

# THE DESIGN AFTER



Cumulus Conference Proceedings Bogota 2019

Cumulus Conference  
Proceedings Series  
06/2019 Bogota



## Cumulus Conference Proceedings

### The Design After

Bogota, Colombia

Oct 30 – Nov 1/2019

<https://www.cumulusbogota2019.org/>

#### Chair

Hernando Barragán

Conference Manager / Dean, School of Architecture and Design

Claudia Mejía

Head, Architecture Department

Ricardo Sarmiento

Head, Design Department

#### Scientific Committee

Isabel Arteaga

Andrés Burbano

Daniel H. Nadal

Cesar Peña

#### Editorial Assistant

Melissa Ferro

#### Graphic Conceptualization

##### Cumulus Bogota 2019

Andrea Amin

Constanza Diaz del Castillo

#### Layout Designer

Adriana Páramo

Layout design in reflection of the cumulus

conference proceedings series graphical concept

by Jani Pulkka 2018

© Universidad de los Andes  
School of Architecture and Design  
Bogota, Colombia  
<https://arqdis.uniandes.edu.co/>

© Cumulus International Association of  
Universities and Colleges of Art, Design and  
Media. Aalto University, School of Arts, Design  
and Architecture  
PO BOX 31000, FI-00076 Aalto  
[www.cumulusassociation.org](http://www.cumulusassociation.org)

All content remains the property of authors,  
editors and institutes

ISBN 978-958-774-912-0  
ISSN 2490-046X

#### Publications in Cumulus Conference Proceedings Series

01/17	Kolding, REDO
02/17	Bengaluru, Letters to the Future
03/18	Paris, To get there: designing together
04/18	Wuxi, Diffused Transition & Design Opportunities
05/19	Rovaniemi, Around the Campfire- Resilience and Intelligence
06/19	Bogota, The Design After

Universidad de los Andes | Vigilada Mineducación.

Reconocimiento como universidad: Decreto 1297 del 30 de mayo de 1964.

Reconocimiento de personería jurídica: Resolución 28 del 23 de febrero de 1949, Minjusticia.

Acreditación institucional de alta calidad, 10 años: Resolución 582 del 9 de enero del 2015, Mineducación

Universidad de  
los Andes  
Colombia

ARQDIS C

# THE DESIGN AFTER

Cumulus Conference Proceedings Bogota 2019

Cumulus Conference  
Proceedings Series

Cumulus Association of  
Universities and Colleges  
of Art, Design and Media

Bogota 2019

## SENSING THE CITY, SENSING THE RURAL

The track seeks to examine the role of technology in the urban-rural balance.

MESSAGE FROM THE DEAN .....	10
MESSAGE FROM THE PRESIDENT OF CUMULUS .....	12
KEYNOTES .....	14
CONFERENCE THEMES .....	17
REVIEWERS .....	18

# CONTENTS

<b>BUILDING NEW IDENTITIES WITH BATIK</b> Martin John Bonney .....	21
<b>SENSING IGOLI: APPLYING TYPOLOGICAL ACTIVITY SYSTEM MODELS IN THE DESIGN OF INNOVATIVE AND APPROPRIATE URBAN TECHNOLOGIES</b> Terrence Fenn, Angus Donald Campbell .....	34
<b>RESEARCH VIDEO: AUDIOVISUAL ETHNOGRAPHY AND BEYOND</b> Léa Klaue .....	48
<b>AQUA_MATICES: INTERACTIVE AQUAPONICS FOR EXPERIENCE-BASED LEARNING IN STEAM</b> Yeferzon Alexander Ardila, Veronica Akle Alvarez, María de los Ángeles González, Freddy Zapata Vanegas, Johann Faccelo Osma, Martha J. Vives Florez .....	50

<b>AN EDUCATIONAL INTERACTIVE DASHBOARD FOR AGROLAB 'S AQUAPONIC SYSTEM</b> Pablo Figueroa, Leonardo Parra, Freddy Zapata .....	64
<b>SHANGHAI (1912 -1949): VALUE OF CONSUMER GOODS IN THE URBAN-RURAL INTERACTION RELATIONSHIP</b> Yanghuan Long, Qiang Wang, Chen Fan .....	76
<b>INSPIRATIONS FROM JIANGNAN CLASSIC GARDEN TO CITY LANDSCAPE DESIGN REQUIREMENTS</b> Shu Xu, Weimin Guo .....	89
<b>SENSE-MAKING STRATEGIES IN ICT ADOPTION FOR RURAL POPULATION IN THE DOMINICAN REPUBLIC</b> Azalya Latorre .....	103
<b>RURAL COMMUNITY PARTICIPATION DIGITAL PLATFORM</b> Carlos Cobreros, María Elena Melón, Eduardo Rosado, Nohemi Lugo, Mariana Maya .....	115
<b>INSIGHTS FROM A DESIGN-LED INQUIRY ABOUT RURAL COMMUNITIES IN BRAZIL</b> Caio Werneck, Javier Guillot, Bruno Paschoal .....	125

<b>HYBRID LANDSCAPES: EXCHANGES BETWEEN ART, DESIGN AND TECHNOLOGY IN THE URBAN INTERFACE</b> Facundo Colantonio .....	127
<b>FINDING A NEW COMMONS: ARCHITECTURE'S ROLE IN CULTURAL SUSTAINABILITY FOR JAPAN'S SHRINKING REGIONS</b> Julia Nakanishi, Lola Sheppard (Thesis Supervisor), Jane Hutton (Thesis Committee) .....	140
<b>AGROLAB: A LIVING LAB IN COLOMBIA FOR RESEARCH AND EDUCATION IN URBAN AGRICULTURE</b> Freddy Zapata Vanegas, Giacomo Barbieri, Yeferzon Alexander Ardila, Veronica Akle Alvarez, Johann Faccelo Osma .....	142
<b>DESIGNING RURAL EXPERIENCES THROUGH SERVICE DESIGN METHODS AND STRATEGIC SCENARIOS: TWO CASE STUDIES IN JALISCO, MEXICO</b> Ruth Maribel León Morán, David Sánchez Ruano, Roberto Iñiguez Fores .....	156
<b>PLANT-DRIVEN DESIGN AND PHYTOTECHNOLOGY TO IMPROVE THE BUILT ENVIRONMENT</b> Laura Dominici, Elena Comino, Pier Paolo Peruccio .....	169
<b>SOCIAL DESIGN FOR TECHNOLOGY TRANSFER: AN EXPERIENCE IN RURAL COLOMBIA</b> Juan Manuel España, Fabio Andrés Téllez .....	182

