Project HEROES
D4.3 Age Inclusive Hackathon

Contents

Project identification	
Project number	AAL-2020-7-47-CP
Duration	30 months (5 Apr. 2021 – 6 Oct. 2023)
Coordinator	Monica Moldovan
Coordinator organization	The Care Hub
Website	www.heroesproject.eu

Document identification	
Document identification	D4.3
Leader of the deliverable	CUAS
Work status	In progress
Review status	

Autorship and review information	
Editor	Daniela E. Ströckl, Johannes Oberzaucher
Reviewer	
Contributors	

Deliverable info	
Description	
Dissemination level	
Deliverable type	
Original Due Date	

Change records			
Version	Date	Author (Organization)	Description
1	28.06.2021	Johannes Oberzaucher	Deliverable structure
2	30.06.2021	Johannes Oberzaucher	New: Background and Terminology, Age Inclusive Events, Concept Age Inclusive Hackathon
3	02.07.2021	Daniela E. Ströckl	Update: Concept Age Inclusive Hackathon New: General Use cases and Hackathon aims, Programm, Implementation Plan incl. Schedule, Dissemination Plan
4-6	05.07.2021	Daniela E. Ströckl	Update: General structure & headings New: Tools (UCD Design Method, Barrier-free and diversity-compliant design), Hack Evaluation Plan
7	26.07.2021	Daniela E. Ströckl	Text passages on the topic of online respository by Andi Georgescu added.

8	29.03.2022	Daniela E. Ströckl	Changed Time Schedule; finalized hackathon deliverable implementation (without results)

1 Introduction

Project HEROES (HomE woRk fOr retireES) is funded by the AAL (Active and Assisted Living) Programme's 2020 Call Challenge, project nr. AAL-2020-7-47-CP, with financial support from the European Commission and the national funding agencies of Austria (Österreichische Forschungsförderungsgesellschaft - FFG), Romania (Executive Agency for Higher Education, Research, Development, and Innovation Funding – UEFISCDI) and Switzerland (Innosuisse).

1.1 Document objectives

The deliverable ***[D4.3]*** is part of ***WP4,*** task ***4.3***

The partner accountable for the deliverable is CUAS, while TCB is responsible to review. TCH, TERZ, RUF and IAF-FHS are invited to contribute with feedback.

The deliverable establishes a clear overview, insight in the general strategy and planning of the implementation of the HEROES age-inclusive hackathon. The objective of the hackathon is to contribute to the prototype development during the co-creation phase and to build a cross-generational bridge between retired end-users, providing the user perspective during the hackathon, and the software developers.

1.2 Project summary

Recruiting a trustworthy caregiver is a time-consuming and frustrating process. Families have neither the time nor the experience to choose among candidates. Care homes invest precious time in screening many candidates until they find the right ones.

1.2.1 Objectives

HEROES aims to build a platform that makes hiring caregivers fast and cost-effective.

The platform will connect:

1) a community of older people and nurses that screen and rate candidates online (i.e. reviewers);

2) families and care homes looking for trustworthy caregivers (i.e recruiters);

3) individuals with formal or informal experience as caregivers and who are looking for work (i.e. candidates);

1.2.2 Overview

Project HEROES expands the state-of-art of AAL projects, video recruiting and job placement platforms by:

1) Providing a much-needed workforce of caregivers to local health and care systems

2) Creating remote, inclusive employment for older people by redefining the pre-recorded video interview concept and technology to allow remote participation, from anywhere and at any age.

3) Fostering inter-generational action learning. The project applies action learning principles to create a self-sustainable learning community.

4) Building diverse ecosystems at the community level, by engaging multiple stakeholders.

5) Increasing quality of life for reviewers (older people and nurses) and recruiters (mainly families) with an easy to use platform, co-created with end-users. The project aims to measure the impact on well-being using WHOQOL-BREF.

6) Changing public decision making around age and employment. We aim to derive fact-based insights into the individual work patterns of older people and to share them with decision-makers.

1.2.3 Expected results and impact

Project HEROES aims to create a recruitment platform for all ages that is easy to use and friendly, with a **UX measurement score of at least 80**.

As one of the key objectives is to improve the quality of life of older people by engaging them in recruiting activities, we expect **at least a 5% increase in the quality of life of people using the platform** (measured using, e.g. WHOQOL - BREF)

Since the social impact is key, we aim to engage at least **75 older people, nurses and families** during field trials in **5 separate communities**. The pilots aim to have a balanced gender representation.

Finally, we will track the success of the recruitment process, aiming to have a **majority of recommendations accepted by recruiters** and **at least 30% promoters and not more than 30% detractors** among recruiters.

1.3 Consortium

The consortium of project HEROES is coordinated by TCH and consists of 6 partners.

