ShareScience: Multidisciplina e Trasferimento Tecnologico







La ricerca interdisciplinare nell'accademia: Una prospettiva europea

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per la Ricerca Internazionale

Horizon Europe

Horizon Europe is the EU's key funding programme for research and innovation with a budget of €95.5 billion .







WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation and spreading excellence

Reforming and Enhancing the European R&I system

Horizon Europe



Pillar 1 **EXCELLENT SCIENCE**

European Research Council

Marie Skłodowska-Curie Actions

Research Infrastructures



Clusters

Pillar 2

GLOBAL CHALLENGES & **EUROPEAN INDUSTRIAL** COMPETITIVENESS

- Health
- Culture, Creativity and Inclusive Society
- · Civil Security for Society
- Digital, Industry and Space
- Climate, Energy and Mobility
- · Food, Bioeconomy, Natural Resources, Agriculture and Environment

Joint Research Centre



Pillar 3

INNOVATIVE EUROPE

European Innovation Council

European innovation ecosystems

European Institute of Innovation and Technology

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European Research Council

Established by the European Commission

Applications can be made in any field of research

The ERC's frontier research grants³ operate on a 'bottom-up' basis without predetermined priorities.

The ERC puts particular emphasis on the frontiers of science, scholarship, and engineering. It welcomes proposals of an interdisciplinary nature, which cross the boundaries between different fields of research, pioneering proposals addressing new and emerging fields of research, or proposals introducing unconventional, innovative approaches and scientific inventions.

ERC Work Programme 2024



ERC Starting Grant

For promising early-career researchers with 2 to 7 years experience after PhD

Explore >



For excellent researchers with 7 to 12 years experience after PhD

Explore >



ERC Advanced Grant

For established research leaders with a recognised track record of research achievements

Explore >



ERC Synergy Grant

For two to maximum four researchers working together and bringing different skills and resources to tackle ambitious research problems

Explore >

»Supporting Interdisciplinarity, a Challenging Obligation»

ERC President Prof. Jean-Pierre Bourguignon NOVA Science Day 2019, Lisbon, Portugal

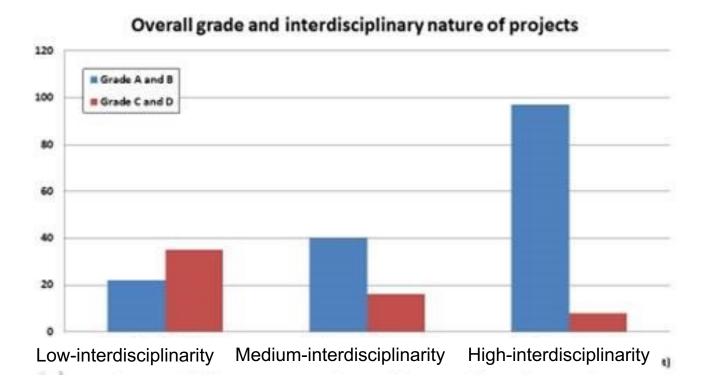
«First, it is very important to be conscious of the *considerable variety of* situations that involve interdisciplinarity: from the obvious case of complex problems to bring together truly diverse competencies (of which climate change provides an excellent example) to emerging new disciplines and from evaluation issues to training issues, etc.»

The impact of interdisciplinarity

Ex-post evaluation of ERC projects.

200 randomly chosen projects two years after their completion. The possible grades independent evaluators can give are A for breakthroughs, B for major scientific advances, C for incremental scientific advances and D for projects with little achievements.

The differences in the level of performances of interdisciplinary projects has been striking:





The challenges of interdisciplinarity

«Identifying obstacles to the development of interdisciplinarity is a must because of scientific challenges that need to be tackled but also because of the remarkable added value brought by interdisciplinary projects which ERC ex-post evaluations have shown. It may be even more important to take appropriate measures at the training level to make sure that the next generation will be given the proper exposure to interdisciplinarity.»

ERC President Prof. Jean-Pierre Bourguignon NOVA Science Day 2019, Lisbon, Portugal

How to bring interdisciplinarity within an ERC grant

Synergy Grant

«With the recent establishment of Synergy grants the ERC Scientific Council created a space truly adapted for broader interdisciplinary projects. Year after year, the ex-post evaluation of completed projects shows that interdisciplinarity is strongly correlated to impact and also to innovation.»

Individual Grant

ADDITIONAL LEGAL ENTITIES

«Where they bring scientific added value to the project, additional team members may also be hosted by additional legal entities, which may be established anywhere, including outside the European Union or Associated Countries, or international organisations, subject to any restrictions provided in Annex 3 to this Work Programme.»



ERC Synergy Grant

For two to maximum four researchers working together and bringing different skills and resources to tackle ambitious research problems

Explore >

The ERC welcomes interdisciplinary research proposals. Proposals of this type are evaluated by ERC's regular panels with the appropriate external expertise.

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European INNOVATION Council

The European Innovation Council (EIC) is the main tool in support of innovation promoted by the European Commission under Horizon Europe, the new Framework Program for Research and Innovation of the EU for the period 2021-2027.

The EIC, in particular, is the most relevant initiative within Pillar 3 - Innovative Europe and aims to identify, develop and implement high-risk innovations of various kinds, with a main focus on pioneering innovations, disruptive, with a high impact on society and potentially market-creating.



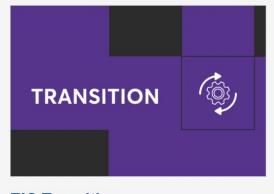
European Innovation Council





EIC Pathfinder

Supporting research and deep tech projects with a high degree of scientific ambition and risk.



EIC Transition

Supporting maturation and validation of novel ideas from lab to business. A bridge between research and application development.



