

## Research Group

### LANDesign<sup>R</sup> | Local Area Network Design

**Reference year:**

2025

**Scientific Coordinator:**

MARTUSCIELLO Sabina/ Associate Professor/ Dipartimento di Architettura e Disegno Industriale / Università degli Studi della Campania “Luigi Vanvitelli”

**Group members:**

BRANCACCIO Pasquale/Direttore INCUBATORE CAMPANO  
CAVANNA Laura/ Professor Department of Art and Design THE HANG SENG UNIVERSITY OF HONG KONG  
HUI CHEUK KUEN Desmond/ Head Department of Art and Design THE HANG SENG UNIVERSITY OF HONG KONG  
GAMBARDELLA Carmine/CEO BENECON SCaRL UNESCO CHAIR  
GAROFALO Maria Carmela/PhD/ Dipartimento di Architettura e Disegno Industriale / Università degli Studi della Campania “Luigi Vanvitelli”  
MARTUSCIELLO Sabina/ Associate Professor /DESIGN/ Dipartimento di Architettura e Disegno Industriale / Università degli Studi della Campania “Luigi Vanvitelli”  
MATRICANO Diego/ Associate Professor/Università degli Studi della Campania “Luigi Vanvitelli”  
MONGILLO VERONICA/ Phd in Design for innovation  
MUZZILLO Francesca/Full professor/ Dipartimento di Lettere e Beni culturali/ Università degli Studi della Campania “Luigi Vanvitelli”  
PRISCO Lucio Junior/Phd in Design for innovation/ Università degli Studi della Campania “Luigi Vanvitelli”  
RUFINO Annamaria/Full professor/Università degli Studi della Campania “Luigi Vanvitelli”  
RUTIGLIANO Flora Angela/ Full professor/ Università degli Studi della Campania “Luigi Vanvitelli”  
SERPIERI Roberto/ Researcher/Dipartimento di Architettura e Disegno Industriale / Università degli Studi della Campania “Luigi Vanvitelli”

**Description of research lines:**

The focus of the Research Group is educo/produco: e-duco (e-ducere, raise, feed, feed, pull out) and pro-duco (promote, generate, implement) actions for the protection and care of the identity of places and the well-being of people.

The actions verify 6 requirements, 3F (form, function, feasibility) + 3E (ecology, economy, empathy): Form, external connotation, result of a clear and conscious design evolution; Function, appropriate use of the product in the man/environment relationship; Feasibility, analysis of the structure necessary and sufficient for the conformation of the product; Economy, from *oeconomia*

as the rules of the home/dwelling, also with respect to the costs-benefits of the product; Ecology, benevolent relationships between man and the environment determined by the use of the product; Empathy, intense affective reaction.

The LANDesign method has therefore structured the virtuous supply chain [University + School + Families + Bodies + Companies] to co-design processes, products, services with ethical and aesthetic value.

The macro-areas of scientific activity are:

#### **-LANDesign for the care of the common home**

Recovery of outdoor areas abandoned to neglect converted into urban gardens or agricultural gardens located in school facilities, to spread the culture of the territory, its regeneration and its traditions.

From 2010 to 2020 the following results were produced: 300,000 square meters recovered in the 560 schools of Campania of every order and degree involved in the Project; 2500 university students of the Department of Architecture and Industrial Design UNICAMPANIA tutors in schools; 60,000 pupils; 60,000 households; 850 social design artifacts made by Design students and school students as co-designers and future users.

#### **-ALI-MENT-AZIONE**

Research aimed at the breakdown of the three fundamental ingredients of the nourishment chain: ALI-immaterial creative design component, associated with the MIND that with a multidisciplinary approach elaborates and structure products / services conforming an ACTION of Pharma Design and Food Design.

#### **-DIAETA MEDITERRANEAN**

understanding expanding the meaning of the word Diet in Diaeta: space of the Roman domus intended for welcome, relationships, sharing that anticipates the rite of food, structuring a permanent dialogue on the subject with young graduates, university students, schools, institutions, municipalities, consortia, companies of the green economy and tourism, the agri-food and pharmaceutical sector;

#### **-MEDITERRANEAN HABITUS**

Research understood in the expanded sense of the Latin term habitus as mental habit, habit, as a space that is inhabited, as a dress that is worn to educate through products and services on the theme of sustainability.

#### **-POTDESIGN**

The Plan includes training activities aimed at directing school students to university studies, through workshops "for the recognition of skills and the development of vocations" and has been drawn up thanks to the consolidated experience already gained in this regard for over a decade with the LANDesign Project®.

The University of Campania Luigi Vanvitelli is the leader of the network formed by all Italian universities with CCdSS active in class L4, 11 Universities are in the Partnership Agreement, another 3 are in joint scientific actions.

As a Lead Project, POTDESIGN's Orientation and Tutoring activities also provide for coordination with the other POT and PLS of the University.

\_\_Partner organizations and institutions:

University of Florence  
Polytechnic University of Turin  
University of Palermo  
University of Camerino  
University "G. d'Annunzio" Chieti-Pescara  
University of Perugia  
University of Rome La Sapienza  
University of Genoa  
Polytechnic University of Bari  
Alma Mater Studiorum University of Bologna  
University of Ferrara

### **-PROJECT AND CONSTRUCTION SCIENCE**

Educating to applying a scientific-critical approach to the solution of design problems and construction problems, nurturing the students' ability to sustainably combine the intersubjective scientific method, aimed at respecting the laws of existing physical reality, with the dichotomous need to modify the existing reality by fulfilling the metatheoretical motivations of the Project thus catalyzing the dynamics of personal and transpersonal creative expression of the students, and of the communities and territories concerned.

