Interconnected Nord-Est
Innovation Ecosystem

Cross-Cutting Activity #3

Citizens engagement

i NEST

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Interconnected Nord-Est Innovation Ecosystem

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Cross-Cutting Activity #3

Citizens engagement

Deliverable DCC3.1 – August 2023
Report on Citizen Engagement
and examples of best practice
in iNEST partners

i NEST

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1 Abstract

The Nord-Est is working, with the iNEST project, to promote a sustainable, fair, innovative, and more resilient macroregional area. For doing this, we need a strong research, education, and innovation foundation, grounded on scientific excellence and competitive innovation policies for citizens and businesses. Our future prosperity and well-being will largely depend on it.

In this view, a more active citizens and societal role and engagement is absolutely strategic. The engagement of citizens, local community and civil society is at the core of the new ERA as well as of all recent communications and strategies of the European Commission. The society must be directly involved, not only at a level of information and communication but also in a phase of planning and realization. Citizens are called to co-design, co-implement and co-evaluate all programs; they must play a key role in the research and innovation cycle by providing feedback on new technologies and by ensuring societal uptake of disruptive solutions.

Many are in fact the benefits from citizens involvement, mainly to raise awareness of the importance and impact of research and innovation in people's daily lives and to increase trust in science. Furthermore, the "Covid experience" has taught us the importance of communicating in a clever and inclusive way.

This document reviews, with reference to iNEST environment, initiatives and strategies, both in a design stage and in progress, concerning the active involvement of citizens in education, research and innovation processes.

Leader

University Partners

2 Introduction

The C3 Citizens Engagement Cross Cutting activity will include the following objectives:

- Develop dissemination, communication and engagement actions realized in a coordinated and shared way with all the Spokes.
- Produce "tailored –made initiatives" according to the specific targets that will be involved (e.g., kids, schools at all levels, universities, elderly people, general citizens, specific professional categories, businesspeople, policy makers) keeping in consideration people' previous experiences and their cultural or socio-economic context.
- Invest on new and innovative ways of communicating.

The challenge in the C3 Citizens Engagement program will be the capacity to create a coherent network of initiatives involving all the iNEST spokes and respective subjects and to guarantee continuity after the end of the project.

The main concepts to be emphasized will be **sustainability and digitalization** that represent the connection and fil rouge among all different Spokes and respective research and innovation topics.

Sustainability and sustainable development are complex issues, but the concept is clear: "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" - *UN World Commission on Environment and Development*.

That means to find a right balance between the environment, economy, and equity. Also, in iNEST project we must reach the integration of all dimensions of sustainability: social, economic, and environmental in order to create thriving, healthy, diverse and resilient communities in the Northeast of Italy for this generation and generations to come.

This approach is at the base of the "Green Deal for Europe" of the European Commission president, Ursula von der Leyen. In these processes, citizens are best placed to co-design, understand, and propose solutions about their everyday lives.

Digital technologies are playing a strategic role in supporting sustainability and the green transition.

Main challenges like the production of Digital Twins in different contexts (personalized medicine, industries, and the most recent digital twin of the sea) will be considered in iNEST different research topics.

These arguments must be discussed together with citizens and their importance must be explained, because there is no doubt: digitalization will change our lives at a breathtaking speed. The trend is inevitable.

Virtual worlds will impact the way we live together, bringing both opportunities and risks that need to be addressed.

All activities that will be produced in iNEST will be realized in North-East of Italy - meaning, the Veneto Region, the Autonomous Region of Friuli-Venezia Giulia and the Autonomous Provinces of Bolzano and Trento.

3 Report on Citizen Engagement and State of the Art

In the period September 2022- April 2023, a strongly multidisciplinary Working Group participated by all Spokes has been appointed and worked to define iNEST C3 activities.

The WG met a few times and interesting discussions, and exchange of opinions and documents among the different members have been produced.

The WG participants collected and discussed different kinds of experiences, investigating innovative formats of citizens engagement. Information concerning existing best practices and already planned initiatives, that could be replicated at macroregional level, have been shared.

Possible approaches that are relating art and science have been widely considered. Also, different kinds of citizens target groups have been analyzed, with particular attention for kids and students.

Quite interesting the idea, proposed by many Spokes, to use different spaces, mainly museums for the involvement of citizens and the dissemination of knowledge (scientific, artistic, social...).

Such activities would be in line with the recent museum definition by ICOM (2022): "A museum is a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection, and knowledge sharing".

These spaces should be devoted to permanently connect the territory with INEST projects and with Spokes activities. See the following point 3.1.

The possibility of organizing a survey on generalized social capital in Northeast has been also widely discussed. Possible partners to be involved for the survey work have been contacted to analyze costs and collaborations.

Thanks to the budget definition and its recent formal approval, the plan of actions has been defined and the specific partners roles have been discussed.

The main actions that have been considered for concrete implementation are the following:

3.1 Network of Museum

All Spokes considered the possible Museums or other social places that could be involved in iNEST dissemination activities in their territories. The list of possible structures is extremely interesting and is presented in the following.

Many of these Museums are already working in cooperation with the Spokes and we are starting concrete planning for specific iNEST events.

In the next months the spokes will verify with which, of the analyzed structures, to promote joint events and possibly to sign official collaboration agreements.

The Museums Network could become the Flagship Initiative for iNEST citizens engagement.

University of Bolzano (Spoke 1)

- Museion, Museum of modern and contemporary art, Bolzano
- Natural Science Museum South Tyrol
- Zelig, School for Documentary, Television and New Media, Bolzano

University of Trento (Spoke 2)

- MUSE (Museo di Scienze): https://www.muse.it/ – Six floors, a vegetable garden and a biotope to experience and discover nature in the city centre.
- Museo Civico di Rovereto (Scienze e Archeologia): https://www.fondazionemcr.it/
- ... and many more other museums (88!), but less connected: https://www.visittrentino.info/it/guida/da-vedere/musei

University of Udine (Spoke 3)

Museo Friulano di Storia Naturale

The Friuli Museum of Natural History is an essential element of the cultural, educational and information network of the city of Udine and an institution of regional and national interest.

