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RELATING
SYSTEMS
THINKING
AND
DESIGN
7th
SYMPOSIUM

CHALLENGING
COMPLEXITY BY
SYSTEMIC DESIGN
TOWARDS
SUSTAINABILITY

TURIN
23-28.10.2018



BOOK OF ABSTRACTS



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EDITORIAL

The seventh *Relating Systems Thinking and Design (RSD7)* symposium was held at the Politecnico di Torino, the 23-28 October 2018, for the first time in Italy, defining an important collaboration among the institutions that founded the informal group of Systemic Design Research Network (SDRN) in 2012. Not by chance, this symposium has seen the official establishment of the Systemic Design Association (SDA), with a public announcement during the first day. A new phase of the association and of the RSD symposiums started by proposing an inclusive approach to expand the membership and engage different systems- and design-oriented professionals and researchers, while looking after a strong identity of systemic design as a discipline.

The proceedings show the huge amount of contributions we received from all over the world that have inspired more than 200 people in Turin. The aim was to promote international debate on the multiple applications and purposes on which the systems thinking in design is developed towards sustainability. The symposium generated nurturing interdisciplinary collaborations and discussions, involving academics, designers and professionals. “*Challenging complexity by Systemic Design towards sustainability*” was the leitmotif of all RSD7 starting from the workshops, through the keynotes, the plenaries and the parallel speeches, and closing with the de-conference at Monviso Institute.

Four workshops were organized by international experts, coming from *Smart Circular Economy Network*, *University of Brighton*, *Ellen Mac Arthur Foundation*, *Namahn center* and *ShiftN*. Around 100 attendees had a full day workshop in which they investigated the theme of complexity, declined through different areas: IoT, material/immaterial places, Circular Economy and Systemic Design. At the end of the the day, the workshops' results were shown in a plenary session and discussed all together with a breaking ice kick-off.

From 24th to 26th October, we had the proper symposium with 6 inspiring keynote speakers, 3 plenary sessions, and 76 presentations in the parallels sessions. We evidenced all the contents through abstracts, presentations and working papers, as well as videos and sketch-notes.

The RSD7 keynotes offered an inspiring range of perspectives on systemic design, emerging from different disciplines and experiences from all over the world. They brightly explained how Systemic Design can effectively integrate systems thinking with design to address complexity, by creating new resilient and sustainable systems in very diverse contexts. We decided to interview them and provide to the whole community a short video to have a glance of their contribution.

The plenary speakers were invited to explore special themes of interest for the community: the newborn Systemic Design Association, the pioneering activities run by Ellen Mac Arthur Foundation and the stimulating Systemic Design Toolkit.

The presentations in parallel sessions were dense and reflected the tracks we proposed. Here we have condensed the wide variety of contributions:

- **Policy design and decision-making** (Innovation in territorial governance, Strategies for sustainable innovation, Design thinking for decision-making, Democracy and responsibility);
- **Industrial Processes and Agrifood Systems** (Industrial ecology in a Circular Economy, Sustainable innovation in industrial development, Sustainabili-

ty of agro-industrial systems);

- **Socio-technical Systems in the Digital Age** (User interaction and enhancement in the age of AI and autonomy, Internet of Things for sustainability, Information technologies in the design domain, Systemic Design for learning from data);
- **Territorial Metabolism and flourishing economies** (Local resources innovation transitioning to a Circular Economy, Sustainable development of regions and bioregions, City metabolism and urban ecologies, Interdisciplinary models for economy-design, New ways of communicating economic systems)
- **Social Care and Health Systems for Sustainable Living** (Sustainable innovation for health systems, Patient empowerment and caregiving, Systemic innovation in social care, Social Flourishing & Cultural Sustainability);
- **Models and Processes of Systemic Design** (Systemic Design theories, Innovation processes in complex systems, Systems and design thinking in education, Historical perspectives on Systemic Design).

The process to select the best presentations was crucial and it required double (and in some case triple or more) reviews, trying to provide a wider spectrum of experiences. In the end, the success rate was 48%. About two third of the presenters have submitted working papers.

The conference was also enriched by the exhibition “Visualizing Complex Systems”. The ability to collect, cross-check, visualize and study quantitative and qualitative information about phenomena and their patterns is itself at the core of the project, becoming strategic for enabling new systems thinking and their design application. Identifying the relationship between components, thus guaranteeing personal expression, horizontal communication and visual thinking, is the first step to enhance a more conscious and transparent decision-making process with a perspective of sustainability.

During the 7th edition of RSD we also experienced some moments of relaxed “learning-and-doing time”, during the “Books and Beers” events and the De Conference Event. In fact, at the end of each day, 3 decompressing “Books and Beers” were hosted in the close venue of Eataly. On that occasion, 5 recently published books were introduced to the audience and discussed in a more informal environment.

After the conventional RSD symposium, for the first time in its history, we proposed a 2-days De-Conference event, to favour networking, deepen conference topics and have a relaxed “learning-and-doing” time in a beautiful natural environment. It took place at MonViso Institute, in the community of Ostana, and it was organised in collaboration with ETH Zürich.

