

Design as Common Good / Framing Design through Pluralism and Social Values

Swiss Design Network
Symposium 2021
Conference Proceedings

Edited by
Massimo Botta
Sabine Junginger

University of Applied Sciences and Arts
of Southern Switzerland

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23 Reflecting on the Common Good

25 Opportunities and Limitations of Design for the Common Good: An Exploration of Approaches to Designing with Communities

26 The Role of Co-Design in National Policy Making for Sustainability - Creating England's Post-Brexit Environmental Land Management Approach

Judith Tsouvalis, Ruth Little, David Rose

40 Regaining the Right to Our City: Designing Reilly Commons
Kate Catterall, Alyson Beaton, Jorge Zapata

62 Knowledge as Common Good - Design and the Changing Frameworks for Collaboration Between Institutions and Communities

Lorenz Herfurth, Jérôme Elissalde

75 Designing With, Within, and For Common Good

76 Design & Permaculture. Shifting Paradigms to Build Food Sovereignty in Tunisia

Safouan Azouzi

88 Urbanism for the Common Good: Assessing the Transformation of 18 de Marzo Oil Refinery in Mexico City
Maitreyi Phansalkara, Beatriz Vergara Allerb, Jorge Zapatac

118 Using Probes and Prototypes in Digital Environments for Participatory Deliberation

Juan de la Rosa, Juan Sebastian Bedoya Rodríguez, Valentina Barrera García, Paul Bryan Gamboa Mateus, Carlos Andrés Garzón Pachón, Dora Consuelo Villalobos, Stan Ruecker

133 Speculating, Acting and Deliberating About the Common Good

134 The Problem With Problem Solving. Design, Ecology and the Common Good

Felix Kosok

146 Design For Public Thinking

Youngbok Hong

158 Designing Beyond the Common Good – an Evolutionary Process between Speculation and Reality

Dustin Jessen, Simon Meienberg

174 Challenging Design for (the) Good – New Design-Roles: Making Design Vulnerable

Lucas Kuster

189 Striving towards a Common Good

191 Social Design in Emerging Economies

192 Moving Mountains: Case Study of Community Based Participatory Research as an Approach to Social Design & Entrepreneurship

Dhriti Dhaundiyal, Richa Pant

206 Design for and From the Community: A Review of Social Design in Egypt

Sherin Helmy

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Since 2003, the Swiss Design Network has been promoting and fostering the development, quality and constant improvement of design research in the Swiss Universities of Design and Art.

