

D4.1 INTERFACE MOCKUPS (I, II, III, IV)

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The report summarises the design research methodology and how it has been implemented throughout the development of the commonfare.net platform. In particular, it elaborates on the public design process during current (1-3) and future (4) releases of commonfare.net. The process towards each release combines different methods including design workshops, solutions prototyping and field studies. This report provides a detailed description of these methods as activities with their inputs, objectives, participants and outputs, and how they informed the releases iteratively and incrementally.

EXECUTIVE SUMMARY

The purpose of this document is to outline the public design process of commonfare.net, across four different releases that have happened (or will happen, in the case of the fourth release to be completed at M30) throughout the project.

The basis of this document is a progress report submitted attached to 'Release 3' in M22, which was requested following a Review at M18. The content of this previous progress report included: detail of the process of collecting and operationalising user research material as requirements; articulated different requirements for each release in terms of technical, functional, privacy and security; descriptions of the functionality of the platform, and a plan of engagement of users. All sections except for the user engagement plan were relevant to D4.1, and thus have been revised and utilised. Beyond this, D4.1 refines the Release 3 section, and provides up to date detail on the work and plan towards Release 4, due in the months following this report.

DOCUMENT REVISION HISTORY

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ACRONYMS

| ACRONYM | MEANING |
|---------|---|
| IxD | Interaction Design |
| PD | Participatory Design |
| R1 | Release 1 of commonfare.net - Information Hub in Annex 1 Language |
| R2 | Release 2 of commonfare.net (this encompasses R2.0, R2.1 and R2.1+) - Stories Hub in Annex 1 Language |
| R2.0 | The initial version of R2 |
| R2.1 | The second version of R2 (with visual improvements) |
| R2.1+ | The third version of R2 (with visual and usability improvements) |
| R3 | Release 3 of commonfare.net - Networking Hub in Annex 1 Language |
| R4 | Release 4 of commonfare.net |
| WPx | Work Package X (e.g. WP4 refers to 'Work Package 4' and the interaction design and platform development work) |
| Dx,y | Deliverable report X.Y (X refers to the Work Package responsible, Y refers to the report number, e.g. D3.2 is Deliverable Report 2 from Work Package 3) |
| AU | Abertay University (Scotland, UK) |
| BIN | Basic Income Network Italy |
| CMS | Centre for Peace Studies (Croatia) |
| FBK | Fondazione Bruno Kessler (Italy) |
| DYNE | Stitching Dyne.org (the Netherlands) |
| MdC | Museu da Crise (the Netherlands) |
| UNITN | University of Trento (Italy) |
| MITI | Madeira Interactive Technologies Institute (Portugal) |
| Mx | Month X of the Commonfare project |

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1. INTRODUCTION

The goals of the PIE News project (hereafter referred to as the Commonfare project), as stated in Annex 1 of the Grant Agreement, is to respond to issues of precariousness as they present themselves in the European context. In particular, this means working with different people who experience precariousness, raising awareness on the threats connected with **P**overty, **I**ncome, and **u**n**E**mployment (hence the original project name PIE News) through the creation of a web-based platform called commonfare.net, which seeks to (a) inform people about existing welfare state provisions, (b) provide people with the means to share good practices on how to handle poverty-related issues, and (c) support the abilities of people to network and to sustain real-life value. The proposal suggested the platform would be developed framed in terms of three 'hubs', an Information Hub (for the organised provision of information on welfare state provisions and other opportunities, such as training and mobility); a Stories Hub (for the organised collection of existing stories and tools to facilitate the production and upload of new stories); and a Networking Hub (for the organised collection of networking tools, each one well described and open to incremental improvement via people intervention).

The design and development of commonfare.net was to follow an iterative process, described in the report as a series of Design-Implementation-Evaluation cycles, whereby the first, second and third release would focus on functionality that corresponded to the Information, Stories and Networking hubs mentioned above. The fourth release would then seek to expand and offer advanced functionality across different commonfare.net features, including those specifically related to collaborative economic interactions and the sustainability of the platform beyond the life of the funding.

The design of commonfare.net was a complex task, because it evolved in parallel to the conceptual definition of the Commonfare vision. The platform was constructed by engaging in reflective design actions which contributed not only to the development of the artefact but also to the clarification of the emerging concept. The evolving artefact, which changed and morphed during the project, was instrumental to make the Commonfare concept visible to the project partners and to the future Commoners (the word we use to refer to registered users).

One of the key principles of Commonfare¹ is the promotion of welfare based on collaborative processes and practices, in an effort to be more inclusive of people regardless of status. Hence, it was important that commonfare.net followed its own logic not only in terms of functionalities but also with regards to the look and feel which had to communicate a democratic, participatory and inclusive vision.

¹ General Intellect collective (2017). Manifesto for the "Commonfare or the welfare of the Commonwealth". In Inge Gloerich, Geert Lovinck and Patricia De Vries (Eds) MoneyLabReader, the Institute of Net Cultures in Amsterdam

This deliverable concentrates on the design of commonfare.net, which can be considered as a 'boundary object'² to facilitate discussions between partners, expose matters of concerns and expectations, and clarify what Commonfare is. That said, we are aware that when commonfare.net will become a public artefact, the Commoners will appropriate it, shaping and adjusting it through their behaviour.

The organisation of the document is as follows: first we introduce the design research methodology, and talk through the different types of steps that have been taken towards each current (R1-R3) and future (R4) release. Within each of these steps, we provide detail about the method and results (specifically in terms of design or other requirements that were derived, or how the results led to further design research). In addition the report provides a list of requirements, and describes the functionality of commonfare.net.

² Star, S. L., & Griesemer, J. R. (1989). Institutional ecology, translations' and boundary objects: Amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39. *Social studies of science*, 19(3), 387-420.

2. DESIGN RESEARCH METHODOLOGY

Commonfare.net derives from a process of public design³ (T2.2) which aims to facilitate the establishment of new social configurations in the form of publics. According to Dewey⁴ a public is “a group of people who, in facing a similar problem, recognise it and organise themselves to address it”. Our interpretation of public design focused on expanding the space of participation for a vast and heterogeneous ensemble of people and things. While engaging in distributed and multi sited research, we put in place several actions to foster social and material heterogeneity in design and development⁵.

2.1 PROCESSES

From a methodological perspective, public design is the result of three parallel and interrelated processes aimed at *articulating* matters of concerns, *representing* different narratives, and *sustaining* emerging practices⁶.

Articulating

The articulation process can be associated with the requirement phase of traditional user-centred projects. The main difference relates to the complexity of the issues to be addressed. Indeed, while traditional engineering projects build on requirements stated as “matters of fact” (description of unique and stable conditions the system shall satisfy), public design deals with wicked problems, a “class of social system problems which are ill-formulated, where the information is confusing, where there are many clients and decision makers with conflicting values, and where the ramifications in the whole system are thoroughly confusing”⁷. Wicked problems escape definite formulation and need to be articulated as “matters of concerns” which describe complex social phenomena deeply rooted in historical and political conditions⁸.

There are no experts in wicked problems. On the contrary, expertise and ignorance are equally distributed among all the actors who relate to the problem, in what is defined as “symmetry of ignorance”. The articulation process may lead to different outcomes according to the people

³ Teli, M, Bordin, S, Menéndez-Blanco, M, Orabona, G, and De Angeli, A. 2015. Public design of digital commons in urban places: A case study. *International Journal of Human-Computer Studies*, vol. 81, pp. 17–30

⁴ Dewey, J. 1927. *The public and its problems: an essay in political inquiry*. University Park, Pa: Pennsylvania State University Press

⁵ De Angeli, A, Bordin, S, and Menéndez-Blanco, M. 2014. Infrastructuring participatory development in information technology. In *PDC 2014: Proceedings of the 11th Biennial participatory design conference*. New York: ACM Press, pp. 11–20

⁶ Menéndez-Blanco, M. 2017. *Processes in the formation of publics: A design case study on dyslexia* International Doctoral School in Information and Communication Technologies, University of Trento

⁷ Churchman, CW. 1967. Guest editorial: Wicked problems

⁸ Latour, B. 2004b. Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern. *Critical Inquiry* 30: 225–248.

involved in the discussion and to the method of inquiry adopted in the analysis⁹. We articulated information and knowledge coming from several sources including a literature review, desk research, analysis of statistical data, and qualitative research involving a diverse sample of people in the three pilot countries. The activities were led by WP2 and WP3 and communicated to the consortium in the forms of deliverables (D2.1, D3.1, D3.2), working documents, and group discussions. The activities of WP2 involve interacting with and developing relationships with local populations and community groups in the pilot countries, as well as carrying out field research that has contributed to an understanding of the local conditions, and to design process. The activities of WP3 have contributed towards an understanding of social engagement and dynamics systems, and how reputation and contribution are measured and presented. This also includes developing a collective understanding of how a digital currency will be implemented within commonfare.net.

Representing

In parallel to the articulation process, we enacted a number of design activities which were followed by systematic assessment of their effect. These activities were aimed at representing matters of concerns into artefacts and can be associated with the design phase in traditional user-centred projects. The design of commonfare.net was inspired by Latour and Weibel's¹⁰ construct of "Dingpolitik" – or "Object-oriented-politics" – which describes the assemblies of objects and people where issues are addressed and political decisions are made. Following this viewpoint, we focused on *political* representations which look for innovative "ways to gather the legitimate people around some issue"; *scientific* representations which consider "if the matters at hand have been accurately portrayed"; and *artistic* representations which focus on the aesthetic of the artefact. The goal was to design a computing artefact with agency in providing information, connecting people, and engaging them in collective action.

The design was driven by WP4 and supported by the entire consortium through co-located and remote participatory activities. Co-located participation took place across four design workshops (DWS1-4); mediated participation took advantage of conference calls, shared documents, and e-mail discussions through the consortium mailing list. Prototyping was heavily used to build boundary objects connecting research results, consortium partners, and participants. From an academic perspective, the research outputs have focused on the methods used¹¹, and understanding the workings of the consortium through an infrastructuring lens^{12 13}.

⁹ Rittel, H W, and Webber, M M. 1973. Dilemmas in a General Theory of Planning. *Policy Sciences* 4: 155–169.

¹⁰ Latour, B, and Weibel, P. 2005. Making things public: atmospheres of democracy.

¹¹ Teli, M., De Angeli, A., Menendez, M. 2018. The positioning cards: on Affect, Public Design and the Common. *AI & Society* Vol. 33 (1) pp 125–132.

¹² Lyle, P., Sciannamblo, M. and Teli, M. 2017. Fostering commonfare. Strategies and Tactics in a Collaborative Project. In Proceedings of the 29th Australian Conference on Computer-Human Interaction (OZCHI '17), ACM, NY, USA, 443-447.

¹³ Lyle, P., Sciannamblo, M. and Teli, M. 2018. Fostering Commonfare. Infrastructuring Autonomous Social Collaboration. In Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (CHI '18). ACM, New York, NY, USA, Paper 452, 12 pages.

Sustaining

The third process of public design aims to build infrastructures that facilitate the formation of socio-material assemblies around matters of concern¹⁴ and have the potential to expand beyond the duration of funded projects. According to Parmiggiani and colleagues¹⁵ infrastructuring is composed of two basic elements: bootstrapping and enactment. Bootstrapping refers to the process of achieving increasing levels of entanglement in the early stages of an infrastructure by resolving local vs. global tensions. Enactment refers to the process of putting the infrastructure into practice across different domains and sites as it grows.

The bulk of our activities so far has focused on bootstrapping which was enacted through an array of socio-technological interventions. The design team worked in close collaboration with the pilot partners (WP2) and the communication team (WP5) experimenting with different types of public interventions (see D1.3 for a list of the events organised in the first part of the project) and technological interventions. The development followed an incremental approach based on staged release of different versions. We used a staging and a production environment, so that we could get immediate feedback from the partners before opening to the public. Feedback was obtained through synchronous and asynchronous communication, thanks to the organisation of the four design workshops, weekly/twice-a-month meetings, and shared documents. Design partners then elaborated such collective feedback to present, evaluate, design and develop possible solutions, alternatives, improvements, etc.

R1 and R2 have provided an opportunity of studying the process of infrastructuring in-the-making¹⁶ and analysing the ongoing processes and interrelated activities that develop over time in 'multi-relational socio-material-technical contexts'¹⁷. It soon became clear that the real engagement of Commoners required the deployment of the networking functionalities (R3). This finding created some delays in user engagement which were collectively addressed by the consortium looking for alternative ways to ensure engagement within the scope of R1 and R2. For example, the bootstrapping phase was supported by a Facebook page, a mailing list and a project website. With R3 (deployed in M22) and towards R4 we have intended to move to enactment. However, we are confident on success as so far we have focused on infrastructuring long-term evolution and continuity, considering the local vs. the global space, as well as the short vs. the long term. A key step we are taking regarding this enactment is a series of networking events that are being organised by pilot partners, in the pilot countries and beyond to other parts of Europe.

¹⁴ Björgvinsson, E, Ehn, P, and Hillgren, P-A. 2010. Participatory design and "democratizing innovation". In PDC 2010: Proceedings of the 11th Biennial participatory design conference. New York: ACM Press, pp. 41–50

¹⁵ Parmiggiani, E, Monteiro, E, and Hepsø, V. 2015. The Digital Coral: Infrastructuring Environmental Monitoring. Computer Supported Cooperative Work (CSCW), vol. 24, no. 5, pp. 423–460.

¹⁶ Bowker, GC, and Star, S. L. 2000. *Sorting things out: classification and its consequences*. Cambridge, Mass.: MIT Press

¹⁷ Karasti, H, and Syrjänen, A-L. 2004. Artful infrastructuring in two cases of community PD. In PDC 2004: Proceedings of the eighth conference on Participatory design: Artful integration: interweaving media, materials and practices. New York: ACM Press, pp. 1:20

2.1 TECHNIQUES

The design was informed by a number of techniques following the methodological approach of public design. For the sake of clarity, we cluster them in three main activities which were iterated through the project to support articulation, representation and sustainability of the project: **Design Workshops; Iterative Prototyping; Field Research**. These three types of activity form the main subsections towards each release of commonfare.net throughout this report, and here we present a brief overview of the organisation of these activities.

Four co-located design workshops have been carried out, serving as points for the consortium to collectively meet and engage with each other, as well as with members of the local communities and organisations considered examples of “good practices” (D2.1). The first was conducted in Zagreb, Croatia, the second in Tuhelj, Croatia, the third was held in Amsterdam and Rotterdam, in the Netherlands, and the fourth in Milano, Italy. The description and content of these workshops is based primarily on – and includes some content directly from – internal reports prepared by different authors shortly after the workshops and used by the WP4 team as inspiration.

In the periods between the formal design workshops, the WP4 design team engaged in iterative prototyping activities, creating artefacts at different levels of fidelity which were discussed with the partners via online meetings, shared documents, and emails. The different releases were used by the partners for conducting field research including evaluation with participants via workshops, focus groups, interviews, and/or questionnaires, which are explained as part of the different sections towards each release in this report. Different techniques were adopted by pilot partners, based on their informed understanding of the research context, taking into consideration needs and preferences of participants. Overall, from a design perspective, the field research activities had the two-fold objective of collecting requirements (based on research conducted in WP2 and WP3) and evaluating artefacts.

The Figure below (from the grant agreement) provides a simplified overview of the key points where workshops and interaction design work has taken place and contributed towards the different releases of commonfare.net. The following sections provide a summary of the activities following a temporal perspective which shows the evolution of commonfare.net from the early conceptual design to each release (up until where the current work is directed – towards Release 4).

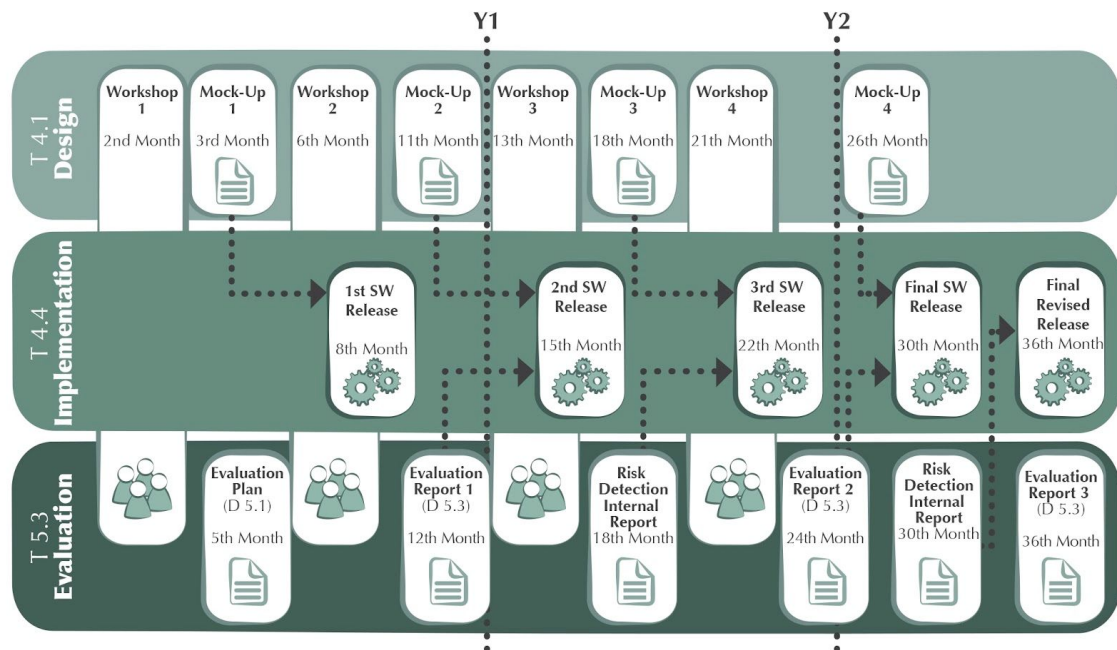


Figure 1. Commonfare milestones.

3. TOWARDS RELEASE 1

The design of R1 was informed by two design workshops (DWS1 and DWS2) which included a number of co-creation activities aimed to define the functionalities and the look and feel. The workshops were complemented by field research and prototyping activities.

3.1 DESIGN WORKSHOP SERIES 1 (DWS1)

Date: 21-22 September, 2016

Location: Zagreb, Croatia

The overarching goal of the DWS1 was to reach a common vision around the initial conceptual design of commonfare.net.

| Activity | Outcome towards requirements |
|--|---|
| <i>Participatory Design with consortium:</i> <ul style="list-style-type: none"> Reflection on visual guidelines Positioning cards to frame requirements Co-design with partners towards mockups | <ul style="list-style-type: none"> Mobile-first approach Understanding of political alignment of commonfare.net V1 mockups |
| <i>Co-Design with 5 Croatian participants:</i> | <ul style="list-style-type: none"> Feedback from participants led to the |

| | |
|--|------------------------|
| <ul style="list-style-type: none"> • Present and discuss V1 mockups in workshop | creation of V2 mockups |
|--|------------------------|

Table 1. Summary of the DWS1.

3.1.1 Participatory Design Activities with Consortium

3.1.1.1 Method

A total of 17 consortium members participated in the activities, all partners were represented. The workshop started with a presentation by a web designer and visual journalist of good examples of engaging storytelling¹⁸. This activity was followed by a collective reflection facilitated by the “positioning cards”¹⁹ to articulate the objectives and the ambitions of the partners and clarify their political views with respect to the project. The activity involved discussing and ordering of four cards that represented a type of political view, including: Liberal-Consumer, Deliberative, Counter-publics and Autonomous Marxism. This activity was framed as a response to the following question that was posed to the consortium: *How would you like a PIE News user, one year from now, to describe his/her relationship with the project?*

A co-design workshop was run to start defining the platform goals and interface design. Co-design activities were run in small groups. Participants were asked to reflect on 3 types of information (statistical data, needs categorisation, and welfare provisions) which had to be used as “building blocks” for their design. The results were presented to the consortium for discussion. Then, the ideas were implemented with Sketch. Finally, the prototypes were used as probes during a focus group with Croatian participants.

3.1.1.2 Results

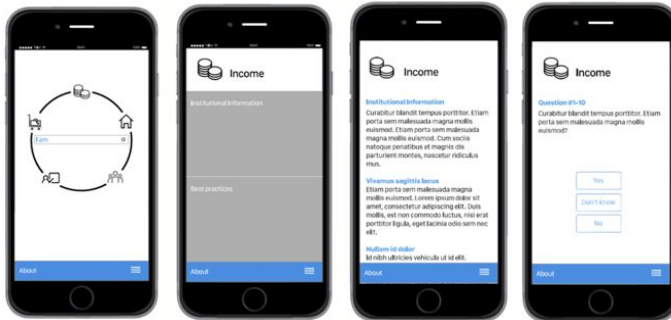
The main result of the review and discussion of design practices was a collective decision to follow a **mobile-first approach** in the design of commonfare.net.

The use of the Positioning Cards identified a consensus among the partners in term of their political expectations with respect to the project. The “Autonomous Marxism” viewpoint was strongly favoured, whereas the “Liberal-Consumer” viewpoint was rejected by all partners. Elaborating on this result, it was decided to favour the use of platform functionalities which would afford **cooperative behaviours** such as “sharing”, “communicating” and “participating”. Similarly, we agreed to exclude functionalities which would afford actions such as “voting” which are likely to induce competition among individuals.

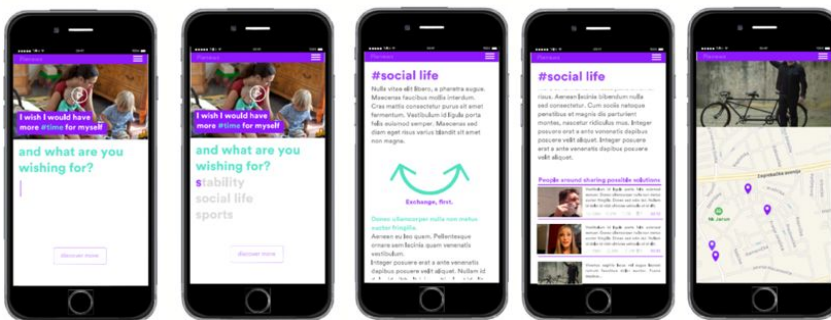
¹⁸ The following examples were considered: <http://peoplesrepublicofbolzano.com>; <http://parliamoneproject.com> ; <http://www.openstate.cc>; <http://ncase.me/polygons>; AJ+ on Facebook (ajplus.net); <http://www.humansofnewyork.com>; <http://neighbourland.com>; <https://invisiblepeople.tv/blog/> <http://europadreaming.eu>.

¹⁹ Teli, M., De Angeli, A., Menendez, M. 2018. The positioning cards: on Affect, Public Design and the Common. *AI & Society* Vol. 33 (1) pp 125–132.

Group 1



Group 2



Group 3



Group 4

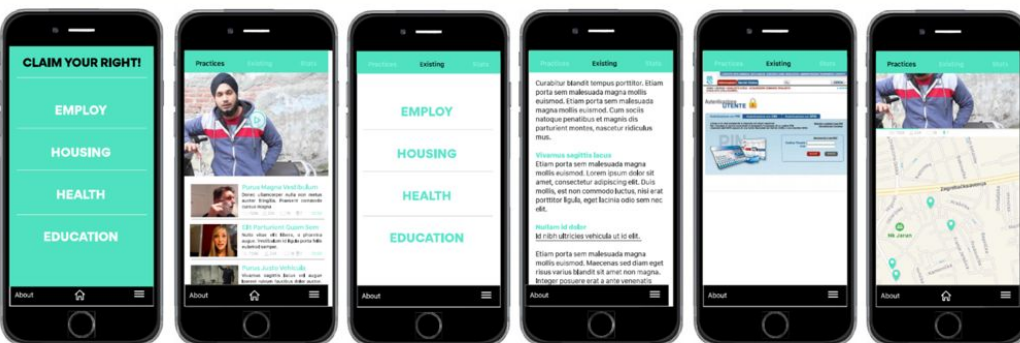


Figure 2. The results of the DWS1 participatory design activities.

The graphical outcome of the design activities is reported in the Figure above. As can be seen, participants had different preferences in terms of look and feel and interaction style. For instance Group 1, preferred a minimalist style strongly focused on icons and information provision. On the contrary, Group 2 favoured the use of evocative images and a more direct interaction style which fostered storytelling with a direct question : “And what would you...?”.

3.1.2 Design with Participants

3.1.2.1 Method

A focus group with 5 participants (all young Croatians - the main target population of the Croatian pilot) was led by CPS which followed the guide presented in [Appendix A1, Section 1](#). It was framed around the following three topics:

- Understanding the participants with regard to the precarious conditions they experience, their related concerns, needs, and desires.
- Presenting and getting feedback on the mockups created as a result of the participatory design activities with the consortium.
- Explaining Commonfare, and understanding whether the participants have encountered examples of it within their life, and whether such a platform would help to meet some of their concerns and needs as detailed in the first part of the focus group.

3.1.2.2 Results

From the focus group a number of main concerns, fears and needs were identified. Participants comments were noted down during the workshop, then transcribed on digital support, reorganised and reported in an internal deliverable (DWS1 report). An affinity analysis was conducted on the data and allowed to identify three themes: labour market, private life, and cultural changes.

The description of the **labour market** articulated two main dimensions addressing employment opportunities (or lack thereof) and working conditions. The young Croatians expressed their disappointment towards the high rate of unemployment, clientelistic employment practices, unstable working conditions, and insecurity of income. They had very negative views of government employment policies aimed at young people (e.g., vocational training), which according to them allowed public and private sector employers to exploit young workers in unethical ways. The labour market was depicted as affected by corruption, nepotism and inequality of opportunity. Similarly, the description of the working conditions was very negative. Participants discussed the problems deriving from a total lack of legal representation and protection, and reported frequent occurrences of mobbing and clientelistic employment practices which often went unreported. Participants also

elaborated on the role of education which was considered a necessary but insufficient condition to find a job.

This environment has a direct effect on **personal life** which was characterised by a prevailing feeling of disempowerment and disillusion. Participants complained about the impossibility to afford housing, initiate their own family, and enjoy leisure time due to economical restrictions and lack of welfare provision.

The need for changing the culture (acceptance of corruption and clientelism) and empowering young people was considered an important point (**cultural changes**). There was a need for a paradigm shift in the widespread belief that it is the fault of people who are in precarious conditions for such conditions. Yet, the general impression was that of a widespread disenfranchisement and demotivation. Some participants confirmed the importance of a guaranteed minimum income and elaborated on examples of Commonfare, which were perceived as time demanding and unreliable unless they provided an immediate reward. Finally, the need for information on alternative welfare solutions (e.g., opportunities for free activities, services and goods) emerged.

The feedback on the mockups are summarised in [Appendix A1, Section 2](#). Participants elaborated on the representations from a political perspective²⁰ (commenting on the choice of words and images), a scientific perspective (elaborating on the clarity or the lack of clarity of the message), and an artistic perspective (evaluating the look and feel from their own perspective of “young people”). The most interesting finding regarded several concerns about the language used in the mockup. Participants reflected on labels and the risk of stereotyping. Furthermore, they asked for a more personalised interface reflecting a “young style”.

To conclude, the workshop confirmed the assumptions underlying the project and offered new insights to elaborate on what commonfare.net could look like. However, it made evident that, **contrary to our expectations**, the participants (young people in precarious conditions in Croatia) were reluctant to engage in collective action and suspicious about initiatives that did not offer them an immediate gain and that they understood and framed as “too institutional”.

²⁰ Weibel, E., Latour, B., & Weibel, P. 2005. Making Things Public: Atmospheres of Democracy. MIT Press.



Figure 3. Mockup 1.1 screens.

3.2 PROTOTYPING: MOCKUP 1, ITERATION 1

Mockup 1.1 was based on the designers' elaboration of DWS1 requirements, after several iterations which experimented with different interaction approaches. This mockup was used to collect comments from partners in conference calls and shared documents to allow further changes towards a plenary discussion at DWS2, as well as its presentation to participants for evaluation. Figure 3 shows how the Information Hub was visible on mobile screens.

The main screen (top-left) presents two main areas:

1. the platform menu that gives access to the three hubs

2. the Information hub menu, that presents the different categories of welfare provision, and when selected will show the second screen.

The detail screen (top-right) is shown when a category is selected (in this case: employment and unemployment):

1. The main title
2. A brief description of its content
3. A button to enter to the next screen
4. An arrow that suggests scrolling in order to reach the other main sections
5. A main menu to access language switches and the homepage.

After entering into a category from the second screen, (bottom-left) this presents:

1. A button to “discover” which will access the text and detail of that specific welfare provision
2. Buttons to navigate between the different welfare provision overviews (navigate forward)
3. *As above* (navigate backward)

The fourth and final screen (bottom-right) presents the full detail about the chosen welfare provision.

3.3 DESIGN WORKSHOP SERIES 2 (DWS2)

Date: 18-20 January, 2017

Location: Toplice Tuhelj, Zagreb area, Croatia

The goal of DWS2 was to finalise requirements for R1 (based primarily on interactions with Croatian participants), and to begin to define requirements for R2 (based primarily on interactions among consortium members).

| Activity | Outcome towards Requirements |
|---|--|
| <p><i>Participatory Design with Consortium:</i></p> <ul style="list-style-type: none"> ● Related to Stories <ul style="list-style-type: none"> ○ Collective benchmarking ○ Creating example story titles ○ Developing prompts for different stories ● Related to Profiles <ul style="list-style-type: none"> ○ Creating lists of possible information people could share. ○ Plotting this information on a public-private, required-optional, 2-axis grid. | <ul style="list-style-type: none"> ● Incorporate storytelling skills in the platform ● An understanding of the diversity and possible grouping of types of stories ● A clear direction to minimise data collected to protect privacy. |

| | |
|---|---|
| <p><i>Design with Participants:</i></p> <ul style="list-style-type: none"> • Provide space for participants to discuss their experiences • Present and discuss mockup 1 in workshop | <ul style="list-style-type: none"> • Improved understanding of the lived experiences and coping strategies of precariousness • Understanding of the importance of word/language choice to be respectful of participants. • V3 mockups created |
|---|---|

Table 2. Summary of the DWS2.

3.3.1 Participatory Design Activities with Consortium

3.3.1.1 Method

A total of 13 consortium members participated in the activities, all partners were represented. The workshop started with a collective benchmarking analysis of selected storytelling systems (including neighborland.com, medium.com, youtube, hollaback.org, pageflow.com and kompoz.com). The selection included a diverse set of media as well as story representation. Each of the different platforms also enabled a different level of interaction between the author and other members of the respective community. Examples were discussed to identify strengths and limitations.

Then, the design team engaged in four activities, all of which involved an initial presentation of examples related to the activity, followed by an exercise with consortium members. The activities were as follows:

1. **Types of stories** - The exercise involved two steps: first, the consortium members, gathered in small groups, created example story titles and/or outlines on post-its. Second, the post-its were shared with the group, and arranged collaboratively on a wall such that stories with similar themes were located near each other. The affinity analysis allowed us to derive a number of themes that formed the basis of story types, which was used for the second activity.
2. **How to prompt for stories** - The exercise involved distributing the different story types from the first exercise among the groups, and allowing each group to produce a question or statement, where the answer or response would be a story that was of the chosen type. The goal was to explore ways in which different types of stories could be encouraged by providing some direction to the potential author.
3. **Profile content** - The exercise involved each group individually constructing a list of attributes and aspects that could be used to represent a person (or a group) on commonfare.net. These were then arranged on a wall where two axes had been drawn - one indicating mandatory/optional, the other public/private information. The placement and arrangement was discussed.

4. **Personas** - This exercise called for each group to construct three prototypical representations of someone who could make use of commonfare.net. Two were individual personas, and a third was a collective persona of a group or organisation. Three basic characteristics were distributed and pre-assigned to give some direction and variety for each persona. Each persona consisted of a *Name*, *Location*, *Country of origin*, *Native language*, *Situation* (including income, job opportunities, previous jobs, relationships, connections to family & friends, interests and other relationships), *A day in life*, and their *Goals and activities on the platform*.



Figure 4. DWS2 participatory design activities.

3.3.1.2 Results

The benchmarking analysis identified two primary limitations of existing storytelling systems:

1. none of them worked efficiently on smart devices;
2. none of them fostered storytelling skills.

With the goal of supporting people who do not necessarily have storytelling skills, the following consideration was brought forward as a requirement for commonfare.net: **a tool to support**

everybody (independent on their skills) to produce compelling and engaging stories. We wanted to give participants the possibility to create rich multimedia stories, which we called Beautiful Stories (see R3).

The outcome of the first activity was a typology of story types. This information was used to develop a series of **story prompts**, which later became the basis for the design work for story-building functionalities. The story prompts consisted of a partial sentence or question, with blank spaces where the author of a story could respond. Examples are shown in the figure below:



Figure 5. DWS2 story prompts.

The exercise regarding **profiles** highlighted the need to prioritise privacy by reducing the capacity of the system to collect personal information. The requirements were to **store minimal information about a potential user** - a *username/avatar* and an *email address* (not public, primarily for account retrieval). None of the attributes of a potential profile were suggested for the category of optional and private. This type of attribute would only make sense as something useful to the commonfare.net system as it would not be shared publicly, such as a method of automatically filtering or sorting search results based on specific private preferences. Attributes such as hobbies and interests should appear publicly if they are stored at all, but they should be optional. Other attributes, such as demographic information, would instead be captured as part of a separate survey that could be completed (optionally as part of the sign up process, or elsewhere on commonfare.net).

Regarding the **personas**, in addition to providing the design team with example people and groups who might engage with the system, the exercise encouraged reflection about how people or groups might want to disrupt the platform, or exploit it to ends that are contrary to the project goals. Possible risks can be divided into three categories: *hacking*, *trolling*, and issues related to creating *hostile offline interactions through the deception of others*.

3.3.2 Design with Participants

3.3.2.1 Method

A focus group with 10 participants on 19th January, led by CPS, was framed around the following three topics:

- The major problems/needs participants are facing, the ways in which they cope with such problems, and the ways in which they frame and cluster problems/needs.
- Feedback with respect to their involvement in the project activities.
- Feedback with respect to the mockups v1.1 and to features of the platform still to be designed.

3.3.2.2 Results

Results reinforced the findings gained in the first workshop and expanded our knowledge of the **problems and needs** faced by young Croatians. Participants' comments were noted during the workshop and elaborated by an affinity analysis. They clustered around two of the main themes identified in DWS1, namely 'Labour Market' and 'Private Life'. The absence of elaboration on the theme related to Culture change of collective awareness is interesting and could be related to the disenfranchisement previously noted in this population.

When talking about the **labour market**, participants complained about the lack of opportunities and low income. They wished they would receive a decent paycheck (about €700) and complained about the difficulty of being able to work in the field they are knowledgeable about, suggesting that education is not sufficient to ensure a satisfying career. On the contrary, nepotism was noted as a major discriminant. However, participants elaborated on the need for investing in education, claiming also that the current system in Croatia is overly focused on memorisation and notions. The curriculum is often old, especially with respect to technology. This gap was attributed to the low wages of teachers who are not motivated to update teaching material.

It also emerged that there are unrealistic expectations on candidates. As a participant noted, "you are expected to be a Renaissance worker, knowing everything as soon as you exit university but being paid like a slave". Because of these expectations, the participants expressed a need for education, such as seminars and training, to support lifelong learning. However, this desire was moderated by the lack of trust on education as a gateway to employment. In addition, the young Croatians noted a mismatch between their country and the rest of Europe as regards the job market and especially the perception of job mobility. According to them, in Croatia people who change jobs are perceived negatively, whereas they believe that this was considered as a positive feature elsewhere in Europe. However, they declared that seasonal work is the only possibility available to

young people, creating a mismatch between their need of stability and the opportunities available to them.

The discussion on **personal life** mainly focused on the family of origin. Participants expressed a strong desire for being autonomous and not obliged to live with parents due to a lack of affordable houses. The reliance on family support was perceived as a strong problem, as the young generation would like to help parents rather than the contrary. In addition, a strong intergenerational conflict emerged in the perception of lifelong learning. According to the participants, the older generation does not perceive work as a possibility for self-realisation but rather as a necessity to satisfy basic needs. Hence, they push their children to accept any work available on the market, which is a source of frustration for them. Finally, the young Croatians expressed a desire for leisure time and socialisation which are perceived as fundamental elements in the definition of their self-identity. They want to enjoy hobbies, to travel, have pets and do sports. All these desires are frustrated by the lack of money.

When shown the mockup, participants engaged in interesting discussions which were noted during the workshop by several observers. Detailed feedbacks are summarised in [Appendix A1, Section 3](#). The evaluation highlighted issues or aspects to improve in the following dimensions: content, aesthetics, functionality and usability. These aspects, going back to Latour's Dingpolitik, translate the artistic (through aesthetics and usability), political (through content), and scientific (through content and functionality) dimensions of software technologies.

Content issues reflected comments on clarity of the message, completeness of the information architecture and the quality of the information provided. Aesthetics covered adverse comments on the look and feel of commonfare.net, including text layout and fonts, as well as colours and pictures. Functionality issues referred to unexpected behaviour due to programming bugs or to the request for new functionalities. Usability issues included critical incidents which caused operational difficulties in finding the desired information or performing a task.

The majority of the issues (N=7) referred to the platform **content**. Six of these comments were negative. The message was considered to be not only unclear, but also inappropriate. In particular, the participants disliked the name "PIE News" which was deemed more appropriate for a bakery rather than to a social innovation project. They also expressed a strong concern related to localisation, wondering how the name could be translated in Croatian. In general, they were offended by the language used in the platform. They refused to be associated with the word "poor" which was associated to people who leveraged on the welfare state for their entire life. On the contrary, participants emphasised the need to foster collaboration rather than stigmatisation. In addition, they provided interesting insights on how to cluster welfare provisions.

Four issues related to **aesthetics** (1 positive). The negative comments related to the design style which was considered to be "too professional", "retro" and not appealing to the younger generation.

