GRIN

Art-driven innovation for digital and green transition in European Regions

S+T+ARTS residencies

Guide for
Applicants

Deadlines 9th June
and 26th June 2023

The GRIN project organizes S+T+ARTS residencies for artists to explore the development of solutions that can address the digital and ecological transition in Europe.

S+T+ARTS is an initiative of the European Commission to encourage partnerships between science, technology, and the arts, recognizing the tremendous potential for creative innovation that emerges from their convergence. This kind of innovation is vital to address the social, ecological, and economic challenges facing Europe in the coming years. The initiative emphasizes the equal relevance of scientists, tech experts, and artists in the innovation process, as they influence and enrich each other's perspectives and practices.

As part of the S+T+ARTS initiative, the S+T+ARTS Residency Programmes facilitate collaborations at the intersections of science, technology, and the arts, leading to pioneering results in creativity and innovation.

The *Art-driven innovation for digital and green transition in European Regions* **(GRIN)** is a preparatory action under the S+T+ARTS initiative, aiming to organize 12 artistic residencies in Austria, Italy, Portugal, and Finland, focused on effective solutions and cases for digital and green transition.

1. GRIN overview

GRIN recognizes the significance of digital technologies in shaping the future of society and business. However, it believes that the design and development of digital solutions should prioritize building trust and acceptance among the public. This will help accelerate the adoption of these technologies, which is critical for achieving ecological and digital transition goals. The European Commission's New European Bauhaus initiative underscores the importance of incorporating environmental factors into the design process for technology and solutions. GRIN shares this commitment and aims to encourage the integration of artistic practices with science and technology to contribute to Europe's efforts in transforming its circular economy. In this regard, GRIN invites artists to apply for its Residency programme to explore innovative ways of integrating technology and art to create sustainable solutions for the future.

Through 12 artistic residencies, the project aims to increase the creation of multi-disciplinary teams of scientists, technology providers, engineers, designers, and artists, and foster the development of 12 new artworks/solutions in line with a human-centered approach to innovation.

The GRIN residencies will be hosted in six different regions across Europe, addressing both local and European challenges. The program offers a unique opportunity for artists to collaborate with leading

experts in science and technology, developing innovative solutions for sustainable living in Europe and beyond. The residencies will be hosted by local partners who will provide guidance and mentorship to the selected artists. The partner organizations include _Johannes Kepler Universität Linz_ (coord., AT), _Artshare_ (PT), _KILOWATT_ (IT), _CINECA_ (IT), _Coliseu Porto Ageas_ (PT), _Oulu University of Applied Sciences_ (FI).

2. Open Call for S+T+ARTS residencies

GRIN offers 40,000 euro grants to selected artists. The residences and the relation of the artists with the project will be managed by a dedicated team of scientific, artistic, and curatorial experts of the project. The results of the residencies will potentially be exhibited in specific curated exhibitions at main venues and under the artistic direction of a renowned curatorial team.

The following may apply, either on an individual basis or as a team (consortium):

- Individual artists
- Artistic collectives, communities or groups
- Artistic studios in the form of SMEs

Applicants may be legal entities or natural persons. In addition, the following condition apply:

● The organizations or individuals applying should not have convictions for fraudulent behavior, other financial irregularities, unethical or illegal business practices.

● The participating organizations in the form of SMEs should not have been declared bankrupt or have initiated bankruptcy procedures.

The aim of the residencies is to produce an art-driven experiment of stimulating the uptake of digital technologies, either by EU citizens and companies, to address social, business and sustainability challenges. **Outcomes of the residencies should represent a technical demonstrator of the technology proposed, coupled with the artistic demonstrator of the novel usage scenario proposed by the artist.**

The final result would be an artwork in the form of artistic demonstration e.g. **_performance, video, sculpture, immersive experience, digital artistic assets._**

The artists' commitment to the project lasts for at least the duration of the residency and may obviously continue beyond the lifetime of the residency. The duration of the residency is expected to be 6 months. The residencies begin with a short research phase during which the artists will spend time discussing with their hosting organization and learning about research, and technology initiatives. In return, Residency hosts learn about the artist's practice, working methods and perceptions of the questions being explored. Exhibitions or public interventions should be planned starting in 2024.

Project proposals should focus on one of the topics that are identified in each region hosting the residency. The Residencies create artworks and stimulate public dialogue through exhibitions, communication initiatives and industry collaborations.

