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Making Visible: Valuating the Impacts of Design Intervention for Social Cooperative

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Abstract: The aim of this exploratory paper is to generate a method of evaluating design interventions for organizational change in third sector and to apply this method to an ongoing design research project with a national social cooperative in Italy. The evaluation model is a way to present what changes and impacts that design, especially strategic design, could bring to organisations and how these results could enable organisations to fulfil its missions in a more "human-centered" process. The results will consist of a theoretical framework to evaluate, taking social cooperative as one example, and the applied results in an empirical project. In the future, this framework will be continuously developed in this and also other similar projects.

Keywords: design strategy, organisational change, social cooperative, evaluation

1. Introduction

Strategic Design Lab per Universiis is a research-oriented design project conducted between Creative Industries Lab[1] and Universiis[2] - an Italian national social cooperative with the headquarter in Udine and 14 local facilities in different cities of Italy. This project is an exploration of extending the scope of design through intervening in third sector organisation, more specific the social cooperative in Italy, and finally the design results will be presented in a logic way to make them "visible" to communicate with diverse audiences.

1.1 Background and Objectives

The third sector in Italy has been playing an important role in delivering social values and impacts in different areas (education, wellbeing, etc.), and a large part of them is the social cooperatives. Social cooperatives are building a unique relation between the public and business sector to answer the social needs, and that is the way in which the services have been delivery to people in different field, territories and human contexts. A crucial point of the third sector growth is also the networking with diverse institutions at different levels (municipality, local health unit, regional authority, etc.).

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[1] *Creative Industries Lab (Cilab) is a research lab in the department of Design, Politecnico di Milano,*
http://www.cilab.polimi.it/
[2] *http://www.universiis.it/*

The social cooperative, Universiis, has contacted Cilab of Politecnico di Milano with an initial motivation to improve the quality of service offering and communication strategy of new projects in three areas (the elderly, disabled, children). To reach this objective, a proposal of developing a new service system through engaging different stakeholders in a co-creation experience supported by various design tools is generated through several conversations between Cilab and the managers at headquarter of Universiis. A new service system refers to offer a more "customer-oriented" service with unmet needs and coherent communication strategy to distribute this service through right channels and to right audiences. And all the elements in the service system will "speak" the same language which is part of the brand identity of Universiis. Due to the large and complicated structures of Universiis, different sub-objectives and strategies were planned in detail at different levels, and at the same time, they are all coherent with the primary objective and they interrelate directly or indirectly with each other.

1.2 Design Methodology

A methodology to guide a process of design activities has been generated at the beginning of this research. The methodology is developed based on Double-diamond Design Process (Design Council, 2005) and different design methods have been adopted in a series of steps. Specifically, this methodology always takes consideration of interventions at both local and national levels of the social cooperative to build agreements and to create profound outcomes for every step during the whole process.

The research began with literature review, best practices analysis and benchmark analysis (second-hand) for building a comprehensive state-of-the-art of social-health services all over the world. Meanwhile, field research has also been conducted to discover better and to define the design problems. Afterwards, through several meetings, research findings and promising opportunities for following steps have been discussed with Universiis headquarter managers. For the develop and delivery phases, the concept of a pilot project at the local level was highlighted. The pilot project is believed as an effective and fast way to test and to get feedbacks for developing the final solutions in real contexts. In the pilot project, the concept of gamification and co-design was combined to involve possible actors in generating new services collaboratively. A situated toolkit (named Caro Amico Ti Scrivo) has been developed to support the participation and co-creation experience, which need to be attractive and ease to join. The develop phase and delivery phase are not separate from each other, and both of them are still under on-going activities.

2. Building an Evaluation Model

The values created by design interventions in the third sector has been shown in different kinds of projects, in which the organisations have involved design and design thinking in their approaches to solving social problems, to build better relationships and to enable different actors to grow. However, there's still a lack of evaluation method to present these values in a logic language, which could be shared with the various stakeholders and could help to distribute design thinking in a wider range. There are four main steps to carry on to evaluate: 1. declaiming the evaluation objectives 2. building logic models to guide the design process 3. identify the indicators for analysis 4. present the findings of the evaluation.