# SOMEWHERE, NOWHERE, ANYONE, EVERYONE

Is it possible for designers to learn and design along with small communities?

<b>CITIZENSHIP IN DESIGN EDUCATION AS A TRANSFORMATIVE LEARNING PROCESS. ID T1</b>	
Massimo Santanicchia .....	194
<b>CONTROVERSIAL-ORIENTED STORYTELLING AS A METHOD FOR DEALING WITH WICKED PROBLEMS</b>	
Nicole Simonato, Guilherme Meyer .....	207
<b>MOVEMENT AND PLACE-MAKING IN A MONSOON TERRAIN</b>	
Deeptha Sateesh .....	221
<b>PARTICIPATORY DESIGN THROUGH JEWELLERY PROTOTYPES: SCANDINAVIAN DESIGNERS AND ZIMBABWEAN VILLAGE ARTISANS</b>	
Margaret Rynning .....	223
<b>PEDAGOGICAL STRATEGIES FOR SOCIAL IMPACT DESIGN, DESIGNING WITH THE POPRUA</b>	
Susan Melsop, Juliana Bertolini .....	236

<b>A RESEARCH AND TEACHING PROJECT FOR THE MARTESANA DISTRICT</b>	
Laura Galluzzo, Claudia Mastrantoni, Ambra Bori, Margherita Rasio, Jixiang Jiang .....	248
<b>CARPAS SOCIALES: A STRATEGY FOR SOCIAL INNOVATION IN FENICIA THROUGH AQUAPONICS</b>	
Laura Amaya, Freddy Zapata, Catalina Ramirez .....	260
<b>INDIGENOUS ANCESTRAL IMAGINARIES AND MATERIAL TRANSFORMATION FROM AN ANTHROPOLOGIC DESIGN APPROACH</b>	
Ricardo Labra Mocarquer, Christian Basáez Villagrán .....	274
<b>ARTISANS AND DESIGNERS: SEEKING FAIRNESS WITHIN CAPITALISM AND THE GIG ECONOMY</b>	
Raphaële Chappe, Cynthia Lawson Jaramillo .....	286
<b>SABER DEL MONTE: DESIGN AS A CATALYST FOR SOCIO-ECOLOGICAL RECIPROCITY</b>	
Lina Lopez-Lopez, Miguel Navarro-Sanint, Natalia Cardenas-Cardenas .....	288
<b>PERCEIVED DESIGN VALUE THROUGH THE LENS OF GENERATION Z</b>	
Aija Freimane .....	302

# FICTION AND DE-INNOVATION

The focus of the track is the articulation between world-making exercises and design methods that reformulate the identity of design.

<b>DRESS ACTION: AN ALTERNATIVE FOR POSTFASHION</b>	
Corneliu Dinu Tudor Bodiciu .....	315
<b>EVERYONE DESIGNS IDENTITY AND DETERMINISM IN THE DIGITAL AGE</b>	
Miguel Lopez Melendez .....	326
<b>'PATADDESIGN: A PEDAGOGICAL EXPERIMENT ON DESIGN OF EXCEPTION, ABSURD ARTIFACTS AND IMAGINARY INTERFACES</b>	
Isabella Brandalise, Henrique Eira .....	339
<b>DESIGNING FASHION FICTIONS: SPECULATIVE SCENARIOS FOR SUSTAINABLE FASHION WORLDS</b>	
Amy Twigger Holroyd .....	341
<b>BLACK PANTHER'S UTOPIAN PROJECT: THE INNOVATIVE POTENTIAL OF FICTION AND SPECULATION BY NON-ARCHITECTS</b>	
Fiona Kenney, Vaissnavi Shukl .....	352

<b>RETHINKING THE PLACE OF NARRATIVES IN DESIGN FICTION: A GAP BETWEEN POLICIES AND THE REAL APPROACH TO VICTIMS</b>	
Mónica Paola Peña Zambrano .....	354
<b>DESIGN FICTION: LATERAL THINKING FOR SOCIAL DESIGN</b>	
David Hernández Falagán .....	363
<b>DESIGNING GOVERNANCE IN THE FOURTH INDUSTRIAL REVOLUTION</b>	
Paula Riveros Tovar .....	372
<b>RE-CONTEXTUALISING THE DESIGN PROCESS IN FASHION EDUCATION</b>	
Shalini Gupta, Varun Goel .....	381
<b>NATIONAL MEMORY AND DESIGN OPPORTUNITIES: PATTERN DESIGN OF TRADITIONAL CHINESE FESTIVAL COSTUMES</b>	
Kunyu Li, Hui'e Liang .....	393
<b>TECHNOLOGIES FOR INTROSPECTION: SPECULATIONS ABOUT THE RELATIONSHIP BETWEEN SUBJECT, PERCEPTION AND TECHNOLOGY</b>	
Laura Catalina Junco Gómez .....	406
<b>PROVOCATIVE PLAYGROUND: CO-DESIGN OF URBAN SPACES IN CONTEXTS OF HIGH DEGREE OF MARGINALIZATION</b>	
Mariana Maya, Carlos Cobreros, Gustavo Peñaloza .....	417
<b>POSTHUMANWEAR EXPLORING POSTHUMAN IDENTITIES AND AESTHETICS THROUGH DESIGN FICTION</b>	
Juan Carlos Guevara Verjel .....	428
<b>RE-THINKING THE DESIGN ROLE: EXPERIMENTING NEW NARRATIVE &amp; RHETORIC DESIGN METHODS</b>	
Valeria Maria Iannilli, Antonella Valeria Penati, Alessandra Spagnoli .....	438
<b>THE EXTENDED PRAXIS OF DESIGN: TOWARDS A CHARACTERIZATION OF THE ADVANCED DESIGN CULTURES</b>	
Roberto Iñiguez Flores, Ruth M. León Morán, Flaviano Celaschi, Elena María Formia .....	449

