

Changing^{the} **change proceedings**

Edited by
**Carla Cipolla
Pier Paolo Peruccio**

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Changing the Change
Design, Visions, Proposals and Tools
Proceedings

Edited by Carla Cipolla (Politecnico di Milano), Pier Paolo Peruccio (Politecnico di Torino)

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CPD - Conference of Italian Design Faculty Deans and Programme Heads

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ICOGRADA - The International Council of Graphic Design Associations
DRS - Design Research Society
CUMULUS - Cumulus International Association of Universities and Colleges of Art, Design and Media
BEDA - The Bureau of European Design Associations
IFI - The International Federation of Interior Architects/ Designers

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The Conference

Something that we know very well about the present is that the world is changing, rapidly and profoundly. The only certain thing that we know about the future is that the current change must change direction. It must find the way to sustainability.

Nobody is yet in a position to say how this can happen. However, many think that the greatest challenge we must face is this one: how to be an active, constructive part of this twofold transformation; and how to be able to interpret the way and the extent to which we are changing, recognising the opportunities that are opening up, and the forces that generate this change. We should learn to use these same forces to "change the change" and promote a social learning process that can lead us towards a society based on networking, knowledge and sustainability.

Contemporary design (seen as the community of all who operate in the design field in different ways) is deep in this turbulent process, both transforming it and being transformed by it. Given its nature it cannot but be like this. However, in this turbulence, we do not have, and cannot have, a clear vision of what is happening. What is design doing today? What could it be like in future and how will it operate in this context of ongoing transformation? What is it doing, or what could it be doing, to play a more incisive critical and constructive role in the great twofold transformation underway?

These are not new questions, but they must constantly be asked. Not only because the world is rapidly changing, but also because despite the good intentions of many, design still continues to be far more "part of the problem" than "part of the solution"; serving more to accelerate unsustainable processes rather than promoting new ways of being and doing to help individuals and communities live better, reduce their ecological footprint and regenerate the social fabric.

Aims

The Conference moves from these considerations and intends to present visions, proposals and tools that emerge from precise design research activities. If indeed design wants to be "part of the solution" it must, perhaps first and foremost, develop a new research culture and new research practices: an open research, sensitive to present contexts, that leads to a better understanding of the great changes underway and of what should be done to re-orient them towards sustainability.

In this spirit the Conference seeks to be a confrontation and discussion ground for designers and researchers operating in different cultural, economic and political contexts (in this perspective, a substantial participation from the East and South of the World has been actively encouraged).

Changing the Change is a design research conference with a strong and ambitious political goal: to focus on the design research potentialities in the transition towards a sustainable knowledge society; to show that these potentialities exist and can be found in all the design application fields (from products to communication, from interiors to services, from ITC to crafts, from medical devices to fashion) and in all the regions of the world (from the most mature industrial societies to the emerging ones). To do all that, the Conference will present and discuss visions, proposals and tools developed by design researchers dealing with various aspects of peoples lives: from food, to health, from residence to mobility, from work to tourism.

Ezio Manzini

Politecnico di Milano, Conference scientific coordinator

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1. Proceedings structure overview

Background documents

Changing the Change proceedings include, other than the selected papers, some background documents. These are:

1. *Presentation by organizers*: it intends to outline different aspects of the conference results and potential directions (about future steps to be taken).
2. *DRAS – The Design Research Agenda for Sustainability*. A series of activities, called emerging issues process (a *round table*, an *international project session*, an *open discussion*) aimed to produce - in a participatory way - the final output of the conference and to make the first steps in possible post-conference initiatives. These initiatives have produced a final document in the form of a short text pinpointing emerging issues and indicating promising directions of research. It was called DRAS: *Design research agenda for sustainability* .
3. *Invited speakers papers*. International speakers have been asked to give an overview of their countries or regions in terms of design research and its contributions in changing the change. As a whole, they have outlined the state of design research for sustainability worldwide. The papers received by them have been included in this publication.

Selected papers by theme

The Conference field of interest – and the selected papers presented in these proceedings – have been divided into 6 themes and, each of them, in 4 sub-themes, generating the 24 modules in which the selected papers are presented. The 6 themes are generated splitting in two the original three ones, that were: *visions*, *proposals* and *tools*.

VISIONS.

These sessions present research results that lead us to imagine possible worlds, or parts of possible worlds. They include the results of activities in the field of scenario design and more general visions produced by research into specific products, communications and services. They also includes a comparative analysis of visions emerging from design history and from a comparison of different cultures.

Theme 1. Visions /Ways of living

(Scenarios/1, Scenarios/2, Ideas/1, Ideas/2)

Theme 2. Visions / Ways of producing

(Models of development/1, Models of development/2,
Production systems/1, Production systems/2)

PROPOSALS.

These sessions present results of design research that give rise to concrete solutions containing elements of systemic innovation. They are also legible as concrete steps towards a new generation of sustainable products, services and systems. So, products, services and product and service systems are proposed along with the communicative artefacts that link several actors and artefacts together. It also proposes places for a new everyday life, the activities that take place within them and the new production and consumption networks that emerge from them.

Theme 3. Proposals / Daily life solutions

(Services and places/1, Services and Places/2,
Products and technologies/1, Products and technologies/2)

Theme 4. Proposals / Enabling Systems

(Tourism and mapping, Energy and packaging,
Networking/1, Networking/2)

TOOLS.

These sessions present the results of research that aims to redefine and develop conceptual and operational tools which enable designers to operate within change and influence its direction. Such tools enable them to participate constructively in new design networks, and deal with emerging problems. Tools may be proposed for conceptualisation and representation, for calculation and appraisal of results or for stimulation and prototype making.