### **Participation in research projects during the last three years:**

PLS Mathematics  
PLS Physics  
PLS Statistics  
PLS Environmental Sciences  
PLS Biotechnology and Bio  
POT Design  
POT Engineering  
POT Jurisprudence  
POT Letters  
POT Psychology  
POT Economy  
REST RESilienza delle STrutture/DADI  
Gemme e Gioielli: Storia e Design/DADI  
BENECON SCaRL CATTEDRA UNESCO

### **Participation in research projects:**

#### **2024**

**Project title:** Comitato Capri Capitale dell'Impero – Celebrazione dei Duemila anni dal trasferimento di Tiberio

**Call title:** Contributi in materia di comitati nazionali ed edizioni nazionali nuova istituzione e rifinanziamento

**Scientific coordinator:** MARTUSCIELLO Sabina, SERPIERI R.

**Abstract:**

The Committee intends to celebrate the two-thousandth anniversary of the transfer in 26 A.D. of Tiberius to the island of Capri with the Praetorian Guard and the Chancellery, to disseminate knowledge of the archaeological, naturalistic and geological heritage of Capri, taking this thematic cue to propose retrospective analyses and perspectives on anthropic and anthropogenic transformations of the Campania Territory, urging a catalysis of interdisciplinary paths of scientific investigation aimed at a comprehensive scientific reflection on current problems – not only confined to Capri – originated by the limits to anthropic development, in search for possible solutions to present emergencies.

**Involved persons:** MARTUSCIELLO S., SERPIERI R., MUZZILLO F., RUFINO A., P., MONGILLO V., PRISCO L.J.

\_\_ **Project title:** TECNE Textile upcycling

**Call title:** Bando Economia Circolare Fondazione con il Sud

**Scientific coordinator:** MARTUSCIELLO Sabina

**Abstract:**

The focus of the research is education for sustainable development: TECNE Gruppo Autostrade per l'Italia S.p.A invites us to give new life to a range of used work clothing through eco-design and upcycling (extension of the life cycle of product). Every year, over 1000 textile Personal Protective Equipment (PPE) reach their natural end-of-life cycle and, instead of sending them to landfill, they can be transformed into different products with added social and environmental value.

**Involved persons:** MARTUSCIELLO S., SERPIERI R., MUZZILLO F., RUFINO A., P., MONGILLO V., PRISCO L.J.

**2023**

\_\_ **Project title:** PHARMA FOOD DESIGN

**Call title:** FUTURO REMOTO 37° EDITION \_\_CITTA' DELLA SCIENZA

**Scientific coordinator:** MARTUSCIELLO Sabina

**Abstract:**

Through gaming we educate children to eye and dental examinations and adolescents with eating disorders, parental alienation syndrome, nyctophobia; we help those suffering from tinnitus, onychophagia, dysmenorrhea, nervous exhaustion, body dysmorphism by nurturing holistic well-being; To women aged 18 to 35 we artfully communicate the prevention of breast cancer; We support grandparents with arthrosis, varus and valgus with "urgent" utensils and seats. Pharma food design is the laboratory in which aids for different pathologies, analog and digital artefacts for the care, nutrition and nutrition of the five senses are designed with a multidisciplinary, interdisciplinary, holistic, shared, intelligent approach (intus legere, inter legere), capable of revealing relationships and interconnections.

**Involved persons:** MARTUSCIELLO S., SERPIERI R., MUZZILLO F., RUFINO A., BRANCACCIO P., MONGILLO V., PRISCO L.J., MATRICANO D.

\_\_ **Project title:** CONCEPTUAL PRACTICE

**Scientific coordinator:** HUI CHEUK KUEN Desmond

**Abstract:**

Research and pedagogy in art, design, creative industries, and cultural heritage the hang seng university of Hong Kong

**Involved persons:** CAVANNA L., MARTUSCIELLO S., MUZZILLO F., MONGILLO V., PRISCO L.

\_\_ **Project title:** ERGO [UNIVERSITA' + SCUOLA + AZIENDE + ENTI]

**Scientific Coordinator:** MARTUSCIELLO Sabina

**Call title:** PCTO ISTITUTO FERMI TIVOLI

**Abstract:**

ERGO, mostra dei risultati finali dei laboratori di Design, coniuga l'attività di orientamento in ingresso, in itinere, in uscita e placement.

ERGO ospita scuole, imprese, aziende, professionisti, enti pubblici e privati, famiglie, per incontrare l'entusiasmo, la passione, la creatività e la competenza degli studenti dei corsi di laurea in design con l'obiettivo di agevolare gli allievi delle scuole ad una scelta consapevole del percorso universitario, sperimentando con una modalità partecipata tutta la filiera formativa dall'ingresso al placement.

**Involved persons:** MARTUSCIELLO S., MUZZILLO F., RUFINO A., SERPIERI R..

**Project title:** LANDesign HUB

**Call title:** CONVENZIONE CON INCUBATORE CAMPANO

**Scientific coordinator:** MARTUSCIELLO Sabina

**Abstract:** The agreement is aimed, in particular, at cooperation for assistance to start-ups, spin-offs and public-private laboratories, for:

- a. formulation and implementation of shared scientific research and technology transfer projects;
- b. support for the validation (possibly certification) of innovative technologies and products;
- c. facilitation of the incubation phase of new businesses on the initiative of students, thus also providing support for the training of key professional figures and possibly their selection;
- d. support for the activities necessary for product innovation;
- e. seeking funding for research and development activities;
- f. collaboration in training activities to be carried out in the sectors referred to in the previous points;
- g. creation of a Hub within the spaces provided to the Department to support potential student start-ups with the collaboration of the Incubator.

**Involved persons:** MARTUSCIELLO S., MUZZILLO F., RUFINO A., SERPIERI R., .. MONGILLO V., PRISCO L.

**Project title:** Ex ospedale psichiatrico Frullone

**Call title:** ASL Na1

**Scientific coordinator:** GAMBARDELLA Carmine

**Abstract:**

Technical-Scientific activities preparatory to the reclamation of the illegal landfill in the tuff cavity owned by the ASL NA 1 Center (Former Frullone psychiatric hospital) Subject of the procedure penalty R.G.N.R. 604970/2011.

