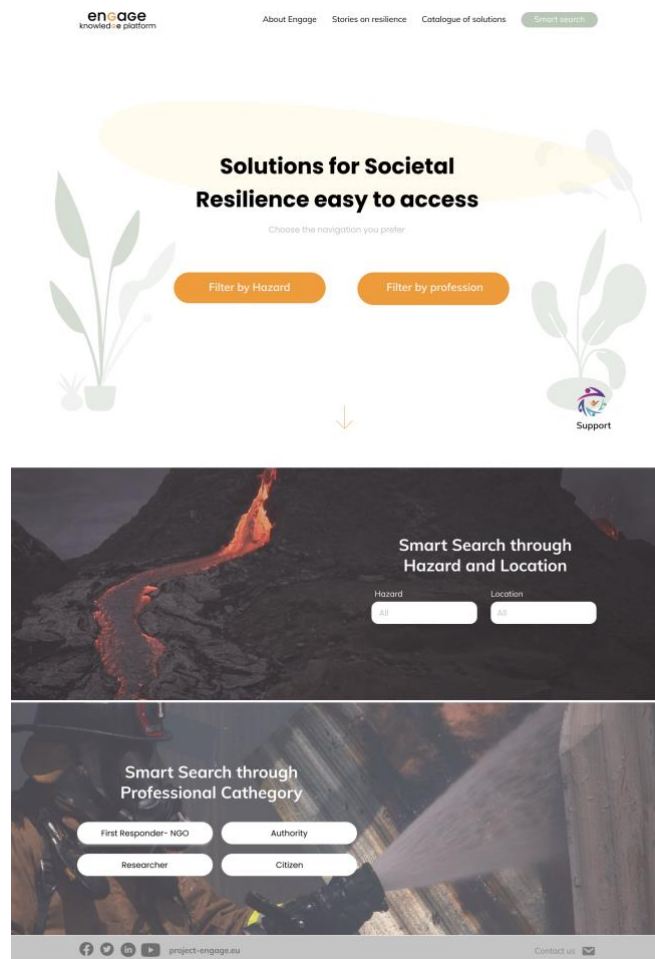
Figure 20. Mock-up of landing page in Prototype 2.0
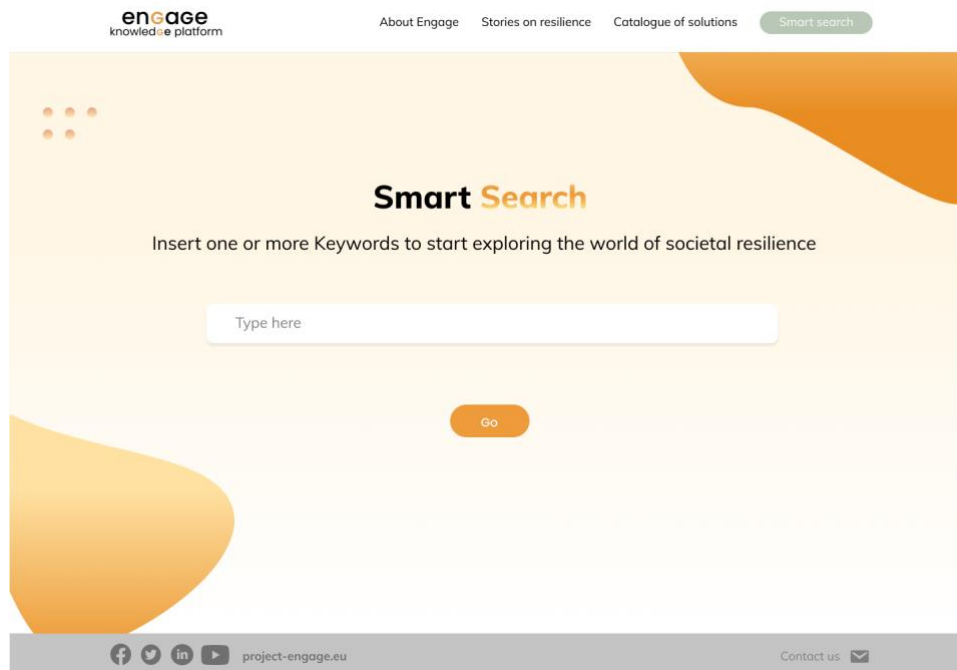
Figure 21. Mock-up of smart search page in Prototype 2.0
