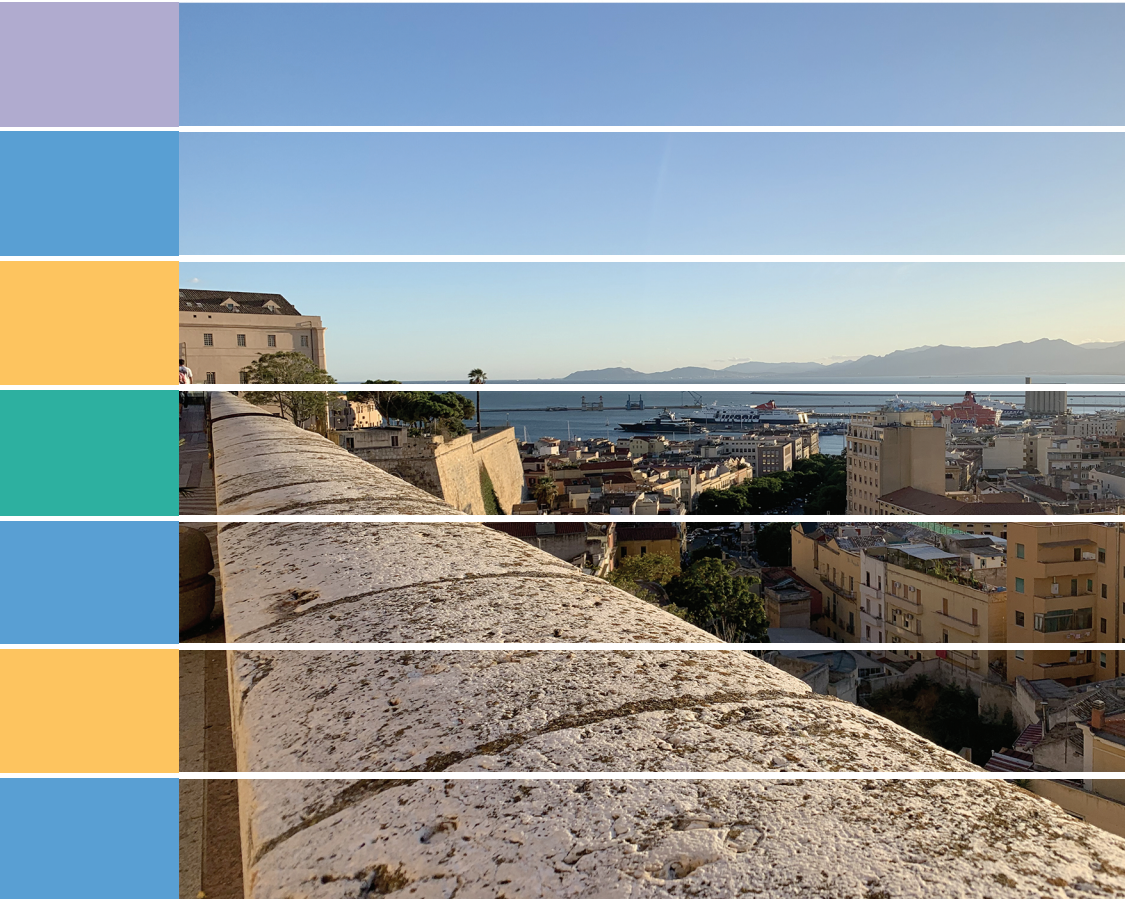


Carmela Gargiulo Corrado Zoppi
Editors

Planning, Nature and Ecosystem Services



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Smart City, Urban Planning for a Sustainable Future

5



Carmela Gargiulo Corrado Zoppi

Editors

Planning, Nature and Ecosystem Services

INPUT aCademy 2019

Conference proceedings

Federico II Open Access University Press



Planning, nature and ecosystem services / editors Carmela Gargiulo, Corrado Zoppi - Napoli: FedOAPress. 2019 - (Smart City, Urban Planning for a Sustainable Future. 5).