2.1 Evaluation Objective

To start the evaluation process, authors have explicitly listed the objectives as the first step. The main goal is to use this evaluation model to identify the changes generated by strategic design interventions at different organisational levels of the social cooperative. The evaluation not only aims at analysing the final results but also illustrating the design process in detail:

- to analyse a complex design process which consists of different steps, and in this paper, the authors will apply double-diamond design process model (Design Council, 2005) to classify different types of design activities at different phases.
- to present the periodical changes and short-term impacts made by design interventions.
- to present the achievements at different levels of the organisation, the social cooperative.

2.2 Applying Logic Model to Evaluate Design Process

Junginger and Sangiorgi (2009) has stated that a human-centred design approach, especially service design, is acting as an inquiry to implement the institutional change from within and outside of the organisations. Also, a large number of design practices have presented many possible approaches to bringing design activities from peripheral area of an organisation to its central part, the organisational vision, through some core elements: people, structure and resources (Shostack, 1984). In the third sector, designers are conducting their practices by adapting their previous experiences to new contexts and organisations. It's necessary to be clear what the differences are, mainly referring to how the organisations in third sectors are managing themselves now. Based on the theoretical framework developed by Bassi (2014), we have obtained an overview on how to assess the social values of third sector organisations, from resources to impacts. It is important for designer to understand: the existing organisational "design" legacy (Junginger, 2015), the languages used to describe and communicate, the possibilities to embed design thinking at different levels, both in short-term and long-term.

For the second step, it's useful to map design process following the *logic model*, also known as the *logical framework*, which is often used in public institutions and not-for-profit organisations, where the priority of mission is to achieve common good instead of financial benefits. It's a systematic and visual method to present and share the understanding of relationships among all the resources you have for operation, activities you plan to conduct and changes or results you hope to achieve. Authors have integrated this model with double-diamond design process to examine this strategic design approach towards generating the *indicators* and *contents* to evaluate. Focused on short-term results, authors have mainly considered the four former items - inputs, activities, outputs, outcomes - to build a design process evaluation model (figure. 1)
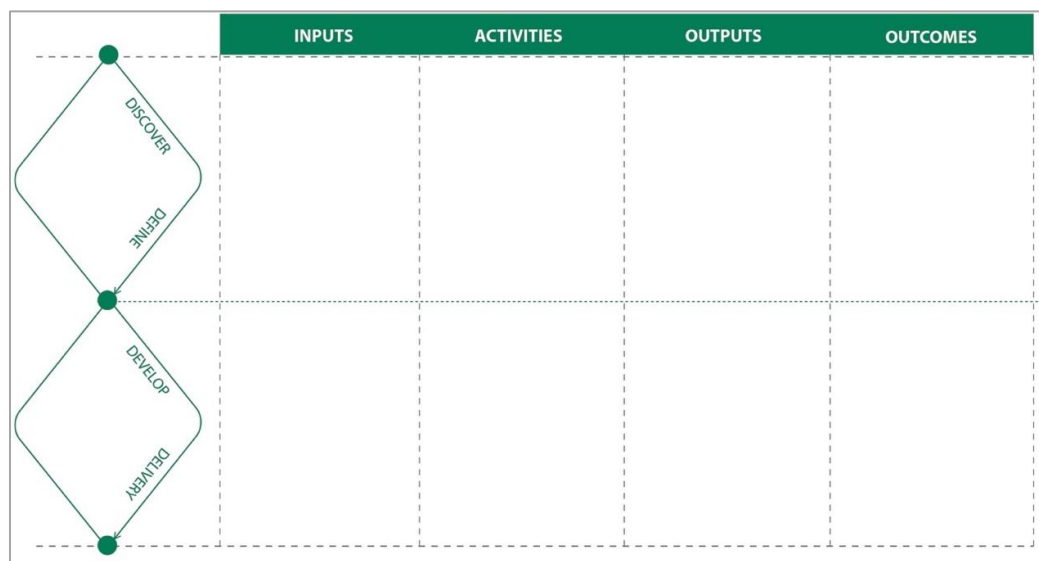
Figure 1. Design Process Evaluation Model, adapted from Double-Diamond design process model and Logic model