2.1 Residencies Overview

Region	STARTS Residency
Johannes Keppler University in Linz (*Upper Austria*)	3 Residencies
KILOWATT - Bologna (*Emilia-Romagna*)	2 Residencies
CINECA - Bologna (*Emilia-Romagna*)	1 Residency
ARTS - Aveiro *(Portugal)*	2 Residencies
Coliseu - Porto Distric*t (Portugal)*	2 Residencies
OAMK - North Ostrobothnia (Oulu) *Finland.*	2 Residencies

The residencies address the following main themes:

1. **Green and blue infrastructure**
2. **Circular solutions**
3. **Climate neutrality**
4. **Well-being and sustainable living**

The themes are further divided into specific topics for each region:

1. **GRIN Residencies in Linz, Austria: Hatred on the internet, The Climate Crisis, Well-Being of young people (DEADLINE 9th June 2023)**
2. **GRIN Residencies in Bologna, Italy: Supercomputing, Quantum and Digital Twin (DEADLINE   26th June)**
3. **GRIN Residencies in Porto, Portugal - AR Contemporary Theatre (DEADLINE 26th June)**
4. **GRIN Residencies in Aveiro, Portugal - Drone technologies for biodiversity (DEADLINE 26th June)**
5. **GRIN Residencies in Oulu, Finland - Sound and Prin**t **(DEADLINE 26th June)**

Artists who are interested in applying for the GRIN residencies **can select a specific topic and region for their project proposals**. The aim is to encourage artists to develop innovative projects that address important issues related to sustainability, technology, and the environment, while also promoting cross-cultural exchange, collaboration and new ways to promote sustainability and environmental awareness through their art.

2.1.1 GRIN Residencies in Linz, Austria: Hatred on the internet, The Climate Crisis, Well-Being of young people

GRIN Linz Residencies: Hatred on the internet, The Climate Crisis, Well-Being of young people	
Location: *Linz, Austria*	Host: Circus of Knowledge at Johannes Keppler University in Linz

The Circus of Knowledge at the Johannes Kepler University is a participatory and inclusive arts space operating since April 2022. The Circus of Knowledge is a pioneering project, which was created by the Rector of the JKU, Prof. Meinhard Lukas, as part of his vision promoting both art-driven innovation and citizen focused communication about science and technology.

The Circus of Knowledge is part of the third mission of the University to disseminate knowledge. At the JKU we do this also in artistic and creative ways. The Circus deals with a wide variety of topics that are developed with scientists. Current activities include numerous participatory workshops with young people about various topics as well as the presentation of high quality artistic performances (Theatre, Music, Dance) developed for the Circus itself.

The Circus of Knowledge organizes educational activities for children and young people, involves University students, connects with other regional players and initiatives, coordinates programs that link art and technology, showcases the results and fosters business connections.

The artists selected for the residencies will collaborate with both professors and researchers of the various departments involved in research connected to the topic. The artist will be able to access a wide variety of researchers through additional mentorship that will support both the technological and scientific aspects of the project that will be presented in the Circus of Knowledge at the end of the residency.

Additional requirements will include the development of a participatory methodology for the project and the collaboration with groups of people (especially young people) who are affected by three topics. The final presentations need to be inspired and developed through workshops with affected citizens.

The outcomes will be presented in the Circus of Knowledge in Linz. The selected artists will need to stay in Linz during their research and development phases and production phases. **The Circus of Knowledge invites artists (with theater, dance, music, or performance art backgrounds).**

Applications for these residencies can be provided in English or German.

NOTE: DEADLINE FOR APPLICATION FOR JKU RESIDENCIES IS 9th June 2023.

 The email address to which to send the applications for the JKU is zirkus@jku.at

 Questions about the applications to JKU can be referred to airan.berg@jku.at

2.1.2 GRIN Residencies in Bologna, Italy: Supercomputing, Quantum and Digital Twin

GRIN Bologna Residencies: SUPERCOMPUTING, QUANTUM AND DIGITAL TWIN	
Location: *Bologna, Italy*	**Host: CINECA, KILOWATT**

Science and technology, through big data and the great calculating capacity of pre-exascale supercomputers like LEONARDO in Bologna, a world-class supercomputing system, with a computing power of nearly 250 petaflops (250 million billion calculations per second) that will be further enhanced by the integration of a quantum computer. As such, it will enable unprecedented research on environmental sustainability, like the creation of digital twins of our planet, our cities, but also of factories and other complex systems, including ourselves.

