

The essays collected in this volume explore a broad number of approaches to design research: Historical, critical perspectives on design and design research, overviews of the social conditions of design and the theories and instruments of co-design, investigations of design research practices, examples of concrete projects and developments, and connecting the material and digital worlds.

Unfrozen encompasses a selection of research projects that were presented at “Unfrozen”, the SDN Design Research Summit.

ISBN 978-3-03863-032-6

SWISSDESIGNNETWORK

Triest

Unfrozen – a Design Research Reader by the Swiss Design Network

Unfrozen – a Design Research Reader by the Swiss Design Network

Triest

Empowering Locals Through Service Design and Social Innovation: The MakeinProgress Case Study

Abstract

The society we live in today is undergoing a paradigm shift (Murray 2009). The crisis of the capitalist model is creating the need for certain social innovation processes (Murray et al. 2010, Manzini 2015).

This paper presents an example of how social innovation and service design (Meroni and Sangiorgi 2012, Stickdorn and Schneider 2012) can promote local territories through *making*. We tested a “what-if” situation to answer the following research questions: a) what kind of *maker space* could work in this territory; b) who are the potential users; and c) if making could increase the local territory’s appeal for social innovation. Using the method of *action research* (Stringer 2014, Stoecker 2012), we created a demonstration plan we refer to as *demo service* in order to experiment with different kinds of activities and areas of application. The MakeinProgress (MiP) project was then initiated. MiP was a case study of the way making could facilitate local development (Bianchini et al. 2014) with the aid of service design.

MiP previewed the use and social function of an old *filanda* (textile mill) being restored thanks to public financing. The converted former mill was initially conceived of as a business incubator, and was later adapted to fit local needs.

The territory in question was unfamiliar with the dynamics of making, maker spaces, and social innovation. Service design was widely and practically used (i.e. open calls for ideas, workshops, space hacking, etc.), hence demonstrating what can be achieved when design positions itself as the intermediary between institutions and local communities.

The action research methodology helped an awareness of the project to emerge and spread through the local territory, aiding the identification and training of a group of local citizens who could assume management of the space; it also helped shape the space according to local demands.

Thanks to service design, the former mill became a place that allowed the community to promote new job opportunities, share ideas, and facilitate the creation of new businesses. MiP also enabled new collaborations between the creative community and pre-existing local companies, helping the latter to benefit from the community through exposure to new technologies and the cross-pollination of ideas.

Theoretical Framework

Crisis and Social Innovation

The starting point of this work is a view of the society in which we live. The 2008 crisis that erupted in many Western economies opened a can of worms, exposing all the contradictions and loopholes in the system we had been living under. According to Castells, this crisis is structural and involves several dimensions: “A financial crisis triggered an industrial crisis that induced an employment crisis that led to a demand crisis that, by prompting massive government intervention to stop the freefall of economy, ultimately led to a fiscal crisis” (Castells et al. 2012, 4). It represents the collapse of a system that has proved unsuitable. According to Schumpeter, all periods of crisis are also periods of creation; Manzini adds that we are now divided into two different worlds, where two realities coexist in conflict: “[T]he old ‘limitless’ world that does not acknowledge the planet’s limits, *and another that recognizes these limits and experiments with ways of transforming them into opportunities*” (Manzini 2015, emphasis ours). A change right now seems more necessary than ever. A new world is slowly emerging in the space between the remains left by the crisis.

One of the primary aspects that characterizes the face of this “new” world is the development of *social innovation practices* in our culture. “Every era needs a bit of social inventiveness. But there are reasons to believe that *social innovation is particularly common when the existing institutions are showing signs of stress and when problems of social cohesion, unemployment, urban decay and youth unemployment seem resistant to traditional solutions*” (Mulgan and Landry 1995, emphasis ours).

So what is social innovation? It is a widely described phenomenon, and here we use the definition given by NESTA: “Social innovation is innovation that is explicitly for the social and public good and is innovation inspired by the *desire to meet social needs* which can be neglected by traditional forms of private market provision. Social innovation can be developed *by the private, public or third sectors or users and communities*” (Murray et al. 2010, emphasis ours).

Design and Design for Social Innovation and Service Design

In this scenario, both design and service design have an important role. The role of design has consistently changed from the era¹ of the first industrial revolution, and as Manzini (2015) says, “Design is a culture and a practice concerning how things ought to be in order to attain desired function and meanings. It takes place within open-ended co-design processes in which all the involved actors participate in different ways. It is based on a human capability that everyone can cultivate and which for some—the design expert—becomes a profession. The role of design experts is to trigger and support these open-ended co-design processes, using their design knowledge to conceive and enhance clear-cut, focused design initiatives.”

So if social innovation has the potential to change the world, with the need of a new culture at the base of it, design could be the right tool for the creation of this culture.

One key point is the birth of a new design culture characterized by innovative practices, in which the polarization between problem solving and sense making becomes more and more blurred.

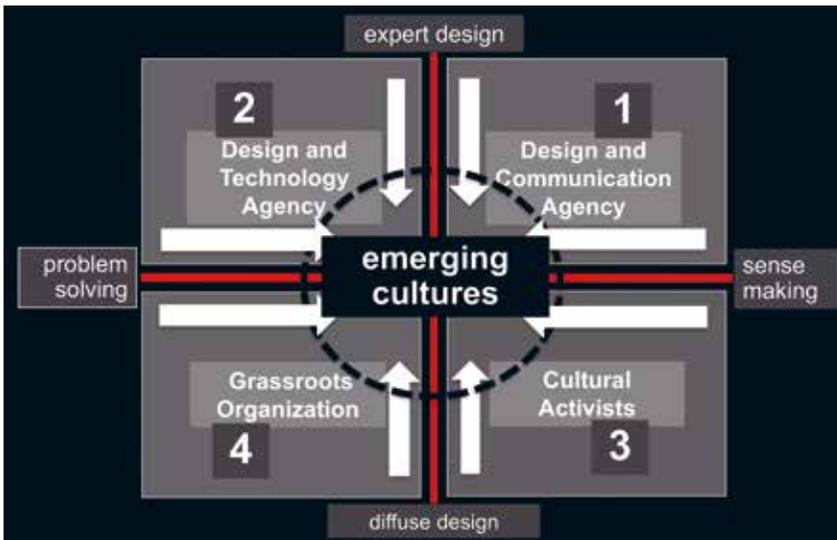


Fig. 1: Manzini 2015.