Only one comment addressed **usability** and **functionality**: participants advocated for a “user-friendly design” and proposed to have a video on the homepage to introduce the platform.

Finally, concerning the features of the platform to be designed in the future, participants were asked what they would share on their profile:

- 1/3 declared to be comfortable in sharing their problems, the others felt comfortable only to share general information (e.g. gender, age, location).
- They suggested to make the profile as flexible as possible.
- They required a clear privacy policy stating how we would handle the data. Participants stated that they do not want to feel ‘exploited’ by offering information about their lives/profiles that could be used for writing papers or doing research at the EU-level without being offered something in exchange.
- On the contrary, they would be comfortable with providing information in a private way to the system, for a reward. They suggested to create a calculator that would provide information about what people are entitled to (they would prefer a website with all information, and an app with just the calculator).
- It should be easy for other people to upload contents on the platform.

The most important outcome from this workshop was a critical reflection on the **use of language**. It became evident that people resist being labelled as “poor”, even when confronted with conditions of severe material deprivation. They refuse to reduce their life to financial issues but rather tend to emphasise the wealth of their social relationships. Hence, the consortium engaged in significant discussions regarding the role of language in conducting dialogical and critical research and co-design which was expanded later in the process (Section 4.1.1). At this point it was decided to **adopt “Commonfare” as the leading project name** (whereas necessarily keeping “PIE News” for institutional purposes), and to change the whole communication. In addition, we started the development of a glossary of sensitising concepts²¹ which was used to inform theory and action.

3.4 PROTOTYPING: MOCKUP 1 ITERATION 2

The feedback received before DWS2 by partners and especially at DWS2 by Croatian participants constituted the basis for high-fidelity mockups. Namely, we proceeded with the following actions:

- Create a new logo to substitute “PieNews”.
- Create high-fidelity mockups for desktop.
- Update the mockups for mobile to include the expandable/collapsible ways to control the list of welfare provisions for each category (referred to as an ‘accordion control’).
- Provide mockups in different colours.

²¹ Blumer, H. 1954. What is wrong with social theory?. American sociological review, 19(1), 3-10.

- Create real content for the mockups based on D2.1.

Examples of these mockups are shown below in Figure 6. They were shared with the consortium for feedback and comments. These comments were incorporated into the final mockups used as the basis of R1 implementation.

Feedback on colour scheme from partners called for a lighter palette which was finally applied in R1, based on the the red colour scheme. Feedback on presentation and navigation led to the following actions:

- Remove all instances of the PIE News logo, which had been used as a faint stamp in the background of some pages.
- Adjust or invert the colour scheme (light backgrounds, dark text) and increase the overall contrast.
- Make the buttons more distinct from the background.
- Add “commonfare” to footers (on pages that would scroll).
- Remove silhouette images that were in some backgrounds.



Figure 6. DWS2 mockups.

3.5 RELEASE 1 (R1)

R1 was implemented using Drupal and delivered in February 2017 according to the R1 requirements (see 8.1).

Landing page: this section had the purpose of providing a short presentation of the objectives of the platform. It also invited visitors to “Discover” more.

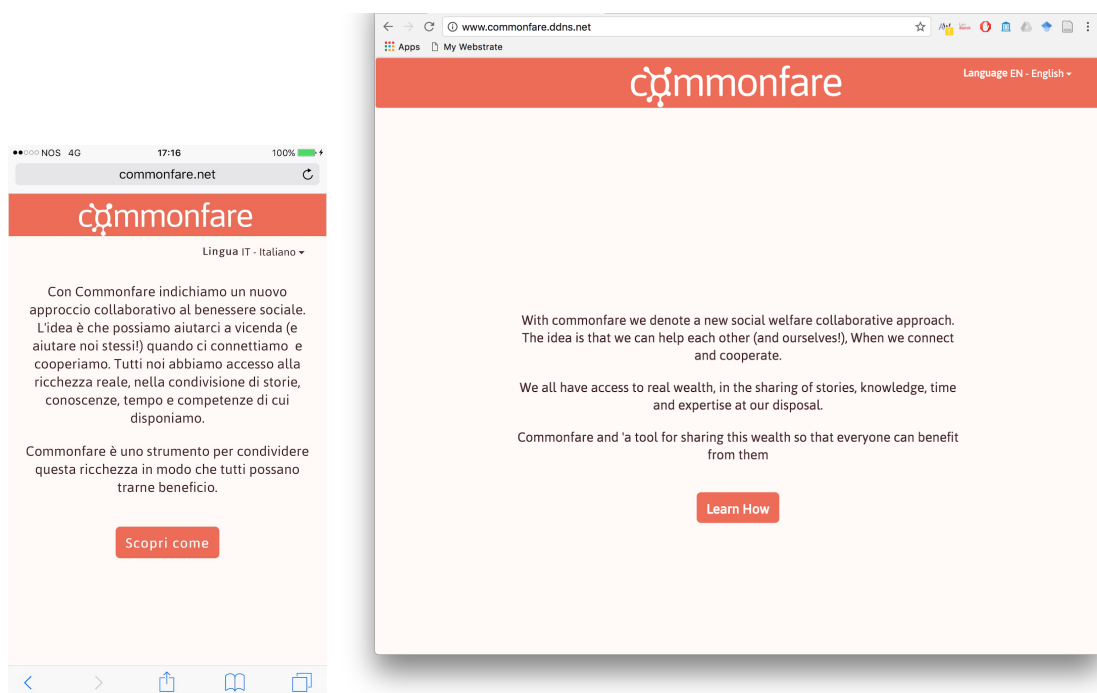


Figure 7. R1 Landing pages screenshots.

Get informed: this section displayed information about specific welfare provisions (hereafter, ‘welfare cards’) organised into six categories: Work, Social Services, Housing, Mobility, Education and Training, Cultural Events. Within each category, visitors could find a listing of provisions and details on each of them through a dedicated page. Provisions would vary from one country to another, therefore it was possible to select the country of interest.

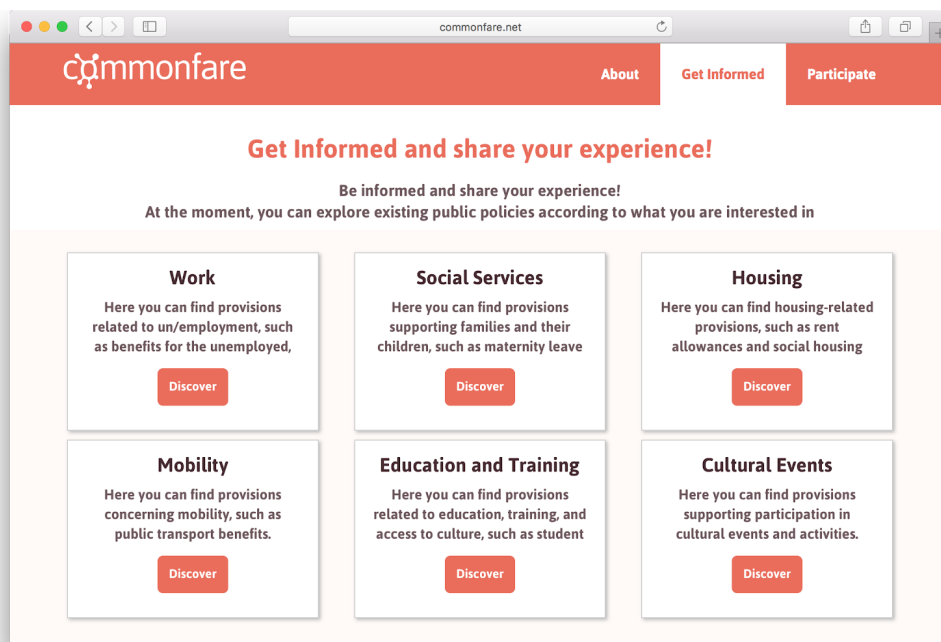
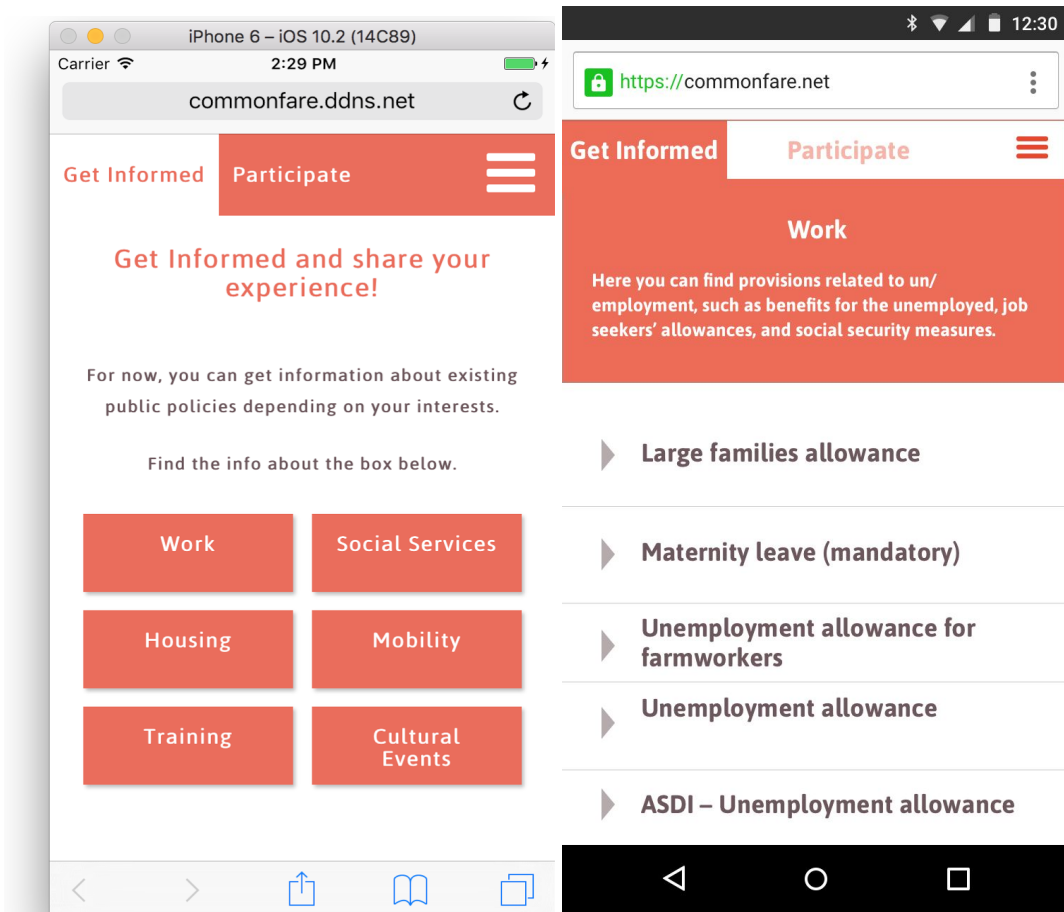


Figure 8. R1 Get informed pages screenshots.

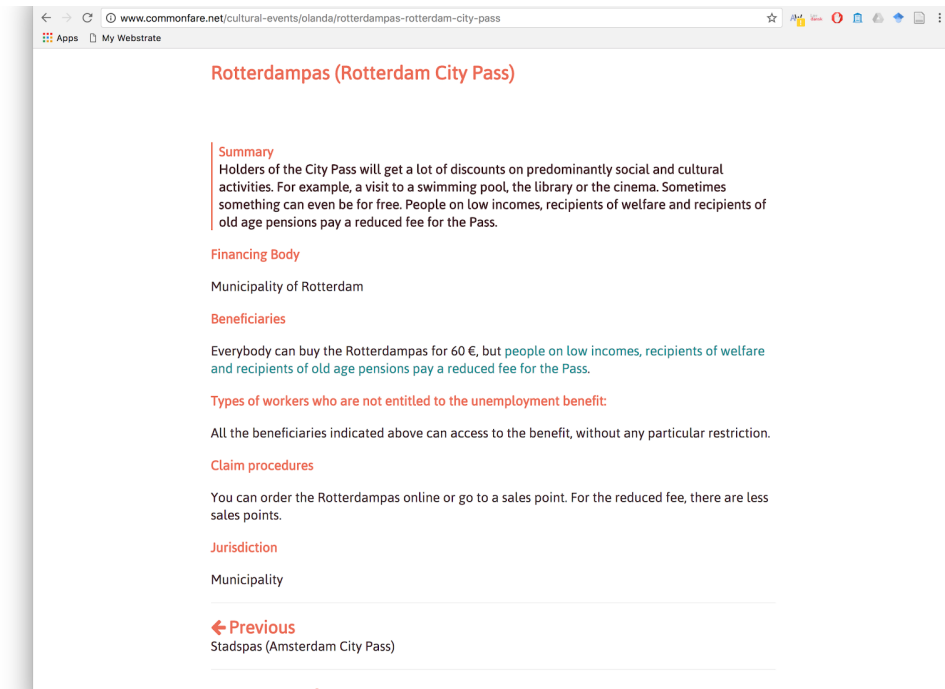
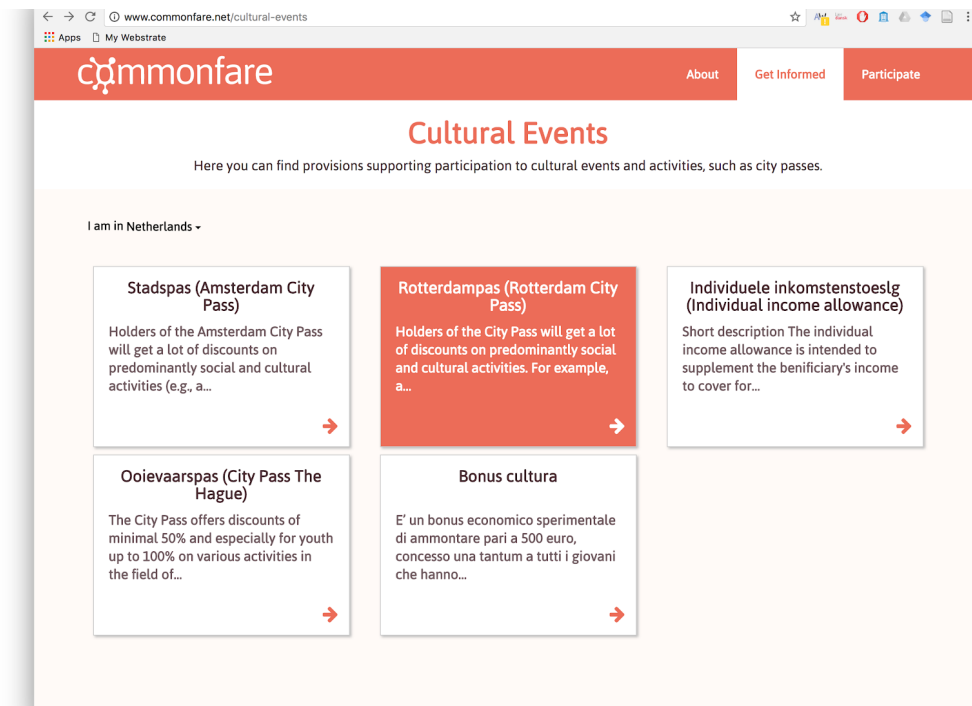


Figure 9. R1 Get informed: cultural events pages screenshots.

Participate: this section briefly described to the visitors what they would be able to do with the platform in the upcoming release (R2) and invited them to subscribe to a newsletter in order to stay updated.

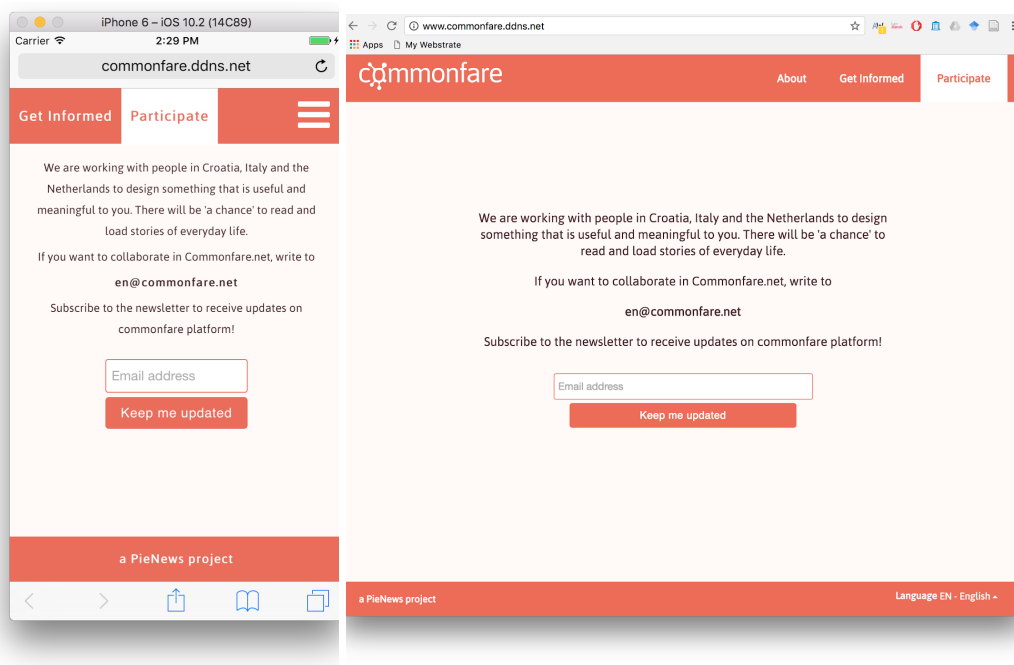


Figure 10. R1 Participate pages screenshots.

Each of the pages of the platform were made available in **different languages**: the three of the pilot countries, namely Croatian, Dutch, and Italian, plus English. To ease access to the content by users, a set of strategies has been implemented in order to decide which language was to be used in the display of the platform.

1. User-selected language: the user selects a language and this is respected.
2. Browser language: the language of the browser indicates the desired language.
3. IP-based detection: the language is selected based on the country associated to the user IP.
4. Default language: when other strategies fail, the default is set to English.

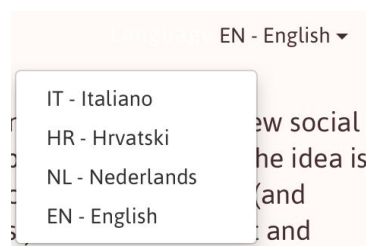


Figure 11. R1 multilingual settings screenshot.

In addition, a **website and content management area** was present in R1 to allow content managers and website administrators to manage the platform. The management area was role-based and accessible after authentication.

A web-analytics platform called “Matomo” (since January 2018, formerly “Piwik”) was installed to monitor usage. Matomo is the leading open-source analytics software used worldwide. It offers the advantage to allow a direct control on the data while avoiding the sharing of information to third parties (e.g. Google).

3.6 FIELD RESEARCH: PARTICIPANT EVALUATION

In the early spring 2017, a plan was developed to conduct evaluation activities with participants during April and May 2017. The plan was drafted by the WP4 team, and discussed with the pilot partners to tailor it to their local situation. It was comprised of two main goals that contributed to R1 and R2. In the case of R1, it included activities that sought feedback for improvement. In the case of R2, it focused on activities related to storytelling, as the main functionality R2 was supposed to add.

- In the Netherlands, MdC led: a workshop with welfare recipients in Rotterdam on April 13th, 2017; a workshop with freelancers in Amsterdam on June 2nd, 2017; a workshop with non-Western migrants on June 12th in The Hague.
- In Italy, BIN led two workshops, in Milan (May 4th, 2017) and Rome (May 6th, 2017) respectively, involving precarious workers and unemployed youth.
- In Croatia, CPS ran a survey for feedback on R1 by involving two target groups, Roma and young precarious. They also conducted two workshops to receive input for R2 and to understand the needs of people given the worsening of the economic crisis.

Results were shared in dedicated documents and discussed during the General Assembly of June 2017. Issues discussed by project members were summarised in a list (reported in [Appendix A1, Section 4](#)). The list was clustered into functionality, content, usability and aesthetics. The majority of issues regarded **functionalities** (N=9). Bugs were dealt with by the development team and requests for new functionalities were considered for R2 and R3. Six issues regarded the **content** and reflected the complexity of designing a platform which promotes an evolving concept. These issues were discussed at length by the consortium as a collective. Indeed, they involve all WPs: WP2 and WP3 as regards the definition of “Commonfare”, and WP5 as regards communication. **Usability** (N=4) and **aesthetic** issues (N=3) were dealt with by the design team in view of R2.

The user studies also collected information regarding the functionality to be implemented in R2 and R3. All participants could see how important a storytelling component could be for commonfare.net. However, they strongly suggested that the tool needed to provide some **guidance** to the Commoners, helping them to open their creativity. This is well elaborated in the words of one participant: “...*I see it strong and I see it powerful. But if you just randomly give the people the possibility to tell stories, and I have a lot of experience with this, they will do whatever. You know,*

like from good to bad and all the colours in between and more that we can imagine, (...) it will be... worthless, sorry to say. So, if this is not conducted, if it's not very well directed... (...) It's kind of complex...." She concludes, ***"To give a voice to people is a very strong tool, (...) if you also give them some guideline, I think you create do really beautiful stories."*** As a result of this idea, the moderator proposed examples of a **storytelling template** which was well received.

In addition, participants elaborated on the stories they would like to read, proposing four examples:

- Stories about/of self-determination and autonomy.
- How-to videos (e.g. "how does co-housing work?").
- Experience videos (people talking about an important topic).
- Complement videos with infographics and text/link to deepen the topic.

While not part of the original plan, the field activities also contributed towards R3 design (mainly as an outcome of a the workshop with freelancers in the Netherlands during DWS3). This contribution concerned networking functionality (R3), particularly in terms of supporting the search for other partners for projects (especially where people offered complementary/diverse skills and expertise). This idea was further elaborated in the requirement of creating different types of networks, such as a repair network, a borrowing network, a tech assistance network, and marketing and webmaster network(s) – a goal that can be achieved through two functionalities in commonfare.net R3: tagging and group formation.

4. TOWARDS RELEASE 2

The design work for R2 built from field research, DWS2, DWS3, and intense prototyping. A number of probes and tools were designed to facilitate reflection, creativity, and development. The activities performed in this phase can be clustered in four main areas, reflecting the main issues emerged by the user evaluation of R1.

- 1) Conceptual design (content related issues)
- 2) Functionality definition (functionality related issues)
- 3) Interactive prototyping (usability related issues)
- 4) Graphical explorations (aesthetic related issues)

Design activities were performed by the WP4 team. In addition, external researchers and designers (N=6) were invited to join in selected activities related to conceptual design and graphical exploration, to bring a fresh perspective into the design. Outcomes were documented in internal reports, as well as visual and interactive artefacts, which were discussed with the consortium in weekly or twice a month calls.

4.1 FIELD RESEARCH: CONCEPTUAL DESIGN

Activities related to conceptual design were prompted by the findings that participants did not fully understand what exactly commonfare.net was (Section 3.6). This problem related to the difficulty of designing a platform around an emerging concept addressing a complex wicked problem (Section 2). Therefore, we dedicated a substantial effort in order to create boundary objects to build a shared understanding of Commonfare which would then inform the design in terms of functionality, interaction, and graphics.

4.1.1 Elaboration of Metaphors

A substantial amount of work focused on the use of language regarding both the design and use of commonfare.net. On a theoretical level, this work was inspired by Leigh Star's work, which defines metaphors as bridges between different worlds. Accordingly, metaphors affect collective action; they can "*heal or create, erase or violate, impose a voice or embody more than one voice*"²² (52).

The focus on metaphors led us to recognise the limitations of our consolidated language. To move beyond the culturally codified associations that any established label brings in, it was decided that the artefact will not be referred to as a "platform" but simply by its URL - **commonfare.net**. Similarly, the users were labelled as '**visitors**' and '**Commoners**' (registered users). This linguistic

²² Star, S. L. 1990. Power, technology and the phenomenology of conventions: on being allergic to onions. *The Sociological Review*, 38(S1), 26-56.

decisions aimed to facilitate creative thinking in a multidisciplinary consortium, because often words act as “affiliative objects” which highlight the differences among professional cultures, instead of being constructive producers of values²³.

Analysing commonfare.net from a metaphorical perspective made us acutely aware that our work was already imbued in metaphors which brought together heterogeneous social worlds. For example, the concept of “welfare provisions” built bridges between the consortium, the participants, the technological implementation and the worlds of policy making, bureaucratic procedures, public money transfer, and the stereotypes associated to welfare recipients. On the other hand, stories were connected to creativity, narrators, style and quality of content, as well as means of production. “Good practices” reminded about a form of judgement, benchmark, and a multiplicity of practices among which criteria-led judgements allow for selection.

Different metaphors were analysed by the partners who collaboratively edited shared documents. Inspirations was sought for in academic works, such as in the concept of ‘Cosmopolitan Canopy’²⁴ and ‘Entanglement’²⁵. Comparing and contrasting this literature, we developed two parallel and complementary metaphors which have been used thereafter to shape the design of commonfare.net.

The first metaphor described commonfare.net as an **ecology**, defined as “a site of intensities, synergies and symbiotic processes within relational compounds. Ecological circulation functions in cyclic interdependent ways rather than extensive. [...] The dominant existential drive of ecology is not so much to extend itself but to hold together resilient relationships”²⁶. Commonfare.net is an ecology composed of technological tools, people, and organisations which fosters autonomy, practicability, and poetry in life. This metaphor strongly embeds the value of collaboration which is key to Commonfare both theoretically (the common is the ensemble of material, symbolic, and affective elements that ties together human beings) and empirically (the field research emphasised solidarity and sociability). Therefore, it was proposed to think about commonfare.net as *a collaborative ecology of tools for autonomous, practicable, and poetic lives*. The simplest metaphor of a toolbox was considered and discarded. Indeed, it would have pointed to a closed, pre-ordered system, in which the different tools are selected depending only on external needs. This is not how contemporary digital technologies work, as indeed they are full of connections, links, and evaluation mechanisms, and therefore better understood as infrastructures and socio-technical systems.

²³ Suchman, L. 2005. Affiliative Objects. *Organization*, 12(3), 379–399.

²⁴ The urban island of civility that exists amidst the ghettos, suburbs, and ethnic enclaves where segregation is the norm. Under the cosmopolitan canopy, people come together interacting across racial, ethnic, and social borders. The modern workplace, the café, the restaurant, the Metro, and the public square all can be viewed as examples of such canopies in action. Anderson, E. 2011. *The Cosmopolitan Canopy: Race and Civility in Everyday Life*. New York: W. W. Norton. Bassetti, C., Brighenti, A.M. 2017. From the iconic ghetto to the cosmopolitan and beyond. An interview with Elijah Anderson. *Etnografia e Ricerca Qualitativa*, 10 (2), 303-310.

²⁵ Entanglement is used to describe the inseparability between matter and meaning, knowledge and materiality, as described by Karen Barad: “to be entangled is not simply to be intertwined with another, as in the joining of separate entities, but to lack an independent, self-contained existence”. Barad, K. 2007. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Duke University Press.

²⁶ Puig de La Bellacasa, M. 2016. Ecological thinking and materialist spirituality, in Bowker, G. C., Timmermans, S., Clarke A.E., Balka E. (eds) (2016) *Boundary Objects and Beyond: Working with Leigh Star*, MIT Press, CA/Massachusetts.

The second proposal focused on the design process. On this perspective, commonfare.net could be defined as a **rhizome**, a continuously growing horizontal underground stem which puts out lateral shoots and adventitious roots at intervals. A rhizome challenges hierarchical organisational structures, ceaselessly establishing connections between social life, discourses, and power²⁷. In other words, a rhizome is always in the middle, drawing upon and establishing relations. The rhizome metaphor allowed us to reflect on the different components of commonfare.net and on its driving forces. If we imagine a rhizome as bamboo, we can see how the different parts of the projects contributed to the design. The roots are the field research, and the stem is commonfare.net. The shape of the bamboo is determined by the stories and their tags, which affect the number and the strength of the poles. This metaphor emphasises user agency in shaping the platform in use. In addition, the rhizome is often used in network visualisation, which strengthens its metaphorical capacities as it is able to connect the networks built by digitally mediated interactions with the relational aspect of the existing groups with which the consortium is working.

4.1.2 Needs Analysis

From the analysis of D2.1 we have built a preliminary understanding of the categories of people who may engage with commonfare.net, and how they can make use of the storytelling functionality to satisfy their needs. For instance, it was clear that people would like to share strategies and practices, and help to understand their own situations, which storytelling can support. Storytelling should include:

- Sharing experiences (positive and negative), frustrations and worries freely and honestly.
- Meeting others that are in the same situation.
- Getting information about welfare provisions, good practices, people stories.
- Getting general help/advice.

To support needs analysis, a table describing the key dimensions for sustainable living was built through a grounded theory²⁸ inspired approach ([Appendix A2, Section 1](#)). D2.1 was carefully annotated to elicit the dimensions emerging as more relevant both quantitatively and qualitatively (the low-level elements listed in the white columns). These dimensions were grouped, satisfying the criterion of saturation, in the higher level concepts in italics in the yellow columns, then in the categories reported in the column headings. Altogether, they constitute the elements of the “practicability of life”, a metaphor advanced in D2.1 by pilot partners, in particular, BIN Italy, to explain the social context of precariousness and poverty during the kick-off meeting.

²⁷ Deleuze, G., and Guattari, F. 1987. *A thousand plateaus: Capitalism and schizophrenia*. Minneapolis, MN: University of Minnesota Press.

²⁸ Glaser B G, and Strauss A. 1967. *Discovery of Grounded Theory. Strategies for Qualitative Research*. Sociology Press.

The low-level elements contained in the table were used as sensitising concepts²⁹ in a creativity workshop, involving 4 HCI researchers who did not have previous knowledge of the project. An affinity analysis disclosed three main clusters: “psycho-social issues”, “practical needs” and “networking requirements”, which reflected well the objectives of the project. Each of these categories was discussed with respect to storytelling.

The relevance of **location** emerged as a main requirement for content organisation, not only for welfare provisions, but also for stories, needs and services. Hence, the functionality to “search by location” was proposed as a useful feature for the platform. Two other important elements with respect to content organisation emerged:

- **Life events.** The need for information, advice or support is largely event-based. The trigger could be a life situation, like pregnancy, changing jobs, major injury, moving home, etc.
- **Categorisation of needs** and "solutions"/services. It was noted that a significant part of needs are in the following categories: Work, Money, Living.

Tags were proposed as the technological solutions to allow for different modalities of content organisation. For instance, it was proposed that one of the platform features could be a visualisation via a map showing where people who have the same needs are located, or where "solutions"/services are displayed. It was suggested that the platform should allow Commonsers to share needs and not only stories, e.g.: “I’m in Trento and does anybody know where I can connect to free Wi-Fi or can anybody share an access with me?”. Moreover, Commonsers should be able to organise events and invite others to join in. Finally, there was an agreement that “**fun is important**” and storytelling should have some kind of playful elements to motivate users.

4.1.3 Personas and Scenarios

D3.1 provided important information to the design team in the form of personas and scenarios. The deliverable contains the results of survey of existing reputation systems, a partial ethnography of existing discussion forums, interviews with potential commonfare.net participants at the pilot sites, and the results of the trial of a digital currency system in Italy. From the empirical work that informed the report, a number of aspects about the lived experience of precariousness also emerged that aligned with findings from previous workshops (such as the workshop with participants as part of DWS2, presented above in Section 3.3.2), including understanding the limits of education towards enabling career opportunity (and issues of nepotism as a factor), the importance of transparency about data use on commonfare.net, and the emphasis on the wealth of social relationships instead of reducing participants to be understood in terms of financial issues.

D3.1 also presents a number of scenarios and personas. Based on this material, the design team has extracted different tasks and actions related to storytelling and profile for our future analysis

²⁹ Blumer, H. 1954. What is wrong with social theory?. American sociological review, 19(1), 3-10.

([Appendix A2, Section 2](#)). These scenarios highlighted a number of actions related to the creation and interaction with stories, groups and profiles, and how these different entities can be connected (through comments/discussion, how and when contact and notification occurs, and the type of media that can be shared).

In addition to the scenarios and personas, specific requirements that were derived from D3.1 are as follows:

- The digital storytelling hub is a place where Commoners are able to describe their own experiences and strategies for dealing with aspects of living in conditions of poverty or financial hardship and associated problems with, for example, housing, food, transport and wellbeing. (D3.1, p.14)
- Interviewees were very positive about the possibility to leave and view comments, for example, when looking for a good cake recipe. In such a context, reading and coming to decisions based on other people’s opinions was a normal part of internet use for some interviewees, along with the assumption that some of those opinions might be deliberately misleading or negative. (D3.1, p.38)
- There was a fear that ratings and star systems might be trivialising, or worse, that they might undermine the purpose of the Commonfare endeavor (D3.1, p.38).
- Individuals should be able to choose not to sign up; however, participation in storytelling and commenting will not be possible without registration (D3.1, p.50).
- While place of residence may be useful in helping establish connections that might lead to local community action, it is important to remember that the purpose of commonfare.net is to facilitate, create and grow Commonfare within and beyond the community of users. (D3.1, p.50)
- Updated content keeps Commoners coming back, as there’s more to see each time they visit. (D.3.1, p.51)

4.2 DESIGN WORKSHOP SERIES 3 (DWS3)

Date: 19-23 June, 2017

Location: Amsterdam, Rotterdam, and The Hague, the Netherlands

The overarching goal of DSW3 was to build a stronger understanding on storytelling, trust and reputation-contribution systems.

| Activity | Outcome |
|------------------------------|---|
| <i>Workshop in Rotterdam</i> | <ul style="list-style-type: none"> • A sense of connectedness between tensions |

| | |
|---|--|
| <ul style="list-style-type: none"> • Understanding stories, how they might be used and interacted with. | <p>of privacy, moderation and trust in the value of online stories</p> <ul style="list-style-type: none"> • Reinforcement of the importance of offline interactions. |
| <p><i>Workshop in the Hague</i></p> <ul style="list-style-type: none"> • Understanding how content can be organised, filtered and searched to ensure relevance for the Commoner. • Discussion about indebtedness and how it manifests in the Netherlands. | <ul style="list-style-type: none"> • Reinforced the importance of a number of the design decisions already taken. • A better understanding of attitudes to indebtedness in the Dutch context, and a number of activities to explore which could be introduced on commonfare.net |
| <p><i>Workshop in Amsterdam</i></p> <ul style="list-style-type: none"> • Explore how relationships and trust are understood involving online mediation, online transactions, and the representation of reputation, contribution. | <ul style="list-style-type: none"> • A sense of how freelancers see a distinction between the services that Commonfare and the state can be expected to provide. • Any reward system should be divorced from a reputation–contribution system as the type of content and stories people will share is not measurable in ways similar to other technical Q&A platforms. |

Table 3. Summary of the DWS3.

Workshops 1 and 2 were led by MdC, and workshop 3 was led by members of WP3. At least one representative for each partner was present at each workshop. They mostly acted as observers. When needed, a translator supported their understanding.

4.2.1 Workshop 1 – Rotterdam

4.2.1.1 Method

The first workshop was held June 22nd, 2017, and led by MdC. It was run in Rotterdam with 12 welfare recipients. The goals were the following:

- Understanding the power of stories.
- Understanding which stories work and why.
- Understanding the types of stories for Commonfare.
- Understanding how people interact with stories.

The workshop involved two exercises: the first exercise aimed to understand how people interact with stories and news items online and to get a grasp of their storytelling capabilities and familiarity with online trust, sharing, informing and supporting and general internet literacy and online presence. This involved reading a number of statements to participants, having them physically move themselves in the room to represent their response, and afterwards reflecting on the final positions of participants.

The second exercise introduced Simon Sinek's Golden Circle theory³⁰ that focuses on the **why** of the story instead of the 'this happened then and then'. Participants were given a number of images, half with positive connotations, half with negative, with space for text below each. The positive connotation images included images of community cohesion (e.g. people working together in a garden), while the images thought to have a negative connotation focused on institutions and issues around material needs (e.g. counting money at the end of a month).

4.2.1.2 Results

The full list resulting from the first exercise as analysed by MdC, and two example stories from the second exercise, are shown in [Appendix A2, Section 3](#). A summary is provided below.

Reflecting on the final positions of participants, a number of points were raised that reflect tensions between online and offline spaces, for example, trust in both relationships and media content, the algorithmic automation of content that is shared and its moderation (or the lack thereof).

The second exercise sought to elicit potential stories, that could be connected with a number of pre-chosen images. In this exercise, participants in groups chose to create positive images, selecting primarily images with positive connotations, and even creating a positive story on the negative connotation image examples.

4.2.2 Workshop 2 – The Hague

4.2.2.1 Method

Later on the same day (June 22nd, 2017), a workshop led by MdC was run in The Hague with 10 stakeholders. The goals were the following:

- Understanding 'filtering' possibilities, i.e. criteria for eligibility and needs.
- Understanding how to differentiate between national, local and intermediary provisions.
- Understanding how to differentiate between official and self-organised provisions.
- Exploring the possibilities to include prevention of complex situations (e.g. indebtedness) in the Commonfare platform.

The first exercise addressed issues of participant needs, contrasting this with the welfare provision information currently provided on commonfare.net. It did so by responding to two questions:

- How can we use these needs to access the information the "other way around"?
- Do we need to distinguish between official provisions that people can apply for themselves or not, and between official welfare provisions and non-official or self organised welfare?

³⁰ Sinek, S. (2009). Start with why: How great leaders inspire everyone to take action. Penguin.

Participants responded by writing their thoughts on different post-it notes, which were then grouped and discussed. During this time, a visual representation of how the platform could better respond to these needs was drawn and discussed.

The second exercise was conducted as a discussion amongst the larger group of all participants on issues related to indebtedness, and in particular, its prevention. The question posed in the discussion was as follows: how can we make people aware that they are going to have a financial problem before they get a financial problem?

