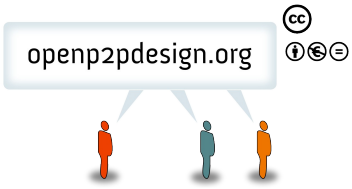

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School of Art and Design + PIXELACHE

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Open P2P Design Toolkit

How to co-design an Open collaborative process

http://www.openp2pdesign.org
http://www.aalto.fi/en
http://www.taik.fi/en
http://mlab.taik.fi
http://www.pixelache.ac/helsinki/pixelversity/

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01. A metadesign toolkit

01.01 Open P2P Design as Metadesign

While **Open Source software** has already developed various viable business models and design processes, other Open or DIY projects (like Hardware, Design, Public Services, Open Business, ...) are still trying to define their best practices. In order to develop new kind of projects that radically changes the way we design, we need new design tools and processes. Moreover, if an open project can be modified in different localities, there may be the need to take into account this. Different cities and regions could have different materials, tools, companies, services and especially different culture and practices. Design tools and processes should be then carefully organized and modifiable by anyone.
Luckily, we can also use the same design tools and processes that we have now in order to build the new ones: this is what designers call *metadesign*. **Metadesign** is an emergent design culture that focus its activities more on the design tools and processes than on the final design projects; it is a critical and reflexive thinking about the boundaries, techniques, goals and contexts of the design practice.
What is important to note now, then, is that developing new tools is not a difficult and only for professionals practice, instead it should be done more than often, as a reflexive thinking on what we are designing and how we are designing it. Furthermore, it is important to develop such new processes and tools collaborating together, adopting an Open Source strategy and P2P social dynamics.

These reasons are behind the development of **Open P2P Design**, a metadesign methodology that was first developed in 2005/2006. It has been in the process of testing and development since then, and currently its development process is part of a research at the **Media Lab** of the **Aalto University – School of Art and Design**, Helsinki (Finland).
The main idea behind Open P2P Design is that we co-design an open and p2p process with communities, in order to make it fit for the specific local context. For example, if we want to focus on Open Design projects, then the process is a design one (that will eventually lead to Open projects). Furthermore: it's not only a design process, but it's also a prototyping and manufacturing one, in the broader sense; it's about organizing an open process and about making it real at the same time. In this way, it is possible to co-design, run, test and modify an open process in a collaborative way.
Open P2P Design basically brings open source and peer-to-peer dynamics inside a community-centered design process, in order to have real co-design projects with people and their communities. We can use Open P2P Design for co-designing Open Design processes or commercial or public services with open and peer-to-peer dynamics, starting from communities and involving them inside the design process. We can also use it for analysing an existing business and opening to collaboration some of its activities, or design new ones in order to start a collaboration with a community of users.
Technology, tools and the sharing of information alone are not enough for setting up successful open organizations: we can co-design such open organizations, tools and technologies with the active participation of communities that will use them. Since every locality and its communities have different features and needs, different available resources and knowledge, it is important to think about the proper design tools and processes carefully, and redesign them if necessary.

This **toolkit** was prepared for the Open P2P Design workshop for **Pixelversity**, the outreach & education programme of Pixelache Helsinki scene around the year (http://www.pixelache.ac/helsinki/pixelversity/programme-2011/open-p2p-design/).
The toolkit is based on three previous versions: the last version was prepared for **DMY International Design Festival Berlin 2011**, that happened as part of the **World Design Capital Helsinki 2012: Open Helsinki (FI)** in the **MakerLab** area.Beside the lectures, during the Maker Lab we helped designers, makers, companies and whoever is interested in developing an Open and collaborative project, starting from a community or from an existing activity. The two previous versions were developed for **UrbanLabs 08** (Barcelona - Spain, October 2008, http://www.urbanlabs.net/index.php/Jornadas) and **Creative Cities in Imagination Society: 5th Congress of Creativity and Innovation** (Caceres - Spain, November 2009, http://www.ciudadescreativascaceres.org/en/).

