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Carmine Gambardella

XII International Forum

Le Vie dei Mercanti

BEST PRACTICE IN HERITAGE CONSERVATION MANAGEMENT

FROM THE WORLD TO POMPEII

La scuola di Pitagora editrice

Fabbrica della Conoscenza numero 46
Collana fondata e diretta da Carmine Gambardella

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Le vie dei Mercanti _ XII Forum Internazionale di Studi

Carmine GAMBARDELLA

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Carmine Gambardella (a cura di)

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XII Forum Internazionale di Studi

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Best practices in heritage conservation and management From the world to Pompeii

Le vie dei Mercanti
XII Forum Internazionale di Studi

Aversa | Capri
June 12th- 14th, 2014

Conference topics:

Heritage

Tangible and intangible dimensions, History, Culture, Collective Identity, Memory, Documentation, Management, Communication for Cultural Heritage.

Architecture

Surveying, Representation, Modelling, Data Integration, Technology Platforms, Analysis, Diagnosis and Monitoring Techniques, Conservation, Restoration, Protection, Safety, Resilience, Transformation Projects, Technologies, Materials.

Landscape

Cultural landscapes, Territorial Surveying, Landscape Projects, Environmental Monitoring, Physical Parameters, Government of the Territory, Sustainable Development, Social Sustainability, Economic Sustainability.

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Peer review

Scholars has been invited to submit researches on theoretical and methodological aspects related to Architecture, Industrial Design and Landscape, and show real applications and experiences carried out on this themes.
Based on blind peer review, abstracts has been accepted, conditionally accepted, or rejected.
Authors of accepted and conditionally accepted papers has been invited to submit full papers. These has been again peer-reviewed and selected for the oral session and publication, or only for the publication in the conference proceedings.

Conference report

238 abstracts received from:

Australia,
Brazil,
China, Colombia, Cuba, Cyprus,
Denmark,
Egypt,
France,
Greece,
Indonesia, Italy,
Japan,
Madagascar, Malta, México,
Portugal,
Russia,
Saudi Arabia, Slovakia, Spain, Sweden,
Turkey,
United Kingdom, U.S.A,
Yemen.

About 400 authors involved.

196 papers published.

Preface

The XII International Forum Le Vie dei Mercanti has the aim of promoting a debate on local and international experiences relating to the themes of the conservation and management of cultural, architectural, archaeological, landscape and environmental heritages. This debate is particularly relevant in Italy, with it not only being responsible to the world for housing the largest number of UNESCO sites but also having a natural and landscape heritage of great variety and beauty in a region characterised by an intrinsic geological fragility.
The management of this vast heritage requires both a serious planning of the interventions as well as adequate funding. The same goes for the protection of the landscape, which in the past was systematically devastated within a myopic perspective that did not take into account the enormous amount of damage caused by wild speculation and hydrogeological instability.
Furthermore natural disasters, such as earthquakes, have led to the transformation and loss of environments which reflect local identity no less than the cultural heritage, in addition to economic damage and in terms of human lives.
In order to conserve and manage the heritage, it is necessary to adopt an integrated and resilient approach in which different skills contribute to the development of improvement and restoration projects, carried out through knowledge, sharing of decisions and proactive sharing, taking into account the social and environmental sustainability of interventions that should characterise the design method in all its aspects.
The key issue is the exchange of ideas so as to give life to a *technological humanism*, understood as the union between the cultural vitality that has characterized humanism and the Renaissance, producing excellent results in all fields of knowledge, and the possibilities currently offered by technological innovation to create platforms in order to support this knowledge. Thus, Pompeii, the most famous archaeological site in the world, is taken as the prime example of the need to adopt a virtuous cycle of conservation and management, supported by the dialogue between the different skills that interact by sharing the same technological platform.
The international debate can be an opportunity to share prime examples of the conservation, management and development of the archaeological, architectural, landscape and environmental heritage through the integration of ideas and experiences of specialists working in different disciplines as well as geographical and cultural contexts.
The conference is open to multidisciplinary experiences on one or more of the proposed themes. Scholars are invited to present research on either the theoretical and methodological aspects or concrete applications carried out on these issues.

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Best practice in heritage conservation and management
From the world to Pompeii

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[…]
Non vivere sulla terra come un inquilino
O come un villeggiante stagionale.
Ricorda:
in questo mondo devi vivere saldo,
vivere
come nella casa paterna.
Credi al grano, alla terra, al mare
ma prima di tutto – all'uomo.
Ama la nuvola, il libro, la macchina,
ma prima di tutto – l'uomo.
Senti in fondo al tuo cuore
il dolore del ramo che secca,
della stella che si spegne,
della bestia ferita,
ma prima di tutto – il dolore dell'uomo.
Godi di tutti i beni terrestri,
del sole, della pioggia e della neve,
dell'inverno e dell'estate,
del buio e della luce,
ma prima di tutto godi dell'uomo.
[…]

[…]
Don't live in the world as if you were renting
or here only for the summer,
but act as if it was your father's house…
Believe in seeds, earth, and the sea,
but people above all.
Love clouds, machines, and books,
but people above all.
Grieve
for the withering branch,
the dying star,
and the hurt animal,
but feel for people above all.
Rejoice in all the earth's blessings –
darkness and light,
the four seasons,
but people above all.
[…]