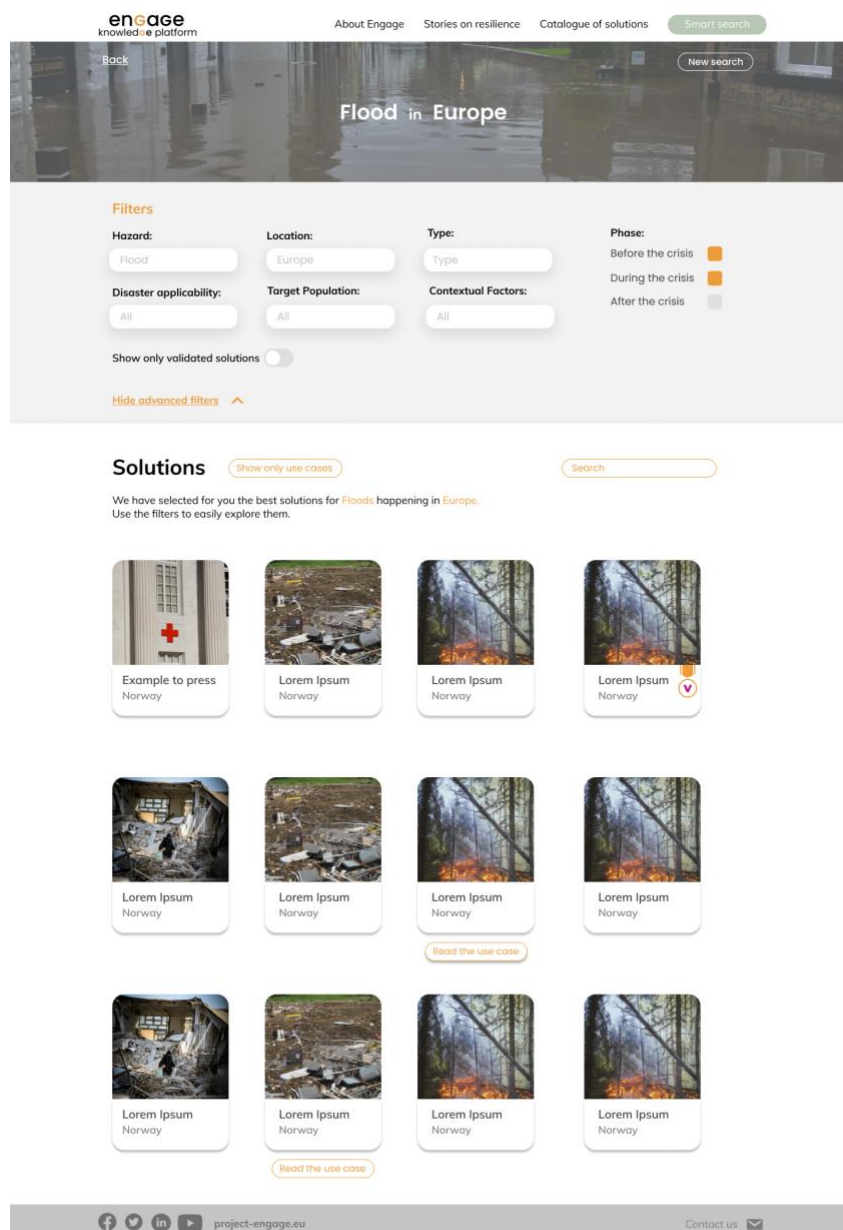
Figure 22. Mock-up of catalogue of solutions in Prototype 2.0
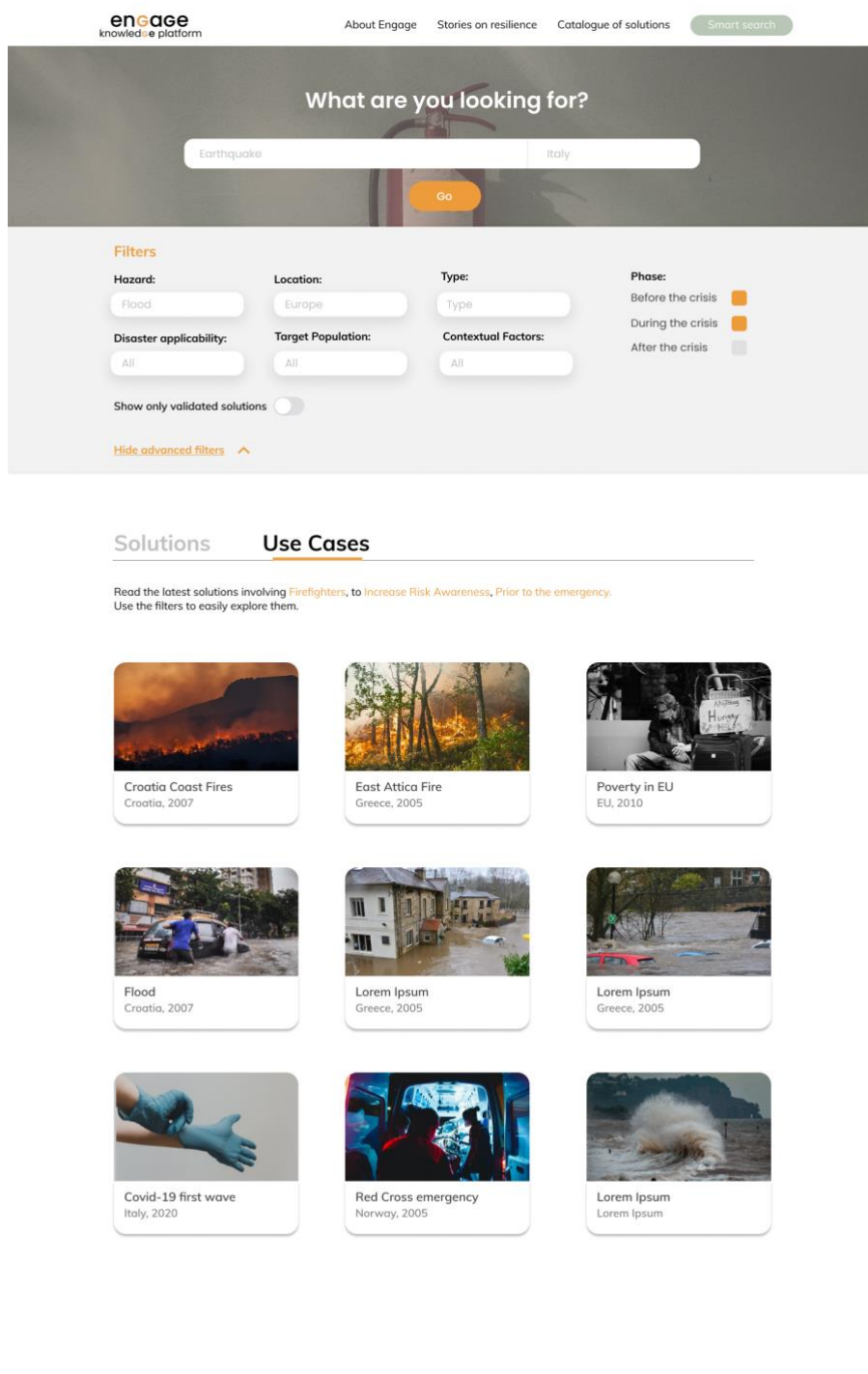
Figure 23. Mock-up of Catalogue of solutions, use cases, in Prototype 2.0