Theme 5. Tools / Design Theories

(Design education/1, Design Education/2, Design culture/1,
Design culture/2)

Theme 6. Tools / Design Methods

(Design thinking/1, Design thinking/2, Design process/1,
Design process/2)

2. Selected papers by theme

Theme 1 Visions / Ways of living

T1.1 Scenarios/1	T1.2 Scenarios/2	T1.3 Ideas/1	T1.4 Ideas/2
<p>P1. Creative Communities for Sustainable Lifestyles. Visions of sustainable ways of living in Brazil, India, China and Europe... [Penin, Jègou, et. al]</p> <p>P2. Design in Public Sector Services. Insights into the Designs of the Time (Dott 07) public design commission projects [Tan]</p> <p>P3. The Melbourne 2032 project. Design-visions as a mechanism for (sustainable) paradigm change. [Ryan]</p> <p>P4. Creative Places for Collaborative Cities. Proposal for the "Progetto Habitat e Cultura" in Milan [Franqueira]</p> <p>P5. Urban Memory Responds to the Change. Improvement and Revitalization of Public Spaces in Macao's Historical Corridor [Zhu, Pinheiro]</p> <p>P6. "Demolish" and "Construction". A Research on transition of urban communities and sustainable lifestyle in China [Zhou, Liu]</p>	<p>P7. A vision of an urban countryside. Service Design as a contribution to the rururban planning [Meroni, Simeone, et al.]</p> <p>P8. Other Design at Sulukule. A Local Development Project in a Degenerated Historical Area of Istanbul under the Threat of Demolition [Kaya, Yancatarol, et al.]</p> <p>P9. The Sustainable Development of Traditional Urban Spaces in Wuxi, China -The changing of the road of Zhong Shan (2002-2007) [Li]</p> <p>P10. Beyond localism, looking for sustainability - Designing "typical knowledge" active-action [Lupo]</p> <p>P11. Rubbings. Preserving the industrial memories amid change [Zhang, Cao]</p> <p>P12. Landscape Ecology as a basis of Landscape and Urban Planning and Design [Thomas]</p>	<p>P13. Beyond Abundance. Motivations and perceived benefits underlying choices for more sustainable lifestyles [Marchand, Walker, et al.]</p> <p>P14. ARK-INC. An alternative view of what 'designing for sustainability' might mean [Singleton, Ardern]</p> <p>P15. Ethically Sound Innovations. The phenomenology and taste of the outdoor elites [Uotila, Rytillahti]</p> <p>P16. Proposals for a Good Life: Senior Thesis Projects from Parsons Product Design 2003-08 [Kirkbride]</p> <p>P17. Fashion that helps us flourish [Fletcher, Grose]</p> <p>P18. The emergence of shamanic wisdom in the culture of the modern Brazilian project. The perspective of a new rationality for design [Badan]</p>	<p>P19. Projecting new forms of neighbourhoods. The creation of a link between the inhabitants as an answer to changes in society [Lanz]</p> <p>P20. Design Activism as a Tool for Creating New Urban Narratives [Julier]</p> <p>P21. From sustenance to sustainable living in India - Elements of vision based on collaboration with local NGOs. [D'Silva, Jégou]</p> <p>P22. Knowledge Communities. The actions of design for the construction of knowledge-based territorial systems [Veneziano]</p> <p>P23. Eco-Cybernetic Architecture [Goodbun]</p>

Theme 2 Visions / Ways of producing

T2.1 Models of development/1	T2.2 Models of development/2	T2.3 Production Systems/1	T2.4 Production systems/2
<p>P24. Design for the Majority. Designers (Collaborators) As Enablers Of Social Entrepreneurship And Sustainable Product Development. [Speer]</p> <p>P25. Shifting Trajectories. Advancing cosmopolitan localism through participatory innovation [M'Rithaa, Verweckken, et al.]</p> <p>P26. The Influence of Design. Examples from Bangladesh [Bauhoff]</p> <p>P27. Design culture: from Product to Process. Building a network to develop design processes in Latin countries [Celaschi, De Marco, et al.]</p> <p>P28. Technoforest. Designing solutions to humanly regenerate ecologically disturbed areas [Barbosa]</p>	<p>P29. Designing transition paths for the diffusion of sustainable system innovations - A new potential role for design in transition management? [Vezzoli, Ceschin, et al.]</p> <p>P30. Design & Transition. What designers can learn from the Transition Movement [Boehnert]</p> <p>P31. Product Design Influencers and Triggers in Micro and Small Enterprises in Kenya. Case Study of Sofa-makers in Gikomba Market, Nairobi. [Osanjó]</p> <p>P32. Design (x) Diaspora. implementing sustainable development in developing countries [Capjon, Edeholt]</p> <p>P33. Breeding cultures of exchange. [Lommee]</p> <p>P34. "Parasitic" Design Strategies for Environmental and Social Sustainability - Vision of a Diffuse Universe of Parasitic Products and Services [Langella, Dell'Aglio, et al.]</p>	<p>P35. New Outputs policies and New connections. Reducing waste and adding value to outputs [Ceppa, Campagnaro, et al.]</p> <p>P36. Supporting Communities. Design led collaborations exploring the creative and economic potential of materials made from waste. [Dehn]</p> <p>P37. MetaCycling. Extending Products' Life Spans Using Virtual Communities and Rapid Prototyping [Lalande, Racine]</p> <p>P38. Design for disassembly and reuse for renovation of housing in Flanders. Case Study for existing (high-rise housing) buildings [Paduart, Elsen, et al.]</p> <p>P39. Integration of Haptics into the Design. A designer-oriented tool for virtual clay modelling [Bordegoni, Cugini]</p> <p>P40. A proposal for communicating systemic design. A "systemic tour" showing systems design applications in the region [Signori]</p>	<p>P41. Crafts_Community_Design. The strategic role of design to promote local production systems [De Giorgi, Germak]</p> <p>P42. Design methodology and sustainability: Between craftwork production and industrial production [Cavalcanti, Andrade, et al.]</p> <p>P43. Textile Traditions and Fashion Design. New Experiential Paths [Conti, Vacca]</p> <p>P44. New Artisanry for New Communities. Frugal Design as the way of the artisan in the new world. [Panghaal]</p> <p>P45. Exploring indigenous innovations: Ascertaining the Scope for Design Interventions for their Successful Commercialization [Mehta, Punekar]</p>