**Involved persons:** MARTUSCIELLO S., MUZZILLO F.

**Project title:** Telerilevamento aereo sulla Reggia di Caserta

**Call title:**

**Scientific coordinator:** GAMBARDELLA Carmine

**Abstract:**

Attività di telerilevamento aereo sulla Reggia di Caserta con sensore iperspettrale CASI 1500 e Camera ottica PhaseOne per la verifica ed il controllo dello stato di salute della vegetazione arborea.

**Involved persons:** MARTUSCIELLO S., MUZZILLO F.

**2022**

**\_\_Project title:**[POTDESIGN educo/produce] Class L4 Industrial Design

**Call title:** MIUR, POT Orientation Plans and Tutoring 2017-2019

**Scientific Manager:** MARTUSCIELLO Sabina

**Abstract:**

The Plan includes training activities aimed at directing school students to university studies, through workshops "for the recognition of skills and the development of vocations" and has been drawn up thanks to the consolidated experience already gained in this regard for over a decade with the LANDesign Project®.

The University of Campania Luigi Vanvitelli is the leader of the network formed by all Italian universities with CCdSS active in class L4, 11 Universities are in the Partnership Agreement, another 3 are in joint scientific actions. As a Lead Project, POTDESIGN's Orientation and Tutoring activities also provide for coordination with the other POT and PLS of the University:

POT INGEGNERIA

POT GIURISPRUDENZA

POT LETTERE

POT PSICOLOGIA

POT ECONOMIA

PLS MATEMATICA

PLS FISICA

PLS STATISTICA

PLS SCIENZE AMBIENTALI

PLS BIOTECNOLOGIA E BIO

CDS FARMACIA/SCIENZE AGRARIE E FORESTALI

DIP. SCIENZE POLITICHE

**Involved persons:**

**\_\_CAVANNA** Laura/ Professor Department of Art and Design THE HANG SENG UNIVERSITY OF HONG KONG

**\_\_HUI CHEUK KUEN** Desmond/ Head Department of Art and Design THE HANG SENG UNIVERSITY OF HONG KONG

**\_\_IANNACE** Gino/ Associate Professor/ Dipartimento di Architettura e Disegno Industriale / Università degli Studi della Campania "Luigi Vanvitelli"

**\_\_IRPINO** Antonio/ Associate Professor/ Matematica / Università degli Studi della Campania "Luigi Vanvitelli"

**\_\_MARTUSCIELLO** Sabina/ Associate Professor/ Dipartimento di Architettura e Disegno Industriale / Università degli Studi della Campania "Luigi Vanvitelli"

**\_\_MATRICANO** Diego/ Associate Professor/ Economia / Università degli Studi della Campania "Luigi Vanvitelli"

**\_\_MUZZILLO** Francesca/ Associate Professor/Beni culturali/ Università degli Studi della Campania "Luigi Vanvitelli"

**\_\_GAMBARDELLA** Carmine/Full professor /BENECON ScaRL UNESCO CHAIR

**\_\_GAROFALO** Maria Carmela/PhD student/ Dipartimento di Architettura e Disegno Industriale /

Università degli Studi della Campania “Luigi Vanvitelli”

\_\_RUFINO Annamaria/ Associate Professor/ Ingegneria / Università degli Studi della Campania “Luigi Vanvitelli”

\_\_RUTIGLIANO Flora Angela/Full professor/Biotecnologia / Università degli Studi della Campania “Luigi Vanvitelli”

**Partners:**

CUID Italian University Design Conference

University of Florence

Polytechnic University of Turin

University of Palermo

University of Camerino

University "G. d'Annunzio" Chieti-Pescara

University of Perugia

University of Rome La Sapienza

University of Genoa

Polytechnic University of Bari

Alma Mater Studiorum University of Bologna

University of Ferrara

Politecnico di Milano

BENECON Scarl

**Status:** funded

**Project submission/start/end date:** Approved by MIUR Decree of 04.03.2019 /start 3/12/2018/ end of project 20/11/2020 extended to 30/11/2021

\_\_ **Project title:** "VALSASA Attuazione di progetti di diffusione delle innovazioni nell'ambito del rafforzamento dell'ager campano"

**Scientific coordinator:** GAMBARDELLA Carmine BENECON

**Call title:** PSR Campania 2014/2020. Tipologia di intervento 16.1.2 - bando approvato con drd 329 del 29/08/2022-

**Abstract:**

The VALSASA project aims at the sustainable management, both from an environmental and economic point of view, of wheat and tomato crops, prominent crops in the Campania region and even more so in the province of Caserta. The project involves the use of innovative 'air-land-water' technological instrumentation, which, applied to precision agriculture, will allow, net of topographic and atmospheric effects, to analyze, quantify and quickly verify the degree of vegetation cover, the percentage of biomass and to distinguish between soil and vegetation.

**Involved persons:**

MARTUSCIELLO Sabina, MUZZILLO Francesca

\_\_ **Project title:** Health-Design degli spazi del Plesso Ospedaliero di Marcianise

**Scientific coordinator:** GAMBARDELLA Carmine BENECON

**Abstract:**

PILOT PROJECT for research activities in order to manage the entire life cycle of the hospitals owned by the ASL of Caserta through the "use of specific electronic methods and tools, such as those of electronic modeling and information for construction and infrastructures - BIM

**Involved persons:**

MARTUSCIELLO Sabina, MUZZILLO Francesca

**\_\_ Project title:** Health-Design of the spaces of the San Giovanni Bosco Hospital Complex in Naples and seismic adaptation of the building

**Scientific coordinator:** GAMBARDELLA Carmine BENECON

**Abstract:**

PILOT PROJECT for research activities by means of the "use of specific electronic methods and tools, such as those of electronic modeling and information for construction and infrastructures – BIM

**Involved persons:**

MARTUSCIELLO Sabina, MUZZILLO Francesca

**2021**

**\_\_ Project title:** [POTDESIGN educo/produco] Classe L4 Industrial Design

**Call title:** MIUR, POT Orientation and Tutoring Plans 2017-2019

**Scientific coordinator:** MARTUSCIELLO Sabina

**Abstract:**

The Plan provides for training activities aimed at directing school students to university studies, through workshops "for the recognition of skills and the development of vocations" and has been drawn up thanks to the consolidated experience already gained in this sense for over a decade with the LANDesign® Project.