Lastly, I would like to take the chance of this publication to thank the international scientific committee because in the preparation phase they always pushed me towards higher and higher goals. A special thank goes to all the keynote speakers to have been central actors of this conference, sharing their inspiring experiences and knowledge. Finally, I would like to thank the local organizing committee because they supported me in every request and with great confidence in our capacity.



RSD7 and SDA chair

Turin, 29.03.19

Packaging reconditioned household appliances

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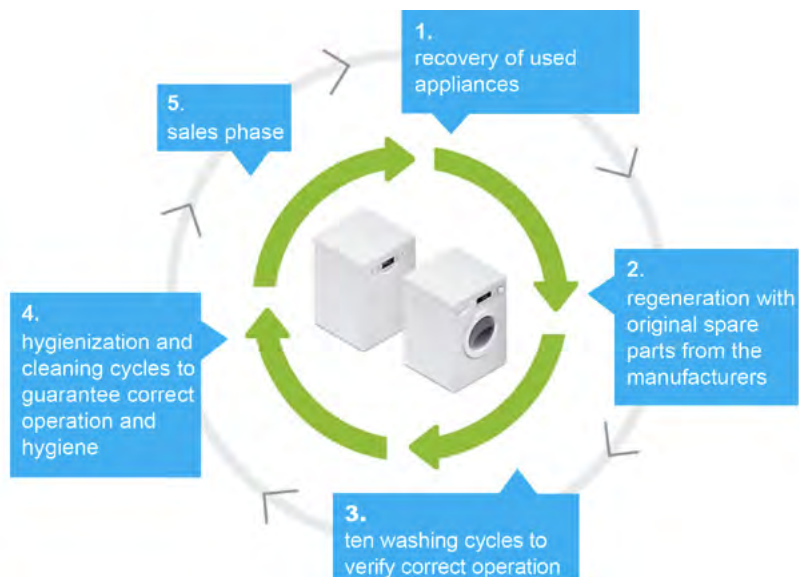
KEYWORDS

Packaging;
Re-use;
Household appliances;
Second-hand;
Social engagement.

This article aims to present a research and design work that focuses on exploring new possible approaches to packaging design as applied to the field of reconditioning and reintroducing old household appliances to the market. The work developed by the research group from the Politecnico di Torino – Design, in particular, is part of a research agreement signed with Astelav, a Piedmontese company based in Nichelino (Turin) and a leading distributor of components and spare parts for household appliances, in partnership with Turin-based Sermig, a non-profit organisation that aims to provide people marginalised by unemployment, social and financial problems with hospitality and both social and job support.

The company recently launched the Ri-Generation project alongside Sermig. This involves reconditioning used white goods (washing machines, dishwashers, fridges, ovens, etc.) by intercepting the WEEE (Waste Electrical & Electronic Equipment) supply chain as well as encouraging socially marginalised people to gain new skills whilst assisting specialised technicians in reconditioning appliances. The work involves the replacement of damaged or broken parts, a cleaning process, followed by the product's placement on the market. It is an example of a circular economy that helps prevent the accumulation of waste in landfills, offers old products a new lease of life and new added value and, at the same time, creates new economies and new employment and social rehabilitation opportunities for people in difficult socio-economic circumstances.

Figure 1: Regeneration process phases



In such a scenario, the design work carried out attempts to develop new systems for the protection, transportation, presentation and sale of these used, salvaged and reconditioned products, so as to allow them to be distributed on the market, as well as to communicate their own particular image during the sales process. It is a very unusual packaging project because, apart from anything else, every product sold is different from the other, even if they share common characteristics.

The design challenge was tackled both in terms of its functional and marketing aspects, but also in line with a wider cultural paradigm that envisages the fine-tuning of a veritable system of activities and relationships that, in keeping with the characteristics of the Ri-Generation project, can generate innovation and sustainability at different levels: at a social level, by involving disadvantaged people and social cooperatives in packaging assembly;

at an environmental level, by salvaging old clothes to create the padding; at a production level, by specially training and organising personnel; and at a linguistic level, by applying new modes and registers of expression that stem from experimentation, particularly in the artistic field.

The new packaging design takes its cue from the use of the waste materials that Sermig receives on a daily basis through private donations, particularly second-hand clothes that are sorted, selected and then redistributed to people who are experiencing social and financial difficulties. The items of clothing that are damaged, ripped or worn out can be salvaged and, if properly processed, can be turned into efficient packaging systems. Garments are cut up and put together following clear procedural guidelines, and then positioned and sewn inside polyethylene tubes, creating a sort of “padded fabric” that is both waterproof and resistant and can wrap up and protect an appliance during the transport, storage and sales phases. The final product makes a strong impression: patches of clothing in different fabrics and colours surround the appliance, creating what looks like a cloth cube. Whilst it surprises and intrigues the viewer, it also expresses a narrative at different levels: an item of clothing that symbolises a product (a washing machine) declares its function at an emotive level whilst at the same time expressing the salvaging of a waste product, which is the principle that underpins the Ri-Generation project.