- 640 **Re-Imagining Commoning Infrastructures and Economies**
Viktor Bedö, Shintaro Miyazaki
- 651 **Activating Processes in the Cultural and Civic Space**
- 652 **Ongoing Matters: Government Document Design in the Public's Interest**
Andre Mürnieks, Anne H. Berry, Sarah Edmands Martin
- 674 **Participatory Design in Design Museums as Platforms for Common Good**
Luisa Hilmer, Lisa Rotzinger, Iria Suárez
- 686 **Curating for the Common Good. An Activist Curatorial Framework to Foster Innovation in Design**
Viviane Stappmanns
- 697 **Making the Design Commons – Methods, Tactics and Processes**
- 698 **Collectivizing the White Cube: Design Gallery as Commons**
Ellen Christensen
- 710 **Walking by the Commons: Developing Design Patterns for Future Cultures of Consumption and Production in Exhibition Interview Walks**
Martina Fineder, Luise Reitstätter
- 724 **The Design of Social Independent Magazines. Multiple Translations for a New Design Sensitivity**
Elena Caratti, Giovanni Baule
- 747 **Negotiating Ethics, Methods and Responsibility**
- 748 **Design for Common Good Needs Some Ground Rules - The Need for Ethical Design Pedagogy**
Saskia van Kampen, Cheryl C. Giraudy
- 764 **DYING.DIGNITY.DESIGN. End of Life Design as a Common Good**
Bitten Stetter
- 774 **Design and Visual Communication as Common Good in the Field of Palliative Care**
Tina Braun
- 790 **A Systems-Centric Approach in Designing for the Common Good**
Shalini Sahoo
- 805 **Future Scenarios for Crisis and Resilience**
- 806 **From Fact to Artifact: a New Approach to Ethical Responsibility in Discursive and Speculative Design Practices for Public Engagement in Science**
Lynn Harles, Marie Lena Heidingsfelder
- 820 **A Research through Design Practice to Envision Home Scenarios in the Post-Covid-19 Future**
Xue Pei, Daniela Maurer, Carla Sadini, Francesco Zurlo
- 834 **Speculative Citizen Design – Design for Resilience through Low-Threshold and Community-Based Speculative Design**
Aïcha Abbadi, Luisa Hilmer
- 851 **As Strong as the Weakest Link: A Global Blueprint for Sustainable Practice**
- 852 **Quantum Thinking – Sustainability in and through Visuality**
Benedetta Crippa
- 862 **Can Plastic Be 'Green'?**
Geoff Isaac
- 878 **The Impact of Sustainable Eco-Tourism by the Khomani San Community: An Ethnographic Study**
Celeste McKenzie
- 896 **Design as a Catalyst for Sustainability – An Approach to the Common Good and the Oceans**
Dilia Nunes, Joana Lessa
- 913 **Educating for the Common Good**
- 915 **Re-Orienting Design Education**
- 916 **Hidden Connections: Holistic Approaches to Design for the Common Good**
Eric Benson, Michelle Fehler
- 932 **Design Education as a Common Good for Artisans in India**
Judy Frater
- 946 **Implementing Design for the Common Good in an MA Curriculum**
Ulla Ræbild, Richard Herriott
- 958 **How Will It Benefit the Community? Designing a Cybernetic Curriculum for the Common Good**
Michael Hohl
- 973 **Other Ways of Worlding: Interrogations of Design Education, Theory, and Practice**
- 974 **Following the Otherwise – Contributions of Intersectional Feminist Design Pedagogies Towards Socially Transformative Practices**
Maya Ober
- 990 **Design for a Feminist Future**
Alison Place
- 1002 **Exploring Feminist Modes of Hacking as a Commoning Design Practice**
Marie Dietze
- 1016 **Fluid Worldviews: Designing within the Common Good**
Ricardo Sosa, G. Mauricio Mejía, Joni Adamson
- 1031 **Calling Upon the Common Designer: An Interactive Roundtable Exploration of Design Education & Practice**
- 1032 **Bridging the Skills Gap of Engineering Students to Engage with 21st Century Challenges: A Designer's Approach**
Marius Aeberli, Pierre-Xavier Puissant, Marc Laperrouza
- 1042 **Caring for the Commons. Teaching Design through the History of Environmentalism**
Meret Ernst

A Research through Design Practice to Envision Home Scenarios in the Post-Covid-19 Future

Keywords: Research through Design, Design Scenario, Covid-19 Pandemic, Home Visions.

Xue Pei^{a*},
Daniela Maurer^a,
Carla Sadini^a,
Francesco Zurlo^a

^aPolitecnico di Milano
*xue.pei@polimi.it

This research is born in response to the Covid-19 pandemic breakout worldwide and aims at shaping new domestic scenarios, which could better answer to the emerging needs at home. This research has followed a designerly way to build understanding and knowledge on unexpected emergency through integrating both qualitative and quantitative methods to collect data, moreover, a strategic design method, scenario building, has been carried out to transfer these initial themes/topics into 7 visionary scenarios, which could involve different actors, designers, experts, companies and also the public, in diving their opinions and taking actions to implement certain ideas and possible solutions to the ground. This research eventually provides an initial strategy and methodology for studies that aim at exploring visionary directions and proposals on social issues relevant to everyone and the common good.

1 Introduction

The Covid-19 pandemic which has struck the world in 2020 asked us, both as citizens and researchers, to deal with uncertainty, change our previous lifestyles, habits and research priorities. To contain the spreading of the virus, everyone was suddenly forced to stay at home, carrying out daily lives totally within the four walls of a domestic setting. This has already been considered one of the most challenging social experiments in human history. It is obvious that the life could not go back to “normal”, and a new definition of what a normal life will look like could be formulated from diverse perspectives. With the growing conviction that “creativity” is an inescapable keyword for the restart that involves and builds together solutions for a sustainable and responsible world for the post-pandemic (Zurlo, Maurer and Pei, 2020). In particular, designers - by definition - thank to a project attitude (from the Latin *pro-jacere*) often adopt a future perspective (Celi and Rudkin, 2016). Designers are not only focused on the understanding of challenges but also on the identifications of possible solutions, trying therefore to overcome anxieties generally connected with survival and adaptation (Schein & Schein, 2019; O'Hara and Leicester, 2019). This paper is going to present the preliminary results of a research-through-design work born during the outbreak of Covid-19 pandemic.