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**Involved persons:**

MARTUSCIELLO Sabina, MORELLI Maria Dolores, MUZZILLO Francesca, CARILLO Saverio, JACAZZI Danila, GAROFALO Maria Carmela, PAGANO Enrica

**Partners:**

CUID Conferenza Universitaria Italiana Design  
Università degli Studi di Firenze  
Politecnico di Torino  
Università degli Studi di Palermo  
Università degli Studi di Camerino  
Università degli Studi "G. d'Annunzio" Chieti-Pescara  
Università degli Studi di Perugia  
Università di Roma La Sapienza  
Università degli Studi di Genova  
Politecnico di Bari

Alma Mater Studiorum Università di Bologna

Università degli Studi di Ferrara

**Status:** Funded

**Project submission/start/end date:**

Approved with MIUR decree of 04.03.2019 /inizio 3/12/2018/ fine progetto 20/11/2020 prorogato al 30/11/2021

**Project Amount: 563.750,00**

**Reported on 30 December 2021**

**\_\_ Project title:** Charasso

**Scientific coordinator:** MARTUSCIELLO Sabina

**Call title:** START CUP CAMPANIA 2021

**Abstract:**

[Charasso] is a concrete response to goals 4, 11 and 12 of the 2030 Agenda for Sustainable Development::

- Objective 4: QUALITY EDUCATION
- Goal 11: SUSTAINABLE CITIES AND COMMUNITIES
- Objective 12: RESPONSIBLE CONSUMPTION AND PRODUCTION

Sustainable consumption and production aim at the well-being of economic activities, through the reduction of the use of resources, of degradation and pollution throughout the entire production cycle. Specifically, the projects wishes to educate about the identity of environments, places and the people who inhabit them through a virtuous supply chain that considers paper as a fundamental element of the narrative of a specific territory, to "develop and implement tools to monitor the impacts of sustainable development for sustainable tourism, which creates jobs and promotes local culture and products".

The actions of the project are:

- Educate citizens [goal 4 of the 2030 Agenda], stimulating them, in particular, to: – Read consciously (avoiding drawing information from digital materials that are not guaranteed by a revision of content) – Collaborate with local institutions to promote projects focused on sustainability – Increase paper recycling in the area – Promote the presence of paper and cardboard collection points in the urban fabric aimed at recycling – Acquire a culture of sustainability and develop appropriate languages.
- Recycling [target 11]: – Paper scraps – Newspapers – and other types of paper
- Produce [objective 12]: – Paper – Mirabilia Charasso • Sales [objective 12]: – Paper – Bread (and various snacks) – Wine – Mirabilia Charasso

**Involved persons:**

*Università degli Studi della Campania "Luigi Vanvitelli"*  
*Prof. Arch. Sabina Martusciello PhD (capogruppo) \_\_Design*  
*Prof. Ing. Giuseppe Faella PhD \_\_Tecnica delle Costruzioni*  
*Prof. Arch. Nicola Pisacane PhD \_\_Disegno*  
*Prof. Flora Angela Rutigliano PhD \_\_Ecologia*  
*Dott. Teresa Di Santo \_\_Ecologia*  
*Dott. Maria Carmela Garofalo \_\_Architettura*  
*Dott. Veronica Mongillo \_\_Design e Comunicazione*  
*Dott. Maria Tammaro \_\_Architettura e Design*  
*Università degli Studi di Napoli "Parthenope"*  
*Prof. Dott. Antonio Garofalo PhD \_\_Economia*  
*Dott. Antonio Cennamo PhD \_\_Economia*

**Partners:** Università Parthenope

**Status:** submitted 2021

**\_\_ Project title:** STONE (Stone Technology Outstanding Network Environment)

**Scientific coordinator:** GAMBARDELLA Carmine

**Call title:** HORIZON-CL2-2021-HERITAGE-01-04\_ Preserving and enhancing cultural heritage with advanced digital technologies

**Abstract:** The aim of the project is to enhance a network of Roman archaeological sites in the

Mediterranean basin through interventions of recovery, restoration, conservative rehabilitation, enhancement and management with the use of innovative technologies and integrated scientific skills able of preserving the authenticity and integrity of the properties in a logic of sustainable development and technology transfer for local economies in different territorial contexts. The archaeological sites are: Pompeii (Italy); Lixus (Morocco); Carthage and Sousse (Tunisia); Petra (Jordan).

**Involved persons:** MARTUSCIELLO Sabina, MUZZILLO Francesca

**Status:** submitted 2021

**\_\_Project title:** INTEGRATED RISKS MANAGEMENT

**Scientific coordinator:** GAMBARDELLA Carmine

**Call title:** Disaster-Resilient Society 2021 (HORIZON-CL3-2021-DRS-01-03)

**Abstract:** The aim of the project is to enhance a network of historical and archaeological sites in the Mediterranean basin through interventions of risks management, recovery, restoration, conservative rehabilitation, enhancement and management with the use of innovative technologies and integrated scientific skills able of preserving the authenticity and integrity of the properties in a logic of sustainable development and technology transfer for local economies in different territorial contexts. The archaeological sites, Universities, Research Centers and Institutional partners of the project are: Pompeii (Italy); Château de mer, Safi (Morocco); Medina of Tunis and Medina of Sousse (Tunisia); Historic Centre of Amman (Jordan).