1 Cf. the ICSID definition at www.icsid.org/about/definition.

Per Manzini, “Design for social innovation is everything that expert design can do to activate, sustain, and orient processes of social change toward sustainability” (ibid.). In the creation of this new culture that could sustain the developing social innovation, *service design* and its tools also have a peculiar role, since “Within Service Design, Service Interfaces are designed for intangible products that are, from the *customer’s point of view*, useful, profitable and desirable, while they are effective, efficient and different for the provider. Service Designers *visualize, formulate and choreograph solutions that are not yet available*. They *watch and interpret needs and behaviours and transform them into potential future services*” (Erlhoff and Marshall 2008, emphasis ours).

Design Theme Definition: Social Conversion of Public Assets in Disuse

Among the various areas in which social innovation can act,² here we present a case study on the issue of redeveloping unused spaces within cities, acting as a local resilience booster through design. According to Cottino and Zandonai (2012), “Attention to such spaces is shifting its value *from a residual function* within social planning *into a real opportunity for reuse*. The unused spaces are therefore seen from a perspective of social innovation—as resources and opportunities to be seized upon to create not only simple urban regeneration projects, but also *places to regenerate and reconvert to social use*.”

In projects that deal with territorial design, referring to *territorial capital* improvement can highlight the territory’s individual characteristics through a materialization of products, services, and strategies (Maffei and Villari 2006). Its role, then, is to promote systemic innovation starting from unique local resources, using different levels of specialization (strategic design, service design, communication, product) and different targeted

2 A wide range of activities, such as: the development of new products, services, and programs; social business and the work done by social enterprises; the reconfiguration of social relations and power structures; innovations in the workplace; new models of economic development, social transformation, systemic change, and sustainable development driven by businesses. It can also deal with hard-to-treat social problems such as youth unemployment, the increase in the average age, immigration issues, and cohesion within multicultural societies etc. (Caulier-Grice et al. 2012).

actions (social, economic, cultural, etc.). One can therefore conclude that territorial design “is the offspring of so-called strategic design [...] that is, addressing local objects through a strategic approach and designing local products and services (be they industrial, communication related, event related, etc.) using multidisciplinary skills, either from other branches of the design disciplines or other disciplines entirely” (Franzato 2009). The output of territorial design then helps determine the appropriate strategy, as the territorial products subsequently developed are a result of said strategy and give it concrete form.

The questions that informed all our research were: How do service design and social innovation fit into territorial enhancement processes? What tools and competitive advantages do they offer?

Field Research and Analysis

To answer these questions, we conducted field research and explored various design tools.

Field Research

The aim of the field research was to analyze, in light of previously implemented projects, how the design operates within the regeneration processes in the social use of unused spaces, with the consequent aim of being able to encode these methodologies in tools that can be helpful to the actors participating in these processes. During our research 19 national and international case studies similar to MiP were mapped. The analysis focused especially on management model/activation, activities, outcomes, and the role of design.

Two strategic documents were also analyzed during our field research (Smithsonian Institution 2013, Minervini et al. 2015); the results clarified that 94% (of the Italian projects) make use of public funding, and as many as 65% of the projects are born from top-down types of activities. 50% of these projects do not continue after they run out of public funding. Moreover, in the few cases in which design is explicitly present and used in a transverse way, the results are a better definition of the outcomes and the prevalence of “mixed” processes where—thanks to co-design and participation—bottom-up and top-down processes coexist and complement each other.

One tangible result of these actions is the creation of stable and participatory local networks, as well as the definition of a new operative/ associative mode, which means that projects using design as a strategic key aspect became more independent from public funding.

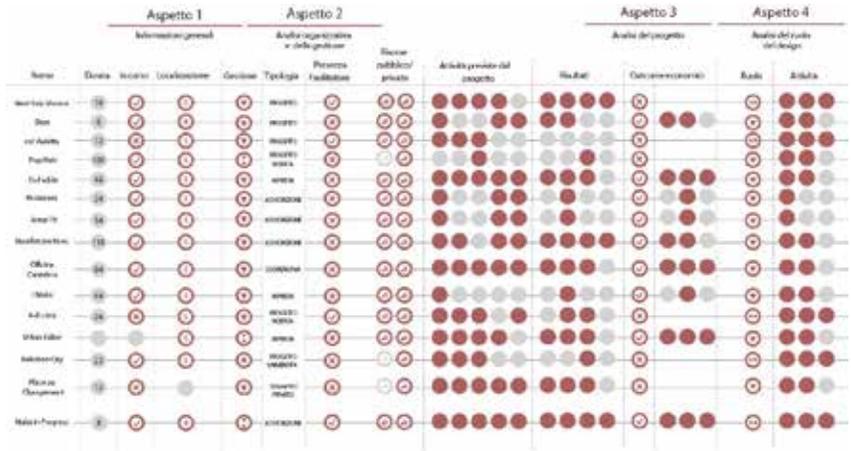


Fig. 2: Case studies analysis map.

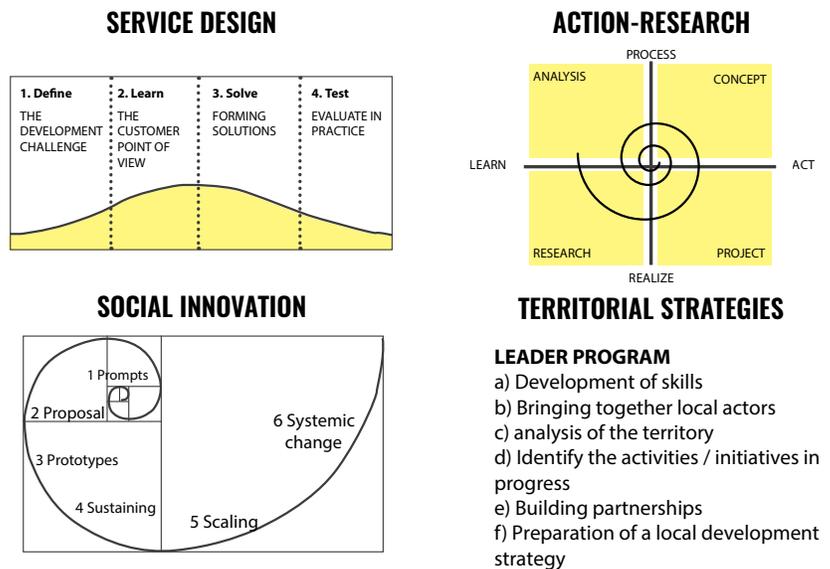


Fig. 3: Tool analysis.

Research on Tools

In addition to field research, different tools were also analyzed.