NAZIM HIKMET

From: *Last Letter to My Son*
Moscow, 1955
Translated by Randy Blasing and Mutlu Konuk

With Best Practice in HERITAGE, the theme of this year's International Forum "Le Vie dei Mercanti", I would like to return to the centre of the issues of Man, hence the reference to the poem by Nazim Hikmet, who, in his interrelations with others and the responsibility that he assumes in academic, cultural and participatory contexts as well as in the governance of public affairs, has carried out or is planning the conservation, protection and regeneration of cultural heritage.
In order to conserve and manage the patrimony, an integrated approach is necessary in which different and resilient skills contribute to the development of the requalification and restoration projects, carried out by means of knowledge, sharing of decisions and proactive sharing, taking into account the social and environmental sustainability of interventions that should characterize the design method in all its aspects.
The international debate, in fact, is an opportunity to share good examples of conservation, management and enhancement of the archaeological heritage, architectural, landscape and environment through the integration of ideas and experience of specialists working in different disciplines and different geographical cultural contexts.
The key issue is the exchange of ideas and experiences in order to create a technological humanism, understood as a union between the cultural vitality that has characterized humanism and the Renaissance, producing the highest results in all fields of knowledge, and the possibilities currently offered by technological innovation to create platforms in support of knowledge.
Nevertheless, we must act with due care in the use of technology, asserting a predictory record. It is worth thinking of Leonardo, who with his will power "measured sand grain by grain just as mathematicians do", had already laid the conceptual foundations of digital knowledge several centuries earlier. The "grain / pixel" is the carrier/code, and therefore multidimensional, capable of integrating knowledge and skills in relation to the measurement and representation of cultural heritage objects in different scales from the city to the territory of the landscape, the code with the potential to interact and integrate data and information capable of providing results that are always implemented in the pipeline that Leonardo himself refers to as "the endless reasons that are by nature" and which wants to strive to give useful answers to the progress and development of society.
That said, digital technology allows us to have dynamic and biological knowledge. Dynamic since it is possible to discretize, measure and continuously monitor the inherited patrimony in order to re- establish it through knowledge, as biological knowledge and skills acting homeostatically, regenerating, through remedial agents of the genetic heritage in the same way as of stem cells on the roots, identity, contamination, historical social urban fabric, the territorial infrastructures, the environment, the production of art work.
Increasingly, indicating that the fate of the city, the territory is linked to the ability of the people to create Knowledge Factories, to transform its own resources, used as raw materials, with a production cycle that is only valid when the human capital is high, I have proposed a synergetic alliance between the University, Business , Public Administration and institutions bearers of great ethical and social values to make a competitive territory.
Some examples that we have analyzed as an interdisciplinary research group are paradigmatic and among them, it is worth mentioning, Pompeii, the vast territory of the Province of Caserta with an extra extension falling within the boundaries of the Province of Naples which borders the Terra dei Fuochi, the design of anaerobic biodigester of Santa Maria Capua Vetere and the Bourbon Palace of Carditello.
More recently, starting from Pompeii, we have surveyed with sensors such as aviation transported Lidar, Hyperspectral, Thermal not only the area of the excavation site but the entire City.
The complex representation activities of the sensors mounted on aircraft of the Guardia di Finanza and the cartographic data processed in the laboratory are merged into a "data cloud and monitoring knowledge" that with the innovative mobile mapping technologies of Topcon allowed us to compare surveys and aerial monitoring with terrestrial data**.** (Fig. 1)

Fig. 1: Pompeii Data cloud and monitoring knowledge.

Even for a larger-scale survey and monitoring with an entire bounded territory such as Terra dei Fuochi, suffering from serious pollution, we used the above systems to acquire knowledge aimed at the regeneration and protection of the landscape, the environment and products of the food chain and biological waste disposal system that generates energy and, therefore, excludes the pollution that comes from the combustion of other types of plants. (Figg. 2-5)

The anaerobic bio-digester is also an opportunity to redesign the relationship between the City and surrounding territory up to assuming a wider project involving the integrated coexistence of cultural, social and economic functions in a unitary model of sustainable development**.**

(Figg. 6-9)