Theme 3 Proposals / Daily life solutions

T3.1 Services and places/1	T3.2 Services and places/2	T3.3 Products and technologies/1	T3.4 Products and technologies/2
<p>P46. The Roots of Change embraced by local food system. Design visions, from the sustainable food system to the prospect multidisciplinary key-principles for a sustainable food development [Vasconcelos]</p> <p>P47. Sybaris. Fast good food [Vesseron]</p> <p>P48. Designing innovative forms of intermediation and communication. Towards sustainable production and consumption systems [Krucken]</p> <p>P49. Sustainable mobility design in contemporary towns High social and technological innovation alternative mobility system [Marano, Bucchianico]</p> <p>P50. Transport in a systemic perspective. How can we change attitudes and behaviours in people? [Pera]</p> <p>P51. Service Design to foster premium prize and sustainable mobility in urban contexts [Meroni, Sangiorgi et al.]</p>	<p>P52. Design for Social Innovation. Enabling replication of promising initiatives for sustainable living in Brussels and Paris [François, Joëlle et al.]</p> <p>P53. The hidden value of allotment gardens in the urban context and the opportunities for design intervention. [Brault]</p> <p>P54. Design tools for sustainable lifestyle: the Italian co-housing experience [Conditi, Ferri]</p> <p>P55. Contribution of Design to EU Projects and Programs in Italy An experience on the use of a "design-oriented approach" in an EQUAL project. Compared outputs. [Morra, Vitolo]</p> <p>P56. Collaborative Services and Mobile Network. Observation of social innovation and anticipation of sustainable lifestyle in China [Gong, Feng at al.]</p> <p>P57. Our House: Interior Design and Sustainable Consumption [Castro]</p>	<p>P58. Less Is More: What Design Against Crime Can Contribute To Sustainability. [Gamman, Thorpe]</p> <p>P59. Are you worth it? Can you fix it? Investigating the sustainability of mundane activities using theories of everyday practice and human/ object interactions [Fisher, Hielscher]</p> <p>P60. Embedding sustainability on do-it-yourself products aiming at low-income families. A Case Study on Shelves Used to Divide Living Spaces. [Santos, Lepre et al.]</p> <p>P61. Design for all. A co-design experience in rural India for healthy indoor cooking [Rocchi, Kusume]</p> <p>P62. Nomadic way of life. Design tools and policies [Barbosa, Santos]</p> <p>P63. Notes on ecodesign, body and the post-human thought. [Rocca]</p> <p>P64. UFOs - Unidentified Future Objects. A suggestion on civilization brought from creative bottom-up instances [Mendoza]</p>	<p>P65. Macrocomponents. An alternative proposal for the production of home integrated systems. [Cozzo]</p> <p>P66. Rethinking the smart home: An environmental perspective. [Loi, Melican]</p> <p>P67. A Study on the Framework Development for Context Analysis in Smart Home Environment With emphasis on user's intention and behaviour. [Ryu, Kim et al.]</p> <p>P68. The sector of household electrical appliances. An integrated system [Marino]</p> <p>P69. Surrounded by high-tech environmental persuasion. Possibilities for new expressive surfaces [Hipólito, Câmara]</p>

Theme 4 Proposals / Enabling Systems

T4.1 Tourism and mapping	T4.2 Energy and packaging	T4.3 Networking/1	T4.4 Networking/2
<p>P70. Social Innovation and Service Design of community-based tourism. The case of Prainha do Canto Verde, in the State of Ceará (Brazil) [Langenbach, Spampinato]</p>	<p>P75. Beyond 1000 Suns. The usage of 'design culture' to create a new paradigm for a hybrid heat-and-power solar system. [Tarazi]</p>	<p>P80. Design for Social and Environmental Enterprise. Design at the Service of Social Businesses [Brass, Bowden]</p>	<p>P86. DAC_Link. A 2.0 tool for SMEs' design innovation. [Arquilla, Genco]</p>
<p>P71. Design, local development and fair tourism. The EKIT project [Dupont]</p>	<p>P76. Energy produced by its own territori. How outputs generate widespread business. [Barbero, Fassio et al.]</p>	<p>P81. Product service systems and non-market oriented approach. Methodological and ethical considerations from a design perspective [Morelli, Jonas et al.]</p>	<p>P87. Research in strategic design: a teaching experience. The design research school model to build a dialog between Brazilian university, society and industry. [Borba, Reyes et al.]</p>
<p>P72. Knowledge cartographies. Tools for the social structures of knowledge. [Quaggiotto]</p>	<p>P77. Design stories for a sustainable society. Case studies of responsibility in practice. [Mottram, Atkinson]</p>	<p>P82. Design Directory. A strategic web-tool for the Italian design system. [Simonelli, Arquilla et al.]</p>	<p>P88. The Vision for Mississauga's City Summit. Collaborating for Change. [Walden]</p>
<p>P73. Handling Changes Through Diagrams. Scale and Grain in the Visual Representation of Complex System. [Ciuccarelli, Ricci et al.]</p>	<p>P78. The Evolving Role of Design: Opportunities and challenges for the Australian Packaging Industry towards sustainable design. [Avendano]</p>	<p>P83. Conceiving the Design Centre of the future. Transforming the economical and social landscape through multidisciplinary projects and integrated user-centred design research [Vanderbeeken, Zoels et al.]</p>	<p>P89. New configurations for networks. The case of the Virtual Institutes. [Bartholo, Bursztyn et al.]</p>
<p>P74. An inconvenient arrow. Visual explanations of ecological cycles in science learning material. [Mølhave]</p>	<p>P79. Fish Box in EPS. Zero Impact. [Catania]</p>	<p>P84. Systems Design Becomes Easy Like a Game. A travelling exhibition as a tool to communicate sustainable society [Balbo, Corsaro]</p>	<p>P90. An Industrial solution for Kenya and Africa. Using home-grown ideas to create sustainable livelihoods [Amollo]</p>
		<p>P85. Design, Research, Italy. Maps, visions and perspectives of academic design research in Italy. [Bertola, Bianchini et al.]</p>	<p>P91. Business Idea Design Supporting tools and services for start-up design-oriented companies. [Vignati, Carriera]</p>