The research has followed a designerly way to explore visionary home scenarios that could better respond to the emerging needs of staying at home. The paper starts with a review on the essential traits and advantages of design and designers when dealing with uncertainty towards a possible future. Two design methods, speculative design and scenario building, have been discussed by design researchers as promising ways to visually present a desired future. The methodology part has illustrated the entire research process and applied methods in detail. During the research data collection phase, authors have integrated both quantitative and qualitative methods to obtain different information for better understanding the phenomena. Then, scenario building has played a crucial role in interpreting collected data and transferring it into the first research finding - 7 visionary domestic scenarios, which has visually presented how the “preferred” home looks like, as well as fostered conversations and collaboration among different actors. Eventually, the paper has reflected on designers' approach to face unexpected crisis and to explore desired possibilities, role of design-orienting scenarios in the inquiry of uncertainty, as well as the practical contributions of this research to current situation and similar studies.

2 Uncertain Times and Design

The present moment that we are all experiencing has not been the first period of uncertainty in history. The globalization process has been analysed and its definition partially changed. Risk has to do with something that has not happened yet, but that might happen; therefore, actions are more oriented towards preventing it (Reith, 2004). However, also due to time-space compression, the

future becomes an extension of the presence (Nowotny, 1985) and in this sense, risk is already there. Beck (1992, 2009) talked about World Risk Society, characterized by different typologies of risks, which are no longer exclusively local but distributed on the planet. Indeed, viruses, pollution, terrorism do not have borders even if they can be more or less successfully overcome thanks to local economic, technological, and political benefits. The emergence of the concept of risk has been strictly connected with the future notion and has had a central explanatory role in the indeterminate world of late modernity (Reith, 2004). Therefore, the globalized world influenced an interpretation of the future as unknown and “not amenable to human intervention” (Reith, 2004: 393), creating a dilemma where, notwithstanding the impossibility to predict it, individuals need to “still engage with it. The problem that now faces them is – how to act” (Reith, 2004: 393).

The most creative societies occurred in periods of redefinition and understanding of current difficult situations (Koestler, 1964). Koestler (1964) uses the concept of “ripeness,” which has to do with maturity and development of solutions at the right time in the right place. Sill (2001), for example, refers to Classical Greece or the Renaissance; in general, periods of crisis, such as the one we are going through right now - the Covid-19 emergency, have potentialities for being creative in responding to critical situations and events. These uncertain periods have been called post-normal times (Sardar, 2010; Montuori, 2011). In particular, the concept of post-traumatic growth has been used to address periods of recovering from difficult times both at an individual and collective level (Tedeschi and Park, 1998; Fuentes, 2017; Fredrickson, et al., 2003). Other very relevant insights can be taken from Hannah Arendt’s reflection on dark-times that she developed, referring to the Second World War atrocities. Arendt sees dark-times “as also [...] precious moments for developing an “activity of thought” where the thinking and action are deeply intertwined” (Staszowski and Tassinari, 2020: 14).

Design, because of its proactive nature, can act in the “space of possibility” shaped by dark times, as Arendt defined. Referring to Cross (1982), design problems are generally defined as “wicked” because they are both ill-defined and ill-structured, and this is typical in the case of societal issues (Sedini, 2020). The so-defined “wicked” problems do not provide all the necessary information to the problem-solver. In general, “The problems which human society faces (...) are, by definition, complex, multifaceted and systemic. And, inasmuch as we are coping with open, dynamic, and unpredictable events, many of these problems are unknowable at this stage” (Schein in O’Hara and Leicester, 2019: 1). Since design involves creating something new or transforming a less desirable situation into a preferred one, building a more humane world (Simon, 1998; Margolin, 2007), it is particularly important to make desirable rep-

resentations of the world and find possible answers to face uncertain and crisis periods.