**Involved persons:** MARTUSCIELLO Sabina, MUZZILLO Francesca

**Status:** submitted 2021

**\_\_Project title:** East Meets West for Sustainability (EMWS)

**Scientific coordinator:** GAMBARDELLA Carmine

**Call title:** INDO-ITALIAN EXECUTIVE PROGRAMME OF COOPERATION IN SCIENTIFIC & TECHNOLOGICAL COOPERATION\_Italian Ministry for Foreign Affair and International Cooperation

**Abstract:** The “East Meets West for Sustainability (EMWS)” project provides an opportunity for two UNESCO Chairs, one in Italy (focusing on cultural heritage) and one in India (focusing on gender equality and women's empowerment), to work together and leverage their experiences and expertise to strengthen the sustainability of cultural and natural heritage site communities in Italy and India. EMWS partners will synergize approaches from the western and eastern traditions to support community resilience, gender-balanced participation, and conservation practices. The approaches in question are multidisciplinary and integrate science and technological advancement with participatory research, women's empowerment methodologies, and conservation strategies to protect and enhance cultural and natural heritage.

**Involved persons:** MARTUSCIELLO Sabina, MUZZILLO Francesca

**Status:** submitted 2021

**\_\_Project title:** Nola Knowledge Factory and Business Garden

**Scientific coordinator:** GAMBARDELLA Carmine

**Call title:** Agenzia per la Coesione Territoriale\_Ecosistemi dell’Innovazione nel Mezzogiorno

**Abstract:** The proposed project aims to create within an industrial area of primary importance (Nola-Caserta-Acerra-Pomigliano, "Target Area") a place, a laboratory, which, through open innovation activities, contributes to the innovation, transformation and dimensional growth of the industrial fabric of the Target Area and, due to the induced effects, of the entire Region. The project aims, therefore, to create an ecosystem to make ideas flourish and transform them into business,

through the synergy between 1) academic research 2) business 3) innovation.

**Involved persons:** MARTUSCIELLO Sabina, MUZZILLO Francesca

**Status:** submitted 2021

**Project title:** Royal Knowledge Factory and Business Garden

**Scientific coordinator:** GAMBARDELLA Carmine

**Call title:** Agenzia per la Coesione Territoriale\_Ecosistemi dell'Innovazione nel Mezzogiorno

**Abstract:** The project has the ambitious goal of creating a tangible and immaterial place (a constant generator of contamination between institutions, territory and companies) for companies in the local entrepreneurial fabric (Caserta area) that can support them in facing the great challenges of the digital transition and the transition to industry i4.0 to which, by size or economic-financial strength, they are not always ready to respond successfully. In other words, we want to bring a set of more varied innovations to the territory, in an "ecosystem" that unites them.

**Involved persons:** MARTUSCIELLO Sabina, MUZZILLO Francesca

**Status:** submitted 2021

**Project title:** Advanced and integrated system for environmental monitoring and risk forecasting for populations through the use of advanced technologies

**Scientific coordinator:** GAMBARDELLA Carmine

**Call title:** PNRR - Piano Nazionale di Ripresa e Resilienza

**Abstract:** The project aims to create a platform for the detection, control and cataloguing of environmental data collected by aircraft and remotely piloted aircraft in order to identify and predict the risks for the territory and the population in the areas immediately close to the hydrographic network of the Regi Lagni and in the municipalities of the "Land of Fires" area.

**Involved persons:** MARTUSCIELLO Sabina, MUZZILLO Francesca

**Status:** submitted 2021

**Project title:** RESEARCH PUBLISHING & GREEN BUSINESS

**Scientific coordinator:** GAMBARDELLA Carmine

**Call title:** Agency for Territorial Cohesion\_Innovation Ecosystems in Southern Italy

**Abstract:** The RPGB International Polygraph represents a HUB of research, training, innovation and technology transfer thanks to the national and international network: of the Benecon University Consortium home to the UNESCO Chair on Landscape, Cultural Heritage and Territorial Government of Prof. Carmine Gambardella; the Mercatorum Telematic University, the first Startup University of the Italian Chambers of Commerce, which was born from a public-private partnership with the aim of taking on leadership in business training; and Gangemi Editore International Publishing, a leader in the publication of texts of international relevance and refereeing.

**Involved persons:** MARTUSCIELLO Sabina, MUZZILLO Francesca

**Status:** submitted 2021

**Project title:** Benecon for Africa Volcano Monitoring

**Scientific coordinator:** GAMBARDELLA Carmine

**Call title:** partenariato UE-Organizzazione degli Stati ACP, Convenzione Cotonou

**Abstract:** The proposal aims to provide a new perspective about the most suitable way for zoning, monitoring, and mitigation in different geographic areas affected volcanic activity. The proposal is an innovative and unique way for different areas of study with a multidisciplinary research approach integrating engineering, geological, technical, sociological and communicative skills.

**Involved persons:** MARTUSCIELLO Sabina, MUZZILLO Francesca

**Status:** submitted 2021

\_\_ **Project title:** Analysis, monitoring and interventions on infrastructure works of regional road networks

**Scientific coordinator:** GAMBARDELLA Carmine

**Call title:** partenariato UE-Organizzazione degli Stati ACP, Convenzione Cotonou

**Abstract:** The remote sensing activities of Benecon University Consortium carried out through hyperspectral, thermal and photographic sensors, which have also been requested by the Judicial Authority and the Ministry of the Interior, have been mainly concerned with the study of the territory, the infrastructure networks, the georeferenced mapping of the state of the sites, the mapping of illicit crops, the mapping of areas with hydrogeological instability, geo-archaeology, precision agriculture, fire prevention, all in line with the vast field of Civil Protection activities for the prevention, monitoring and management of seismic, volcanic, meteorological, hydraulic, health and environmental risks.