This analysis conducts us to four key considerations:

- The need for a process divided into stages, providing research and analysis of the territory, the conception of an idea, and its prototyping
- The need for a moment dedicated to evaluating the results
- The importance of analyzing the local territory, its state and state-of-art potential
- The creation of partnerships and preparation of a well-structured strategy

Method Development

Our research results led to the development of a method experimented with and implemented during the demo activity conducted as part of the MiP project. The method, as shown below, consists of 4 stages that build on previous research into the possibilities, represented by public funding or other local opportunities. We refer to this as the *4A Model*, encompassing *analysis*, *anticipation*, *action*, and *activation*. For every stage, several tools were developed and tested in local experiments.

Onsite Experimental Activity: The MakeinProgress Case Study

A Top-Down Opportunity

The MakeinProgress project is part of a broader initiative referred to as the *Distretto Culturale Evoluto (DCE) Monza Brianza* (“Monza Brianza Developed Cultural District”), led by the local province³ with the support of Fondazione Cariplo as part of the *Distretti Culturali* (“Cultural Districts”)⁴ program. The specific challenge launched by Fondazione Cariplo was to solicit the restoration of historic architectural buildings suitable for hosting design activities capable of ensuring the area’s vitality and sustainability into the future.

3 www.distrettoculturale.mb.it.

4 www.distretticulturali.it.

The Monza Brianza DCE selected four major properties: Palazzo Arese Borromeo in Cesano Maderno, Ca' dei Bossi in Biassono, Castello da Corte in Bellusco, and the former Filanda in Sulbiate. The idea for Sulbiate in particular, considering the structure's industrial nature, was to implement a restoration process for the creation of a business incubator. The project dated back to 2008, when the first feasibility study was developed and funding of € 800,000 was supposed to cover 50% of the restructuring costs, plus a small fee for communication activities and local entertainment.

Analysis and Definition of a New Scenario

Quali-quantitative analysis of data provided by the Monza Brianza Chamber of Commerce⁵ shows that the territory of Sulbiate and surrounding municipalities are underdeveloped from a manufacturing and production point of view, especially when compared to other areas in Brianza such as Monza, Lissone, Seregno, and Meda, which average over 200 companies per square kilometer. This element, combined with the low number of new manufacturing enterprises developed locally in recent years—businesses that could and should inhabit the hypothetical business incubator—led stakeholders to reconsider the ongoing model. The Monza Brianza Province, the City of Sulbiate, and the Monza Brianza Chamber of Commerce contacted the design department of the Politecnico di Milano requesting a review of the Monza Brianza DCE project, with the goal of redefining the local service model in a manner consistent with the territory and its real potential. Emphasis was placed on specific types of local activity, highlighted by the development of a “territorial capital analysis” tool. As a result, a new service model was developed—*Innovazione e impresa: la Filanda di Sulbiate, un recupero ad alta sostenibilità energetica per l'artigianato, le energie rinnovabili e le nuove tecnologie* (“Innovation and Enterprise: Sulbiate's Filanda and the Sustainable Renovation of a Site for Crafts, Renewable Energies,

5 “Il Sistema imprese Monza-Brianza ed il distretto di Sulbiate” (“The Monza–Brianza Industrial System and the Sulbiate District”), Venanzio Arquilla and Venere Ferraro (eds.), unpublished report, Design Department, Politecnico di Milano.

and New Technologies”). The model focused on social innovation (Manzini 2015), cultural entrepreneurship, and the “making” phenomenon (Anderson 2012). What, then, is this new scenario? The idea of putting a makerspace in this municipality aims to enable social cohesion through a diversified production of experiences—both individual and collective—which act as enterprise generators with a social purpose. Making, in accordance with the definition of FabLand (Bianchini et al. 2014), is seen as a tool functioning on several levels:

- creating not only economic value but also cultural, social, and environmental value in relation to the territory’s own capital
- enabling local communities to thrive and activating learning processes
- bringing together citizens and local policymakers to define new policies for specific problems

The challenge posed to us as designers was: What kind of open hub/ maker space (Menichinelli, 2016) could work in this territory, and who are its potential actors/users?

Anticipation—Demo Service Design

While the Filanda was being renovated, the broader MiP project was conceived as a series of activities and actions of high social impact in order to:

- involve the productive community of the territory
- connect to creative networks in Milan and productive platforms in the Brianza industrial district
- better define the design and business model of the Filanda by linking it to making and fabbing, enhancing local resources.

The key points identified during our field research and analysis were modified into a number of core actions to be taken within this kind of process. These points were then developed through the so-called demo service:

Key points that emerged from research:

- project tailored to the reference territory
- clear and well-defined idea of the project and objectives
- strong local network
- economic sustainability of the project
- documentation and sharing of results

MiP—Demo service actions:

- knowledge of and experimentation in local territory
- rehabilitation of the Sulbiate civic center
- experimentation and cultural dissemination / public workshops
- territorial networking / special projects

Action—MakeinProgress as Demo Service

Knowledge of and Experimentation in Local Territory

To identify sources of local resilience and identify any weaknesses, we launched a direct inquiry by sending a simple postcard to all local inhabitants, expressing the social significance and participatory basis of our project. The basic idea was to enable the majority of citizens to participate by studying a simple and deliberately non-technological tool, easy for all to use: a card to fill out and return. Use of such cards⁶ is common for the management of brainstorming and creative sessions, so we decided to use them for their directness and *anti-technological* qualities in an era where social relations are developed on the net. We created three deliberately broad and inclusive slogans / questions that called for participation: Do you want a space? Create it! / Do you know how to do? Prove it! / Do you have an idea? Propose it!

The slogans were on the front of postcards, deliberately allusive and without any detailed instructions on what to do with them, while at the back there was a simple form to fill out. The municipality helped distribute the postcards, which were delivered in random order to local inhabitants. The idea-collection phase lasted from June 5th to 30th, 2014, and 34 proposals were received:

6 Cf. the Ideo Method Card, www.designkit.org/methods.

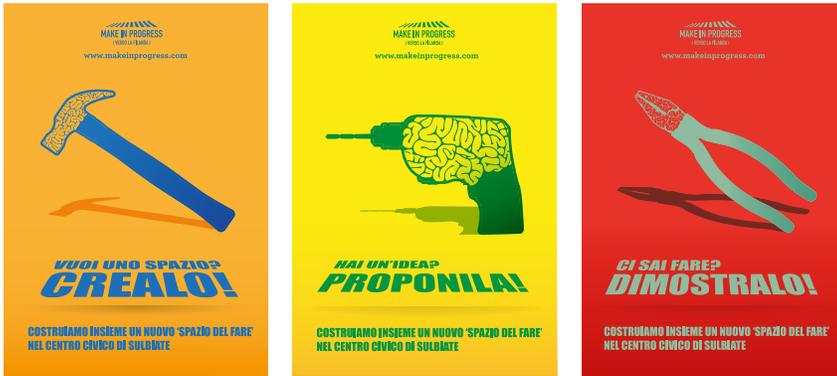


Fig. 4: Postcard, seminar, and workshops for idea generation.