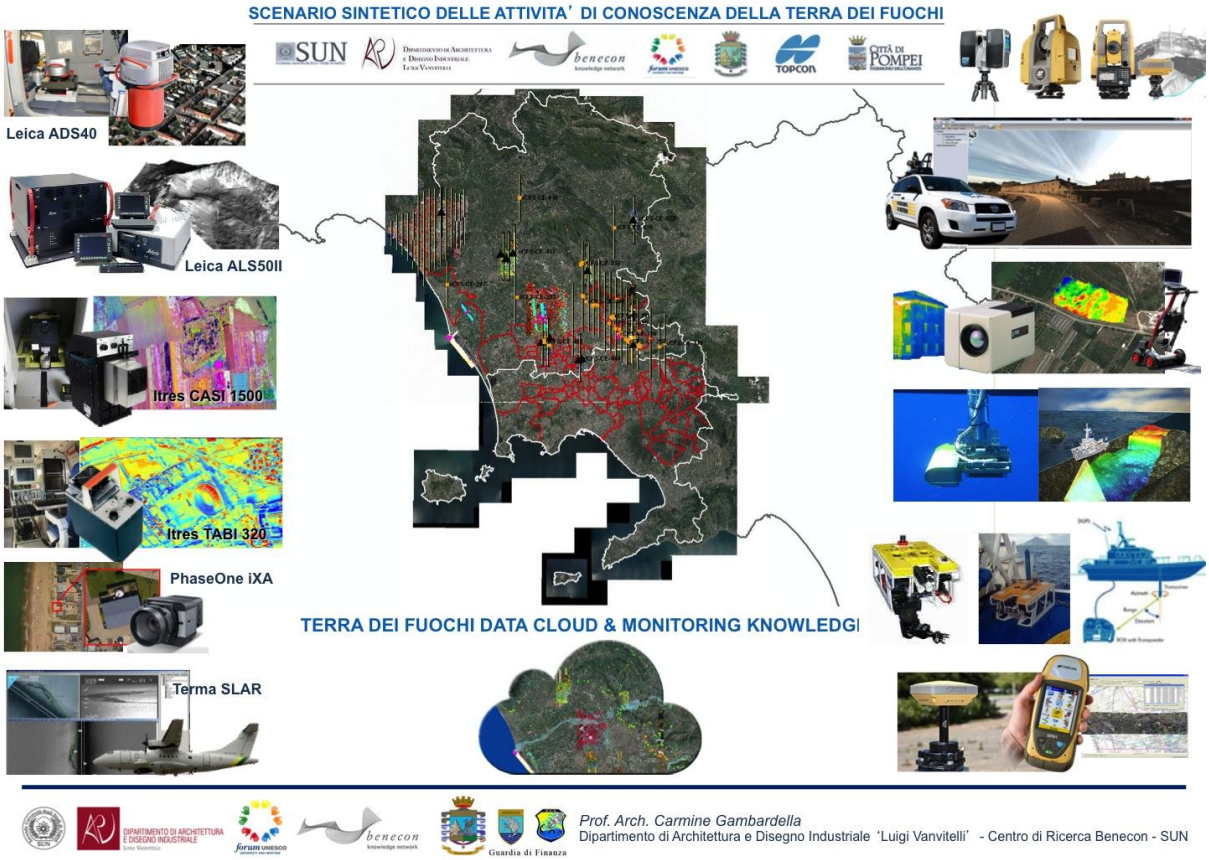


Fig. 2: Terra dei Fuochi. Land Data Cloud and Monitoring Knowledge

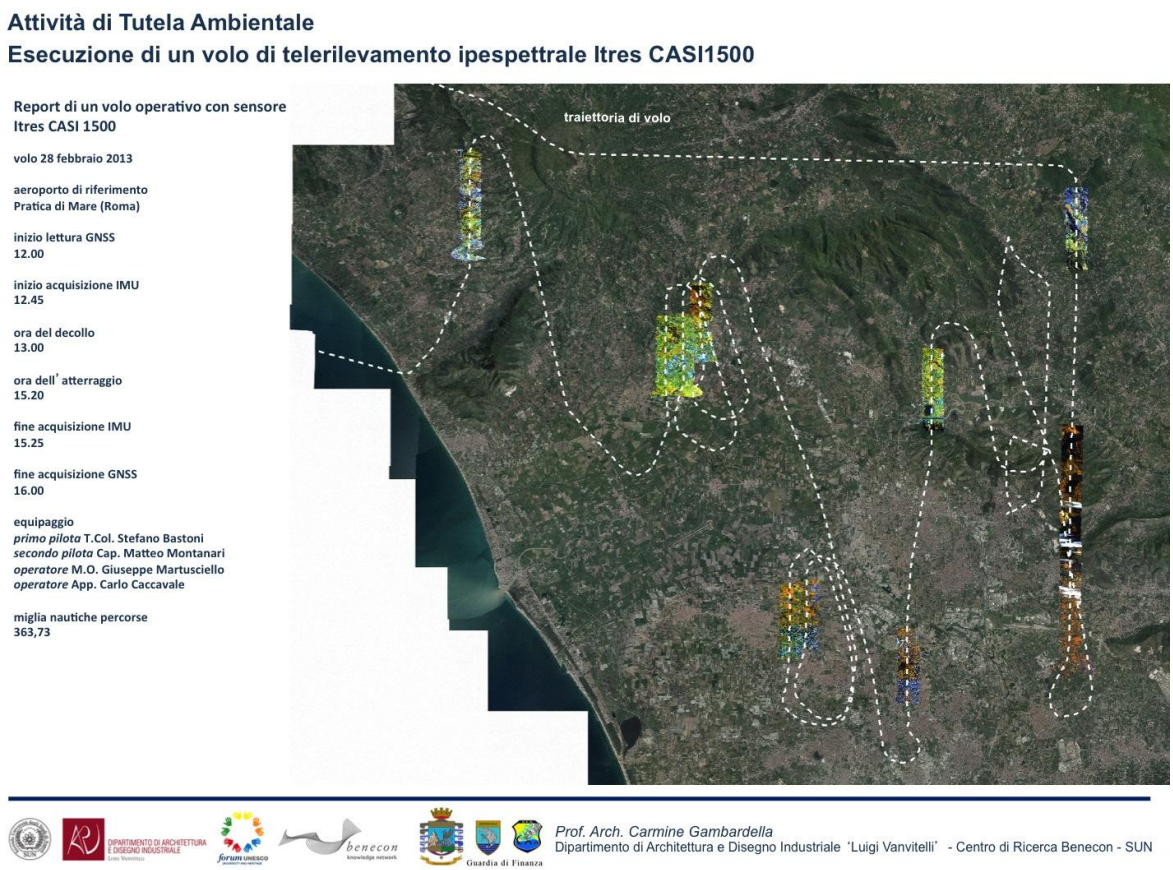