Web link:

<http://www.tema.unina.it/index.php/tema/Monographs>

ISBN: 978-88-6887-054-6

DOI: 10.6093/978-88-6887-054-6

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Università degli Studi di Napoli Federico II

Centro di Ateneo per le Biblioteche "Roberto Pettorino"

Piazza Bellini 59-60 - 80138 Napoli, Italy

<http://www.fedoapress.unina.it>

Published in Italy

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Cover and graphic project: TeMALab

This book collects the papers presented at INPUT aCA^demy 2019, a special edition of the INPUT Conference hosted by the Department of Civil and Environmental Engineering, and Architecture (DICAAR) of the University of Cagliari.

INPUT aCA^demy Conference will focus on contemporary planning issues with particular attention to ecosystem services, green and blue infrastructure and governance and management of Natura 2000 sites and coastal marine areas.

INPUT aCA^demy 2019 is organized within the GIREPAM Project (Integrated Management of Ecological Networks through Parks and Marine Areas), co-funded by the European Regional Development Fund (ERDF) in relation to the 2014-2020 Interreg Italy – France (Maritime) Programme.

INPUT aCA^demy 2019 is supported by Società Italiana degli Urbanisti (SIU, the Italian Society of Spatial Planners), Istituto Nazionale di Urbanistica (INU, the Italian National Institute of Urban Planning), UrbIng Ricerca Scientifica (the Association of Spatial Planning Scholars of the Italian Schools of Engineering) and Ordine degli Ingegneri di Cagliari (OIC, Professional Association of Engineers of Cagliari).

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This book is the most recent scientific contribution of the "Smart City, Urban Planning for a Sustainable Future" Book Series, dedicated to the collection of research e-books, published by FedOAPress - Federico II Open Access University Press. The volume contains the scientific contributions presented at the INPUT aCAdeMy 2019 Conference. In detail, this publication, including 92 papers grouped in 11 sessions, for a total of 1056 pages, has been edited by some members of the Editorial Staff of "TeMA Journal", here listed in alphabetical order:

- Rosaria Battarra;
- Gerardo Carpentieri;
- Federica Gaglione;
- Carmen Guida;
- Rosa Morosini;
- Floriana Zucaro.

The most heartfelt thanks go to these young and more experienced colleagues for the hard work done in these months. A final word of thanks goes to Professor Roberto Delle Donne, Director of the CAB - Center for Libraries "Roberto Pettorino" of the University of Naples Federico II, for his active availability and the constant support also shown in this last publication.

Rocco Papa

Editor of the Smart City, Urban Planning for a Sustainable Future" Book Series
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GEODESIGN FAST-WORKSHOPS EVIDENCES

ON FIELD APPLICATIONS OF COLLABORATIVE
DESIGN APPROACH FOR STRATEGIC PLANNING
AND URBAN RENOVATION

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How to cite item in APA format:

Scorza, F. (2019). Geodesign fast-workshops evidences. In C. Gargiulo & C. Zoppi (Eds.), *Planning, nature and ecosystem services* (pp. 443-452). Naples: FedOAPress. ISBN: 978-88-6887-054-6, doi: 10.6093/978-88-6887-054.6

ABSTRACT

The paper presents a critical overview of the main evidences deriving from the development of two GEODESIGN workshops on the same case study: urban regeneration programs in Gravina in Puglia. The field work experiences allowed to reinforce methodological awareness and its application with heterogeneous focus group. The methodological appraisal is mainly oriented to highlight positive evidences in workshop management. The case study is representative of disciplinary debate on Urban regeneration approach in fragile ancient-historic settlement and for the specific thematic focus (Systems) on which the territorial assessment process had been delivered (evaluation maps). Urban regeneration is a complex issue strongly characterized by case study structural features or bindings, actors and beneficiaries, promoters and owners. It is an effective interdisciplinary scope combining instances of architectural and technological disciplines but also social sciences and urban economy. We proposed such case study to two different focus group, whose participants were asked to negotiate strategic development scenarios starting from basic assumption and a thematic structure of context analysis. Geodesign meta-planning approach by C. Steinitz demonstrated its effectiveness as a tool to handle a "negotiation process" among different stakeholders for the achievement of a shared strategic scenario in a very short timeframe. Workshops were supported by GeodesignHub (an online platform by Geodesign Hub Pvt. Ltd., Dublin, Ireland), and were prepared according to Geodesign International Collaboration (IGC) standards.