4.2.2.2 Results

The first exercise grouped the post-it notes into the following categories:

- Financial health
- In charge (in the sense of autonomy)
- Human Contact
- Basics (specific to different groups)
- Prevention
- Integration and participation
- Peace of Mind
- Education
- Documentation
- Information

The diagram that was drawn reinforced a number of points which were already clear about the platform, including:

- Good mobile support.
- Effective search functionality, ideally leveraging existing experiences with common search engines.
- Multi-language support.
- Accessibility options - ability to listen to the content.
- Good tutorial and clear *About* section.
- Useful categorisation of different similar welfare provisions (official and unofficial).

The discussion that came from the second exercise first explored the domain of the problem of indebtedness and shame, and the predatory nature of commercial companies that effectively encourage people to spend regardless of the implications. The conversation then moved towards suggestions, and the importance of anonymity was raised in relation to sharing information about indebtedness with professionals whom people interact with as part of their daily life. This was followed by conversation about how to create awareness, and then concluded with remarks from

the consortium members about people already in debt. Overall a number of activities were suggested throughout this discussion, which were grouped into the following:

- Involving (social) professionals in debt prevention.
- Creating large scale awareness.
- Creating emotional support.
- Long term debt prevention.
- Influencing policy makers.
- Giving free legal support.

To address the issues described by the activities, we proceeded with the third workshop.

4.2.3 Workshop 3 – Amsterdam

4.2.3.1 Method

On the final day, a workshop led by members of WP3 was run in Amsterdam on the theme of contribution, trust and currency, with 10 participants who work as freelancers. The goals of this workshop were as follows:

- Understand what kinds of information, connection and interaction freelancers might value in the commonfare.net context.
- Understand priorities in terms of information, connection and interactions.
- Obtain initial input into mechanisms to recognise and reward contribution to / creation of the commonfare.
- Explain the nature of digital currency, i.e. cryptographically secure digital value tokens and obtain participant input into potential uses.
- In context of contribution, trust and currency, find out what would encourage and deter participation in the platform.
- Initial participant input into representations and visibility of contribution, trust and currency mechanism information.

The first activity of the workshop was intended to set the context for the questions that we would subsequently ask the participants. Participants were asked to introduce themselves and to state what was important to them at this point with regard to their work as freelancers. This allowed the facilitators to better understand the audience.

The second activity focused on eliciting expectations of what participants felt the state should provide, and Commonfare should provide. Participants listed individual items on post-it notes, which were then positioned near each other based on similarity to allow for the emergence of groups.

The third activity was conducted as a whole-of-workshop discussion, which emphasised the evolution of the platform, the way in which welfare provision information is provided, storytelling functionality is being implemented, and looking forward to issues of networking and how a digital token could be used.

The fourth activity involved a discussion on the issues of trust and reputation–contribution, considering mutual-aid, exchange, trade, and a general distrust of existing social media platforms.

Finally, the fifth activity involved participants writing responses to a question of what would encourage or discourage participation on commonfare.net.

Overall this workshop ran out of time and facilitators indicated that not all goals were met.

4.2.3.2 Results

The first exercise served to begin discussions around issues of precariousness as they exist for freelance workers (as a demographic they typically have high levels of confidence and education).

The second exercise involved the grouping of post-it notes into categories of expectations and needs, divided along whether they should be provided by the state (top-down welfare) or Commonfare (bottom-up welfare). The categories were grouped into ‘general provisions’ and ‘financial, income and employment provisions’ for the state, and ‘community’, ‘education and learning’, ‘financial, income and employment provisions’, and finally another category which only contained ‘the exchange of goods’ from Commonfare. A third category that relates to the intersection between the state and Commonfare included aspects related to welfare provision and tax clarity (both in terms of the navigation of regulations, but also knowing where to go for assistance).

The third and fourth exercises were conducted as discussions, that resulted in comparisons between the types of functionality that Commonfare seeks to provide compared with existing social media platforms, while at the same time contrasting the goals and motivations for the platform (and distrust of the profit motive of existing platforms). The fourth exercise continued the discussion to the reputation–contribution system, and participants highlighted a desire to maintain a separation between it and any token/reward system.

The post-its from the final exercise were grouped into the ethos of the community and platform, and associated practical issues (for encouraging participation); and, non-cooperative activities and ethos, data privacy, and ease-of-use issues (for discouraging participation).

The needs emerging from workshops 2 and 3, gathered as post-its, have been transcribed and, once transformed back in several copies of “need cards”, have been used in multiple brainstorming and affinity analysis sessions, conducted by HCI experts both within and outside the consortium.

4.3 PROTOTYPING: MOCKUP 2

Different prototypes were developed to embody the functionalities defined during the conceptual design into artefacts with a main emphasis on usability and aesthetics. Two streams of work were carried forward in parallel. The first one aimed to define the interaction style using low fidelity prototypes, the second one explored different visual representations as a response to critiques on R1 look and feel. The functional prototype evolved through several iterations of sketching and interactive prototyping. Feedback was sought by using shared documents in weekly meetings involving the design team, and plenary discussions. An example storyboard is shown in [Appendix A2, Section 4](#).

Different graphical possibilities were considered by experimenting with colours and interaction techniques. However, after careful consideration of cost/benefit in terms of usability, implementation effort, and based on the consortium preferences, they were discarded in favour of a minimalistic look and feel which could better fit mobile interaction.

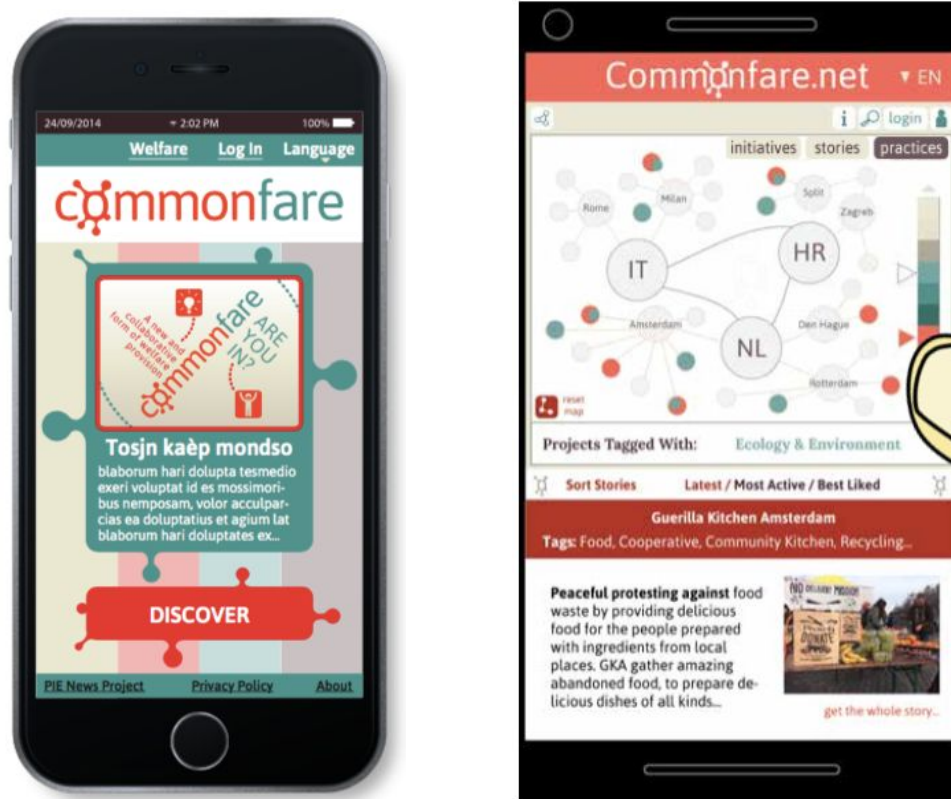
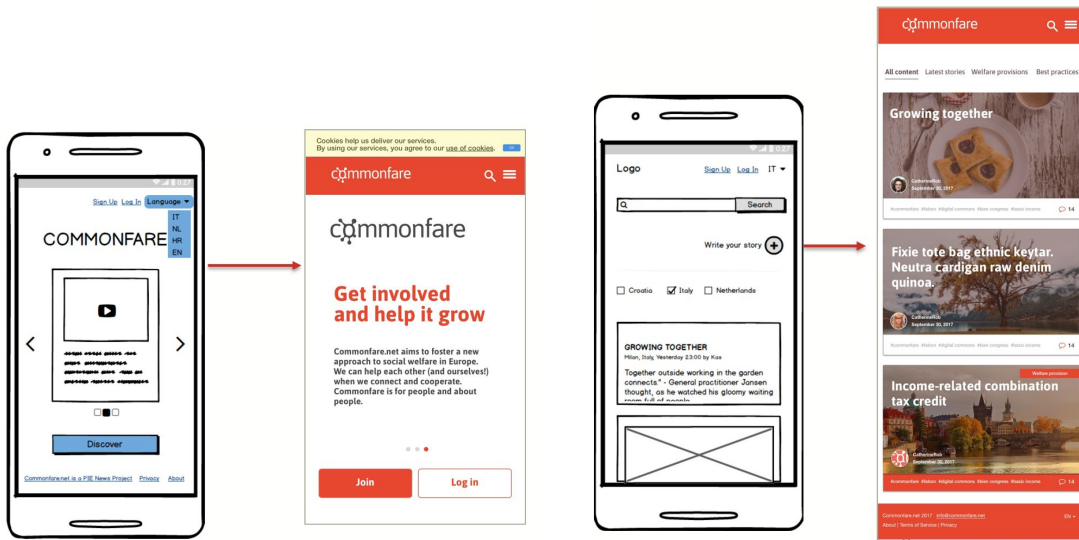


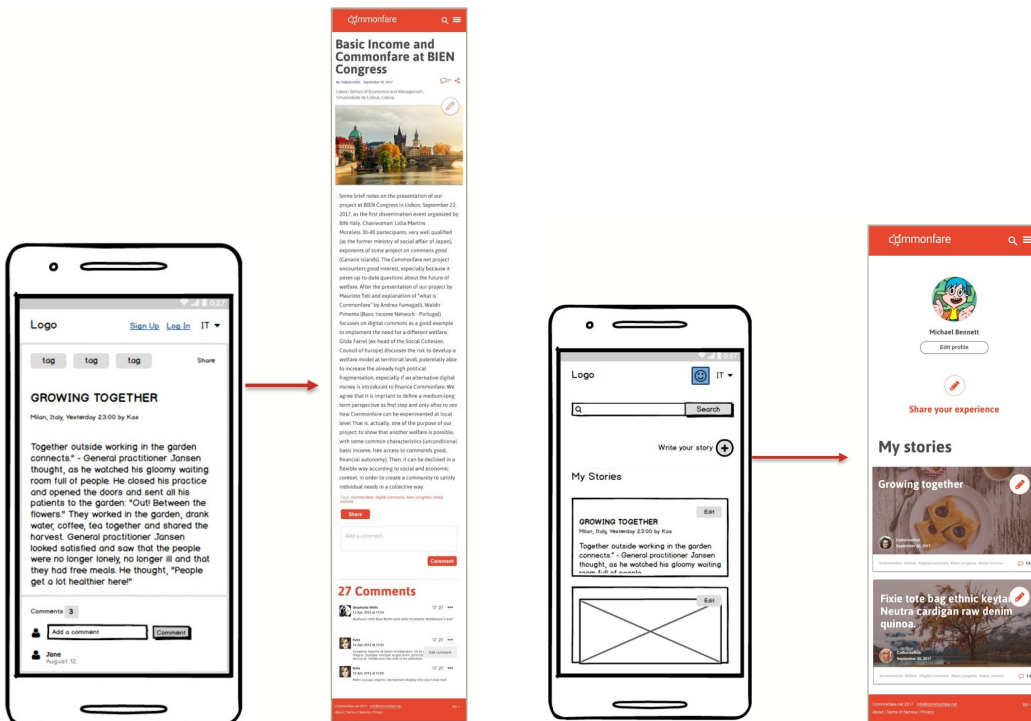
Figure 12. Mockup 2 screens that were eventually discarded.

We also provide examples to show some of the conversions from low to high fidelity mockups (on mobile) below.



Landing page with tutorial

Latest content



Story view

My stories

Figure 13. Examples showing the evolution from low to high fidelity of the mockups, including the initial entry point to commonfare.net (the landing page) and story content views.

4.4 FIELD RESEARCH: MOCKUP USABILITY TESTING

The next stage involved an evaluation of the high fidelity mockups, to get feedback and improve their usability. A total of 15 participants were invited to complete a series of tasks while thinking aloud. Half of the participants used commonfare.net on their mobile and the other half on a desktop. All participants could use the browser they preferred. Participants were international students who volunteered their time. This convenience sample was justified by the main emphasis on usability rather than user experience.

The main problems related to **content**. Participants found that the text in the homepage failed to give a clear idea about the platform purpose. In terms of usability, it was noted that the difference between personal stories and the stories written by others should be made clearer, and the navigation between some screens should be improved. Responding to these problems, the following actions were taken:

- The homepage text was improved and instead of one screen with a big paragraph of text, the text has been separated.

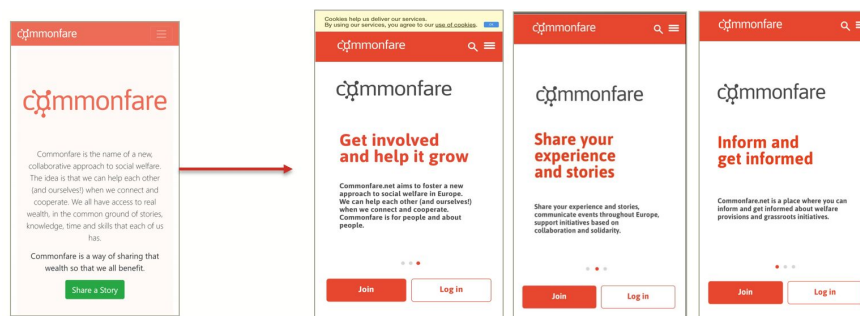


Figure 14. High-fidelity M2 mockup home page.

- Differences between profiles and stories were improved: by clicking on “my profile”, a Commoner can obtain a list with content created only by her/himself.

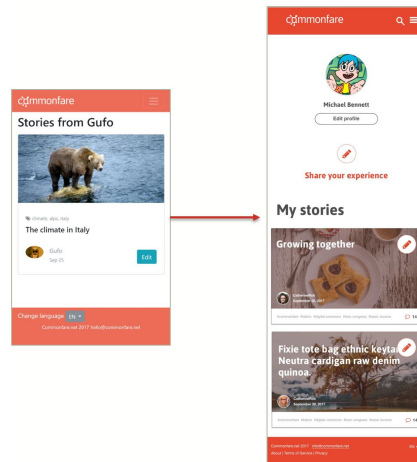


Figure 15. High-fidelity M2 mockup stories page.

- The information in the navigation was rearranged by changing positions of the search field and buttons, in order to make the 'search' function more prominent.

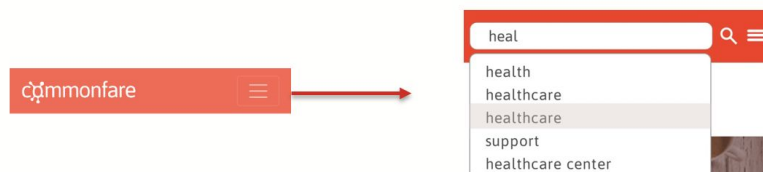


Figure 16. High-fidelity M2 mockup search function.

4.5 RELEASE 2 (R2)

The second release of commonfare.net went live at the end of M15, September 2017. The main purpose of this release was to add interactive functionality in the form of a space where visitors could contribute their stories. R2 evolved in multiple stages: an initial release, a series of visual improvements, and a series of usability improvements (referred to as R2.0, R2.1 and R2.1+ respectively). In general, a list of possible changes following R2.0 was presented to the consortium in order for all partners to vote on what should be considered a priority. The technical implementation was based on the Ruby On Rails framework, as it allowed for greater flexibility and control than Drupal.

4.5.1 R2.0

At the first stage, R2.0 added the following main new functionalities to R1:

- Registration and login of "Commoners".
- Creation and sharing of "Stories".

- Possibility to comment on a Story.
- Possibility to search among Stories.

The functionalities of R1 remained unchanged and were available on a different endpoint (e.g. infohub.commonfare.net).

4.5.2 R2.1

The first iterative improvement, R2.1, added the following:

- The welfare provisions from R1 were integrated using the same data model as a 'story', but with a different visual representation. Conditions for new and updated information about welfare provisions were made explicit in terms of the author(s) of the content and tags assigned.
- The aesthetics were improved in terms of:
 - Layout: font, headers style, buttons
 - Floating button for creating a new Story
 - Homepage
 - Story and Comments
 - Story cards, with ribbon for welfare provisions
 - "Share" button in Stories, with automatic 'copy to clipboard'
 - Navigation bar
 - Footer

Sign up and login. These screens show the minimal information required to join commonfare.net, and the respective login page. Their use of an email address allows for password recovery.

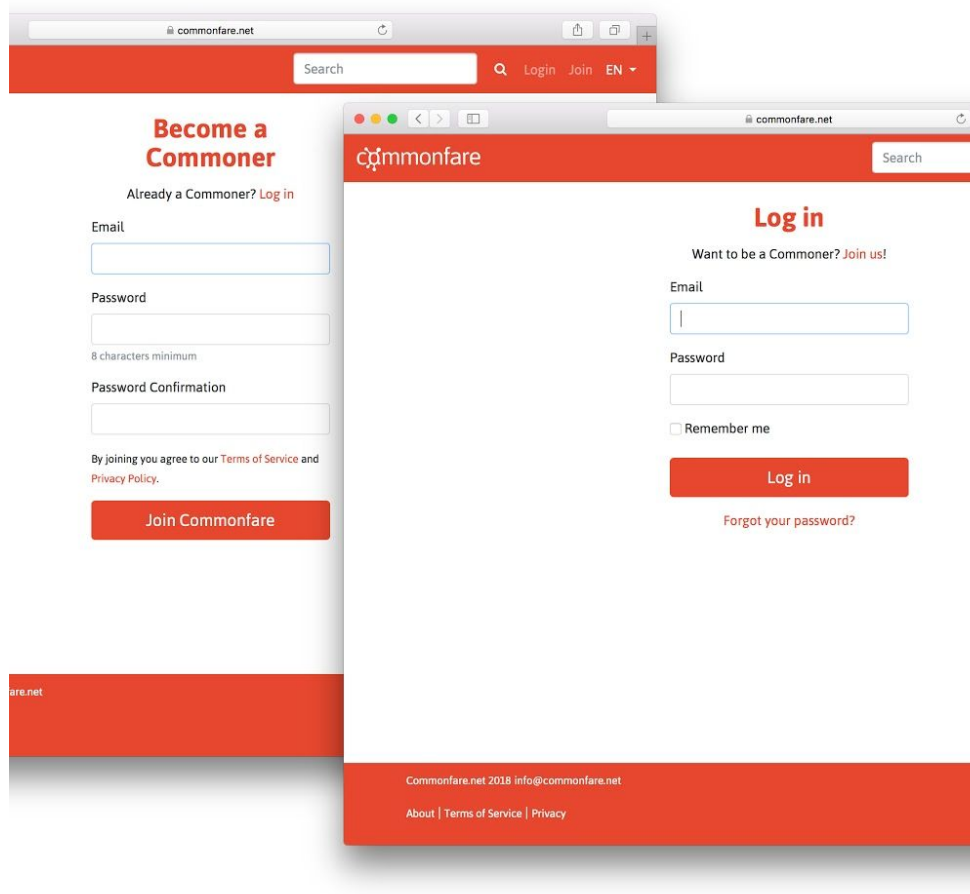


Figure 17. R2 authentication pages.

About, Terms of Service, and Privacy Policy sections. While the 'terms of service' and 'privacy policy' pages reflected important aspects of disclosure and transparency of the platform, it is the *About* section that serves to give a clear representation of who is behind the project, the rationale for design, and the purpose of Commonfare. The text and scope of the *About* page has continued to be reflected upon by the consortium.

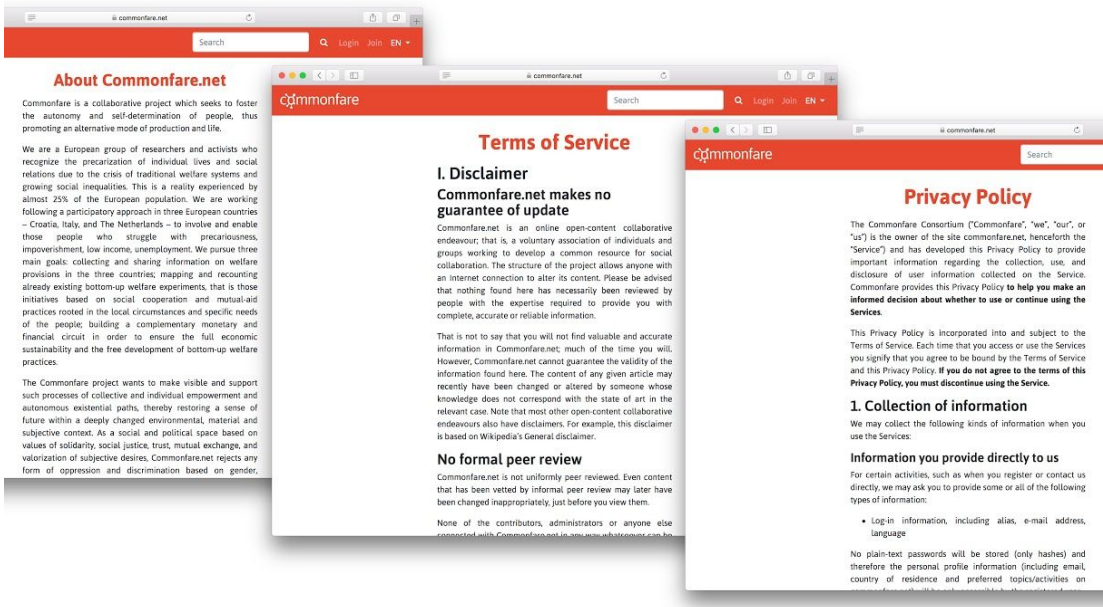


Figure 18. R2 terms of service and authentication pages.

Story, Good Practice, and Welfare Provision. This content was displayed in a similar manner. A banner in the top right of the preview differentiates Good Practice and Welfare Provision content.

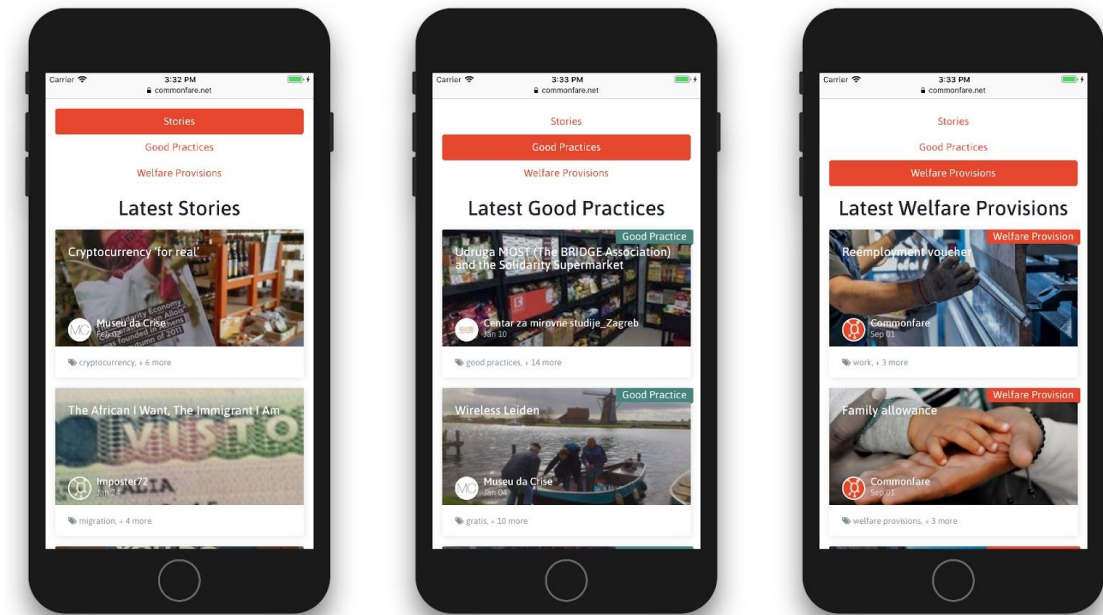


Figure 19. R2 stories, practices, and welfare provision pages.

4.5.3 R2.1+

An update to R2.1 in the form of aesthetic and minor usability improvements was created before DWS4. The updates were presented to the consortium and, after a round of feedback, were implemented. The main improvements included a restyling of the navigation bar that shows the

main sections of the platform. In particular, the welfare provisions were labelled as ‘public benefits’ and presented in a list form to make them more distinct from other content. In addition ‘Stories’ were renamed as ‘Commoners Voices’. Example screenshots are shown below. A detailed list of changes is reported in [Appendix A2, Section 5](#).

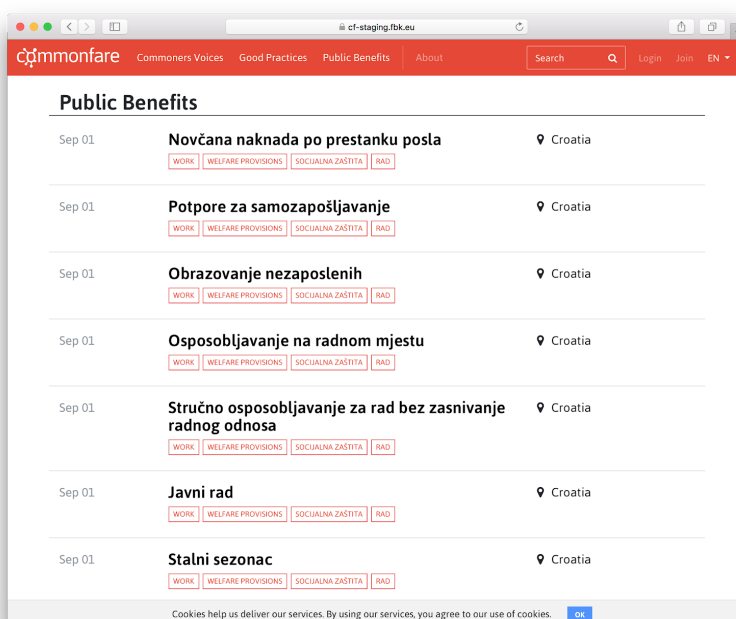
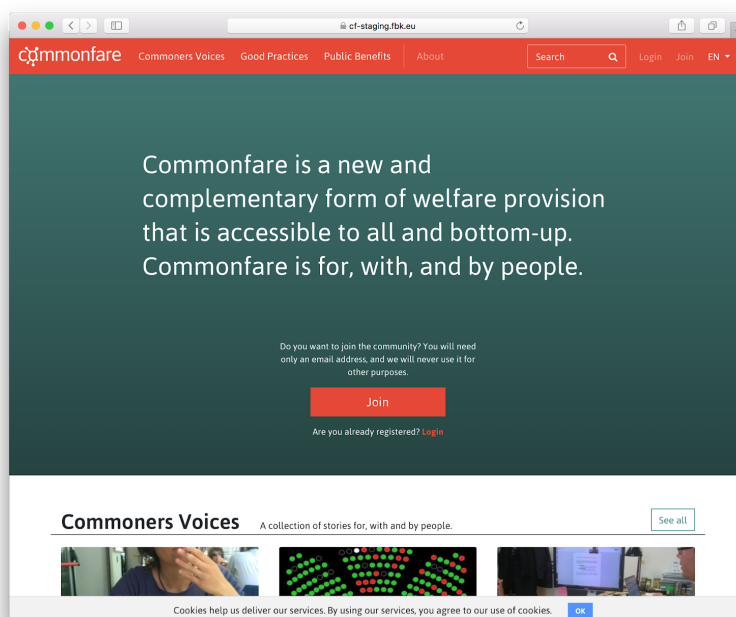


Figure 20. R2 navigation feature and public benefits page.

5. TOWARDS RELEASE 3 (R3)

The design work towards R3 was informed by further field research, DWS3 and DWS4, and iterative prototyping. The project deliverables D3.2 and D4.2 were of particular importance, as they elaborated on issues and technical approaches to functionality that connects people through discussion, groups, and transactions using a digital token, as well as representing such interconnection through the Commonshare, a social network measure of connectedness (based on the *k-core* algorithm, described in D3.2).

5.1 FIELD RESEARCH: CONCEPTUAL DESIGN

D3.2 provided multiple options regarding the implementation of a digital currency, and led to discussions before and during a General Assembly in late November 2017 in Madeira. Moreover, it provided a description of the *k-core* algorithm that will be used to calculate the Commonshare.

5.1.1 Currency Scenarios

As it emerged from the research conducted in D3.2 and discussions at the General Assembly of the consortium in Madeira in November 2017, the 'Common Coin Social Wallet API' pilots are going to be implemented after R3, with roll out phases attuned to each pilot country and specific context. As stated also in D3.2 and D4.2, Italy, Croatia and the Netherlands are serving very different communities. However, pilot partners in each country decided upon a common digital currency framework, hereafter defined as Common Coin. It was also foreseen that Common Coin would be expected to support customisation based on emergent opportunities for particular groups of Commoners, via contacts with good practices, (e.g. Macao and the Santarcangelo Festival, described later). Further, the consortium agreed that the Social Wallet API accessible on commonfare.net would be optional for Commoners at sign-up.

Common Coin has been designed as a complementary cryptographically secure digital value token to be tested by pilot participants in different contexts and according to different rules. The main difference among pilots is about convertibility of the tokens in fiat money. Contrary to non-convertible uses of the tokens in both Italy and the Netherlands, in Croatia community requirements included convertibility of the token into national currency. However, this factor will only impact uses of Common Coin as complementary form of exchange in the productive economy under the guise of a local loyalty scheme. In general, Common Coin will be a non-convertible complementary currency circulating among commonfare.net participants to reward stories posted by other participants and in exchange for second-hand goods and small services, as implemented in

Local Exchange Trading Systems and local loyalty schemes such as the Sardex, Bristol Pound, or the Swiss WIR.

At the beginning of piloting operations, this arrangement is suitable for testing related digital tools such as individual and group wallets and Common Coin database implementations. Minimising in this way the operationalisation of Common Coin allows for smoother roll out of pilot activities taking place in a framework closer to gamification than real economic activity. Accordingly, a better fine-tuning of legal and fiscal pilot-specific arrangements can be organised around communities that express a more robust uptake of Common Coin in their socio-economic contexts. Such an approach to piloting is in this case justified by the need to maximise project budget resources, which can experience reallocation processing by virtue of special and new roll out necessities emerging from typical dynamics within fieldwork research and innovation in action.

In particular, the Italian pilot will include both the growing participation by the community of precarious artists, activists and researchers at Macao, a cultural centre in Milan. As indicated in D3.1 and D3.2, this is the most organised among social wallet pilots. It can count on the early, albeit slightly marginal engagement within the works of the DCENT project (GA 610349) which ushered in a fruitful and more extended synergy with the PIE News / Commonfare project. Macao members co-designed much of the wallet and database features they needed for running the cultural centre's socio-economy in a more decentralised and effective way. Alongside Macao, and through their own networking, Common Coin was piloted mid-July 2018 at the oldest street theatre festival in Italy, the Santarcangelo Festival, in Santarcangelo di Romagna, in central Italy (which we describe in Section 6 below).

Secondly, the Netherlands-based research and co-design with participants for pilot requirements and implementation led to the requirement for an unconditional form of basic income in Common Coin. In this case, the basic income scheme will be optional for the participant. The basic income in Common Coin is named Common Income. A period airdrop of tokens to Dutch pilot participants will reach their wallets. In turn, they will be enabled to exchange such coins for second-hand goods and small services by other participants, donate them to groups, or reward participants' contributions to commonfare.net (e.g. stories).

Regarding the Croatian pilot, given time and resource constraints, and also the new features being added for the voucher coin, Croatian pilot partners are considering to adopt the use of the voucher designed for Santarcangelo Festival at Croatian networking events. More broadly, pilot partners in Croatia have been in touch with a social movement and social enterprise based on Brac Island and surrounding islands. Negotiations on Common Coin features and community participation are ongoing at the time of writing. Nevertheless, the voucher system for a local loyalty scheme leveraging also the tourist industry of the region has been under consideration and deliberation will be taken in due time. For now, Croatian pilot partners propose to roll out a general pilot (i.e.

train the trainers workshops) for interested NGOs, including interested members of island movement to define outreach and uptake rates.

In all three cases, in concomitance with R3, the consortium is preparing a section of commonfare.net to explain the legal issues connected to the Common Coin aspects of piloting the overall platform. This section of the website will then go to form a part of a bigger research effort to service provision as a 'How To' for the real world implementation of Common Coin and the set of technical and legal components it needs to operate properly for participants as individual citizens and their local socio-economic environment.

From a technical point of view, in order to be able to use the Social Wallet API (SWAPI) developed by DYNE and described in D4.2, FBK developed a Ruby library called 'social_wallet'³¹, that manages the connection between commonfare.net and SWAPI, allowing use of one or more instances of the latter. This is the basis for the possibility of having multiple currencies in commonfare.net.

5.1.2 Commonshare Implementation

Through workshops conducted on trust and contribution, as described in D3.2, it emerged that public recognition of contributions on commonfare.net was seen as important for establishing trust, motivating involvement from others, and facilitating exchange of knowledge. This led to a definition of the novel concept of **Commonshare** as “the aggregate contribution of a commoner and the digital resources she owns.” The quantification of a Commoner’s contribution, their Commonshare, is calculated through a weighted k-core algorithm, as a measure of the density of the relation on the platform. Moving forward from the design of Commonshare described in D3.2, work began in April 2018 to implement the necessary algorithms and some of the related user interface visualisations.

The algorithm is applied by considering Commoners, stories, listings, and interactions between them, as a social network of nodes and links. Commoners engaging in a high number of interactions are densely connected in this network, thereby obtaining a higher core number. Figure 21 shows such nodes in red, with sparsely connected blue nodes obtaining a low core number.

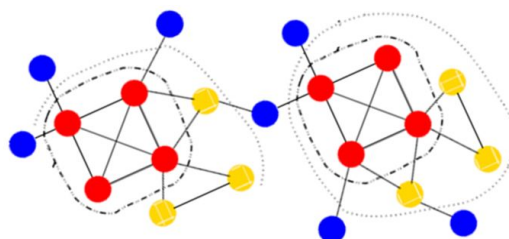


Figure 21. Red, yellow and blue nodes possess high, medium and low core numbers respectively.

³¹ https://github.com/Commonfare-net/social_wallet_ruby

During the work, subsequent D3.2 discussion took place within the consortium about the need to consider both the weight and direction of these interactions. For example, leaving a comment constitutes a greater contribution than simply 'liking' a story. Moreover, the sender of a comment makes a greater contribution than the recipient. The additional calculation increases a node's core number in proportion to the sum of its directed interaction weights.

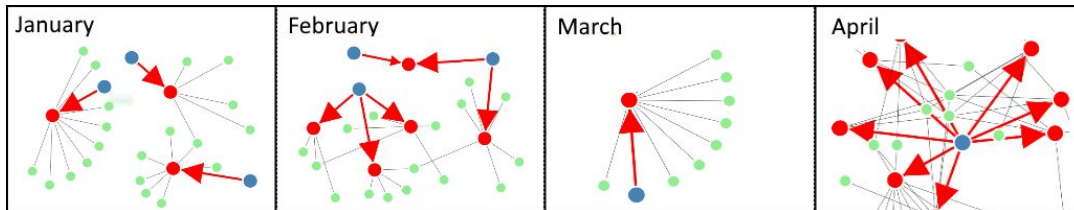


Figure 22. Dynamic social graphs change significantly over time.

The k-core algorithm, which works on static graphs, was thus adjusted to account for the dynamic nature of the network. As shown in Figure 22, nodes and edges are added and removed as time passes, thereby requiring core number values to be recalculated at regular intervals. These additions were implemented by extending the existing k-core algorithm in the NetworkX Python library. NetworkX provides pre-built graph algorithms and operations, but as open-source code, it allows for extension with respect to the dynamic, weighted, directed graph requirements.

5.2 PROTOTYPING I: MOCKUP 3

After the functional improvement design work of R2.1+, the design work focused on functionality connected to the groups, messaging, the digital currency and a space for transactions we call **Commonplace**. A low-fidelity prototype was created to frame the structure of each page as well as the connections between the various new functional components. Continuing the mobile-first approach, all the screens are in portrait mode. A few screenshots for each section are reported in [Appendix A3, Section 1](#). An interactive prototype was created using [invis.io](#)³².

The **Wallet**, which is connected to a Commoner **profile**, can be used to transfer digital tokens to other Commoners. This could take the form of transferring digital tokens as a gift, or as part of a transaction through the **Commonplace**. The Wallet also provides a place where the current balance and all previous transactions can be browsed.

The **Commonplace** allows Commoners to create and search for listings that represent skills or second-hand goods that they have to offer, or that they would like to request. There will be support to discuss the offering in the public listing, but in order to engage in a transaction, the Commoner is led to directly contact the owner of the listing through direct messaging Conversations. However, in

³² <http://invis.io/6YQ13786177DSN>

this context, the term ‘transaction’ can signify multiple actions, i.e. gift giving, token transaction, exchange of favour without monetary mediation, and the like. In effect, the Commonplace is thought of as a space for meeting Commoners which can also include, while not being limited to, a marketplace.

Regarding transactions in the latter context, token transactions that occur in the Wallet can have descriptive text, tags, and a reference to a Commonplace listing (where relevant). The Conversations can also be initiated by viewing a Commoner’s profile, which is the only way of engaging in direct private messaging between Commoners. If a marketplace is characterised by transactions among people who do not know each other on the basis of the information available in terms of price and availability of goods, the Commonplace looks at transactions as embedded in pre-existing social relations or stimulating new ones. In this way, the role of currencies shifts from the medium for anonymous interactions³³ to the medium for the strengthening and construction of new interactions and relations.