Fig. 3: Terra dei Fuochi: Hyperspectral remote sensing survey with ITRES CASI 1500 Sensor

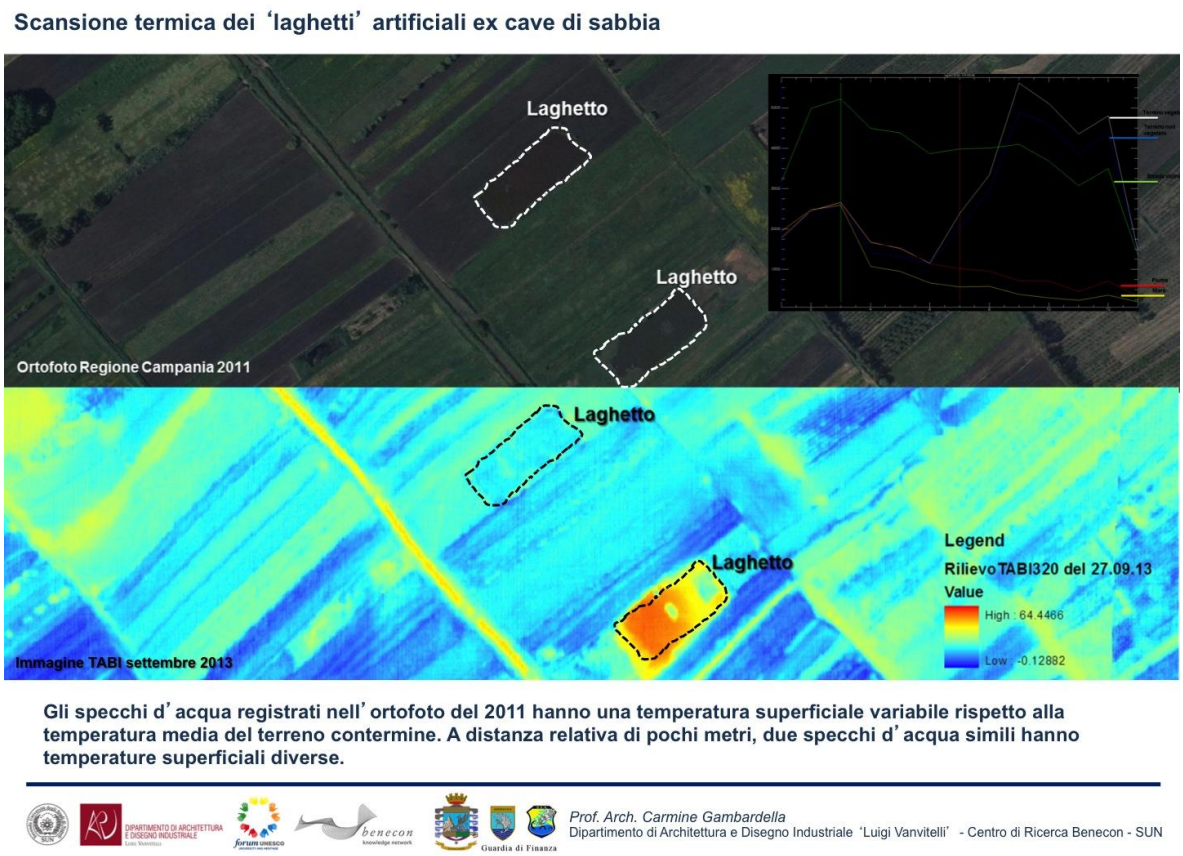


Fig. 4: Terra dei Fuochi. Thermal map of a sand quarry.