3 Design Research on the Possible Futures

Because of the nature of problems that designers face, they use abductive thinking logic to explore potential answers and solutions. The “designerly way of knowing”, which Cross (2001; 2007) has explained, is based on reflections on practices. Kumar (2004) defined a typical design process as constituted by research/exploration, analysis, synthesis, and realization phases, which are iteratively repeated. Focusing on the first phase, design exploration is mainly based on the question “What if?” (Schön, 1983), trying to address the problem-setting (Fallman, 2008), and, in particular, exploring possibilities outside current paradigms. This process could also be understood as giving shape to new potentiality and push the generation of potential solutions (Boland and Collopy, 2004).

In the domain of Speculative and Critical Design, for example, Ehn (2006) proposes the idea of ‘transcendence’, that has to do with the “exploration of possibilities outside of the current paradigms of style, use, technology or economics” (Fuad-Luke, 2013: 84). In order to define possible “what if?” answers and to envision possible and alternative futures, both past and present have to be taken into consideration. This requires the capability to build a bridge to link existing or emerging needs and aspirations with possible conceptual future (Auger, 2013). The exploratory process is different from the anticipatory one, which instead tends to be built on the basis of different visions of the future, which can be desirable or not (Godet and Roubelat, 1996). However, not all actors are alike designers or have a design mindset, who are good at playing with and balancing of being totally “out-of-box” and showing familiar aspects of current contexts and situations.

“Synthesis is an abductive sensemaking process” (Kolko, 2010: 17), where sensemaking is defined as an effort to identify and understand connections among the different elements which compose a system, such as people, places, and events, to identify or even anticipate their trajectories (Klein, Moon, and Hoffman, 2006; Kolko, 2010). One of the ways to present these trajectories is to create scenarios. A scenario is “a description of a future situation and the course of events which allows one to move forward from the original situation to the future situation” (Godet and Roubelat, 1996: 8). Manzini and Jégou (1999) have proposed to use scenario as a way to present imaginations and potentialities of a preferred future. Scenarios are stories about the future that cannot be clearly foreseen; however, their purpose is to make decisions today. Scenarios are not based on probability but on qualitative data and analysis. Uncertainty is part of this method, which builds different pathways to the near future through storytelling. Their creation depends on data collection (research and exploration) and analysis; these two phases lead to the data’s organization into patterns that represent more plausible and pragmatic futures.

4 Research Methodology

Home Bridges the World is an on-going research project conducted by Creative Industries Lab^[1] of Politecnico di Milano starting from the first lock-down period in Europe. It aimed at exploring and inquiring how our homes have changed following the outbreak of the Covid-19 pandemic, and how this worldwide crisis could leverage home to play different roles in our daily life. The research followed a designerly way to create new knowledge and to define promising opportunities through a defined research process. One of the main objectives is to provide access and means to involve different actors and roles in the co-creation and co-definition of “what is the new normal as a common good”.

4.1 A Research-through-Design (RTD) Approach

This work has used design practices as the research process through collecting, interpreting and visualizing data, translating the design and research theories into practical design methods and process. Applying what we called a Research-Through-Design (RTD) approach. The researchers background determined also the human-centered focus, confirming the designer attitude to start from user’s need and desires, usually through the use of qualitative research tools to empathize with them. In this specific case, the restrictions imposed by the lock-down made it difficult to carry out field research through interviews and direct observation, therefore a methodology that integrates both quantitative and qualitative tools aimed at collecting first and second-hand data has been planned, exploiting the possibilities offered by the digital tools and devices: therefore, the research has been conducted completely online.