KEYWORDS

Geodesign; Meta-planning; Strategic Design; Urban Regeneration

1 INTRODUCTION

At the end of the seventies, the “classical” period of the so-called systemic approach¹, relevant elements of dissatisfaction about the transition from territorial analysis to critical stage of urban and territorial design persisted.

Such transition remained predominantly linked to the optimization attempt connected to Operative Research (Friend & Jessop, 1969) and to the flourishing production of simulation models (cfr. Wilson, 2016).

According to a “new rationality in planning approach”, the rationality of decisions about citizens’ needs and aspirations and the use of common goods and non-renewable resources must be considered as a citizen’s right and so a prerequisite in the development of plan proposals. An approach whose structural methodological background (namely the “toolkit” (Las Casas & Scorza, 2016)) has to be focused on:

- collective learning processes: the awareness of the interaction of stakeholders and decision makers on a complex territorial system connected with relevant instances on social fabric, economy and environment;
- governance processes: that could be applied after the definition of objectives, means and activities, logical links between the achievement of the desired scenario and available means, an adequate system of indicators measuring effectiveness and efficacy.

Moreover the concept of sustainability has become a key theme of place/context based territorial development policies (Las Casas & Scorza, 2009) The “context” is identified not only with the natural or anthropized environment, but also with the system of public and private actors that will be involved in the transformations induced by the plan. Often, due to their different cultural background and their role in the decision-making process, they can have different views on priority development strategies. The core problem between territorial analysis (interpretation phase) and design is a problem of communication and shared understanding among heterogeneous actors. It may be faced – as sometimes solved - by effective collaboration between various parties involved in the design process (Ballal, 2015). Similar principles appear to be particularly relevant with regard to the innovations that the European Directive 42/2001/EC promoted in the process of drawing up the plan with the introduction of Strategic Environmental Assessment (SEA), but they are not always implemented satisfactorily in planning practices (COWI, 2009; Fisher, 2010).The methodological enrichment brought by the SEA to urban and territorial planning process is

¹ Among the authors Mac Loughlin (1969) and Ghadwick (1971).

very close to the concept of Geodesign, which is therefore able to provide a useful guide for a profitable innovation in practices (Campagna & Di Cesare, 2014). Recent developments in the disciplinary debate on urban and territorial planning - in the United States of America, but also in Europe and Asia - propose the concept of Geodesign as a possible methodological framework for the territorial project (Campagna et al. 2016; Steinitz, 2012). Such dissemination of the GEODESIGN approach had been traced in the framework of Geodesign International Collaboration: a spontaneous network of scholars and research institute oriented to reinforce and spread out potential application of geodesign methodologies in concrete case study applications.

The recent meeting in Reedland (CA) in Feb. 2019 signed milestone of such academic and practitioner community interested in GEODESIGN applications and advances. Geodesign can be defined as the process of integration of methods, techniques and tools of GEO territorial information sciences to support the design and planning of physical development DESIGN. It can be described as a multidisciplinary collaboration with direct interaction among design professionals, geographically oriented scientists, and the people of the place, using available information technologies (Nyerges et al., 2016).

Geodesign proposes an integrated collaborative and participatory approach starts from the conceptualization of the project and continues with analysis, simulation, development of alternatives, and evaluation of impacts and the choice (between the various phases). Central in Geodesign, is the role of methods and tools of geographic information sciences (Goodchild, 2010) which today (thanks to a great availability of data and processing services) allow the construction of dynamic cognitive frameworks constantly updated. The aim is therefore to explicate and strengthen the relationships between knowledge, decision and action in the project.