Together with the presentations of the lectures, it can be downloaded from:

- http://www.slideshare.net/openp2pdesign
- http://www.scribd.com/openp2pdesign
- http://issuu.com/openp2pdesign
- http://www.openp2pdesign.org/source

01.02 Open P2P Design: focus on activities

This toolkit is intended as **a simple tool** for starting to approach the Open P2P Design methodology. It is then a reduced version of the full methodology, tailored to the needs of the context: during a design festival is not possible to develop a full project, it's not possible to interview all the actors and stakeholders (or at least a consistent group of them), it's not possible to prototype and test the process, and so on. Unfortunately, the scarce time we have in a design festival shortens the scale of our project, therefore this toolkit is intended for starting to think about opening an activity to full participation, rather that already developing a complete project.

The focus of Open P2P Design and of this toolkit is on an **activity**: a set of people, artefacts (tools, but also immaterial artefacts like knowledge and expertise), rules, roles, the bigger context and how all these elements interact working on the object of the activity. People carry out an activity upon an object using tools, rules, dividing the work with roles and interacting with a bigger context they are part of. This means that if we reframe an Open process as an activity (or a set of activities through time, if we want to have a better and more detailed control), we will have a more systemic and comprehensive view of it, and therefore it will be easier to design it. If we are able to design an activity, then we can design (and re-design and co-design) many different (more or less open) processes, and the possibilities will be great. Luckily, we can use many tools, methods and processes from **Service Design, Activity Theory, Urban Planning, Social Network Analysis** (and maybe more in the future) to do this.
Open P2P Design then is for designing activities, but which kind of activities can we design then? For example, if we want to work on the metadesign level, we can reframe the design process as a design activity. We can then use design tools for analysing and designing a design activity. As said before, this is why it is called **metadesign**. Furthermore: if we take the open and p2p social dynamics in mind, we can design activities that are **collaborative, open and p2p**, including the same design process. With Open P2P Design them, we design a collaborative design activity (the metadesign) and an open project:

- a design activity (metadesign level)
- an open project (design level)

Which kind of open project can we design collaboratively then?

- product design;
- interior design;
- graphic design / typography / web design / information and data visualization;
- interaction design;
- music and sound design;
- movie design;
- service design;
- ...

As we said before, we can design an activity thanks to Service Design and Activity Theory; as consequence, anything that can be reframed as an activity can be designed, even in a collaborative way. Where to apply Open P2P Design is up to you, then! The methodology is considered to be open source and it is currently on further development, if you are more interested in its development, follow http://www.openp2pdesign.org/ or send an e-mail to info@openp2pdesign.org.

One more thing: when you start a process like this, keep in mind that you are going to work with a community. Think of Open P2P Design as a **community-centered design process**. Collaboration here happens thanks and through the many social interactions between the participants in the process; the design process takes place not just in a team but in a community.

If you want to discover more about Open P2P Design, please have a look at these resources:

- http://www.issuu.com/openp2pdesign/docs/openp2pdesign.org_1.1
- http://www.issuu.com/openp2pdesign/docs/reti-collaborative
- http://blog.p2pfoundation.net/massimo-menichinelli-open-p2p-design-as-enabling-open-p2p-systems/2008/11/24

01.03 How to use the toolkit

Consider this **toolkit** as a simple tool for helping people approach **design thinking** on a **metadesign** level, in order to organize collaborative processes with open and p2p social dynamics. Furthermore, if you fill the empty spaces of this toolkit, you will have a **source code of an open and collaborative process**. All the tools presented in this toolkit can be used and reused for different projects or part of the projects, for the design concept of the metadesign project. For this reason every page of the tools / source code has a box on the upper right corner, where you can write which kind of project is the page referring to.
The complete source code of an Open projects, in fact, may consist of:

1. **metadesign** (of the whole open process)
2. **analysis** (of the context and the community that is part of the open process)
3. **design concept** (that will be the Open Design project as seen by users)

Every tools can be also reused for creating new versions of the same project. This is a common practice of every Open Source project, and it is very useful for organizing the process and keeping track of the all collaborative efforts.

Furthermore, as said before, a design process is an activity and then it can be designed as such but, if we want more definition of the process, we can subdivide the whole process into different steps, and each steps can be analysed and designed as an activity. For example: we can better define how a concept is collaboratively developed, how a product is collaboratively manufactured, and so on, if each step has different specific features that must be highlighted in the whole process.

Additionally, you can also add your name, project, version, license, at the bottom of the page of every page of the source code, in order to keep track of all the tools and source codes.

