

2. Distributed Organizing in Practice

Distributed organizing can be found in various fields. The most prominent examples come from the areas of politics (2.1), research and innovation (2.2), product and service design (2.3), as well as work organization (2.4). In the following, for each of these fields examples are presented.

2.1. Politics

The Obama Campaign from 2008 and the rise of the “Pirate Party” in Europe have made first examples of the involvement of distributed agents into political discourse and decision processes. Figure 1 shows screenshots of the se platforms.

Obama’s campaign used online media of all sort, but also provided a platform for user involvement, which was promoted to the official petition platform of the White House.¹⁸ The pirate party tries to involve their members using a system called “liquid feedback”,¹⁹ which also allows for creating petitions, discussing and supporting them.¹⁹

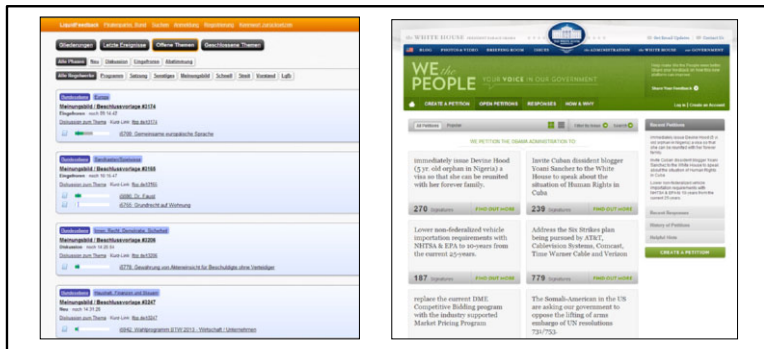


Figure 1: Liquid Feedback at Pirate Party (left) and petitions at the White House (right)

This involvement is backed by several types of information systems and

18 <https://petitions.whitehouse.gov>

19 See <http://liquidfeedback.org> and <https://lqfb.piratenpartei.de>, for the system in use.

movements, such as open government²⁰ and open data²¹. The main aims of these movements are closer involvement of citizens in democratic decision-making processes and more transparency for controlling these. The aim and scope of these ideas is heavily debated, as the nature of representation and confidentiality are tackled by the concepts propagated. However, with the technical possibilities being made use of, it is time to think about how user involvement and transparency affect the organizing processes in both the administrative bureaucracy and in finding decisions democratically.

Distributed organizing tries to frame these issues. The complexity created by opening these formerly closed political processes needs to be conceptualized from an organizational perspective and supported through adequate information technology. It needs to provide a frame which guides citizens, politicians, and administrative decision-makers alike in structuring their interactions in these open environments.

2.2. Research and Innovation

Large-scale collaboration on the web also offers new possibilities for creating and developing scientific and real-world ideas. The notions of open innovation and open research describe the themes occurring and the platforms used in these environments. Open innovation focuses on the opening of innovation processes to external or internal stakeholders. The use of specialized platforms, such as innovation markets²² or innovation contests²³, proposes the inclusion of a widespread mass of people. Open research goes along the same line but wants to achieve this for scientific content. Platforms for social networking of researchers, sharing of experiments, sharing of publications, or writing and publishing allow for worldwide and dynamic collaboration of researchers across fields. The examples of Mendeley and Innocentive, which are shown in Figure 2, allow for collaboration based on interest or reward. On Mendeley, researchers can flexibly form common interest groups and share literature. On Innocentive, challenges are awarded with money for a global crowd to take them up in order to solve them and receive the award money.

20 See e.g. Hilgers 2012

21 See e.g. Auer et al. 2007

22 See e.g. <http://innocentive.com> or <http://ninesigma.com>

23 See <http://innovation-contest.de>, for a database with examples and search functionality.

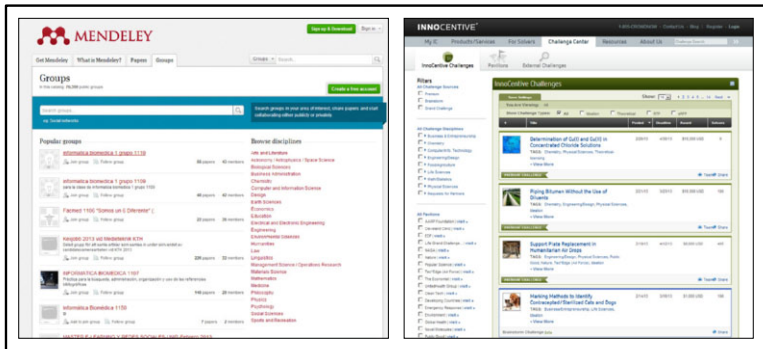


Figure 2: Research groups at Mendeley (left) and challenges at Innocentive (right)

Distributed Organizing tries to understand what this means for the practices of researching and innovating, i.e. what is a framework that can help both companies and researchers seeking to solve novel problems in a distributed environment. The complexity created demands new measures, but these need to be based on a clear idea of how organizing works and a systematic approach towards using support tools. This can help foster the widespread exchange on new ideas from both research and innovation, across different communities.