- 19 came from citizens of Sulbiate or neighboring municipalities and associations already operating locally
- 11 new business ideas
- 4 offers of collaboration from local professionals and companies

The initiative included several communicative actions both online⁷ and offline (three public presentations in Sulbiate and Vimercate), and we provided an online form which had a much lower response rate compared to the cards. Out of 3,000 people contacted, we received 34 unique proposals, and of those: 10 people spontaneously emerged from the start; more than 60 people were involved in the collection of ideas; and approximately 200 joined events and workshops. With the belief (later confirmed) that active participation and physical presence facilitate the processes of interaction and exchange, we brought together all participants in a *workshop for the discussion, planning, and development of ideas*, which emerged in different areas: food production and culinary culture; training and educational initiatives; fabbing and tinkering; art and culture; public-service and volunteer activities; crafts, design, and prototyping.

Participants were grouped according to thematic areas, and a discussion of individual projects ensued. This activity revealed several

⁷ See www.makeinprogress.org/raccolta-di-idee.

people, each with their own story, who attested to the local area's resilience and previously unknown potential—people with whom we hadn't previously had the opportunity to collaborate. We refer to this first batch of locals as the *working group*.



Fig. 5: Re-design workshop—online proposals, voting, and codesign workshop. Citizens Proposals (left), Final Solution (right)



Fig. 6: Painting and furniture-making workshop.



Fig. 7: Final situation.

Rehabilitation of the Sulbiate Civic Center

Once all the proposals and ideas were collected, we moved on to the demo service prototyping stage, involving the rehabilitation and repurposing (or hacking, if you will) of the physical space in which the activities were to unfold. After using a participatory process to identify an area of the city various local associations used as a meeting center, this space was *redesigned* and *reconfigured* by the community and used by the working group as a coworking space and makers' lab during events.

Experimentation and Cultural Dissemination / Public Workshops

In order to more closely involve locals in the future of the Filanda, and give the working group a chance to experiment and train themselves, we ran a few workshops. Some were led by the working group (art and photography workshops), others were led by guest experts (WeMake and Tecnificio). They included interactive sessions with Arduino, experimental art, photography, 2D upcycling, and digital fabrication.

The topics were of great interest to the locals. Each workshop was attended by about 20 people, reaching approximately 200 participants total. This helped us explore the territory and gain valuable insight into the development of the ideal business model. For example, we found strong interest in artistic experimentation, which had not initially seemed to be a possible area for development.

Territorial Networking / Special Projects

Several other local initiatives were launched simultaneously. An experimental activity about art and making involved the elementary- and



Fig. 8: Picture of the Arduino workshop.



Fig. 9: School experimentation and Milano Rugby Festival.

middle-school children of Sulbiate. Over 100 children and three teachers attended for a total of ten days of training and experimentation, resulting in a final exhibition of the products realized. Other important activities included one with the association *Asparago rosa di Mezzago*, a contest themed around the distinctive local pink asparagus, and yet another was realized in association with the *Milano Rugby Festival*, for which the working group digitally manufactured trophies.

Activation—Enhancing the Results

The final stage of the demo service was identification and evaluation of the achieved results:

- thanks to the analysis of local territory and similar projects, we understood how a business incubator in Sulbiate was an ill-suited idea, and responded by shifting direction towards the creation of a cultural hub that will foster local social business
- the success of the artistic experimentation workshops revealed a latent local demand for art-related initiatives, so we expanded on the initial idea of having a simple exhibition area and focused instead on converting it to an area for artistic activities and social services
- the working group, motivated and trained by this experience, created an independent association, MiP-MakeinProgress (a bottom-up process)

A group of locals has since been able to start its own social business activity. The original project, *MakeinProgress-Verso la Filanda*, continued on to become an established association, *MiP-MakeinProgress*, an official APS (*associazione per la promozione sociale*, or social promotion association). MiP's business opportunity was born of a combination of top-down policies (i.e. the recovery, renovation, and rehabilitation of the Filanda) and bottom-up policies that saw as their goal the discovery of talent, local engagement, new job creation, and the reevaluation of the territory.

MiP's business model is based on a new type of enterprise able to generate business—especially social business—through the direct

management of the spaces belonging to the community. The model MiP aims to create and foster is *horizontal*. The heterogeneity of its components are used as a competitive bonus, and the creative energy of each component is coordinated without hierarchical organization.

As mentioned, MiP is a project that aims to bring innovation in the territory of Sulbiate and neighboring communities through various activities related to the art world, making, training, food, and shared workspaces.

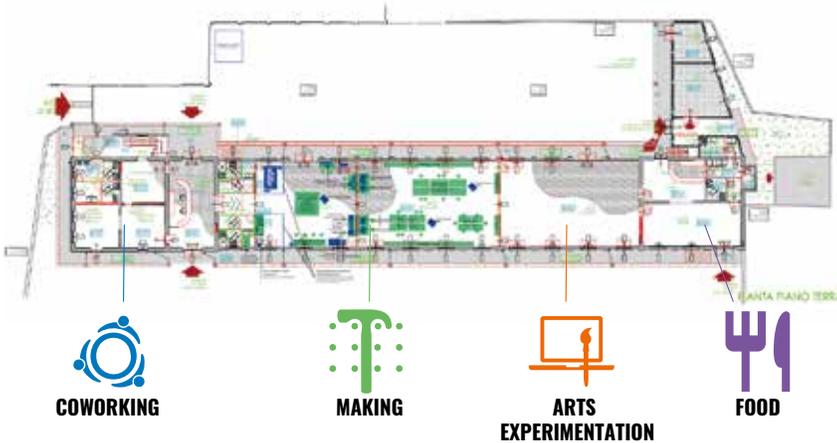


Fig. 10: The ex-filanda final layout and working areas.

MiP is an innovative business model that plans to generate employment through the management of the space and its services. Compared to the traditional management model of the FabLab (Menichinelli 2016), MiP offers a mixed and integrated model of services, where making is not the end goal, but rather an amalgam of the activities and generated processes. MiP has generated a bottom-up management model that defines new social innovation practices related to making activities, and creates a new local awareness, enabling new forms of enterprise and participation.

The main limitation of the whole operation is the allocation of space; notified through public announcement, those who wish to use the space need to prove immediate economic sustainability and structuring. In MiP's case, this limit turned into an opportunity.