Among its many activities, importance is dedicated to activities of enhancement and scientific dissemination, which includes the preparation of temporary exhibitions, the organization of conferences, seminars, refresher courses for teachers, projects for schools, itineraries that integrate different scientific disciplines and fields of knowledge etc.

Recently the Friuli Museum of Natural History has moved to a new fascinating location, that is that of the former municipal slaughterhouse, a series of buildings covering 5,000 square metres.

Collaboration with iNEST activities, dedicated to kids, has recently started with reciprocal satisfaction.

University of IUAV (Spoke 4)

IUAV is planning to promote a mapping of social innovation spaces (linked to the themes of the project, Spoke 4, therefore city architecture and sustainable design, but with a view to social innovation) within the metropolitan city of Venice (mapping that can be extended to other territories if of interest to other partner universities).

The mapping will start from the systematization of data already collected by the Iuav University or by other institutions that want to collaborate. This first database will then be integrated through different mapping methods to be defined (e.g. questionnaire, participatory mapping, etc.). The mapping will allow to have a first overview of the Venetian locations where it would be possible to carry out the planned community engagement activities.

Following the mapping, a kick-off meeting should be organized to structure, together with the subjects identified and selected during the mapping phase, a methodology of engagement, work and relationship between research and territory. The co-design event of the community engagement network could be held at Ca' Tron, home of the iNEST project at IUAV, obviously with the involvement of all the units participating in the project. The development of a methodology and a working tool, starting from the research on case studies previously conducted, which brings together universities and local actors, does not intend to be limited to the realization of this project, but has a longer-term perspective (the structuring of a permanent space within IUAV dedicated to community engagement and dissemination of research results).

At the same time, a research and analysis of case studies will be carried out to identify innovative methodologies and work tools on the theme of the relationship between research and territory, effective in defining innovative models of citizen engagement.

University of Padova (Spoke 5)

Historic Botanical Garden of the University of Padua (UNESCO SITE)

Museum of Nature and Man

This new museum represents a journey in which the history of science helps us interpret the world to come. The museum is where science and culture harmoniously merge as the main enduring legacy bestowed upon the city of Padua following the University's 800 anniversary celebrations, the almost 4,000 square meters dedicated to permanent and temporary exhibitions will stand as the largest university scientific museum in Italy.

It represents a scientific narration of planet Earth as an evolving system, describing the diversity of humankind and the environment, and the relationships between them, using multimedia and interactive methods for the ultimate learning experience.

Ca' Foscari University of Venice (Spoke 6)

Ca' Foscari University has an established tradition in the domain of cultural heritage, activities and policies thanks to its bachelor's and master's degree program in Economics and Management of Arts and Cultural Activities and the Executive master in Management of Cultural Assets and Activities. This is complemented by intense research activity conducted in those same areas by the Laboratory for the Management of arts and Culture and by the center aiku – arte, impresa cultura – dealing specifically with third mission initiatives, outreach and citizen engagement.

Much of this expertise has been channeled in the Spoke 6, where culture and creativity play a central role in the interpretation and reconfiguration of the touristic ecosystem, with the aim to develop relationships with a variety of institutions and stakeholder around cultural heritage and production.

Below is a list of possible institutions with which Ca' Foscari University has a longstanding research collaboration and could be activated for the purpose of CC3 "Citizen Engagement" of iNEST. Links to the institutions are provided together with a quick description of past and current projects and activities with Ca' Foscari University.

Institution	Type of collaboration
ICOM North East (international organization of Museum)	Established collaboration in the domain of museum management with a focus on community engagement (Faro convention) and the interpretation of museums as Innovation Hubs for business firms.
MUVE (Civic Museums of Venice)	Established collaboration for student's internships and the interpretation of museums as Innovation Hubs for business firms (SACHE Interreg project).
Civic Museums of Padua	Established collaboration for student's internships and the interpretatio of museums as Innovation Hubs for business firms (SACHE Interreg project).
Civic Museums of Treviso	Established collaboration for student's internships and the interpretation of museums as "creative nest" and Innovation Hubs for business firms (SMATH & SACHE Interreg project)
Civic Museum of Bassano del Grappa	Established collaboration for student's internships and for the role of museums as preservers and promoters of craft traditions and techniques (HEPHAESTUS Horizon project). Partnership for the study and promotion of performing arts as mediators of Museum experiences and improvement of the welfare of citizens (Creative Europe projects DANCING MUSEUMS and DANCE WELL)
Museum Network of Alto Vicentino	Collaboration on the interpretation of museums as "creative nest" and Innovation Hubs for business firms (SACHE Interreg project)
Natural History Museum of Montebelluna	Collaboration in an exhibition on "Sport and Science" for the engagement of business and citizens in the industrial tradition of manufacturing sports equipment in the local area.
Corporate Museums of the Veneto Region	Research based on the mapping of "industrial cultural heritage" in the Veneto region with identification and description of all corporate museums in the region. The research has evolved into the identification of system-wide cultural districts that will be presented in Treviso in late April 2023.

Institution	Type of collaboration
Fondazione Querini Stampalia Venezia	Established collaboration for student's internships with specific focus on studies on visitor expectations to suggest new strategies for heritage interpretation and mediation.
Palazzo Grassi & Punta della Dogana	Established collaboration for student's internships with specific focus on cultural mediation.
M9 Museum	Established collaboration for student's and research project with the first Italian museum without works of art that narrates the story of XX° century in Italy through a completely digital and interactive path.
Fondazione Bevilacqua la Masa	Collaboration in the project "Alchimie Culturali" that has the objective of putting contemporary art and local businesses in communication allowing young artists to work and produce with business companies.
Teatro Stabile del Veneto	Collaboration for series of theater shows "Asteroide Amor" whose title is inspired by the group of asteroids that skim the orbit of the Earth and other planets, bringing signals from other worlds
RES – Networks of professional theater companies in the Veneto Region	Research collaboration for the mapping of cultural work in the Veneto region and partnership for the research and training project "Approdi" and CAD"

University of Verona (Spoke 7)

The University of Verona - Spoke 7 will deal with citizen engagement activities concerning the Verona area, according to two macro-dimensions of intervention, that of digitization and that of sustainability. In particular, the willingness to carry out collaborative activities has been already collected by the network of Civic Museums of the Municipality of Verona.