02. Organize the design process

02.01 Metadesign of the process

With Open P2P Design the focus is on an activity, since it is a systemic way of describing and designing how people interact. The design process itself, is an activity or, better, **a set of activities that happen consequently through time**. Even if the flows between them may not be linear (feedback loops, branching, ...), we can still see the process as made of different activities.
Since this methodology (and toolkit) is about **metadesign**, you are free to choose the best steps (or activities) in the design process that best suit your needs. Just as an example, a possible suggestion for an Open Design project (based on a product) could be a sequence of these activities:

1. analysis of the context;
2. concept design;
3. communication of the concept to the possible future participants;
4. co-design of the concept with the participants in order to have a fully developed project;
5. prototyping of the project, in order to see if the project should be modified or not;
6. manufacturing of the project;
7. distribution of the product;
8. support (repair, help, ..);
9. manage the end of life of the product.

02.02 Metadesign of participation

We can consider the stages of the design process in a flexible way, so that they are also **a tool for organizing the design process** according to our needs and those of the community for / with which we work.
For each step we can choose a level of participation of the community for / with whom we design, (or more levels and nuances if we want more flexibility): in this way we can choose the relationship that forms between designers and the community at each stage. These relationships should take shape as a balance between the knowledge and experience and the duration and speed that characterize each step: when the designers will have more knowledge the they will have more control of the process; when the community or part of it will have more knowledge then it will have a stronger role.

The importance of the levels of participation lays in the fact that participation is not just a goal but it is a design tool, oriented towards getting better results from the process for the community. These are the levels of participation that are usually possible:

1. **none**: only designers are responsible for the project, without any participation. This happens when circumstances require sophisticated knowledge and expertise in a very short time (though there are more chances for mistakes).
2. **indirect**: similar to the previous level, the designers get information on the community through indirect sources. The choice of this level of participation requires two conditions: the availability of sufficient reliable information on the community and the ability of designers to analyse this information. It is not appropriate in rapidly changing situations.
3. **consultative**: designers develop the project on the basis of information received directly from the community and then make proposals and gather feedback. Not recommended for seeking suggestions from the community and is ideally suited to seek approval of an idea or proposal by the community.
4. **shared control**: at this level, the community and the designers interact on a peer to peer level, when both are in possession of resources and capabilities that can be useful.
5. **full control**: the community controls the process and designers become a resource, observing how the community works and providing professional support when needed.

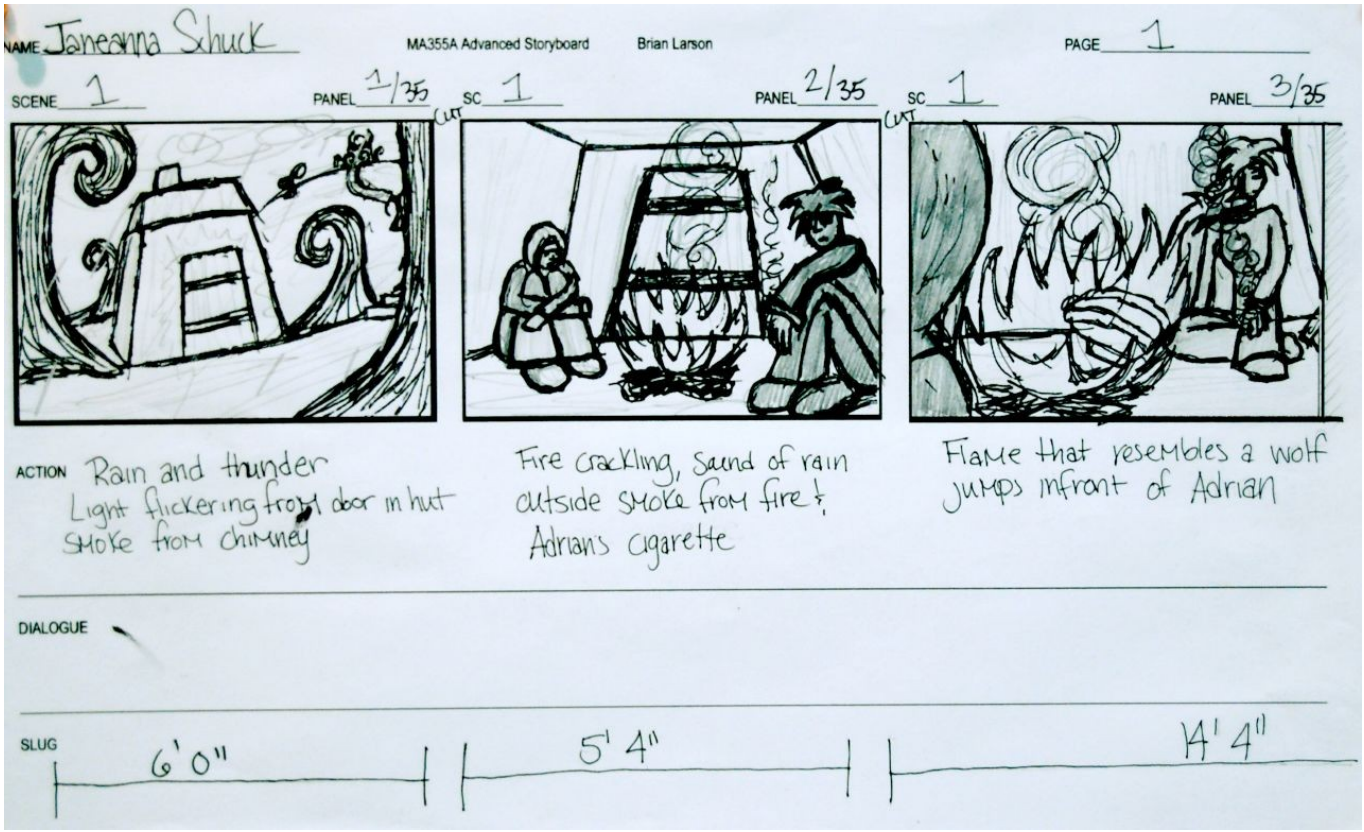
We can then create a table, with all the step in the design process and the possible levels of participation. The steps in the following pages come from the first proposal of Open P2P Design, but of course every project will have its own steps (maybe repeated or iterative), so feel free to add new one.