Theme 5 Tools / Design Theories

T5.1 Design education/1	T5.2 Design education/2	T5.3 Design culture/1	T5.4 Design culture/2
<p>P92. A Dialogue on the Future of Design Education. [Gornick, Grout]</p> <p>P93. What if the World Were A More Equitable Place Would Any of Us (Designers) Be Necessary?[Stairs]</p> <p>P94. The Experiential Experiment: Is design education sustainable in a changing university environment? [Gaston, Scott]</p> <p>P95. Sustainable Design r&d – Geneva. Bringing University and training design towards Sustainability. [Corminboeuf, Styger]</p> <p>P96. How you define is how you design. Problematic definitions in Design for Sustainability Education. [Clune]</p> <p>P97. Looking for Likely Alternatives (LOLA). A didactic tool to approach sustainability by investigating social innovation in daily life. [Thoresen, Jegou, et al.]</p>	<p>P98. DEEDS: a new Teaching & Learning resource to help mainstream sustainability into everyday design teaching and professional practice. [Blincoe, Fuad-Luke, et al.]</p> <p>P99. The Learning Network on Sustainability. A mechanism for the development and diffusion of system design for sustainability in design schools. [Penin, Vezzoli]</p> <p>P100. Productive friction: a case study of design research between practice, education and community in rural Australia. [Harrisson]</p> <p>P101. Sustainable Product Design: From delivering sustainable products to enabling sustainable lifestyles. [McKay, Raffo, Trowsdale]</p> <p>P102. Changing Perspectives on Design Education (...) at the Universidade Federal do Rio de Janeiro (Brasil). [Nicolaiewsky, Monteiro]</p> <p>P103. Design-Oriented Futures Wheels. Using Foresight Methodologies in our Design Schools. [Kohtala]</p>	<p>P104. Systems Design Approach. Interdisciplinary/systemic innovation. [Bistagnino]</p> <p>P105. Social Design: Exploring the systemic conditions of sustainable change. [Tang, Klein]</p> <p>P106. Changing the Change: A Fractal Framework for Metadesign. [Wood]</p> <p>P107. Being Here. Attitude, place, and design for sustainability. [Badke, Walker]</p> <p>P108. 360°Eye on Sustainability. An experimental research approach to construct an useful sustainable language. [Zandanel]</p> <p>P109. Non-designed design. A Study on Unprofessional and Non-productive Design in Shanghai [Chen]</p>	<p>P110. Sermons in Stones. Argument and artefact for sustainability. [Walker]</p> <p>P111. Design and values: materializing a new culture. [Malaguti]</p> <p>P112. Changing a phenomenal change. Reassembling the self through a new ethics of negotiation. [Merwe]</p> <p>P113. Ethics and aesthetics in industrial production: Possible ways for the design in this new century. [Moraes, Figueiredo]</p> <p>P114. Ethics Become Sexy! A critical approach to Design for the right to access to aesthetics and technology in the knowledge society. [Imbesi]</p> <p>P115. A Taxonomy of the Changing World of Design Practice. A vision of the changing role of design in society supported by a taxonomy matrix tool. [Young]</p>

Theme 6 Tools / Design Methods

T6.1 Design Thinking/1	T6.2 Design Thinking/2	T6.3 Design Process/1	T6.4 Design Process/2
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A vision of an *urban countryside*.

Service Design as a contribution to the rururban planning*

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Abstract

This paper aims to present, from a Service Design perspective, a scenario of sustainable development for a critical and crucial context: the *rururban* territory i.e. the *periurban* area that lies between a town or city and its rural surroundings.

It is here that urban and rural dynamics meet, creating unique opportunities (or risks) to improve the quality of everyday life and make a decisive step towards sustainable territorial development.

This approach, uses Service Design skills to help us visualise empty or pending urban spaces as a rich, multifunctional territorial resource, where virtuous local interactions among actors create a network of services that can support urban planners and architects in giving shape to the territory.

The paper presents an Italian research project developed for the Agricultural Park South, surrounding the southern part of the city of Milan.

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1. Background: *rururban* territory and virtuous networks

The so called *rururban* territory (Donadieu, 1998), i.e. the *periurban* area that lies between a town or city and its rural surroundings, is a critical context for the sustainable development of any urban area. These areas are subject to urban expansion where formerly separate cities and towns merge into vast urbanised zones: *periurbanisation* may be described as a process that integrates rural areas into systems organised around cities, and such a process has heavy spatial and social consequences, resulting in what Gottmann called a *megalopolis* (Hugo and Champion, 2003). The way this comes about is crucial for the development of a region. It is here that urban and rural dynamics meet, creating unique opportunities (or risks) to improve the quality of everyday life and make a decisive step towards sustainable territorial development.

According to the European Spatial Development Perspective, the kind of *urban-rural partnership* is a key issue: to define the nature and structure of this partnership, a multidisciplinary approach is needed, crossbreeding contributions from the disciplines of finance and economics, urban planning, geography, sociology, agronomy and landscape architecture (Landry, 2000; Viljoen, 2005)

Recently, Service Design has also taken up this debate, and this territorial application looks extremely promising for this new discipline. Collaboration would appear to be particularly promising with the so called *Scuola Territorialista* (Magnaghi, 2000), which seeks to valorise territorial heritage (environment, urban settlement, culture and society) as the only possible and fundamental approach to producing a lasting enrichment of an area. According to this approach, places are the result of a historical co-evolution of human settlement with environment, nature and culture, whereas the recent functionalistic approach tends to consider the territory as a kind of technical support for activities organised independently from the local means, resources, potentialities and qualities.