The two Veronese museums of particular interest for the activities of iNEST could be the following:
- Castelvecchio Museum;
- Natural History Museum;

which allow, globally, to turn attention to both humanistic and scientific contents (in the sense of connected to natural sciences) typical of museum experiences.

The Spoke 7 has already elaborated a first idea of possible activities:

(a) Castelvecchio Museum: activities on the nexus between art, wine and food. The keywords of these activities are digitalization and accessibility.

(a1) An activity could be carried out to provide the production of a documentary on the representation of wine and food within the works of art, with particular reference, but not only, to those exhibited in the Castelvecchio Museum.

(a2) At the same time, the creation of a mobile application (app), which uses the technology connected to the use of QR codes, could be envisaged, for the use, in Italian and English, of the presentation of works exhibited in the Castelvecchio Museum, highlighting the principles and masterful solutions of Carlo Scarpa's exhibition.

(b) Natural History Museum: activities on the foods "of the future".

The key word of these activities is sustainability. The activities are aimed at disseminating the main contents, in terms of knowledge and above all with respect to the theme of sustainability of consumption. Particular attention will be dedicated to products connected, even if only potentially, to food consumption and which can be considered a novelty (absolutely or even only with respect to the context of Italian culinary traditions): the reference is, among others and by way of example, the use of insects as food. During these dissemination activities, we would try, where possible, also to co-design together with the involved subjects, providing, in this case, for them an active involvement and a role of co-production of the activity.

(b1) A first conceivable activity is related to the dissemination, with respect to the above mentioned theme, for teachers, basically of the first and second cycle of education and for the educational operators of the Municipality or of the Province of Verona. The hypothesis is to involve specialists in laboratory activities.

(b2) The second activity, planned in close connection with the theme addressed with the Museum of Natural History, consists in the organization of two opportunities for dissemination and discussion open to all interested citizens.

The activities planned in the Castelvecchio Museum are part of the broad line of intervention related to the digitization and accessibility of museums, strongly connected to the theme of the inclusiveness. It is worth mentioning, with particular respect to the production of a documentary, that this is part of a field of research, reflection and dissemination already developed at the University of Verona – Department of Cultures and Civilizations and Department of Biotechnology (also in collaboration with external partners, including the same Civic Museums of Verona – Municipality of Verona) whose reference is "The Food and Wine in ancient Verona (FaW) project".

The activities planned in the Natural History Museum have the characteristic of addressing a theme – that of sustainability connected to new generation products – widely present in the media and which seems to require extensive presentation and dissemination activity.

A possible collaboration with the Spoke 6 of Venice is widely supported.

University of Trieste (Spoke 8)
and
SISSA (Spoke 9)

LIS Laboratorio dell'immaginario scientifico – Museo Scientifico

Trieste LIS Laboratorio dell'immaginario scientifico, is an interactive and experimental science center/museum located in the Magazzino 26 of the Old Port of the city of Trieste. The museum is spread over two floors, with a total of 2,000 square meters of exhibition and laboratory space, interactive exhibits, all to be touched, in order to discover natural phenomena, the most innovative applications of science, and the research activities of the scientific community.

The friendly, informal, and engaging museum setting makes the Immaginario Scientifico suitable for all ages and for the organizations of different kinds of initiatives. LIS also includes two special sections: IMAGINAIRE SCIENTIFIQUE, an immersive space where you can take a journey through the most evocative images of science, and the PLANETARIUM, where you can watch fascinating projections of stars as well as plan immersive projections on different subjects. A second LIS branch is in Pordenone where the Spoke 8 has a very active affiliated Partner, the PAA.

As "new generation museums" the centers use original exhibition techniques and innovative educational methodologies, thus becoming a lively place, where visitors can really interact with objects and exhibits. The LIS philosophy and methodology: touching, experimenting, learning while having fun, is exactly what we need to disseminate iNEST results.

The collaboration between the Trieste Scientific Community and LIS experts, mainly the Director Dr Serena Mizzan, allowed to develop in the past many innovative initiatives. An agreement for collaborating in different dissemination events has already been established, such promising interesting and fruitful possibilities to disseminate iNEST results.

3.2 Innovative approaches relating art and science

Supporting art contamination and cross-fertilization with science

We believe art is a powerful instrument to bring science closer to the public, not limited to science communication, but going beyond it, as art can link science to our humanity and thus can help different audiences embrace and understand it. Art and science together can promote mutual dialogue, create emotions and strong involvement in all citizens.

In the Working Group we analyzed previous experiences in this direction as well as possible projects to realized thanks to iNEST.

University of Bolzano (Spoke 1)

Generate new arts and humanities approaches to cultural development through place-based making, external partnership working, knowledge exchange and creative co-production with businesses, arts and cultural organizations, communities and community partners.

Copperalities Elena Mazzi 2021

Copperialities emerges from Italian artist Elena Mazzi's participation in Scientific Visualizations: Impact on Practice (2019-2021), an interdisciplinary research project developed at the Free University of Bolzano-Bozen. Fostering a collaboration between members of the Faculty of Design and Art and members of the Faculty of Science and Technology, Scientific Visualizations assessed the relationship between design and art and scientific practices of visualization. Contributing to the field of image studies and art theory, the project involved art and media theorists, a team of scientists, a designer, and the artist Elena Mazzi.

The goal was to consider the diverse roles and modes visual arts can adopt in shaping scientists' relationship with their visual production and imagination. To this aim, art and media theorists observed and participated in the process in which these relationships unfolded.