## BIODIVERSITY-DRIVEN DESIGN

Is it possible for science and design to question how their knowledge can be better integrated to solve real world problems?

<b>HISTORY MAY LEAD TO FUTURE: HOW CHINESE FIVE ELEMENTS THEORY HELP TO IMPROVE PRODUCTS' EMOTIONAL DURABILITY</b>	
Ruimin Hao, Jiapei Zou .....	500
<b>BATRACHARIUM – AN IN SITU PARTICIPATORY CONSERVATION AND EDUCATION PROGRAMME FOR AMPHIBIANS</b>	
Gururaja Kotambylu Vasudeva .....	511
<b>EXPLORING THE BENEFITS OF NATURALLY COLORED COTTON FOR FUTURE DESIGN SOLUTIONS</b>	
Sharda Nautiyal, Sakshi Babbar Paul .....	520
<b>BUILDING A BIODESIGN CURRICULUM</b>	
Jenifer L. Wightman, Jane Pirone .....	532
<b>SYMBIOGENESIS-BASED DESIGN: A NOVEL METHODOLOGICAL APPROACH TO DESIGN BASED ON COOPERATION AND INTEGRATION</b>	
Alejandro Durán Vargas, Lorena O'Ryan Cuevas .....	554
<b>TRANSFORMING AGRICULTURE THROUGH URBAN PRODUCTION METHODOLOGIES WITH THE SUPER POTATO</b>	
Elizabeth Jamie Dellheim, Stephen Enrique Bruque Coral, Laura Andrea Cabrera Villamizar, Pablo Llinás Tono .....	568
<b>BIOMINING: AN APPROACH FROM BIODESIGN IN SEARCH FOR AN ECOLOGICAL EQUILIBRIUM</b>	
Lina Gisell Aranzalez Rodríguez, Brillyt Carolina Quimbayo Gutiérrez, Carolina Páez Vélez .....	579
<b>SENSING NATURE: EXPERIENCE DESIGN FOR LEARNING THE INTERPLAY BETWEEN MATERIALS AND EMOTIONS</b>	
Sara Lucía Rueda Mejía .....	589
<b>PROTOTYPE OF A SELF-SUFFICIENT BIOFABRICATION PROTOCOL FOR REMOTE TERRITORIES</b>	
Aníbal Fuentes Palacios, Carolina Pacheco Glen, Adriana Cabrera Galindez, Alejandro Weiss Munchmeyer, María José Besoain Narvaez .....	601

<b>WALKING IN THE AGE OF ANTHROPOCENE: AN INTERDISCIPLINARY LEARNING EXPERIMENT FOR A SUSTAINABLE FUTURE</b>	
Fan Feng .....	461

<b>TRANSDISCIPLINARY COLLABORATION MEDIATED BY DESIGN: AN INITIATIVE FOR RURAL ADAPTATION TO CLIMATE CHANGE</b>	
Luis Beltran-Forero, Fabio Andrés Telléz .....	472

<b>TECHNO-AESTHETIC SPACES OF FICTION</b>	
Karen Aune .....	486

<b>BIOFORM – LEARNING AT THE INTERSECTION OF SCIENCE AND DESIGN</b>	
Damian Palin, Sam Russell, Ferdinand F. E. Kohle, Enda O'Dowd, S. Yeşim Tunali Flynn .....	498

## DESIGN AND COUNTERCULTURE

What is the role design could play in creating new production models or economic systems?

<b>WALKING BACKWARDS INTO THE FUTURE: USING INDIGENOUS WISDOM WITHIN DESIGN</b>	
Nan O'Sullivan .....	606
<b>A CONTEMPORARY URBAN HUMANISM: THE URBAN SPACE AS CULTURAL FRAMEWORK FOR PARTICIPATIVE ARCHITECTURE, GRAFFITI IMAGE AND URBAN GENRES</b>	
Omar Campos Rivera .....	615
<b>THE CREATION OF A DIGITAL PUBLICATION ABOUT GENDER AND DIVERSITY FOR EARLY CHILDHOOD</b>	
Débora Falleiros Gonzalez .....	627
<b>COLLABORATION AS A FORM OF COUNTERCULTURE</b>	
Dickson Adu-Agyei, Finzi Edward Saidi, Jabu Absalom Makhubu .....	639
<b>SUSTAINABLE DESIGN AS ANTI-FASHION</b>	
Daniela Monasterios-Tan .....	651
<b>DESIGN AGAINST WAR. HOW CAN DESIGN SUPPORT THE EFFORT TO PREVENT CONFLICT, MITIGATE WAR DAMAGES AND PROMOTE A CULTURE OF CARE?</b>	
Massimo Bruto Randone, Irina Maria Suteu .....	664

<b>HAND-MAKING AS THE INTERPLAY OF THE PERSONAL AND COLLECTIVE IN DESIGNING TRANSITIONS</b>	
Marysol Ortega Pallanez .....	675