These 'synthetic worlds' can help us visualize and understand the relationships existing in complex systems which are difficult to see or experience; they can show us the results of certain actions, policies, choices, thus elaborating predictive models that are also useful for the prevention of climate and health risks, and in general for making complex decisions with high degrees of randomness.

But the expansion of digital double systems poses both opportunities and challenges. They can reinforce a **terraforming approach** that has transformed landscapes and ecosystems through genocides and systematic transformations, or help decolonize our idea of the Earth and show non-anthropocentric scenarios. Digital double systems can also reveal connections and relationships otherwise not visible, such as those between species, and help imagine more equitable modes of **cohabitation**. With ever-increasing computing power, digital double systems can help us to experience the interconnection between all beings and reveal the **interdependence of cultures, environments, and forms of life**, particularly in the atmosphere. However, the complexity of decision-making and forecasting will increase with the ever-increasing amount of data and scenarios, and technology needs to integrate seamlessly with human experience to rediscover cognitive and sensory capacities that are almost forgotten.
In highly evolving contexts such as these, scientific research and the speculative fabulation typical of art need each other to generate radical innovations that will carry us into an ever better future.

Artists are invited to propose topics and reflect on questions such as "How can digital double systems contribute to decolonizing our relationship with the Earth and promote non-anthropocentric perspectives?"; "In what ways can digital double systems help us understand and address the interconnectedness of all beings, cultures, and environments?"; "What ethical considerations should be taken into account when creating and implementing digital double systems in order to avoid reinforcing existing power structures or creating new ones?"; "How can technology be designed to enhance human experience and promote sensory and cognitive capacities that are often overlooked or undervalued?"; "What role can art play in shaping the development and use of digital double systems, and how can artists contribute to a more equitable and sustainable future?"

Additional information on the facilities and technologies related to the GRIN Residency in Bologna are provided in Annex I.

2.1.3 GRIN Residencies in Porto, Portugal – AR Contemporary Theatre

GRIN Porto Residencies - AR for Contemporary Theater	
Location: *Porto, Portugal*	**Host: Coliseu Porto Aegas**

A symbol of Porto city and an iconic building of modernist architecture, **Coliseu do Porto** has been, since 1941, a stage for all audiences and a wide range of arts. A theater where the classic-style decor coexists with advanced equipment and technology, thus creating a unique environment that is fully prepared to host all kinds of performing arts. An eclecticism that has come to be the measure and identity of this venue of infinite possibilities.

These **S+T+ARTS residencies, focused in augmented reality for contemporary theater**, are to be developed as a space for investigation, creation and registration for new artistic techniques and materials, aesthetic and thematic research and opportunities for interdisciplinary and transcultural dialogues. Coliseu welcomes various methodologies and approaches towards research that unfolds not only through the performance but also includes forms of experimentation with the body and other non-traditional systems of knowledge.

+ There is no commitment for residents to create a production during or after the residency. Instead, residents will be asked to present at least one public programme of their choosing, developed in conversation with the project team.
+ The work carried out for the development of artistic projects in both artistic residencies will have the support of qualified technical teams and Coliseu artistic and technological partners.

GRIN Porto Resdiency 1 –" Back to the future"

Porto, a century-old city, full of historical, architectural, social and cultural dichotomies. Spaces and traditions that perpetuate themselves in an endless transformation.

New technologies offer a different way of telling the history and/or stories of the city.

Artists are invited to work on an approach on how to share the citys' experiences and preserve them in collaboration with cutting-edge technology and the community and explore new ways to create performances as well as physical or virtual XR-enhanced scenarios and environments.

GRIN Porto Resdiency 2 – "Digital performances: a new era"

Is this the (one of the) way(s)?

During the COVID pandemic, many were the artists who made their work available online, mostly performances created for live presentation and filmed in that context. But how can artistic creations be designed for digital dissemination?

Artists are invited to rethink solutions on how to transcend the ephemeral and to enhance accessibility (both for both public and artists) on performing arts, by applying cutting-edge technologies to enrich end-users' understanding and experience.

2.1.4 GRIN Residencies in Aveiro, Portugal - Drone technologies for biodiversity

Topic: Drone technologies for biodiversity	
Location: *Canelas, Estarreja, Aveiro, Portugal*	Host: Estação Viva

In the spirit of going global the challenge is to use advanced drone technologies for the preservation of biodiversity in remote rural areas. Artists will have access to diverse drone technologies, namely many different UAVs and imaging processing software. The focus will be mostly in exploring multispectral and hyperspectral imaging technologies from an artistic point of view.

