Karrot: a case-study of a digital tool that supports grassroots-movements in saving and sharing resources

Contributors:

Philip Engelbutzeder is a PhD student and freelance researcher in the fields of socio-informatics and plural economics. His research focuses on sustainable food practices, with emphasis on the practices of saving and sharing food. Philip Engelbutzeder is an action researcher who has spent many years with grassroots movements, both with those designing open source applications and with local communities using these.

Nick Sellen is a software developer who became interested in community empowerment and where software can play a role in making this work. This led him to rethink a lot of the assumptions about how software is produced and become interested in participatory design processes, skill sharing, resilience, and community organising. He is also wondering why he is writing about himself in third person.

Bruno Chies is a community organiser who started a food saving initiative in Gothenburg, Sweden and is still amazed about how much people can accomplish with so little economic resources. He is also part of the team of active contributors for Karrot, usually taking a role of relaying feedback from users, conceptualizing and co-designing features, and eventually adventuring on some more technical parts.

Introduction:

The "Peak Oil" or "Peak-Everything" syndrome (Heinberg 2007), but even more so the Lehman-Brothers and Corona crises have expanded the sustainability discourse beyond ecological concerns to include an aspect that was previously hardly considered relevant: Resilience as the ability of society, the economy, a technical and/or social system or even an individual to process (external) disturbances without losing the ability to survive and to function originally. In a similar vein, HCI scientists are calling for a new debate on the concept of sustainability, which would help to break down previous divisions in SHCI and generally take a more radical stance in HCI (Knowles 2018).

In recent years academic interest in grassroot-movements is growing, as top-down regulations are not expected, but bottom-up interventions seem promising in their dynamical local organization structure to understand and encourage change towards sustainable practices (Ferguson and Lovell, 2015). These structures are often supported by open source initiatives, which design software for self-organization and also often provide general information, advertising material and regulations. In the following we present such an initiative and its digital artifact: karrot.world.

The interest of our contribution to the workshop is threefold: We aim to introduce the saving and sharing platform karrot.world to the HCI-community, discuss certain design issues and find interested researchers for future collaboration.

Background and the concept of food-saving/sharing

Karrot is a digital tool to facilitate the organizing of groups that want to save food from being wasted and to share it broadly with the public. It is also being developed and tested for other similar movements and groups organizing similarly to save and share other resources. The concept of foodsaving comes from the experience of the foodsharing movement in Germany and its anchor platform foodsharing.de. The concept and practice of food saving and sharing, especially within the context of foodsharing.de and karrot.world is that people can organize themselves, on a voluntary basis and with no money exchange involved, to save food from being wasted and to share it freely with anyone. This has been achieved most effectively by establishing

cooperation with stores, markets, bakeries, restaurants, etc. to pick up their surplus food and to either consume the food themselves (i.e the volunteers), share it with family and friends or bring the food to sharing points that are open to the public, like community fridges, pantries and the like.

The team that started working on the development of Karrot, alongside with establishing the international network of foodsaving initiatives (foodsaving.world), aimed to provide a free and open-source software for groups that were starting or had already been established outside Germany, because these groups could not make use of foodsharing.de due to many technical and language barriers. An important design premise that is still informing many of the design decisions of the team behind Karrot has been one of a *political-conceptual* nature, which is basically about how these groups should be independent and self-governed, with their own rules and processes. We will discuss these later. For the moment, it is important to explain the main features of Karrot - mainly inspired by the organization of foodsharing Germany - that are aimed towards facilitating the dynamics of organizing and coordinating people working on a voluntary basis:

- Tasks or activities in a determined place and time can be created and self-assigned by members of a group. In the case of food saving, these are usually food pickups at stores, but they can also be meetings or the distribution of saved food at sharing points
- Ad-like offers can be created to share things within the group.
- Contextual communication: there is a general wall for group conversation, but also specific chats regarding an activity, a place, an offer or between members of the group.

foodsharing.de (obscured for data privacy)
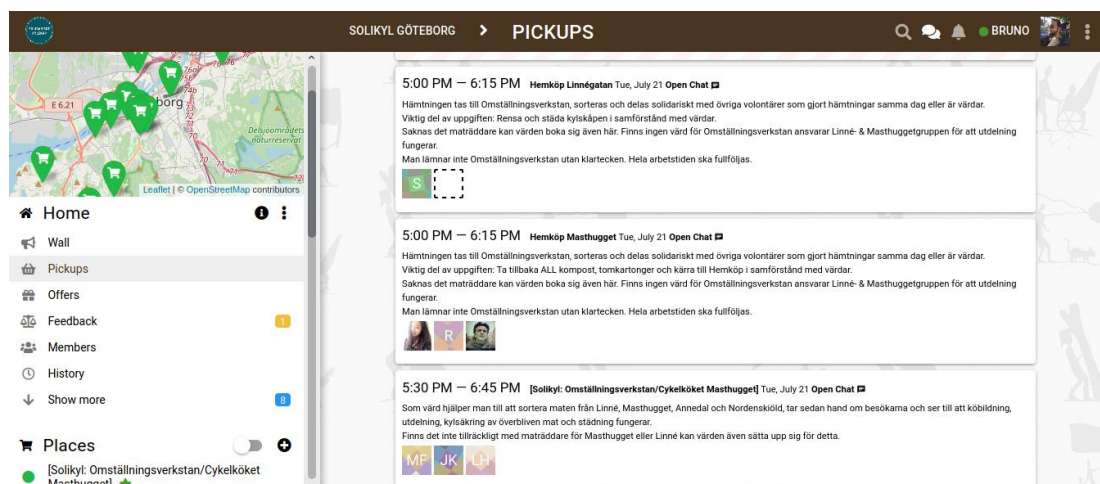
karrot.world