4.2 Research Process

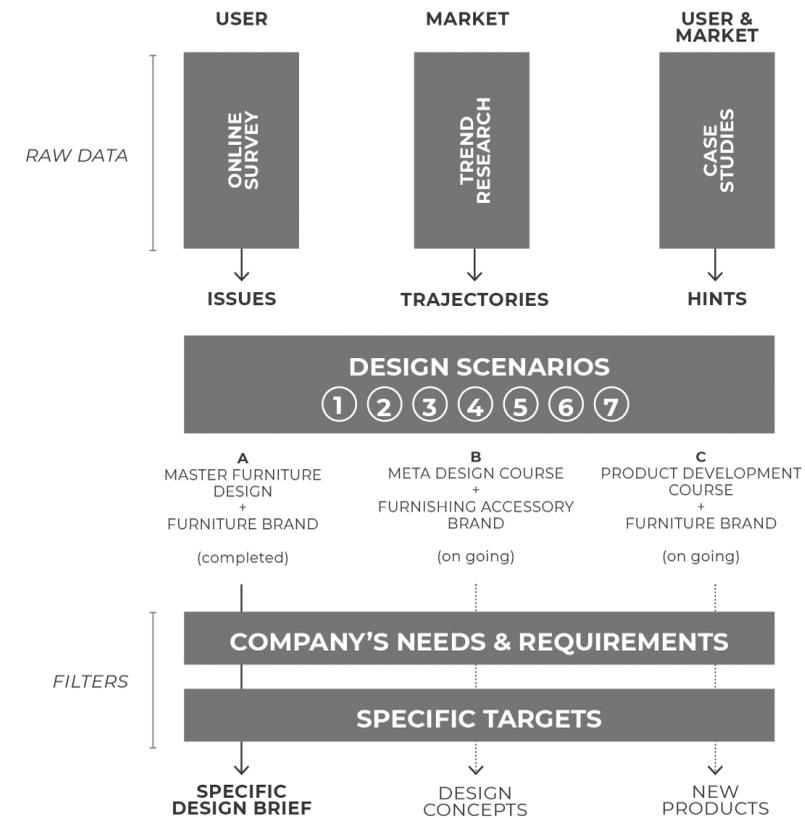
The Research Process was planned started from the collection of data, that, from an empirical perspective, looked at:

- User’s behaviors through an online survey, to understand the issues people were facing;
- Market directions and trajectories through trend research and analysis;
- Both market and user through case studies, to get hints about how individuals and companies spontaneously reacted to the situation.

[1] Website of Creative Industries lab: <http://www.cilab.polimi.it/>

Then, the collected raw data has been categorized in different themes and topics that guided in the definition of Design Scenarios for “visualizing” the possible future that answers the emerging needs. Those have been later used to “design” solutions in collaboration with design companies and students from the Academic field, aligning research and corporate values of social/common good.

Fig. 1: *The Research Methods and Process* (elaborated by authors).



4.3 Data Collection

Both quantitative and qualitative research methods have been conducted to collect first and second-hand data.

4.3.1 Online Survey

The online survey aimed at collecting as much data as possible from a miscellaneous population in terms of age and profession.

The survey was designed with 42 questions, divided into 6 sections:

- Basic information: to understand age, gender, occupation, nation of origin and if the people were experiencing the lock-down alone or with someone else;
- Life during quarantine: to comprehend how people coped with being restricted at home during the lockdown;

- Typology of domestic living spaces: to know where in the house people conducted their 24-hour activities;
- Work and study situation: to get information about the remote working/studying experience of workers and students;
- Necessary activities: to realize how people managed issues related to maintaining/ cleaning the house, keeping the house virus-free and purchasing food;
- Free Time: to know how people were coping with free time activities, alone and/or with the people they were living with and how they were maintaining social relationships, to identify emerging domestic entertainment activities.

Two researchers analysed the data, looking for commonalities and differences in the answers, to identify emerging needs and hints from the users and synthesize them in main issues, supported by case studies and trends observed in desk research.

Second-hand data about case studies and trends have been collected through desk research, looking at trend report from trend research agencies, following webinars organized by universities and organizations, reading articles on economical and design websites and newspapers.

Case studies have been collected looking mainly at what has been published on the social networks by people and companies that, due to the lockdown, have become the privileged channel of communication and relationship and therefore the means to have a look to what was happening in the houses of all world.

Each Scenario has been defined through the following factors:

- issues identified from users' NEEDS & WANTS: issues that are created and clustered from studying and analysing survey results;
- HMW question: using the How Might We question to frame a design challenge and therefore define a clear explorative direction for each Scenario;
- key features: defining essential and unique features the scenario must have in order to reply to the challenge posed by the HMW question;
- relevant social trends: presenting emerging socio-technological trends that confirm the scenario's directions;
- inspiring initiatives: presenting initial ideas, concepts, initiatives from the users and business that could be seen as first attempts to answer the scenario challenge and therefore can be of inspiration to build a possible concrete solution;
- impacted sectors: identifying sectors and industries that could be impacted by this scenario;
- design opportunities: identifying possible directions to follow to propose new design or business solutions;

4.3.2 Cases Studies and Trend Analysis

4.4 Design Scenario Building

4.5 Testing Design Scenarios (for Creating Project Proposals)

- digitization and technology: highlighting the role of digitalization as enabler of new behaviours and facilitator in the application of solutions.