The invention of perspective during the Renaissance radically changed the way we perceive and literally see the world and extremely improved our capabilities of representing our perceptions and therefore plan and construct other realities. For instance, the work Giovanni Batista Piranesi, Cerceri di Invenzione, is a great example of that. Multilayered spectral imaging technologies allow us to choose which parts of the electromagnetic spectrum we want to work with and further combine them to create new realities based on concrete data gathered.

Biodiversity plays a critical role in maintaining the balance of ecosystems and the services they provide. It ensures that natural systems can resist environmental stresses and adapt to changing conditions, making them more resilient.

The grounds of experimentation will be the most fertile lands in Portugal: the Bocage forest grounds in Canelas, Estarreja, Portugal. The bocage structure of agriculture exploration allows for the preservation of autochthonous species as well as a sustainable combination of agricultural production. **Bocage**[1] refers to a network of hedgerows planted by farmers, surrounding agricultural parcels of variable size and geometry and should become available in the coming years.

The Bocage structure of agriculture exploration has many benefits. One of its main advantages is the preservation of autochthonous (native) species, which can thrive in the hedgerows and surrounding areas. Additionally, the combination of agricultural production and biodiversity conservation is considered to be sustainable, as it allows for the production of crops while also preserving the natural ecosystem.

Drones can help map and better understand biodiversity of those bocage systems.

Artists will be in contact with local biodiversity experts Bioliving, scientists from the University of Aveiro, local public initiatives: Bioria and major industries that have social responsibility policies in place: Bondalti, Nestle Portugal and The Navigator Company.

The hosting location, Estaçao Viva is a young emergent artistic association based in Canelas, by the Bocage grounds.

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[1] Biological Conservation, 2022

2.1.5 GRIN Residencies in Oulu, Finland - Sound and Print

GRIN Oulu Residencies: "The sound around us" and "Print please"	
Location: *Oulu, Finland*	Host: **Oulu University of Applied Sciences**

Oulu is the Northern destination of the GRIN project. A residency period in Oulu offers artists a possibility to develop their artistic work with the latest technologies and to reach out for new audiences and cooperation partners. Oulu is getting ready for the European Capital Of Culture year 2026, and here an artist gets to experience the ground of a modern technology city, an original cultural environment as well as the northern nature that strongly surrounds the area.

GRIN Oulu residency 1: "The sound around us"

"The sound around us" –residency calls for an artist or artist group to work in the Oulu area during Oct 2023 -Mar 2024. This residency is suitable for art professionals who work with sound art, music and instrument building or dance and movement, and who are interested in approaching the subjects of well-being and sustainability in their artistic work as well as in looking for new ways of bringing art and science together and developing new ideas for collaboration.

This residency is meant for artistic research and creating new art works. Working in the Oulu area with people for whom it is normally challenging due to distances, transportation or other struggle is also included in the residency period. Target groups for the work with local communities can be for example people living in rural areas, home care customers or the disabled. The artist is expected to create new art works or productions that will be exhibited in Oulu later in the year 2024 as well as in the final event of the GRIN project. During the residency period the artists are welcome to participate in the GRIN clubs organized by the project.

If wanted, the artist has access to the equipment and technology of GRIN project partner Playtronica (https://shop.playtronica.com/). The GRIN personnel will assist the artist with travel, accommodation and needed working spaces and act as contact persons for reaching the local communities and cooperation partners.

GRIN Oulu residency 2: " Print please"

In the "Print please" residency the artist gets to explore the possibilities of printed electronics with Oamk's PrinLab and its network of partners. This residency is suitable for an artist who is interested in combining printed electronics in their art works or productions. The residency is a possibility to develop and test new ideas that bring science, technology and art together.

This residency is meant for artistic research and creating new art works. Working in the Oulu area with local communities is also included in the residency period. Target groups for the work with local communities can be for example children and youth. The artist is expected to create new art works or productions that will be exhibited in Oulu later in the year 2024 as well as in the final event of the GRIN project. During the residency period the artists are welcome to participate in the GRIN clubs organized by the project.

> The artist has access to Oamk PrinLab's equipment and the support of the personnel (https://www.oamk.fi/en/partnership/laboratories/prinlab). The GRIN personnel will assist the artist with travel, accommodation and needed working spaces and act as contact persons for reaching the local communities and cooperation partners.