In such a framework, the concept of sustainable development not only refers to the reproducibility of natural resources, but also to the way in which urban systems are established; to the coherence of productive systems with local resources and entrepreneurship; to the development of capability and self government by local communities.

Service Design contributes to this approach by observing local social innovations, meaning local virtuous and promising activities in different areas of doing, and interpreting them as forms of interaction and exchange of benefits that call for proper (or better) infrastructure and support. Virtuous and promising activities are those able, in everyday life, to bring individual interests into line with social and environmental ones (Manzini and Meroni, 2007). In different ways and for different motivations, such behavior often means *radical changes* in the way practical problems are solved, and would appear to represent a positive step towards sustainability, drawing the interest of an increasing number of people. It has been argued (Meroni, 2007) that since such bottom-up initiatives, along with the Creative Communities that activate them, are deeply rooted in local territory, they can be considered the starting point and the stimulus for a new generation of collaborative services (Cipolla, 2004) within a scenario of Diffused Social Enterprise (Manzini and Meroni, 2007). In other words, Creative Communities together could mature into a form of social organisation where a larger number of people are enabled to organise themselves to achieve results that interest them, while producing sociality and environmental quality.

Because of the common interest in understanding the link between people and places, and between virtuous initiatives and promising models of settlement, this Service Design-driven approach to social innovation can also conveniently integrate the urban planning approach of the *Scuola Territorialista*. Its contribution consists in offering another disciplinary viewpoint and

methodological toolbox for generating a new paradigm of urbanisation which grows out of an understanding and enhancement of local virtuous initiatives, rather than a techno-functional ratio, in a vision of connected and symbiotic networks.

Given the previously discussed critical state of *rururban* territories, where open spaces tend to be inundated with building or treated as residual gaps, the combined approach to territorial development of Service Design and territorial Urban Planning could lead to an experimental one, where local interrelations become dominant and generative, so that even empty or pending urban spaces are seen as rich, multifunctional territorial resources, where virtuous local interactions create a network of services fulfilling ordinary needs and, at the same time, producing sociality and environmental quality.

In such a collaborative pattern, after an initial phase of identification and understanding of local best social innovation practices, the Service Design aim would be to outline corresponding *service models* to be utilised in generating a *scenario framework* for the development of the territory: a scenario that, in seeking to facilitate virtuous interactions, would foster an urban planning strategy able to support Diffused Social Enterprise.

2. Social innovation and experimental projects

This essay presents part of the results of an Italian research project, founded by the Italian University and Research Ministry (PRIN, Miur, 2006 - 2007) for the Agricultural Park South, surrounding the southern part of the city of Milan, in region of Lombardy. This area is an emblematic example of the previously described situation, currently suffering from highly speculative pressures and a lack of vision in terms of a possible sustainable partnership between the town and the productive countryside. The aim of the research was to construct a theoretical and instrumental foundation for a new way of designing urban settlements.

In view of their specific areas of interest, the cases of social innovation here considered can be partially gathered under the umbrella of the so called “solidarity economics networks” (EQUAL, 2007) and are mainly related to three fields of activity: 1) the production, exchange and consumption of food; 2) leisure in the area between town and countryside. 3) the innovative housing and hospitality system in the *rururban* areas.

They demonstrate the presence in the Lombardy Region, and in the Milan area in particular, of a lively humus of activities, already creating a virtuous, but still fragile, network in the territory: numerous examples of solidarity purchasing groups, community supported agriculture, farmers’ markets and direct sales, organic and quality food production, agritourism initiatives for proximity leisure, innovative housing and working typologies. Even though these virtuous initiatives are currently working, they are the result of a sort of *early stage heroic effort*, and lack any real supporting system and any effective transversal connection.

Besides this emerging local reality, it is useful to observe some experimental projects in various parts of the world that exemplify how to use the Service Design approach to integrate the competences of the various disciplines working on territorial development. We will briefly discuss two cases where the approach and field of application are of particular interest:

_ Dott2007 (*Design of the time 2007*) is a national initiative of the Design Council aiming to explore what life in a sustainable region (i.e. North East England) could be like and what role the Service Design discipline can play in achieving it. Spotlights are on five aspects of everyday life: movement, health, food, school, energy. Dott2007 promotes a “less-stuff-more-people approach”, where services help the community to share the load of everyday activities: eating better food, caring for sick or aged people, looking after children, going on holiday, washing clothes and so on. It is a matter of providing instruments to develop personal visions and scenarios, rather than teaching people how to live.

_ VEIL (*Victorian Eco Innovation Lab*) is devoted to research, innovation, creation and testing of fruitful long-term (typically 25 year) scenarios for sustainable solutions: concepts for sustainable products, services, built-up environments and lifestyles in the Victorian region of Australia. The project promotes an interdisciplinary research environment: an evolving 'think-tank' referred to as *the Hub*. It matches different contributions in constructive speculation; calls on the university design program to re-invent the future; presents new products, services, systems and life-styles to be tested in real everyday life; drives investments and social tastes to expand the request for eco-innovation; helps professionals to develop a successful career dealing with these issues; matches the best research with government policies. These long-term visions and eco-innovation ideas are also taken up as '*design studio*' topics for the university design schools (and as student competitions). At the end of these design studies, the students' work is sent back to the VEIL, and the most promising ideas are discussed in a *post-production workshop*, involving students, hub members and professional designers. Here, the projects are revised in order to make them suitable for communication to the general public and media, and then discussed.

Both examples show some common points that can be considered essential in a Service Design driven approach to sustainable development:

- they present a high degree of multidisciplinary;
- they involve the different local actors in a co-design process, and put them in direct relation with each other;
- they stimulate a self-help attitude and develop community capability by providing enabling tools and creating the conditions for the birth of a flexible socio-economic system;
- they rely on the strengths and on the opportunities offered by the local territory.

3. The scenario framework: hypothesis and objectives

The real problem of defining a urban identity of *periurban* areas is the apparent lack of profitable and practicable alternatives to production sites, housing or offices. However, increasingly supported by current reality, the researchers hypothesised the profitable feasibility of developing existing small agricultural concerns in a local network, taking into account local resources and opportunities offered by the local territory.