This model has mainly been divided into two main phases: "**DISCOVERY+DEFINE**" phase and "**DEVELOP+DELIVETY**" phase. Since the double diamond model has placed "discover & define" as the most critical step to affect the whole design process, authors have followed this idea and highlighted the outputs and outcomes at first phase. Besides, this evaluation model has tried to map all elements impacted by the design interventions at different levels of the organisations, from understanding an individual employee's behaviour to engaging in the decision-making conversations at headquarter office.

"DISCOVER + DEFINE" phase

- **inputs/resources:** human resources: profile of designers; staffs of social cooperative (local + national levels); material resources: design research tools;
- **activities:** design research activities, research analysis;
- **outputs:** analysis results, problem (re)definition, new research questions, new design focus;
- **outcomes:** (re)definition of design brief, new strategy (local + national)
- "DEVELOP + DELIVERY" phase
- **inputs/resources:** elements defined by previous phase, designers, staffs of social cooperative (different roles at different levels);
- **activities:** concept generation, pilot project operation, toolkit (re)development;
- **outputs**: results generated by pilot project, situated design tools and instructions, experiences of participating in the design process (qualitative & quantitative; different roles at different levels);
- **outcomes:** new design strategy (for the near future), distributed design knowledge
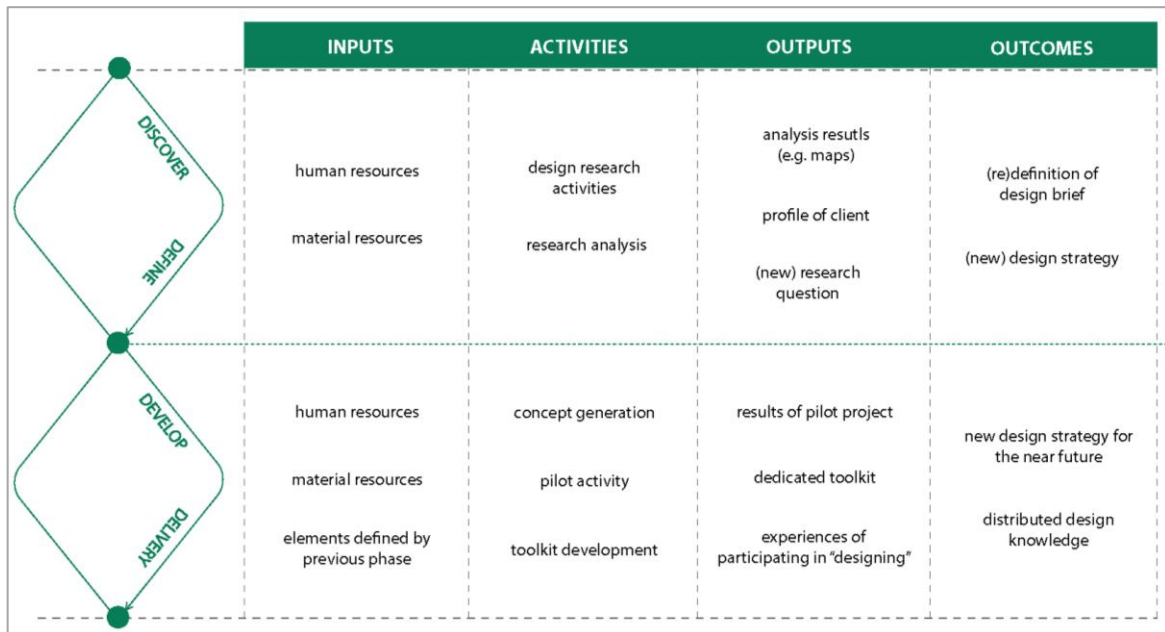
Figure 2. suggestive items for using Design Process Evaluation Model, elaborated by authors

2.3 Identifying the Indicators for Evaluation

Thanks to the second step of evaluation, the contents and indicators have been listed in the model. In this step, the main activities are to clarify "what to evaluate" and "what are the criteria to evaluate". Thus authors have categorised the elements from "outputs" and "outcomes" in the evaluation model into two groups: quantitative and qualitative contents, and afterwards created the criteria of evaluation for each element.