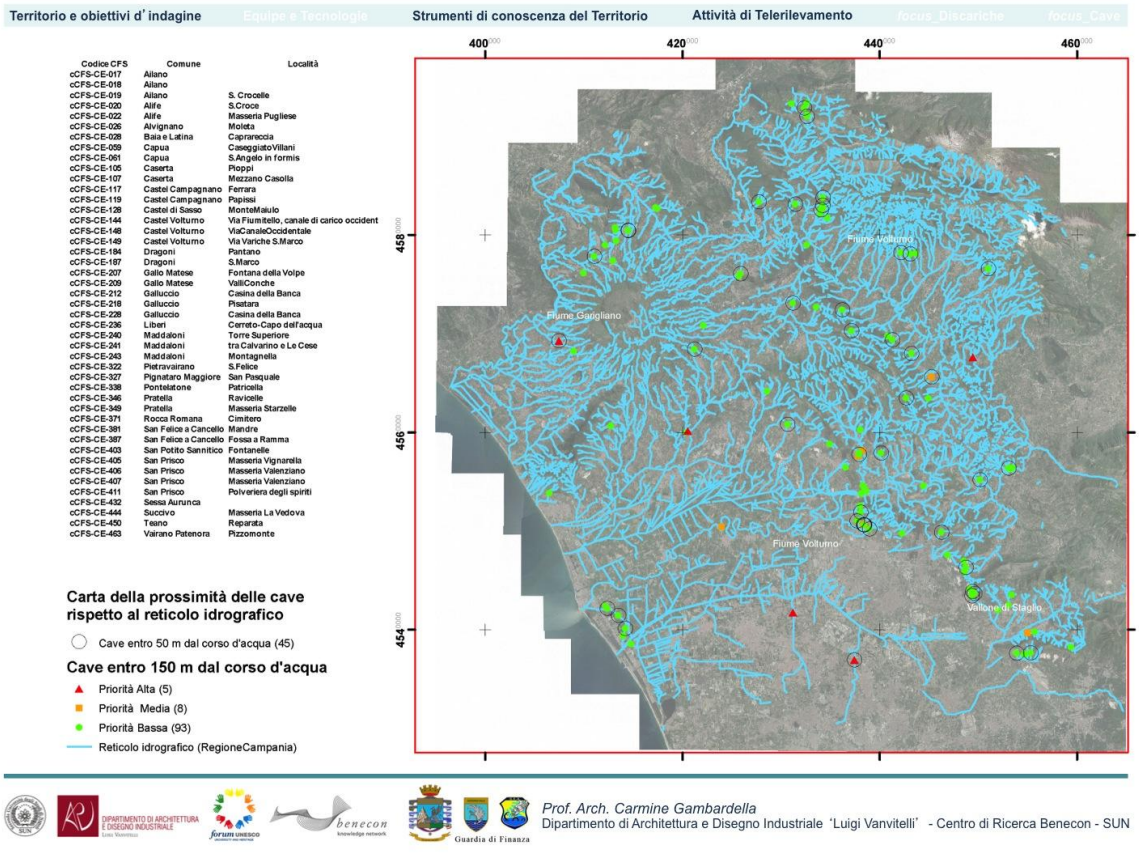


Fig. 5: Terra dei Fuochi. Geographic Information System. Waterways and quarries layers

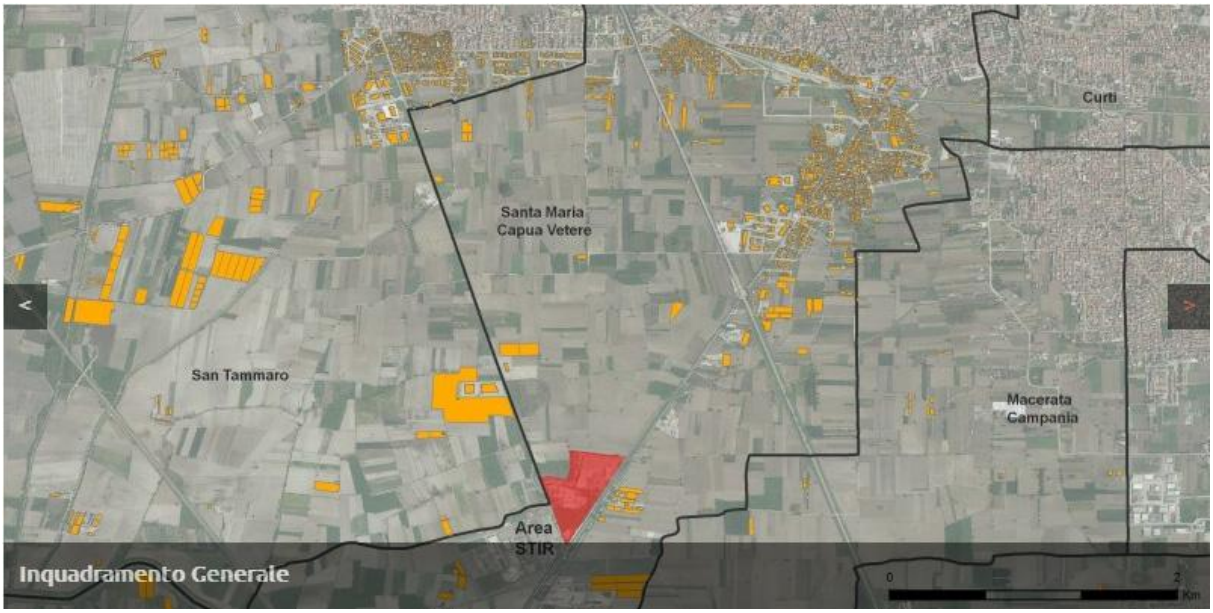


Fig. 6: Plant Anaerobic Digestion in Santa Maria Capua Vetere. Land overview.