**Involved persons:** MARTUSCIELLO Sabina, MUZZILLO Francesca

**Status:** submitted 2021

\_\_ **Project title:** Eco-sustainable thermoregulating multilayer panels for the building industry-TermoReSos

**Scientific coordinator:** GAMBARDELLA Carmine

**Call title:** Ministry of the Environment and Protection of Land and Sea, Directorate-General for the Circular Economy. Call for the co-financing of research projects aimed at the development of technologies for the prevention, recovery, recycling and treatment of waste not falling within the categories already served by supply chain consortia, the eco-design of products and the proper management of related waste - 2020 Edition

**Abstract:** The aim of the project is the creation of a prefabricated multilayer panelling made with a bivalent cement matrix and eco-sustainable thermoregulating panels, innovative for increasing the energy efficiency of buildings. These thermoregulating panels, made of recycled plastic, will be engineered through the inclusion of phase changing materials (PCM), which will allow the modulation of thermal flows, favoring the optimization of the thermal management of buildings, throughout the year.

**Involved persons:** MARTUSCIELLO Sabina, MUZZILLO Francesca

**Status:** submitted 2021

\_\_ **Project title:**

Restoration and enhancement of the Roman Amphitheatre of Santa Maria Capua Vetere (CE)

**Scientific coordinator:**

GAMBARDELLA Carmine

**Call title:** Funding: Operational Programme complementary to PON "Cultura e sviluppo" FESR 2007-2013 dm 29/09/2017 – CIG: 8272714B8C CUP: F94BI7000150006

**Abstract:**

The improvement activities, proposed by the Benecon Consortium, provide for the creation of a dynamic construction site, with management and control of ex ante, in itinere and ex post operations, which takes the form of the 'Construction Site of Knowledge' as evidenced by the numerous best practices conducted by Benecon.

EX ANTE: the integration of H-BIM and webGIS data makes it possible to structure the resources of the construction site, optimizing the scheduling of interventions over time and planning the

participation of work teams in relation to the particular specific skills in the restoration site.  
IN ITINERE: the remote-control room allows you to interact in progress with all the players in the restoration process, from the executing company, to the work teams, to the Superintendence. In this way, it is possible to implement a dynamic process of verification in progress of the work.  
EX POST: the remote-control room, thanks to an agreement with the Superintendence, also of a temporal nature, allows a continuous process of verification, testing and scheduled maintenance once the restoration work has been completed.

**Involved persons:** MARTUSCIELLO Sabina, MUZZILLO Francesca

**Partners:**

**Status:** presentato

— **Project title:** Urban regeneration project of Piazza Esedra for the purpose of tourist accessibility to the archaeological site of Pompeii, UNESCO World Heritage Site as part of the Complementary Action and Cohesion Program to the NOP "Infrastructures and Networks" 2014-20 AXIS C "Tourist accessibility"

**Scientific coordinator:**

GAMBARDELLA Carmine

**Call title:**

Programma di azione e coesione complementare al PON "Infrastrutture e Reti" 2014-20 ASSE C "Accessibilità turistica"

**Abstract:**

The project for Piazza Esedra in Pompeii is the result of a research activity conceived and promoted by Prof. Arch. Carmine Gambardella. Architects, Engineers, Urban Planners, Structural Engineers, Cartographers, Jurists, Economists, Historians and Technologists collaborated on the Master Plan and the Project. The state-owned area is part of a broader planning of the entire territory that goes from San Giorgio to Castellammare and concretizes the reasons for the design intervention. In fact, from the measured data, this intervention overlooking the most famous archaeological park in the world, a World Heritage site since 1997, was also sized. The Area presents itself as a space congested with environmental detractors. The redevelopment plan also takes into account the new conditions of the Covid-19 pandemic with regard in particular to access to the excavations, which cannot be denucleated from the entire urban planning: "an organization of the area is envisaged with vast spaces for use and practicability capable of guaranteeing the decongestion of flows, the redevelopment of the tree-lined axis of Via Plinio, which represents the filter element between the ancient and the contemporary, is aimed at the redesign of the area... the construction of the canopies that house the removable stands is a further element that characterizes the project using the citation of the Pompeian red ribbon, a sign of the ancient 'lava' path that invaded the city of Pompeii.

**Involved persons:**

MARTUSCIELLO Sabina, MUZZILLO Francesca

**Status:** presentato

— **Project title:** Participation in the tender "Restauro e valorizzazione del settore settentrionale delle fortificazioni di Pompei – Torre di Mercurio"

**Scientific coordinator:** GAMBARDELLA Carmine

**Call title:**

Source of funding: ordinary funds of the Archaeological Park of Pompeii) CIG: 8279502D2E CUP: C62C15000100006

**Abstract:**

The Benecon University Consortium proposes an operational methodology that integrates

multidisciplinary scientific expertise and innovative technological instrumentation through an ex-ante, in-progress and ex-post process of analysis, verification and management of all phases of the restoration site, in compliance with COVID-19 risk prevention measures, given the current emergency.

**EX ANTE:** survey with multisensor platform, return of a model in H-BIM environment, creation of a technological knowledge platform and WebGIS data population for the work being restored.

**IN ITINERE:** digital control in progress on reliable data acquired by sensors, processed and scientifically verified by Benecon that populate the H-BIM model and webGIS, including all the measures for the abatement of dust and noise. A programmed control and monitoring station is set up on site in a special Office of the Superintendence (remote control room), to dynamically verify all phases of the restoration work.

**EX POST:** the remote control room becomes, in agreement with the Superintendence and for a fixed period, a data collection station that flows into the H-BIM and WebGIS models, which can be continuously implemented. These models make it possible to always have the state of conservation of the monumental structure under control over time, implementing a continuous process of verification, testing and scheduled maintenance.