The **Group** creation can be done either as a current Commoner, or as part of creating an account (to make it simpler for good practices who may wish to engage with commonfare.net by creating a group, but do not yet have an account). Groups have a public name and description, their own stories (when a member of a group creates a story, they can attribute it to the group rather than themselves), private discussions, and a list of members (and membership requests). Commoners can request to join a group, and anyone in the group can authorise their request. For R4, the consortium is considering more options in this regard, such as group roles and the possibility to assign connected administrative/moderation responsibilities.

Finally, to display information about activity by Commoners and groups (in relation to stories, transactions, etc.) a separate Activities tab of information has been added.

The mockups used in the interactive prototype are shown in [Appendix A3, Section 1](#). They cover changes to (and new) pages as follows:

- Navigation (what is and is not visible when logged out, what is visible to a Commoner when logged in, both in relation to content they have created, and other content).
- Creating an account (allowing for group creation).
- Profile page
 - Show wallet information such as balance, and recent general activity.
 - Write a description and add interests (which will be treated as tags).
 - Show commonshare information.
 - Show recent activity of the profile.
- Group pages (with a similar structure to the profile page in terms of name and description)
 - Support for discussions amongst members.
 - Show requests to join, and a list of members.

³³ Graeber, D. 2014. *Debt: The First 5,000 Years* (Upd Exp edition). Brooklyn: Melville House.

- Social Wallet pages
 - Show current balance.
 - Show and be able to search transaction history.
 - Make transactions to other Commoners.
- Commonplace pages
 - Show and search all listings, or your listings, or favourites (which Commoners can designate).
 - Initiate a public discussion, or a private conversation based on a listing .
- Conversations pages (private two-way communication, similar to instant messaging)
 - Show individual conversations and a list of all a Commoner's conversations.
 - Receive notification when there are new/unread messages.
- Main page (additional links to new content such as the Wallet and Conversations).
- About pages (split into multiple sections that can be expanded).

5.3 PROTOTYPING II: BUILDING BEAUTIFUL STORIES

Starting from DWS2, the consortium infrastructured a parallel line of design and development focused on the story editor, called the storybuilder. The objective was to supplement the tool deployed in R2 with added functionalities aimed to provide storytelling capabilities to all people independent of their skills, as emerged by user requirements. The Beautiful Stories Editor was included in R3.

The design was composed of two phases. It started from the visual deconstruction of a beautiful story, which resulted in a series of different media chained together (text, caption, image, video, etc.). Then, it focused on the translation of these modules in a visual-metaphor to support interaction on mobile phones. From this perspective, storytelling was facilitated by a modular system based on the chaining of different media.

In addition, to support the requirements of **connecting digital and physical world** we developed the idea of a prompted story, which is a short version of the beautiful stories, connected to a digital story on commonfare.net through the automatic generation of a QR code. Participants can enter their text in a form, and a poster, card, or sticker is automatically formatted. This is an important function allowing the exposure of localised content which may foster new local connections between Commoners and increase critical mass in commonfare.net.



Figure 23. R3 QR code feature.

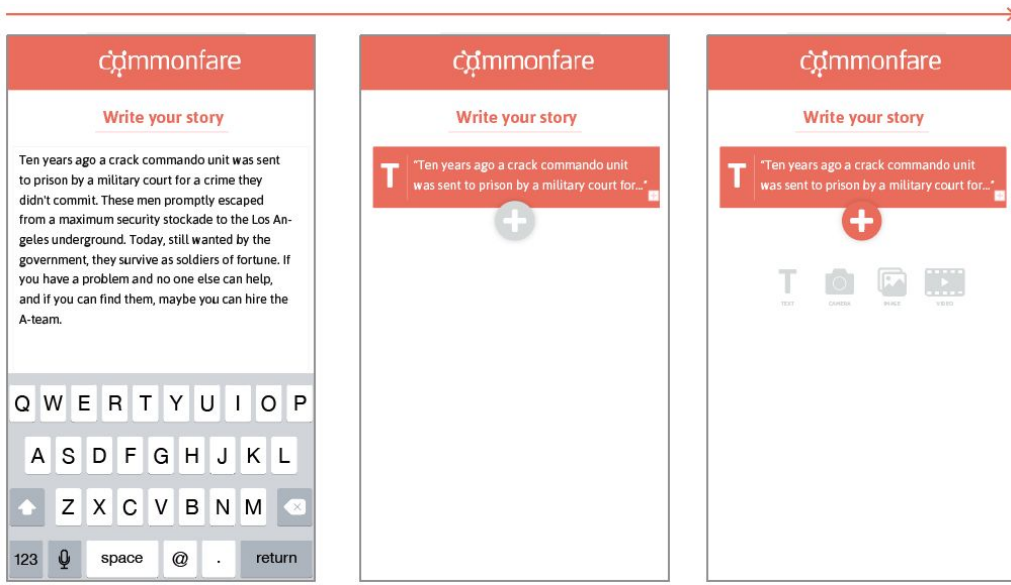


Figure 24. R3 story pages.

From a narrative perspective, storytelling was supported by the provision of templates. They aim to facilitate Commoners in writing more effective and compelling stories. The template design process

- which is still ongoing although near completion at the time of writing - was informed by a systematic benchmarking³⁴, incremental prototyping, results from design workshops and the analysis of good practices collected in D2.1, which represent successful cases that could be translated into a beautiful story format and prompted stories.



Figure 25. R3 low-fidelity prototypes for creating stories.

The analysis revealed that Commoners would benefit from several kinds of story type:

- **Political issues / injustices**
 - What need to be changed?
 - Surpass political barrier
 - I really wish politicians knew that...
- **Celebration / event**
 - I/We reached the goal/Succeeded in...
 - Thank you to...
 - Save the date
- **How to**
 - How I changed/turned/transformed ... into ...
 - This is how I figured it out!

In addition to these, templates for internal use were developed, in order to support the writing of welfare provisions and best practices.

³⁴ The following web-sites were analysed: ihollaback, Virgin Money London Marathon Story Hub, Women on Web, Rare Lives, Illinois Poison Center,

5.4 DESIGN WORKSHOP SERIES 4 (DWS4)

Date: 28-29 March, 2018

Location: Milano, Italy

The goal of DWS4 was to finalise requirements for R3 and the public engagement plan, and to discuss the role of group and currency functionality with good practices in anticipation of R4.

| Activity | Outcome |
|---|---|
| <i>Design with consortium</i> <ul style="list-style-type: none">• Presenting R3 mockups for feedback and discussion.• Discussion about R4 and sustainability beyond the project (including the public engagement for the final year of the project). | <ul style="list-style-type: none">• Final feedback and validation for the R3 functionality.• Direction for ongoing discussions and future plans for the project. |
| <i>Presentation and Discussion with Good Practices</i> <ul style="list-style-type: none">• Ri-Maflow• Macao | <ul style="list-style-type: none">• Direct feedback from good practices on practical applicability of new features (in particular, the Common Coin). |

Table 4. Summary of the DWS4.

5.4.1 Design and Planning with Consortium

5.4.1.1 Method

On the first day of DWS4, the latest mockups for R3 were shown, focusing on the new functionality (as described in Section 5.2). This was followed by a discussion for functionality of the platform, to introduce or expand towards R4, and more generally about the sustainability of Commonfare beyond the project. This included a presentation of a number of examples of other platforms that make use of a digital currency, to promote discussion about how the implementation and basic income could work. This finished with a brief discussion to plan questions to pose to the good practices that were visited by the entire consortium over the two days. These were informed by the consortium's understanding of R3 capabilities, and considerations towards R4.

5.4.1.2 Results

The discussion of Mockup 3 was positive, and the discussion largely served to clarify some aspects of the interaction for consortium members. In particular the following was discussed:

- The different 'activities' that will be listed for groups, Commoners and Wallet transactions.

- The public/private nature of different activities and aspects such as a Wallet balance and a Commoner's Commonshare.
- Comments on the utility of the 'interests' on a Commoner profile as 'matters of concern' (rather than explicitly offers or needs).
- Reducing the amount of space on a Commoner profile page dedicated to the Social Wallet.
- A more advanced system for in-platform notifications, which would be considered as an update to R3 or in R4.
- Connecting content to other parts of commonfare.net, such as including a reference to another Commoner as part of a story, comment, discussion or listing (similar to connecting content with tags). This would be considered as part of an update to R3 or in R4.

The discussion about sustainability allowed the consortium to reflect on the following issues:

- The **server** where the platform will be after the end of the project: who will own it, maintain it, pay for it, and how? The best-case scenario is the following: Commoners, through collective contribution in Common Coin, organise this directly through commonfare.net – i.e. crowdfunding by Commoners in Common Coin. However, as a backup plan, we need to start engaging stakeholders.
- **Who will be “us” after end of project?** We are not going to be a consortium anymore. Options: a foundation, an association, a cooperative.
- The **sustainability notebook, which** is a separate tool developed as part of 'T5.4 Promoting Sustainability', which partners are encouraged to engage with.

The collective discussion that followed elaborated questions to be posed to good practices, starting from Ri-MAFLOW and Macao:

- How do you think that the platform could be useful for your activities?
- How would you use the platform to organise events and more generally your activities?
- Would a group wallet be beneficial to you? For what?
- What other functionalities would you need?
- What about the management of issues within the group? Which editorial, admin or moderation functionalities would you need?
- Do you think the anonymity and protection allowed by commonfare.net would help you with your current situation?

5.4.2 Presentation and Discussion with Good Practices

5.4.2.1 Method

Over the course of both days of DWS4, the consortium visited two good practices in Milan: Ri-Maflow and Macao. This involved a presentation of commonfare.net, demonstrating the functionality of R2, and the planned functionality of R3 (based on the mockups presented to the

consortium earlier on the first day), followed by a discussion between consortium members and the good practice, in order to better understand how commonfare.net could be made to better suit their context. The discussion sought to respond to the questions that were developed as part of the Design with consortium activities above.

5.4.2.2 Results: Ri-Maflow

Ri-Maflow³⁵ is a recovered factory located in Trezzano sul Naviglio, in the southern outskirts of Milan. The factory was shut down in 2009 after a long dispute that ended with a process of delocalisation of production in Poland. In 2013, it was then occupied by the dismissed workers, as well as precarious workers, and craftsmen living in the area. The factory has been completely restored, secured (before it had some safety problems), and reconverted according to the inspirations deriving from workers' skills and desires

Ri-Maflow showed interest in the possible use of the platform as an internal and external communication tool. More specifically:

- The use of the public benefits information (formally 'welfare cards') as they can support and facilitate the tax help desk that is already operational and available to workers, pensioners and citizens at Ri-Maflow. The workers providing this service could interact with this section of the platform and even update it with municipal welfare measures (when available), including a public benefit counselling service run by Ri-Maflow. The information section represents an element of interest and potential sustainability, for it is capable of simplifying and maximising this ongoing activity.
- The use of the storytelling section (Commoners' voices) as it can support, network and let people know about the many stories related to the activities carried out in Ri-Maflow
- The use of the networking features of R3, as they can provide support to build a transparent channel of internal communication and to feed a circular and collaborative economy (food, workshops, services). This could also be used to manage payment of meals in their cafeteria.

An exchange between the Commonfare project and Ri-Maflow could acquire political value because, as underlined during the meeting, they both have in common the search for new democratic self-management practices. For this reason we all agreed to meet again after R3 is live to present it to the Ri-Maflow workers' assembly, as part of the public engagement activities conducted by pilot partners, which will contribute to R4.

³⁵ <https://commonfare.net/en/stories/ri-maflow-recovered-factory>

5.4.2.3 Results: Macao

Macao³⁶ is an independent centre for art, culture and research, which played a significant role in independent arts and cultural production in Milan since 2012, when they occupied a former slaughterhouse in the middle of a huge abandoned area not so far from the centre of the city. Today, the cultural and political events, performances, concerts organised by Macao as well as the projects carried out represent added value for the city of Milan.

The possibility of the potential management of a social wallet in Common Coin was discussed. It was agreed to call another meeting in Macao for a more detailed discussion in order to promote participation in the Commonfare platform as soon as the new version is online. Commonfare's participation in the Santarcangelo Festival is the first result of the collaboration started with Macao.

A representative at Macao also suggested that the platform could include a section providing information about those elements that oppose the implementation of Good Practices as well as their replicability, particularly referring to a series of bureaucratic rules and constraints impeding the creation or development of self-managed experiences. They also suggested it could be useful to facilitate a comparison among various rules and regulations that apply for certain activities and topics across different European countries (eg. self-managed crèche).

5.5 RELEASE 3 (R3)

R3 (the Networking Hub in the language of Annex 1) continued to be implemented using Ruby on Rails, functionally expanded commonfare.net on R2, and was deployed into production in April 2018 (M22). Below we summarise the functional improvements based on the entirety of the Towards Release 3 section, and provide screenshots.

The new *login* and *sign-up* screens. The sign-up now allows for the immediate creation of a group as part of the process, for good practices to engage immediately and create their presence.

³⁶ <https://commonfare.net/en/stories/macao-center-for-the-arts-culture-and-research>

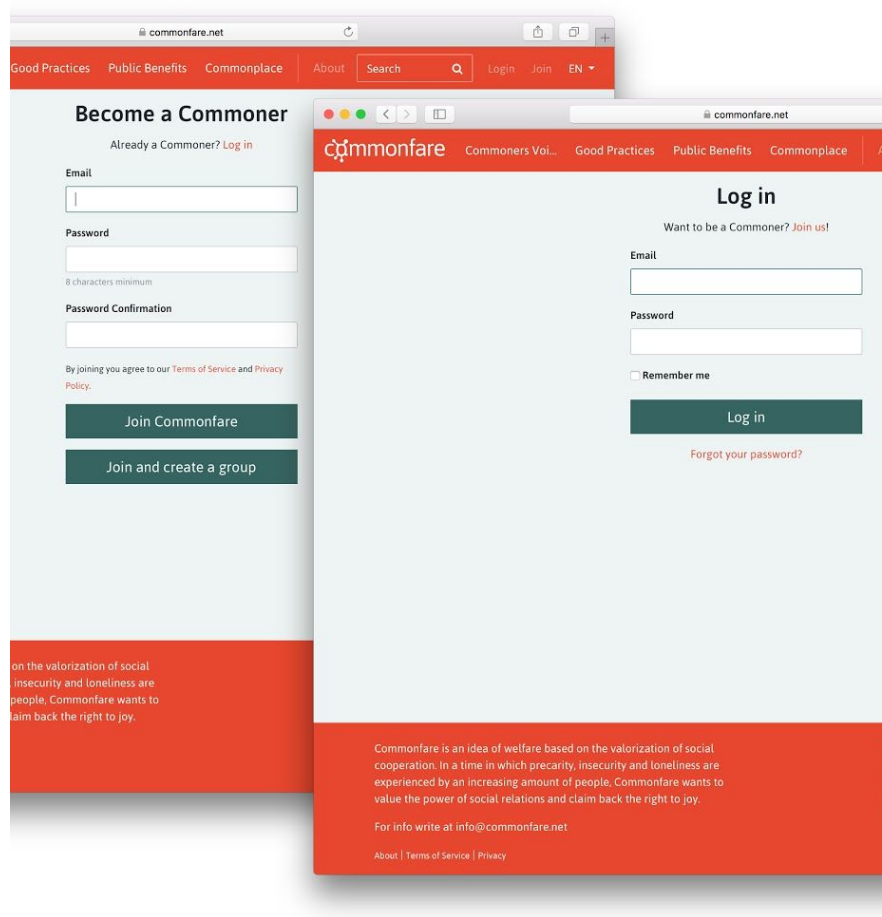


Figure 26. R3 authentication screens.

Groups. In terms of the functionality, following the tabs across a group page, groups can have their own private discussions (visible to members only - presented as discussion threads), stories can be authored *by* the group, the list of members, invitations and membership requests are available, and activities serve as a list of notifications of different types of interactions members have with the group, and the group with commonfare.net at large.

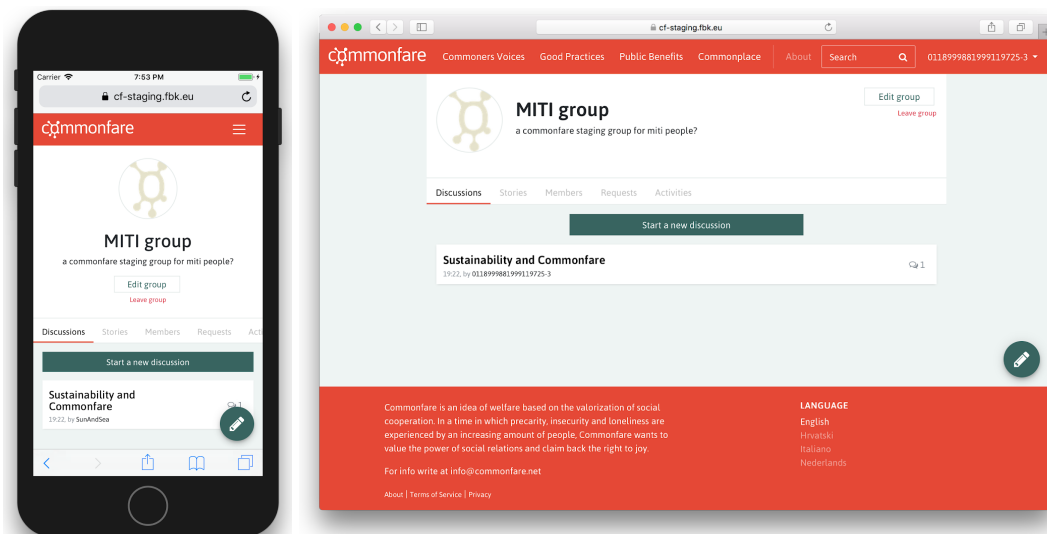


Figure 27. R3 Groups screens.

Social wallet. This focuses on the current balance and transaction list of the social wallet, with support to initiate transactions of Common Coin to other Commoners.

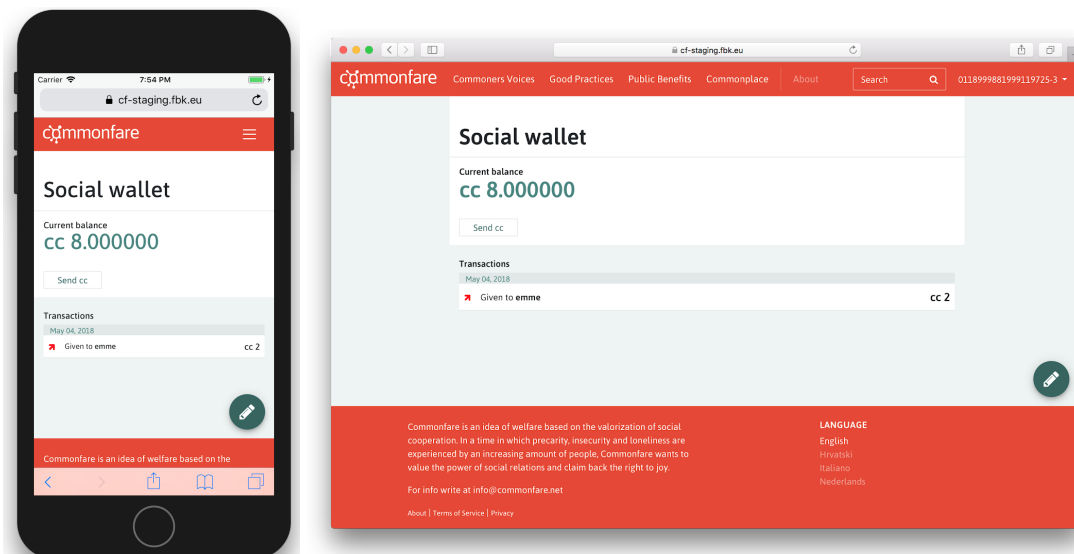


Figure 28. R3 Wallet screens.

Commonplace. The Commonplace serves as a means to present and create a *listing*, including a description of the type of transaction or service that a Commoner wishes to engage in, along with a price in Common Coin. The transaction itself is negotiated through a conversation, which can be initiated from each individual listing.

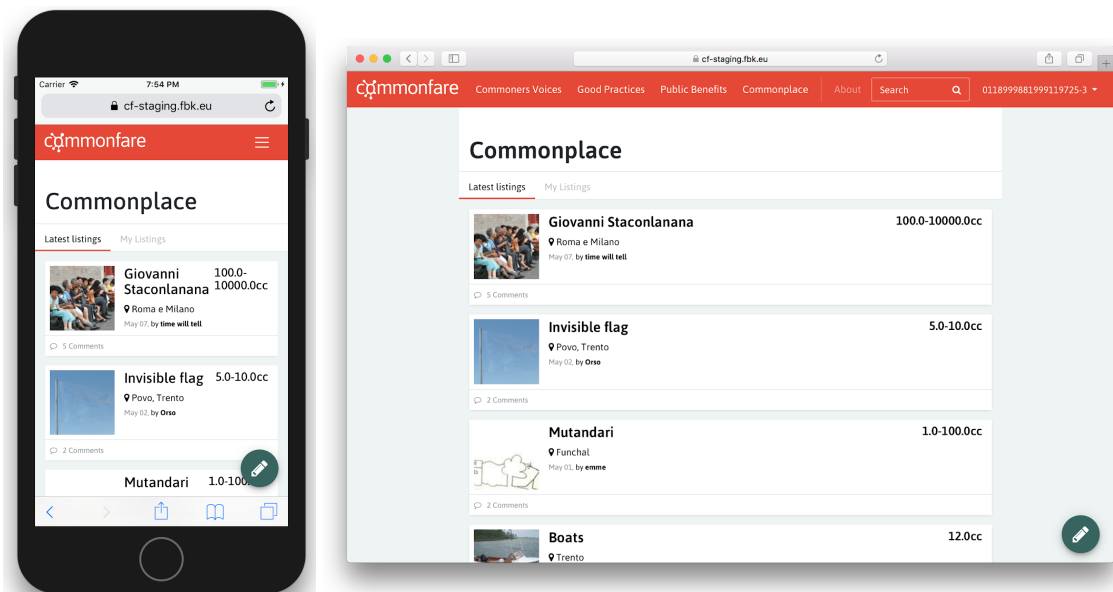


Figure 29. R3 Commonplace screens.

Conversations. Here is where conversations – such as those initiated by interactions with the Commonplace – can be found. For R3, the conversations were only between pairs of Commoners. For larger interactions with a group or with commonfare.net at large, discussion is initiated through group discussion and the comments on stories respectively.

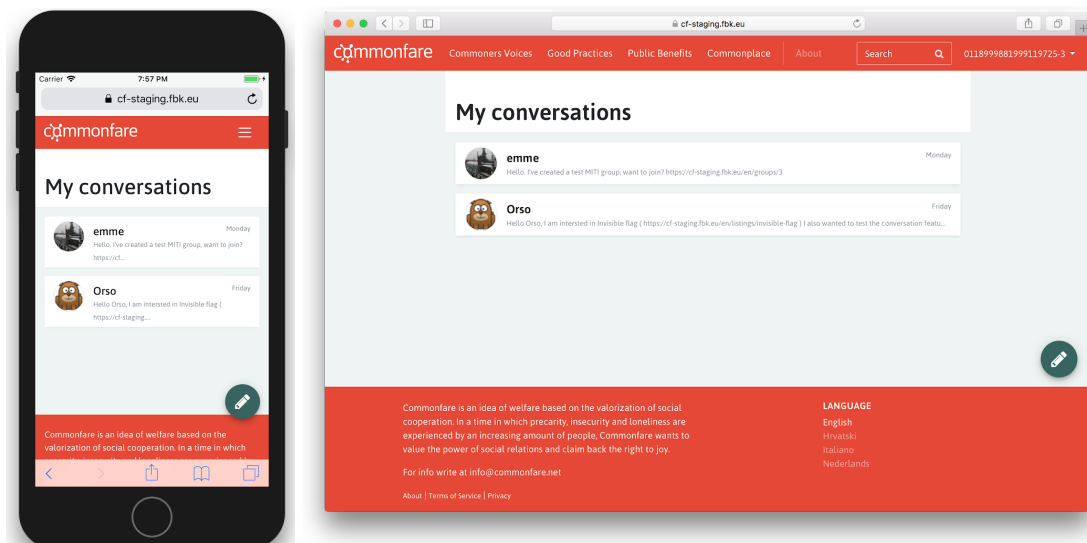


Figure 30. R3 Conversation screens.

6. TOWARDS RELEASE 4 (R4)

The design and implementation of R4, in addition to bug fixing, will address and respond to the following three points: 1) support the creation of group-based digital currencies, in particular in connection to the organisation of events, including improvements and additional functionality as a result of the public engagement plan and of the analysis of actual use of commonfare.net, first piloted at the Santarcangelo festival; 2) implement visual representations of the Commonshare, which will contribute to Commoner profiles, 3) implement a metrics dashboard, able to make publicly visible aggregate data on platform use (T5.3); and 4) ensure compliance with the General Data Protection Regulation. As these activities are ongoing towards Release 4 at the end of 2018, the content of this section is subject to change based on input and feedback from partners and research participants.

6.1 FIELD RESEARCH: PARTICIPANT EVALUATION

The design process, following R3, continued in two specific ways:

1. An evaluation focusing on the new functionality.
2. Further evaluation, focusing on the storybuilder.

6.1.1 Evaluation of R3

The evaluation was conducted through interviews using think-aloud protocol while doing the set of tasks for the features. The platform was evaluated using different devices and browsers. As the Commonfare project uses novel concepts and terminology, it was important to investigate how successfully these elements transform into specific designs. In particular, how these concepts and terminology can be understood and engaged with by prospective Commoners with the Commonfare technology. The evaluation identifies critical issues and proposes points for improvements.

What emerged from our study is that certain elements require better clarification or explanations. The elements include 'good practice', 'public benefit' and 'Commonplace'. Some of these elements (e.g. Good Practices and Public Benefits) were perceived as lacking in underlying functionality. The functions already familiar to the participants (such as groups and messaging) need further improvement. Finally, the findings regarding stories (in particular the contrast between the old and new methods of creating stories) highlighted issues related to the complexity and need for refinement of present design alternatives, and the selection of the most appropriate one.

Despite some conceptual issues emerging, on average participants were positive with respect to commonfare.net. On a 1-5 scale, the evaluation of ease-of-use was on the positive half of the scale (>3), with some features scoring 4 or above (for example, the wallet scored 4.5). The overall satisfaction was generally good with only Public Benefits and Good Practices scoring slightly less

than 3. Overall, the aesthetic of the artefact was evaluated as excellent and the main problem was related to the content of the system, which was considered unclear. It is therefore recommended to revise the explanations of the platform, as this lack of clarity has strong effect on the system usability.

The main objective of the study was usability evaluation of the staging website in terms of learnability (initial ease-of-use), errors, and subjective satisfaction. In addition to this, the interviewer constantly probed participants to comment on the expected utility of each function and contained information. The issue of aesthetics (overall look and feel of the website elements) spontaneously emerged in the participants' comments.

We conducted formative usability evaluation consisting of a set of task-based scenarios using the think-aloud protocol to understand participants' thoughts as they interact with the interface. The procedure was pilot-tested with 2 participants (one on smartphone/one on laptop) to ensure its feasibility. The results of the test led to establishing the study script reported in the [Appendix A4, Subsection 1.1](#).

6.1.1.1 Method

The sample consisted of 10 participants (5 females and 5 males; age range 21-40; mean age 27). The participants were students from the University of Trento with different backgrounds including computer science (5), sociology (2), economy (2) and literature (1). They were recruited by formal contact (email). The participants were fluent in English and declared their nationality as Italian (7), Spanish (1), Brazilian (1) and Ecuadorian (1). They had previous experience with touchscreen devices (10), social networking applications (10) and online systems for organising events such as EventBrite (9). The tasks involving Italian native speakers were also probed in the respondents' language. More detail about participants can be found in [Appendix A4, Subsection 1.2](#).

The evaluation metrics included:

1. Performance measures (such as errors and task completion), reported in tables along with each feature.
2. Subjective measures (self-reported ratings for ease of use and satisfaction for each task and the website overall, what participants liked most about the website, and what they liked least about the website), reported in Table 5.
3. Recommendations for improving the website, aggregated in Table 6.

The evaluation took place in a room with a laptop/tablet/smartphone displaying the website, with screen recording software to capture sessions (video and audio).

At the beginning of each interview, participants were introduced to the project, the purpose of the study and invited to sign a consent form. The session continued with questions related to the

participants' demographic information and experience with touchscreens and social networking applications. The participants were then asked to freely interact with the staging platform for 5-10 minutes to get a sense of its content in terms of information and services. Following this introduction, participants were asked to complete a set of tasks (8) on the website based on the different aspects of the platform. During the task completion, the facilitator noted the comments made by each participant as they were encouraged to "think aloud", and asked participants about the ease-of-use and satisfaction of the task. Finally, the participants completed the questionnaire indicating overall ease-of-use and satisfaction with the website, what they liked most/least, and notes for improvement of the website. The details of the procedure, including the tasks, can be found in [Appendix A4, Subsection 1.1](#).

Commonfare.net was tested using different devices and browsers with different participants, and each session lasted, on average, 70 minutes. The session involved the researcher as a facilitator and the participant. The facilitator was the observer and note-taker at the same time. The recordings were used to update notes and for later analysis.

6.1.1.2 Results

Here we summarise the main issues that arose from the evaluation, along with suggestions for improvement. The full detail of results per feature can be found in [Appendix A4, Subsection 1.3](#).

- **Groups:** the membership mechanism needs improvements that, according to the participants, should include clear group ownership and functionality to invite other users to join through the user search (function issue).
- **Storybuilder:** the participants liked the old editor because it was clear and simple. They disliked the template for being too complicated to use and biased by the blocks' questions (felt they were complaining). Therefore, this implies both function and content issues. They suggested using the old editor. Alternatives would be to either redesign the template or explain it.
- **Good practices:** It was not clear to participants what these represent (content issue). When participants tried to create a good practice it created a story (function issue).
- **Public benefits:** Again, it was not clear what these represent (content issue). Participants found that public benefits could not be created (function issue).
- **Commonplace:** It is not clear to participants what it is and needs to be explained, together with terminology (e.g. listing) and information (e.g. why are there min and max price and what do they mean). These count as content-related issues.
- **Wallet:** Common Coin needs to be explained as a virtual currency (content issue).

- **Conversation:** It was difficult to find a user to send a message to (function issue). This can be fixed by including users in the search box (suggested by the majority of participants), or having a dedicated user search from a messaging tab (instead of activities tab) of the profile (suggested by some participants).
- **Search and navigation:** Participants suggested including user search and group search. The content issue (relating to the lack of the user and group as search categories) caused the issue of function.
- **General:** Participants encountered content issues with the following suggestions. The 'About' section should be used to explain the terms that are not clear from above (instead of describing the project). There should be no more than 2-3 sentences so that it can be read with minimal scrolling on the smartphone, making key terms bold. All the terms should be translated in the selected language, including text labels, button labels, entry field explanations and messages. The participants favoured language selection for the entire website instead of specific tasks (e.g., creating a story). The icon symbols should be used consistently on the website (pen for edit and plus for creation). The icon functionality should be verified on different browsers (e.g., Safari, Internet Explorer). The consistent colour scheme should be used for the buttons (green for background and white for text) with stronger contrast for the labels to make them more apparent.

Table 5 gives mean values of self-reported ease-of-use and satisfaction per feature. The profile feature received the highest ratings from the participants. The groups were less appreciated (although with above the average scale mainly due to the immature functionality) regarding the membership mechanism (e.g., the absence of the steps including ownership roles and user search). Regarding the stories, the ratings were above average. However, it is important to mention that the more positive individual ratings mainly reflect the use of the old editor to create a story. The subjective ratings concerning public benefits and good practices are little above the average value. Although the features were not understood by the participants, they continued creating the stories which they tried to related to the features by tagging them (as "public benefit" and "good practice"). The Commonplace received ratings higher than average. The feature as such was not intuitive at the beginning for the participants, but once using it, they associated the feature with the wallet metaphor from everyday life. Search and navigation received high ratings with suggestions for improvements (addition of user and group search). The communication feature received ratings little above average due to the missing function of the member search. The overall scores of the website were above average: 3.3 out of 5 for ease-of-use and 3.6 out of 5 for satisfaction.

| Feature | Mean rating of ease-of-use | Mean rating of satisfaction |
|--------------------------|----------------------------|-----------------------------|
| Profile | 4.6 | 4.3 |
| Groups | 3.5 | 3 |
| Stories | 3.7 | 3.5 |
| Good practices | 3.1 | 2.7 |
| Public benefits | 3.1 | 2.7 |
| Commonplace | 3.9 | 3.8 |
| Wallet | 4.5 | 3.9 |
| Search and navigation | 4 | 4.1 |
| Communication | 3.1 | 3.5 |
| Website (overall) | 3.3 | 3.6 |

Table 5. Mean ratings of subjective ease-of-use and satisfactions for features (the scale range is 1-5).

We summarise our findings and formulate the design guidelines to improve the usability of the commonfare website as reported in Table 6 below. The suggestions are enumerated in order of their relevance that corresponds to the severity.

| Feature | Suggestion |
|------------------------|--|
| <i>Profile</i> | <ol style="list-style-type: none"> 1. Remove "Join and create a group" button. 2. Pen icon should be removed because there is "Edit profile" button. 3. Activities tab is a placeholder and should be removed. 4. Remove paragraphs describing stories from the Welcome page (after the Join page). |
| <i>Groups</i> | <ol style="list-style-type: none"> 1. Define the group ownership and member invitation as that include user search function. 2. Pen icon should be removed because there is "Create group" button. 3. Activities tab is a placeholder and should be removed. 4. Include search by groups in the main search box. 5. Make the entire group widget (rectangle) an active link. |
| <i>Stories</i> | <ol style="list-style-type: none"> 1. Explain the concept of Commoners Voices 2. Redesign the chain-based storybuilder in the following way: <ol style="list-style-type: none"> a. use meaningful labels for title and location fields. b. increase contrast of the tag entry field. c. make the plus icon white foreground and red background, and visible at the storybuilder page opening. d. for each story block provide meaningful label. e. for each story block, use stronger colours for "remove" and "done" button to ensure good contrast. f. differentiate visually inactive elements (labels) from active elements (buttons and text entries). 3. When deleting a story, the confirmation message should be "Story was successfully deleted". 4. Layout of the created story - make the description field accommodates its size (height) to the amount of text. 5. Delete button is too close to publish button and too small, would make it same size and more distant. 6. The pen icon to create a story does not work on Safari and Internet Explorer browsers. It displays an empty page. Correct and verify cross-platform issue with the icon. |
| <i>Good practices</i> | <ol style="list-style-type: none"> 1. The concept is not clear and needs description on the website. The majority of the participants perceived good practice as a special type of story and proposed a dedicated tag "good practice". Alternatively, the content can be created in advance without the option to create for end users, but only browsing. |
| <i>Public benefits</i> | <ol style="list-style-type: none"> 1. The concept is not clear and needs description on the website. The majority of the participants perceived public benefit as a special type of story and proposed a dedicated tag "public benefit". Alternatively, the content can be created in advance without the option to create for end users, but only browsing. |

| | |
|------------------------------|---|
| <i>Commonplace</i> | <ol style="list-style-type: none"> 1. The concepts of commoncoin and commonplace are not clear and need explanation on the website. 2. Make the icon (pen) creates a listing, not a story. 3. "My Listings" label should use stronger colour to for better visibility. 4. The reference value for commoncoin needs to be provided. 5. The purpose of fields for min and max values for a listing needs explanation. 6. Two identical icons with different functions (pen for creating new and pen for edit listing). Use plus symbol for new and pen symbol for edit (see General). |
| <i>Wallet</i> | <ol style="list-style-type: none"> 1. When transferring commoncoins, mandatory fields should be denoted. |
| <i>Conversation</i> | <ol style="list-style-type: none"> 1. When transferring commoncoins, mandatory fields should be denoted. 2. Implement user search (see General). 3. Make the entire message widget (rectangle) active link. |
| <i>Search and navigation</i> | <ol style="list-style-type: none"> 1. Implement user search. 2. Concerning smartphones, when typing in search box, move the contextual menu or search box up to decrease the overlap with the keyboard. |
| <i>General</i> | <ol style="list-style-type: none"> 1. Describe the features and their elements that were not clear to the participants in the About section. Use visual cues (e.g. bullets and bolding) to facilitate conciseness and clarity. 2. Localisation should include all menus, labels and buttons. 3. Use non-transparent background colour for feedback messages. 4. Use consistent colour scheme for buttons - green background and white text for better contrast against page colour. 5. Include user search in the main search to improve communication and sharing. 6. Use plus symbol for creation and pen symbol for edit operations across the features. |

Table 6. List of suggested changes for commonfare.net.

Based on the list of changes we created an immediate action plan which aligned with the general preparation for the use of commonfare.net as part of the Santarcangelo event ([Appendix A4, Section 2](#)).

6.1.2 Update and Evaluation of Storybuilder

Following the negative results of the user evaluation of the initial template-based storybuilder ([Appendix A4, Subsection 1.3](#)) we refined this element based on the suggestions from Table 6. Upon the refinements we conducted another round of testing targeting this feature.

6.1.2.1 Method

The main objective of the study was the usability evaluation of the Storybuilder tool in terms of learnability (initial ease of use), errors, and subjective satisfaction. In addition to this, the interviewer constantly probed participants to comment on the expected utility of each function and contained information. The issue of aesthetics (overall look and feel of the website elements) spontaneously emerged in the participants' comments. We conducted formative usability evaluation consisting of a template-based Storybuilder using the think-aloud protocol to understand participants' thoughts as they interact with the interface. The study script, including the briefing of participants, the further detail about participant demographics, and the procedure, is reported in [Appendix A4, Section 3](#).