Important individuals, associations, and companies working in and around Sulbiate joined the project and contributed to the development of a sustainable business model: some activities are covered by MiP, others are add-ons related to theater (thanks to the work of Associazione DelleAli⁸), and still others are related to employment thanks to the participation of the Consorzio Comunità Brianza,⁹ which will open a job help-desk in the Filanda, as well as offer a womens' coworking space and some childrens services.

Conclusion

MakeinProgress as Demo Service—Redefining sustainability models (making + coworking + food + art + social services)

To answer to the questions posed at the beginning of this paper, we can safely say—expanding upon Manzini's (2015) reflections—that *service design can work within territorial enhancement processes, making things visible and tangible, possible and probable, effective and full of meaning.*

The tools analyzed during our research and applied during the phase of local experimentation showed their competitive advantages in the field. Through—and thanks to—service design, the Filanda will be a place for the community to make and

- promote new kinds of jobs, starting with management of the space itself
- promote new kinds of production, activating locals creativity and cross-pollination of ideas
- promote new kinds of business, microbusiness, and productive interaction between creative communities and local companies, reinvigorating all involved.

The project remains open to all contributions stemming locally or from elsewhere, with the ambition to link the local community to the creative and cultural circuits, both national and international.

8 www.delleali.it.

9 www.comunitamonzabrianza.it.

The main open issue was the project's initial financial sustainability. As we have seen from case studies, and as is apparent in one major reflection on the business model of makerspaces and FabLabs (Menichinelli 2016), when initiatives are linked to public funding they struggle to find sustainability in the long run. In this case, the service design phase and the anticipation produced have generated the creation of an entirely new working group and social enterprise.

This achievement differentiates this project from other initiatives born with the same prerequisites and similar conditions. We will later assess how this new venture—which uncovered local resources and talents that had been lying dormant, exhibiting a kind of evolutionary resilience—will build a model of sustainability through the management of the premises themselves, in addition to other initiatives.

REFERENCES

- Anderson, C. 2012. *Makers: The New Industrial Revolution*. New York: Crown Business.
- Bianchini, M., V. Arquilla, S. Maffei, A. Carelli. 2014. *FabLand: 'Making' digital/analog distributed urban production ecosystems*. Accessed June 18, 2017, <https://www.fab10.org/en/papers/46>.
- Castells, M., J. Caraça, and G. Cardoso. 2012. *Aftermath: The Cultures of the Economic Crisis*. Oxford and New York: Oxford University Press.
- Caulier-Grice, J., A. Davies, R. Patrick, W. Norman. 2012. "Defining Social Innovation," a deliverable of the project *The theoretical, empirical and policy foundations for building social innovation in Europe* (TEPSIE). European Commission, 7th Framework Program. Brussels: European Commission and DG Research. Accessed June 18, 2017, http://sire-search.eu/sites/default/files/1.1%20Part%201%20-%20defining%20social%20innovation_0.pdf.
- Cottino, P. and F. Zandonai. 2012. "Progetti d'impresa sociale come strategie di rigenerazione urbana: spazi e metodi per l'innovazione sociale," in: *Euricse Working Paper* no. 042 | 12.
- Erlhoff, M. and T. Marshall. 2008. *Design Dictionary: Perspectives in Design Terminology*. Basel: Birkhäuser.
- Franzato, C. 2009. "Design nel progetto territoriale," in: *Strategic Design Research Journal* 2(1): 1–6.
- Maffei, S. and B. Villari. 2006. "Design for local development – Building a design approach for the territorial capital resources based on a situated perspective," in: *Nantes Cumulus Working Papers*, 16/06, Publication Series G. Helsinki: Helsinki University of Art and Design.
- Manzini, E. 2015. *Design, When Everybody Designs: An introduction to Design for Social Innovation*. Cambridge, MA: The MIT Press.
- Menichinelli, M. 2016. *Fab Lab e maker. Laboratori, progettisti, comunità e imprese in Italia*. Macerata: Quodlibet Studio.
- Meroni, A. and D. Sangiorgi. 2012. *Design for Services*. Farnham: Gower.
- Minervini, G. et al. 2015. "Documento Strategico," *Laboratori Urbani Mettici le Mani*. Accessed June 18, 2017, http://www.metticilemani.it/docs/DOC-LUM_DEF01.pdf.
- Mulgan, G. and C. Landry. 1995. "Creativity and Social Innovation," in: *The Other Invisible Hand: Remaking Charity for the 21st Century*. London: Demos.
- Murray, R. 2009. *Danger and opportunity: Crisis and the new social economy*. London: NESTA/Young Foundation.
- Murray, R., J. Caulier-Grice, and G. Mulgan. 2010 *The Open Book of Social Innovation* London: NESTA/Young Foundation.
- Smithsonian Institution. 2013. "Design and Social Impact: A Cross-Sectoral Agenda for Design Education, Research, and Practice," a white paper based on the *Social Impact Design Summit*. New York: Cooper-Hewitt National Design Museum. Accessed June 18, 2017, <https://www.cooperhewitt.org/publications/design-and-social-impact/>.
- Stickdorn, M. and J. Schneider. 2012. *This is Service Design Thinking: Basics, Tools, Cases*. New York: Wiley.
- Stoecker, R. 2012. *Research Methods for Community Change: A Project-Based Approach*. Thousand Oaks: SAGE Publications.
- Stringer, E. T. 2014. *Action Research*. Thousand Oaks: SAGE Publications.

p.17

Ruth Baumeister

Aarhus School of Architecture,
Aarhus, Denmark
rb@aarh.dk
Post-war Avantgardes in Art
and Architecture

Baumeister R. (ed.). 2015. *What moves us? Le Corbusier and Asger Jorn in Art and Architecture*, Zurich: Scheidegger & Spiess.

Baumeister R. 2014. *L'architecture sauvage. Asger Jorn's Critique and Concept of Architecture*. Rotterdam: NAI 010.

p.37

Ludwig Zeller

Academy of Art and Design (FHNW),
Institute Visual Communication and
Experimental Design and Media Cultures,
Basel, Switzerland
ludwig.zeller@fhnw.ch
Speculative Aesthetics, Interaction Design,
Design Theory

Zeller L. 2017. "A Post-Naturalist Wunderkammer", in: *form* 273 (Sept/Oct): pp.70–76.