This paper, as a development of previous studies (Fiore et al., 2018b) aims at reporting evidences deriving from geodesign workshop's experiences delivered on the same case study area: Gravina in Puglia. In particular we refer to two workshops: the first was held in Gravina in 2018, the second was held in Matera in 2019. Both experiences can be defined as semi-simulated workshop: in fact, instead of decision-makers, young students and professionals was engaged in the workshop.

Participants were characterized by a strong technical background and a specific site knowledge. In the following sections the description of the case study areas is presented by the means of evaluation maps (systems land suitability elaboration concerning the local planning issues), the results of the workshops are synthetically summarized and final conclusions present success evidences of the implementation.

2 CASE STUDY AND EVALUATION MAPS

The Municipality of Gravina in Puglia is located in the Murgia area between Puglia and Basilicata, at the limit between the calcareous plateau of the Murge and the "Fossa Bradanica". It is therefore included in a territorial function system between Matera (European Capital of Culture 2019) and Bari, which is going through an intensive tourist development perspective.



Fig. 1 S. Maria Assunta Cathedral, Historic center view of Gravina in Puglia

The historical center is characterized by a vast beauty of the traditional urban environment, with partially restored historic buildings, and a settlement in a unique landscape scenery: the Gravina. Various forms of settlements along the slopes of the Gravina on the calcarenitic outcrops have developed over the centuries.



Fig. 2 Fondovito and Piaggio neighbourhood in Gravina in Puglia

These settlements, which use the terraces as well as natural and artificial cavities, are the result of a close union between the geomorphological conditions of the places and the economic and social needs of the populations.

The peculiar morphology of space has suggested the idea of recovery that takes shape through the principle of excavation and subtraction: ARCHITECTURE IN LEVING, consisting of digging and building in the same place, creating a sort of positive and negative: a city under the city. In fact, in ancient times, it was excavated in domestic quarries to use the material produced to build the above dwellings, such as the cave house, or cavati.

The historic center is therefore characterized by the presence of important neighborhoods that are in a state of neglect and degradation, with the presence of abandoned buildings that show structural weaknesses. These situations have caused over the years: depopulation, environmental degradation, the isolation of some areas and, at the same time, the inaccessibility to them.

The historic center has been the subject of urban regeneration in recent years, with specific interventions in three main areas of the historic center: on Via Giudice Montea – Cavati, along the monumental axis and in the Fondovito neighborhood.

According to GEODESIGN methodology, local context analysis were organized in 10 Systems. Each system represents a key layer we adopted to organize project knowledge. In the following Fig. 3 the 10 suitability maps (evaluation maps) are shown.

The basic planning assumption is related to three main current development issues for the “Gravina in Puglia” municipality:

- tourism development;
- protection and enhancement of cultural and environmental heritage;
- recovery of residency.

In facts, the municipality of “Gravina in Puglia”, through a process of urban regeneration, aims to improve the habitability and liveability of the historic centre with targeted actions in the field of mobility, green infrastructures, protection and enhancement of natural environment, social policies and housing.

The potential project categories discussed during the workshop mainly regard:

- accessibility and sustainable mobility (promoting pedestrian and excursion practicability) through the recovery of paths, historical and internal roads to the historical centre;
- increase of territorial security (urban resilience);
- defence and enhancement of historical, architectural and environmental heritage;
- redevelopment, re-use and establishment of new urban functions in public and private building stock;
- sustainable tourism (favouring the establishment of tourist, cultural, commercial and handicraft activities).