Fig. 7: Plant Anaerobic Digestion in Santa Maria Capua Vetere. Period of construction of buildings.

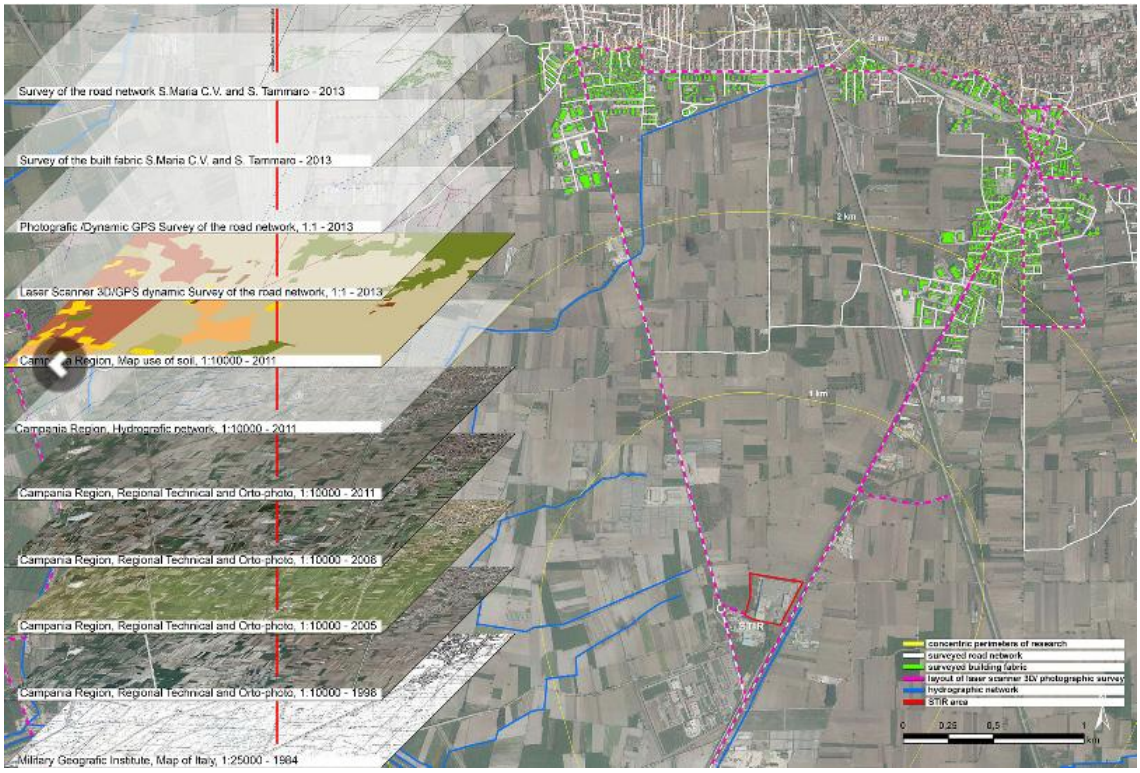


Fig. 8: Plant Anaerobic Digestion in Santa Maria Capua Vetere. Knowledge layers.