Table 1 Members of HEROES consortium

No*	Organisation name	Short name	Organisation type	Project role	Country
1	**The Care Hub (Coordinator)**	TCH	SME	Business	Romania
2	**Institute for Ageing Research**	IAF-FHS	University	Research	Switzerland
3	**Institute for Applied Research on Ageing**	CUAS	University	Research	Austria
4	**terzStiftung**	TERZ	End-User	User	Switzerland
5	**rapid user feedback GmbH**	RUF	SME	Business	Austria
6	**Tricubiq Solutions**	TBQ	SME	Business	Romania

2 Background and Terminology

The project HEROES follows a clear participatory and inclusive approach of technology development and evaluation. In order to open this approach even more to an academic and open-innovation oriented community the project will organize the HEROES age-inclusive hackathon. The objective of the hackathon is to contribute to the prototype development during the co-creation phase and to build a cross-generational bridge between retired end-users, providing the user perspective during the hackathon, and the software developers.

In relation to this in the following chapter 2 and 3 we will discuss the general background and related terminology of open-innovative hacking events with an inclusive character, in order to develop a common understanding for the described planning and implementation in the chapters 4-9.

As starting point we have to state the fact, that community-oriented participatory technology events (e.g. Hackathons) have become very popular in last years, both in traditional academic contexts such as universities and in the broader perspective of participative, applied R&D.

Ideas related to "hacking" and "making" have been spread as approaches to solve problems in societal quadruple helix settings in a creative and cooperative way including different stakeholder groups. In (academic) education, hacking and making can offer students greater autonomy, choice and personalization opportunities than the traditional classroom. Students can be encouraged to collaborate on challenges that interest them, to develop context-specific problem-solving strategies, and to engage with the wider world. Nevertheless Hackathons are still mainly technology-driven events and very related to relatively young hacker groups. In relation to this we have to face the questions:

- Where does (Age-)inclusive Design fit into these approaches?
- How do we maximize their reach and impact to better include those who may be on the margins?

In relation to this in the following the terms

- Hackathon
- Age inclusive event

and relevant influencing factors will be discussed.

2.1 Hackathon

The term "Hackathon" is mainly used in this context to refer to events that emphasize intensive short-term collaboration between small groups of hackers. The tem-member normally

- brainstorm,
- design and
- prototype

around social, cultural, or technological issues that are relevant to them and then present their results in some form to a larger group or a jury throughout the event or at the end. These events are often focused on producing or drafting new software(-components) or hardware as a means of addressing a social problem or creating a new product.

In academic settings, hackathons might be held as part of course curriculum or as an extracurricular activity for interested students or implementers. Academic institutions might seek to partner with community groups for hackathons to encourage students and faculty to form connections outside the institution. These events can be highly engaging to students (including students disconnected from or turned off by traditional classroom structures) by allowing them to design and pursue challenges of their own interest, and can help bring in the world beyond the classroom.

2.2 Hacking

The term "hacking" in the context of a Hackathon is very related ideas of learning by doing, do-it-yourself and creative and cooperative playing that we can also find present in the term "making" [4]. In relation to an inclusive approach the hacking approach can be present in adaptations and transformations of technology that allow participation in activities or the use of technology by more diverse groups, including older people. In academic settings, hacking might include classroom projects involving prototyping a product or system, or customizing devices to suit someone's unique needs [5].

3 Age Inclusive Events

In relation to the HEROES project and the general approach of participative development of technologies also the planned age-inclusive hackathon the project team emphasizes that the approach of developing ideas that get made between people attending hackathons are more important than any products that get produced. If hackathons are about building community, issues of inclusion, exclusion and audience diversity are paramount to their design. In planning inclusive design strategies for hackathons, the team must ask some of the same questions which are also asked in other contexts[1]:

3.1 How can we include diverse groups in the event?

In order to structure events to improve accessibility for people with different backgrounds two pieces of specific advice from Inclusive Design practice are recoomended [6]

- Use an approach that is directly related to approaches like Inclusive Design Mapping[2] to reconsider and stretch the design of the hackathon or hacking exercise towards greater inclusion.
- Conceptualize, execute and review in the open.

3.2 How can we include quadruple helix perspectives – not only technological visions?

Hacking is often associated with technology driven contents and disciplines (Science, Technology, Engineering and Math). Nevertheless a clear inclusion of User-Centred-Design approaches and quadruple-helix perspectives has to be realized in realtion especially to social and socio-technological topics. The transfer ability and possibility from non-technological groups toward the hacker-concepts and implementation has to be supported be corresponding tools and methods.

[1] https://handbook.floeproject.org/inclusivemakingandhacking
[2] http://www.inclusivedesigntoolkit.com/GS_explore/explore.html

3.3 Who is excluded?

Hackathon events can unintentionally exclude participants through limitations in their design.

- How do we redesign our approach to running, promoting and recruiting for our events?
- What strategies can help us avoid inadvertent exclusion?