Zeller L. 2017. "It's getting different. Participation and deliberation the 'society of the accidental'", Stuttgart: Fraunhofer Publishing.

p.63

Grace Lees-Maffei

University of Hertfordshire, Hatfield, UK
g.lees-maffei@herts.ac.uk
Design History, Heritage, Cultural History

Fallan K., and Lees-Maffei G. (eds.). 2016. *Designing Worlds: National Design Histories in an Age of Globalization*. New York: Berghahn. Open access at <http://www.berghahnbooks.com/title/FallanDesigning>

Lees-Maffei G., and Huppatt, D.J. 2017. "A Gathering of Flowers: on Design Anthologies", in: *Design Journal*, vol20, no. 4. DOI: 10.1080/14606925.2017.1323426

p.83

Anna Calvera

University of Barcelona, Department of
Visual Art & Design, GRACMON Research
Unit (Design History), Barcelona, Spain
annacalvera@ub.edu
Design History, Design Aesthetics,
Graphic Design and Semiotics

Calvera A. (ed.). 2014: *La formació del Sistema Disseny Barcelona (1914–2014)* (Essays on local history). Barcelona: UBE.

Calvera A. 2017. "Nulla ethica sine esthetica: Should aestheticism still be stigmatized?", Thread in: *The Radical Designist*, Vol2, Issue 7 (Des. 2017), Lisbon: IADE. Online at: <http://unidcom.iade.pt/radicaldesignist/nulla-ethica-sine-esthetica-should-aestheticism-still-be-stigmatized/>

p.99

Minou Afzali

Bern University of the Arts HKB, Research
Unit Communication Design,
Bern, Switzerland
minou.afzali@hkb.bfh.ch
Health Care Design, Material Culture,
Culture-specific Nursing Homes

Klingemann, H., Scheuermann, A., Laederach, K., Krueger, B., Schmutz, E., Stähli, S., Afzali, M., and Kern, V. 2015. "Public art and public space – Waiting stress and waiting pleasure", in: *Time & Society*, 2015, 0(0), pp.1–23.

Afzali, M. 2013. "Forschen mit den Alten – Forschen über die Alten. Partizipative Methoden in der Designforschung", in: Hülsen-Esch, A. Seidler, M. and Tagsold, C. (eds.). 2013. *Methoden der Alter(n) sforschung. Disziplinäre Positionen und transdisziplinäre Perspektiven*. Bielefeld: transcript, pp. 225–240.

p.115

Marie Lena Heidingsfelder

Fraunhofer Center for Responsible
Research and Innovation am IAO,
Berlin, Germany
marie-lena.heidingsfelder@iao.fraunhofer.de
Design Fiction; Responsible Research and
Innovation; Science Communication

Heidingsfelder, M., Kimpel, K., and Schraudner, M. 2017. "New ways of thinking about the future. Design fiction for public reflection to new and emerging technologies," in: *Iterations* 5, pp. 44–51.

Häußermann, J. J., and Heidingsfelder, M. 2017. "Offen, verantwortlich und verantwortlich offen," in: *TATuP Zeitschrift für Technikfolgenabschätzung in Theorie und Praxis*, 26(1–2), pp.31–36.

p.115

Martin Kim Luge

Raum für Zukunft
info@raum-fuer-zukunft.com
Transformative Methods, Design-driven
Innovation, Process Design

p.115

Kora Kimpel

Berlin University of the Arts, Institute
of Time-based Media, Berlin, Germany
kkimpel@udk-berlin.de
Interface Design, Interaction Design,
Design Research

Kimpel K. 2016. "Design Prototyping for Research Planning and Technological Development," in: Gengnagel C., Stark R., and Nagy E. (eds). 01/2016. *Rethink! Prototyping*, 01/2016. pp 23–35;

Heidingsfelder, M. L., Kimpel, K. and Schraudner, M. 2017. "Design Fiction for public reflection," in: *Iterations* 5, pp. 44–51

p.129

Joshua McVeigh-Schultz

University of Southern California,
Los Angeles, California, USA
University of California Santa Cruz,
Santa Cruz, California, USA
jrmcveig@gmail.com
Ritual, Speculative Design, Design Research

McVeigh-Schultz J., Kreminski M., Prasad K., and Fisher S. forthc. "Immersive Design Fiction: Using VR to Prototype Speculative Interfaces and Interaction Rituals within a Virtual Storyworld."

McVeigh-Schultz J., and Baym N. 2015. "Thinking of You: Vernacular Affordance in the Context of the Microsocial Relationship App, Couple" in: *Social Media & Society* 1(2).

p.143

Daniela Peukert

Leuphana University of Lüneburg,
Center for Methods, Lüneburg, Germany
daniela.peukert@leuphana.de
Designerly Knowledge Production, Trans-
disciplinary, Sustainability Transformation

Peukert D., Vilsmaier U. forthc. "Entwurfs-
basierte Interventionen in der trans-
disziplinären Forschung," in: M. Ukowitz,
R. Hübner (eds.) *Wege der Vermittlung
– Intervention – Partizipation*, Wiesbaden:
Springer

Peukert, D. 2017. "Co-creating transforma-
tive processes – a designerly approach," in:
*Proceedings of Transformations Confer-
ence 2017*, Dundee, pp. 22–23.

p.143

Andrea Augsten

University of Wuppertal, Chair of Design
Theory, Wuppertal, Germany
mail@andreaaugsten.de
Design Management, Innovation strategy,
Human-centered Design

Augsten, A., Gekeler, M. 2017. "From a
master of crafts to a facilitator of inno-
vation. How the increasing importance
of creative collaboration requires new
ways of teaching design," in: *The Design
Journal*, 20:sup1, pp. 1058–1071. DOI:
10.1080/14606925.2017.1353049

Augsten, A., Gebhardt, V.K., and Maisch, B.
2016. "Change by Design? Organisational
learning barriers in the German Automotive
Industry," in: *Proceedings of 20th Aca-
demic Design Management Conference
(ADMC16)*, Boston, pp. 1529–1545.

p.151

Matina Kousidi

Politecnico di Milano, Department of Archi-
tecture and Urban Studies, Milano, Italy
stamatina.kousidi@polimi.it
History and Theory of Architecture;
Space and the Body; Building as Skin

Kousidi, S. 2017. "When Walls Became
Membranes. Le Corbusier, Siegfried
Ebeling, and the Concept of the breathing-
wall skin," in: Thorne, M. and Rico-Gutierrez,
L.F. (eds.), *105th Association of Collegiate*

*Schools of Architecture Meeting (Session
on Design for Performance)*. Washington:
ACSA Press, pp.85–90.