2.3. Product and Service Design

The design of software and real-world products and services has long been confined to workshops and factories. Open Source Software, mass customized products, and 3D-printing yield novel ways of integrating customers. In software design, the Linux operating system, the Apache Foundation and, in the meantime, a vast array of other projects have shown that distributed people can organize around common goals and boundary objects they design. In real-world product design, mass customization made the first step towards integrating customers into value creation, by offering them choices for the configuration of a product. Dependent on the solution space of a configuration tool, customers could be more or less creative. With the advent of 3D-printing the possibility to create 3D-objects offers new possibilities for the design and collaboration on the design of new products. This opens the solution space from configuration options and toolkits for the design of modular products towards the distributed design and refinement of a three-dimen-

sional shape. In fact, also real-world products can now be created in code. So, similar techniques as in the open source software communities can be applied to structure interaction and foster collaboration on these real-world artifacts. For now, tool support and sharing still lack a common format to enable widespread collaboration. Both real and virtual product design are supported by the notion of service design, which creates new possibilities for defining the way products and services providers interact with their customers. In a similar fashion, structured objects can be defined and shared, which describe the ideas of how a service and product can be integrated to work together. Especially, the use of hybrid or informatized products and embedded systems offers new possibilities to define product-service interfaces. Figure 3 shows examples of open source software design and a 3D-printing community for the design of real-world products.

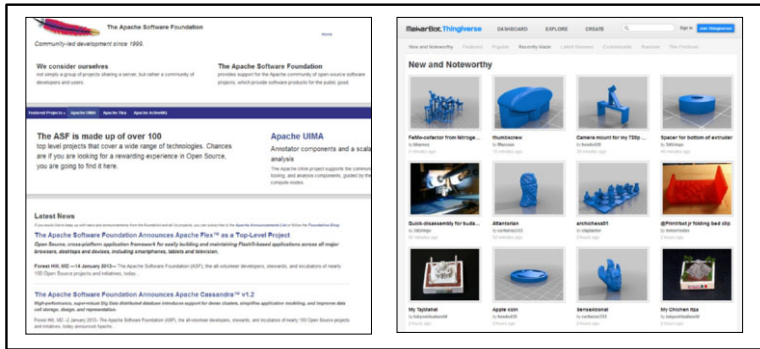


Figure 3: Open source software design at Apache (left) and collaboratively designed 3D-printable products at Thingiverse (right)

Distributed organizing can provide an approach to managing the generation and distribution of products and services by adding metadata layers, which can be used by humans and machines alike. While machines can do automated computations on the described products and services²⁴, humans can browse a more structured catalogue to compare and combine new elements of product-service bundles. This enables the customization of such hybrid products.

2.4. Work Organization

Finally, the idea and method of distributed organizing is also found in new ways of organizing work. The idea of crowdsourcing is to enable an anonymous mass of people to solve problems, which are not necessarily innovation or research related. This creates new possibilities for using a global workforce for all kinds of tasks. Figure 4 shows two of the many examples, which can be found today: Amazon Mechanical Turk and Cloudfactory. Amazon Mechanical Turk offers crowdsourcing of simple tasks for small rewards. These tasks can range from translation over digitization of material to the tagging of pictures. It can be used as a replacement in situations where automated methods of computer processing reach their limits. However, an open API allows integrating Mechanical Turk into automated processes. So, a mix between computation and human intelligence may be worthwhile thinking about. Platforms such as Cloudfactory allow combining different services such as Amazon Mechanical Turk and recombining the respective outcomes. This allows for a hybrid approach by structuring a portfolio of tasks which are handled in an automated fashion, while others are worked on by humans.

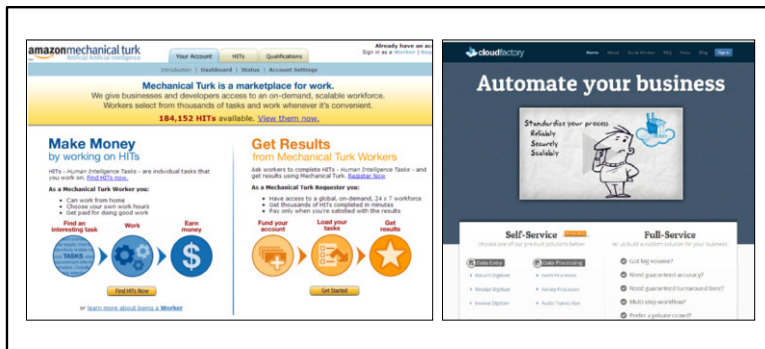


Figure 4: Issuing simple tasks at Amazon Mechanical Turk (left) and managing tasks at Cloudfactory (right).

Distributed organizing can provide a framing for combining these, so-called, crowdsourcing processes with more regular ways of organizing by looking at information flows and complexity, which result in opening the area of organizing work itself to a global public.



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