This is especially important for hackathons trying to discuss and solve questions faced by older user-groups following the idea of “Nothing About Us Without Us” [7]. This principle is also of broader value in considering inclusion in hackathons targeting social problems - we cannot hope to focus on topics and solutions that are relevant, important and engaging without working together with those most directly affected, which also mirrors the general HEROES approach.

3.4 Is physical attendance really needed?

Physical co-work in same room-setting is common, but a requirement to be physically present to participate can exclude people based on ability to travel to the location or health [6]. In realtion to this the organisation team has to consider several points to realize an inclusive event:

- Support of remote collaboration using audio and video conferencing tools and/or collaborative coding environments
- Define if there are alternate styles of event available that would also be appropriate, such as the distributed approach

Distributed events can allow a greater reach and diversity, and greatly expand the potential audience who can participate, work together and learn from each other's different experiences.

3.5 Are such „interdisciplinary” teams able to solve problems?

Within an age-inclusive event especially the group of older people is often tagged as a special group, with special knowledge, but lack of technological knowledge. It would be important to on the one hand make clear that is often the case, but that it should not be emphasized by the interdisciplinary hacker teams (seniors, younger developers, mediators, etc.) There are no "average" users in inclusive and user-centred design's philosophy. Building with diverse individuals, including those with "extreme" needs, results in designs with greater adaptability, resilience and usability for all [6].

From this, the team should not worry that a hackathon challenge or project is "too specific" to the particular situation of one individual; rather, the team can use an individual's unique needs as a means of generating unorthodox solutions and stretching the designs.

4 Concept Age Inclusive Hackathon

Based on the described general background and questions that the team has to face in the development and implementation of the HEROES age-inclusive hackthon a concept of a distributed (Romania, Switzerland, Austria), age-inclusive (developers, mediators and supervisors) and social-technological hackathon was developed.