"DISCOVER + DEFINE" phase:

Quantitative:

- Numbers of involved participants (considering to involve staffs with different roles, at different levels and the target groups/clients)
- Numbers of collected best practices
- Numbers of benchmark cases/competitors
- Time of field research at local and national levels (including visits, interviews & observations)
- Time of discussion with managers at local and national levels

Qualitative:

- Analysis of best practices. Indicators to evaluate should include: 1. the dimension and diversity of case (geography dimension) 2. level of innovation 3. the relevance to the objective(s) 4. quality of designed touchpoints (considering the visible changes brought by service and strategic design activities)
- Analysis of benchmark. Indicators to evaluate should include: 1. the dimension of services offerings (local or national) 2. the relevance to the mission and typology of third sector organisations 3. critical attitude to analyse the advantages and disadvantages

- Integration of field research and desk research (applying finding from desk research to answer the real needs and problems found during field research)
- Feedbacks during the process of redefining research questions from local and national levels of the social cooperative. It's crucial to accurate the feathers of the problem and to communicate them properly to managers in order to plan a promising, feasible and resilient design strategy together.

"DEVELOP + DELIVERY" phase

In this phase, it's important to highlight the role of the pilot project for fast testing and implementing the initiatives in small and local dimension but with an implication of the whole organisational system. Therefore, the qualitative part of evaluation here will concentrate on the entire experiences of participation in the pilot project.

Quantitative:

- Number of participants (especially with a focus on pilot project)
- Number of generated results in different phases of pilot project
- Number of final "design" ideas in pilot project
- Time dedicated in pilot project
- budget for conducting pilot project (toolkit, communication materials, spaces and so on)

Qualitative:

- New service ideas. Suggested indicators: 1. the marks obtained during pilot project 2. level of innovation 3. contextualization 4. feasibility in real context 5. comments from managers at local and national levels
- The experience of participation during the whole pilot project. Suggested indicators: 1. level of engagement 2. participants' motivation 3. interactions with others (teamwork and competition)
- The experience of using the toolkit. Suggested indicators: 1. simplicity/user friendly 2. participants' motivation to fill the toolkit 3. possibility to make participants gain the sense of identity and belonging (e.g. enabling participants to tell their stories)
- Behavioural change of participants (especially the main target). Changes of motivation, action, attitude etc. (comparing "before" and "after")

3. Evaluation of Strategic design lab per Universiis

3.1 Mapping the Design Process

The mapping phase aims to reveal the results that design interventions have brought to the social cooperative. The evaluation process has been divided into two main parts and all the detailed information has been clearly presented at different steps during the whole design process.

"DISCOVER + DEFINE" phase

Inputs/Resources:

- Human resources: Cilab has played the main role. It's consist of professional designers with different design expertise (design strategy, products design and communication design) and an interdisciplinary approach. Staffs at different levels *(managers at*

headquarter and local facilities) of Universiis. *Care workers, volunteers and several end-users* at local facility have also participated during the field research phase.

- Material resources: a number of design research tools have been developed to analyse the contexts and to explore possible future scenarios.

Activities:

- Field research activities: there are two main activities conducted during this phase: interviews with different roles of the social cooperative and end-users and their families; observation at local facility to collect indirect information and opinions to illustrate existing situations.
- Design-oriented research activities: while doing field research, the authors have also designed a series of research tools to collect and to interpret data and information.
- Communication through conversations: there have been several conversations with managers at both national level and local level to accurate the "real" problems and redefine the design brief.