Evaluation Maps

10 Systems:

1. Green Infrastructure
2. Cultural Heritage
3. Road Transport
4. Active transport
5. Residential
6. Parking
7. Craft
8. Recreation
9. Commerce
10. Tourism

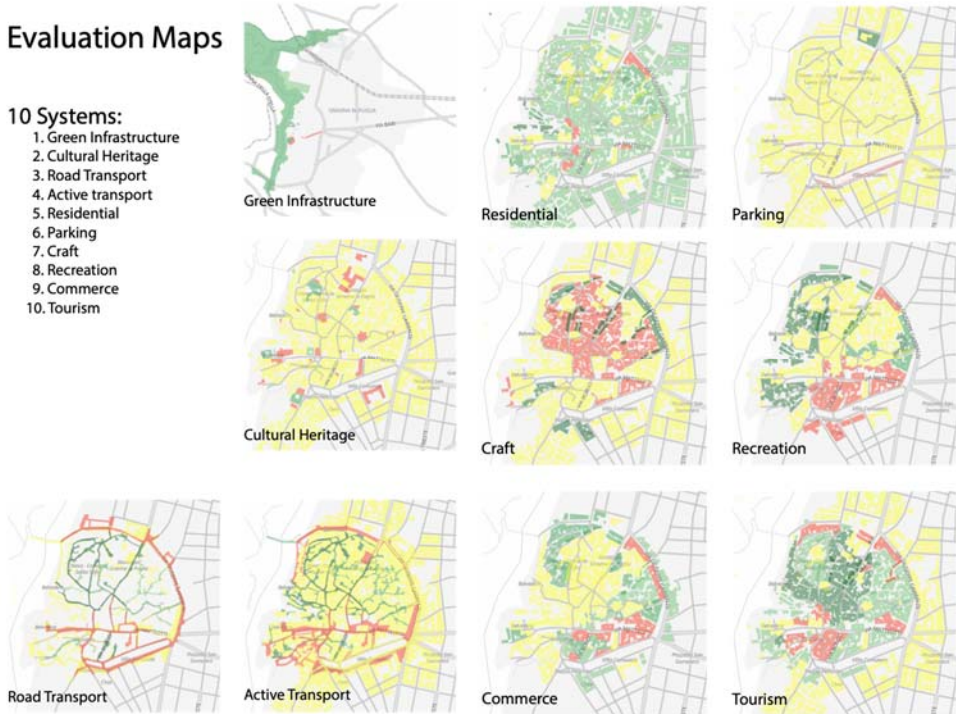


Fig. 3 Evaluation Maps on 10 Systems for Geodesign workshop

3 WORKSHOPS REPORTS AND FINAL REMARKS

The two workshops were started in different contexts: the first one, held in Gravina, had been developed in the research carried out by Pietro Fiore for the preparation of his Master thesis, the second was organized by Prof. Piergiuseppe Pontrandolfi in Matera Campus as a seminar for architecture students. Both were conducted in a very short time frame: about 6 hours. Such organization depended on specific instances of participants (difficulties in attending 2 days agenda) or deriving from the framework structure of organization (i.e. the university seminar has to be schedule in 1 day at least).

In the following list, the main positive aspects characterizing the two experiences are quoted. They are key points deriving from the methodological framework of GEODESIGN and from the perception of participants' satisfaction/engagement in active participation in the workshop:

- GEODESIGN as a method (and as a process) works! In fact, according to very synthetic presentation and introduction on the methodological framework and case study assumptions given at the very beginning of the activity, participants mainly understood

- the procedure and handle the tools proposed by conductor during workshop implementation;
- GEODESIGN HUB, as a fundamental ICT tool, works! The success of the process depends on the easy-to-use feature of Geodesign Hub platform. It is an online framework, provided by H. Ballal (Ballal, 2015), fully oriented to procedural implementation of Geodesign Workshop. Each participant registered an individual account managing his own interaction in the process, and progressively groups of users are managed through the platform and the final stage of negotiation was supported by;
 - Short time frame is nice but The workshop delivered in a very short time frame demonstrated that the strongest and effective features of GEODESIGN as a method. In fact, 1 conductor is sufficiently able to handle all phases of the workshop in a framework of participants enough committed with the general scope of the territorial application. On the contrary, during field activities, it becomes more and more important to dedicate time on the explanation of local contexts analysis. Even if evaluation maps represents an understandable way of managing synthetic and thematic elaboration for the design phase, participants expressed the willingness to go in deep and to understand more about those analytical processes and assumptions which allowed to deliver such suitability maps.