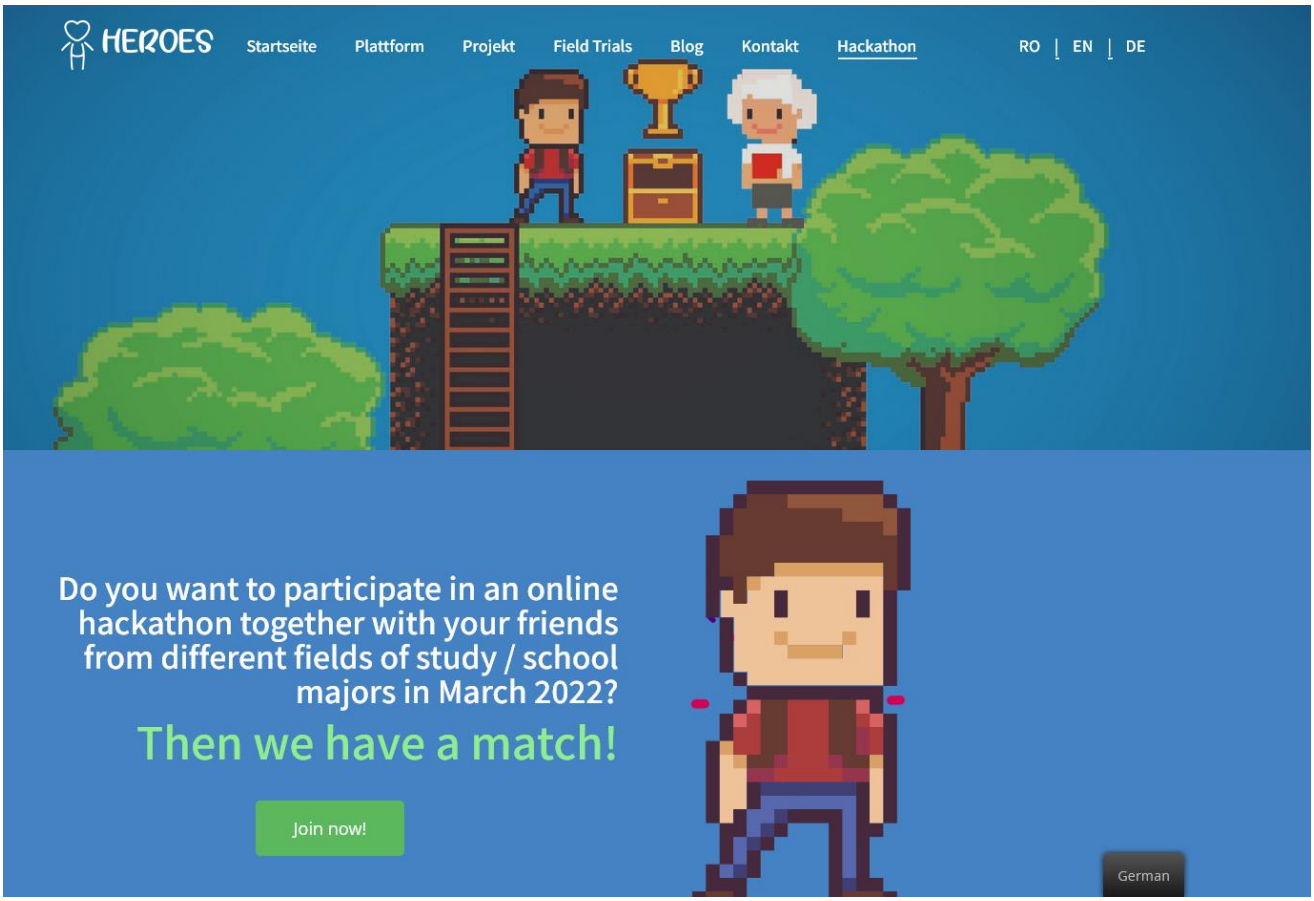

Figure 1 HEROES age inclusive hackathon – Recruitment Webpage

As shown in Figure 1, a subpage on the Heroes Project website was created in the design of the hackathon for the recruitment of the teams. The design should appeal especially to the younger participants and convey the spirit of "joint development and competition".

4.1 Use Cases

The HEROES age inclusive hackathon will rise two defined implementation tasks related concrete HEROES use cases – namely:

- UC1: Improve the video interview component for candidates.
- UC2: Improve the motivation process of reviewers through gamification elements

The focus of both use cases is the development of gamification elements to improve the user experience of the diverse user groups. The teams are challenged to develop appealing and executable solutions together with the supervisors.

4.2 Team composition

The team composition (3-5 persons in the core team) should have an interdisciplinary character. In addition to the developers, people from other disciplines should also be involved and a technical mediator and a non-technical supervisor is also assigned to the teams, who primarily brings in the needs perspective of the software to be implemented. In addition to the interdisciplinary aspect, intergenerational discourse is thus promoted in each team (e.g. through the non-technical supervisor).

4.3 Possible Hackathon Scenario

The following scenario provides an overview of the ideal process and structure of the hackathon to be conducted.

Scenario: At the beginning of the event, all registered teams will get a short online introduction to the Heroes project, the actual problem of finding a suitable caregiver and to the two use cases. After that, the teams have to decide internally for one of the two UCs after a short consultation. After that, the non-technical supervisors are introduced to the teams and an assignment is made. Extending this, the digital event will also be launched on a matching and exchange platform (e.g. gather.town[3]) - it should give the teams the opportunity to exchange across borders with other teams and to network during breaks. During the actual hackathon (conception - iterative implementation - rest phases), non-technical supervisors are available to the teams at fixed times for consultation, as well as a technical support team online at any time. At the end of the development time, each team has to finish the further development and present their solution in short pitches to all other teams and the jury (via stream to the others - language: English). Afterwards, the jury (consisting of technicians, potential users and project team members - all impartial and not actively involved in the events of the hackathon) retires and deliberates. After that, the winners and their prizes will be announced.

Based on the general idea in the following a detailed description of

- General use case to be implemented
- Planned program
- Tools and methods used
- Implementation plan
- Dissemination plan
- Hack Evaluation plan

is given.

[3] https://gather.town/

5 General Use Cases and Hackathon aims

The most important framework conditions are presented below.

Table 2 Hackathon framework

Whom	These hackathon events are intended for all those people from the IT community who would like to develop something together with people from other disciplines (e.g. social, business, etc.) that improves the care context within the Heroes project.
What	Participants will be fully online conected. The challenge is to choose one out of two use cases and develop and prototype a creative solution in the given time. Working together as small teams, they will be given a non-technical supervisor to provide insight from the perspective of a person using the solution. The intergenerational factor is intended to profitably extend the iterative development process and contribute to the creation of usable solutions.
Why	The "why" is perhaps the most important element in this equation. Matching or motivation processes are implemented in the healthcare / nursing context in a very rigid and unexciting way, if at all. For reasons of seriousness, gamification elements are hardly ever incorporated and used, as there is a reluctance to scare off potential customers with innovative and playful ideas. The hackathon provides the opportunity for young interdisciplinary development teams to make exactly this balancing act between serious algorithm and gamification in order to gain an advantage in use (joyful use) for the user group.
Where	The event will take place in 3 countries (Romania, Austria and Switzerland): • 16-17 September 2022, in an fully online environment + a hybrid on-site event in Austria.
When	The implementation of the hackathon should take place close to the technical implementation and development of the Heroes system during the project period. To encourage as many students as possible to participate, the hackathon was scheduled for two days in September 2022.
How	All project partners are eager for the Heroes platform to make a decisive contribution to the care situation in Romania, Austria and Switzerland. In order for the user experience to go beyond the mere benefit of finding someone to care for, innovative approaches and unbiased ideas for the use of gamification elements are needed. The different ideas and solutions that emerge during the hackathon can contain exactly this sparking idea that helps to generate added value for the users of the platform.
How much	A clever idea for each use case, or a clever solution, could be all it takes to provide a better and more exciting user experience of matching and motivation processes.