Outputs:

- **Research tools** and generated research **results**: all the research tools are designed by the authors for this particular project, including user analysis, benchmarking in third sector (competitor analysis template and positioning map; best-practice analysis template and position map), profile analysis template and scenario building axis. These results have shown: the advantages and disadvantaged of Universiis (at both local and national levels) and social-technic trends for innovation in the third sector.
- **Problem redefinition**: one of the most important outputs of the first phase is the redefinition of "problems" and the "design brief". Based on the research activities and results, authors have realised there is a gap between the Universiis' real problem and the problem that managers at headquarter had considered. The problem is not a lack of innovation and high-quality services, oppositely, the feedbacks from the end-users and the families are relatively positive; instead, the process of creating and developing these services was not well organised, and few care workers were motivated to participate and contribute to this process. Lots of them, of course, are doing the work *without motivation and enthusiasm*. At the same, there is *a lack of communication channels* among all local facilities and between the locals and the central. The managers at headquarter rarely know and updated with the impressive services developed at local facilities.

Outcomes:

- **New design focus**: authors have moved the design focus from creating new services to developing a new approach to enable them to care workers to **engage** in services development process **actively** and motivate them to respect their role in Universiis. At the same time, authors have also planned to use this approach to generate an **accessible** and **interactive communication channel** to make the Universiis more connected at all levels.
- **New design strategy for next steps**: to solve the redefined problem and to answer the new design brief, a new design strategy has been formed as the outcomes of "discover + define" phase, meanwhile, as the starting point for "develop + delivery" phase, in which the inputs/resources are reset and reorganised.

"DEVELOP + DELIVERY" phase

Inputs/Resources:

Human resources: as been redefined in the previous phase, the care workers are involved as one of the main resources in this phase. Besides, managers at headquarter have collaborated in developing the final design concept and planning pilot project; managers at local facilities have actively organised and participated in managing pilot project in detail at local level with the authors (design researchers).

Activities:

- Concept generation – Caro Amico Ti Scrivo: the concept is to generate a new way to produce and develop new services with the contribution of care workers and to effectively communicate the results through the whole structure of Universiis. *Storytelling* and *Gamification* are used as the leverage to enable the co-design activities.
- Conversations of developing design strategy: a series of conversations have been conducted with managers at both levels along the whole process of concept development. These conversations have been considered as an important activity to transform design thinking knowledge and practices from top-down. Authors have explained the design strategy to managers at both headquarter and local facilities, and they have also involved in supporting authors preparing co-design workshop, which has been the most interactive phase in the pilot project.
- Toolkit development (CATS): based on the concept of gamification and co-creation, a situated toolkit supporting the pilot project at the local level and its communication to national level has been designed and tested at two local facilities. The toolkit acted as a manual to organise pilot project: 1) activities for different roles 2) instructions for preparation co-design workshop (e.g. space transformation plan, operation process) 3) instructions for running co-design workshop as playing a game (e.g. situated tools, rules to play and to compete)
- Conducting pilot project: with the support of dedicated toolkit, the pilot was run through three steps. ***Pre-workshop step***: delivering and presenting tools at local facilities; guiding managers and care workers at local facilities to fill the tool with their own experiences; checking and updating. ***Workshop step***: check-in; introduction; postman game; game – I tell you an experience; game – I tell you a new experience we haven't tried before; awards session. ***Post-workshop step***: collecting and digitalizing contents produced in workshop; results analysis; and presenting the outcomes in order to share among all levels of Universiis.

Outputs:

- Dedicated toolkit – CATS (figure 3): the toolkit has been tested during the pilot project and it's modified with authors' reflections and participants' feedbacks. This toolkit will guide managers at local facilities to organise creative events and idea-selection step by step more independently. At the same time, it acts also a method to transform the results of events at different facilities into an easy-to-communicate form for archiving and sharing. It's contributing to establishing a digital database of Universiis' projects and services.
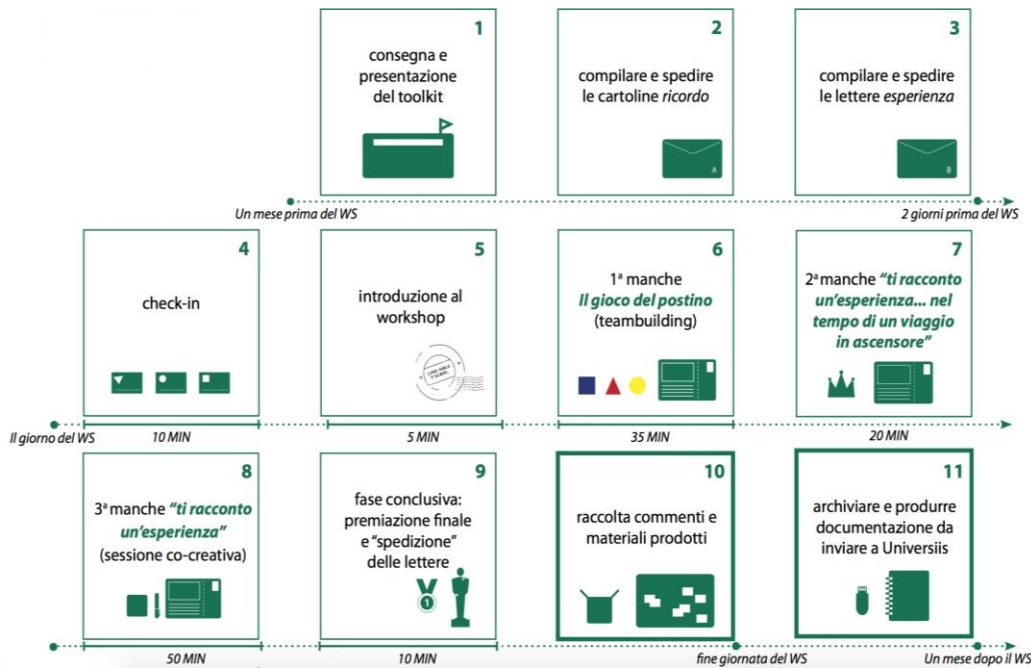
Figure 3. Toolkit – CATS for pilot project, designed by authors

- Selected best projects and new ideas of services generated during the pilot project by using the dedicated toolkit.
- Experiences of participating in "designing" and the acknowledge of design thinking. The idea of design thinking and co-design have been spread inside Universiis through different types of interactions and activities, from care workers at local facilities to the managers in headquarter office.

Outcomes:

- **Distributed design knowledge** (Manzini & Coad, 2015) will definitely has impacts on the working attitude and motivation of staffs at different levels of Universiis in their daily life in the future. The quality of service offerings will also be improved as the indirect results, which will, eventually, benefit the target communities – the final users.
- After analysing the feedbacks from the pilot project, the design strategy for the following three years has been created and confirmed by the managers at headquarter of Universiis. And this new design strategy will focus on two main tasks. On the one hand, more co-design projects will be conducted at different local facilities. On the other hand, a training programme will start soon for building a group of creative staffs in Universiis, and in the future, this group will act as a facilitator, the same role of authors in the pilot project, to leverage continuous co-design activities and to embed design thinking to the DNA of Universiis.

3.2 Evaluation Results

"DISCOVER + DEFINE" phase:

More than 20 staffs of Universiis and more than 50 hours of both second-hand and on-site filed researches have been dedicated at this phase. All detailed information could be found in the description of a design process.