	Open P2P Design proposal							
	Analysis	Concept Design	Communication of the concept	Co-Design / Prototyping	Manufacturing	Distribution	Support	End of life
None								
Indirect								
Consultative								
Shared control								
Full control								

03. How to use the tools: examples

03.01 Interactions through time as a story: Storyboard

The storyboard is a tool derived from the cinematographic tradition; it is the representation of how people interact through time with a series of drawings or pictures, put together in a narrative sequence.

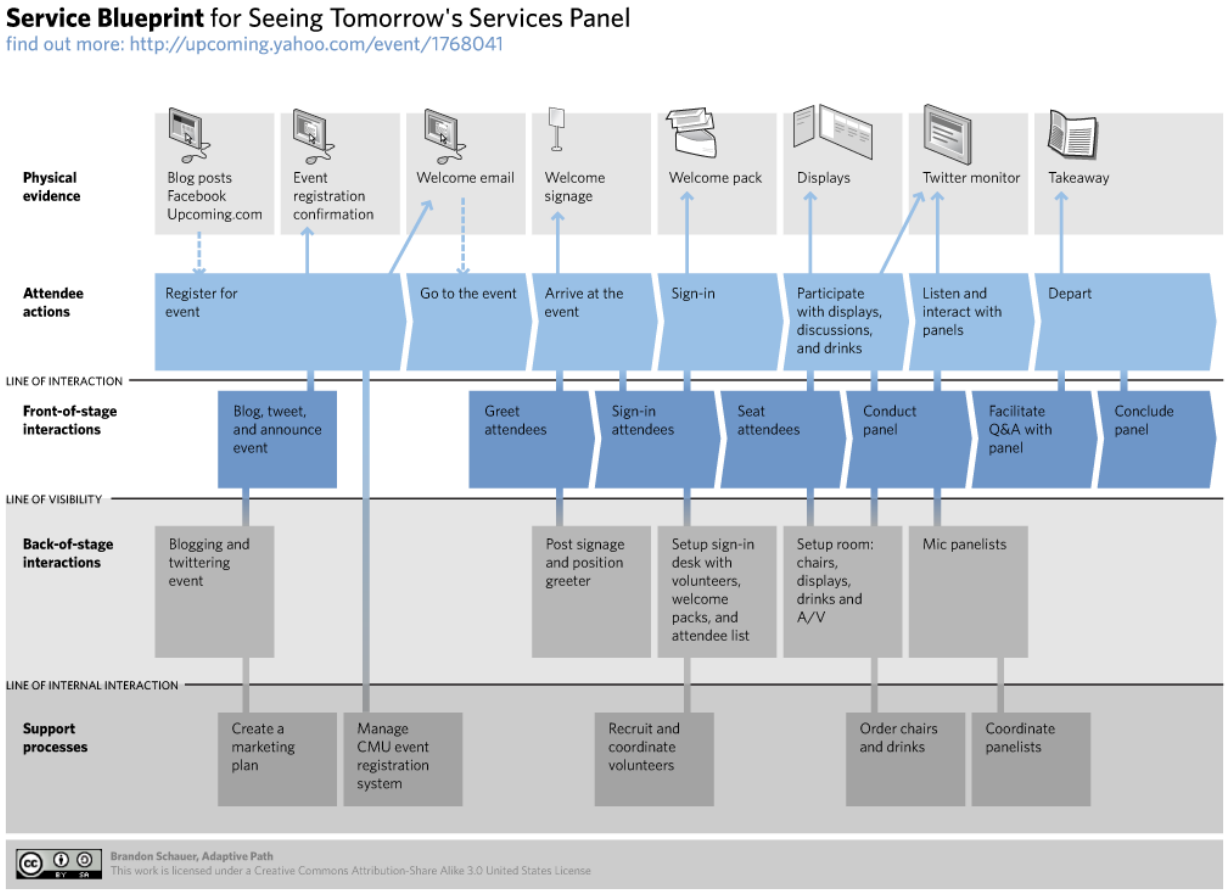


Source: http://www.flickr.com/photos/ninga/473316247/

For more information, see:
http://en.wikipedia.org/wiki/Storyboard
http://www.servicedesigntools.org/tools/13

03.02 Interactions in a place: Blueprint

The blueprint is an operational tool that comes from Service Design and it describes the nature and the characteristics of the interactions in enough detail to verify, implement and maintain them. It is based on a graphical