Work was based on two main hypotheses:

- only by using local resources (Mirata and Ristola, 2007) and activating collaborative and open services (Cottam and Leadbeater, 2004) is it possible to make real, tangible and effective improvements in quality of life and environment.
- local collaborative patterns, involving both local inhabitants and enterprises, can lead to powerful social innovations able to radically change settlement models, by changing underlying practices (Latouche, 2004).

In this conceptual framework, the role of Service Design is to interpret, activate and develop such collaborative local enterprises, in order to provide them with a more favourable ground to flourish (EMUDE, 2007). This means, first and foremost, creating a network of interconnected and complementary *service models* able to develop a different partnership between town and country. To use the tools and the language of the discipline, this partnership typology defines the *scenario framework* (Ogilvy 2002) that challenges the overflow of urbanization by presenting sustainable alternatives: *periurban* areas are seen as places where the *network economy* meets the *collaborative service pattern*, giving rise to a vision of an essentially *multifunctional urban countryside* where:

- the food system aims to increase regional self-sufficiency through local food sale and the de-mediation (Meroni, 2006) of agricultural production. This still remains the most important function of periurban agriculture (Petrini, 2005);
- relationships between rural areas and the city are strengthened in terms of material, economic and cultural flows, and rationalized according to a sustainability assessment;
- enhanced agritourism activities add a new perspective to proximity leisure ;
- locally focussed, regional economies generate income and improve labour opportunities (Fleury, 2005);
- closed loop systems use better and cycle the results of rural activities within a logic of service symbiosis (Mirata and Ristola, 2007);
- good practises and *soft policies* can play a significant, structured role;
- traditional and new communication technology fosters the constitution of collaborative communities;
- agricultural activities can inspire new urban lifestyles by promoting the diffusion of technologies that allow urban farming (green walls and green roofs, simplified hydroponic and aeroponic systems), ease the spread of a new generation of urban cultivators and, at the same time, increase the quantity and quality of urban green (public and private)

4. The scenario for the Agricultural Park South

The work presented here is an action research project conducted by a multidisciplinary team, in 2006-2008 under the auspices of the Italian University and Research Ministry. Its aim was to lay a theoretical and instrumental foundation for a new way of designing urban settlements, through the proposition and visualisation of a scenario of sustainable development for the great *periurban* area of the Agricultural Park South.

This area, made up of different kinds of field partially rented out to farmers and partially owned, is managed and overseen by the local authority for the Province of Milan.

It is an area currently in decline as small farmers abandon the fields, and the soil is overexploited by agro-industrial production. It is also subject to aggressive building programmes and, as their contracts expire, leaseholders fail to invest in new infrastructures and services. Even the small producers are not stimulated to invest money in the agricultural business, which is no longer profitable in a mass distribution scenario. Despite this situation, the previously described solidarity economics network (a mix of Creative Communities and Creative Entrepreneurship) has emerged, and seems to open the way to a sustainable development.

The project has taken this virtuous situation as a starting point from which to develop a coherent system of interconnected territorial service and actor networks, mutually reinforcing and producing business and society.

This system consists of eight *service models*, which we will describe briefly, that take their inspiration from the observed reality. Per se, they are not yet networked or multifunctional, but they are the basis of the entire system.

The collective Park brand

What shared identity can we attribute to this park which is able to characterise its activities? What does this identity entail?

The answer is a brand that denotes the short chain initiatives and activities that are the result of networked collaboration between different actors (eg: food box subscription with products from different local farms; agritourism hospitality combined with other leisure and catering services etc.)

The authority issuing this brand could be a consortium of producers, or the local authority for the Province of Milan, which wants to promote and support the quality of Milanese local products. The products awarded the brand must be the result of collaboration among different local producers; there must be a set percentage of products/services distributed at local level; the products/services must be produced and delivered according to eco-friendly production techniques (biodynamics, biologic and integrated systems...).

Farmers' market: the market for the Park's produce and services

How can the Park and its produce be brought into the city? How can the city feed on its territorial produce? Where can a trip from the city to the countryside start?

To enable short sale from the producer to the consumer, the Farmers' market can be placed in dedicated areas within the most important street markets in the city, following a weekly rota. Organized by a consortium of local producers, it can support the de-mediation of both product and services, encouraging access to the park from the city.

Local product and local services can be sold side by side as in a new kind of street market, where people can find "packages" to enjoy the territory (bicycle rent discount, restaurants), last minute offers of surplus produce and a refreshment point, providing take away food and ready to eat snacks, made with local produce.

Public green procurements: green purchasing

How to transform an administrative protocol into a landmark for aware consumers and enlightened producers? How to organize local windows for the exchange of high quality produce and services?

The Consortium of Local Producers can be the promoter and the provider of this service. It can create touch points between virtuous producers and critical consumers through the realization of critical mass and the organization of shared platforms for goods exchange based on the model of group purchasing organizations. The solution works like an auction where the discount of the products increases with the increasing of the amount of people who join the auction, so building critical mass. Consumers can join the service either through a *digital window* or a local agent, who is a resident of the Park, paid by the service provider.

The food box subscription

How to supply the city with local produce through a convenient and advantageous service? How to give commercial continuity to the producers?

The food-box is a de-mediation service promoted by a consortium of producers, or by a bigger farmer and his network of small suppliers. It is conceived to be accessible in terms of costs, because of the cut in long distance transport, and in terms of convenience, because of the regular home or near-home, delivery. The consumer can personalize his/her purchase by choosing the products he/she wants, how much and how often according to his/her needs.

Visitors' centre: the Park Points

What could a "visitors' centre" look like in an agricultural park? What is it possible to find there? Who takes care of it?

Park Points are welcoming place, located at strategic points in the Park. They combine physical access to the territory with access to its knowledge and its produce. Here it is possible to find an info point and local produce on sale at the same time; or it can also be the starting point for special routes and itineraries and offer agritourism hospitality, etc.