**Involved persons:**

MARTUSCIELLO Sabina, MUZZILLO Francesca

**Status:** submitted

**Project title:** Scientific consultancy, architectural and engineering services (art. 46 Legislative Decree 50/2016) for the design and direction of interventions for the participation of the Municipality of Roccamonfina in the “Programma di azione e coesione complementare al PON cultura e sviluppo (FESR) 2014-2020 piano operativo cultura e turismo (FSC) 2014-2020”

**Scientific coordinator:** GAMBARDELLA Carmine

**Call title:**

PON cultura e sviluppo (FESR) 2014-2020 piano operativo cultura e turismo (FSC) 2014-2020

**Involved persons:**

MARTUSCIELLO Sabina, MUZZILLO Francesca

**Status:** presentato/

**Scientific products of the last three years:**

*10 scientific publications on Class A journals and/or indexed in the Scopus/WoS databases:*

- [1] Martusciello S., (2024) - Cities in emergencies: the scientific contribution of Design for a new educational paradigm. In Gambardella C. a cura di WORLD HERITAGE AND CITIES IN EMERGENCIES, Atti del XXII INTERNATIONAL FORUM 14-15 JUNE 2024 in Napoli/Capri, ABITARE LA TERRA QUADERNO 10, ISSN 15928608 PAG. 48-50
- [2] MARTUSCIELLO, S., MUZZILLO, F., RUFINO, A., SERPIERI, R., 2023. "LANDesign HUB HUman Backup" In: De-Sign Environment Landscape City\_2023, a cura di Giulia Pellegrini. VIII International Conference De-Sign Environment Landscape City, Biennale di Venezia, VIII Conferenza Internazionale sul disegno De-Sign Environment Landscape City, parte degli eventi Students as Researchers della Biennale di Architettura di Venezia 2023.
- [3] RUFINO, A., 2024. Environmental regeneration. Affective literacy and relational memory, in G. Gnerre Landini (ed.), Children in armed conflict: how can they be protected in a multilevel international framework? A joint commitment by national and international institutions and organizations together with the academic community, Gambini Editore University Press, Roma.
- [4] RUFINO, A., 2024. Transformative Dynamics of Corruptive Systems, “Italian Sociological

Review”, n. 14(1)

- [5] MUZZILLO F., Tortorelli F., 2024. Wine Culture and Landscape. Experiences of Recovery and Regeneration in Italy, collana Monumenta Documenta, Luciano Editore, Napoli, ISBN 9788860263568
- [6] Massaro, L., Di Gennaro, L., Frunzio, G., Sallicandro, E., SERPIERI, R., 2024. Understanding past rules of the art in columna-capreoli wood trusses. *Developments in the Built Environment*, 100472. <https://doi.org/10.1016/j.dibe.2024.100472>.
- [7] MARTUSCIELLO S., 2023. Safeguarding intangible cultural heritage in education ‘*Cucina italiana*’: identity design in Gambardella C. a cura di, *Dwelling on space: Representation and Safeguarding intangible cultural heritage in education*, Gangemi Editore 2023
- [8] MARTUSCIELLO S., MUZZILLO F., 2022. Animi Motus, resilient community design, in Pellegrini G., *De-Sign: Environment Landscape City 2021. Venice Biennale Resilient Communities. Conference proceedings*, ARACNE 2023
- [9] MARTUSCIELLO, S., 2022 POTDESIGN for a design of responsibility, Editorial, *Quaderni n. 5 della Rivista Internazionale di Classe A ‘Abitare La Terra/Dwelling on Earth’*, pagg. 9-11, ISSN 1592-8608
- [10] MARTUSCIELLO, S., MUZZILLO F., MONGILLO V., 2022. Resilient Design, *Quaderni n. 5 della Rivista Internazionale di Classe A ‘Abitare La Terra/Dwelling on Earth’*, pagg. 12-17, ISSN 1592-8608

*Additional 10 scientific products:*

- [11] Monaco, M., SERPIERI, R. (2024). A critical review of 100 years of permeability tests for the sustainability of concrete structures. *Journal of Sustainable Cement-Based Materials*, 13(12), 1725-1752. <https://doi.org/10.1080/21650373.2024.2409935>.
- [12] Frettoloso, C., Kehne, H., MUZZILLO, F., 2024. Small and interconnected. Keywords to address future urban open spaces challenges, Maggioli editore, Rimini, ISBN 978-88-916-7432-6
- [13] SERPIERI, R., Monaco, M., 2023. A percolation-threshold model for evaluating permeability in Portland pastes with high water-cement ratio. *Journal of Building Engineering*, 70, 106328.
- [14] RUFINO A., 2023. Penser et former la pensée dans don humanité, in *ESPRIT CRITIQUE*, vol. 33.
- [15] GAMBARDELLA C. (2023) editoriale in *Abitare la Terra/ Dwelling on Earth – Quaderno n 9, supplemento al numero 59; pp 3-5, ISSN: 1592-8608*
- [16] MATRICANO D., Young entrepreneurs and skills mismatch in school-to-work transition. Empirical evidence from innovation processes managed in Italian NTBFs *International Journal of Manpower*, 44 (6), pp. 1028-1045, 0143-7720 10.1108/IJM-09-2021-0547, 2023
- [17] MATRICANO D., 2022. Designing policy based on entrepreneurial venture type: The effects of innovation, hiring practices, and patent ownership on enterprise development *Journal of Small Business and Enterprise Development*, 30 (7), pp. 1377-1395 ISSN: 1462-6004 10.1108/JSBED-09-2022-037, 2023
- [18] RUFINO, A., 2022. Social solving. Norme e prospettive del Problem Solving nelle frontiere della socialità, in *"Sociologia del diritto"*, n. 2, classe A 2022.