technique that displays the process functions above and below the line of visibility to the customer: all the touchpoints and the back-stage processes are documented and aligned to the user experience.
The Blueprint is very useful for mapping and designing interactions inside and outside of a specific place through time.

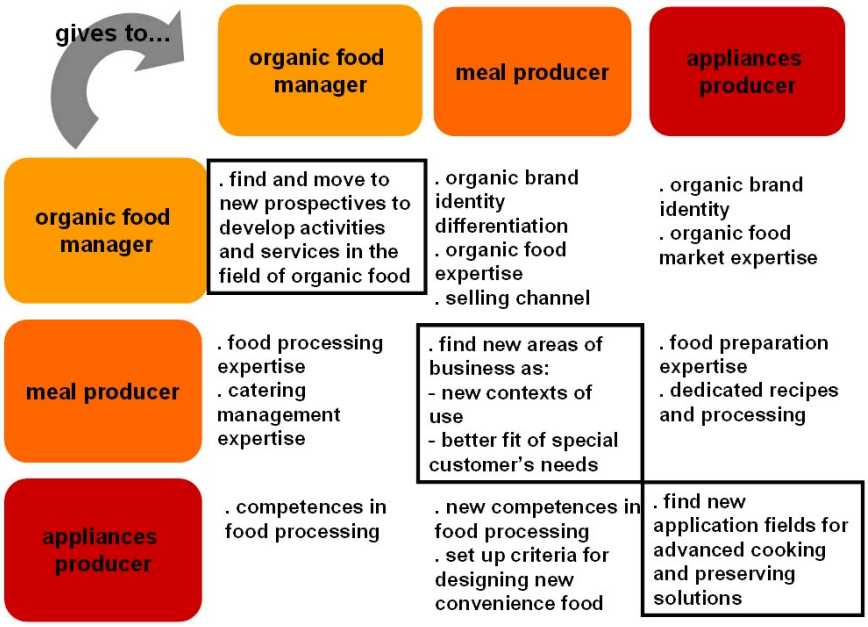


Source: http://www.flickr.com/photos/brandonschauer/3363169836/

For more information, see:
http://www.servicedesigntools.org/tools/35
http://servicedesign.wikispaces.com/Service+Blueprint
http://www.scribd.com/doc/13636899/service-blueprint

03.03 Motivation Matrix

The aim of the motivation matrix is the understanding of the connexions between the different actors of the system through mapping the motivations behind every interaction.
Each actor expresses what he needs or expects from the activity. The motivation matrix is an interesting means of investigation of the solution assuming the point of view of each stakeholder with his own interests.