This service is like a mirror of a Farmers' market: it is a territorial agency for the park within the Park itself, and it also sells produce from the closest farms, whereas the Farmers' market is a place where the visitor/consumer can get in touch with services and information to visit the Park and where he/she can buy local produce. A Park Point can also work both as a welcoming centre and as a logistic sorting hub linked to the Farmers' market and vegetable orders.

The rural cultural centre (at a historical building)

How to create an active cultural place in a Park? Where is it convenient to place it, what is it possible to find there, what is it possible to do? Who takes care of it?

The idea of a Cultural Centre is to enhance the value of local biodiversity through activities carried out by scientific researchers (from Universities) and experienced local farmers.

It should bring together a seed savers' association, a botanical multimedial library and a botanical garden, working together. It a place of knowledge and study of local cultivation and traditional farming techniques and is also a consulting window for local producers on advanced farming techniques (advanced organic and biodynamic cultivation, the use of indigenous species etc.). Since this is intended to become a point of attraction in the park, it should be located in a building of historic or other particular interest.

Horticulture

How is it possible for an amateur to enjoy taking care of a vegetable garden in the Park? How can the Park be made more beautiful, vital and healthy with the help of amateur gardeners?

The service transforms available fields on the farms into amateur allotments to cultivate as small vegetable gardens. Amateurs can pay a rent to the host farm or a fee as part of the association that organizes the service. The garden is hybrid space where individual and collaborative activities are connected, as for a *time bank*. When a farmer needs help in his/her activities he/she can rely on an internal exchange of favours and products, managed on a credit system. .

The design of the service facilitates the internal exchange system, which needs to be organized and balanced to make collaboration as friendly and easy as possible.

Urban indoor/outdoor agriculture

How is it possible to enjoy cultivating a vegetable garden in the city? How can 0 mile fresh and biologic vegetables be produced?

Advanced building and gardening technologies can help urban farming: from great metropolises to smaller towns several solutions like green walls and green roofs, simplified hydroponic and aeroponic systems, are getting footing in urban environments to fulfil the need of citizens to cultivate their own food.

The service is intended to give advice on implementing such solutions, based on fixed parameters like the season, the space and the energy available, light and water requirements and so on. It can support users in setting up and maintaining their own vegetable gardens.

5. Service structure and organization

These eight *service models* are quite consistent with each other, but a deeper analysis is required to understand how they can overlap, integrate and share resources so to create a symbiotic network.

In order to do this, a frame of analysis has been developed breaking the services down into assessable elements (Jegou, Manzini and Meroni, 2004) The different elements (the minimum material or immaterial self coherent constituents needed to deliver the services) have been clustered under the following categories:

- Logistics and infrastructures
- Material goods
- Immaterial goods
- Human resources
- Communication

All the eight service models have been analysed using these criteria, so as to understand how they overlap and complement each other, giving rise to possible synergies or closed loop systems. Taking the Farmers' market (FM), the Horticulture (H) and Park Points (PP) as examples, it emerges, for instance, that:

- FM and PP can benefit from sharing logistic systems, means and storage: a well equipped PP would appear to be a convenient collection and transit point for the FM;
- since PP and H, both need an accessible location, they can often be merged. Additionally, the two services both need to attract people for working and for leisure, so the amateur farmers can play an important role in animating and making the PP work;
- FM and H call for similar management actions and tools, so they can share the same system of managing work credits/debits.

By repeating this analysis over and over again a conceptual map of possible integrations emerges, where it is possible to see:

- an overlapping of the elements: potential economies of scale and convenience in joining the services
- complementary elements: potential economies of scope and convenience in linking the services.

Using this method it has been possible to establish guidelines that make a convenient multifunctionality in the agricultural service system feasible.

6. Conclusions: networking and multifunctionality

The services described here propose a vision where agricultural activities, and particularly food production and exchange on a local scale, become the means of sustainably developing *rururban* areas. They rely on direct relations (de-mediation) between producers and consumers, and their collaborative nature blends the roles of the actors, highlighting the need for a local rural-urban production partnership to produce territorial value.

They become profitable precisely because they use the local resources to best advantage: as a matter of fact, the availability of such resources and the possibility of having direct control over them, as far as quality and quantity are concerned, is the distinctive and key factor that enables small business to use them in a beneficial way, making the difference in the market. This allows small enterprises to create the distinct features in their offer that attract the critical consumer; controlling these resources is the way to activate a quality market beside the mass one.

Nevertheless, without a network strategy able to share and complement assets and resources, they are unlikely to have sufficient power to influence the way the territory takes shape: only when and if these services become self-sustaining, will they be capable of creating a social and economic territorial humus that can counter the building speculation.

In order to support their diffusion, Service Design aims to make them more accessible and affordable for a larger target of users and, at the same time, more practicable for a larger group of producers (Manzini and Jégou 2003). In such a framework, the network strategy is a way of increasing both options and benefits to users and effectiveness and convenience for producers.

The functional basis for building the network is the need to share or complement the main elements that constitute the services. From a social and relational perspective, the key point is to enhance actor perception of a coherent community where everybody contributes to collective success.

This approach can lead to a feasible concept of multifunctionality, where activities become conveniently manageable by the actors, not wasting working capacity, but rather increasing it. In these terms, the collaborative aspect of these services is also a way of relieving the farmers or the associations in charge of the territory, of the burden of delivering several services. A self help group of amateur farmers can, for instance, cultivate a field on the farmer's property with a relatively autonomous attitude, using equipment in exchange for labour. A group of professional farmers can run direct sales more easily by managing turnovers and sharing logistics. A group of experienced agricultural enthusiasts can effectively help the less experienced in approaching the cultivation of native species, or processes, much better than a consultancy.