6 Programm

Below are the details of the hackathon event in more detail. The hackathon is divided into four phases. The first phase is for necessary preliminary work and with phase 2 the event as such is started.

The implementation of the hackathon consists of four phases:

- Briefing
  - Online come together at least one week before the hackathon is taking place
  - Addresses primarily the non-technical supervisors and all other involved people to provide an successful organisation
  - At the briefing, the seniors get all the necessary information in advance about their activities as well as the use cases that are available for the teams to choose from. The seniors can explicitly choose a use case they want to supervise.
- Introductory phase
  - Duration: ~ 1h
  - The teams will be briefed again on the general process (schedule, repository information, pricing, etc.), the use cases will be presented and briefly explained, and the teams have to choose the UC they want to work on
  - The teams will be brought together with the supervisors.
- Implementing phase
  - Duration: 24h
  - Following Phase 1, the executing part of the hackathon starts, spanning a full day i.e. 24h. This phase is of iterative character. The supervisors are connected via online meeting sessions with the teams at fixed times and give input / feedback.
  - In addition, the online room for cross-border exchange is open for all teams during this time (e.g. on the platform gather.town). The use of the same is also encouraged by the supervisors - the technical mentors are also available for the teams via the platform or for more support via remote video call.
- Completion
  - Duration: ~ 2h
  - At the end of the executing phase, all teams must present their results in a pitch presentation for all participants and have uploaded the results to the repository in advance. After all teams have pitched, the international jury of experts will retire and deliberate. Afterwards, the winners are chosen and the prizes are awarded. All teams then receive their "thank you".

7 Tools

In order to develop the hackathon and the developed solutions according to the state of the art for user-centered accessible and diversity-compliant digital services, the methods to be applied are presented below. Additionally, during the hackathon an online repository will be available for participants to upload the implemented solutions.

7.1 UCD Design methods

The user-centered design approach focuses on individual human needs, physical and mental abilities, and behaviors. During the development of new technologies and services, the elicited needs and capabilities are considered a central component. By using this approach, the design and implementation of technology and services that are inappropriate for the particular user group or have poor usability or user experience can be avoided, instead enabling user-friendly and appropriate technologies and services. [1] User-centered design is an iterative process that involves all relevant stakeholders in the development process from the beginning.The process is shown in **Error! Reference source not found.**.

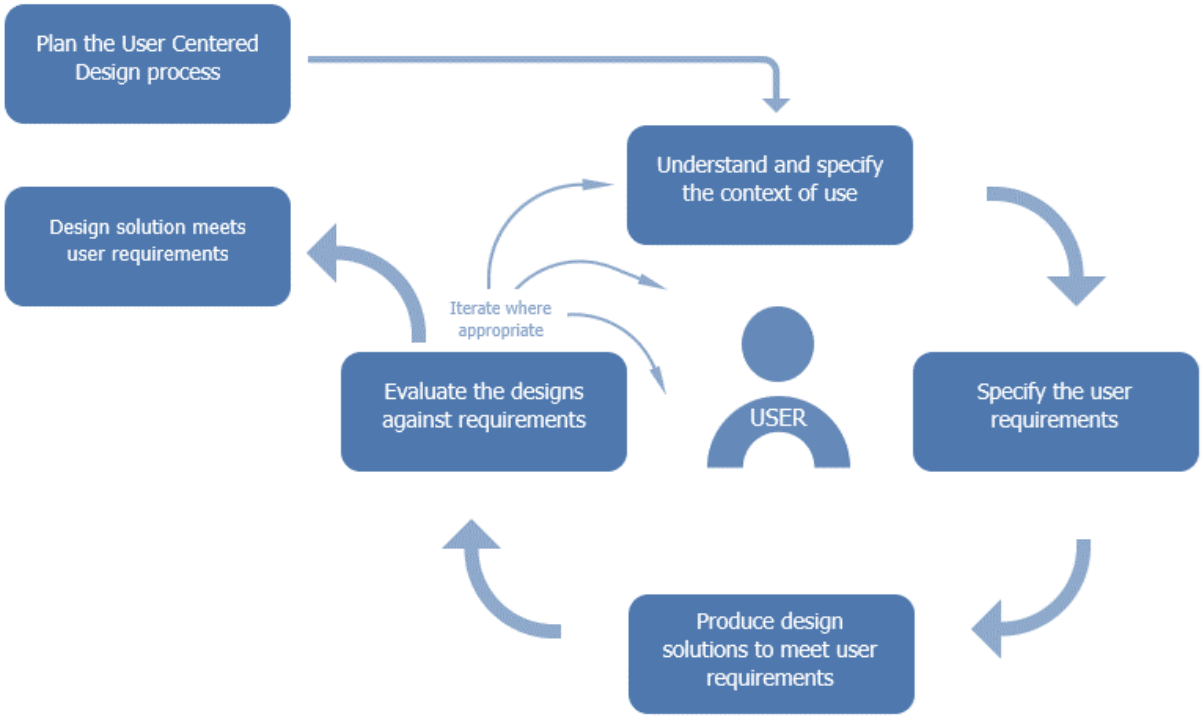

Figure 2 Human centered design approach [2]

This approach can lead to increased effectiveness and efficiency, as well as improved human well-being during use, user satisfaction, user experience, accessibility, and overall sustainability. In addition, early involvement of the potential user group counteracts potential adverse effects of use on human health, safety, and performance.