Mazzi orchestrated a series of workshops to invite scientists to reflect on their experimental practice and to enable them to experience the experimental dimension of her practice as an artist. The series consisted of two different sets of encounters: firstly, a shoot within the scientists' laboratories. With the technical support of a video maker, Mazzi learned about each scientist's research and recorded the performative dimension of their work.

Secondly, Mazzi held workshops at Vetroricerca studio, a glass-making studio in Bozen. She often collaborates with craftsmen to materialize her work, testing the possibilities of materials to search for an accomplished aesthetic shape. By bringing the scientists to the glass workshop, she invited them to enter her artistic sphere of experimentation. *Copperialities* coalesces and presents these exchanges in a multimedia installation.

Studium Generale, Unibz

Studium Generale is an interdisciplinary study programme available to the general public for those who wish to strengthen their knowledge in various fields ranging from creativity and culture to technology, social science and law and business, from parenting parents and families to languages, sustainability and communication.

In particular:
Cultural Heritage and Cultural Production Platform, *Faculty of Design and Arts*, *Free University of Bozen-Bolzano, in collaboration with the educational program Lifelong Learning Museion Academy, Museion museum of modern and contemporary art Bolzano. Curated by Waltraud Kofler Engl, Brita Köhler*

In the event series "Today is tomorrow's yesterday: Conversations and visits on heritage cultural at the crossroads of time", the debate on the concept of "cultural heritage" continues as part of the Studium Generale.

In contrast to the classical view that the term is to be understood primarily in relation to the past, it is proposed to look at the concept from a new and extended perspective, capable of including aspects of the present and future-oriented issues.

The aim of this series of events organized in eight meetings, is to create a dialogue between the historical and contemporary aspects associated with the construction and protection of cultural heritage, but also with its visibility and collective responsibility towards it.

The proposal includes: conversations on specific topics with guests from the artistic, cultural and business worlds; behind-the-scenes looks at local institutions committed to building and preserving cultural heritage; but also special visits to the city on the traces of the past and present.

University of Trento (Spoke 2)

Teatro della Meraviglia UniTN - (https://www.teatrodellameraviglia.it/)

The Teatro della Meraviglia is a festival where art and science meet. It is aimed at a varied and curious audience: those who love theater and those who love science, veterans of live entertainment and young people who want to be fascinated.

Scientific progress has fundamentally changed the world we live in and offers us wonderful ideas to explore, ethical dilemmas to consider, and urgent issues to address. Art and theater allow us to transform all these concepts into experiences and emotions that can deeply touch the human soul.

The Teatro della Meraviglia draws its *raison d'être* from this reflection and arises from the awareness that often the boundary between Art and Science is thin. After all, every science researcher is also a bit of an artist, and every artist is a researcher.

Augmented Lectures

These lectures represent an innovative science communication format in which a scientist and an artist, together, create and produce a live performance.
https://www.jetpropulsiontheatre.org/prod_augmentedlecture-it.html

Ca' Foscari University of Venice (Spoke 6)

The approach, inherited from the history of scientific dissemination, cantered on the museum as the space par excellence of cultural heritage, is now flanked, and often intertwined, by other approaches emphasizing artistic languages and practices as tools for mediation and involvement.

Regardless of the space in which they occur, the artistic interventions proved capable of conveying some of the most profound aspects of the process and of the research result by mobilizing visual, poetic, musical and performative expressions that activate more direct and emotional channels of dissemination and engagement.

iNEST Spoke 6 is distinctively characterized by a concentration on phenomena with a high territorial and social value (cities, tourism, cultural production, landscapes, communities) in which the role of canonically scientific-and experimental research is comparatively lower while the human and associative relationships occurring in the spaces of social and productive aggregation assume centrality.

In these contexts, research results very often assume an immaterial configuration embedded in a system of social or socio-technical relations: think for example, the definition of a business model, a new approach to cultural regeneration or the development of new forms of territorial narration.

Spoke 6 therefore proposes to integrate in the general planning of the transversal activity "Citizen Engagement" references to the use of forms of direct involvement of artists (theatre, visual artists, musicians, dancers...), and their forms of expression in various spatial contexts (obviously without excluding museums) but explicitly embracing the possibility of actions and events in urban (centres and suburbs) and rural contexts, industrial archaeology sites, companies, laboratories of research, tourist contexts... and in general in any place that can be symbolic and significant of the processes and research outcomes of the Spokes.

Initiatives would be directed at the general public with a focus on those categories of citizen, regardless of their age, that are or feel marginalized with regards to the production and understanding of scientific and cultural debates. The adoption of such a perspective in the identification of target audiences will direct first and foremost attentions to social and education conditions and geographical location of citizens.

Spoke 6 proposes 4 types of citizen engagement initiatives which are sketched below but can be further articulated.

Performing Media-storytelling of research

A performing media format mediated by a performer and combined with "walkabouts", nomadic radio broadcasts, for a participatory exploration of places and organizations. A form in which the participatory narration is inscribed in the action "augmented" using radio and the web.

Conversations supported by smartphones and headphones connected to a radio receiver (whisper radio) allow to listen to the voices of walking-talking heads and prepared audio repertoires, in a radio stream that can be streamed via web radio and georeferenced. The walkabouts are site specific and typically low cost which allows for the reproduction in time and space.

Artistic residencies in organizations and research labs

Engaging interaction between artists and companies or research organizations based on the model of the residency. The artists are selected by the iNEST researchers to create a dialogue with companies or research organizations interested in making their results more engaging with artistic creativity "in action".

To carry out these projects, artists work in the context of production or research with the aim of producing artworks (often in the form of public art) that are engaging thanks to codes such as the symbolic character of the work of art, the procedural peculiarity of the artistic work, paradox, and irony. The curated collection of artworks could be displayed in a curated exhibition.

Research-based theater shows

These initiatives would be based on the collaboration between professional theatre companies and companies/research centres for the development of dramaturgies and theatrical performances that narrate the research process and outcomes in an innovative way, capturing its different facets and components.