Cilab has collected around 30 best practices in the last five years related to service innovation for healthcare, wellbeing and disability all over the world. The diverse and inspiring cases have provided useful and promising directions for generating the final design concept. Meanwhile, more than ten competitors in Italian third sector have been analysed and mapped to create a competitive strategy for Universiis. Several analysis tools have been shown below.
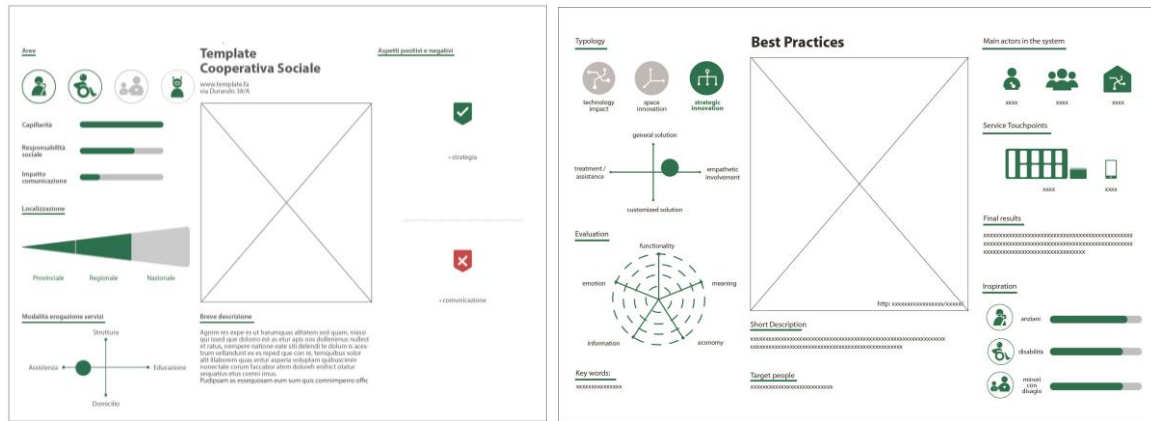

Figure 4. research & analysis tools, designed by authors

One of the most outstanding results in the first phase is to *integrate* the data of desk research and field research from the designers' perspective. This interpretation of information and transformation of knowledge have played a significant role in the following steps. In this project, authors have adapted the second-hand data to the real contexts and needs, and changed the design focus from developing new services to a new way of service development: engaging and co-creating with local care workers. The results of pilot project and feedbacks from all participants and managers at headquarter have demonstrated the success of reframing design strategy.

"DEVELOP + DELIVERY" phase

Pre-workshop: 46 filled "envelopes" have been received before the workshop day - 40 with unique stories related to personal working experience in Universiis and 6 with events held in last year at two local facilities. Around 30 hours have been contributed to developing the pilot project, from the initial concept of gamification and co-design to the complete idea of "caro amico ti scrivo". Authors have also devoted more than 6 hours to explain the details of the pilot project to managers at two local facilities, and three managers have played an important role in distributing design tools to all participants and guiding care workers to finish their tasks in pre-workshop phase. Besides, managers at headquarter office have also collaborated through the whole develop and delivery process.

Workshop: 50 care workers and volunteers from two local facilities and three managers from local facilities have participated in the 2-hour co-design workshop. Finally, two best personal stories and 1 best event have been selected and shared among all. Thanks to the toolkits, three new ideas have been generated during the workshop and the best one (figure. 6) will be the starting point for "designing" the new service in this year at these two local facilities. Design thinking knowledge and skills have been transferred from expert designers (authors) to non-designers (staffs in Universiis) through toolkit and participatory experiences.

Figure 5. pilot project at one local facility: co-design workshop, photo made by authors

Post-workshop: around half-an-hour food sharing section has been organised to receive feedbacks from all participants immediately and informally. Authors have collected "hot" comments efficiently. Authors also have written several emails to managers at local and national levels after the workshop to receive feedbacks continuously.

Figure 6. the best idea produced during pilot project at one local facility, produced by participants

The three phases of the pilot project have always highlighted the important role of care workers. All involved care workers felt moved and motivated after this experience. They didn't have huge problems when they were asked to use the co-design tool. However, in the beginning, it took some time to make them understand the objectives of the pilot project and what they need to do in the workshop. So the role of authors, who were acting as facilitators during the workshop, has been shown very significant and necessary. All participants have shown great interests and strong capabilities to use the tool.

The selected memories, best projects and three news ideas created during the pilot project are all of the high values regarding innovation and contextualization. Especially the best ideas (Figure. 6), with

110 marks, has proposed a new relationship between two local facilities as a new direction to develop future services.