Further information as well as questionnaire and application details are to be found on the website of the S+T+ARTS GRIN Open Call.

3. Who and How to Apply

Artists, pairs of artists (artist group) or artistic studios in the form of SMEs from all over the world are welcome to submit their proposals.

Interested artists and pairs of artists-SMEs will be able to submit their application through the online application form at any time for the duration of the open call. Applicants should fill in the online form in English.
In this platform, individual artists, group of artists or artistic studios in the form of SMEs will be able to answer the questions and upload the documents asked in order to submit the proposal.

Materials can be sent as annexes to the application in so far as their relevance is described in the application.

+ **Call will be open from 28th April to 26h June 2023**
+ **Call for GRIN Residencies in Linz will be open from 28ᵗʰ April to 9th June 2023**
+ **GRIN Residencies will take place between October 2023 and April 2024**

4. Selection criteria and procedure

The evaluation process for the GRIN open call residencies will consist of a single stage evaluation. A minimum of 12 experts (3 per region) will be involved in evaluating the proposals submitted. The selection criteria for the proposals will be based on their artistic merit, the potential for clear innovation, and how well the proposal aligns with the goals and ambitions of S+T+ARTS. The aim is to ensure that the chosen proposals reflect a high level of quality and have the potential to contribute to the development of the field.

Proposals will be evaluated based on:

1. **Project Design (40%)**: overall concept, objectives, pertinence to selected GRIN topic.
- Approach to conceive challenging human-centered use scenario and the proposed alternative design methods (30%)
- Adequacy of use scenarios for novel technologies using artistic practice and novel technologies to be explored and worked with (10%)

2. **Impact (40%)**
- Expected increase of inclusiveness, by supporting a human-centred approach to technology development (economic, social, artistic, environmental sustainability; ambition of outputs) (20%)
- Approach to empower end-users/technology providers to make a better technology choice and facilitate ethical considerations (10%)

3. **Implementation (20%)**
- Competences of the artist / team (10%): skills, knowledge, previous work and experience.
- Suitability of project plan and budget (10%)

5. Funding Scheme

GRIN will finance 12 proposals.

Selected projects will be required to sign a Sub-Grant Agreement with binding details on the project time plan and goals and budget plan.

6. Types of Activities

Successful applicants of the Open Call will receive financial support for the realization of Residency-projects to explore and to work with technologies to enhance their usability and uptake by collaborating in art-driven experiments.

The different types of activities for which a funded third party may use their financial support will be the following:

+   Development and research related costs,

+   Artists` fees, accomodation, travel and subsistence, related to activities within the GRIN project, while specifically w.r.t. their individual project's purpose,

+   Costs related to demonstrations and test activities, material for artworks and art performances

+   Visiting the partners 'worksites, exchanging ideas and working together with the researchers at these spaces.

+   Participating in cultural events to exhibit their outcomes,

+   Creating exhibitions and other communication platforms and materials (e.g videos) to promote dialogues pertinent to GRIN.

Residents will be expected to achieve their project aims and contribute to the overall project of GRIN. Artistic outcomes of the residencies shall be made available for S+T+ARTS exhibitions across Europe for at least a year after the end of the S+T+ARTS residencies.

7. How to Apply

Proposals are comprised of (i) an online form and (ii) a full proposal document. Both must be submitted online at the following link:

- The template for the full proposal can be downloaded here
- Proposals shall comply with the guidelines included in the template and do not exceed the maximum number of pages

For applicants applying to the GRIN Residencies in Linz applications can be provided in English and German.
- The deadline for the GRIN Residencies in Linz is 9th June
- Please submit your project proposal along with a detailed resume with active links to representative works (max. 2 pages) directly to JKU at the following email address: zirkus@jku.at
- **Questions about the applications to JKU can be referred to** airan.berg@jku.at

The project proposal template is available on the S+T+ARTS website: https://starts.eu/opportunities/open-call-for-artists-grin-s-t-arts-resdiency/

8. Intellectual Property Rights (IPR)

1.1 IPR Ownership of the sub-granted Projects

The ownership of all IPR created by the selected third parties, via the GRIN funding, will remain with them. Results are owned by the Party that generates them.
The ownership of intellectual property rights (IPR) related to concept design, research, artist intellectual work and art piece will remain with the respective creators or owners. However, in the case of performances or shows, the production of the experience will be owned by the hosting institution.

The Sub-Grant Agreement will introduce provisions concerning joint ownership of the results of the sub-granted projects. This will be assessed and negotiated case by case.