Back to the question of governance, a problem identified with both the platform foodsharing.de and the organization foodsharing itself (they have been mirroring each other in many ways) was the presence of

unwanted hierarchies, which were purposely avoided in the design of Karrot. Some of the basic features that distinguish Karrot from foodsharing in this political-conceptual sense are the following:

- Groups are closed and sovereign entities. The main features for communicating and organizing are not visible to the public or anyone who's not a member of the group.
- Instead of there being group admins, there is a trust system that allows group members to edit and do other actions, like accepting applications from newcomers, that are relevant to the whole group.
- Full transparency of actions performed by members in the group, which allows for accountability of individuals, but also more efficiency in organizing.
- Conflict resolution: members might raise an issue with another member for misconduct, and all can discuss and vote if a person should be excluded from the group, stay or if the discussion should be prolonged.
- more? yes! It's possible for groups to self-host their own instance of Karrot using a custom domain name if they want to, otherwise they can use the hosted instance at karrot.world

Critical issues

Within the workshop we would like to explore 3 issues and thereby find interested HCI-researchers and practitioners to cooperate in understanding and supporting saving and sharing practices:

1. Small local initiatives & big global issues - a question of networking and scaling?

The foodsharing.de project grew as one unified organization and software platform, but reached geographical and organizational scaling limits. For Karrot we avoided this structure to allow diverse groups to share a platform. However, this means they are detached from each other with their own structures and values, and no collective voice. It also makes it harder to explain how the project and the software relate.

Some groups are reaching scaling limits and considering how to grow, we want to support this whilst keeping power within the individual grassroots projects. Expansion could be supported through (con)federation or subgroups. Both approaches raise many interesting governance issues.

Additionally, as groups scale the vision of the founders becomes diluted by the incoming members. For us, saving and sharing resources is part of a bigger vision of a self-empowered bottom-up society and we want to avoid the scenario that occurs in some parts of foodsharing.de where filling pickup slots is the only goal.

2. How can an open source project with limited access to resources incorporate user feedback and research from a diverse set of groups to design and develop a supporting platform?

We want the groups to make the software work for them and participate in its evolution. However, groups naturally have different needs and structures. We also have our own ideas about how things could work but don't want to dominate them. Combining these different models can be tricky!

The groups are usually not technology-focused; they are activists, community organizers, and citizens. It's important to us to support this real-life action, but it presents many challenges and resources and skills are very lacking! We are building a community design process to structure this more, but existing models are thin on the ground. We're borrowing ideas from Google's design sprint but significant adaptation will be needed to support more flexible participation.

Additionally, we are not aligned with economic growth so traditional sources of funding are usually not available. If Karrot groups are working well in a city it probably has a negative impact on GDP, as people come to rely on each other and save resources for their needs in non-commercial transactions.

3. Designing for democratic governance

All governance features we implement use democratic approaches, for some groups this comes quite naturally, for others it doesn't match their existing structures. So far though, all the groups have embraced it, even if they found it complicated to think about at first. Our insight is still quite limited though.

As we have access to much of the collective wisdom from foodsharing.de and other projects we would like to find better ways to support groups to use democratic processes at their core, e.g. making decisions, creating constitutions, and dealing with conflicts.

There is a lot of theories concerning democratic governance but many challenges turning them into features in the software that are intuitive and work well within the context of the existing groups.

A case from Philip for collaboration between researches and activists

Through my involvement as an action researcher (Hayes, 2011) in grassroots movements, which dealt with economic issues of sustainability in a social context where the design and use of digital artifacts was an everyday practice, I noticed a special opportunity to build bridges: For the design there was hardly any research available on the socio-technical context of the users, the needs of the community were rather unknown and came from the experience of the designers themselves, and appropriation studies were missing. The grassroots movements simply had no resources for this. On the other hand, science, often out of the ivory tower, was looking for interesting fields of research that would make a meaningful contribution (to sustainability). From a distance, however, too often only prototypes were designed, which later ended up being sunk. In this context, HCI scientists asked themselves how they could contribute to the sustainability of their research projects (Meurer, 2018).

After I started to focus my action research on a local context a year ago, people from the design environment of foodsharing.de and karrot.world are now starting to visit me to look at the local work and to find a link to HCI. In addition to reading HCI literature together and registering for HCI seminars, the designers themselves also initiated this contribution to the workshop. The question for us in this context is how we can strengthen the collaboration between the open source community and the scientific community, especially how we can make personal connections. Because for the open source communities "projects are their relationships" (Quote from Nick Sellen when he was visiting me).

References:

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