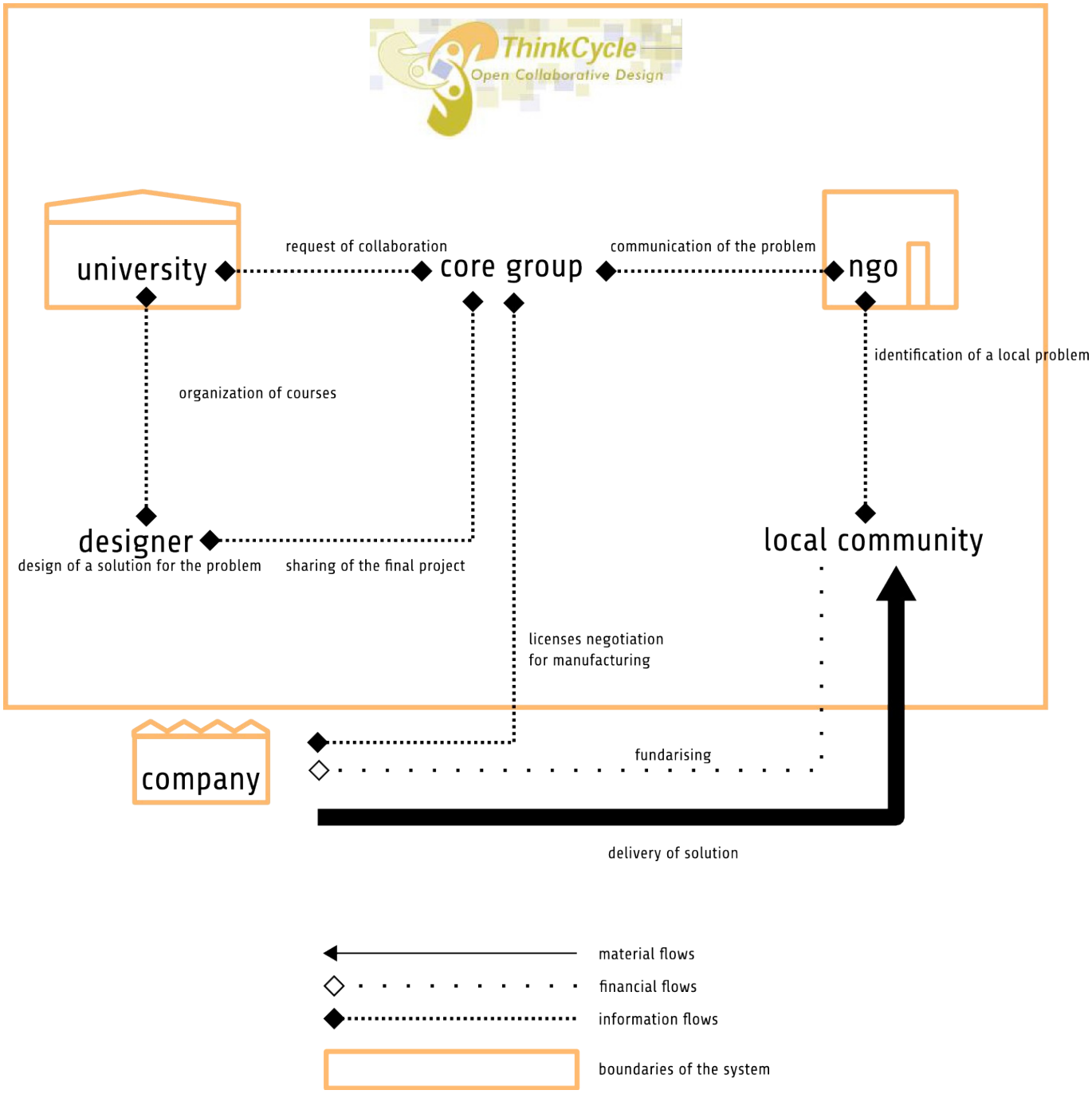


Source: http://servicedesign.wikispaces.com/Motivation+Matrix

For more information, see: http://www.servicedesigntools.org/tools/20

03.04 Interactions as flows: System Map

The system map comes from Service Design ans it is a visual description of the service technical organization: the different actors involved, their mutual links and the flows of materials, energy, information and money through the system (and out of its boundaries and with external actors).