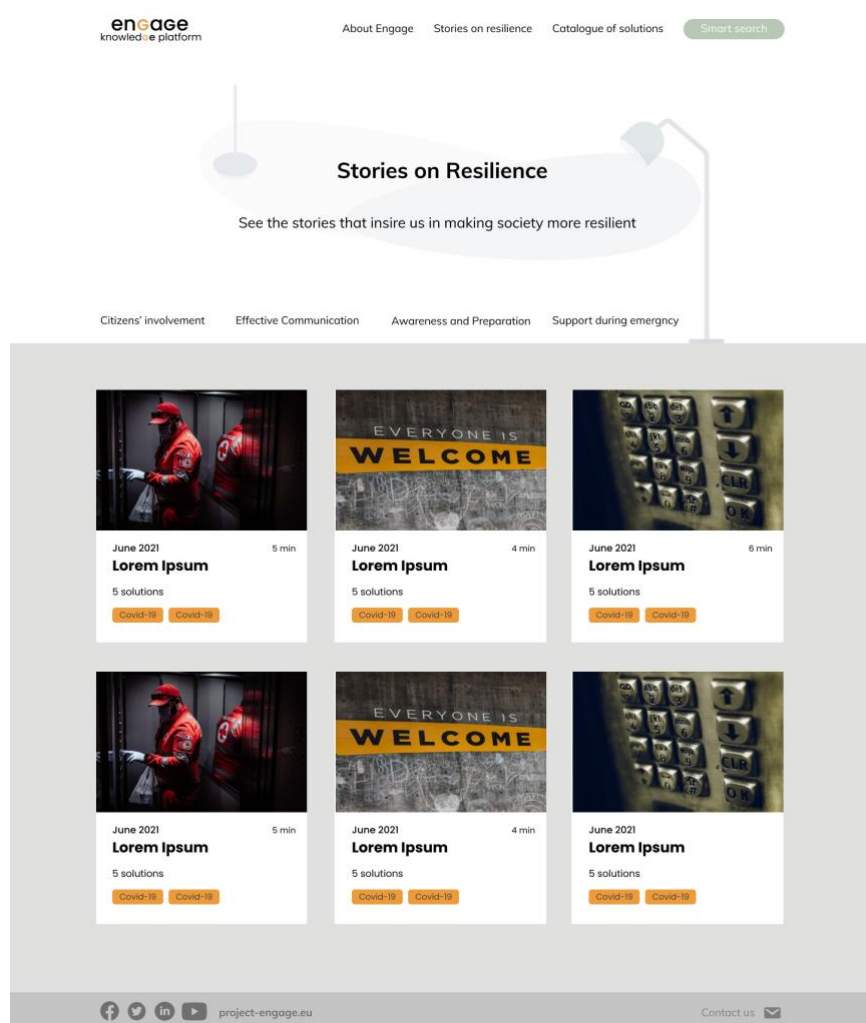*Figure 24. Mock-up of solution page in Prototype 2.0*