An intersectoral dialogue that feeds the exchange of knowledge and approaches, an opportunity to stimulate to get to the essence of scientific results and business innovation. The curated collection of theatrical shows could be performed during a new festival of theatre for science and research or be associated with existing ones.
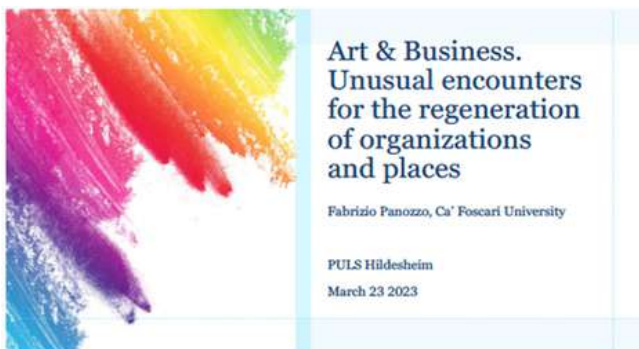
Images and sounds of research

A combination of a contest and final exhibition of video and sound art.

iNEST would invite artists working with the moving images (filmmakers, photographers.) and with sound (musicians, sound designers) to engage with the processes, intermediate results and final outcomes of the different research topics and tasks undertaken within the ecosystems. A jury will select which proposals are more promising and challenging and will create the connection between researcher and video or sound artists (or both) to start a dialogue that would lead to the production of short video artistic movies, soundscapes, and music. The curated collection of the various production could be displayed in a contemporary art museum like, for instance, the M9 Museum in Mestre.

A further example that could be reproposed and adapted to iNEST context, is given by the Art & Business project that F. Panozzo performed at a German innovation center in march 2023. Three slides on this context are following:

Art & Business.
Unusual encounters
for the regeneration
of organizations
and places

Fabrizio Panozzo, Ca' Foscari University

PULS Hildesheim

March 23 2023

Artistic interventions in business

· What sort of innovation can arise from the contamination between art and business?
· What happens when an artist shares times and space with a business company?
· Since 2017 Ca' Foscari university has answered these questions conceptually and concretely experimenting with the artistic intervention.
· The interventions promotes the presence of art within traditional business activities, the dialogues with entrepreneurs and managers, the identification of new meanings and methods.

Sea level rise

Artist: Andreco
Company: De Castelli
Site: Venice

The installation consists of an open iron structure of considerable size, designed and built in collaboration with the company, intended to protect a system of plants typical of the Venetian landscape, combined with a visual representation of the future of Venice expressed through forecasts for its water levels.

Proposal: *all the artistic actions that use theatre to express problems could be aggregated in an iNEST Festival of Theatre and Science or an iNEST Festival of Images and sounds of research.*

University of Trieste (Spoke 8)

Plasticocene Project

With the support of the artist Elisabetta Milan, different activities have been promoted to raise awareness among citizens on the issue of plastic pollution of seas and rivers:

- art exhibitions made with plastic material and recovered nets; installations along waterways;
- artistic representations with giant jellyfish corresponding to a household's weekly plastic consumption;
- insertion of plaques with the words "the sea begins here" to be put on manholes, especially in cities that are not on the sea (this initiative is widely spreading at European level).

One of these exhibitions presented the very innovative narrative "From Hell to Paradise: a trip in the Plasticocene ".

In Trieste, in the framework of iNEST, we are planning further events in collaboration with Elisabetta Milan and related to the spoke topics.

Trieste will also enforce collaboration with different Associations, like Marevivo, to support the dissemination of campaigns dedicated to the general public.

3.3 Initiatives with schools

Activities for schools related to the specific themes of iNEST will be designed, planned and implemented with the active involvement of professors and students.

Some example and proposals follow.

University of Trento (Spoke 2)

Teacherdojo – https://fablab.unitn.it/teacherdojo/

Teacherdojo is a professional updating workshop aimed at primary and secondary school teachers on the topics of computer science teaching, computational thinking, and creative learning, in which, until 2022, training modules focused on computer science without computers, visual programming and maker activities have been proposed.

Starting from 2023, we will expand towards the STEM area.

The 2022 edition saw the participation of 170 teachers over a three-days period. This event has the possibility of producing a significant impact on scientific dissemination, since by working with teachers we can reach a large number of students.

University of Padova (Spoke 5)

With the idea of the person at the center of every development project, the well-being of citizens, social inclusion, the protection of natural resources, the development of places of culture, socialization and training are promoted.

In collaboration, also with the Museums, the aim is to generate citizen science projects involving stakeholders, museum audiences, school groups and local communities of citizens on the theme of the relationship between individuals and living environments, considering the mediation carried out by the digital transition and the consequent transformation of increasingly hybrid living places between cognitive-digital worlds and the physical world.

Particular attention will be paid to the **age groups 6-12 years**, promoting languages and approach aimed at a socially and cognitively age-appropriate involvement.

Participants will be involved through specific visits to museums, lectures, and workshops, in **participatory research activities** oriented to the places of life in terms of:

- Accessibility: mapping accessibility, both physical and digital, to spaces of life, culture, work, education, leisure.
- Inclusion: analysis and mapping of spaces and services, tangible and intangible, for children, families with newborns, for seniors and the very elderly, for intergenerational encounter.
- Well-being of the person: analyze and understand the relationship between psychological well-being, mediatization processes and physical places of life (home, work, school).
- Sustainability, environment and habitat: analysis and mapping of air, soil and water quality in different areas of the city, monitoring of sustainable and non-sustainable behavior.

Development phases

In order to develop engaging and effective activities, the following development phases will be respected:

Training: participants will be trained on the themes of their specific project with innovative methods, through multimedia and immersive systems. Formation of common objectives, methods of collaboration and definition of the work agenda.