Kousidi, S. 2016. "Breathing Wall Skins.
Theorizing the Building Envelope as a
Membrane," in: *Journal of Material Design
(Special Issue on Integumentary Design)*,
no. 1, pp.141–153.

p.151

Joanna Pierce

Central Saint Martins, University of
the Arts, London, UK
j.pierce@csm.arts.ac.uk
Textile Print, Material Designer

Images included in: Braddock Clarke S.
E., and Harris J. 2012. *Digital Visions for
Fashion + Textiles. Made in Code*. London:
Thames and Hudson

Images included in: Blackley L. 2006.
Wallpaper. London: Laurence King
Publishers

p.151

Eva Sopeoglou

Senior Lecturer, Kingston School of Art,
Architecture, Kingston University London,
UK
eva.sopeoglou@yahoo.com
Architecture, Practice research, Sustain-
ability, Fabrication

Winner, Architizer A+ Award 2017. Work
featured in book: *A+ Architecture: The
Best of Architizer 2017*, New York: Phaidon.

Sopeoglou E. 2017. "The Generator, Cedric
Price, Gilman Paper Corporation – White
Oak – USA, 1976–1980", in: DOMES Index
(ed.). 2017. *Afetiries 05*, Domes Index,
Athens, Greece.

p.173

Lisa Elzey Mercer

University of Illinois Urbana-Champaign,
USA
lmercerc@illinois.edu
Design Research, Human Centered Design,
Interaction Design

Mercer E. L. 2016. "Operation Compass:
Riding Shotgun in the Fight Against Human
Trafficking," in: *The 20th DMI: Design*

*Management Institute, Academic Design
Management Conference Design Research
Meets Design Practice at the Inflection
Point*, Vol. No. 1, Boston, MA: Design
Management Institute.

p.195

Venanzio Arquilla

Politecnico di Milano, Design Department,
Milano, Italy
venanzio.arquilla@polimi.it
Service Design, User Experience,
Social Innovation

Arquilla V., Barbieri A., "Design as enabler of
anticipatory systems: The MakeinProgress
case study," in: *Strategic Design Research
Journal*, 10(1): 2–11 January–April 2017
Mortati M., Villari B., Maffei S., Arquilla V.
2017. *Le Politiche per il Design e il Design
per le Politiche*, Santarcangelo di Romagna:
Maggioli

Vitali I., Arquilla V., and Tolino U. 2017.

"A Design perspective for IoT products.
A case study of the Design of a Smart
Product and a Smart Company following a
crowdfunding campaign", in: *The Design
Journal*, 20:sup1, pp 2592–2604, DOI:
10.1080/14606925.2017.1352770.

p.195

Annalisa Barbieri

Politecnico di Milano, Design Department,
Milano, Italy
isab89@hotmail.it
Service Design, Making, Social Innovation

Arquilla V., Barbieri A. "Design as enabler of
anticipatory systems: The MakeinProgress
case study," in: *Strategic Design Research
Journal*, 10(1): 2–11 January–April 2017

Arquilla V., and Barbieri A. forthc. "Sus-
taining and enabling territorial resilience
through making actions. The Makein-
Progress case study", in: *RGS-IBG Annual
International Conference 2016*. London

p.215

Bianca Herlo

Berlin University of the Arts, Design
Research Lab, Berlin, Germany
bianca.herlo@udk-berlin.de
Design Research, Civic Design,
Participatory Design

Herlo B., and Unteidig A. 2017. "Socially and Politically Oriented Practices in Design, Design for Next/12th EAD," in: *The Design Journal*, London: Taylor & Francis.

Schubert J., and Herlo B. "Citizens, Technology and Power," in: *Nordes 2017: Design and Power*, No 6/2017

p. 215

Andreas Unteidig

Berlin University of the Arts, Design Research Lab, Berlin, Germany
a.unteidig@udk-berlin.de
Design and Politics, Civic Technology, Participatory Design

Unteidig A., Dominguez Cobreros B., Calderon-Lüning E., and Joost, G. 2017. "Digital commons, urban struggles and the role of Design", in: *The Design Journal*, 20(sup1), pp. 3106–3120.

Herlo B., Unteidig A., Jonas W., and Gaziulusoy, I. 2017. "Perspectives on socially and politically oriented practices in design", in: *The Design Journal*, 20(sup1), pp. 4710–4713.

p. 215

Prof. Dr. Gesche Joost

Universität der Künste Berlin / Berlin University of the Arts
info@drlab.org
Digitization, Human-Computer-Interaction, Participatory Design Research

Mareis C., Held M., and Gesche J. (eds.). 2013. *Wer gestaltet die Gestaltung?* Bielefeld: transcript.

Gesche J., Bredies K., Christensen M. et al (eds.). 2016. *Design as Research – Positions, Arguments, Perspectives*. Basel: Birkhäuser.

p. 231

Tomás García Ferrari

University of Waikato, Department of Computer Science, Hamilton, New Zealand
tomas.garciaferrari@waikato.ac.nz
Design Theory, Interaction Design, Web Design

García Ferrari, T. 2017. "Design and the Fourth Industrial Revolution. Dangers and

opportunities for a mutating discipline," in: *The Design Journal*, 20(sup1), pp. 2625–2633. doi:10.1080/14606925.2017.1352774

Short, C., Garcia Ferrari, T., and Quijano, M. 2016. "HfG-Archiv Ulm Online. De la realidad exclusiva a la virtualidad inclusiva," in: *RChD: creación y pensamiento*, 1(1), pp. 13–25. doi:10.5354/0718-2430.2016.44192

p. 249

Isabel Rosa Müggler Zumstein

Lucerne University of Applied Sciences and Arts, Lucerne School of Art and Design, Lucerne, Switzerland
isabelrosa.mueggler@hslu.ch
Textiles and Lights, Colour and Material, Design-driven Innovation

Müggler Zumstein I.R., Tomovic T., and Reisinger M. 2016. "Empirical Approach to define a Digital Colour Space for Light emitting Textiles," in: *AIC 2016 Interim Meeting. Color in Urban Life: Images, Objects and Spaces*. Santiago de Chile, 18–22 October 2016.

Müggler Zumstein I.R., and Tomovic, T. 2014. "Light and Shadow: Industrial Integration of Electronics into Textiles," in: *Ambience 2014. Scientific Conference for Smart and Functional Textiles*. Tampere, Finland. 7–9 September 2014.

p. 249

Tina Tomovic

Lucerne University of Applied Sciences and Arts, Lucerne School of Art and Design, Lucerne, Switzerland
tina.tomovic@hslu.ch
Textile Design, Smart Textiles, Textile Sustainability

Moor T., Egloff B., Tomovic T., and Wittkopf S. 2017. "REPEAT – Textile Design for PV Modules! Design-driven Strategies for Photovoltaic Modules," in: *Design for Next. Proceedings of the 12th European Academy of Design Conference*. Sapienza University of Rome, 12–14 April 2017.