The sample of students consisted of 6 participants (3 females and 3 males; age range 25-46; mean age 32). The participants were from different backgrounds including computer science (3), sociology (2), and arts (1). They were recruited by formal contact (email), based on convenience sampling. The participants were fluent in English and declared their nationality as Italian (3), Indian (1), Bengali (1) and Ukranian (1). One participant had previous experience with the story-building applications. The tasks involving Italian native speakers were also probed in the respondents' language.

The metrics included performance measures (such as errors and task completion) and subjective measures (self-reported ratings for ease of use and satisfaction of the storybuilder, what participants liked most about the storybuilder, and what they liked least about the storybuilder).

The evaluation took place in a room with the smartphone accessing the website, and audio recording software was used to capture sessions.

At the beginning of each interview, participants were introduced to the concept of Commoners' Voices, the purpose of the study and invited to sign a consent form. The session continued with questions related to the participant's demographic information and experience with touchscreens and social networking applications. The participants were then asked to freely interact with commonfare.net for 5-10 minutes to get a sense of its content in terms of information and services. Following the introductory part, the participant was asked to complete the task of creating a story on the website. During the task completion, the facilitator noted the comments made by the participant as they were encouraged to "think aloud". Upon completion of the respective task, the participant was asked about the ease-of-use and satisfaction of the task. Finally, the participants completed the questionnaire including overall ease-of-use and satisfaction with the storybuilder and things they liked most/least.

Each session consisted of one task and took 30 minutes per participant. In case of successive sessions, 30 minutes were allocated between sessions to reset the environment, briefly review the session, and accommodate for a potential delay in participant arrival. The website was tested using different browsers for different participants (Chrome, Safari). The session involved the researcher as a facilitator, and the participant. The facilitator acted as the observer and note-taker at the same time. The recordings were used to update notes and for later analysis.

6.1.2.2 Results

The storybuilder functions (e.g. creating, publishing, sharing, changing information and deleting) worked successfully, including textual and visual data (images). Overall, the feature, its functions and contained information were assessed as clear and easy to use by the participants (Table 7).

| Feature | Ease of use | Satisfaction | Clarity of instructions |
|--------------|-------------|--------------|-------------------------|
| Storybuilder | 4 | 4.3 | 4.5 |

Table 7. Mean ratings for subjective ease of use, satisfaction and clarity of instructions (the scale range is 1-5).

Compared to the previous results, we notice the improvement of the template-based storybuilder in terms of UI quality dimensions.

6.2 PROTOTYPING: COMMUNICATION AND COMPLIANCE

This section describes three aspects of prototyping that has taken place. The first two – a public dashboard and improvements to the ‘About’ section – relate to how the project is communicated, and in the case of the public dashboard and the third aspect – the General Data Protection Guidelines – relate to compliance both with the Grant Agreement, as well as new legal requirements.

6.2.1 Commonsense

The algorithm for calculating Commonsense values for each Commoner, as described in Section 5.1.2 of this Deliverable and in D3.2, was implemented using the NetworkX Python library. Prior to acquiring platform data in the correct format, this implementation was validated with simulated data. A separate script was written to generate Commoner, Story and Commonplace Listing ‘nodes’, and randomly generate interaction ‘links’ between them every day over the course of a simulated calendar year. The output of this script consists of JSON files containing node and link data for each month of the simulated year.

Following feedback from the General Assembly in May 2018, visualisations were implemented to represent this data as a social network graph, using the D3 Javascript library. Elements of this graph visualisation are shown in the example screenshots in Figure 31, with descriptions as follows:

- Commoners, stories, listings and tags are represented as coloured circle nodes
- The size of each node is proportional to its calculated Commonsense
- Coloured arrows represent interaction between two nodes, including its type and direction
- Arrow thickness is proportional to the summed weight of interactions between two nodes

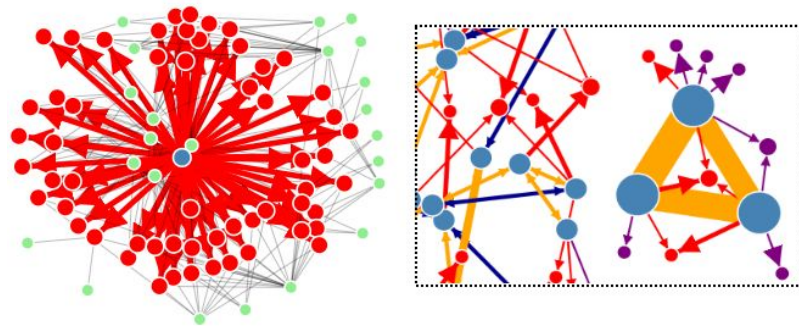


Figure 31. Screenshots from visualisation showing suspicious behaviour.

The screenshots in Figure 31 also serve to illustrate sensible results from the Commonshare algorithm, and to show how suspicious behaviour can be detected. The left part shows a Commoner who has created a large number of stories that have not been interacted with. Hence, their Commonshare is still low (indicated by the small node size) despite the number of interactions. The right part indicates collusive behaviour, where three Commoner nodes are isolated from the rest of the graph, but have very thick arrows between them, indicating multiple strong interactions.

Following the Santarcangelo festival, real data was obtained from the platform database, which required an additional parsing phase before visualisation. Figure 32 shows platform activity during the two weeks in which the Santarcangelo festival took place. The large cluster of Commoners connected with blue arrows visualises the multiple Common Coin transactions during its course.

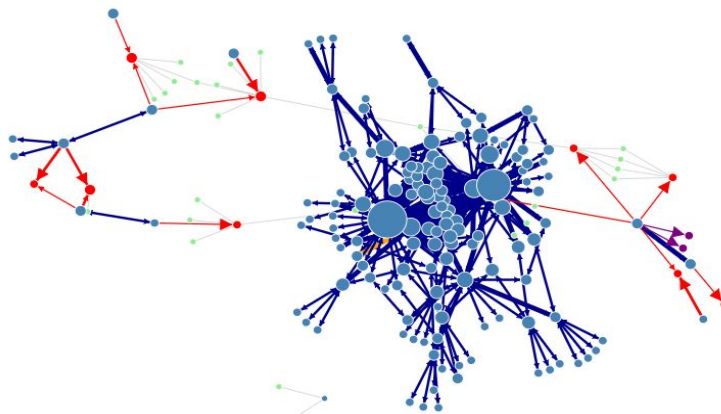


Figure 32. Platform interactions during the Santarcangelo festival.

Feedback from WP4 members prompted visualisations for three different areas to be considered:

- The public dashboard - this consists of the graph as above, showing data for the last two weeks, anonymised to protect Commoner's privacy
- The management dashboard -this contains the same graph but with options to filter by tags or interaction types, as well as view historical data prior to the previous two weeks.

- Commoner profiles - these will require different representations of a particular Commoner's platform activity and Commonshare. Prototype examples have been generated, shown in Figure 33.

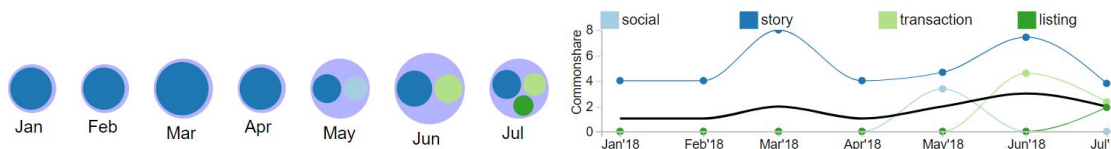


Figure 33. Potential visualisations for Commoners' profiles.

Feedback obtained from users of commonfare.net and WP4 members will guide the final version of this visualisation, to be integrated into Release 4.

6.2.2 Metrics Dashboard

The metrics dashboard was previously referenced in the Grant Agreement as: “An up-to-date public on-line evaluation dashboard with metrics for service improvement will be created during the 2nd year and then it will be implemented and improved until the end of the project.” (pg. 104). The first version of this was made available in time for the Santarcangelo Festival. It combines metrics coming from the Network Dynamics Analysis part of commonfare.net and from the open source analytics tool Matomo (formally Piwik), implemented to collect information on commonfare.net use. In particular, the version delivered by the end of June 2018 included:

1. A snapshot of the social graph of commonfare.net use (without referring to individual users profiles).
2. Data on Visits, Unique visitors, and Pageviews, both current visit overview and visits over time pattern.
3. Aggregated Pageview data for specific contents' topics/tags referring to the needs of people, and for internal site-search Keywords.

Data will initially have a refresh frequency of once every two weeks. A preliminary mock-up of the evaluation dashboard is shown below in Figure 34.

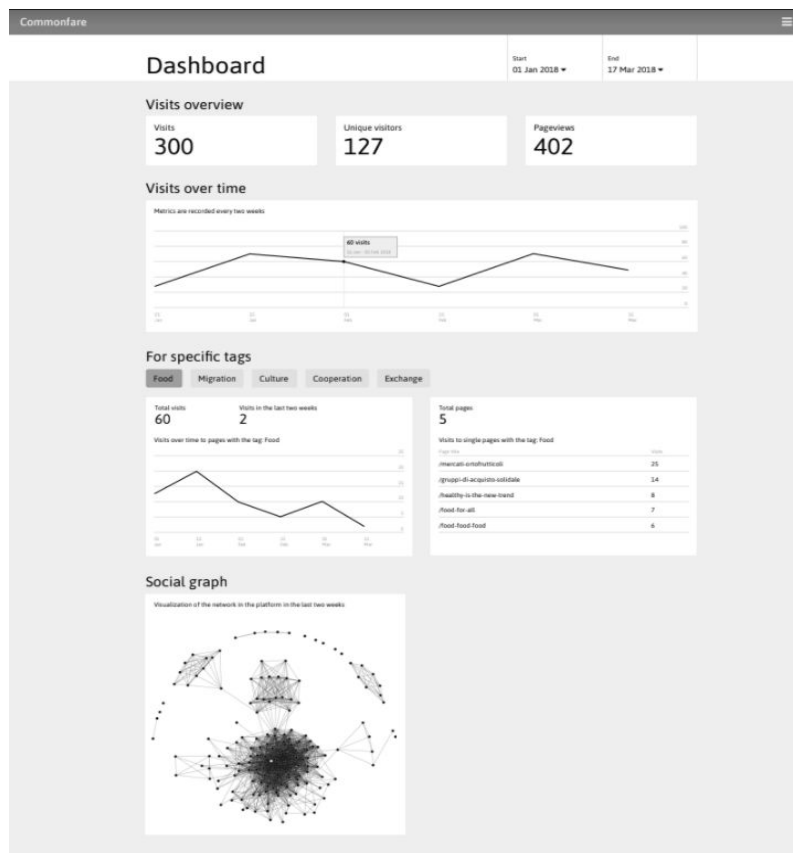


Figure 34. Metrics dashboard preliminary mockup.

From this initial mockup, feedback amongst WP4 members led to a number of adjustments to improve the utility and usability:

- Increase the complexity of the social graph (ensuring no compromise of privacy) through grouping by tags and allowing for interaction.
- At the point of implementation, ensure the visual styling is consistent with the platform.
- Visits overview: add the last 2 weeks metrics.
- Introduce “visits over time”.
- Add Site Search (keywords).

The adjusted mockup, considering this feedback, is shown below in Figure 35.

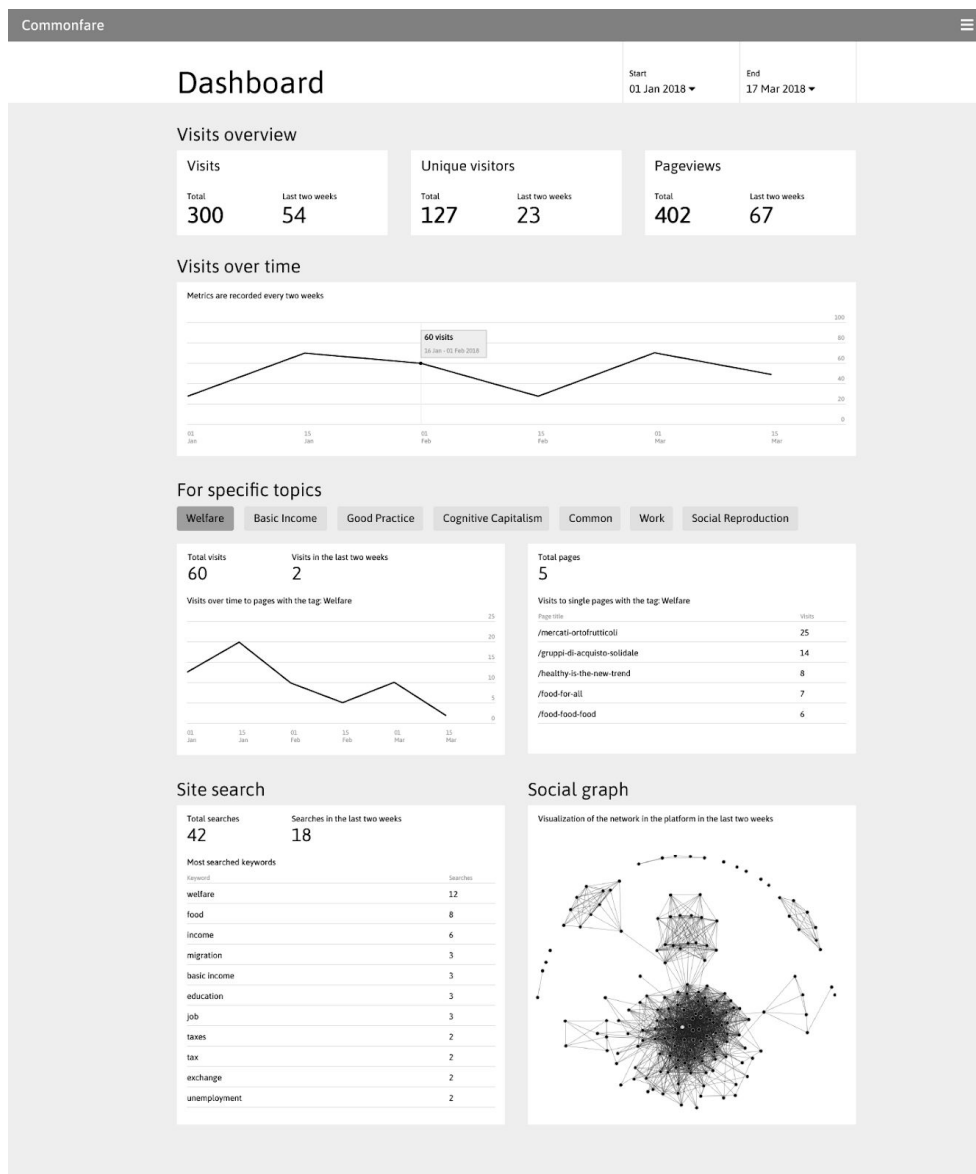


Figure 35. Updated Metrics Dashboard based on feedback within the consortium.

A final opportunity for feedback came at a General Assembly in Dundee in May 2018, which resulted in the following suggestions from a discussion amongst consortium members:

- Do not show numbers for “last two weeks” (only “Total”) for Visits, Unique visitors, and Pageviews.
- Add the number of registered users.
- Add views for platform sections.

Based on the iterations of feedback the mockups were updated (and increased in fidelity) as shown below in Figure 36.

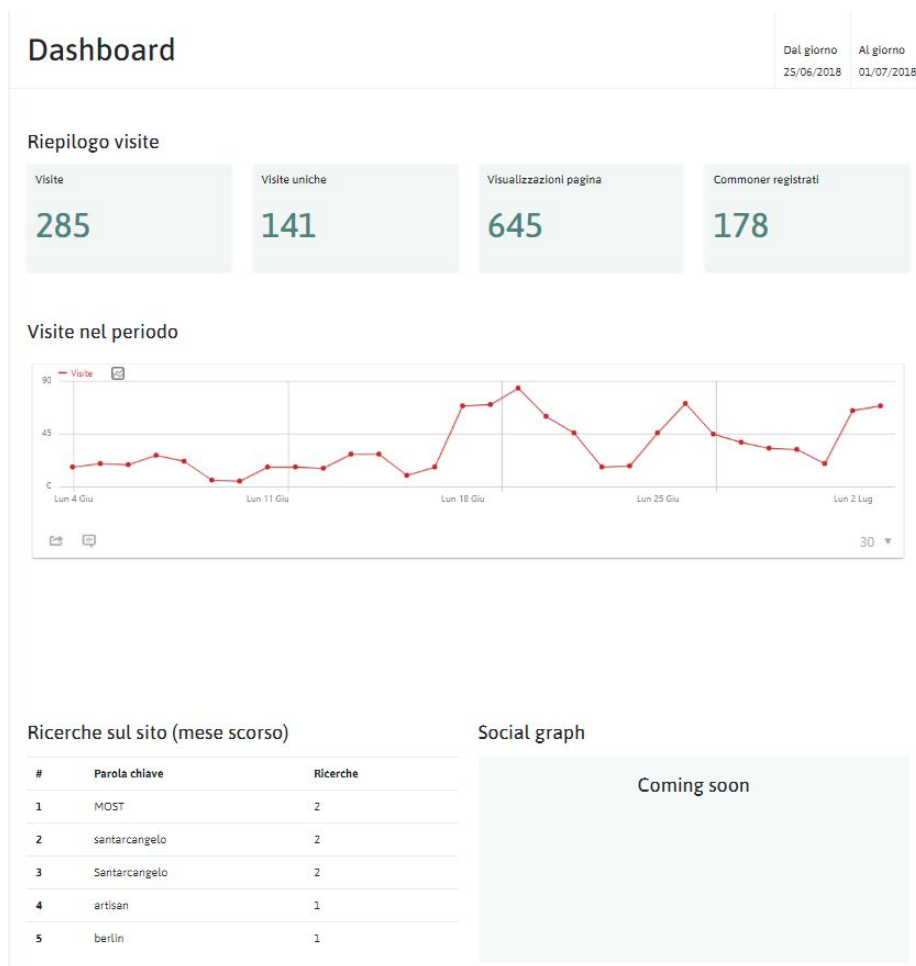


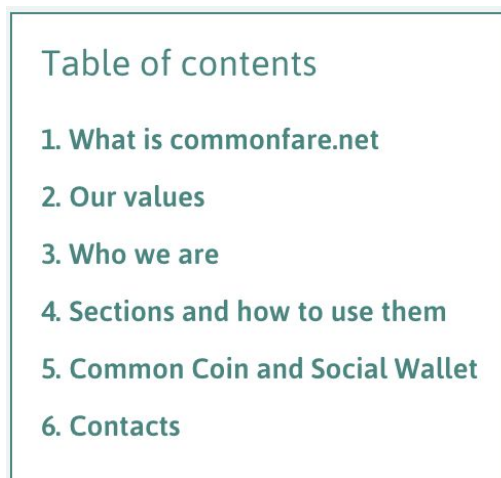
Figure 36. Higher fidelity mockups of Metrics Dashboard after consortium feedback.

A version of this has been implemented at the time of writing, and will be further refined as part of the R4.

6.2.3 Improved About section

The 'About' page was modified, both in terms of the descriptive text, and also its structure. Its text and sections were expanded to respond to calls for tutorials and greater transparency about how the platform is managed, updated, and its goals. This was the result of the field research outcomes in Section 6.1.1. The new text was the result of a collaborative effort within the consortium led by the communication team (as part of WP5).

In addition to clarifying the project and goals of commonfare.net, the new About page included subsections that addressed the purpose and use of the different parts of commonfare.net, such as the Commoners Voices, Good Practices, Public Benefits, Commonplace, as well as aspects such as the Common Coin and Social Wallet, as shown below in Figure 37.



| |
|----------------------------------|
| Table of contents |
| 1. What is commonfare.net |
| 2. Our values |
| 3. Who we are |
| 4. Sections and how to use them |
| 5. Common Coin and Social Wallet |
| 6. Contacts |

Figure 37. New *About* page list of subsections.

6.2.4 General Data Protection Regulation

With respect to the **General Data Protection Regulation**³⁷, commonfare.net had previously met most of the *Data Subject Rights*, and prior to the compliance deadline of *May 25th 2018* this process was completed. In particular, the only personal data that are stored in commonfare.net is the email address of the person who signs up. This email address could be a real one, a temporary one, or just a randomly generated one. For this reason, the identifiability of the person through the email address is not intrinsically given. A person who signs up is also assigned a random display name (which is visible when that person opts not to post Stories or Comments anonymously, and it can also be changed to anything – we do not prevent people from changing it to reflect their actual name). All the data and information created by the persons registered to commonfare.net are deleted once the person cancels the account, apart from Stories and Transactions, which are anonymised to protect the person’s right to be forgotten. This is clearly stated inside commonfare.net and shown to the Commoner in the process of account cancellation. Regarding the *Right to Access*, commonfare.net clearly states how the data and information provided by the people are managed and for which purposes, in easy-to-read language, translated in the four languages of the project. Regarding *Data Portability*, commonfare.net has put in place a way to make the persons registered be able to receive data concerning them in a commonly used and machine-readable format.

³⁷ <https://www.eugdpr.org/>

6.3 FIELD RESEARCH & PROTOTYPING: DIGITAL CURRENCY,

GROUPS AND EVENTS

This section groups together the prototyping and field research that is related to the use of commonfare.net to support the 2018 Santarcangelo Festival. In relation to the possibilities for groups to create and manage their own digital currency, the Commonfare consortium established a relationship with the Santarcangelo Festival³⁸, that took place in Santarcangelo di Romagna, Italy in July 2018, with an expected audience between 8000 and 10000 people. In this occasion, commonfare.net was piloted as the infrastructure allowing the Festival to rely on their own digital currency, *Santacoin*. Following conversations with festival organisers – Macao – a number of requirements were collected regarding: 1) the use of QR-codes to favour transactions in the digital currencies; 2) the connection of QR-codes with personal profiles on commonfare.net; 3) the distinction, among a group in commonfare.net, between the roles of the “buyer” of services and the “provider”; 4) the construction of a guide, to be visible on commonfare.net, on how to replicate the experience of Santacoin in other contexts. Some of these requirements, e.g. QR-code support in paper form, as well as group currencies, emerged before also in the Netherlands and in Croatia, and the collaboration with Santarcangelo Festival will be the occasion to implement and pilot them in a large-scale situation.

This opportunity presented allowed for a real-life case of how the digital currency could be used, and how functionality for its use could be expanded on commonfare.net beyond the Commonplace and other transactions already part of Release 3. Functionally, everyone who interacted with Santacoin at the festival were made members of a specific group on commonfare.net. This served as a way to enhance the functionality of a group, which can then be replicated for future events (or in different ways for local communities). It also served as an opportunity to create a group that had a temporary purpose and goal – that of an event.

In responding to the requirements of the organisers, work was done both on the backend infrastructure to increase supported functionality of the way digital currency transactions were supported (and to ensure adequate performance), while the general infrastructure of commonfare.net was reviewed to ensure stability of the platform as the usage load increased.

Santacoin, the name given to the digital currency (based on Common Coin infrastructure introduced towards the design of Release 3), was used as a voucher and ticket system serving organisational needs of organisers throughout the Festival, exposing its 8000+ participants to commonfare.net. In

³⁸ <https://www.facebook.com/SantArcangeloFESTIVAL>

addition, discussions were held with the municipality and Mayor, about further integration and use of Santacoin in the future.

Regarding the design for how the interactions with Santacoin would work on commonfare.net, we identified four types of user:

- **Seller:** using the above language, these are the 'providers' - people at the festival who offer services or goods in exchange for Santacoin.
- **Issuer:** the organisers of the festival, who distribute the QR codes, and allow for people to add or remove Santacoin from the account associated with each QR code.
- **Customer:** a visitor to the festival (not necessarily a member of commonfare.net) who has acquired a QR code (from an issuer), and is able to further interact with Sellers and Issuers. A customer is someone who has the option to become a Commoner.
- **Commoner:** drawing on similar nomenclature of the project, a Commoner is a member of commonfare.net who, in this context, has a QR code associated with their account with which they can interact with Sellers and Issuers.

The QR code itself (a 5x5cm grid, on recycled plastic, supplied for free, shown below in Figure 38) hereafter referred to a **Talisman**, would hold the data of a URL to an initially temporary commonfare.net account, that when visited in a browser would act differently depending on who visited the page.



Figure 38. An example Talisman, as used at the Santarcangelo Festival.

The design was such that when logged in as a *Seller* or *Issuer*, scanning the *Talisman* would allow for transactions with the associated account. A description of the workflow is in [Appendix A4, Section 4](#), and mockups of the different steps of the process are shown below in Figure 39.

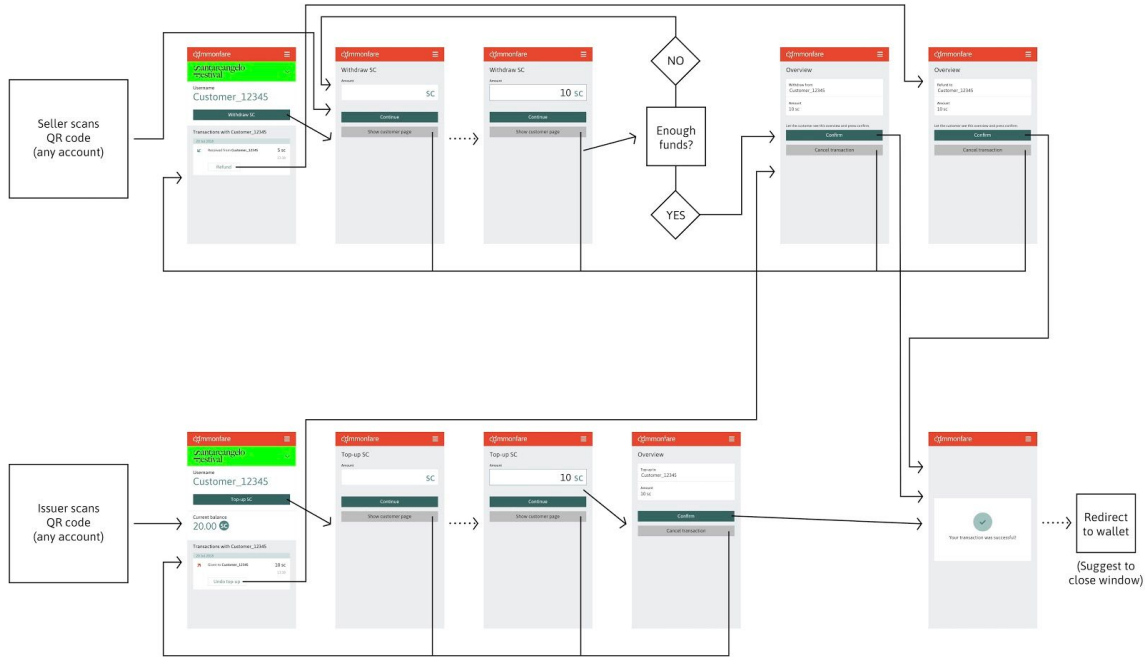


Figure 39. Mockups showing interaction of Sellers and Issuers with Customer/Commoner Talismans.

If a customer in attendance scanned their own Talisman, they would be presented with the opportunity to become a Commoner and take ownership of the temporary account (thereby making the account persist beyond the festival). Commoners with a Talisman would be able to make their QR code appear on their mobile device, which served as a small incentive for the creation of accounts. In addition, Commoners with an associated Talisman would be able to see all transactions easily within their existing social wallet. The process of scanning a Talisman and activating an account is shown below in Figure 40.

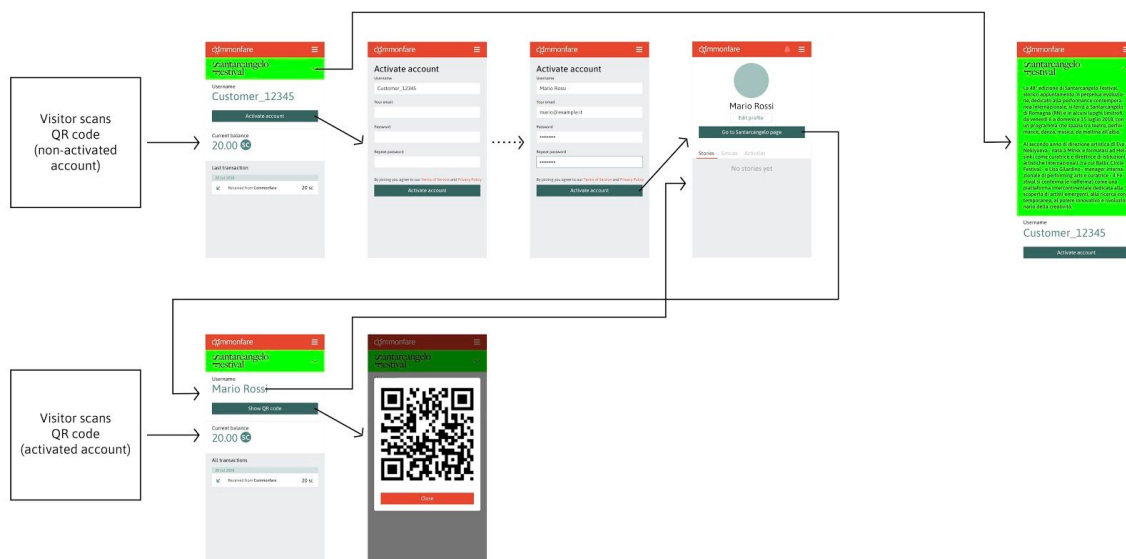


Figure 40. Mockups showing Customer/Commoner interaction with their own Talisman.

6.3.1 Santarcangelo Festival: Piloting in the Wild

6.3.1.1 Method

The Santarcangelo Festival took place from 6-15th July 2018 in Santarcangelo di Romagna, Italy. People visiting the festival had the option to acquire a Talisman and begin interacting with different sellers and issuers to exchange Santacoin for different goods and services on offer. In order to prepare for the festival, temporary accounts were created beforehand such that the Talismans could be configured and printed.

The research that took place during the festival was in the form of ethnographic observations and interviews. Seven members of the consortium who were in attendance for some or all of the festival, organised a schedule such that for the core days of the festival there would be observations gathered at the key areas at the festival, which included: the issuer stand, the food/drink selling area, ticket selling area, and in the main plaza where Macao artisans were situated.

The researchers who engaged in ethnographic observations followed an observation guide focusing on how visitors at the festival use and talk about the Talismans and commonfare.net generally (the observation guide is included in [Appendix A4, Subsection 4.2](#)). In addition, informal and formal interviews were conducted with members of the staff in addition to festival attendees (the interview question guide is included in [Appendix A4, Subsection 4.3](#)).

6.3.1.2 Results

At the time of writing, the festival has concluded, and an analysis of the ethnographic observations and interviews is underway. As such, information provided in this section is preliminary, and focuses only on indicative results of the metrics dashboard, plus a preliminary note about a non-technical barrier to use of the Talismans.

While technically the system performed as expected without any major issues, the printing quality of the Talismans became a barrier for efficient use of commonfare.net. This was further complicated by the mobile phones used by sellers and issuers, because of the variable camera quality.

Regarding Santacoin, throughout the festival, commonfare.net handled 744 transactions, across 259 social wallets (including 34 seller and 4 issuer social wallets), and 15 customers became Commoners (one of which contributed a story to commonfare.net).

Regarding the network dynamics, the information available showed that, understandably given the Talismans' accounts were pre-created, the network of transactions related to Santacoin was not connected with the network of Common Coin.

Overall, throughout the festival there was a considerable increase in activity on commonfare.net, totaling 1770 visits and 6134 pageviews, meaning in average 177 visits and 613 pageviews everyday.

6.4 RELEASE 4 (R4)

R4 (with enhanced networking functionalities compared to R3) will continue to be implemented using Ruby on Rails, and will be delivered in December 2018 (M30). At the time of writing this release is still undergoing a design and development process, as outlined in the sections prior. Included here are screens from the iterative improvements and work regarding the metrics dashboard, and the about page.

Metrics dashboard. This page contains initial public information about the utilisation of commonfare.net and the growth of the different social interactions. Included below is a screenshot current as of this report, however, design and development work, based on further discussion amongst consortium members and, in particular, feedback from pilot partner interactions with participants.

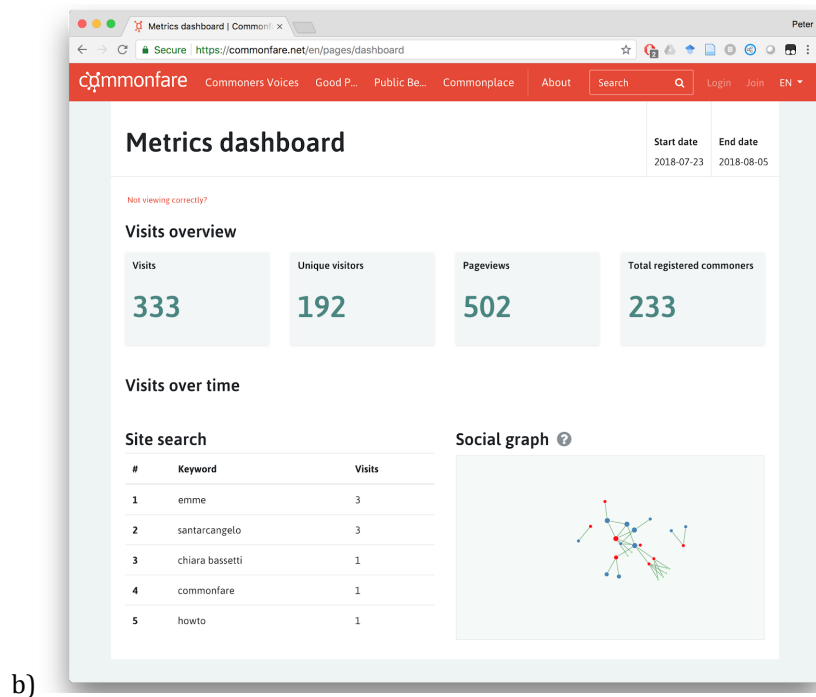
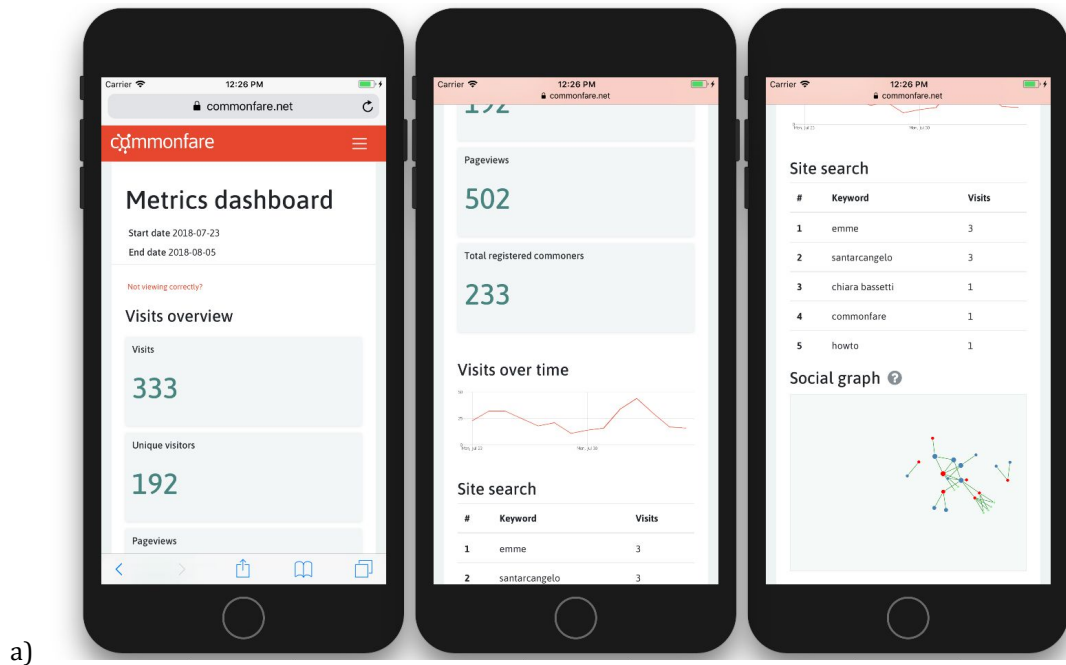
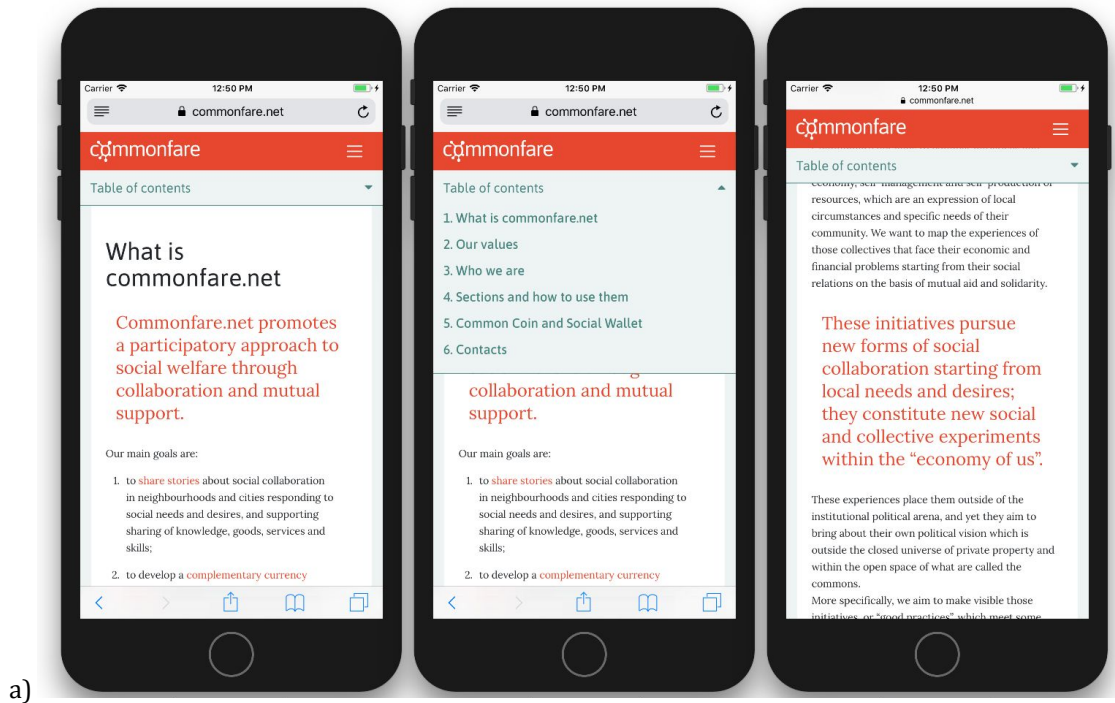
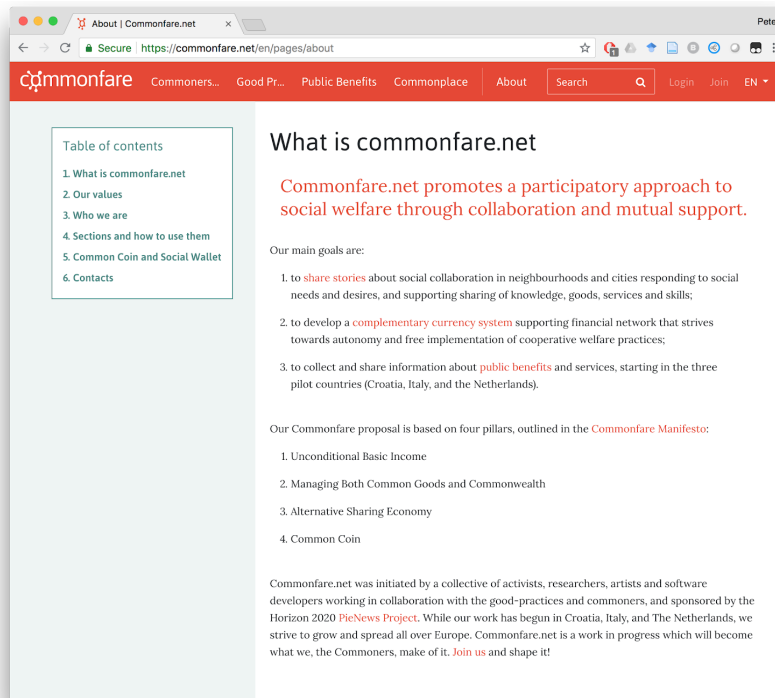


Figure 41. First version of Metrics dashboard for (a) mobile and (b) desktop, prepared in time for Santarcangelo Festival.