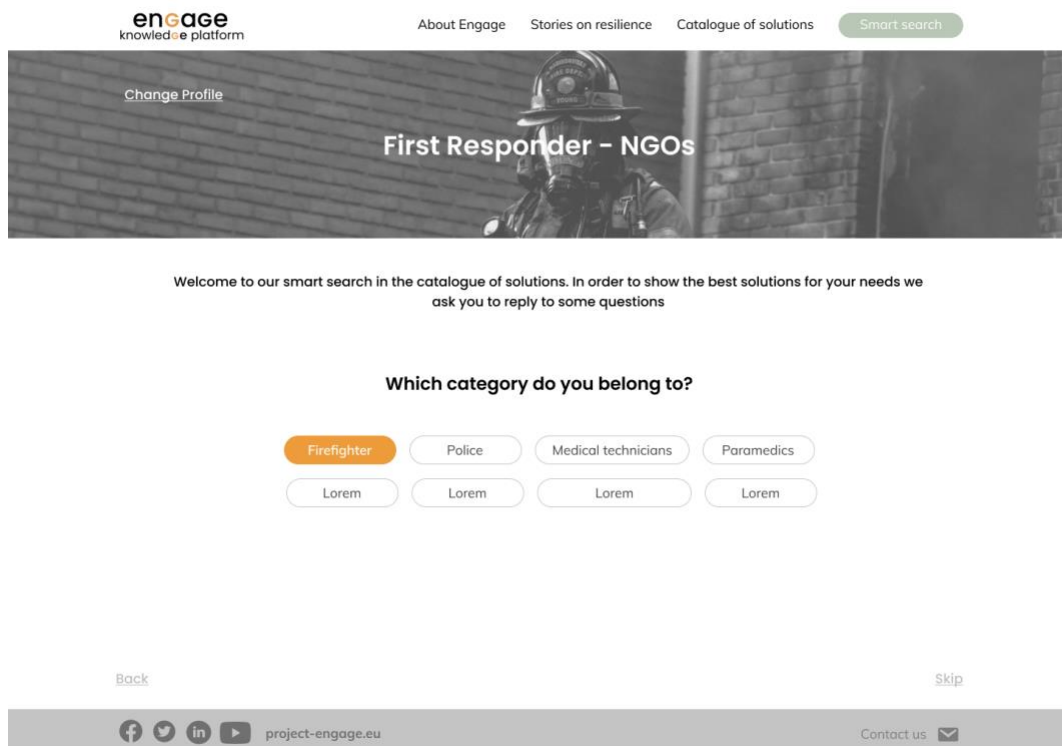*Figure 25. Mock-up of stories on resilience in Prototype 2.0*