For more information, see:

http://www.mepss.nl/index.php?p=tool&l4=W21
http://www.servicedesigntools.org/tools/28

Source Code:
.....

01. The context of the project

01.01 Choose a **community**, and choose **one of its activities** that may have problems we want to solve with our **Open Design** project, that is a **collaborative design activity**:

.....
.....
.....
.....
.....
.....
.....
.....
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.....

or

01.01 Choose a **community**, and choose **an existing activity**, in order to see how it can be improved through opening it to **an open community around a collaborative activity**:

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Source Code:

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Source Code:

02. Define the project

The following questions are very useful as a starting point for our project. Answering to these questions makes it clearer which kind of project we want to design.

02.01 Which is the **local** context in which our project is being developed and then realized?

02.02 Which is the **community** we design with and for this project?

02.03 Which is the **problem / opportunity** we may find within this community we want to design with/for?

02.04 Which is the reason, **our motivations, our mission**, that move us to design this project with open and p2p dynamics?

02.05 How do we see the future of this community? Which is the **vision** we have that our collaborative process will achieve in the community and for us?

02.06 What do we want to change and communicate with this collaborative process? Which are **our values and the values of the project** that we want to share with the community?

Source Code:

.....

Process: Activities and participation

Source Code: .....

	Step 01:	Step 2:	Step 03:	Step 04:	Step 05:	Step 06:	Step 07: .....
None							
Indirect							
Consultative							
Shared control							
Full control							

Source Code:

.....

Step ..... : .....

Source Code: .....

In this step .....

Level of participation	Step ..... : .....
None	
Indirect	
Consultative	
Shared control	
Full control	

Who participates in this step of the process?

Where does this step take place? Is it online, in a region, a city, a neighbourhood or a room?

Source Code:

.....

Activity analysis / design

Source Code:

01. Which is the **activity** we are analysing / designing here?

02. Who is the **subject** of this activity? Who does carry out this activity?

03. Through the activity, the subject is working actively on an **object**. What is this object?

04. Which are the **rules** that this subject has to follow within the activity?

05. How is the activity organized among the people? How is the work divided? Which are the **roles**?

06. Which are the **artifacts (materials, tools, communications, knowledge)** that are needed in order to run the activity?

Source Code:

07. Which is the bigger **context (the bigger community where this collaborative community takes place)** where this activity runs?

07.01 Which are the **reputation levels** that are present in this activity? How do people structure reputation?

07.02 Which kind of **participation** is available to the participants? Top-down or an emergent bottom-up, or is is a marketplace service that let people establish p2p connections and profits from them?

08. What does the activity gets in the end? Which are the **results, objectives, outcomes** the activity looks for?

09. Are there any **contradictions** (that is, sources of possible changes) **within** one of the previous elements? *[Primary contradictions]*

10. Are there any **contradictions** (that is, sources of possible changes) **between** two (or more) of the previous elements? *[Secondary contradictions]*

Source Code:

11. Are there any **contradictions** (that is, sources of possible changes) between the existing **results, objectives, outcomes and probably new ones**, coming from outside? *[Tertiary contradictions]*

12. Are there any **contradictions** (that is, sources of possible changes) between **this activity and its neighbor activities**? *[Quaternary contradictions]*

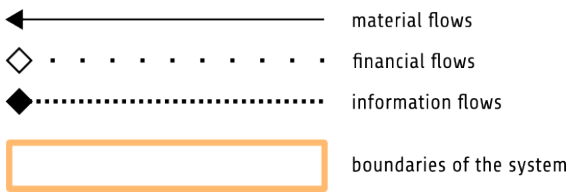
13. Which are the possible changes in this activity that these **contradictions** can probably bring?

Source Code:

.....

System map: interactions as flows among roles

Source Code:



Source Code:

.....

Motivations matrix: interactions as motivations between roles

Source Code:
.....