<b>BOGOTA DUST AND PAPER CITY: A CRITICAL DESIGN EXERCISE THAT EXPLORES CORRUPTION IN TOWN</b>	
Viviana Alejandra Moya Arenas .....	686

<b>BIO-CURRENCIES: AN ALTERNATIVE TO PAYMENTS FOR ENVIRONMENTAL SERVICES (PES)</b>	
Santiago De Francisco Vela, Miguel Navarro-Sanint, María Belén Castellanos Ramírez, Leidy Lorena Rodríguez Pinto, Catalina Ramírez Díaz .....	698

<b>SOCIALLY ENGAGED DESIGN AND ART EDUCATION PRACTICES FOR REINVENTING TERRITORIES</b>	
Andréia Menezes De Bernardi, Edson José Carpintero Rezende, Juliana Rocha Franco .....	700

<b>THE TRANSFORMED SOCIAL FUNCTION OF RELIGIOUS ARCHITECTURE – TAKE “ZHUANGFANG” AS AN EXAMPLE</b>	
Jiaye Chen, Qiang Wang, Lu Ding, Stephen R. Drown, Anran Feng .....	711

<b>APPLYING HUMAN-CENTERED DESIGN AND BEHAVIORAL ECONOMICS TO DRIVE UPTAKE OF PREP AMONG SEX WORKERS</b>	
Juanita Rodríguez Barón, Dean Johnson .....	722

<b>CLASSROOM AS RESISTANCE: MICRO-STRATEGIES FOR DESIGN EDUCATION</b>	
Gaia Scagnetti, Nida Abdullah .....	735

<b>FROM SELF-CARE TO WE-CARE: PRACTICAL TOOLS FOR FIGHTING ORGANIZATIONAL BURNOUT</b>	
Jenny Liu, Hannah Roodman .....	746

<b>ABRACEMOS LO NUESTRO: ENCOURAGING NEW IDEATION WITH TRADITIONAL PARAGUAYAN TEXTILES</b>	
Andrea Gonzalez Esteche, Melissa Dawson .....	760

<b>PHOTO-ETHNOGRAPHY AND POLITICAL ENGAGEMENT: STUDYING PERFORMATIVE SUBVERSIONS OF PUBLIC SPACE</b>	
Pablo Hermansen, Roberto Fernández .....	771



**SOMEWHERE,  
NOWHERE,  
ANYONE,  
EVERYONE**

**One of the dominant design narratives since the mid-nineteenth century has to do with its centrality in fostering consumerism. However, in the second half of the same century, behavioural researchers started thinking about alternatives to market economies and the emergence of new ecologies. Contemporary design is still looking for different ways to establish a more responsible, long-term and healthy relationship with the environment and its context. From consumption and individualism, the design has**

**transcended to promote a strong consciousness on the scarcity of resources and the importance of environmentally mindful local communities. Is it possible for designers to learn and design along with small communities? Can social sciences and design work together in providing ways of thinking and methodologies to empower communities instead of finished products? Can design reach beyond the framework of market-driven economies? Can design methodologies help tackle wicked problems?**

# A RESEARCH AND TEACHING PROJECT FOR THE MARTESANA DISTRICT

Re-occupation and re-designing of public spaces are becoming increasingly frequent, particularly in peripheral and semi-peripheral neighbourhoods. This essay will try to explore a research teaching project that involves different realities, including small local communities of the City of Milan, a Milanese private company called Cargo, and a group of students from second-year studio on the Master's Degree course in the School of Design of Politecnico di Milano. Here, the role of the design discipline is to take advantage of the fertile context of the Martesana District in Milan, and to propose new solutions, scenarios and strategies, by placing the resident population and the small local communities in a relationship by using the skills of the design students' skills to create synergies and new processes of inclusion and social innovation.

The process began when Cargo, a traditional furniture store in the north-east of Milan was looking to be more innovative. The company asked the Polimi Desis Lab, a research team of the Department of Design at Politecnico di Milano, to help them to increase their relations with the neighborhood, offering the residents a new space for meeting together, community, and sharing. Corresponding to a common phenomenon in many commercial areas in the world, Cargo is maintaining the character of a place of consumption, without engaging in community dynamics.

After an in-depth concept analysis about the context and the associations involved, the studio will generate a prototyping event, including some co-design sessions extended to the people of the neighbourhood. Design practice is trying here to cross through the barrier made by the framework of market-driven economies, by co-designing and using a community-driven approach as its central core.

**Keywords:** Social practices, Design education, Research in design, Community-centred Design, Co-design

## INTRODUCTION

Cargo, a traditional furniture store in the north-east of Milan was looking to be more innovative. The company asked the Polimi Desis Lab, a research team of the Department of Design at Politecnico di Milano, to help them to increase their relations with the neighbourhood, offering the residents a new space for meeting together, community, and sharing. A group of forty international students of Temporary Urban Solutions (TUS), an elective course of the Master's Degree at the School of Design at Politecnico di Milano, were involved in this research and teaching project. In particular, they were asked to work with some local associations, creating opportunities for meeting and collaboration at the neighbourhood level, in order to activate the local community, generating strong opportunities for participation.

Starting from this analysis, this essay highlights the collaboration between researchers, students as designers, and the local community, in particular with the aim of understanding how to involve them in the co-creation of new, best solutions.

The results of the course confirm that the social component within an urban reality in close contact with design is favourable to the definition of new responsible strategies for promotion and participation of neighbourhood.

Six associations were chosen for a complete final prototyping, one for each project team. From the educational point of view, this allowed a relationship to develop with the associations and, from the point of view of the coherent, co-planning Human-Centred Design method, a full exchange of experiences, complexity and objectives developed among design teams, neighbourhood associations and local community. The final sharing of the prototyping results coincided with a district-wide event, *Martesana Fest*, which was held in Cargo's outdoor spaces.