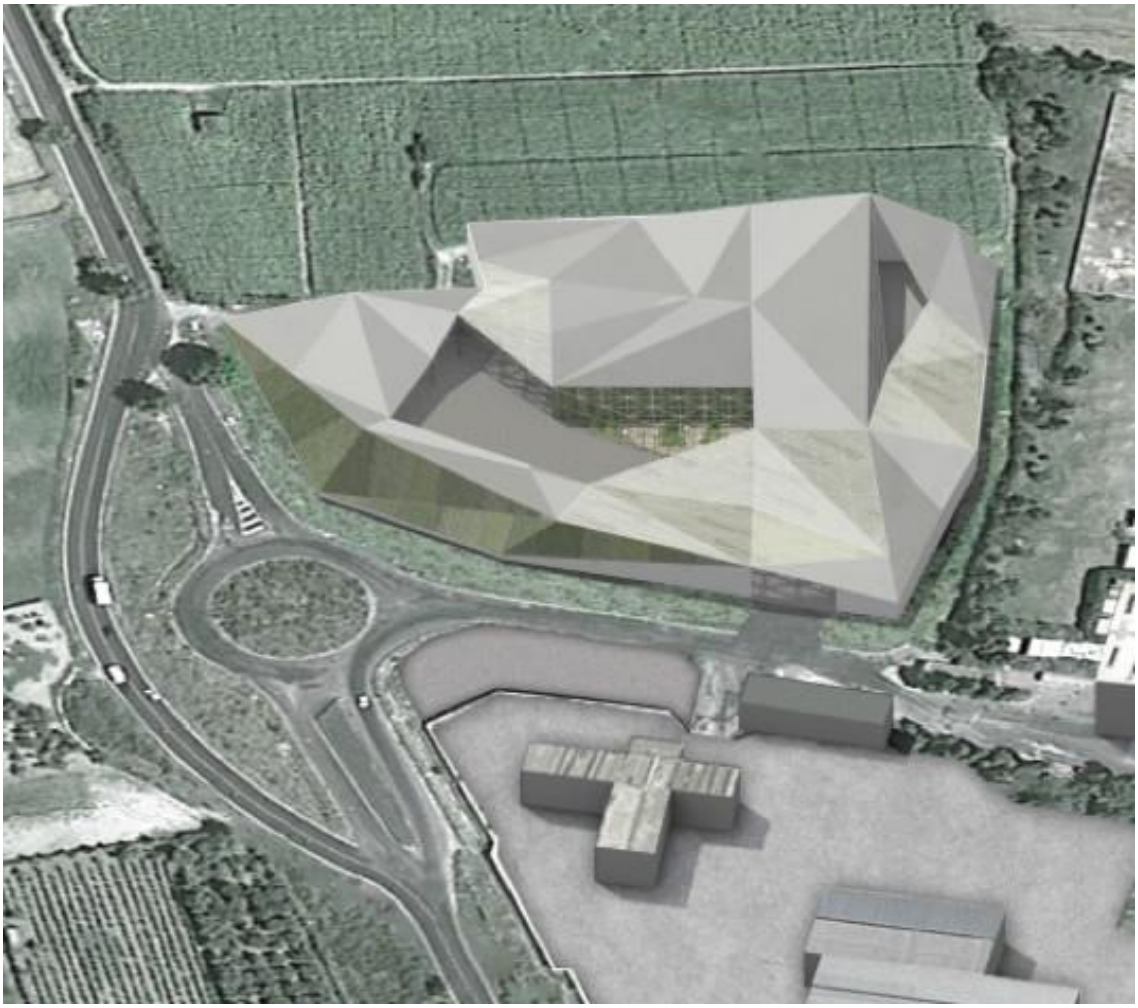


Fig. 9: Plant Anaerobic Digestion in Santa Maria Capua Vetere. Project.