The emerging network (an articulated model of *Community Supported Agriculture*), a way to exchange or pool resources and competences, can be seen as a web of interconnected and complementary services in the territory, which operatively tends to concentrate around crucial points where, for the convenience of the enterprise, several service models can coexist. We can call these points *territorial service ganglions*, because of their crucial role in making the whole system work. They result from the sum of different overlapping and complementary opportunities, where food production, exchange, hospitality, leisure, cultural and social activities create a unique mix of functions, adding value to the territory even simply by avoiding its exploitation for building.

The *ganglions* are the key points of the system, with a multifunctional role. They can be seen as the result of the functional optimisation of business and the convergence of social and human energies around an epicentre of entrepreneurship, which could be a community or a business with the social innovator characteristics previously mentioned. In fact, management of the *ganglions* calls for actors with a distinctive and outstanding entrepreneurial attitude: farmers, associations or other enterprises that, like the *creative communities*, are already notably active in the territory and whose current activities will be enhanced by this new role.

A *ganglion* manages considerable flows of goods, resources and persons, gathering together several smaller activities. Because of the availability of adequate resources and infrastructures, and its strategic location, it plays the role of strategic operational support for businesses gravitating around it: it can better express its own potential as territorial enterprise, by making it possible to activate a win-win alliance with smaller businesses in geographic proximity. Back to the example of a possible convergence of Farmers' market, Horticulture and Park Points, a *ganglion* can be a Park Point endowed with a logistic platform for gathering the product for the

Farmers' Market, at the same time selling part of them, and hosting a community of amateur gardeners.

The possibility of activating synergies or sharing with other businesses in close proximity is, moreover, a way to create virtuous circles that also valorise the offer of leasehold-farmers unable to benefit from huge investments in adequate standards of service. This dynamic can activate an *economy of reciprocity* where services and goods are exchanged outside traditional market rules, creating a flexible local system.

For all these reasons the *ganglions* are the means by which *soft policies* (bottom-up rules and behaviours self-imposed by local communities in order to increase quality) are implemented in the territory, and are also crucial points where institutional policies and local Authorities (Landry, 2000) could really and effectively support them in producing a sustainable local development of *urban countryside*.

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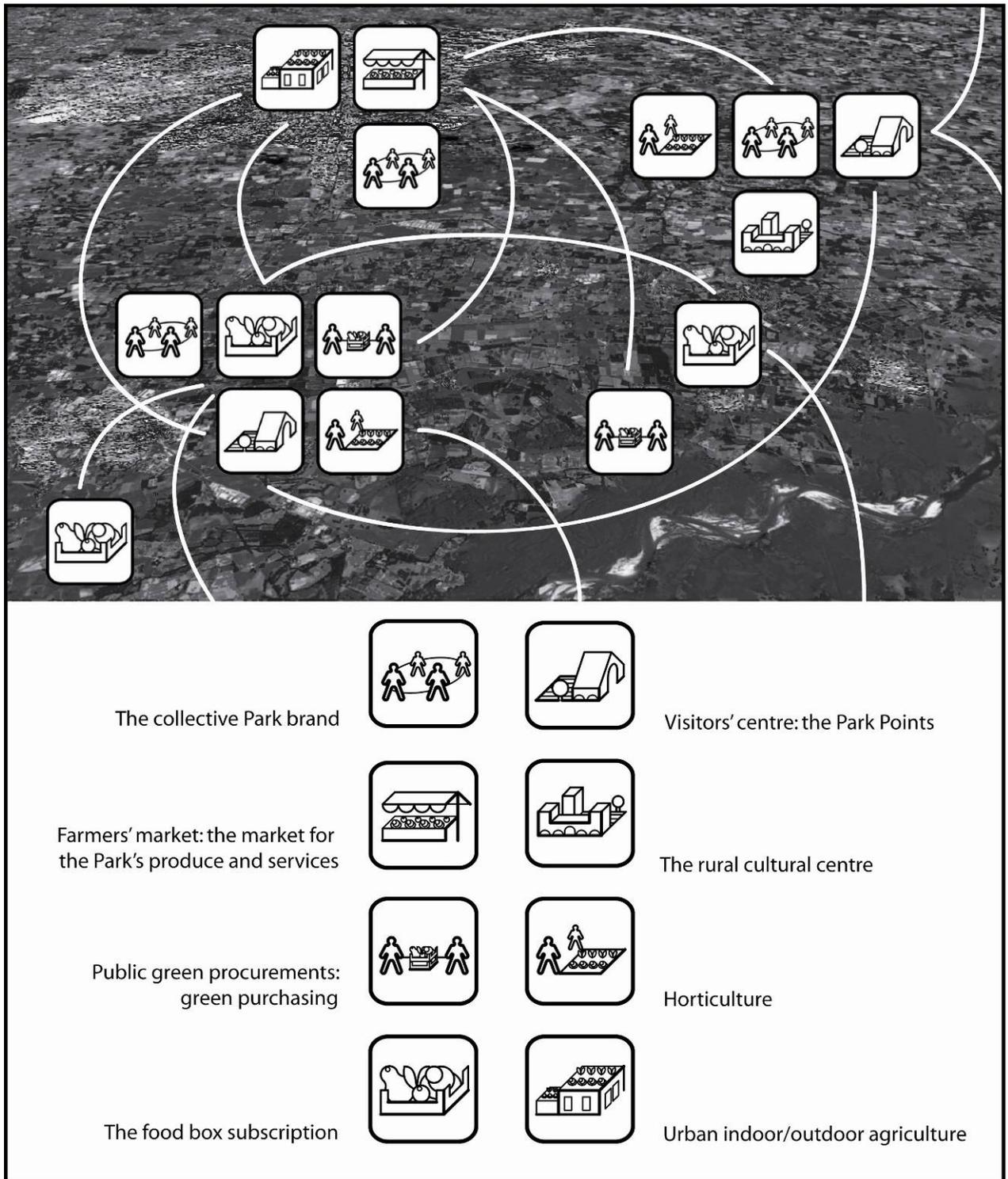


Fig. 1: Conceptual map representing the designed *service models* and their combination in territorial networks gravitating around main *ganglions*.