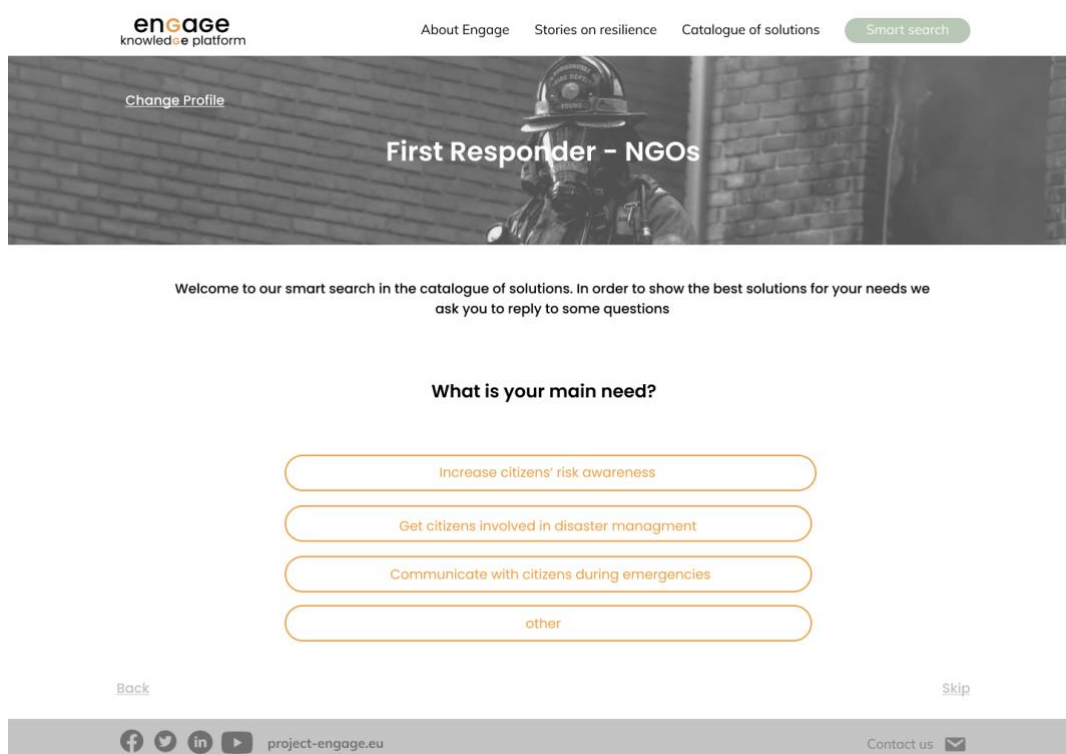*Figure 26. Mock-up of profile selection in Prototype 2.0*