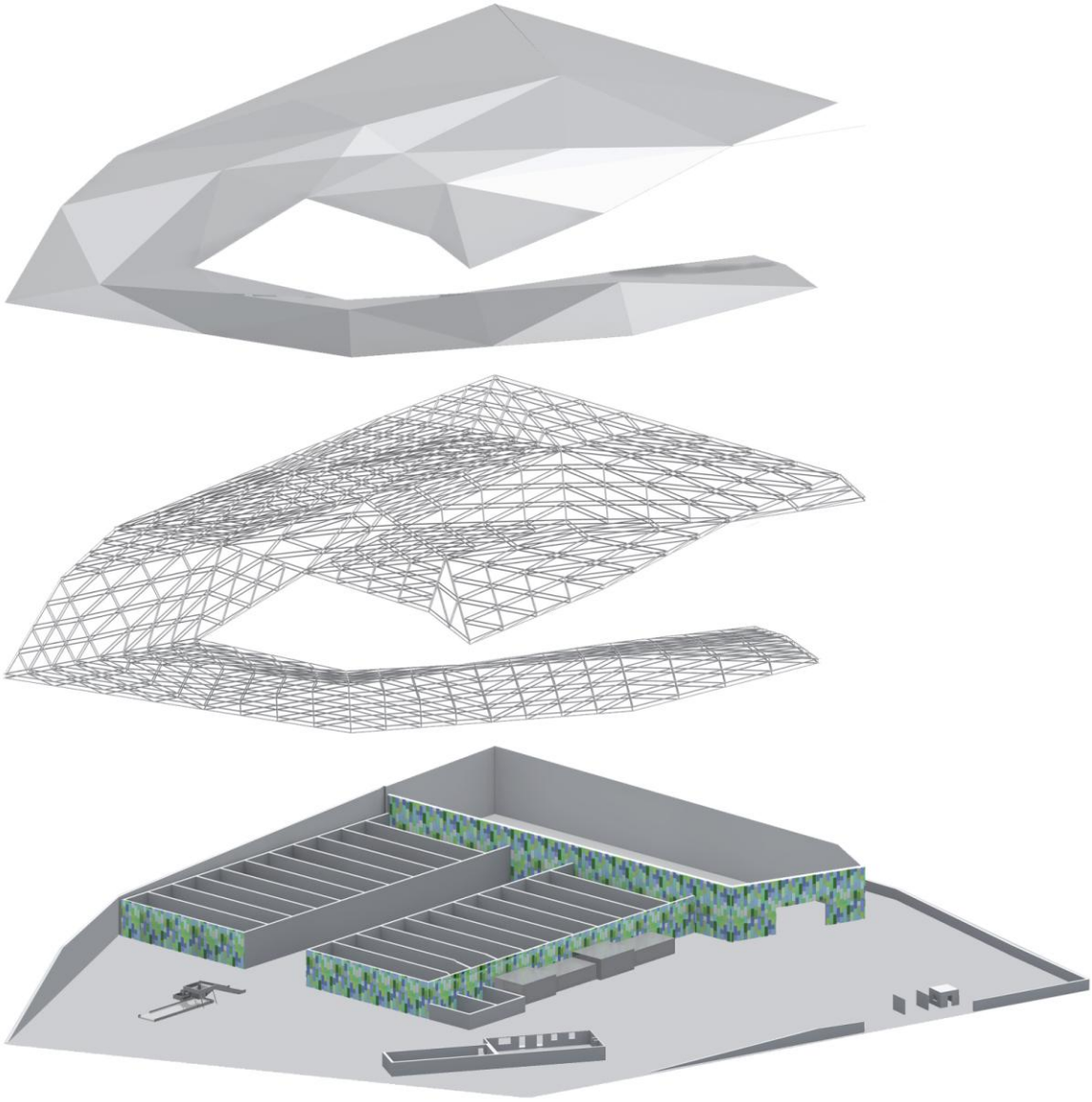
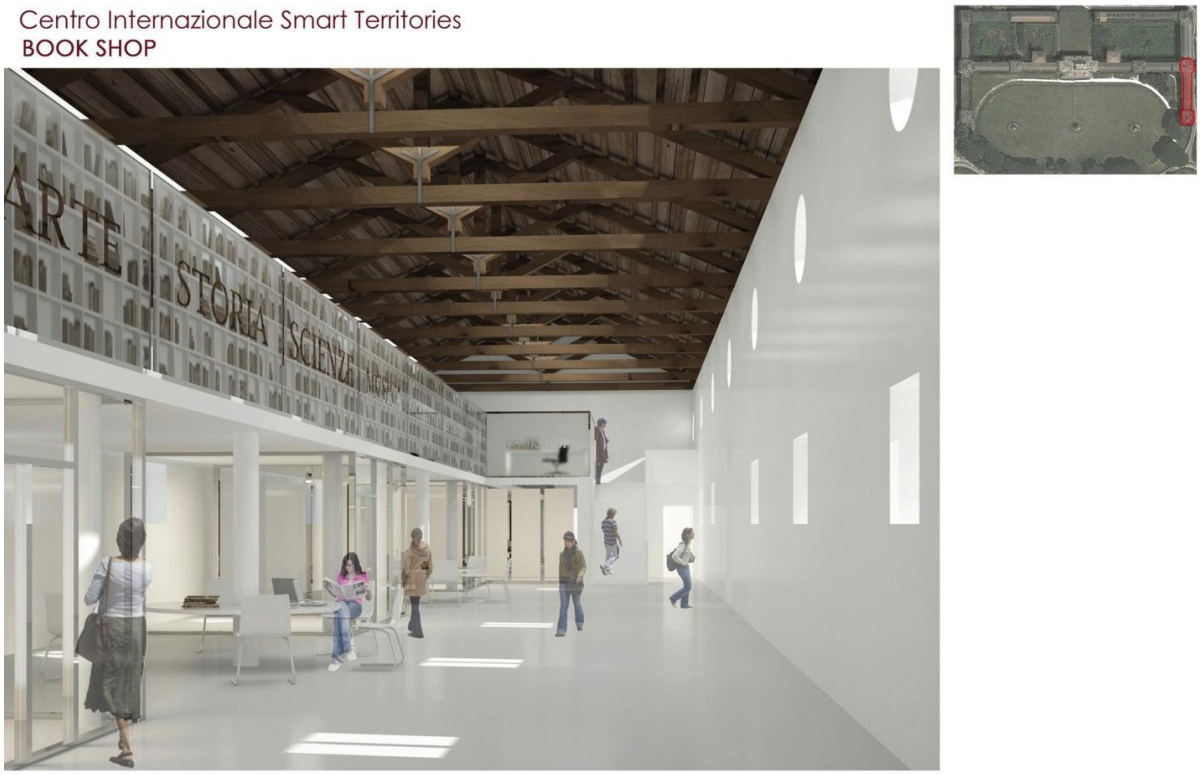


Fig. 10: Plant Anaerobic Digestion in Santa Maria Capua Vetere. Project.

In addition, on a monumental scale, with the Royal Palace of Carditello , we assumed not only the restoration of the architectural complex itself but also the regeneration of the foundational functions of the Factory, endorsing the current needs of the community, the functions promoted by the Bourbon project to create innovation and development in agriculture.
(Figg. 11-14)

Figg. 11-12: Carditello Royal Palace: rehabilitation project.



Figg. 13-14: Carditello Royal Palace: rehabilitation project.

In conclusion, taking the initial assumption on the primacy of thought, it is worth highlighting that technology allows thought to enter the body of Architecture and the Territory, to control the phenomena of change in progress, to capitalize integrated diachronic and synchronic information and data to provide a material that is not addressed by a reductive broad vision, full, but that allows to analyze the mind of Man from the building blocks that make up the matter in both its generative factors as well as the processes of change that are realized over time.
Therefore, I am convinced that by engaging in a process aimed at increasing the scientific welding between humanism and technology, we will achieve the expected results for a “best practice in HERITAGE” and good governance for the protection and preservation of the heritage inherited.

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2003-2009 - Director of Department of the Culture of Design Second University of Naples.
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