The following step was testing the design scenarios with students of design academic programs coming from different parts of the world and attending different programs (specialized master courses, undergraduate and postgraduate courses), challenging them to use the design scenarios as part of their brief.

We ran three tests, all of them in partnership with Italian design companies, in order to interpret and concretize the Scenarios through the constraints of a company and the request of the market:

- with students of specialized master in Furniture Design of POLI.design in partnership with an Italian furniture company, with a workshop aims at defining detailed design brief for the design of a post-COVID furniture collection. During the workshop, the visionary scenarios have been transformed into practical design briefs for the company;
- with students of the Meta-design course (undergraduate level) of the School of Design_Politecnico di Milano, in partnership with an Italian furnishing accessory company, with the aim of deepening the research of three Scenarios (selected for affinity with the company's market objectives) and consequently developing concepts that take into consideration the client's target, poetics and production technologies; *(on going)*
- with students of the Product Development course (postgraduate level) of the School of Design_Politecnico di Milano, in partnership with an Italian furniture company, with the aim to develop furniture products to be eventually prototyped and produced. *(on going)*

4.6 Preliminary Research Results

4.6.1 Survey Result

We collect data for 12 days over the period 23 April-4 May 2020, then the data analysis lasted 2 weeks and the results were synthesized through graphs. We acquired answers from 337 people (290 living in Italy, and 47 from countries all over the world). The 68,5% were women, the majority of them between 19 and 35 years old. The 85,8% of them lived with someone (family, relatives, roommates or friends) during the lockdown period, while the 14,2% went through it alone. The 85,4% lived in a house (flat, detached house, single house) with outdoor space (balcony, terrace, garden, rooftop) where half of the people, 45,3%, declared to have spent most of their time. The main difficulties that emerged regarding the domestic spaces were to make the same space/ furniture meet the requirements of different needs/activities (24,9%); to organize and

to share the space with other people they lived with (16,5%) and to guarantee privacy (7,5%). Therefore, around 25% of the people bought new furniture, devices or accessories to adjust/change the home environment to better meet the new needs.

4.6.2 Design Scenarios

The following 7 Scenarios have been created:

- Working from home as normal: underlining the role of the house as enabler of an adaptive working experience that mix tangible and intangible needs;
- Back to Hands: enhancing the house as a laboratory used to make things, experiments and to learn with hands;
- Collective entertainment at home: where the house becomes a platform for collective digital and physical entertainment, enhancing the relationships among people;
- Personal wellbeing at home: the house as the place where everyone can fully take care of themselves and spend time on personal wellbeing (mentally and physically);
- Keep virus outside home: the house intended as the safe shelter in an easy and reassuring way;
- Outdoor space is as a must-have: enhance the possibilities to benefit more of outdoor experiences even with very limited outdoor spaces;
- Cooperativism from home: the house as facilitator of stronger relationship in the neighborhood.

4.6.3 Design Proposals

Two of three collaborations ran to test the Scenarios are currently ongoing experience (B-C), while one is fully completed (A). It lasted 2 weeks as a full-time activity and thanks to this collaboration, the following 6 Design Brief have been designed:

- Brief 1: aimed at defining partition systems solutions for people that share the same working space at home (Working from Home as Normal Scenario)
- Brief 2: aimed at defining solutions for indoor cultivation of vegetables (Back to Hands Scenario);
- Brief 3: aimed at defining solution for socially active teenagers in need of privacy while playing/talking with friends (Collective Entertainment at Home Scenario);
- Brief 4: aimed at defining solution for a modular desk that can adjust to the different needs of each family members and to the activities dedicated to relieve the stress and improve the wellbeing (Personal Wellbeing at Home Scenario);
- Brief 5: aimed at defining solutions for a modular multipurpose storage unit with an added feature of UV sterilization (Keep Virus Outside Home Scenario);
- Brief 6: aimed at defining solutions for a versatile support for space saving in small balconies (Outdoor Space is a must-have Scenario).