4. Discussion

Through one-year's collaboration, the research results have showed positive changes and transformations at diverse organisational levels (Best, 2015) of the social cooperative: operational levels: engagement of different categories of human resources; tactical level: processes of developing new services, systems of internal and external communication; and strategic level: the mind-set of top-level managers, local structures and headquarter. And there are several issues worth to discuss:

- The importance of redefining the "right" research questions

Redefinition of research questions is obviously one of the main results of the first phase. It also demonstrates where design researchers should put more efforts. A large number of organisations, especially social-oriented organisations, don't have a clear mind about what are the real problems they are facing and what they need when they want to "innovate". After the field research and interviews at local facilities, authors in this research got entirely different findings from that communicated by the managers at headquarter. The successful results of pilot project have also confirmed the right strategy of switching design focus.

- Different impacts at different levels

When designers and design researchers are working with third sector organisations that have complicated structures, it's important to identify design strategies at different phases and different levels. The relationship among the various roles is highly dynamic and relevant. In many projects in the third sector, final-users are often considered as the only "target of design intervention. However, from the perspective of HCD, "human" refers to all type of human being in a service system and an organisation. In this research project, authors observed and study all different actors in the Universiis system and considered all possible way to impact them towards reaching a common objective. Thus, designers have planned carefully for every step: what to do, who to involve, where to conduct. For example, the two local facilities for testing the pilot project have been selected strategically, and this choice has been proved accurate according to lots of positive feedbacks after pilot projects. For the future, more specific impacts at different levels will be studied in detail according to the figure below.
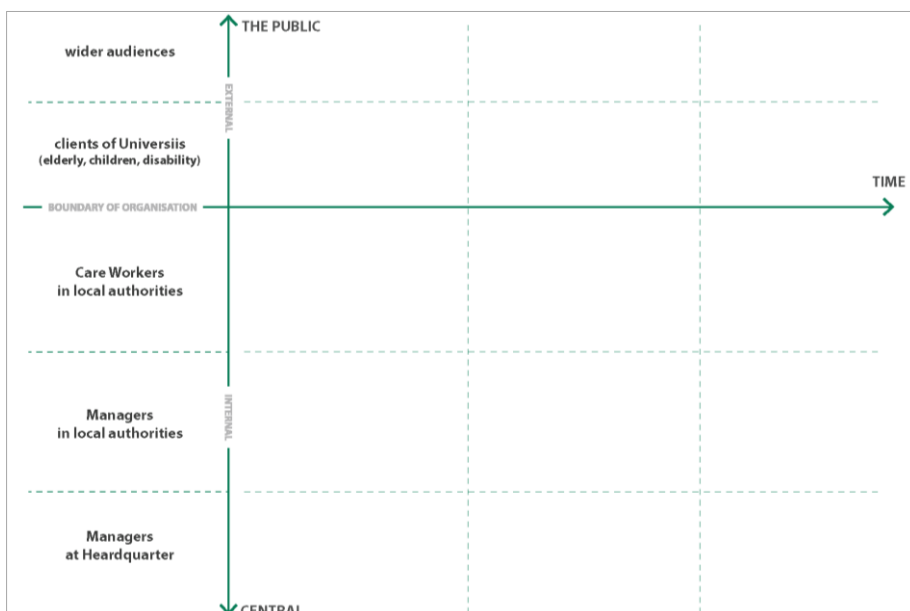
Figure 7. impacts analysis framework on organisational structure of Universiis, designed by authors

- Design intervention as capability building

In this project, designers have facilitated the social cooperative to build its capabilities of creating better solutions by engaging its staffs in co-design activities. Design thinking (Buchanan, 1992; Martin, 2009 & Brown, 2009) is not something only belongs to design teams, and more and more social cooperative and other types of third sector organisations should realise its importance and potential impacts. The staffs of Universiis have started to work together with designers to understand the advantages of this problem-solving process and basic design techniques. In the future, these activities should also be transformed from expert designers to non-designers, who will learn to use design thinking step-by-step and make themselves capable of conducting this approach more independently.

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