Figure 27. Mock-up of need selection in Prototype 2.0

3.8.3.1 Interactive prototype

An interactive prototype was created to conduct user research with end users of the KP.
It allows to explore only the main pages and functionalities of the website.
The interactive prototype is accessible at this link:

https://www.figma.com/proto/CaKkdKt0K0wbhm5XuSSo4W/Knowledge-Platform?node-id=293%3A912&scaling=scale-down&page-id=286%3A174

3.8.4 PROTOTYPE 3.0 (WIREFRAME)

Prototype 3.0 is the evolution of prototype 2.0 and it is still under definition. At the moment, the wireframe was built. The new layout identifies the search bar as main call to action and provides other entrances through some dedicated cards.
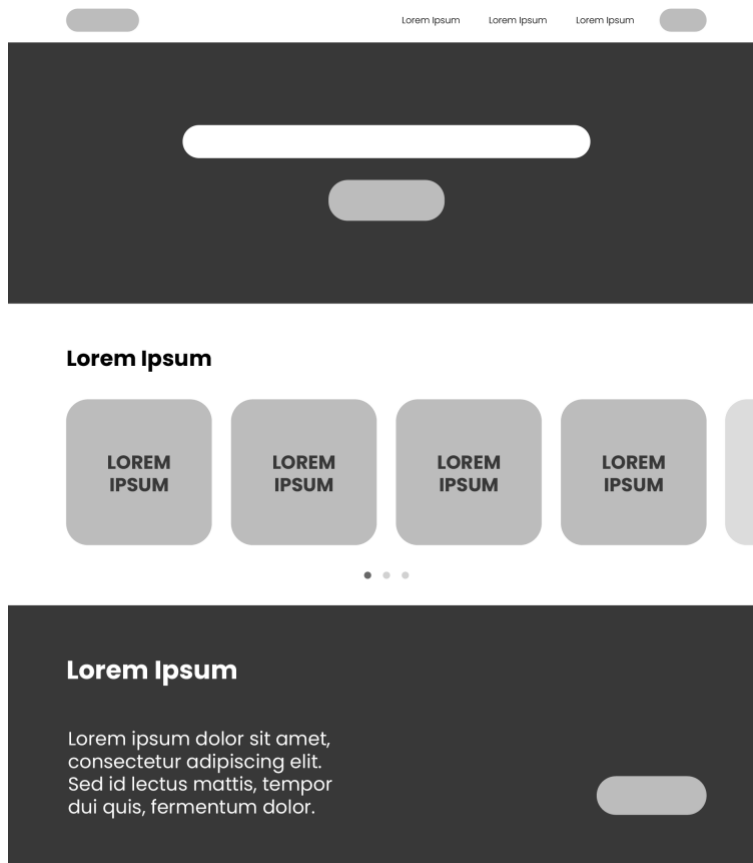
Figure 28. Wireframe of Prototype3.0

4 SYSTEM DEVELOPMENT AND RELEASE

System development is the process of testing and implementing the software application and the hosting website. It will include the internal development of the customized system, the database system, the front-end and back-end.
DBL is in charge of the system development and implementation management.

4.1 ROADMAP TO THE LAUNCH OF THE PLATFORM

DBL will start the system development activities in M17. Four system development phases will bring to the creation of different releases of the KP. See chapter 2.3.2 for the whole list of features.

1. The initial implementation aims at the creation of a first beta version in the format of a high-fidelity prototype. It will be available in January 2022 and will allow to visualize the KP with both basic and advanced features. DBL could decide to test and analyse it with end-users before concluding the implementation.

2. Mature implementation will last until the release of the first version in M22. This process will produce the first online and public version of the KP with the basic features.

3. After M23, the implementation will not be considered initial anymore and will aimed at implementing advanced feature for the second release in M27.

4. From M28 the development could address additional advanced features, if requested by the nature of new project outcomes.