## PROTOTYPING SOCIAL PRACTICES

Design practice has been influenced by the changing landscape of human-centred design research. The user-centred design approach, which began in the 1970s and became widespread by the 1990s, proved to be most useful in the design and development of consumer products (Sanders, 1992). It became clear that this type of approach cannot address the scale or complexity of the challenges we face today (Edwards et al., 2003). It is no longer a matter of simply designing products for users, but rather of thinking about and designing future experiences for people, communities and cultures that are disconnected and misinformed.

**Laura Galluzzo**  
Politecnico di Milano  
laura.galluzzo@polimi.it

**Claudia Mastrantoni**  
Politecnico di Milano  
claudia.mastrantoni@polimi.it

**Ambra Bori**  
Politecnico di Milano  
ambra.bori@gmail.com

**Margherita Rasio**  
Politecnico di Milano  
margherita.rasio@gmail.com

**Jixiang Jiang**  
Politecnico di Milano  
jixiang.jiang@polimi.it



In this text, we want to focus on a critical challenge that includes the collaboration between researchers, students as designers, and the local community of the Martesana district, discovering above all how to involve the latter in the co-creation of new and improved solutions. Researchers and designers have to deal with two main challenges. The first is to understand who to involve in this type of process, such as those who are interested in and impressed by it, like local communities and associations linked to the neighbourhood. Secondly, there is a need to preserve the environment in order to foster collective creativity, including the conjecture that can be improvised at any time during the activity (Lee et al., 2018).

Over the years, design has moved from being a more hand-crafted discipline to a multidisciplinary one, linked to social environments, products, services, systems, relationships and brands (Friedman, 2002; Muratovski, 2010). Referring to innovative, social and service activities means referring to design for social innovation. The objective of the process presented here is to satisfy social needs and demands, spread mainly through local associations with a community purpose (Mulgan, 2006).

In a context such as that of the suburban and near-suburban, the design discipline has a pro-active role, proposing specific research methodologies and intervention strategies in close relation to the neighbourhood, also building new skills, creating unique synergies, functions, relationships, spaces and, in general, processes of social inclusion and innovation. Consequently, the use of spatial design practices and services in social innovation puts into practice a holistic, co-creative and user-centred approach, understanding and involving the behaviour of users such as the neighbourhood, students and Cargo employees, in order to refine new emerging models (Stickdorn et al., 2011). Design is therefore recognized as a powerful driver of innovation, even when its methods and tools are applied in new fields.

The designer succeeds in broadening and investigating his interests even in small, uninvolved communities, leading to an improvement of life in the neighbourhood by establishing new relationships and the power of social understanding, through an applied methodology and a short- and long-term creative perspective. The role of the design discipline, in this particular context, is to optimize the fertile context of the Martesana district by proposing new activating solutions, scenarios and strategies, connecting the resident population -small local communities- using the skills of design students, creating synergies and new processes of social inclusion and innovation. Here, the practice of design is trying to cross and overcome the barrier constituted by the framework of market economies, co-designing and using the community-driven approach as its core.

In the following paragraphs, starting from an in-depth conceptual analysis of the context and the associations involved, there will be a discussion of how a precise methodology is applied during the course to generate co-planning that is extended to the neighbourhood, concluding in the organization of a public event to present the results of a first prototyping.

### **Martesana District**

Martesana District is the urban context selected to develop the experiences undertaken during the elective course of TUS and of the research related to it. This is an area placed on the north side of Milan, between Viale Monza and Via Padova between Rovereto and Gorla Metro stations; it is an industrial and residential area, where people from different cultures and of different ages live.

The Martesana area is characterized by a fragile cultural fabric, which is socially, economically and culturally fragmented. This district is therefore still trying to find its own identity, an unprecedented territory that spans different areas of dialogue.

The historical part of Crescenzago is a coastal village, with houses and farms that show the traditional rural nature of the area. In the first half of the twentieth century, however, the area was intended for other purposes and fell to urban, indeed uncontrolled, expansion (Bonomo et al., 2014). The Metropolitan network is the main communication link for the whole area with the rest of the city, but it also acts as a wall between Crescenzago and the rest of the district that extends beyond the railway line.

In the neighbourhood today there are well-built areas and completely abandoned parts. Even though calls for proposals by the Municipality of Milan have always sought to bring about change to regenerate the situation, especially in terms of urban planning and services. It was decided to revitalize the district with infrastructure and services that will improve citizens' quality of life, making it more strongly connected with the surrounding area. The redevelopment of the Adriano district passes through the management headquarters of the technology multinational Siemens (Rigatelli, 2018). This new project is a symbol of innovation and sustainability for a small neighbourhood that has not yet evolved but has potential for growth. It is closely connected to the metropolis of Milan, but still needs time and the inclusion of new projects of different realities to achieve real urban development, starting from the community and possible future internal and external relations in the neighbourhood.

The first challenge of this research and teaching experience, is to respond to a specific request of a local reality like Cargo, thus finding potential temporary urban solutions, with the possibility of becoming permanent in the future, for those who

live in this neighbourhood, and promoting social, cultural and interpersonal opportunities, and making the most of common spaces through new opportunities. This university research methodology is intended to transform students into primary activators of improvement of the neighbourhood, using their design ideas to experiment with activities of co-design with the different local realities, until you get a first prototyping in real scale. The enrichment of a district with events, activities and social involvement also means helping its environment, thanks to a network of active collaborations between citizens, local merchants and the activities and associations already present in the area, using the public spaces and empty places of the district that have potential.

### Development and Methodology

This article presents an action format developed through reflection on different experiments that, through the principles of design for social innovation, focuses mainly on action research and field activities. Design for social innovation is defined as new solutions to social problems that are more efficient, effective and sustainable than existing ones (Phills et al., 2008). More bottom-up approaches are needed, so that multidisciplinary stakeholders can have open discussions and cooperation to form policies and projects that produce social benefits (Needham, 2008).