1.2 IPR Ownership of the sub-granted projects

There are no IPR obligations toward the European Commission (EC). However, any communication or publication of the selected third parties shall clearly indicate that the project has received funding from the European Union and the GRIN project, therefore displaying the EU and STARTS logo on all printed and digital material, including websites and press releases. Moreover, selected third parties will agree that certain information regarding the projects selected for funding can be used by GRIN consortium for communication purposes.

KEY DATES

- April 28th - June 26th 2023: Call open for submission here
- April 28th - June 9th 2023: Call submission for GRIN Linz Residencies

- June - Evaluation of GRIN Linz Residencies
- July - August: Evaluation for GRIN Residencies in Porto, Aveiro, Bologna and Oulu
- September: Contracting
- October 2023 – April 2024: Residencies
- May – September 2024: Residencies Follow up, Exhibitions, Events

CONTACT

The S+T+ARTS GRIN Residency programme is promoted by the GRIN Consortium Members.
For any inquiries, please contact: grinopencall@artshare.pt

Annex I - Facilities and Technologies for the GRIN Residencies in Bologna

Available Data - related to weather and climate
Thanks to the numerous European projects developed over time, Cineca makes the following datasets available:

Weather data (ARPAE)
- Ensemble over Italy, Cosmp-2I (spatial resolution 2.2Km) 20 members, 48 hours, 1 run daily
- Deterministic over the Mediterranean Area (COSMO-5M) (spatial resolution 5km), 72 hours. 2 daily runs
- Deterministic over Italy (COSMO-2I) (spatial resolution 2.2km), 48 hours. 2 daily runs
- Observed data over Italy, main meteorological station fields (Temperature, Humidity, Wind, ...)

Climatological Data (HighLander)
- Very High-Resolution Reanalysis (VHR-REA) (1980-2020) spatial resolution 2.2km over Italy (main meteorological fields, T,T2M, precipitation, wind)
- Very High-Resolution Climate Projections (VHR-PRO) (1989-2065) spatial resolution 2.2km over Italy (main meteorological fields, T,T2M, precipitation, wind)

Software
Cineca is able to provide expertise to support the use of various software tools, such as:

- **Paraview** www.paraview.org
- **VTK - The Visualization Toolkit**   vtk.org
- **Blender**   www.blender.org
- **Unreal**   www.unrealengine.com
- **Verge3D**   www.soft8soft.com/verge3d

Hardware
Cineca is able to provide expertise to support the use of various hardware tools, such as:

- **Machines for High Performance Computing (HPC)**   www.hpc.cineca.it
- **Cloud resources** Cineca Ada Cloud provides a wide range of cloud computing services, including virtual servers, virtual machines with hardware accelerators such as GPUs, storage solutions, databases, security and monitoring services.

Fruition Systems
- **Projection systems** www.kunstkraftwerk-leipzig.com
- **VR and AR systems** Virtual reality visors HTC Vive, Oculus and Oculus Quest are available

Related Projects
- **Destination   Earth**
  Destination Earth (DestinE) is a visionary EU initiative to create Digital Twins of the Earth system supporting climate change adaptation policies and decision-making for reducing the impacts of

extremes. DestinE will contribute to revolutionise the European capability to monitor and predict our changing planet and complement existing national and European services. https://stories.ecmwf.int/destination-earth/index.html

- **Mistral   portal**
  The goal of the MISTRAL portal is to facilitate and foster the re-use of the datasets by the weather community, as well as by its cross-area communities, to provide added value services through the use of HPC resources, turning it into the level of new business opportunities. https://www.mistralportal.it/

- **Highlander   project**
  Through the use of High Performance Computing, Highlander makes it possible to process data for generating climate forecasts and reducing the risks associated with climate change, for a more intelligent and sustainable management of natural resources and the territory. https://highlanderproject.eu/

- **OptimESM: Novel   Earth   system   models   for   improved   policymaking**
  Monitoring and studying climate changes worldwide is essential for understanding the tipping points of climate change and working to avoid them with innovations, or new technologies, that improve our current tools. The EU-funded OptimESM project will develop one such tool: an innovative, new generation of Earth system models. It will combine basic physical and biogeochemical processes with high resolution, which will offer unparalleled knowledge on climate change and crucial tools for simulations and policymaking regarding the climate. This technology will also be used to provide new policy-relevant emission and land use methodologies to reach Paris Agreement goals. https://cordis.europa.eu/project/id/101081193/it