The figure below provides the system implementation timeline
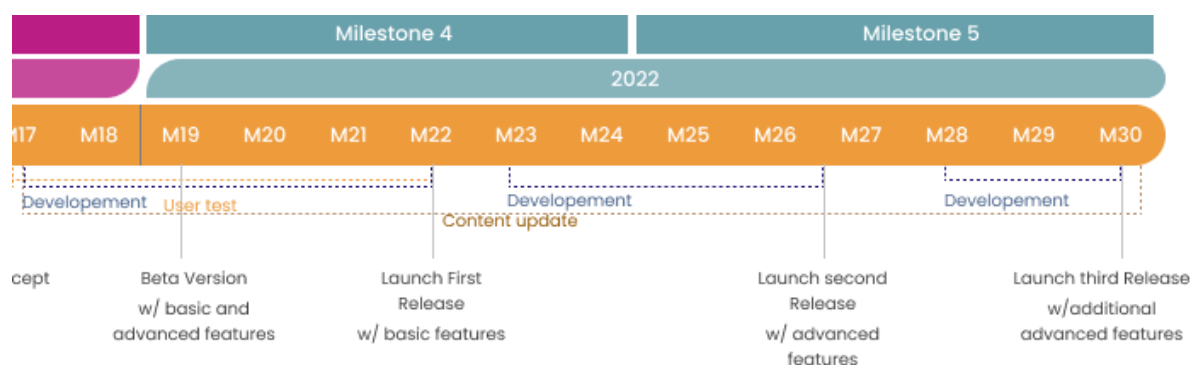

Figure 29. Timeline of the system implementation

4.1.1 RELEASE OF THE FIRST ONLINE VERSION

The first online version of the KP will be released at the end of March, beginning of April 2022.
It will be host on a dedicate domain and will be accessible both from the project website and Google search. The release of the platform will be disseminated through the communication channels of

ENGAGE project. EENA will be responsible for the communication and dissemination regarding the launch of the KP.

4.1.2 UPDATES AND FUTURE RELEASES

The KP will be updated with the latest project results throughout the entire duration of the project. The upload of new material will be constant with bi-weekly update of the database.
The material will be provided by all the WPs and DBL will take are of updating the platform, while SNTF will be in charge of updating the Catalogue of Solutions.
Several releases of the content are planned for the next years. Please note that the concept of release is a technical indication for the development and its mainly referred to the technical features of the platform. The content database will be constantly updated.

Table 3. List of KP releases

Beta Release	M19 - January 2022	Beta version of the KP in the format of high-fidelity mock-up with all the basic interactions connected.
First Release	M21 – M22 End March – Beginning April 2022	Online public release of the KP. Basic features are available.
Second Release	M27 September 2022	Second official public release with the addition of advanced features.
Third Release	M30 December 2022	Final release with the most advanced features. This edition will be subject to the future project results.

5 MAINTENANCE AND CONTRIBUTION

Deep Blue is responsible for the maintenance of the Knowledge Platform for up to three years after the project termination.

All the partners will contribute to the creation of content throughout the entire project duration. In particular:

- STF is in charge of the creation and update of the Catalogue of Solutions.
- EENA is in charge of the communication and dissemination of the KP.

6 CONCLUSION

This deliverable described the ongoing process of creating the ENGAGE Knowledge Platform. An overview was given about the Information Architecture of the KP and features categorized into basic and advanced features were indicated. Further a timeline was provided which illustrates the KP design process. As this deliverable is submitted with a delay section 3.2 points out multiple reasons for the delay. It further states that no other tasks are affected by this delay.

The Knowledge Platform is one of the main outcomes of the ENGAGE project. The ENGAGE project aims to deliver a tool that is valuable to the target users and that is catering towards their needs. As described in section 3.2 different circumstances made it difficult to guarantee the quality of the outcome. Now with COVID-19 restrictions lifted and the possibility to hold user-workshops, user-assessments and user-tests in person, the project can generate the data to guarantee a product that is tailored towards the needs and expectations of the end-users.

The deliverable further goes on to describe evolution of the KP, showing prototypes that were created at different stages.

The KP will be further developed in the coming months to further adjust towards outcomes that will be produced through user-research.