Müggler Zumstein I.R., Tomovic T., and Reisinger M. 2016. "Empirical Approach to define a Digital Colour Space for Light emitting Textiles," in: *AIC 2016 Interim*

Meeting. Color in Urban Life: Images, Objects and Spaces. Santiago de Chile, 18–22 October 2016.

p. 263

Christiane Luible

HEAD, Geneva School of Art and Design, Fashion and Accessory Design Department, Geneva, Switzerland
Christiane.luible@hesge.ch
Fashion Design, Clothing Simulation, Fabric Characterization

Luible C. 2017. "Personalisierung von Mode und Bekleidung," in: Oberösterreichische Zukunftsakademie (eds.). *Trendreport Personalisierung*, online at: http://www.ooe-zukunftsakademie.at/Personalisierung_Endfassung.pdf.

Luible C., forthc. "Innovate the way of working with textiles", in: Lucerne University of Applied Sciences and Arts.

p. 263

Caecilia Charbonnier

Artanim Foundation, Geneva, Switzerland
caecilia.charbonnier@artanim.ch
Motion Capture, Biomechanics, 3D Animation

Charbonnier C., Lädermann A., Kevelham B., Chagué S., Hoffmeyer P., and Holzer N. 2017. "Shoulder Strengthening Exercises Adapted to Specific Shoulder Pathologies Can Be Selected Using New Simulation Techniques: A Pilot Study", in: *International Journal of Computer Assisted Radiology and Surgery*,

Kolo F.C., Schwitzguébel A.J.P., Kourhani A., Denard P.J., Charbonnier C., and Lädermann A. 2017. "Fosbury Flop Tear of the Rotator Cuff. Diagnostic Assessment with Magnetic Resonance Arthrography," in: *BJR* Vol 90, Issue 1077.

p. 275

Françoise Adler

Lucerne University of Applied Sciences and Arts, Research group Products & Textiles
francoise.adler@hslu.ch
Textile Design, Design-driven Technology, Textile Sustainability

Weber Marin A., Adler F., Selbmann K.H., and Felder R.; Lucerne University of Applied Sciences and Arts, Bern University of Applied Sciences. *Verfahren zum Bedrucken eines Substrats und damit hergestelltes bedrucktes Substrat*. Switzerland and Principality of Liechtenstein, patent CH 712 180 B1. 2017 Aug 31.

Weber Marin A., Müggler Zumstein I., Adler F., Häberle J., and Poldner K. 2014. *The Design Alphabet for Textiles as applied Method at the Frontiers of Textile Design Research*. DRS – Design Research Society. Umea, Sweden.

p.275

Andrea Weber Marin

Lucerne University of Applied Sciences and Arts, Research group Products & Textiles
andrea.webermarin@hslu.ch
Environmental Sciences, Textile Production, Design-driven Technology

Weber Marin A., Adler F., Selbmann K.H., Felder R.; Lucerne University of Applied Sciences and Arts, Bern University of Applied Sciences. *Verfahren zum Bedrucken eines Substrats und damit hergestelltes bedrucktes Substrat*. Switzerland and Principality of Liechtenstein patent CH 712 180 B1. 2017 Aug 31.

Weber Marin A., Müggler Zumstein I., Adler F., Häberle J., and Poldner K. 2014. *The Design Alphabet for Textiles as applied Method at the Frontiers of Textile Design Research*. DRS – Design Research Society. Umea, Sweden.

p.285

Tina Moor

Lucerne University of Applied Sciences and Arts, Competence Center Products & Textiles, Lucerne, Switzerland
tina.moor@hslu.ch
Fibers, Textile Architecture, Textile Structures

Moor T.; Egloff B.; Tomovic T., and Wittkopf St. 2017. "REPEAT: Textile Design for PV Modules: Design-driven Strategies for Photovoltaic Module", in European Academy of Design EAD (eds.). *The Design Journal*, pp.1879–1893. Abingdon UK: Taylor

& Francis Journals Production. Volume 20, 2017.

p.285

Daniel Wehrli

Lucerne University of Applied Sciences and Arts, Competence Center Products & Textiles, Lucerne, Switzerland
daniel.wehrli@hslu.ch
Product Design, Textile Design, Research and Development

p.303

Ruedi Baur

HEAD, Geneva School of Art and Design, Geneva, Switzerland
silent@ruedi-baur.eu
Problem-oriented Design, Design of Public Spaces, Design Research

Baur, R. and Felsing, U. 2016. "Researching Visual Application Respectful of Cultural Diversity," in: *Studies in Visual Arts and Communication – An International Journal*, Vol. 3, no. 1. Online at: <http://tinyurl.com/k3rgdez>

Baur, R. and Felsing, U. 2015. "The Visualization of Knowledge: Researching for New Methods for Information Design in the Intercultural Field," in: *Review of Arts and Humanities*, Vol. 4, no. 1, pp. 27–41, DOI: 10.15640/rah.v4n1a5

p.303

Ulrike Felsing

HEAD, Geneva School of Art and Design, Geneva, Switzerland
ulrike.felsing@multilingual-typography.com
Design Research, Knowledge Visualization, Picture Theory

Baur, R. and Felsing, U. 2016. "Juxtaposing Chinese and Western Representational Principles: New Design Methods for Information Graphics in the Field of Intercultural Communication," at: the 50th Anniversary Design Research Conference. Brighton, Theme: design and translation, 28 June 2016, online at: <http://www.drs2016.org/384>

Baur R., and Felsing U. forthc. "On the Cultural Anchorage of Knowledge Visualization", in: *Design Issues*,

This book collects a selection of the contributions of the First SDN Design Research Summit held on 28-31 January 2016 in Giessbach, Switzerland.

Editor: Swiss Design Network
Concept: Swiss Design Network

Project Team: Massimo Botta, Davide Fornari, Sarah Haug, Robert Lzicar,
Claudia Mareis, Isabelle Müggler-Zumstein, Sarah Owens, Arne Scheuermann,
Anne-Catherine Sutermeister

Coordination: Sarah Haug
Proofreading: Alta Price, ALP Editorial Consulting and Translation
Graphic Design: Rob van Leijsen
Printing: Schöler Druck und Medien, Immenstadt
Bookbinding: Idupa Schülerin, Owen
Paper: Symbol Freelifelife Raster, Munken Polar
Typeface: Founders Grotesk, Caslon

© 2018 by Triest Verlag für Architektur, Design und Typografie, Zürich, triest-verlag.ch
and the editors, authors and photographers.

ISBN 978-3-03863-032-6