A Human-centred (HC) design methodology is used - a creative approach to problem solving that builds a deep empathy with the people you design for. As IDEO affirms, the HC approach "is a process that starts with the people you're designing for and ends with new solutions tailored to their needs" (2015). It's about generating ideas and building prototypes, sharing what's been done with the people you're designing for and bringing new innovative solutions into the world. The design of HC basically consists of three phases:

- *Inspiration*: to learn directly from the people you are designing for and understand their needs in depth;
- *Ideation*: to identify design opportunities, and prototype possible solutions;
- *Implementation*: is about understanding how to bring your solution to life, and to market in the real world.

Figure 1. Timeline scheme about phases and applied methodology in the course TUS.



Forty international students on the TUS course were called upon to involve the six associations of the neighbourhood to carry out a process of continued co-design. The phases of the process are:

- *Analysis and Research* that includes desk research and field research on the context of the neighbourhood and their assigned associations, also using tools such as interviews and photo reportage;
- *Concept Generation* which mainly includes a co-design session extended to the neighbourhood;
- *Project Development* the project conception phase after having analyzed all the previous points;
- *Prototyping* which aims to test the planned activities, services, communication, and spaces with the community.

Through the study of local actions undertaken by communities, it is possible to promote the development of the urban public space, focusing on sustainability, conviviality and solidarity, new ways of involving residents and users in the design phases of a transformation project. Each of the six student groups was assigned an association: *G.A.S (Ethical purchasing group)* *Crescenzago* is a local community of people who share the common philosophy based on the rejection of consumerism, the care of natural products and affordable prices; *Assab One* is a non-profit organization that promotes exhibitions, events and art projects focusing on initiatives that integrate different languages capable of reaching beyond the art world, symbolic of a meeting place where exchanges take place between different individuals, realities and cultures; *WeMake Fablab* supports and provides a space for digital and traditional manufacturing while also providing access to fablab technologies to explore new fields of innovation involving the local and global community in different skills and learning processes; *Sonomusica Association* is a local reality linked to music, offering concerts and various musical events more generally throughout the neighbourhood, including concerts in community areas; *Artigirovaghe* promotes the spread of cultural and educational research, also promoting social experimentation, especially in creative development and free expression, to create socialization processes for a new social community; and, *City Art*, where the projects deal with the protection and respect of the environment, the theme of social relations and conflict mediation in all those places where the capacity for active participation in social and public life can be increased.

The final output of the TUS course is an event organized in spaces owned by Cargo that open to the whole district, to stage possible future scenarios for the Martesana district, where the local associations and the local community were able to test final prototypes of space and service designed by the students.

The students provided Virtual Reality (VR) models of the spaces, allowing people to interact and imagine the future through them.

The prototypes and the activities proposed during the event were made with the aim of building long-term relationships with local community actors to create networks and new relationships from which design opportunities can emerge.

### When design helps small communities

Manzini (2015) says “social innovations are solutions based on new social forms and economical models. They are those social changes towards sustainability when they can reduce the environmental impact, regenerate common goods and social fabric”. These innovations often deal with public space because communities often act in it and for it.

Richard Sennett (1992) wrote about the crisis of the city, introducing an idea that differed from that of Jane Jacobs in *The Death and Life of Great American Cities* (Jacobs, 1961). Jacobs, he says, is nostalgic about the past and the relationships between people in small towns and she tends to suggest a restoration of past conditions. Therefore, as Sennett claims, we cannot think that the past can give us elements to improve our present city problems, as the solutions we want must be adapted to an affluent technological era. The answer is probably to be found between these two arguments, or perhaps they are not so far away from each other to begin with. They both conclude that communities must have a need for, and the will to re-reach, some values that have been lost in modern urban life, such as mutual support and conviviality (Sennett, 1992).

According to this last concept, public spaces are becoming places of social innovation, offering a context where creative communities act (Meroni, 2007) to provide original solutions to the daily problems that the current economic system is no longer able to provide.

In the particular context of this teaching research, all the activities and prototype projects have been implemented with the aim of building long-term relationships with stakeholders in the Martesana local community to create networks from which design opportunities can emerge. The actions of these active groups of six associations, the students and Cargo as spokespeople for the neighbourhood, create opportunities for social transformation and sustainable growth that modify the existing model, replacing the old individualistic values with a new sense of community, sharing the exchange of knowledge and information through shared support.

This assessment session helped to explore the opportunities and understand the possible future scenarios of the spaces and services designed. The real impact was visible for the first time from the presentation of six full-scale prototypes referring to spatial design and service design strategies, which took place during the public event. These include strengthening the identity of the neighbourhood, enhancing its unique creativity, preserving material and immaterial culture, and using design to build potential long-term development strategies. These are all elements that, if put into practice, can contribute to improve the quality of life of the local population in the Martesana district.

### FROM ANONYMOUS TO COLLECTIVE CITY

The projects described below follow the methodology previously analyzed, anticipating what will then be the last phase of the course, which consists of a triple objective of prototyping:

- *Space Prototyping*: the students have realized a 1:1 scale spatial model of the project or at least a detailed part of it;
- *Service Prototyping*: the idea of a new service or activity as a tool to connect the project to the Martesana District;
- *VR (Virtual Reality) Prototyping*: through the use and support of this technology, the mise en scene of a future scenario regarding the new Cargo spaces.