There is a wealth of knowledge in DIN EN ISO Standard 9241-210:2010 about Human Factors/Ergonomics and Usability on how to organize and use human-centered design effectively. This part aims to provide necessary information to help those responsible for conducting design and redesign processes to identify and plan effective and timely human-centered design activities.

The User Centered Design (UCD) approach is a design philosophy that places the needs, desires, limitations, constraints, and opportunities of potential end users at the center of the development process from initial idea to finished product or service.

The goal of the UCD approach is to ask the right questions about the tasks of the user groups and to draw conclusions from this information for system design and (technical) development. The information obtained is evaluated in several stages.

The conceptualization and development process in the teams should not only follow the interdisciplinary and intergenerational aspect, but also be carried out in an iterative UCD approach. In this process, the role of the potential de-user is taken by the non-technical supervisor, who shares his or her own view of the development at certain points in time and works together on solutions with the team.

7.2 Barrier-free and diversity-compliant design

As a top premise of the hackathon, in addition to incorporating the user perspective and working in an intergenerational and interdisciplinary discourse, the conceptualization and development of the solutions in an accessible and diversity-compliant manner.

This means that the solution must be of an inclusive nature so as not to exclude at least the majority of the user group due to physical or mental needs, language, sex or other demographical aspects of the defined possible target group.

The following principles must be met:

- ✓ Perceptibility
  - the information and components of the user interface must be presented to users in a way that they can perceive them;
- ✓ Usability
  - users must be able to handle the user interface components and navigation;
- ✓ Understandability
  - the information and handling of the user interface must be understandable;
- ✓ Robustness
  - the content must be robust enough to be reliably interpreted by a variety of user agents, including assistive technologies.

From a technical point of view, the guideline is the fulfillment of level AA of the "Web Accessibility Guidelines - WCAG 2.1". A European Standard 301 549 has been adopted for this purpose. [3]

7.3 Online repository

The online repository used (in this case GitHub) allows participants to put their developed solutions online and thus make them available to the jury for evaluation.

What is GitHub?

GitHub is one of the world's largest community of developers. It's an intricate platform that fosters collaboration and communication between developers. GitHub has a number of useful features that enable development teams to work together on the same project and easily create new versions of software without disrupting the current versions.

One new additions to a program are complete, for example, they can easily be incorporated into existing programs. GitHub also makes it extremely simple to work together on strings of code to really dial in and perfect even the smallest parts of a program. With GitHub, you can collaborate and work on projects with others anywhere in the world.

Hackathon Management(using GitHub)

- Set up a GitHub account for HEROES Organization
- Create a repository with Hackathon Name
- Create a README.md – to add the basic information
- Create a rules.md – to add the basic rules for hackathon
- Create a submissions template – for hackathon teams to submit their projects using the "New issue" feature
- All projects submissions appear as Issues on GitHub

Example of rules:

All the Project Submissions have to be done by making an issue in this repository. The guidelines to followed for the same have been mentioned below:

1. The Team Leader has to open up an Issue for project submission using his GitHub Account
2. The Issue Template should be strictly followed. A submission not following the same would be termed as an invalid submission
3. Only a single issue has to be made for each individual project. Multiple submissions will be termed as invalid submission.

Submission template:

***Before you start, please follow this format for your issue title**:*
TEAM NAME - PROJECT NAME
Project information
*- **Project Name**:*
*- **Short Project Description**: _One line crisp description of your project_*
*- **Team Name**:*
*- **Team Members**: _Mention their Names & tag their GitHub handles_*

*- **Demo Link**: _(if any, this might contain a website/ mobile application link/ short video, etc.)_*
*- **Repository Link**: _Provide us the link to your code_*

Any other specific thing you want to highlight?
*_(Optional)_*

Checklist
***Before you post the issue**:*
- [ ] You have followed the issue title format.
- [ ] You have provided all the information correctly.

8 Implementation Plan

In the following, the necessary organizational cornerstones are presented that are required for the successful implementation of the hackathon.

The hackathon will be conducted in an online fashion in bilingual manner. Teams can work in native language as well as the communication with the non-technical supervisor is in native language, online and pitch and implementation documentation must be in English.

8.1 Online Infrastructure

- Provision of the technical infrastructure
  - Previous provisioning and testing of the upload environment / repository
  - User creation (usernames, passwords etc.)
  - Implementing a digital meeting platform for cross-border exchange of teams (e.g. gather.town)
  - Provide external video call communication if the meeting platform is not working as a backup
- Personnel organization
  - Provide a technical mentoring team (online) for all teams for queries.