Data collection: participants will be provided with tools and instructions to collect environmental, social, behavioral data. Participants will record the data through scientific equipment and learn how to store them properly, if necessary, in compliance with the relevant rules. Data collection can take place through the use of a dedicated app, available for smartphones. Volunteers, equipped with smartphones, will have to explore the area of interest and report. Online questionnaires will be carried out to collect information on the habits in place among citizens even in remote places.

Data analysis: The collected data will be analyzed collaboratively to identify any significant results. The results will be shared with all stakeholders and communities interested in the topic. They will be represented through infographics and illustrations to facilitate understanding.

Communication and Awareness: participants will be involved in disseminating the results and raising awareness on the covered topics. Information materials, based on science but easy to understand, on the identified phenomena will be created and distributed.

Concrete actions: participants will be encouraged to adopt consistent behaviors, (for example, use means of transport with low environmental impact, support a social center for the elderly, promote separate collection) and to spread these practices in their community.

Internationalization and Sharing: developed projects will be shared on eu-citizen.science, the European platform for sharing "citizen science" projects, a "knowledge hub" where it is possible to share tools, resources, projects, training and other useful things. link: https://eu-citizen.science

The project aims to recruit a significant number of participants, in particular "very young researchers" (6-12) and aims at their involvement in the collection, analysis and understanding of scientific data and results on phenomena that are fundamental today for the development of mankind and the sustainability of the planet; all this in a participatory, captivating and attentive dimension to the local territory.

The information obtained will be accessible from a central database with data on phenomena analyzed in the different communities. Finally, the project aims to raise awareness among citizens on the issues of: transformation 5.0; person at the center of projects; environmental and social sustainability; intelligent use of new technologies.

University of Trieste (spoke 8)
in collaboration with LIS, Marevivo and Area Marina Protetta of Miramare

Environmental education courses for young and very young people.

1 "What if project "

CAUSES AND EFFECTS IN THE COMPLEXITY OF THE WORLD (What if explained to the kids). The United Nations 2030 Agenda has set out the 17 goals for Sustainable Development, a plan for people, planet, and prosperity. The 17 objectives concern the economic, social, and environmental spheres; they are interconnected, achievable through actions and interactions linked to each other and between the objectives themselves.

Being citizens aware of what it means to live in a complex world means being citizens committed to reflecting on choices and their consequences.

Every day we make choices: what we eat, how we behave, what we buy... Choices defined by tastes, economic availability, needs and values that we want to pursue.

Every choice we make has effects and impacts the world around us in a more or less evident way. The "what if" discussion game takes the form of a collaborative game in which the participants, with the help of cards, news, and characters, must make decisions, solve problems and suffer the side effects of others' choices. The aim is to become aware of how all actions have an impact on our planet by influencing ecosystems, public health, the world of work, the division of wealth and natural resources.

From rising temperatures to mass migration, from the financial crisis to coastal erosion, everything is connected by a thin thread that involves us all.

Attention will be dedicated to the theme of the sea and its health, with specific analysis to the "what if" question in relation to the creation of the digital twin of the Gulf of Trieste. (Main objective of Spoke 8).

2 Martina the starfish

Paths of education to the protection and respect of the sea dedicated to children aged 3 to 7 years.

In collaboration with Marevivo Association and with the artist and creator of kids comic Nicoletta Costa, we intend to involve kids thanks to the character of Martina Stella di Mare (The Starfish Martina) that is presented in booklets and events. The Starfish Martina, which represents the **Starfish mission of the European Commission** and the 5 objectives linked to it, is the protagonist of stories that accompany children to discover the sea, its biodiversity and the problems that afflict it: first of all plastic and pollution.

The project aims to raise awareness among children on these increasingly topical issues, by teaching them how pollution arises, what are the small daily actions that we can do to reduce it, what could happen if we continue to adopt wrong behaviors and what we would get instead if everyone, adults and children, adopt new behaviors to preserve our sea. The project has been acknowledged by the European Commission and presented, as a best practice example, in different European events.

As part of the project, a competition among kindergartens has been launched to raise awareness among new generations and encourage them to reduce the daily use of plastic and ensure its proper reuse and/or disposal, to protect the seas and oceans. 2.500 kids are willing to participate.

For next year we plan the creation of a second volume dedicated to Martina which will have as main theme the acoustic pollution in the sea.

For citizens of any age

"Martina Stella di Mare"
By Nicoletta Costa
Edito Panini
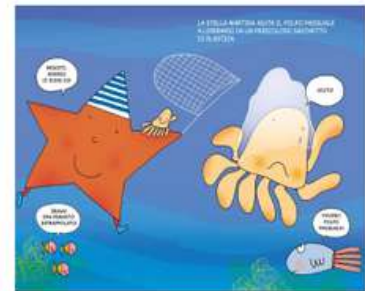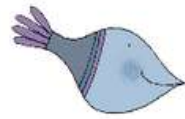
3.4 Some examples of already planned events for the year 2023, presenting iNEST results to the general public.

A few examples of iNEST events that will be realized in the next milestone periods and that have already been planned, are listed below.

University of Bolzano (Spoke 1)

- Unibz – start of the "Studium Generale" programme titled "Dialoghi sugli ecosistemi montani tra arte e scienza" (7 talks 10.23–01.24)
- Unibz – cooperation with the initiatives of "BAW Bolzano Art Weeks": guided visits to the sites of the exhibition with the engagement of the iNEST researchers
- Unibz – cooperation with the initiatives of the "Content" group of Museion: performance by Aitana Cordero on the topic of memory and identity in the context of overtoursim affected sites.

This living lab can also count on an inclusive urban park, which is supplied with inclusive furniture, sports and leisure equipment purposefully designed to be used and shared by individuals with and without disabilities. The smart home living lab enables researchers to test, in a situation close to the field, new technology solutions to advance the field of Ambient Assisted Living and improve the quality of life of end-users, that is individuals with disabilities and their formal and informal caregivers.