Since the most significant environmental problem for packaging systems is indeed related to the need to prevent waste before its production, the value of this salvaging process is further stressed by the reusability once it has finished transporting the appliance after sale. The information sheets included and the packaging’s own graphics suggest a “catalogue” of possible alternative uses (the protection of accessories and furnishings during house moves or for storing items in attics and warehouses, garage wall padding, informal poufs, pet cushions, picnic blanket undersheets, etc.).

Figure 2: The assembly phase and the final packaging]

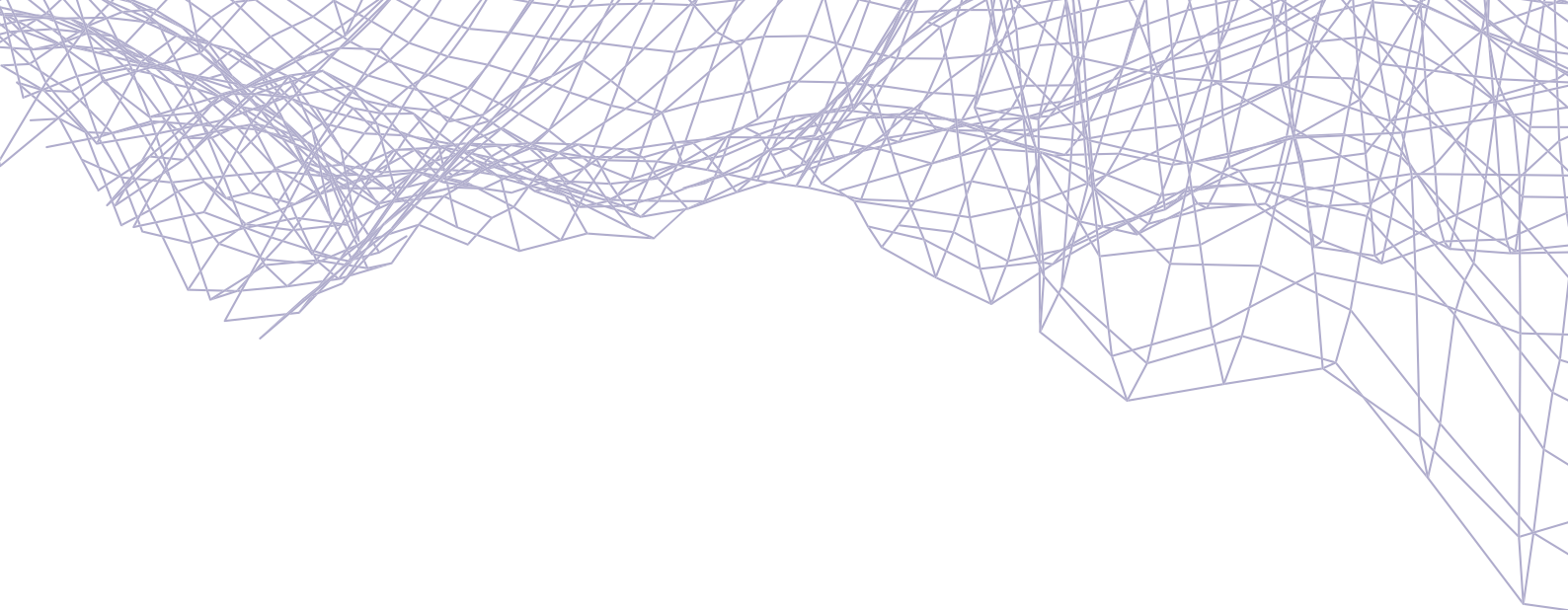


The product’s fine-tuning has involved Sermig personnel (supervisors and guests) and Astelav employees and some social cooperatives during a number of workshops coordinated by the Polito research group, designed to test the production methods and skills of people both joining and leaving the packaging production process. The packaging is assembled by social cooperatives, who are suitably trained using the above-mentioned direct experimentation and partial co-designing phases.

To date - having completed the production development, prototype and trial phases - the project is now preparing a pre-series of dozens of items that will be tested during their transportation and sale to consumers. The resulting feedback from these activities will allow the project’s organisers to streamline packaging production methods and the entire sales supply chain.

Among the possible outcomes foreseen, action designed to divulge this project in order to turn it into a repeatable or reinterpretable example of best practices is envisaged, as well as the promotion of the project's cultural merits. Such action includes:

- The declinations of the semi-finished product: the defined packaging system, could be considered as a new semi-finished product which, when suitably reshaped, that means it could also be used as packaging in other product sectors;
- The curatorship and creation of an exhibition to be put on display: the design of possible display concepts that could be shown at exhibitions and sustainable packaging trade fairs or used for creating a tailor-made event dedicated to Ri-Generation's case history;
- The creation of a special section on the Ri-Generation website: creating text, images, animation, etc. that can present the partnership with the Politecnico di Torino, the design process and the scientific and cultural value of the packaging design process;
- The creation of a narrative: a sustainable packaging case history could be the focus of a story told by a lively, abridged publication that could be distributed at particular events designed to promote the initiative and the Ri-Generation project's work.



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