8.2 General Organisation

- Composition of the jury from developers (unequal to those who acted as technical mentors), project team members, seniors (unequal to those who acted as supervisors)
- Recruiting and briefing of the non-technical supervisors
- Organization of the winning prizes (special prizes for the first three with descending value)
- Organization of thank-you "prizes" for all participating groups (if possible, coupons etc. from regional companies should be chosen)
- Setting up a registration webpage + all needed information

8.3 Schedule

The first envisaged date for the hackathon was the end of March / beginning of April 2022 in a fully online format.

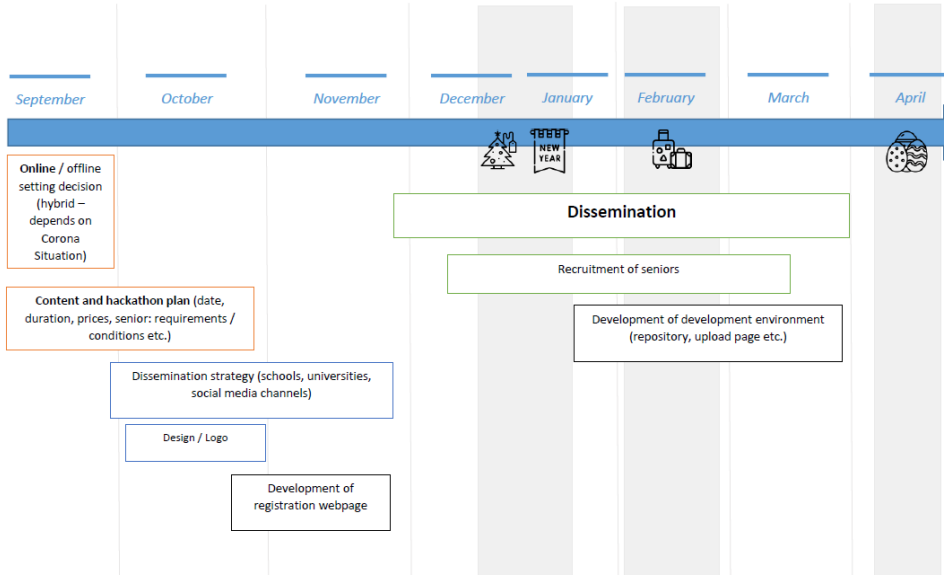

Figure 3 Initial Timeline

8.4 Time delays and rescheduling

The hackathon schedule has been moved from April to September 2022 for several reasons. Firstly, the delay opens up the possibility of organising an additional hybrid hackathon event, at least in Austria. This would allow participants to take part both online and on-site. Furthermore, the postponement avoids a collision with a hackathon that is also popular in Austria / Germany / Switzerland and has been scheduled for the end of March. This increases the chance of recruiting more participants and motivating them to take part.

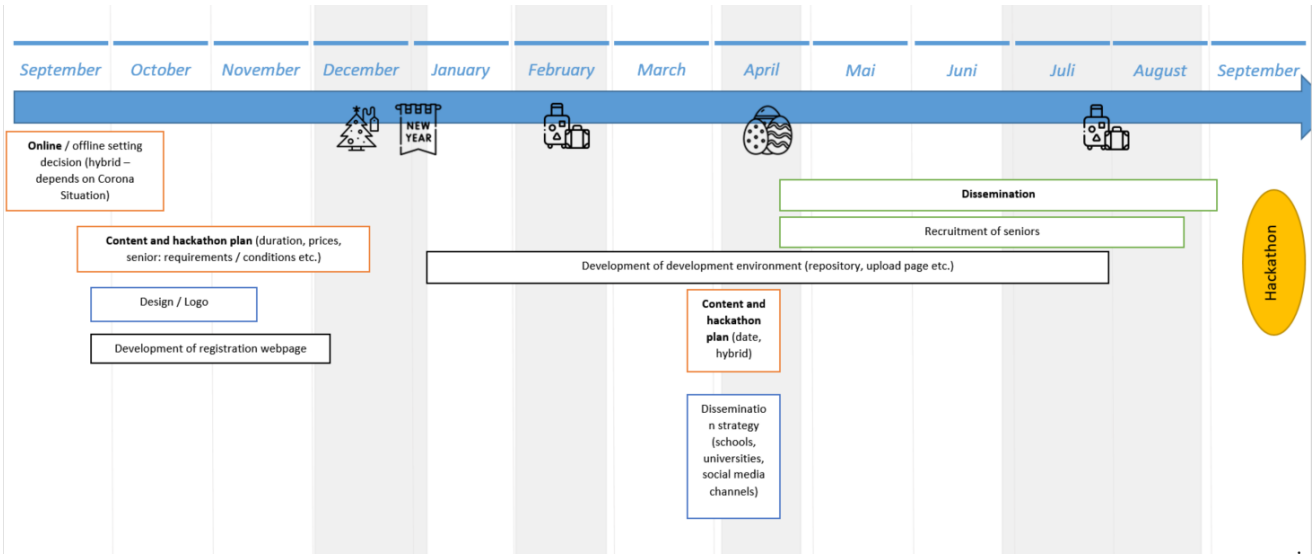

Figure 4 Final Timeline

The final date for the hackathon event is **16.-17. September 2022**.