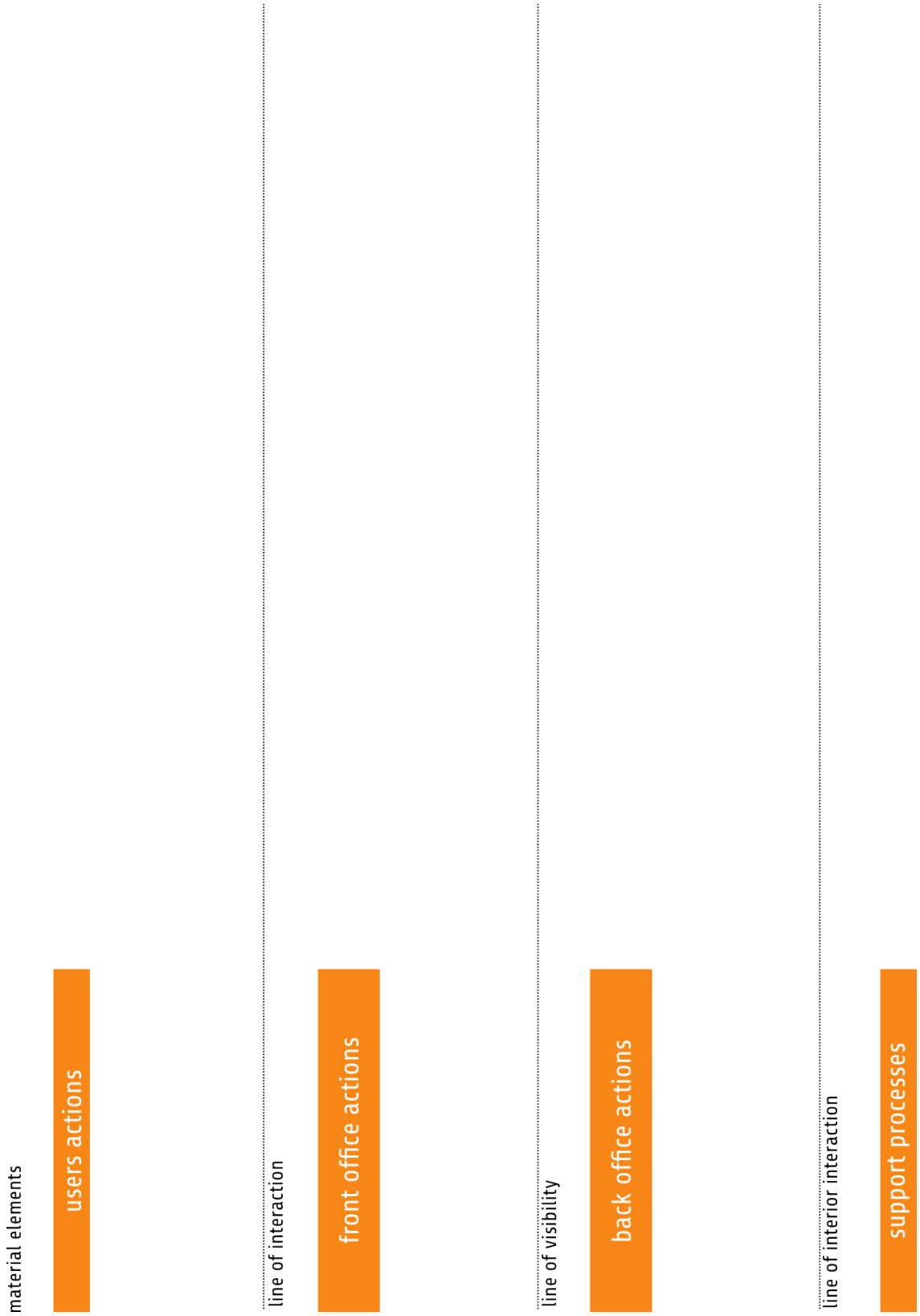
They interact because...						

Source Code:

.....

Blueprint : interactions within a physical space

Source Code:
.....



Source Code:

.....

Source Code:
.....

Design Concept

Source Code:

.....

Storyboard: interactions through time as a story

Source Code:

Storyboard: interactions through time as a story

Source Code:

License: the social contract

Source Code:
.....

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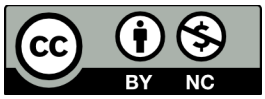	**Attribution-NonCommercial CC BY-NC** This license lets others remix, tweak, and build upon your work non-commercially; although their new works must also acknowledge you and be non-commercial, they don't have to license their derivative works on the same terms. http://creativecommons.org/licenses/by-nc/3.0
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Source Code:

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