University of Trento (Spoke 2)

- UniTN: Teacherdojo@Trento (https://fablab.unitn.it/teacherdojo/).
- Professional development workshop for teachers about computer science and computational thinking.
- UniTN: Teatro della meraviglia (https://www.teatrodellameraviglia.it/)
- UniTN, Settembre 2023, Sharper's Night Trento (https://www.sharper-night.it/event-organizer/sharper-trento/)
- UniTN, Agosto-Dicembre 2023, second edition of the Podcast "Riflessi di Scienza" (https://www.unitn.it/riflessi-di-scienza)

Ca' Foscari University of Venice (Spoke 6)

- Crea – Art-based exploration of a creative district, Venice, April 2023
- System-wide cultural districts, workshop, Treviso, April 20, 2023
- Atmospheres of Craft, Art Installation, May 27, Bassano del Grappa
- Re-imagining Venice – 1, participatory video workshop, Venice, June 2023
- Art-night, Venice, June 2023
- Re-imagining Venice – 2, participatory video workshop, Venice, November 2023

University of Trieste (Spoke 8)

Some activities will be carried out in collaboration with OGS
- Barcolana Sea Summit 2023
- NEXT 2023
- Researchers' Night 2023
- Rose, libri, musica 2023
- "Uno sconosciuto di nome mare" – performances in different FVG Regional locations.

Sissa (Spoke 9)

Some activities will be carried out in collaboration with OGS
- NEXT 2023
- Researchers' Night 2023
- SISSA for School
- SISSA in Festa
- Pint of Science
- ILAS activities of the interdisciplinary laboratory.

3.5 Survey and social poll (Coordinated by Universities of Verona and Trieste)

Among the different co-participation initiatives and citizens science actions that will be promoted, C3 is planning to organize a survey and poll study on public opinion.

The iNEST survey will involve citizens residing in North-East of Italy and will analyze their attitude towards the different topics considered in the project; it will be submitted to about 2.000 people in a first step, followed by a second and smaller one. The research will focus on a general analysis of the main ways through which individuals enjoy the cultural activities organized by museums and similar institutions dedicated to the production of culture and the relationship between these ways and the sociodemographic, cultural, and socioeconomic features of respondents.

Possible contents of the questionnaire to be integrated with contents related to the specific themes of iNEST (with main focus on sustainability and digitalization) are: Socio-demographic profile. Cultural capital. Economic capital. Use of museums / archaeological parks / etc. Participation in cultural events. Community social capital. Generalized social capital: generalized trust in the other, trust in institutions. Civism: participation in elections, commitment in the territory, etc.

3.6 Further interesting citizens engagement initiatives

University of Trento (Spoke 2)

Riflessi di Scienza
UniTrento Podcast
https://www.unitn.it/riflessi-di-scienza

Riflessi di Scienza is a production of the University of Trento with the collaboration of Arditodesìo; it is the podcast that explores science. With the hand of Andrea Brunello and the original music of Stefano Oss, every fortnight we will go to look for important scientific and human issues to explore a world, that of science, which is too often seen as distant and cold. UniTrento is member of the ECIU - the european consortium of innovative universities) (https://www.eciu.eu/about-eciu). ECIU promotes a challenge-based educational approach, both inside and outside the university: https://www.unitn.it/ECIU.

Also challenges involving the population were held: https://www.eciu.eu/for-business-society

University of Udine (Spoke 3)

Only by knowing the past you can build the future; the University of Udine together with Confindustria Udine imagine industry 5.0.

Vetrina dell'Ingegno

Thanks to the restoration of the medieval Tower of Santa Maria, Confindustria Udine has created an ambitious, as necessary, project aimed not only at combining present, past, and future of Friulian entrepreneurship, but also at bringing citizenship, especially the young people of the territory, closer to the values and culture of business and to the specificities of territorial ecosystems. To achieve these goals, the Tower becomes a cultural, educational, and training center. The exhibition itinerary develops on the 5 floors of the Tower and is divided into a permanent and a temporary exhibition. In the first, at the beginning of the journey, there is the story of the Industrial association of Udine, told with images and videos that not only retrace the life of the Association, but project it, thanks to Impresa Futuro, into industry 5.0.

The ambition of this project is to promote the territory and businesses by highlighting the main factors that become strategic, thus establishing an educational and training dialogue with the population and especially young people, allowing them to improve their knowledge and their specific skills.

Impresa Futuro

Impresa Futuro represents an effort to imagine future scenarios in 20 years; it is realized through a multidisciplinary think tank and represented by a multimedia story built by the Storytelling Lab of the University of Udine.

In conclusion, "Vetrina dell'ingegno" and '"Impresa Futuro" will in fact be not only a synthesis of the past and present, but also an example of what can be done and undertaken in the future.

University of Trieste (Spoke 8)

Uno sconosciuto di nome mare

Between musical notes and readings of narrative texts, the Scientists explain the mysteries of the sea.

Different performances will be realized in different locations in the FVG Region, expecially involving the suburb areas.

The performance has been already included in the iNEST - C3 activities; a video will be produced.

Progetto realizzato da Marevivo FVG grazie al contributo della Regione Friuli Venezia Giulia.

MAREVIVO

REGIONE AUTONOMA
FRIULI VENEZIA GIULIA

In collaborazione con:

i NEST

UNIVERSITÀ DEGLI STUDI DI TRIESTE

OGS

WWF

ALTO ADRIATICO

Comune di Gorizia

CEI
CENTRAL EUROPEAN INITIATIVE

UNO SCONOSCIUTO DI NOME MARE

Tra note musicali e letture di testi narrativi, gli scienziati spiegano i misteri del mare.

"Il mare! Il mare! Chi non ama il mare? E' una presenza costante nella nostra vita, una presenza amica. Ecco, per tutti noi il mare è un amico!"

Musica: Marco Castelli
Narrazione: Roberto Eramo
Creazione narrativa : Fabio Denitto
Apporto scientifico:
Ricercatori dell'Istituto Nazionale di Oceanografia e di
Geofisica Sperimentale
e
dell'Università degli Studi di Trieste

Dall'esperienza maturata negli ultimi anni, Marevivo FVG ha appurato che l'unione arte e scienza è un connubio vincente e ha dunque pensato di implementare la connessione tra la comunicazione scientifica e le arti umanistiche, mettendo a contatto i mondi della letteratura e della musica con quelle della divulgazione scientifica.
Da qui è nato il progetto " Tra Mare e Letteratura".