The students' ideas were presented during the Martesana Fest, a final event: six projects and six activities to involve the inhabitants and six future scenarios to stimulate the vision of Cargo spaces of the future, through their prototypes. With the intention to build

Figure 2. During the event, Martesana Fest, experiencing VR cardboard.



a social, efficient and pleasant activity, and at the same time, take care of the environment, a new strategy for reusability of waste materials and their transformation into furniture or other useful objects was designed. In the project *RE-MIX*, using the philosophy of G.A.S. Crescenzago, combined with the active participation of the locals and the physical/spatial help of Cargo, a co-design system based on inclusion and sustainability was created, re-establishing a better connection between people. The outcome was the creation of a new community that cares for smarter consumption and upcycling of goods for better environmental awareness. *RE-MIX*'s idea is based on the three main activities: reuse, upcycle, and connecting people. One possible future scenario of the project is for G.A.S members and locals to organize a bimonthly event, where all the participants come together and are asked to bring their waste materials, such as plastic bottles. In this event, Cargo's craftsmen could teach people how they can build their shared public furniture together in an enjoyable way. This shared desire to modify the empathy and appearance of the neighbourhood by engaging people in interactive activities, starting from a reuse of existing object/materials, has also developed through the design of creative and sensory activities.

*DYNAMIC ART*, in collaboration with the Assab One association, aims to create artwork through different body movements and action painting, giving people the possibility to appreciate their own imagination and creativity. All these artistic atmospheres become a large co-created decorative wall piece in the neighbourhood, appreciated by everyone.

Like the project *ECHO*, whose purpose is to gather together people from the area along the canal, and create a stronger identity for the neighbourhood, using another artistic method: music as a medium to connect people and spaces. People's needs and preferences in music create a shared social space with the intent of bringing back the idea of community founded on a collective passion. *ECHO* aims to revitalize the neighbourhood using a stage that will rise in front of the Cargo store to host musical events for young people and adults in the Martesana District and beyond, an "open stage" that allows buskers – from the area and elsewhere – to perform legally and also be seen and heard by the general public.

Sharing arts, is also important for the *SEEDS OF POETRY* project, which proposes an activity in which people are free to participate and express themselves only using the written word. The idea is to create small vertical green areas in the Martesana district, improving the concept of the project named *#riempiamoviapadovadipoesia* driven by the Arti Girovaghe association, circulating poetry in the streets. People can plant seeds, write their poetry, and place it wherever they like in the neighbourhood streets.



Figure 3. From left: *RE-MIX* (by Katia Al Chosman or Al Hussban, Siyka Georgieva, Kristina Mickute, Giuliana Racco, Vanja Rakic, MengTing Xu), *DYNAMIC ART* (by Aradhana Das, Alessandra Fazio, Hongmiao Liang, Simona Sanfilippo, Yuke Yan), *ECHO* (by Li Xiaoqian, Peggy Liu, Alice Lonardi, Hao Lyu, Margaux Padrutt, Daniele Trappetti).



The project *TRAMA*, born in association with City Art and the cooperation of its citizens, has the goal of bringing out the potential of intercultural exchange understood as personal, generational and ethnic. The activity created for the bridge co-design with the people who collaborate in the project could be replicated along all the bridges that are in Martesana canal.

Finally, *iCreate*, is a project with the collaboration of We Make Fablab, consisting of an urban garden in which a series of workshops is held about how to grow and harvest fruits and vegetables involving the use of technology, as well as how to process the harvest for consumption (raw food). Fablabs can

Figure 4. From left: *SEEDS OF POETRY* (by Amélie Anger, Beatrice Rinne, Joddy Patrianagara, Niv

promote the idea of prototyping and effectively and efficiently producing efforts for a more sustainable and healthier lifestyle by creating a suitable habitat for people who inhabit modern structures and communities.

These students' prototypes were exhibited during the Martesana Fest, a final event where every single group presented their solution, also telling the story behind the experience and explaining how the local support was useful for designing such prototypes. Six projects, six activities to involve the inhabitants, and six upcoming scenarios to stimulate the vision for the future Cargo spaces, through their prototypes.