[19] MATRICANO, Diego (2022) Economic and social development generated by innovative startups: does heterogeneity persist across Italian macro-regions?, *Economics of Innovation and New Technology*, 31:6, 467-484, DOI: 10.1080/10438599.2020.1823675

[20] CASTALDI L., William E. Jackson III, Louis Marino & Diego Matricano (2022): Introduction to the special issue on entrepreneurship processes, *Journal of Small Business Management*, DOI: 10.1080/00472778.2022.2140162

**Relationships with international and national Companies, Institutions, Research Centers, Universities during the last three years:**

**2022-2023-2024**

TECNE AUTOSTRADE PER L'ITALIA  
HANG SENG UNIVERSITY OF HONG KONG  
INCUBATORE CAMPANO  
CUID Consorzio Universitario Italiano Design  
Università degli Studi di Firenze  
Politecnico di Torino  
Università degli Studi di Palermo  
Università degli Studi di Camerino  
Università degli Studi "G. d'Annunzio" Chieti-Pescara  
Università degli Studi di Perugia  
Università di Roma La Sapienza  
Università degli Studi di Genova  
Politecnico di Bari  
Alma Mater Studiorum Università di Bologna  
Università degli Studi di Ferrara  
MUR  
NTFI Napoli Teatro Festival Italia  
AVIO INTERIORS SpA  
Fondazione EZIO DE FELICE  
F.AGR.I. Filiera Agricola Italiana  
MIUR Campania

**Collaborations with Consortia, Scarl or other Institutions participated by the University of Campania L. Vanvitelli during the last three years:**

\_\_Benecon Scarl, CATTEDRA UNESCO Beni Culturali, Ecologia, Economia, per il Recupero produttivo, la Riconversione eco-compatibile e il Design di supporto dei sistemi ambientali a valenza culturale (Società Consortile a Responsabilità limitata costituita da Università degli Studi della Campania, Università degli Studi di Napoli Federico II, Università Pegaso.

2022. Memorandum of Understanding with School of Tourism Management, Sun Yat-sen University, UNESCO Chair on Sustainable Tourism in UNESCO Designated Sites, China. – (click on)

2022. Memorandum of Understanding with the Amrita Vishwa Vidyapeetham, School of Social and Behavioural Sciences, and its two research centers, AMMACHI Labs and Center for Women's Empowerment and Gender Equality, India .

2020. Memorandum of understanding tra Cattedra UNESCO on Landscape, Cultural Heritage and Territorial Governance e Università e Cattedre UNESCO nel mondo:

2020. Memorandum of Understanding with the UNESCO Chair on Equality and Women Empowerment, Amiratapuri , India.

2020. Memorandum of Understanding with the UNESCO Chair in Social Pedagogy, Maria Grzegorzewska University, Poland.

2020. Memorandum of Understanding with The international Traditional Knowledge Foundation, USA.

2020. Memorandum of Understanding with the UNESCO Chair on Education for Social Justice, Autonomus University of Madrid, Spain.

2020. Memorandum of Understanding with the UNESCO Chair on Education for Sustainable Development, National Academy of Sciences, Armenia.

### **Projects in partnership with Consorzio Universitario Benecon – Università di Napoli 'Federico II'**

- Progetto Exposoma con il Dipartimento di Medicina e Chirurgia, Prof.ssa Annamaria Colao - Prof. Rosario Pivonello;
- Progetto Exposoma con il Dipartimento di Scienze Chimiche, Prof. Marco Trifuoggi;
- Collaborazione con il Professore Daniele Riccio nell'ambito del Dottorato di Ricerca in Information Technology and Electrical Engineering.
- Progetto APRIPISTA bando di ricerca ASI 'Studio di nuovi metodi e tecniche basati sull'utilizzo dati SAR multidimensione/multifrequenza' con il Prof. Daniele Riccio: Dipartimento di Ingegneria Elettrica e delle Tecnologie dell'Informazione;
- Bando pubblico APEA per la selezione di 'progetti di ricerca e sviluppo per sistemi e tecnologie abilitanti per l'industria dell'aerospazio' DGR n. 380 del 15.11.2019: Dipartimento di Ingegneria Elettrica e delle Tecnologie dell'Informazione;
- Bando di ricerca PRISMA SCIENZA Agenzia Spaziale Italiana: Dipartimento di Ingegneria Elettrica e delle Tecnologie dell'Informazione;
- Progetto SAT Satellite Airborne Telemedicine Satcom on the move (SOTM) Telemedicine Experience Telecommunication link test and demonstration: Dipartimento di Ingegneria Elettrica e delle Tecnologie dell'Informazione;
- Progetto MAI Monitoraggio Ambientale Irripetibile: Dipartimento di Ingegneria Elettrica e delle Tecnologie dell'Informazione;
- Avviso pubblico CAMPANIA START UP 2020 metodi e modelli per la gestione di big data e l'estrazione della conoscenza LANDesign

### **ISI Web of Science Subject Categories:**

Agriculture, Multidisciplinary  
 Architecture  
 Ceramics

Communication  
Cultural Studies  
Education & Educational Research  
Engineering, Environmental  
Green & Sustainable Science & Technology  
Health Care Sciences & Services  
Multidisciplinary Sciences

**Scientific-Disciplinary Sectors:**

CEAR-08/D  
CEAR-06/A  
CEAR-08/C  
SPS/12  
SECS-P/08  
CHIM/10  
BIO/07  
SECS-P/02  
SECS-S/01

**Keywords:**

Design  
Education  
Agriculture  
Health  
Care  
Landesign  
Industrial Design  
Food design  
Structural design  
Sustainable development

**ERC Categories:**

LS7\_3 - Pharmacology, pharmacogenomics, drug discovery and design, drug therapy  
LS9\_6 - Food sciences  
PE10\_12 - Sedimentology, soil science, palaeontology, earth evolution  
PE8\_11 Industrial Design  
PE8\_12 - Sustainable design (for recycling, for environment, eco-design)  
PE8\_16 - Architectural engineering  
SH1\_8 - Banking, corporate finance, accounting  
SH2\_8 - Legal studies, constitutions, comparative law, human rights  
SH6\_11 - Cultural history, history of collective identities and memories.