Each brief has been defined and described taking into consideration the coherence with the Brand values, market, production technologies and target users.



Fig. 2: Example of how each design scenario has been presented, through the factors explained in chapter 4.3 (elaborated by authors).

5 Findings and Discussions

The contribution of design and design research to science, society and culture is different from other disciplines. This inquiring process has provided some vital evidences to make reflections on the notion of design research practices for facing unexpected crisis, as well as the role to guide for a common good.

5.1 Nurturing Visions through Problems and Opportunities Co-Definition

As discussed in the beginning of this paper, designers are working on how things could be instead of how they are done. With the capability to image and give shape of possible futures, their cognitive process is not fully based on evidences. The designer's notion is to critically anticipate possible situations to seek for the reason-why behind evidences and to make sense of why could be the new meanings. The design process is co-evolving problem space and solution space together (Dorst & Cross, 2001).

Design process starts always with the understanding of users' needs. When the situations and the issues are becoming more and more complex, in which there are no specific users but the whole society should be taken into consideration, it is essential for designers and design researchers to create effective methods and tools to collect, interpret, understand and synthesize information and resources rapidly. These activities are aiming at helping the public

and the society to “see” how the society is changing and how they could act accordingly. In this research, there is not a defined problem to solve or a question to answer, oppositely, the very first objective is to understand what is the problem and what questions to ask. All the activities are parts of the journey to shape a way to “observe” the complexity and then to nurture shared visions. Collecting data both directly from the public and from other resources is to build up a dataset which is meaningful for designers to better understand the situation. The difference between designers and many other professionals to deal with the dataset is what they could transform it to. Visible and understandable visions with concrete examples and well-defined features is an effective way to present what the future could be like. On one hand, designers have the responsibility to push the boundary of imagining “what the future could be like” through critically presenting their point of views; on the other hand, a common recognition and acknowledgement is necessary to be shared with the public, decision makers, experts from different backgrounds in order to involve them in collaboration and co-creation. This research process is a co-evolution of defining problems, opportunities and visions.

5.2 Design Scenarios as Open-Platforms to Users, Industries and the Society

One of the most important preliminary research outputs are the seven scenarios explained in the chapter 3.6. They have been used to present the visions on how domestic environments might change to better answer the emerging needs and wants. More importantly, they are essential to act as a “visible” platform for provoking conversations with other actors and triggering co-creation of possible solutions with companies, public sectors and the citizens. Since these scenarios were intentionally designed to remain at a strategic level (not aiming at defining specific projects), the received experience and feedbacks have proved the importance and strategic role in involving different stakeholder in the society in discussing, collaborating, contributing to some common visions and how to implement.

It is very difficult for people to participate in a co-creation action without seeing visible or visualized elements. Designers are good at imagining the possibilities but not everyone is able to do it. When talking about co-creation, especially when the objective to create is less materialized and includes diverse layers, dimensions and elements, it is often that designers overlook the capabilities of other involved actors, whose contributions might be limited by the difficulty of not being able to “see” and to “interact” with it. A design scenario is composed by elements, evidences, information, resources that are created and visualized with a vision at the core. Even though it doesn’t have a tangible shape, but all the ingredients have helped to make it able to perceived. The design scenario is, on the one hand, quite open, since it is not a proposal for project, either a solution to solve problems; on the other hand, it is also very

5.3 An Initial Strategy to Face Similar Crisis and Social Issues

solid to work on, and different actors are able to perceive opportunities to make their own contributions as well as benefits to them.

The experience from this research makes the research team to reflect on the scalability and duplicability of the research methodology and process. The research was born to create a positive contribution to face the unexpected pandemic that are still threatening the whole world. From the preliminary research outputs, it is able to see that the process and the methods have successfully leveraged actors (e.g., the public, industries, businesses) to take part in a conversation towards shared goals and common good. The industries are changing their mind of doing business and integrating the social dimension and common good for the public as part of daily activities. Therefore, when facing “wicked and complex problem”, this design research approach could be used to define problems and opportunities, then to co-create desired visions towards a common good. The research team will continue to test and redefine these methods and tools in similar research projects and on relevant research topics.

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