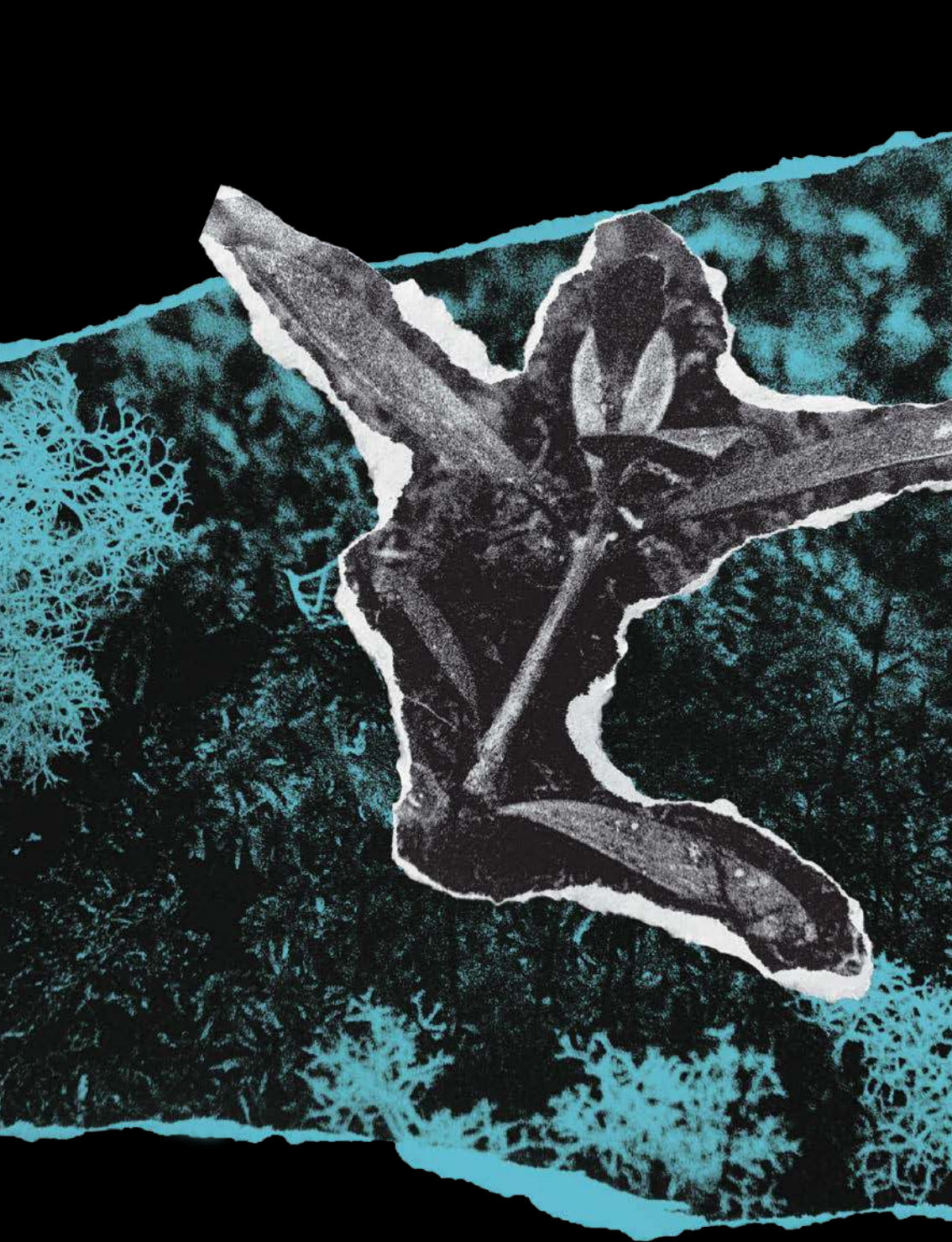
## CONCLUSION

Setting new dynamics and new habits in the surrounding area was the main objective of this project, in which the students were able to develop relations with the six local associations as new possibilities; future scenarios to give the collective city, often anonymous, a new face and a connection with its citizens, so developing a better atmosphere with positive synergies. The final proposals of the students are only the first ideas born from an educational path; it is fair to say that they could be a starting point for subsequent project phases while maintaining the collaboration between the various actors involved. Some of the projects have a stronger potential than the others, because they have been able to enhance the inputs and suggestions received from the district itself. The prototyping event, Martesana Fest, allowed the results of this research project to be tested for the first time, through the six future scenarios for a collective, and often anonymous city, proposed by the students, and highlighting a new context of connections.

In the next few years, the collaboration between the research group Polimi Desis Lab and Cargo will continue, with the intention of continuing to apply the same methodology in future design phases. The neighbourhood and the community will be the main driving force behind this collaborative project. First, through initiatives and activities in the neighbourhood itself, one of the projects can be chosen, to set and monitor its evolution towards realization. Finally, these future steps will be coordinated through design tools that will promote an integrated design between spaces and services: there will be a single universal language of co-design, providing a collaborative process from the bottom up through co-creation methods that promote a lively atmosphere.

## REFERENCES

- Camocini, B., & Fassi, D. (Eds.). (2017). *In the Neighbourhood Spatial Design and Urban Activation*. City?: FrancoAngeli.
- De Pieri, F., Bonomo, B., Caramellino, G., & Zanfi, F. (2013). *Storie di case. Abitare l'Italia del boom*. City?: Donzelli Editore.
- Design Kit, What is Human-Centered Design? (2019). Retrieved from <http://www.designkit.org/human-centered-design>
- Edwards, W. K., Bellotti, V., Dey, A. K., & Newman, M. W. (2003). *The challenges of user-centered design and evaluation for infrastructure*. In Proceedings of the SIGCHI conference on Human factors in computing systems (pp. 297-304). ACM.
- Friedman, K. (2002). *Towards an integrative design discipline. Creating breakthrough ideas: the collaboration of anthropologists and designers in the product development industry*. Westport, Conn: Bergin and Garvey.
- Jacobs, J. (1961). 1993, *The Death and Life of Great American Cities*, Modern Library ed. City and Publisher.
- M. Stickdorn, J. Schneider, K. Andrews, & A. Lawrence, *This is service design thinking: Basics, tools, cases*. Hoboken, NJ: Wiley, 2011. Vol.1, 2011.
- Manzini, E. (2015). *Design, when everybody designs: An introduction to design for social innovation*. Cambridge, MA: MIT Press.
- Meroni, A. (2007). *Creative Communities. People inventing sustainable ways of living*. Milano: Edizioni Polidesign.
- Mulgan, G. (2006). The process of social innovation. *Innovations: technology, governance, globalization*, 1 (2), 145-162.
- Muratovski, G. (2010). Design and Design Research: The Conflict between the Principles in Design Education and Practices in Industry. *Design Principles & Practice: An International Journal*, 4(2).
- Needham, C. (2008). Realising the potential of co-production: negotiating improvements in public services. *Social policy and society*, 7(2), 221-231.
- Phills, J. A., Deiglmeier, K., & Miller, D. T. (2008). Rediscovering social innovation. *Stanford Social Innovation Review*, 6(4), 34-43.
- Rigatelli, F. (2018). Siemens inaugura la prima mini smart city italiana. La riqualificazione del quartiere Adriano alle porte di Milano passa dal centro direzionale della multinazionale della tecnologia. *La Stampa*. Retrieved from <https://www.lastampa.it/2018/03/22/milano/siemens-inaugura-la-prima-mini-smart-city-italiana-lwL3CxyzEULBAgHU1kcsbM/pagina.html>
- Sanders, E. B. N. (1992). Converging perspectives: product development research for the 1990s. *Design management journal*, 3(4), 49-54.
- Sennett, R. (1992). *The uses of disorder: Personal identity and city life*. City??: WW Norton & Company.



Cumulus Conference  
Proceedings Series  
06/2019 Bogota