About page. The *About* page was updated with revised text, and different sections (each section also contains links to other parts of the site). Overall the page is now better connected with the different functionality of commonfare.net



a)



b)

Figure 42. Redesigned *About* page with different sections listed for (a) mobile and (b) desktop.

Santarcangelo transactions. Figures 43-45 show a number of different mobile interfaces that were used by the different types of user role at the Santarcangelo Festival, which handle transactions between Customer/Commoners and both Sellers and Issuers, and finally the process of registering whereby a Customer becomes a Commoner.

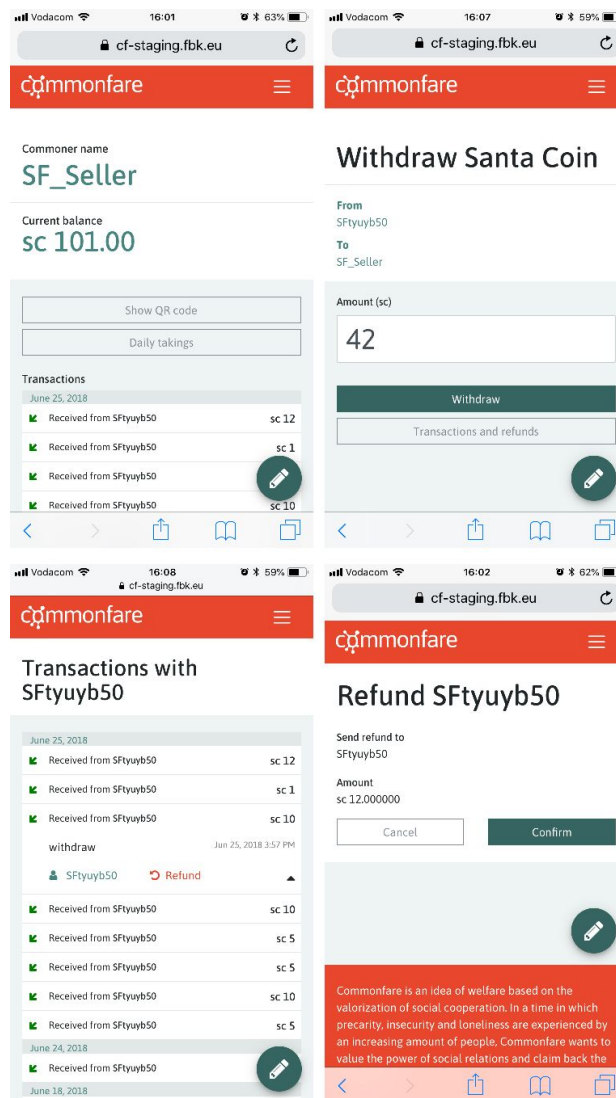


Figure 43. Screens visible to Sellers when scanning a QR code and conducting transactions with Customers/Commoners.

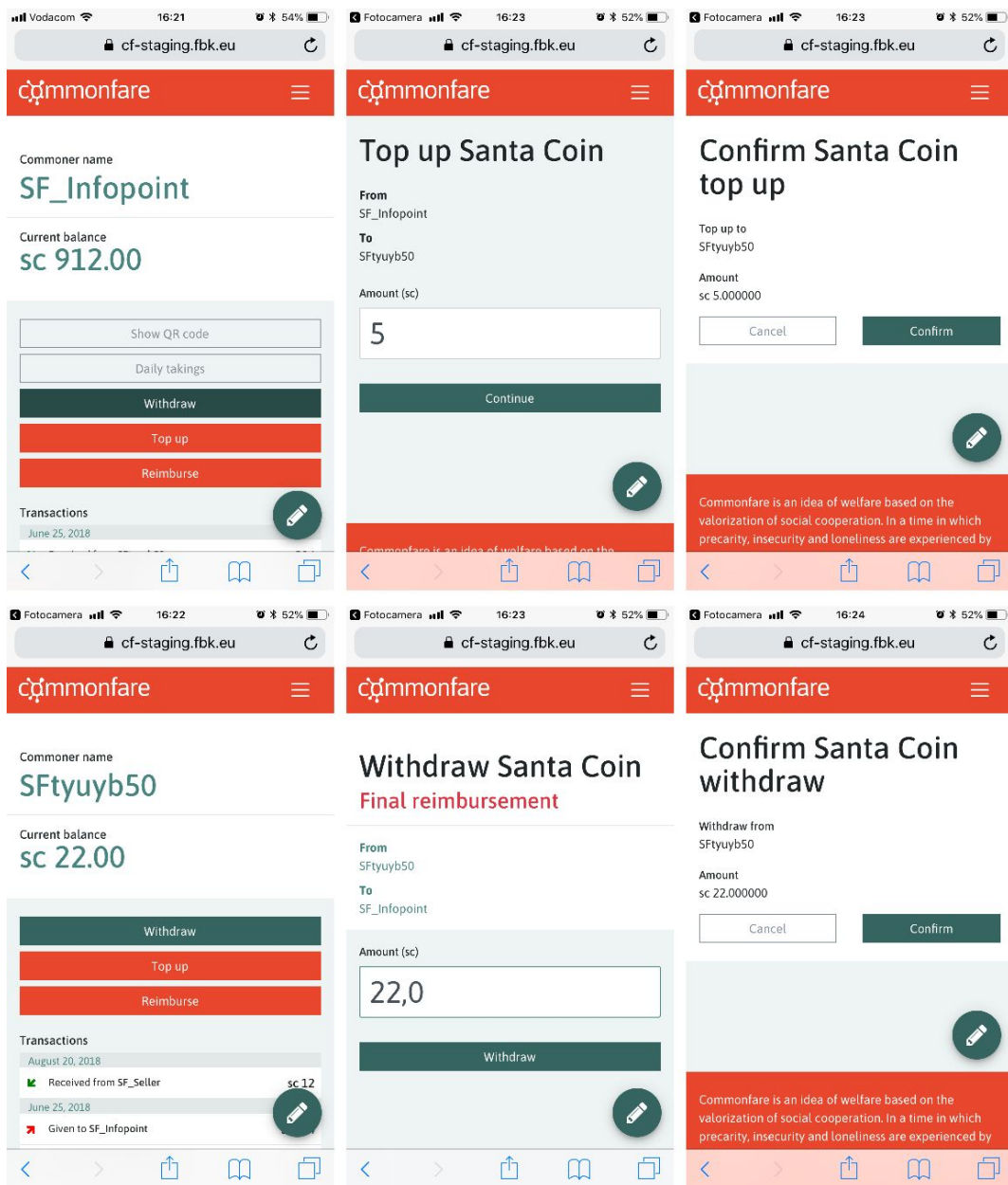


Figure 44. Screens visible to Issuers when scanning a QR code of a Customer/Commoner, in order to issue Santacoin, or issue reimbursement.

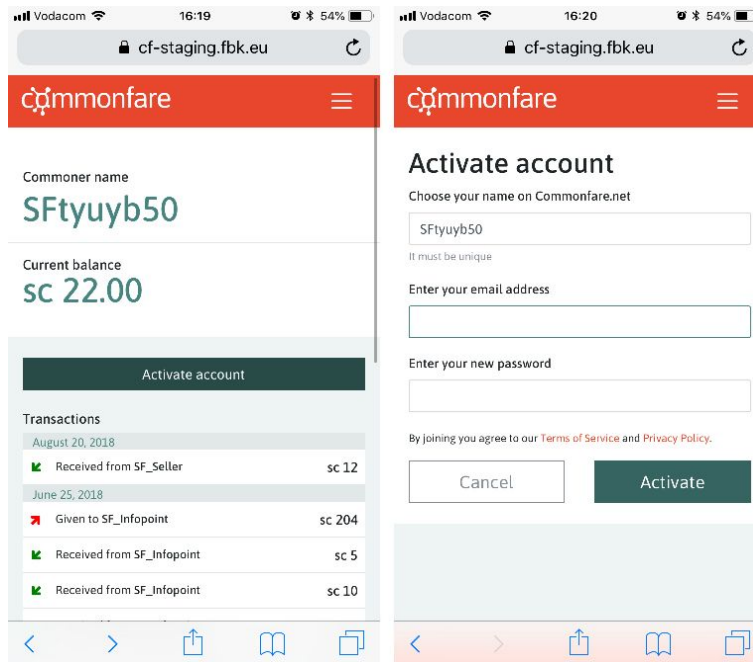


Figure 45. Screens visible to a Customer/Commoner when they scan their own QR code, and, in the case of a Customer, the option to become a Commoner.

7. REQUIREMENTS

Here we present a straightforward list of functional requirements, and their source for each release.

7.1 R1 REQUIREMENTS

The requirements for R1 were derived from:

- Design Workshops
 - DWS1
 - DWS2
- Iterative Prototyping
 - Mockup Design Iteration 1

Functional Requirements

To support information functionality we will consider the following entities:

- Categories
- Welfare provisions (which we refer to as Cards)

The following are the key functional requirements:

- Access to information about existing welfare provisions in the three pilot countries should be provided.
- Welfare provision information should be accessible in the native language of the country.
- Welfare provision information should also be accessible (in at least a summary form) in English (although ideally also in Dutch, Croatian and Italian).
- Information about the platform should be provided (i.e. through an About page that allows people to sign up to a mailing list).

The crucial functional requirements for the front-end side are the following:

- A portal capable of responsive behaviour should be accessible from the web and mobile (with “mobile first” approach).
- Content management features (editorial and presentation capabilities), including language translation features to address different pilot needs, should be provided.

Security and Privacy

The lack of interaction with R1, as it is solely an information website, has meant that while we need to consider security and privacy of people who interact in the future, there is little space for exploitation of the platform for this release.

Accessibility

- The system should support all functionality on mobile and desktop web browsers.
- The system should support the following languages: Croatian, Italian, Dutch and English.

7.2 R2 REQUIREMENTS

The requirements for R2 were derived from:

- Design Workshops
 - DWS2
 - DWS3
- Iterative Prototyping
 - Mockup Design Iteration 2
- Field Research
 - Activities in April-May 2017
 - Project Report D2.1
 - Project Report D3.1
 - Other Documents - Scenarios and Personas
 - Other Documents - Metaphors
 - Mockup Usability Testing

Functional Requirements

To support storytelling functionality should consider the following entities:

- Story
- Comment
- Author
- Reader
- Profile
- Listing (skill listing)

The following Figure 46 depicts the high level data model of R2, in which entities and their relations are shown.

Commonfare.net R2
 High level data model
last update on 2017-12-21

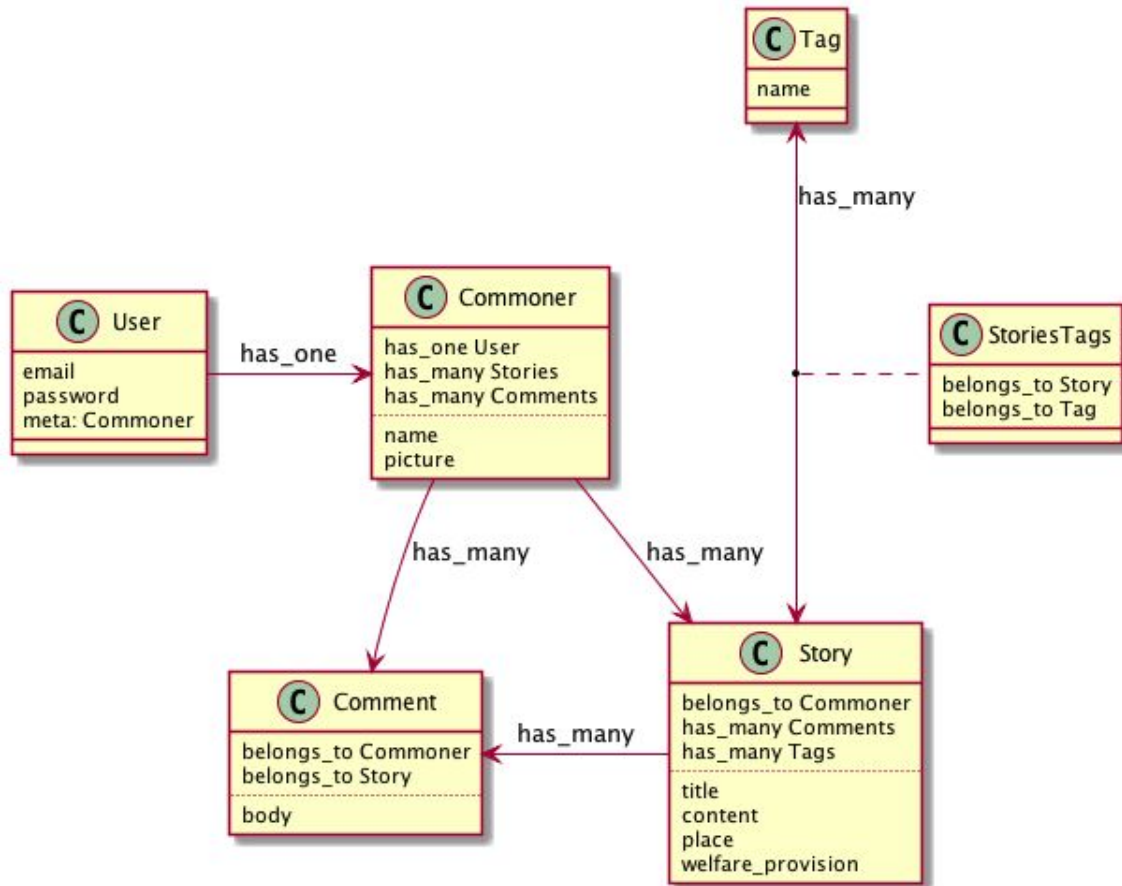


Figure 46. R2 data model.

Support for two types of users:

- Guests (then Visitors) - people that have not yet registered. Can only search, share and read any content, such as: stories (with comments), good practices, welfare provisions, and information about profiles.
- Registered (then Commoners) - people that have registered and have a profile. In addition to guest actions they can write stories, write comments, follow and favourite stories.

Security and Privacy

To build trust with the users of the platform, the platform can make use of the following possible strategies:

- Anonymisation and aggregation, so that route information may be shared safely without disclosing personal information.

- Encryption, for all data that is privacy sensitive (e.g. email address), but must be persisted on the server for basic functionality.
- Permission for the use of anonymous avatars/ aliases.
- Control to end-users over private data (at least a 'delete private repository' option).

Accessibility

- In addition to R1's support of languages Croatian, Italian, Dutch and English generally, the creation of content by a Commoner should also allow for multiple languages.
- The system should consider supporting browsers without Javascript.
- The system should support text-to-speech and screen reader technology.

7.3 R3 REQUIREMENTS

The requirements for R3 were derived from:

- Design Workshops:
 - DWS3
 - DWS4
- Iterative Prototyping
 - Mockup Design Iteration 3
- Field Research
 - Project Report D1.3
 - Project Report D3.1
 - Project Report D3.2
 - Project Report D4.2
 - Other Documents - Currency Scenarios

Functional Requirements

Navigation is different for logged-in users (Commoners) and not logged-in users (Visitors).

To support groups, messaging and Common Coin we require the following entities:

- Groups
 - The group is a hub that aggregates Commoners.
 - Members can open discussions with the other group members.
 - Members can write stories (Commoners Voices) for a group.
 - Members can invite other Commoners to join the group.
 - Non-members can request access to the group.
- Conversations (direct private messaging between two Commoners)

- Social Wallet
 - Each commoner can access only her/his wallet.
 - Social wallet shows the current balance in CC (Common Coin).
 - Social wallet shows the list of transactions, that can be filtered (all, sent, received, or by a given tag).
 - It is possible to transfer CC to another Commoner (provided that the latter has a social wallet).
- Commonplace
 - The Commonplace is a public wall that displays listings created by the Commoners.
 - Users can search (title, tag, description) and filter content (date, location, price).
 - Users can propose a service, specifying the value in CC.

The following Figure 47 depicts the high level data model of R3, in which entities and their relations are shown.

Security and Privacy

- A Visitor can become a Commoner by creating his/her personal account.
- A Visitor can join Commonfare as a group, creating a group and her/his personal account at once.
- A Commoner profile is always personal.
- Each Commoner has a Commonshare, which is the result of his/her interactions in the platform.
- Commoners can decide to opt-in to the social wallet upon registration.

Commonfare.net R3
High level data model
last update on 2018-04-24

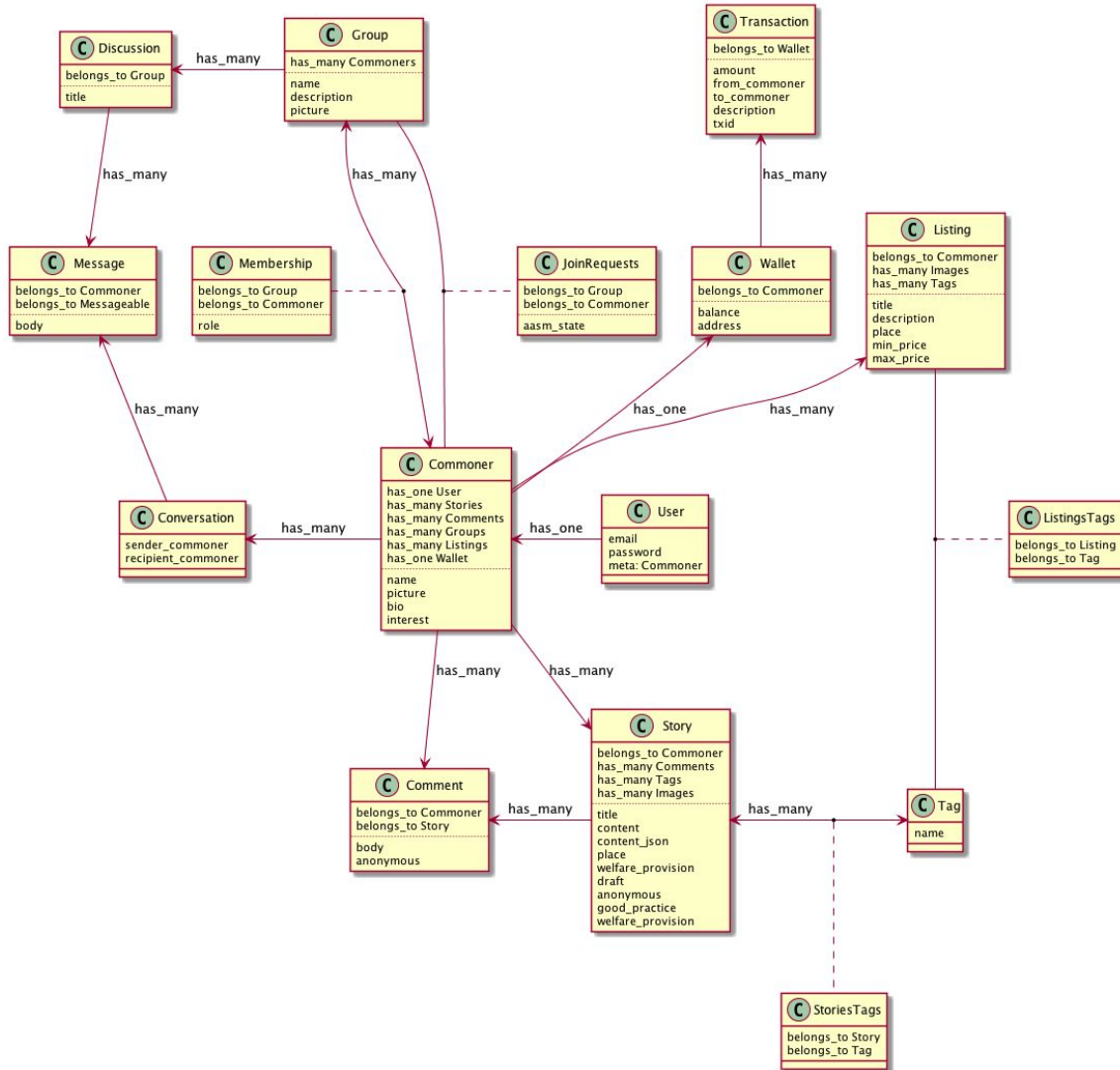


Figure 47. R3 data model.

7.4 R4 REQUIREMENTS

The preliminary requirements* for R4 are in the process of being derived from:

- Design Workshops
 - DWS4
- Iterative Prototyping
 - Metrics Dashboard
 - Improved 'About' section
- Field Activities
 - User Evaluation of R3

- Santarcangelo Event

Functional Requirements

- Groups
 - Support for self-contained currency to be used by group members.
- Metrics dashboard

Security and Privacy

- Compliance with European Union GDPR

Accessibility

- About page
 - Improved and clear communication of commonfare.net purpose.

* Other functional, security, privacy and accessibility requirements will emerge from further analysis of existing field research and prototyping, and future field activities and interaction with project partners and research participants.

CONCLUSION

This report has presented detail of the design process of commonfare.net and its different components, from the start of the project to after the third major release. The fourth release, which is in progress, has also been presented in terms of the relevant field research and prototyping that has taken place. Whereas Release 1, 2 and 3 focused on adding the core pillars of design work towards the information hub, stories hub and networking hub (using the language of the grant agreement), Release 4, as part of the 'Advanced Collaborative Economy and Sustainability' Design-Implementation-Evaluation cycle, is interested in adding more advanced capability to the different parts of commonfare.net.

The future design will be guided largely by the outcomes and feedback from networking events organised by pilot partners around Europe, and will influence: 1) the language and communication (such as the about page, and further guides and instructional content on commonfare.net), 2) the currency and group support, building on further analysis of the model piloted at the Santarcangelo Festival, and 3) more generally, through use case examples of different parts of commonfare.net across all 'hubs' of the platform. In addition, the new storybuilder that was introduced can be improved through the addition of templates (based on prompting for certain genres of story), as well as suggested improvements that will become evident following real-world usage. This will be supported by Task 2.3 -Training and Providing Capabilities - and will involve pilot partners.

Other general improvements and functionality we foresee include the 'interests' of a Commoner profile, which can be given a more explicit and integrated purpose, allowing for Commoners to find each other based on similar interests, or to find or filter Commonplace listings. Means through which Commoners can give feedback and interact with other content can be expanded and made deeper than simple controls similar to existing social media (e.g. 'liking' a story). Finally, discussions of content and group moderation (and/or an editorial system) have begun, but the design and implementation will depend on further interaction with participants.

APPENDIX A1

This appendix contains raw data from design workshops, iterative prototyping, and field research, to supplement the discussion in the main document as it relates to Section 3: Towards Release 1.

1. DWS1 FOCUS GROUP GUIDE

Focus Group Guide for DWS1

Introduction

PIE News project objectives (if not already explained), plus signing consent form.

PIE conditions

Users' perception of current situation

Show statistics data about Croatia (Annex 1a, 1b of WP2 Template for National Research) coupled with fake statistics, and ask participant whether they think data are correct/true or incorrect/false.

Let people motivate and discuss their respective opinions, this should elicit also issues about needs. Then disclose which data are invented and which not.

Users' concerns

Collective creation of a proximity/distance (close/far) map with respect to the building blocks of the Hub as defined during DWS1 Day 1 by the partners. Actually, only two out of three categories of the building block: 1. variables of the statistics, 2. needs.

This will be done by: a) writing down post-it through guided collective brainstorming; b) disposition (and related negotiation, discussion, etc.) of the post-it on a (possibly white) wall.

Users' needs and desires

Present about 5 examples of extant welfare provisions in Croatia (or 2 more complex scenarios). Then ask each participant to write down 3 to 5 adjectives for each provision (or 7-10 for each scenario).

Finally, going provision/scenario by provision/scenario, ask participants to read out their adjectives and try to foster discussion among participants.

The PIE News platform "Info Hub": mock-up evaluation / refining

Show participants the mock-up (with mobile/flexible building blocks — now all three categories of building blocks will be considered) and ask them:

- to prioritise among building blocks categories (or choose instead an horizontal presentation)
- to prioritise about the information in each of the three categories, the needs especially

Towards Commonfare

Explain what is meant by Commonfare, then ask participants if they think they have encountered examples of Commonfare in their lives, or heard about.

If yes, ask them to narrate and comment. [Ask practicalities, details, etc.]

If nobody does, propose an imagined example and ask for comments, opinions, likability, etc.

2. DWS1 DESIGN WITH CROATIAN PARTICIPANTS

WORKSHOP

The results for the Mockup comments are shown below.

- Group 1: received the best feedback, yet the icons were considered as not clear enough and participants suggested to add labels (not only on mouse-over). The “Income” label was considered particularly obscure (suggestion: "financial support"). Participants did not like the language used which they believed reduced people to negative labels (e.g. unemployed, employed, seasonal worker).
- Group 2: the participants complained it was not clear what the platform was about. They believed that the message on the landing page evoked commercial ads or political/institutional statement.
- Group 3: the design was considered old fashioned, not appealing to young people, stereotyping. Participants suggested to focus on people needs not stereotypical labels. Yet, they believed that the categorisation of needs should be improved.
- Group 4: the design received very negative feedback, mainly due to the picture in the homepage which was not clearly related to PIE conditions. The participants considered the statistics of little importance. They said that the table were difficult to read and suggested the use infographics.

3. DWS2 RESULTS OF DESIGN WORKSHOP IN CROATIA

The DWS2 workshop with Croatian participants involved collecting feedback on updated mockups that related to R1. These mockups were the result of the design effort up until that point from DWS1

and consortium feedback. The results of this evaluation highlighted issues or aspects to improve in the following user-experience dimensions: content, aesthetics, functionality, and usability.

Content

- PIE news is a terrible name, it sounds like a company selling pies, not a collection of people.
- PIE news is difficult name to promote in Croatia (how to search for it on Google?).
- They were offended by the word “New poor” which they perceived as people who leverage on welfare state for the entire life.
- The focus should be on cooperation.
- The language used in the platform is too complex.
- In the culture section they wished to find information related to leisure events and not only to welfare provision.
- Cluster the main-page in 6 squares: separating “housing” from “mobility”, and “education and training” from “culture/cultural events”.

Aesthetics

- They liked the InfoHub main page.
- The design looks too professional.
- The design reflects a style which is likely to appeal to older people.
- It needs to be more focused towards a modern/fresh style, which can appeal to a younger generation (strong colours, punk rock, etc.).

Functionality

- They propose to put a video on the homepage to introduce the platform.

Usability

- The design needs to be user friendly.

4. FIELD RESEARCH ON R1: PARTICIPANT EVALUATION

RESULTS

Following Release 1, a number of workshops were conducted (described in Section 3.6 of the main document) in order to get feedback and input from participants. Below is a list of a number of points where participants expressed different needs relating to the design of R1, and contributing to R2.

Functionality

- Provide opportunity to listen vs reading.

- Issues on android mobile platform.
- Issues with the language selection.
 - the derivation from the language of the operative system in which the platform is displayed does not work.
 - When you change language it automatically changes also country, this should not be the case.
- Add a space for people to say what they need if for example they did not found a provision for or info about).
- Add the opportunity to "vote" for welfare measures requested by other participants.
- Add a best practices section (a short description similar to welfare cards with links to external sites to learn more.
- Add filters to select desired welfare provision.
- Provide a possibility to update welfare provisions.
- Some links to external sites are not working.

Content

- To clarify which administrative office or institution is responsible for each of the welfare provisions as part of the "welfare cards".
- Platform objective are not clear.
- The link between welfare provisions and stories is not clear, add a text explaining what welfare cards are (e.g. "Welfare in Italy").
- Who are the promoters? Which relationship exist among them? A trust issue was highlighted which can be solved by better communication and adding a section like "about us" / "contacts".
- Add (video) tutorial, yet consider that people have different opinions about that.
- Revise categories of needs and their clustering.

Usability

- When a visitor to the site signs up to the newsletter, they would be redirected to the website of the newsletter host (i.e. Create-Net/FBK), rather than back to commonfare.net.
- Issues with the language menu: Misunderstanding about language/location.
- Welfare cards: links to external sites as "open in new window" and do not display the link, just a "click here".
- Navigation back and forth among cards/categories is not easy.

Aesthetics

- Make it more colourful.
- Use images (of people) and possibly videos.

- Use infographics and visual narrative.

These issues were organised around the following topics which were discussed during the General Assembly of the consortium which coincided with DWS2:

- Rationale for different hubs.
- The role and introduction of the information hub.
- Filtering based on geographical area and language.
- Size and resolution of screens to show during design workshops.
- Size, position and prominence of the logo.
- Size and position of upcoming user registration.
- Further consideration of our use of terms and length of welfare provision content.
- Consistent navigation across the platform.
- The role of numbering/order of content.
- Wireframe feedback and colour usage to show during design workshops.
- Reconsider mobile device content layout in order to provide a similar overview of all content as per desktop.

APPENDIX A2

This appendix contains raw data from design workshops, iterative prototyping, and field research, to supplement the discussion in the main document as it relates to Section 4: Towards Release 2.

1. FIELD RESEARCH: SCENARIOS AND PERSONAS RESULTS

The following are a list of actions that were identified across the different scenarios and personas created as part of D3.1 by WP3.

- Reading stories of good practices.
- Leaving comments on stories.
- Writing stories of my own
 - Including photos in stories I write.
- Getting feedback on how many people read my story.
- Following stories authored by others
 - When visiting commonfare.net, receiving notification if someone followed has published a new story.
- Receiving a feed from the Commonfare platform.
- Registering on commonfare.net
 - Deciding to sign up
 - Describing my skills on my profile.
- Bookmarking a notice for an event (e.g. public talk) on the Croatia's recent history.
- Favoriting an item (e.g. about support for ongoing professional learning).
- Leaving an indication that the facility has been helpful to her.
- A group creating an entity for its representation on commonfare.net
 - Seeing the organisation location, contact details, and some photos from the last events organised by the group.
- A good practice creating an entity for its representation on commonfare.net.
- Searching for specific employers to see if there is any information available
 - Leaving an indication that they are in the same situation.
- Sending a link of a group to my friend.
- Finding and reading a brief introduction to the platform and how the platform could be used
 - Finding and watching short videos about the platform features.

2. DWS3 RESULTS OF DESIGN WORKSHOP IN ROTTERDAM

As the exercises at the workshop in Rotterdam involved the creation of stories, there was a large number of examples created (and we provide examples below). Firstly, however, we provide reflections about the first exercise final positions:

- Some people are **sceptical** about online news and do not **trust** online friendships.
- In general the **lack** of online **moderation** annoys people.
- Online platforms are seen as **handy** for maintaining long-distance relationships that were first created offline.
- Nevertheless other people do trust online news that is published by well-known **existing offline and online** newspapers.
- People are aware of **ownership** and do not like to lose it.
- And they are also aware of **online privacy** and the dangers that a lack thereof can bring.
- Luckily for our project people have fun by **sharing stories** that can help other people and they relate that to democratisation of knowledge.
- But they don't like the algorithms that keep bringing to their attention to the same kind of stories that they have once clicked. They actually **value exactly the contrary**.

Two examples of the multiple stories that were created are shown here. Both have been translated by MdC into English:

1. Growing together (with an accompanying image of community gardening)

"Together outside working in the garden connects." - General practitioner Jansen thought, as he watched his gloomy waiting room full of people. He closed his practice and opened the doors and sent all his patients to the garden: "Out! Between the flowers." They worked in the garden, drank water, coffee, tea together and shared the harvest. General practitioner Jansen looked satisfied and saw that the people were no longer lonely, no longer ill and that they had free meals. He thought, "People get a lot healthier here!".

2. Joining with a book (with an accompanying image of a reading room)

When I entered the Reading Room at the Reinhoutsquare this morning, I was pleasantly surprised. I saw that a brainstorm was taking place about the sharing of used books. Much to my pleasure I could join the brainstorm. While drinking coffee, I saw people I know coming in with bags full of books: the new acquisitions. From the brainstorm, I understood that it is not like this only today, this happens every day. I saw a volunteer, who took the books and sorted them before putting them on the shelf.

3. EXAMPLE STORYBOARD DESIGN FOR R2

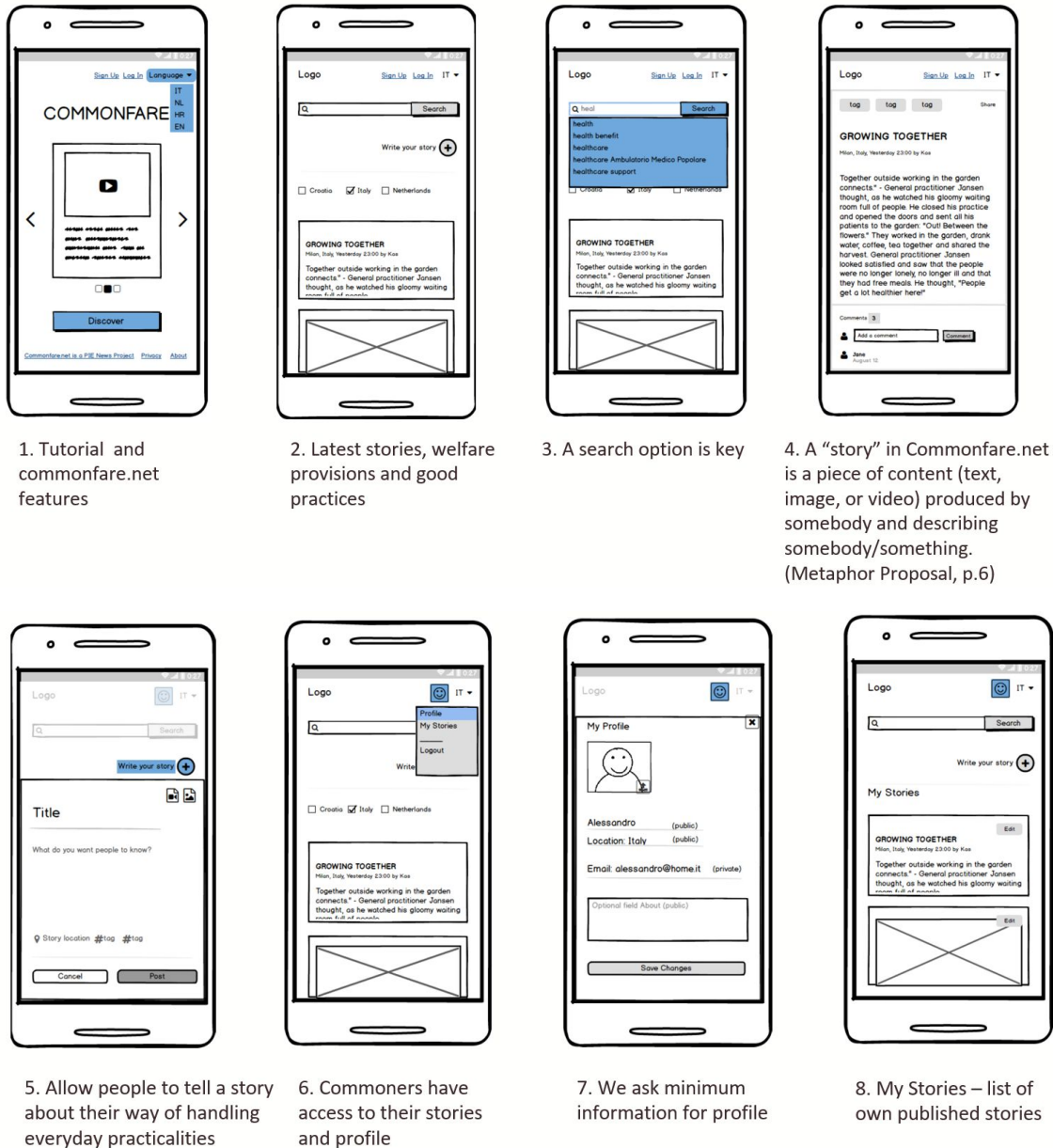


Figure 48. R2 storyboard design low-fidelity mockups.