The following picture represents in a schematic way the workshop results. More than to explore details of designs selected/negotiated by the groups of participants, it was useful to understand how, starting from blank page the workshop, in almost 6 hours, participants delivered a synthetic strategic development scenario, integrating several domains of interventions (the 10 systems), operating in an interaction environment basically focused in the identification and discussion of specific "designs". The territorial dimension is a fundamental feature for each design: you have to draw it on the map. This represents a critical stage of the conceptual elaboration which drastically simplifies the proposal and the comparison between competitive ones. In fact, the participant in order to provide a potential solution to a specific need of the context, he has to produce not a generic narrative (potentially vague) of an intervention category, but a place-based intervention. This approach allow the benchmark with other proposal and at least facilitates the capacity of participants to agree on a common set of designs to be included in their shared scenario.

The research development looks at reinforcing application structure of the methodology over real decision-making process concerning territorial transformation. A specific feature of the contribution that the LISUT group intends to develop in the wider framework of Geodesign International Collaboration is to combine (at least integrate) GEODESIGN with Logical Framework Approach methodology. The second represent a rational structure in order to

identify and organize in a cause-effect relation the territorial problems at the basis of a planning activities, producing synthetic tools for the strategic program structure identification and monitoring. GEODESIGN represents the effective way to manage interactions in decision making process on a collaborative and inclusive participatory structure. Combination of such approaches promises to be effective with potentials to be applied extensive as a fundamental component of the planning toolkit.

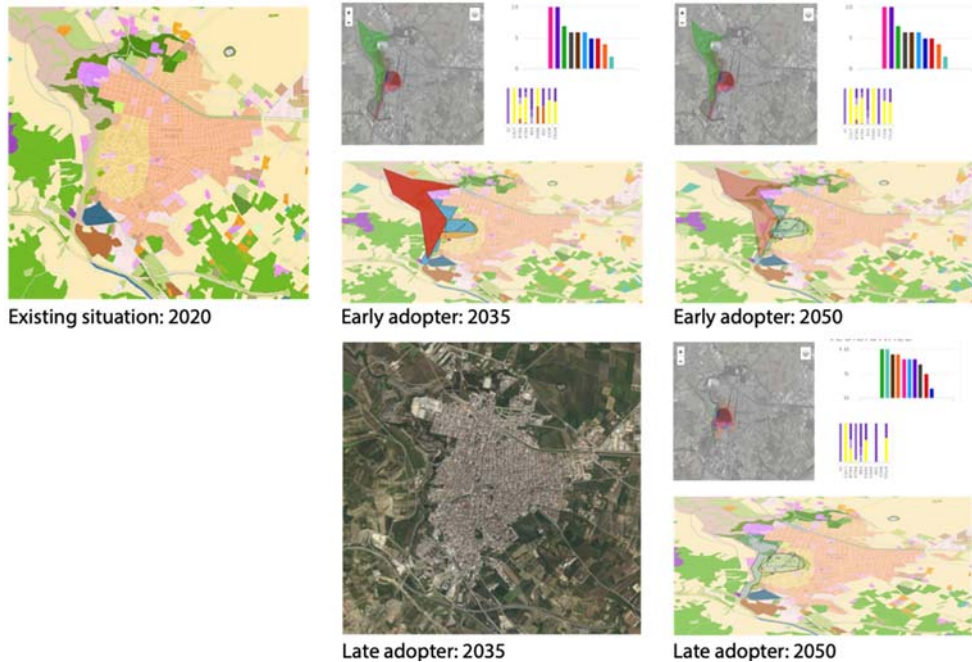


Fig. 4 Strategic design delivered in the Geodesign workshop in Gravina in Puglia

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ISBN:978-88-6887-054-6

DOI:10.6093/978-88-6887-054-6