Il percorso ribattezzato poi "Uno sconosciuto di nome Mare" consiste in una serie di appuntamenti sul territorio della Regione FVG che si svolgeranno da maggio a settembre 2022, durante i quali i cittadini verranno invitati ad assistere a letture di brani selezionati da testi della letteratura classica e moderna, interpretati in una nuova chiave scientifica ed ecologica e accompagnati dalla musica e dall'arte.

Partendo da problematiche ambientali e ricerche scientifiche che trattano temi quali lo sfruttamento incontrollato di risorse ittiche e l'ingerenza antropica e la comunicazione via mare, si sono individuati testi in letteratura classica e moderna che, in chiave rivisitata, descrivono il rapporto uomo-mare e uomo-natura, dando un importante assist per parlare di sinergia tra connessione e scienza in tutte le sue sfumature.

PROGRAMMA

Incipit narrativo

1. Lettura tratta da : "La pesca" di Vittorio G. Rossi
Tema scientifico: La pesca

Filo Narrativo e musica

2. Lettura tratta da : "Leoni di Sicilia" di Stefania Auci
Tema scientifico: Il Sale

Filo Narrativo e musica

3. Lettura tratta da : "I lavoratori del mare" di Victor Hugo
Tema scientifico: La Comunicazione

Filo Narrativo e musica

4. Lettura tratta da : "Il quinto giorno di Frank Schatzing"
Tema scientifico: Lo Tsunami

Filo Narrativo e musica

5. Lettura tratta da : "Mio padre, l'Ammiraglio" di Fernando Colombo
Tema scientifico : Le grandi scoperte
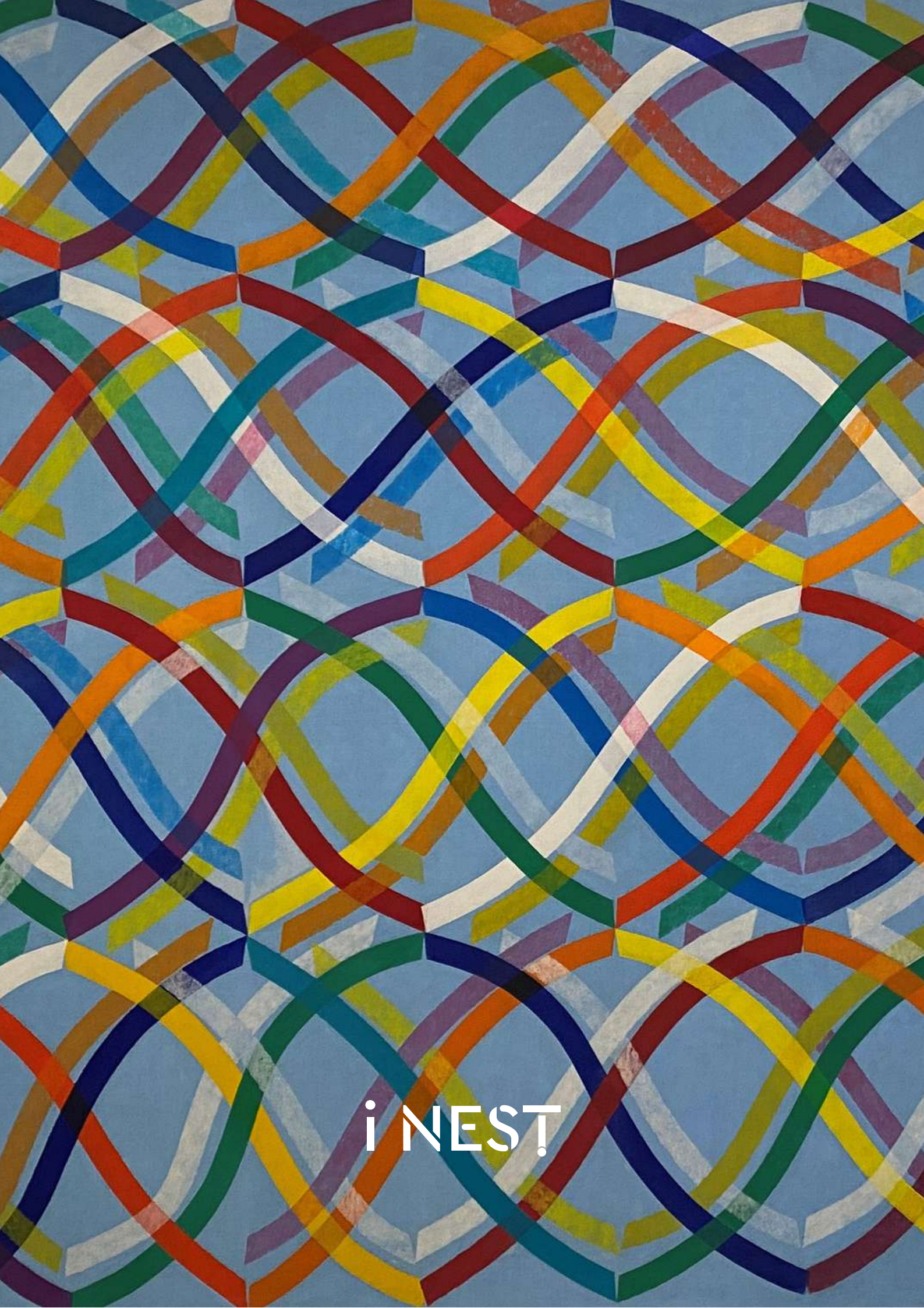
Conclusione narrativa e musica

RINGRAZIAMENTI E SALUTI

i NEST Interconnected Nord-Est Innovation Ecosystem

August 2023

i NEST