4. CHANGES FROM R2.1 TO R2.1+

Changes were as follows:

- Main navigation improvements
 - Main sections renamed: Commoners Voices, Good Practices, Public Benefits.

- About section included.
- Search bar, more balanced with the other elements.
- Search results, hierarchy improved.
- Mobile version, dimensions and structure changed for better usability.
- Intro section redesign
 - Background image removed due to conflict with text.
 - Introduction text, bigger font size and copy changed.
 - Call to action enriched with a clear explanatory text.
- Different sections of the platform (Commoners Voices, Good Practices, Public Benefits) have been visually differentiated, and the inner page structure has been improved
 - Different information displayed on preview (e.g. 'Public Benefits' show the *country*).
 - Full screen cover images.
 - Tags restyled and placed below the title.
 - Left column dedicated to content metadata.
 - Text font changed for better readability.

5. KEY DIMENSIONS FOR SUSTAINABLE LIVING

| Practicability of Life | | | | | | | | | |
|------------------------|--|--|------------------------------------|----------------------------------|------------------------------------|--------------------------------|---------------------------------|------------------------------|--|
| Future and Strategies | | Material and symbolic individual needs | | Resources and networks | | Socially constructed obstacles | | Contextual processes | |
| Individual strategies | DIY biography | Material needs | Housing | Networks of solidarity | Exclusive solidarity | Financial issues | Debt | Subjective aspects | Subjectivation of work |
| | Imagining the future | | Food | | Family/friend welfare | | Low wages | Composition of the workforce | Highly educated, multi-tasking producers |
| | | | Income support and security | Paths to access opportunities | Gatekeepers | Caregiving | Historical and national aspects | War shocks | |
| Unveiling the context | Analysis of context and strategies | | Free Wi-Fi | Examples to look at | Crossroad of relations | Economic dynamics | Individualisation | | |
| | Avoiding cultural traps, new rhetorics | | | | Good practices | | Precarity rate | | |
| Struggles to engage in | Disrupt the stigma | | Less bills | Ambivalent networks of relations | Relations with public institutions | Social recognition obstacles | Life put to work | | |
| | Fighting corruption | | Space | | Relations with individuals | | Poverty traps | | |
| Fostering collectivity | Fostering solidarity | | Conditions for autonomy | Quality education | | Legal obstacles | Social Exclusion | | |
| | Fostering bottom-up agency | | | Work-life balance | | | Vulnerability | | |
| | Socialise expectations | | | Autonomous time management | | | Exclusion from citizenship | | |
| | | Freedom from discrimination and violence | Gender equality | | | Bureaucracy | | | |
| | | | Freedom from stigma | | | | | | |
| | | | Freedom from racism | | | | | | |
| | | | Freedom from blackmailing | | | | | | |
| | | Psychological well-being | Freedom from the sense of guilt | | | | | | |
| | | | Freedom from despair and passivity | | | | | | |
| | | | Free psychological support | | | | | | |
| | | Socialising and sharing | Sharing frustrations | | | | | | |
| | | | Socialisation opportunities | | | | | | |
| | | | Social networks | | | | | | |
| | | Sociological imagination | Event-based | | | | | | |
| | | | View of the larger context | | | | | | |
| | | | Socio-economic rights | | | | | | |

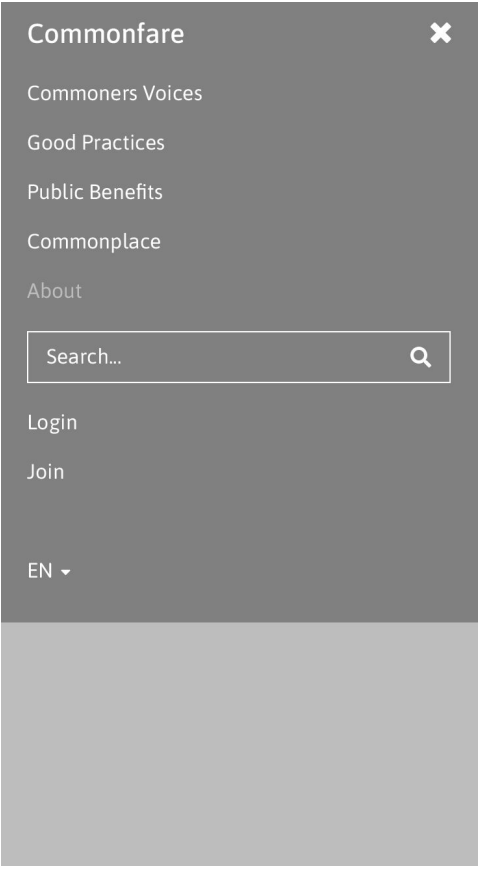
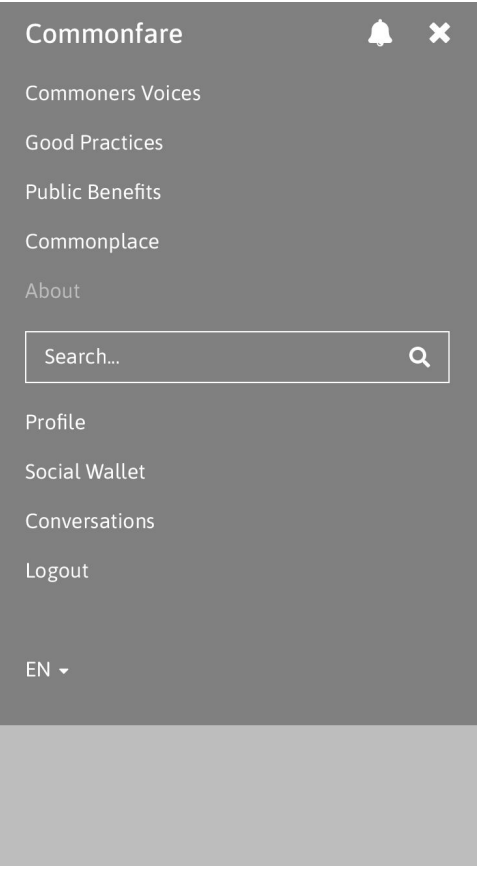
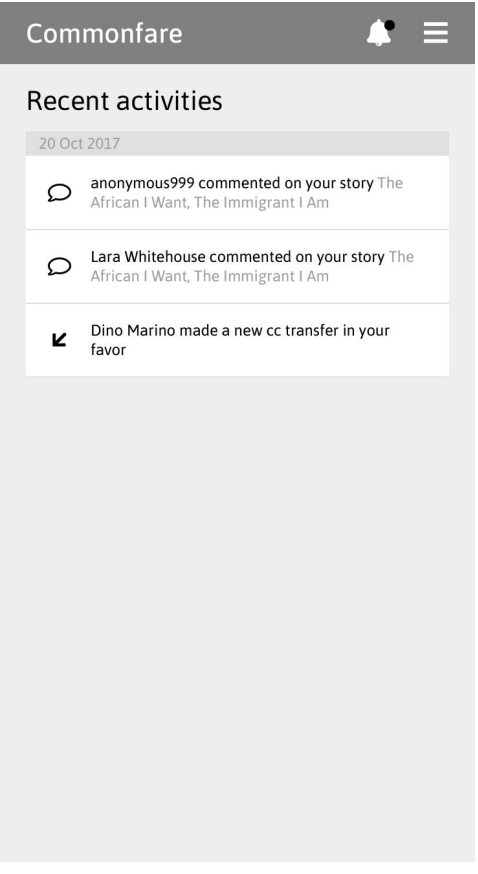
Table 8. Key dimensions for sustainable living.

APPENDIX A3

1. LOW FIDELITY PROTOTYPING & DATA MODEL

A low-fidelity prototype allows to understand the structure of each page as well as the connections between the various pages. All the sections described above (1-8) have been prototyped. A mobile-first approach has been followed, so all the screens are in portrait mode. Below we show screenshots for each section.

1.1 Navigation

| Navigation for a non registered user | Navigation for a Commoner | Recent activities page. The activities listed will be removed once they have been checked by the Commoner. |
|--|---|---|
|  <p>Commonfare ✕</p> <ul style="list-style-type: none"> Commoners Voices Good Practices Public Benefits Commonplace About <p>Search... 🔍</p> <ul style="list-style-type: none"> Login Join <p>EN ▾</p> |  <p>Commonfare 🔔 ✕</p> <ul style="list-style-type: none"> Commoners Voices Good Practices Public Benefits Commonplace About <p>Search... 🔍</p> <ul style="list-style-type: none"> Profile Social Wallet Conversations Logout <p>EN ▾</p> |  <p>Commonfare 🔔 ☰</p> <h3>Recent activities</h3> <p>20 Oct 2017</p> <ul style="list-style-type: none"> 🗨 anonymous999 commented on your story The African I Want, The Immigrant I Am 🗨 Lara Whitehouse commented on your story The African I Want, The Immigrant I Am 👉 Dino Marino made a new cc transfer in your favor |

1.2 Create Account

Become a Commoner has two options:
 1. Join Commonfare, to create an account;
 2. Join and create a group, to create an account and a group at the same time.

In **Create group**, only name of the group is required.

Create account: *See [interactive prototype](#) for full [Create account flow](#)*


The screenshot shows the 'Become a Commoner' registration page. At the top, there is a 'Commonfare' header with a menu icon. Below the header, the title 'Become a Commoner' is displayed, followed by a sub-header: 'If you want to join as a group, you will need to create a personal account anyway.' The form includes three input fields: 'Your email' (containing 'mario@mail.it'), 'Password' (with masked characters), and 'Repeat password' (also with masked characters). Below the fields, there is a line of text: 'By joining you agree to our [Terms of Service](#) and [Privacy Policy](#)'. At the bottom, there are two buttons: 'Join Commonfare' and 'Join and create a group'. A link 'Are you already a Commoner? [Log in](#)' is located at the very bottom.

The screenshot shows the 'Create group' form. It features a 'Commonfare' header with a menu icon. The title 'Create group' is at the top. Below it, there is a 'Group name *' label and a text input field containing 'Name of your group'. This is followed by a 'Profile image' section with a circular icon containing a pencil. Below that is a 'Description' section with a text input field containing 'Describe in short what is your group about'. At the bottom, there is a button labeled 'Confirm and create profile'.

This screenshot is identical to the previous one, but the 'Group name *' input field now contains the text 'BIN Italia'.

In **Create profile**, you can decide if to continue editing your profile or go directly to the platform.

If the user continues editing, s/he can upload a profile image, write a description and add interests, which will be treated as tags.

Commonfare 


Create profile

Username *
We generated a random username for you. You can keep it to stay anonymous, or you can let the other Commoners know your identity.

anonymous007


Continue editing profile

Go to Commonfare

Commonfare 

Create profile

Profile image



Description


Describe in short what you offer

Interests
These tags will help you highlighting content you would like to find in the platform.

Food ✕ Languages ✕


Social Wallet
A Social Wallet allows you to receive a basic income in CommonCoins and to exchange CC with other Commoners.

Confirm

Commonfare 

Create profile

Profile image



Description

Italian typical commoner with passion for food.

Interests
These tags will help you highlighting content you would like to find in the platform.

Food ✕ Languages ✕

Social Wallet
A Social Wallet allows you to receive a basic income in CommonCoins and to exchange CC with other Commoners.

Confirm

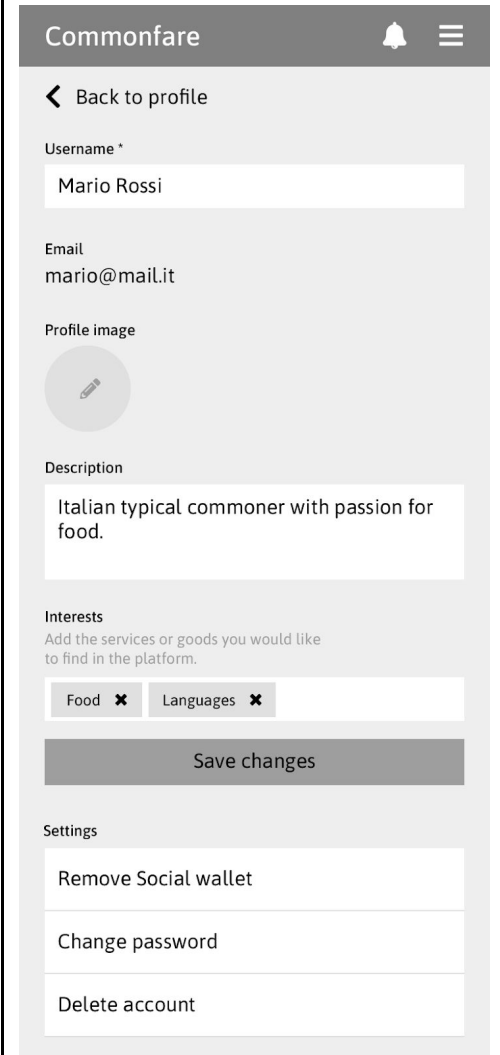
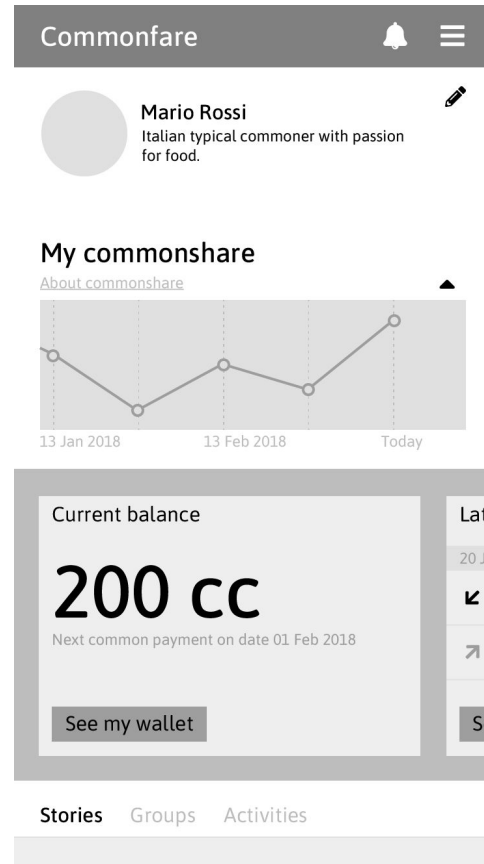
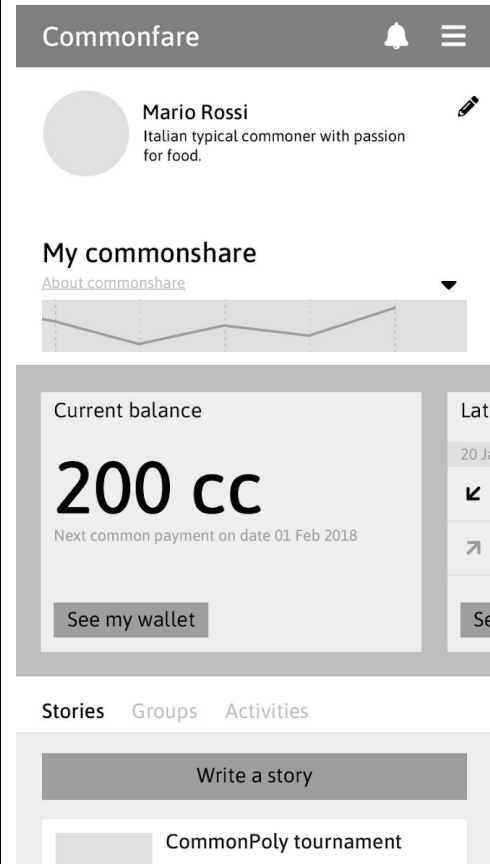
1.3 Profile Page

Profile page structure:

- Info about the Commoner
- Commoner's CommonShare
- Wallet overview
- Content tabs (stories, groups, activities).



The CommonShare section can be expanded.

Edit profile allows also the user to enable/disable the social wallet and delete the account.




Tabs allow to separate different kinds of content related to the same Commoner.

Activity tab is only visible to the profile owner.



Commonfare  


Stories Groups Activities

Write a story






The African I Want, The Immigrant I Am
Feb 21

 2 comments  1 positive feedback







Communics – a project in comics-based digital storytelling to foster...
Feb 21

 2 comments  1 positive feedback




CommonPoly
Feb 21


 2 comments  1 positive feedback


Commonfare  


Stories **Groups** Activities


Create a group






BIN Italia
 11 members



Museu da Crise
 11 members




Macao
 11 members


Commonfare  

Stories Groups **Activities**


20 Oct 2017



You commented on [Voices from the field - Get to know Commonfare pilot partners!](#) **by Commonfare**



You gave feedback to [Unemployment allowance for farmworkers](#)



Jack Baile commented on your story [The African I Want, The immigrant I Am](#)

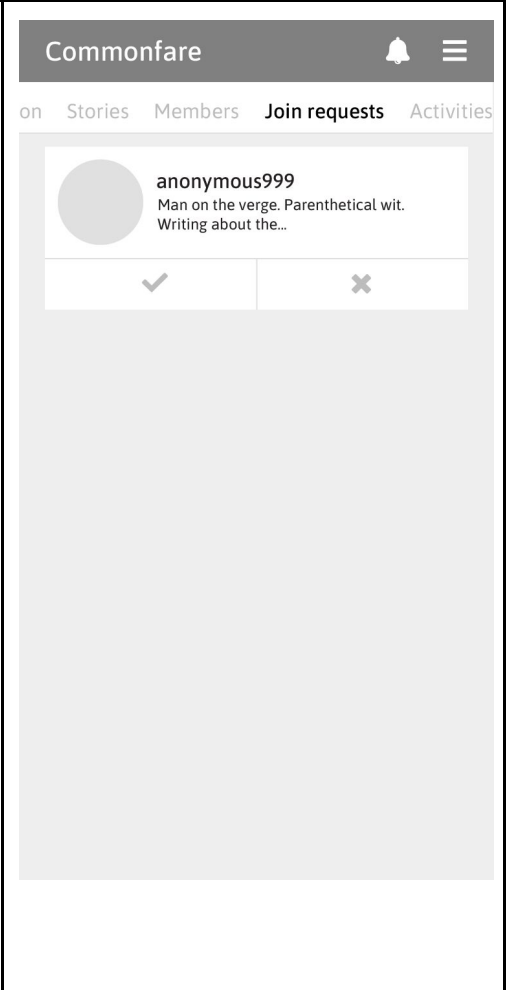
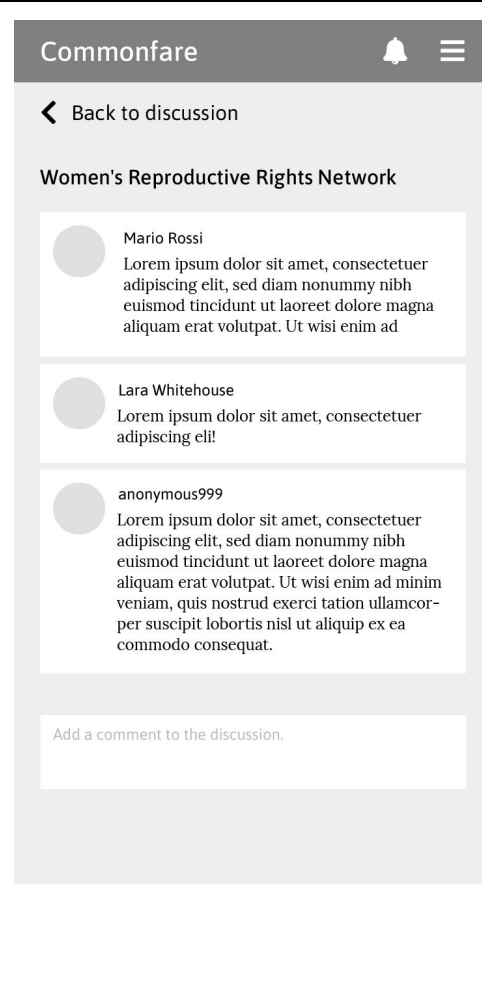
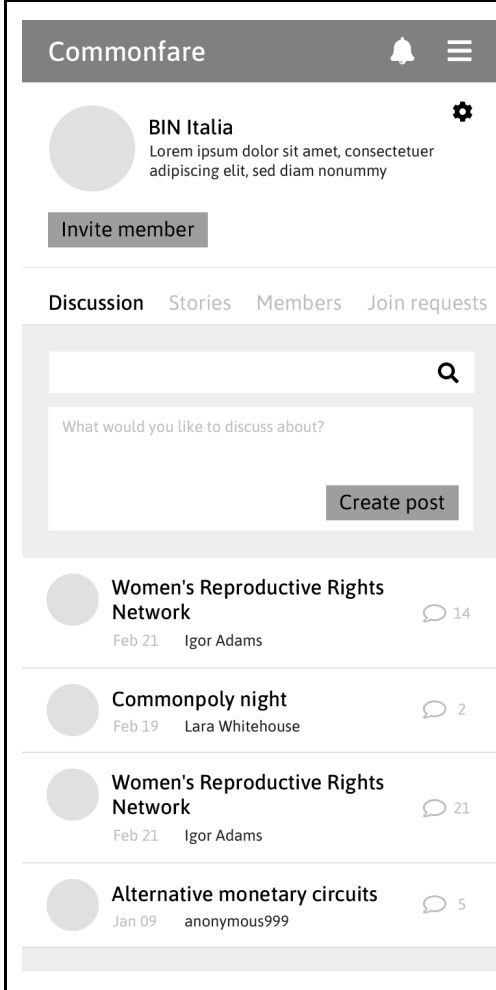
1.4 Group Page

Group page has a similar structure to the profile page. Groups don't have a wallet and a CommonShare (at the moment). They will be added in future releases.

The tab *Discussion* is only visible to the group members. It allows the members to start discussions about a certain topic that they define.

Detail page of a discussion.

The tab Join requests allows to accept new members in the group.



1.5 Social Wallet

Social wallet structure:

- Show current balance
- Transfer CC to another Commoner (or, in the future, to a group)
- Show list of transactions

A single transaction can be clicked to see details.
Transactions can be filtered (all, received, sent)

Transfer CC: [See interactive prototype for full transfer cc flow](#)

| | | |
|--|--|--|
| <p>Commonfare 🔔 ☰</p> <p>Social wallet ⚙️</p> <p>Current balance 200 cc</p> <p>Next basic income payment on date 01 Feb 2018</p> <p>Transfer cc</p> <p>Transactions</p> <p>All Received Given</p> <p>20 Jan 2018</p> <ul style="list-style-type: none"> Received from Commonfare 50cc Given to Igor Adams 5cc Given to Dino Marino 150cc <p>10 Jan 2018</p> <ul style="list-style-type: none"> Received from Dino Marino 15cc Given to Dino Marino 5cc | <p>Commonfare 🔔 ☰</p> <p>Social wallet ⚙️</p> <p>Current balance 200 cc</p> <p>Next basic income payment on date 01 Feb 2018</p> <p>Transfer cc</p> <p>Transactions</p> <p>All Received Given</p> <p>20 Jan 2018</p> <ul style="list-style-type: none"> Received from Commonfare 50cc Given to Igor Adams 5cc Given to Dino Marino 150cc <p>This is my Christmas 2018 present :)</p> <p>👤 Dino Marino ⬆️</p> <p>10 Jan 2018</p> <ul style="list-style-type: none"> Received from Dino Marino 15cc Given to Dino Marino 5cc | <p>Commonfare 🔔 ☰</p> <p>← Previous</p> <p>Transfer to</p> <p>👤 Igor Adams</p> <p>Amount 100cc</p> <p>Message Monthly dutch lessons</p> <p>Confirm</p> |
|--|--|--|

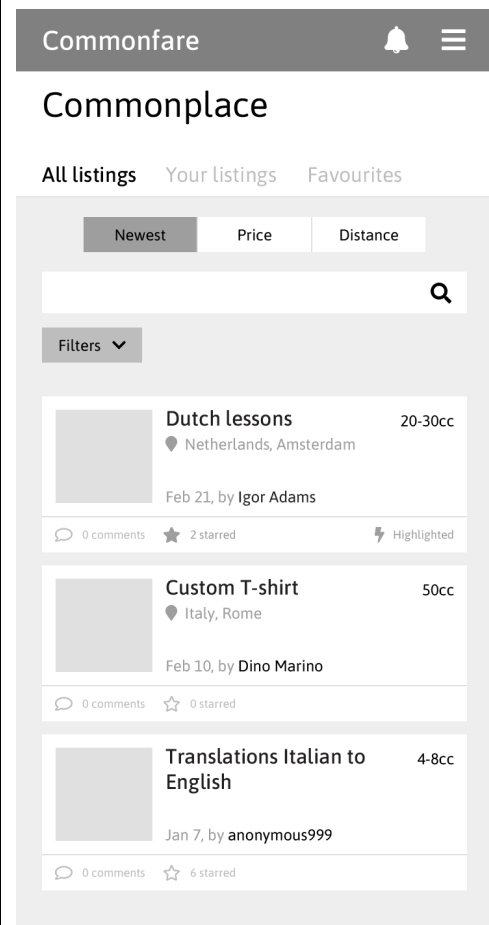
1.6 Commonplace

CommonPlace has three main sections:

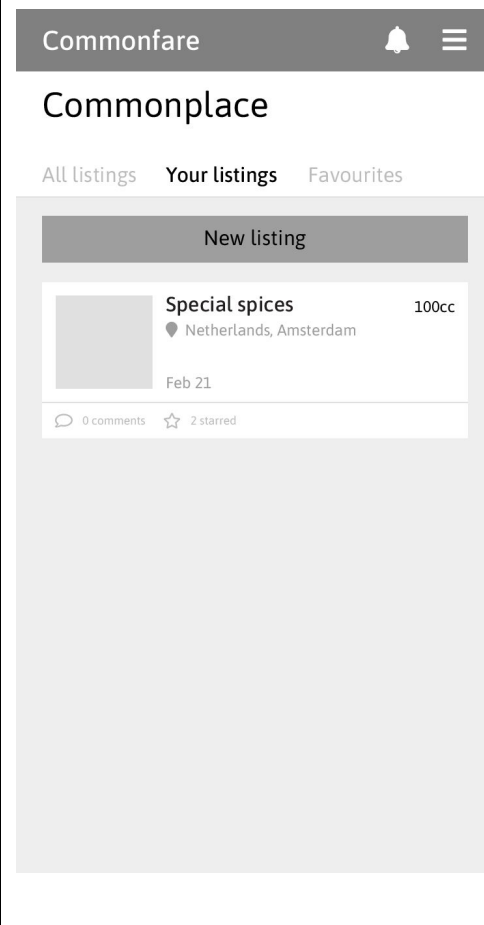
All listings displays all the services, skills and goods offered by the Commoners.

Your listings collects all the services, skills and goods offered by the Commoner who's using the platform.

Favourites allows each Commoner to save their favourite listings.

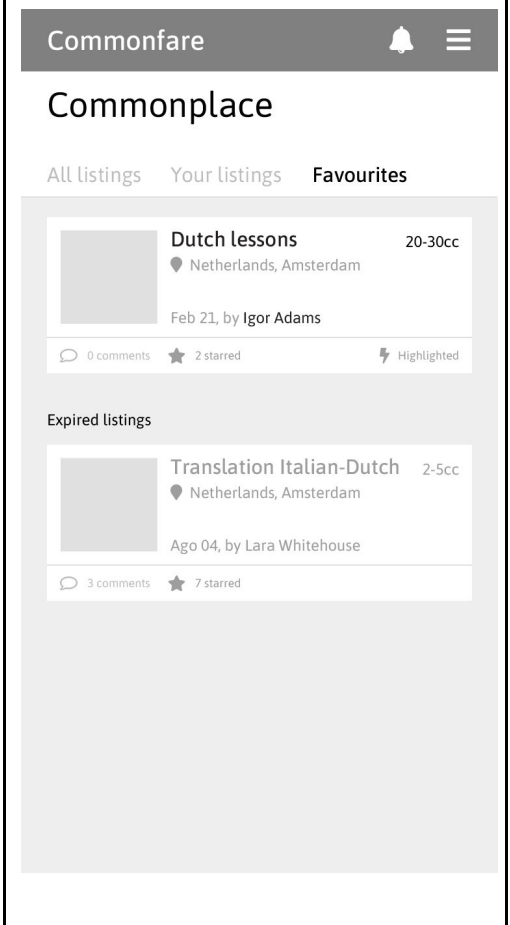


The user can **filter the results** of *all listings* in the Commonplace.






A **single listing** can have: title, author, price, description text, tags, preview images, comments.

It is not possible to purchase directly from this page. Two Commoners need to talk to each other, and the transaction in CC must be executed manually.




Add new listing to the Commonplace: [See interactive prototype for full New listing flow](#)



Commonfare  

 Back to Commonplace


Filters

Date

All 



Min price  Max price 


Distance

Any 

Highlights


Show only results that match with your profile preferences

Commonfare  


 Back to Commonplace


Dutch lessons 20-30cc


by Igor Adams



 This listing matches your preferences


Lorem ipsum dolor sit amet is not Dutch language, but you will learn way more than this. Contact me for details.


 Netherlands, Amsterdam


 Added on February 21



 5 commoners starred this


 3 comments 

 **Lara Whitehouse**
Feb 27, 2018 at 13:38
What about consectetur adipiscing eli? How many sit for the amet?

 **Igor Adams**
Feb 28, 2018 at 11:50
Lorem ipsum dolor sit amet!!

 **anonymous999**
Feb 28, 2018 at 19:40
Adipiscing eli!

Commonfare  

 Back to Commonplace

New listing

Title *

Min price (in CC) * Max price (in CC)

Description *

Tags

Area *

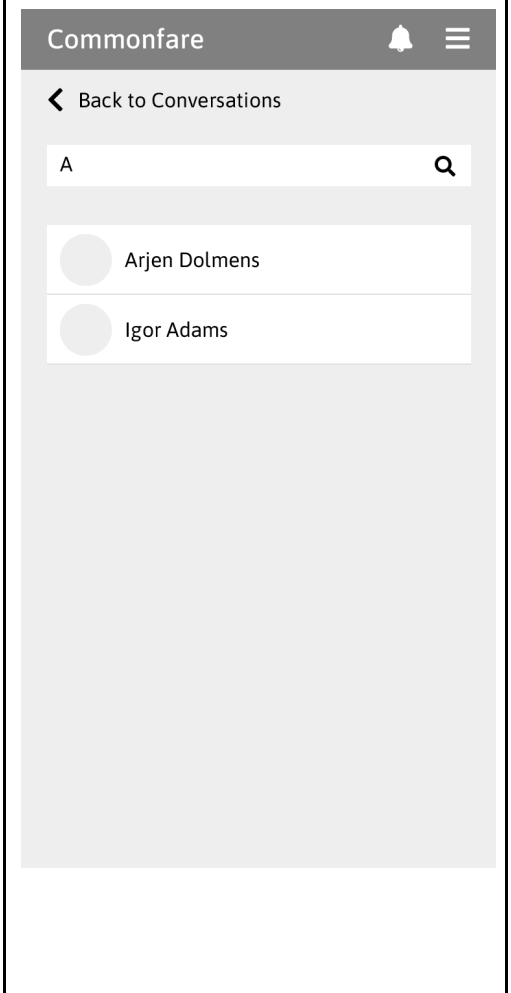
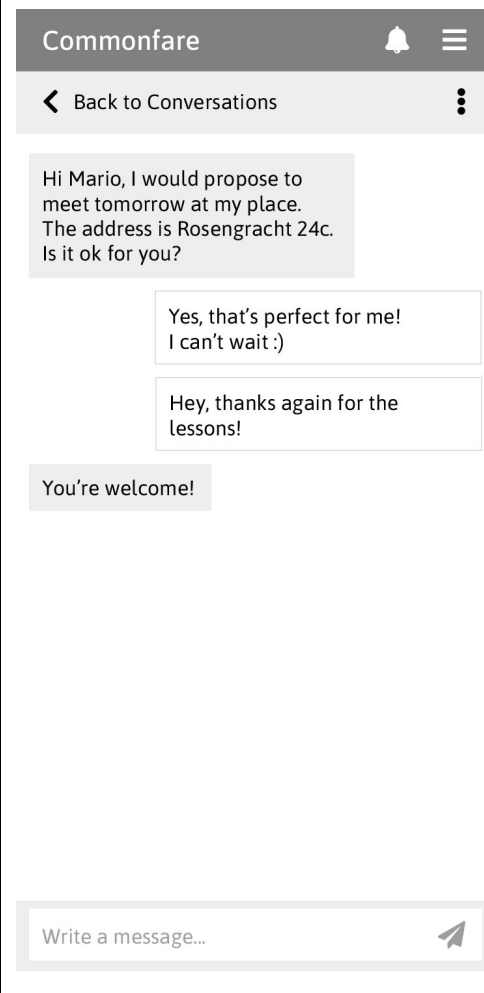
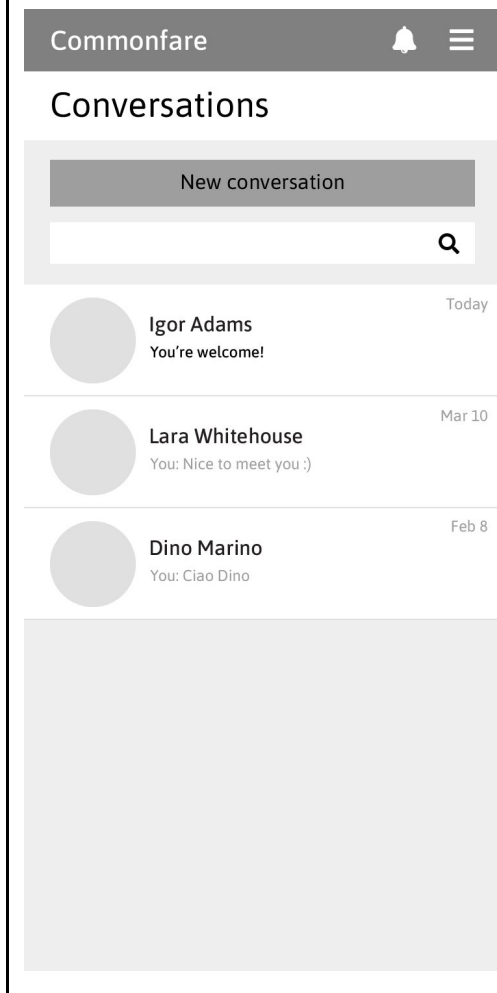
Preview image

1.7 Conversations

Conversations page is a list of all the Commoners with which the considered Commoner chatted. Commoners can start a conversation with any other Commoner.

The icon on the top-right corner allows to visit Commoner's profile and to transfer cc

New message: [See interactive prototype for full New conversation flow](#)



1.8 Content Page

Content pages:

- Commoners Voices
- Good practices
- Public Benefits

- A simple **Give Feedback** button has been introduced to simply appreciate the story;
- **Related content** are displayed at the end of the story.
- The user is explicitly asked for an opinion and invited to comment the story.

The screenshot shows the Commonfare mobile app interface. At the top, there's a header with the name 'Commonfare' and a menu icon. Below that, there's a section for 'COMMONERS VOICE' featuring the story 'The African I Want, The Immigrant I Am' by BIN Italia. The story is categorized with tags like 'WORK', 'LAVORO', 'RI-MAFLOW', 'WEMAKE', 'ISOLA PEPE VERDE', 'AUTOPRODUZIONE', 'ALTOGESTIONE', 'SELF-ORGANIZATION', 'SOCIAL COOPERATION', and 'COOPERAZIONE SOCIALE'. The author's name 'BIN Italia' and location 'Milano, Italy' are shown, along with the date '21 February 2018' and '2 comments'. A 'Share this story' button is also visible.

[continues same screen]

Insomma un kit per l'autoproduzione dell'allestimento, che sarà un pezzo del più grande kit per autocostruirsi un piccolo asilo (burocrazia, organizzazione, economic...). Potenza della cooperazione sociale,

State connessi, a breve vi racconteremo meglio anche quest'altra storia!

Did you appreciate this story?

Share this story

Give feedback

Related content

CommonPoly tournament

Feb 21, by Mario Rossi

Communics – a project in comics-based digital storytelling to foster...

Feb 3, by Lara Whitehouse

What do you think about this story?

Write a comment

2 Comments

Mario Rossi

Mar 01, 2018 at 16:32

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.

Lara Whitehouse

Feb 28, 2018 at 13:02

Lorem ipsum dolor sit amet, consectetur adipiscing elit!

“Quello che ti salva la vita sono le persone” dice Sumiti, e in questa frase si condensa il significato di questa breve storia che unisce i percorsi di Soprasotto e di Ri-Maflow, due “buone pratiche” di Milano, già intervistate per la ricerca Commonfare. Sumiti e il suo socio, Andrea, sono due architetti-artigiani che hanno aperto il loro laboratorio di falegnameria, laboratorio del Pesce rosso, dentro Ri-Maflow, la fabbrica recuperata che attualmente ospita, tra tante iniziative, anche vari laboratori e coworking. Invece Maddalena, insieme a Emanuela, Samantha, Nuria e tanti genitori, quattro anni fa ha dato vita all'asilo nido autogestito Soprasotto, un laboratorio formativo autogovernato da giovani famiglie di freelance e precari che hanno deciso di autorganizzarsi per risolvere la difficoltà ad accedere al nido pubblico.

[continues same screen]

1.9 About Section

The **About Section** contains different subsections.
Different type of content are allowed: text, blockquote, paragraph title, image (with caption), video.