EIC Accelerator

Supporting start-ups and small and medium-sized enterprises to develop and scale up to new markets or disrupt existing ones.

European Innovation Council



II.1 EIC Pathfinder Open

- → Do you have an ambitious vision for a novel future technology that could make a real difference to our lives?
- Do you see a plausible way of achieving the scientific breakthrough that will make this technology possible?
- → Can you imagine collaborating with an interdisciplinary team of researchers and innovators to realise the proof of principle and validate the scientific basis of the future technology?

If the answer to each one of these questions is 'yes', then EIC Pathfinder Open may be the right call for you.

European Innovation Council



Before applying to this call, you should verify that your proposal meets all the following essential characteristics ('Gatekeepers'):

- → Convincing long-term vision of a radically new technology that has the potential to have a transformative positive effect to our economy and society.
- → Concrete, novel and ambitious science-towards-technology breakthrough, providing advancement towards the envisioned technology.
- High-risk/high-gain research approach and methodology, with concrete and plausible objectives.

EIC Pathfinder Open involves interdisciplinary research and development. By bringing diverse areas of research together, often with different perspectives, terminologies and methodologies, within individual projects and within a portfolio of projects, really new things can be generated and entirely new areas of research can be opened up. It is up to you to compose the team that you need, that you can learn from, and that you can move forward with.

European Innovation Council



Table 2. Award criteria for EIC Pathfinder Open

Excellence (Threshold: 4/5, weight 60%)

Long-term vision: How convincing is the vision of a radically new technology towards which the project would contribute in the long term?

<u>Science-towards-technology breakthrough</u>: How concrete, novel, and ambitious is the proposed science-towards-technology breakthrough with respect to the state-of-the-art? What advancement does it provide towards realising the envisioned technology?

Objectives: How concrete and plausible are the proposed objectives to reach the envisaged proof of principle? To what extent is the high-risk/high-gain research approach appropriate for achieving them? How sound is the proposed methodology, including the underlying concepts, models, assumptions, alternative directions and options, appropriate consideration of the gender dimension in research content, and the quality of open science practices?

<u>Interdisciplinarity</u>: How relevant is the interdisciplinary approach from traditionally distant disciplines for achieving the proposed breakthrough?

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Key adopted strategies:

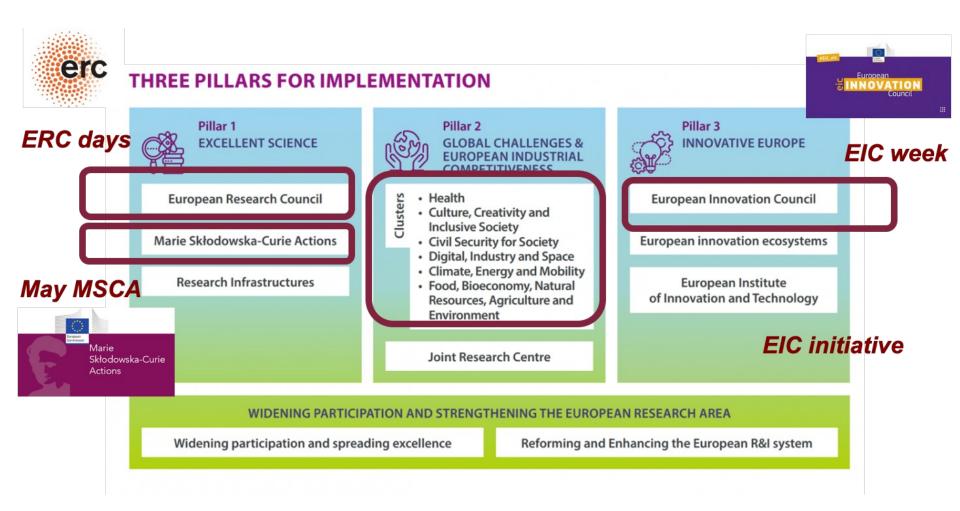
- 1) To inform the academic community
- 2) To support the researcher applications
- 3) To boost the applicants







Eventi Horizon Europe @ Sapienza



Eventi Horizon Europe @ Sapienza



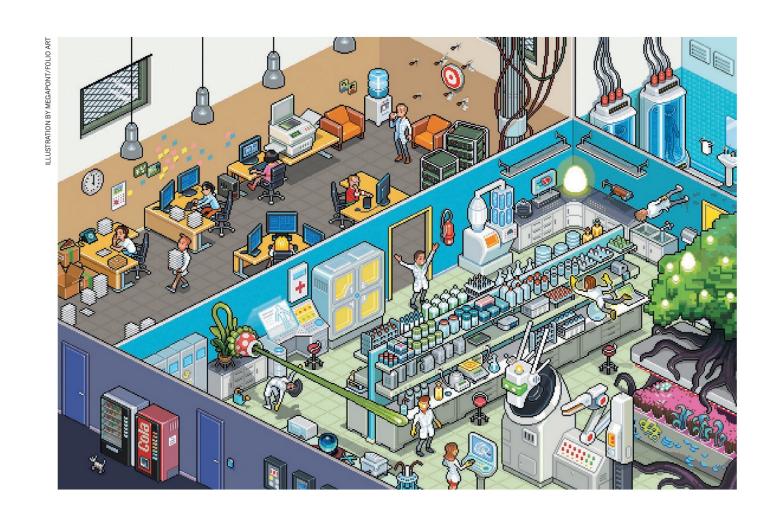
Horizon Europe @ Sapienza Bandi di supporto alla progettazione



Scadenza: 7 marzo 2024 (ore 14.00)



Bando Award progetti Horizon Europe Scadenza. 25 ottobre 2024 (ore 14.00)



"Let researchers try new paths», T. Oni, F. Sciarrino, G. Adesso & R. Knight Nature 538, 451–453 (2016)