9 Dissemination Plan

The dissemination plan consists of two main phases, the first one is the “Before” phase, which is mainly used to promote the hackathon and to recruit hacker teams that want to participate at the event. The second “After” phase, is there to disseminate the results, findings and learnings from the hackathon event to the scientific community (e.g. conference presentation) as well as in the non-scientific media (e.g. regional, national newspaper).

9.1 Before the hackathon takes place

To promote the hackathon the following channels should be used to recruit hacker teams for the event:

- Social media: Facebook, LinkedIn
- Print media: Flyer, Poster - with approval posting / display at higher schools, university campuses in the vicinity, possibly regional partners etc.
- Digital media: spot / ad at local radio station (selection of the radio station that our target group also listens to), webpages of the own company / research institute
- Networks: personal networks to companies (maybe they can form a young developer team and want to participate), dissemination channels of the own HEI / company.

Timeframe: At the beginning of September (mid September / KW38 at the latest!) the information material must be ready and send out. Online reminder KW 42 to spread some last “last chance”-reminder before the registration ends on the 26.November.

9.2 After the hackathon has taken place

Referring to the special structure that the hackathon has both interdisciplinary and intergenerational character, the experiences after the event should be processed for the scientific and non-scientific community.

As in the previous phase, different channels should be used; the following are examples of ways to disseminate.

- Social media:Facebook, LinkedIn (review of the event)
- Digital media: webpages of the own company / research institute (review of the event), regional TV sport / ads
- Scientific dissemination: conference contributions

10 Hack Evaluation Plan

The jury will choose among all the participating teams the winner based on the criteria mentioned here bellow.

Table 3 Hack evaluation plan[4]

				
Practicality of t-he idea	Innovative approach	Consistency with competition purposes	Quality and design	Usability
5 points	5 points	5 points	5 points	5 points
✓ Does the hack (prototype) work? ✓ Does the idea come to live with the demo? ✓ Is the hack testable? ✓ Is the hack easier to use than the original idea (without the gamification aspect)?	✓ Does the team come up with a good, innovative and out-of-the-box solution to the initial problem or challenge? ✓ Does the team use an innovative approach or do they follow existing patterns and solutions?	✓ Does the team understand the problem? ✓ Does the hack solve the problem? ✓ Does the team have a clear plan to move the project forward? ✓ Does the team worked together with the non-technical supervisor in an interdisciplinary and intergenerational way?	✓ Does the group think about the user interface (UI) and user experience (UX)? ✓ How well designed is the demo? ✓ How user-friendly is their solution? ✓ Is there a wow effect? ✓ Is the user interface discussed / tested with the non-technical supervisor? ✓ Is the solution designed in a barrier-free and diversity-compliant manner?	✓ Is the hack easy to use for the target group or does it require a lot of training to master the demo? ✓ Is it easy to use at first glance, professional / fun or sloopy and not really intuitive?

The evaluation plan is based on the used evaluation plan of the “Single digital gateway hackathon”[5] and was adapted according to the involvement of the focused interdisciplinary and intergeneral aspect.

[4] All used icons are from https://www.flaticon.com/

[5] https://ec.europa.eu/growth/content/single-digital-gateway-hackathon-bucharest-edition_en

Literature

[1] D. A. Norman, (2013). The design of everyday things, Revised and Expanded edition. New York, New York: Basic Books.

[2] ISO 9241-210, (2010). Ergonomics of human-system interaction — Part 210: Human-centred design for interactive systems.

[3] W3C (2009). Web Content Accessibility Guidelines (WCAG) 2.0. Online Available: https://www.w3.org/Translations/WCAG20-de/ [Accessed: 12.2021]

[4] R. Stallman, Sam Williams (2010). Hack, Hackers and Hacking in Free as in Freedom (2.0): Richard Stallman and the Free Software Revolution. ISBN 978-0-9831592-1-6, GNU Press

[5] S. Levy (1984). Hackers: Heroes of the Computer Revolution. ISBN 0-385-19195-2, Doubleday

[6] OCAD University, Inclusive Design Research Centre. Floe - flexible learning for open education: INCLUSIVE LEARNING DESIGN HANDBOOK, OER. Online Availbale: https://handbook.floeproject.org/inclusivemakingandhacking [Accessed: 07.2021]

[7] *Nothing About Us Without Us: Developing Innovative Technologies For, By and With Disabled Persons,* Healthwrights, Palo Alto CA, 1998 ISBN 9780965558532