A sub-navigation menu allows to browse the contents

At the end of each about subsection, a link to the previous and next about content.

| | | |
|--|--|--|
| <div data-bbox="54 241 529 304"> <p>Commonfare ☰</p> </div> <div data-bbox="54 304 529 367"> <p>Table of contents ▼</p> </div> <div data-bbox="76 383 217 427"> <h1>1. Intro</h1> </div> <div data-bbox="76 456 466 609"> <p>Commonfare is a collaborative project which seeks to foster the autonomy and self-determination of people, thus promoting an alternative mode of production and life.</p> </div> <div data-bbox="76 642 483 826"> <p>We are a European group of researchers and activists who recognize the precarization of individual lives and social relations due to the crisis of traditional welfare systems and growing social inequalities.</p> </div> <div data-bbox="76 862 475 974"> <p>This is a reality experienced by almost 25% of the European population.</p> </div> <div data-bbox="76 1008 474 1220"> <p>We are working following a participatory approach in three European countries – Croatia, Italy, and The Netherlands – to involve and enable those people who struggle with precariousness, impoverishment, low income, unemployment.</p> </div> <div data-bbox="54 1263 529 1496"> </div> <div data-bbox="76 1505 347 1527"> <p>Commonfare is a collaborative project</p> </div> <div data-bbox="76 1556 201 1594"> <h2>Subtitle</h2> </div> <div data-bbox="76 1599 501 1800"> <p>The Commonfare project wants to make visible and support such processes of collective and individual empowerment and autonomous existential paths, thereby restoring a sense of future within a deeply changed environmental, material and subjective context.</p> </div> | <div data-bbox="561 241 1037 304"> <p>Commonfare ☰</p> </div> <div data-bbox="561 304 1037 367"> <p>Table of contents ▲</p> </div> <div data-bbox="584 376 909 730"> <ol style="list-style-type: none"> 1. Intro 2. Manifesto 3. Values 4. Team 5. Sections of the platform 6. Video Tutorial 7. Contact 8. Press </div> <div data-bbox="584 770 724 815"> <h1>1. Intro</h1> </div> <div data-bbox="584 844 971 996"> <p>Commonfare is a collaborative project which seeks to foster the autonomy and self-determination of people, thus promoting an alternative mode of production and life.</p> </div> <div data-bbox="584 1030 975 1059"> <p>We are a European group of researchers</p> </div> | <div data-bbox="1069 241 1544 304"> <p>Commonfare ☰</p> </div> <div data-bbox="1069 304 1544 367"> <p>Table of contents ▼</p> </div> <div data-bbox="1091 383 1417 427"> <h1>6. Video Tutorial</h1> </div> <div data-bbox="1091 456 1517 609"> <p>This is the video tutorial of Commonfare, a collaborative project which seeks to foster the autonomy and self-determination of people, thus promoting an alternative mode of production and life.</p> </div> <div data-bbox="1066 642 1548 875"> </div> <div data-bbox="1091 1146 1209 1193"> <p>Previous section Manifesto</p> </div> <div data-bbox="1442 1146 1528 1193"> <p>Next section Contact</p> </div> <div data-bbox="1069 1227 1544 1272"> <p>Table of contents ▼</p> </div> |
|--|--|--|

Table 9. Low fidelity mockup of all Release 3 sections.

APPENDIX A4

1. FIELD RESEARCH: USER EVALUATION OF RELEASE 3

1.1 Briefing and Task Feedback of the Evaluation

Introduction to the Commonfare study

Participants are presented with the following short description of the Commonfare:

“Commonfare is a collaborative project which seeks to foster the autonomy and self-determination of people, thus promoting an alternative mode of production and life. We are working in three European countries – Croatia, Italy, and The Netherlands – to involve and enable those people who struggle with impoverishment, low income, and unemployment.

We developed an online collaborative platform, [staging URL], to support the processes of collective and individual empowerment by collecting and sharing information on welfare provisions from different countries; raising the awareness of existing welfare initiatives based on social cooperation and specific needs of the people; and building a complementary monetary and financial circuit in order to ensure the full economic sustainability and the free development of bottom-up welfare practices.

The aim is to design a system that is easy to interact with, and that will help people to be more engaged with our project. We are interested in your feedback, both negative and positive!”.

Participants briefing

Participants are given the informed consent and a short questionnaire to collect the background information.

Introducing procedure to participants

Participants are introduced with the following short description of the study:

“The study aims to examine the usability of the interface, how well it would satisfy the needs of potential users, and whether and to what extent it would meet their expectations of what it should look like and how it should respond. The reason we asked you to participate in this study is to help us to discover and solve these issues by doing tasks on the website and sharing with us your thoughts and ideas while interacting with the interface. In the study, we are evaluating the design of the interface - not you. So if anytime you need help, we will show you what to do.

Thank you very much for taking your time to participate and for helping us out with the project !”.

Tasks

Participants are asked to briefly use the the staging website for 5-10 minutes to get familiar with the website. The participants will be provided with the copies of the task descriptions in case they may need it. Then, the procedure continues as follows.

| | |
|-------------------------------|--|
| <p>Task 1: Profile</p> | <p><i>“Imagine you wish to attend the Santarcangelo Festival, the oldest street theatre festival in Italy happening in mid-July. You want to share your experiences on the commonfare platform. To start using it, you need to create and populate your profile.”</i></p> <p>[Ask them to change username and avatar]</p> <p>[After completing the task the participant is asked to answer questions on ease of use and satisfaction about the task on a 5-point likert scale]</p> |
| <p>Task 2: Groups</p> | <p><i>“You want to share your stories and experiences from the festival, so you want to create a group, invite existing users to join the group, for example the Commoner user, and start a discussion about the festival”.</i></p> <p>[Ask them to change the description of the group]</p> <p>[After completing the task the participant is asked to answer questions on ease of use and satisfaction about the task on a 5-point likert scale]</p> |
| <p>Task 3: Stories</p> | <p><i>“Imagine you attend the festival, and the first day (July 6) you saw an interesting performance on the concepts of power and control of the masses. The performance inspired you and you want to create, publish and share the story about it.”</i></p> <p>[Indicate that participant should create the story by using a template]</p> <p>[After publishing and sharing ask them to change the title, description and tags of the story]</p> <p>[Ask them to delete the story]</p> <p>[Ask them to create the story by using the old editor]</p> <p>[After publishing and sharing ask them to change the title, description and image of the story]</p> <p>[Ask them to start a conversation by sharing the story with the user called Commoner]</p> <p>[Ask them to delete the story]</p> |

| | |
|---|---|
| | <p>[After completing the task the participant is asked to answer questions on ease of use and satisfaction about the task on a 5-point likert scale]</p> |
| <p>Task 4: Good practice and public benefits</p> | <p><i>"You find out that during the festival there will be a large street market in which the virtual currency known as commoncoin (cc) will be used for exchange. You want to spread the word and create and share it as a good practice on the commonfare platform."</i></p> <p>[Ask them to create a good practice by using a mean of their choice, old editor or template]</p> <p>[After publishing and sharing ask them to change the title and tags of the practice]</p> <p>[Ask them to delete the practice]</p> <p>[Ask them to create a public benefit by using a mean of their choice, old editor or template]</p> <p>[Ask them to delete the benefit]</p> <p>[After completing the task the participant is asked to answer questions on ease of use and satisfaction about the task on a 5-point likert scale]</p> |
| <p>Task 5: Commonplace</p> | <p><i>"You have some things to exchange that you think you could share on the commonfare platform. How would you do it?"</i></p> <p>[After creating ask them to change the price range]</p> <p>[Ask them to leave a comment for Wookie]</p> <p>[Ask them to delete the listing]</p> <p>[After completing the task the participant is asked to answer questions on ease of use and satisfaction about the task on a 5-point likert scale]</p> |
| <p>Task 6: Social wallet and commoncoins</p> | <p><i>"When you joined the Commonfare community, you were assigned a social wallet with a certain credit as the number of Common Coins. You want to give some of that credit, for example 100 cc, to the Commoner user."</i></p> <p>[After completing the task the participant is asked to answer questions on ease of use and satisfaction about the task on a 5-point likert scale]</p> |
| <p>Task 7: Search and navigation</p> | <p><i>"Imagine you want to find out more about the welfare provisions."</i></p> <p><i>"Next, you are interested to see if there are rent allowances."</i></p> <p><i>"Now, you wish to be informed about the health benefits."</i></p> <p><i>"Finally, you heard the story on overthrowing capitalism and want to read about it."</i></p> |

| | |
|----------------------------------|---|
| | [After completing the task the participant is asked to answer questions on ease of use and satisfaction about the task on a 5-point likert scale] |
| Task 8: Communication | <i>"How would you write a message to the Commoner user?"</i> [After completing the task the participant is asked to answer questions on ease of use and satisfaction about the task on a 5-point likert scale] |

Table 10. Evaluation of R3 task list.

When the session is completed, the participant is asked to:
 answer questions on overall ease of use and satisfaction of the website using a 5-point likert scale;
 list three to five things they liked most about the website;
 list three to five things they liked least about the website;
 note any further comments or improvements on the design.

1.2 Participant Demographics

| Participant | Age | Gender | SN/application experience | Platform |
|-------------|-----|--------|---------------------------|---------------------------------------|
| 1 | 37 | Female | Yes | Laptop Mac OS (Chrome) |
| 2 | 22 | Female | Yes | Laptop Windows OS (Chrome) |
| 3 | 21 | Male | Yes | Smartphone Android OS (Chrome) |
| 4 | 34 | Male | Yes | IPad Mac OS (Safari) |
| 5 | 40 | Male | Yes | Smartphone Android OS (Chrome) |
| 6 | 27 | Female | Yes | Smartphone Android OS (Chrome) |
| 7 | 23 | Male | Yes | Laptop Windows OS (Firefox) |
| 8 | 22 | Male | Yes | Smartphone iPhone Mac OS (Safari) |
| 9 | 27 | Female | Yes | Smartphone Android OS (IE and Chrome) |
| 10 | 26 | Female | Yes | Smartphone Android OS (Chrome) |

Table 11. Evaluation of R3 Participant demographics.

1.3 Evaluation Results

In the following sections we describe the results of the testing for each feature.

Profile

The profile functions (creation, changing information and deletion) worked successfully, including textual and visual data (images). Overall, the feature, its functions and information were clear to the participants. The main criticalities regarding profile are reported in Table 12.

Firstly, the participants did not find necessary the option to join and create a group when registering (10 negative comments). Next, participants tended to edit the profile with the pen icon

(10) as it created a new story. The participants did not understand the meaning of the Activities placeholder in the edit profile view (10). Some participants tried to use the feature in their native language (Italian) and noticed that not all options were translated (including text labels, button labels, explanations and messages). The content of Welcome screen (immediately after joining) was found to contain information describing some website features (e.g., stories) and proposed to move in explanation section (About). The issue on smartphones was the lack of strong contrast of the feedback message after completing an action (10).

| Severity | Control | Errors ³⁹ | Correct | Comments (number) |
|----------|--------------------------------------|----------------------|---------|---|
| High | Join and create a group | 0 | 10 | Would not use it (10). |
| High | Pen icon (edit profile) | 10 | 0 | Recognised to edit profile, but creates a story. Should be removed because there is "Edit profile" button (10). |
| High | Activities tab | 0 | 10 | This is a placeholder. Purpose is not clear (10) |
| High | Localisation | 0 | 10 | Not fully translated into Italian, for example "Choose file" (6). Should include text labels, button labels, explanations and messages. |
| Medium | Welcome screen (after Join screen) | 0 | 10 | Second and third paragraph describe features. Would move them to the About section (6). |
| Medium | Feedback messages | 0 | 10 | Appear too short on smartphones and tablet and mingles with the menu bar colour (5). Use non-transparent background colour. |
| Low | Username (Welcome after Join screen) | | | Hidden in text, allow to specify username on the Join page (4). |
| Low | Consistent colour scheme for buttons | 0 | 10 | Use always green background and white text because it is also easier to differentiate from background which is usually white or grey ("Edit profile", "Back to Conversation", etc.) (3) |

Table 12. Profile - critical controls in terms of errors, correct actions and comments.

Groups

The participants faced some problems with the group feature regarding its function and information (Table 13).

The major issue was the group membership mechanism (10). The participants elaborated on the need for a clear definition of ownership and inviting other users to join through the user search. For example, invitation works only as sharing the link to the group, and it is difficult to find the user to share it with. It is possible only manually by searching the stories from the Commoners Voices.

Similar to the profile, a proper reflection of participants' mental model was an issue when tried to create a group using the pen icon as it created a new story (10 comments). It was seen unnecessary as there was already the button for creating a group. Next, empty placeholder for Activities was not understood by the participants regarding its purpose (10). Specific controls were not translated into

³⁹ Errors refer to the mistakes in recognition of icon, button or text entry field.

Italian, and they should include text labels, button labels, explanations and messages (6). Feedback messages mix with the red menu in the background, therefore, should use the non-transparent background colour (5).

Less severe issues are as follows: consistent colour scheme for buttons to improve recognition (3). Next, some participants would include group search (3) and change button labels to reflect meaning better (e.g., save instead of edit). Finally, the entire rectangular group widget should be an active link (3).

| Severity | Control | Errors | Correct | Comments (number) |
|----------|--------------------------------------|--------|---------|---|
| High | Membership mechanism | 10 | 0 | Group membership mechanism can be improved by defining the ownership and member invitation that includes user search function (7). |
| High | Pen icon (groups tab) | 10 | 0 | Recognised to create a group, but creates a story. Should be removed because there is "Create group" button (10). |
| High | Activities tab | 0 | 10 | This is a placeholder. Purpose is not clear (10). |
| High | Localisation | 0 | 10 | Not fully translated into Italian, for example "Choose file" for avatar (6). Should include text labels, button labels, explanations and messages. |
| Medium | Feedback messages | 0 | 10 | Appear too short on smartphones and tablet and mingles with the menu bar colour (5). Use non-transparent background colour. |
| Low | Consistent colour scheme for buttons | 0 | 10 | Use always green background and white text because it is also easier to differentiate from background which is usually white or grey ("Edit groups", "Start a Conversation", etc.) (3). |
| Low | Search for existing groups | 3 | 0 | Would like to have this option as part of standard search box, in addition to existing categories such as tags (3). |
| Low | Edit group page | 0 | 0 | Change label "Edit" into "Save" (3). |
| Low | Group widget | 3 | 7 | Make the entire widget (rectangle) active link (3). |

Table 13. Groups - critical controls in terms of errors, correct actions and comments.

Storybuilder

To examine and verify different ways of creating a story, each participant was asked to complete the respective task using the old editor and a storytelling template consisting of information blocks in which users are guided by a set of questions, a question per block. The chain-based storybuilder now available in production was not evaluated in this specific test. It was pre-tested in the pilot study and 5 participants were asked to use it in the main study. However, its behaviour was unstable. In particular, after entering the title and place the plus icon to add additional information did not become visible. Furthermore, unexpected content (strikethrough text) emerged in the two fields. The issue was confirmed with the members of the design team (UNITN) during the discussion on the results.

Table 14 reports key issues with storytelling. Critical problems emerged with the question based editor (10 comments). In particular, the participants were making mistakes in recognising text entry fields. The mistakes were due to the meaning (e.g., questions contained in the blocks) and

design (e.g., lack of visual contrast and differentiation between active and inactive elements) (62 errors). Besides, the participants felt biased or constrained to enter what they were asked for in the template fields and not telling their own story (8 comments). Another issue was sharing the story (8 comments). While it was easy to obtain sharing link, finding a user to share with was difficult. Again user search was proposed to be part of the main search function. Similar to the previous, all text should be translated into the language of the user session (6 comments).

The old editor received favoured comments for its clarity and ease of use (10 comments). However, the participants suggested some improvements as follows: denoting required fields in advance so that the input does not get lost (6 comments). Using different icons for different operations (e.g., the pen symbol for edit and the plus symbol for creation) (7). Using more appropriate wording to describe the entry fields, as elaborated in Table 5.6.4 together with other proposals.

The critical platform-specific issue is that pen icon did not work properly when using the Safari and Internet Explorer Web browsers on different devices. Finally, the contrast of feedback messages and button colour scheme issues emerged as for the previous features.

| Severity | Control | Errors | Correct | Comments (number) |
|----------|----------------------------|--------|---------|---|
| High | Template | 62 | 28 | The template is confusing (10). Not clear how to enter content (10). Mistakes in recognising text entry fields (starting from tags and including successive blocks). They were due to the lack of clear meaning of the blocks, and visual contrast and visual differentiation between active elements (buttons, editable text entries) and inactive elements (labels) (62). Do not understand what type of content to enter (confused by questions). Overall, felt biased or constrained to enter what they were asked for in the blocks of information instead of telling their own story (8). Adding fields increases the amount of vertical scrolling (6). When deleting a story, the confirmation message should be "Story was successfully deleted", not destroyed (6). |
| High | Sharing a story with users | 8 | 2 | While sharing link is easy to get, the problem is to find the user to whom to send it. Include user search (8). |
| High | Localisation | 0 | 10 | Not fully translated into Italian, for example "Choose file" for avatar (6). Should include text labels, button labels, explanations and messages. |
| Medium | Old editor | 0 | 60 | Favoured among the participants (10). Required fields should be marked in advance otherwise all the input gets lost (6). Different icons should be used for different operations – plus to create and pen to edit (7). Especially if they appear on the same page (Edit story). More meaningful labels should be used (7). "Give a title to your story" for title field. "Tell your story" for description field. "Where does this story happen" for location. The images should be scaled automatically if a user selects large image (5). |

| | | | | |
|--------|--------------------------------------|---|----|---|
| | | | | The description part can accommodate its size (height) to the amount of text (6). Would choose a language before, for the entire website/user session and not when creating a story (6). Delete button too close to publish button (just below) and too small, would make it same size, but more separated (6). |
| High | Pen icon (create new story) | 3 | 7 | Does not work on Safari (iPhone, iPad, MacBook) and Internet Explorer (smartphone). It displays an empty page. This counts for all appearances of this icon across the features. |
| Medium | Feedback messages | 0 | 10 | Appear too short on smartphones and tablet and mingles with the menu bar colour (5). Use non-transparent background colour. |
| Low | Consistent colour scheme for buttons | 0 | 10 | Use always green background and white text because it is also easier to differentiate from background which is usually white or grey ("Continue Conversation", "Start Conversation", etc.) (4). |

Table 14. Stories - critical controls in terms of errors, correct actions and comments

Good practices and public benefits

The two features are analysed together as the participants faced the same problems (Table 15). The main issue was conceptual, the meaning and purpose of these features were not perceived as apparent by all participants (10). After struggling to understand their meaning, many participants (7) proposed classifying them as a type of story described with dedicated tags, "good practice" and "public benefit", respectively. Alternatively, they could be explained in the About section of the website.

Similar to the previous, the pen icon displayed an empty page when tried to create new good practice or public benefit in certain browsers. Suggestion for improving the contrast of feedback messages and button emerged.

| Severity | Control | Errors | Correct | Comments (number) |
|----------|-----------------------------|--------|---------|--|
| High | Good practice (pen icon) | 10 | 0 | Not clear what it represents (10). When tried to create by clicking on the pen icon it actually created a story (10). The participants perceived good practice as a special type of story and proposed a dedicated tag "good practice" (7). |
| High | Public benefits (pen icon) | 10 | 0 | Not clear what it represents (10). When tried to create by clicking on the pen icon it actually created a story (10). Similar to the previous, the participants perceived public benefit as a special type of story and proposed a dedicated tag "public benefit" (7). |
| High | Pen icon (create new story) | 3 | 7 | Does not work on Safari (iPhone, iPad, MacBook) and Internet Explorer (smartphone). It displays an empty page. |
| Medium | Feedback messages | 0 | 10 | Appear too short on smartphones and tablet and mingles with the menu bar colour (5). Use non-transparent background colour. |

| | | | | |
|-----|--------------------------------------|---|----|---|
| Low | Consistent colour scheme for buttons | 0 | 10 | Use always green background and white text because it is also easier to differentiate from background which is usually white or grey (“Continue Conversation”, “Start Conversation”, etc.) (4). |
|-----|--------------------------------------|---|----|---|

Table 15. Good practices and public benefits - critical controls in terms of errors, correct actions and comments.

Commonplace

The participants faced problems with initial understanding of this feature and suggested explaining it in the About section (Table 16). The pen icon created a story instead of a listing (10 comments). “My listings” options was not immediately apparent to the participants because of the weak contrast (7). This was the first time the participants were dealing with the Common Coin currency. The major issues was the absence of the frame of reference for the Common Coin value (7). Some suggested adding the examples with different artefacts to help them make an estimate. Another negative comment related to the meaning of the min and max fields specifying values in commoncoins when adding a listing (7). Similar to the previous tasks, different icons should be used to represent different actions (pen for edit and plus for creation) (7 comments).

| Severity | Control | Errors | Correct | Comments (number) |
|----------|-------------------------------|--------|---------|--|
| High | Commonplace | 0 | 10 | Not clear what it is and needs to be explained on the website (About section). However, once they enter the feature they realise what they could do there and it was easy to use (10). |
| High | Pen icon (create new listing) | 10 | 0 | Instead of a listing, it created a story (10). |
| High | My listings | 0 | 10 | Selected after seeing that pen icon does not work. However, contrast should be stronger because it is not immediately apparent. Use the same colour as for the Listings label (7). |
| High | Common Coin values | 0 | 10 | The participants complained regarding the absence of the reference value for the Common Coin, and meanings of min and max fields. It needs to be explained (7). |
| High | Edit listing page | 6 | 4 | Two identical icons with different functions (pen for creating new and pen for edit). Use plus for new and pen for edit (7). |

Table 16. Commonplace - critical controls in terms of errors, correct actions and comments.

Wallet

The preliminary version of the social wallet was tested. Overall, the participants understood and appreciated the feature. The only issue was the absence of the instructions on mandatory fields when transferring Common Coins (3 comments).

| Severity | Control | Errors | Correct | Comments (number) |
|----------|---------------------------|--------|---------|--|
| Medium | Transferring Common Coins | 3 | 7 | When input error occurs all the data previously entered gets lost. Mandatory fields should be denoted and already entered data kept in the form (3). |

Table 17. Wallet - critical controls in terms of errors, correct actions and comments.

Search and navigation

The feature was easy to find and use. However, the participants raised the requirement to implement user search (10 comments). This requirement also emerged in relation to user-related operations such as sharing stories and group membership. Less relevant issue concerns contextual search menu when using a smartphone (Table 18). There has been an overlap of the menu and the keyboard. The overlap can be decreased by either moving the contextual menu or search box more to the top part of the page (6). Finally, the entire rectangular message widget should be an active link (3).

| Severity | Control | Errors | Correct | Comments (number) |
|----------|-------------------------------------|--------|---------|--|
| High | User search | 10 | 0 | The participants expected to have user search in the main search box (10). |
| Medium | Contextual search menu (smartphone) | 0 | 7 | When typing in search box, contextual menu drops down and becomes hidden behind the keyboard (6). Suggested to move the contextual menu or search box up to decrease the overlap (6). |

Table 18. Search and navigation - critical controls in terms of errors, correct actions and comments.

Communication

The participants faced issues with this feature. Missing function of the feature is user search (10). They immediately tried to find the recipient by using the main search. Once they realised they could not do it, they were looking for users manually, by browsing through the stories in the Commoner Voices section. The message dialog itself was clear and easy to use.

| Severity | Control | Errors | Correct | Comments (number) |
|----------|----------------|--------|---------|--|
| High | User search | 10 | 0 | The participants faced issues to find the users to send the message to. They would use search box to find the users (10). Instead, they did it manually by looking for users in the stories, going to their profiles and sending messages from there by using the conversation dialog. |
| Low | Message widget | 3 | 7 | Make the entire widget (rectangle) active link (3). |

Table 19. Communication - critical controls in terms of errors, correct actions and comments.

Discussion with design guidelines

The main findings are aggregated in Table 20. To gain a deeper understanding of the issues, we describe the usability in terms of specific design qualities. In particular, function, content and aesthetics. Function refers to the quality of service (- corresponds to either missing or incomplete function). Content means the quality of information (- corresponds to either missing or inappropriate content). Aesthetics relates to the overall look and feel.

The superscript implies dependence between dimensions (for example, -^F usability influenced by function).

| Feature/Dimension | Usability | Function | Content | Aesthetics |
|---|------------------------------------|-------------------------------|-------------------------------|------------|
| <i>Profile</i> | + | + | + | + |
| <i>Groups</i> | - ^F | - | + | + |
| <i>Stories (O: old editor; T: template)</i> | + ^O - ^{T (FC)} | + ^O - ^T | + ^O - ^T | + |
| <i>Good practices</i> | - ^{FC} | - | - | + |
| <i>Public benefits</i> | - ^{FC} | - | - | + |
| <i>Commonplace</i> | - ^C | + | - | + |
| <i>Wallet</i> | + | + | - | + |
| <i>Conversation</i> | - ^F | - | + | + |
| <i>Search and navigation</i> | + | - | - | + |
| <i>General (About)</i> | + | + | - | + |

Table 20. Features of the commonfare website described in terms of usability, function, content and aesthetics.

2. SANTARCANGELO IMMEDIATE ACTION PLAN

| Feature | Problem | Solution |
|----------------------|--|--|
| Profile | Two controls with the same function on Edit profile page. | Remove the Pen icon because there is "Edit profile" button. |
| | Activities tab does not have a function. | Remove Activities tab. |
| | Welcome page cluttered with text. | Remove paragraphs describing stories from Welcome page. |
| Groups | Group ownership function incomplete. | Implement group ownership function function. |
| | Member invitation function incomplete | Implement member invitation function (part of the user search). |
| | Two controls with the same function on Groups page. | Remove the Pen icon because there is "Create group" button. |
| | Activities tab does not have a function. | Remove Activities tab. |
| | Group search does not exist. | Include search by groups in the main search box. |
| Stories | Redesign the chain-based storybuilder. | Fix the bug of overlapping text in the title and location fields. Use meaningful labels for title and location fields. Enable image preview in the image entry block. Remove the text "You haven't yet saved this Story in English". Make the plus icon visible at the storybuilder page opening. Add caption "Add new contents" to the plus icon. Replace the "Publish anonymously" button with a checkbox. "Publish as group" button should not be visible if a user has no groups. Add "Delete story" icon to the stories at Commoners Voices and Profile. Move tags text field to the bottom of the page. Redirect the story instruction in EN to the translated version to have one story in two languages. |
| | The pen icon to create a story does not work on Safari and Internet Explorer browsers. | Correct and verify cross-platform issue with the icon. |
| | The old editor visibility. | Remove as an option since it will not be used for the Santarcangelo festival. |
| Good practice | The concept is not clear. | Explain the concept in the About page. |

| | | |
|------------------------------|---------------------------|--|
| Public benefit | The concept is not clear. | Explain the concept in the About page. |
| Commonplace | The concept is not clear. | Explain the concept in the About page. |
| | The design of listing. | The pen icon should create a listing, not a story. "My Listings" label should use stronger colour to for better visibility. The explanation of the commoncoin needs to be provided. The reference value for the commoncoin needs to be provided. The purpose of fields for min and max values for a listing needs explanation. |
| Wallet | | When transferring commoncoins, mandatory fields should be denoted. Implement the QR code printing for the sellers. Put two decimals after the dot (number format). |
| Conversation | | Make the entire message widget (rectangle) active link. Add "Refresh page to see replies" button to update the window with messages. |
| Search and navigation | | Implement user search. Move the contextual menu or search box up to decrease the overlap with the keyboard (concerns smartphones, when typing in text in the search box. |
| General | Common | IT localisation should include all menus, labels and buttons. Use non-transparent background colour for feedback messages. Use consistent colour scheme for buttons - green background and white text for better contrast against page colour. Include user search in the main search to improve communication and sharing. Use plus symbol for creation and pen symbol for edit operations across the features. |
| | Landing page | Redesign page - slogan and visual design (images) |
| | About page | Describe the features and their elements that were not clear to the participants (commoner voices, good practices, public benefits, Commonplace, Common Coin) in the About page. |

Table 21. List of immediate actions to take following R3 evaluation, prior to Santarcangelo Festival.

3. FIELD RESEARCH: USER EVALUATION OF STORYBUILDER

3.1 Introduction to the study

Participants were presented with the following short description of the Commonfare:

"Commonfare.net provides a platform for everyone to share experiences, foster ventures, and connect with people who want to support each other. It is not a social network. Rather, commonfare.net is a platform for social innovation intended for developing relationships among people through mutual help. We think this can be possible starting from the stories we decide to share with other people. In this spirit, the feature "Commoners Voices" hosts stories – both visual and verbal – about social change and social justice. In this feature, you can communicate and share descriptions of the world we live in, of what we know, and of what we desire.

The aim is to design a feature that is easy to interact with, and that will help people to be more engaged with our project. We are interested in your feedback, both negative and positive".

3.2 Participants briefing

Participants are given the informed consent and a short questionnaire to collect the background information.

3.3 Participant Demographics

| Participant | Age | Gender | Story-building app experience | Platform |
|-------------|-----|--------|-------------------------------|---------------------------------|
| 1 | 29 | Male | No | Smartphone Android OS (Chrome) |
| 2 | 43 | Female | No | Smartphone Android OS (Chrome) |
| 3 | 36 | Female | No | Smartphone Android OS (Chrome) |
| 4 | 29 | Female | No | Smartphone Android OS (Chrome) |
| 5 | 33 | Male | Yes (Pixton) | Smartphone IOS (Safari, Chrome) |
| 6 | 25 | Male | No | Smartphone IOS (Safari, Chrome) |

Table 22. R3 second evaluation storytelling participant demographics.

3.4 Introducing procedure to participants

Participants are introduced with the following short description of the study:

"The study aims to examine the usability of the storybuilder, a tool to create stories. In particular, how well it would satisfy the needs of potential users, and whether and to what extent it would meet their expectations of what it should look like and how it should respond. The reason we asked you to participate in this study is to help us to discover and solve these issues by doing tasks on the website and sharing with us your thoughts and ideas while interacting with the interface. In the study, we are evaluating the design of the interface - not you. So if anytime you need help, we will show you what to do. Thank you very much for taking your time to participate and for helping us out with the project!"

Participants are asked to briefly use the commonfare.net for 5-10 minutes to get familiar with the website, with the help of the researcher. The task consists of three steps:

1. reading the poster (Figure 42) and scanning the QR code which points to the story on how to write a story
(<https://commonfare.net/en/stories/we-can-change-things-starting-from-the-stories-we-tell>);
2. reading the story containing the instruction on how to write a story;
3. writing a story.

Accordingly, the procedure continues as follows.

"Please read the poster and follow the instructions by scanning the QR code."

"Please read the instructions on how to prepare a story."

“Imagine a nice experience that recently happened to you, or an interesting event you attended. How would you write a story about it ?”

[Ask them to insert tags, two images and a video]

[Ask for different ways of sharing]

[Ask them to change the title, description and tags for the story]

[Ask them to delete the story]

[After completing the task the participant is asked to answer questions on the clarity of instructions, ease of use and satisfaction about the template-based storybuilder on a 5-point likert scale]

When the session is completed, the participant is asked to:

- list three things they liked most about the storybuilding process;
- list three things they liked least about the storybuilding process.

WE CAN CHANGE THINGS, STARTING FROM THE STORIES WE TELL

Commonfare.net provides a platform for everyone to share experiences, foster ventures, and connect with people who want to support each other. It is not a social network. Rather, Commonfare is a platform for social innovation intended for developing relationships among people through mutual help, information sharing about available economical means, and proofs of others' successful experiences related to precariousness, welfare, and social inclusion. It also informs about existing public benefits.

Commonfare.net allows to create new relationship also offline. To facilitate new meetings, we organize events in Europe and we support participation by contributing to travel, room and board costs for the writers of selected stories. Here at the Santarcangelo Festival there is a Commoner supported by Commonfare: find the writer out and enjoy sharing your respective experiences.

You can participate in next events.

Visit **commonfare.net** and share your experience: we can change things starting from the story you can tell.



Figure 49. The poster with the QR code which points to the story on how to write a story.

4. FIELD RESEARCH: SANTARCANGELO DESIGN

4.1 Workflow

How to buy services/goods:

1. CUSTOMER goes to the SELLER and asks for a service/good
2. SELLER asks the CUSTOMER to show their Talisman (if the requested service/good is available)
3. CUSTOMER shows the Talisman
4. SELLER scans the Talisman with their phone
5. SELLER starts the withdrawal process, specifying amount and description
6. If CUSTOMER has enough SantaCoins:
 - a. SELLER sees the confirmation page
 - b. SELLER shows confirmation page to CUSTOMER
 - c. CUSTOMER clicks 'confirm' to complete the transaction
7. If CUSTOMER doesn't have enough SantaCoins:
 - a. SELLER receives a warning (not enough SantaCoins)
 - b. SELLER suggests the CUSTOMER to top-up their wallet

How to make top-ups:

1. CUSTOMER goes to the ISSUER and asks for a top-up
2. ISSUER asks for Talisman or Commoner name
3. CUSTOMER shows the Talisman or tells Commoner name
4. ISSUER scans the Talisman or types the Commoner name
5. ISSUER asks to the CUSTOMER the amount to top-up
6. ISSUER starts the top-up process, specifying amount and description (top-up)
7. ISSUER shows confirmation page to CUSTOMER
8. If CUSTOMER confirms, ISSUER completes the transaction

4.2 Observation Guide

Ethnographic observation guide for researchers at Santarcangelo Festival

1. How people use (practices):
 - a. the Santacoin / Talisman
 - b. the Social Wallet (first login, checking balance, etc.)
 - c. commonfare.net at large (if any)
 - d. Which device people use
2. How people talk of (discourses):
 - a. How people talk of SantaCoin and wallet
 - b. How people talk of cryptocurrencies in general, not only SantaCoin (positive or negative terms, do they know only bitcoin or also other currencies, to what they associate SantaCoin / as an example or instance of what)
 - c. How people talk about digital platforms facing social issues?
3. What about CF folded poster with QR code? Do people go checking? What they do with stickers? Do they talk about them, do they try to guess what cf.net or a GP is?
4. How staff at places of interest use the social wallet (this may be complemented with ethnographic interviews to some members of staff, possibly towards the end of the festival).

4.3 Interview and Other Questions for Attendees and Staff

Included here is the guide for questions for festival attendees that are relevant to commonfare.net design:

Informal questions for attendees

1. Focus on tools:
 - a. How people use the SantaCoin (when, to purchase what, for what instead they use euro) -- Example questions: How is going the festival for you with this novelty of the SantaCoin? Are you using the talisman only or also the digital wallet?
 - b. How people use the wallet (first login, checking balance, etc.) -- Example questions: If you did use the wallet, what do you think about it? Does it work? Is it easy to

understand and be used? What is missing? What did you expect and did not find (e.g. wallet functionalities)?

- c. How people use commonfare.net at large (if any) -- Example questions: Did you explore cf.net a little? What do you see on cf.net? What do you think cf.net is for? What do you think about it (content, usefulness, usability, aesthetics)? Do you think you will create an account and/or contribute in the future? What are the features you think are important to include at socio-economic and technical level?

2. Focus on larger socio-technical issues:

- a. How people talk of cryptocurrencies in general (positive or negative terms, do they know only bitcoin or also other currencies, to what they associate SantaCoin / as an example or instance of what).
- b. How people talk about digital platforms facing social issues

Interview questions with attendees

1. Biographies, identities, stories, experiences

- a. Can you tell me something about you (where do you live, what is your work)?
- b. What brings you to the Festival (cosa ti porta a Santarcangelo)? Is it your first year here or did you come in the previous editions?

2. Relations with the context/target population: Santarcangelo, creative industries, freelancers

- a. How did you come to know about Santarcangelo Festival?
- b. What is the thing you like most about the festival?
- c. According to the official [introduction](#) of the Festival, this edition (titled “cuore in gola”) addresses themes such as affect and emotions. In particular, fear is presented “the main condition of contemporaneity” and “Fear has become more than just an emotion, but a driving force that rules over economics, politics, human relationships”. What do you think about these statements?
- d. Is there any relationship between your profession and your attendance at Santarcangelo Festival?

3. Interaction with commonfare.net at the festival

- a. Did you come to know the commonfare.net platform in these days or before from the SantaCoin page of the Festival website?

- b. What do you think about it (content, usefulness, usability, aesthetics)?
 - c. Do you used it?
 - d. What did you explore, if any, on the platform?
 - e. Do you think you will create an account and/or contribute in the future?
4. Relations with digital platforms
- a. What is your relationship with social media? Do you have Facebook, Twitter, other social media? If so how do you use them?
 - b. Going back to emotions as theme of the festival, what emotions do you usually associate to these social media you use?
 - c. Commonfare.net is a digital platform to foster connections among people coping with challenging experience such as precariousness and to foster social change: what features do you think it should have? And what it should NOT have?

Interview questions for festival staff

- 1. The Social
 - a. Can you tell me something about you: Where do you live? What is your work? What is the work you would like to do?
 - b. What brings you to the Festival? Is it your first year here or did you come in the previous editions? Which is your role/work at the festival? What is the thing you like most about collaborating to the festival? Why are you doing so?
- 2. The Technical
 - a. How is going the festival for you with this novelty of the Santa Coin? Do you think it has been a good idea/innovation? Does it works?
 - b. Did you incur any issue in using the wallet? Major asset? Major problem? Which is the added value, if any, to you? Were the infographics clear and helpful? What is missing in terms of functionality and content?
- 3. Both
 - a. Did you came to know the commonfare.net platform in these days? What do you think about it (content, usefulness, usability, aesthetics)? What did you explore, if any, on the platform? Do you think you will create an account and/or contribute in

the future? What are the features you think are important to include at socio-economic and technical level? What are the feature that must NOT be there?

- b. What is your relationship with digital platforms and social media? Do you have Facebook, Twitter, other social media? If so how do you use them, what do you do on them? Do you use other digital platforms? Which ones? For what?