

Statement by the ERC Scientific Council on the next EU framework programme for research and innovation (FP10)

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European Research Council
Established by the European Commission

Established in 2007, the European Research Council (ERC) has been highly effective in supporting curiosity-driven frontier research across all fields, based only on scientific excellence. The ERC has given the EU framework programmes a new dimension that complements traditional top-down approaches, and it provides a benchmark for excellence in European science. The EU should build on this success and strengthen the ERC in the next research framework programme.

The ERC has demonstrated the amazing creativity and talent of Europe's best researchers when they are given the freedom to propose their best ideas. Between them, ERC grantees have won 14 Nobel Prizes, 6 Fields Medals, 11 Wolf Prizes and many other [prizes](#). ERC-funded researchers have advanced knowledge and contributed to many of the wider goals of the EU in terms of the green and digital transitions as well as societal challenges such as improving health or addressing demographic trends. They have made breakthroughs in critical technologies such as artificial intelligence and quantum information, and stand out as innovation leaders. 40% of ERC projects have produced results subsequently cited by patents and about 400 ERC funded researchers have founded [start-up companies](#). ERC researchers are also training the next generation of excellent scientists and have employed over 100,000 other researchers, mainly PhD candidates and postdocs, in their teams.

In view of increasing global competition, time is running out for Europe to maintain its competitive edge in global science and technology. To keep pace, an essential step is to modernise the long-term EU budget and to double the spending for research and innovation in the next Multiannual Financial Framework.

Europe has the talent to be world leading in science and technology but is struggling to keep up with its main [competitors in research funding](#), high-quality [scientific output](#), especially in new and emerging fields, and European industry is not specialised in the [fastest growing sectors](#). These issues are linked as Europe cannot hope to be a leader in industry without being a leader in science and technology. If these trends continue, they will increasingly undermine Europe's economy, competitiveness and social model as well as ultimately threaten its standing in the world, strategic autonomy and security.

Reversing these trends will require huge efforts at the EU and national levels. An essential prerequisite is to modernise the long-term EU budget (Multiannual Financial Framework) with a doubling of the budget for research and innovation in the next EU research framework programme (FP10). This will yield high returns due to the increased collaboration, scale, and pan-European competition made possible at EU level. This investment is crucial for Europe's competitive edge in global science and technology.

If Europe wants to aspire to a position of leadership in new and emerging areas of science, we also have to allow our best researchers the freedom to use their own creativity. The ERC has funded over 13,000 projects but has not been able to fund many equally outstanding proposals due to a continuing lack of appropriate budget. Unchanged grant sizes since 2009 are eroding the value and prestige of the ERC's grants. Increased funding will address these issues and allow an expansion of bottom-up, collaborative research through the ERC Synergy Grants. The ERC's current budget is about €2 billion annually, but for the ERC to meet its full potential and for its systemic effects to be felt throughout Europe, it was estimated in [2003](#) that it would need a budget corresponding to 5% of Europe's national research agencies, now equivalent to around €5 billion per year. This still holds true today.

The Scientific Council's independence has been critical to the ERC's success. This independence entails the ability to determine how the ERC's calls are run and how its grants can be managed according to the needs of frontier research. The ERC's independence and autonomy must be protected under FP10 to safeguard its position as Europe's top frontier research funder.

The ERC is steered by an independent Scientific Council with a dedicated agency for implementation. This arrangement is designed to guarantee the quality of the ERC's operations and above all its peer review processes. This in turn ensures the ERC's credibility in the scientific community and their continued support. This arrangement has been recognised as critical in multiple [reviews](#).

The ERC's simple and tailored procedures provide the flexibility that is necessary to respond to the needs of Europe's scientific community. They should not be hampered by standardized processes and systems across the research framework programme and other EU funding programmes. Europe's researchers deserve to be supported in a way that allows their talents to thrive.

ERC Impact

The ERC has now funded over 13,000 top researchers since its creation. The ERC grantees are of 87 different nationalities and are hosted at over [900 research institutions](#) across the EU and Associated Countries.

ERC funded researchers have already made significant advances at the frontiers of knowledge across [all fields of science](#) from the natural sciences to the social sciences and humanities. Between them, ERC grantees have won 14 Nobel Prizes, 6 Fields Medals, 11 Wolf Prizes and many other [prizes](#). They have produced over 200,000 articles published in peer reviewed scientific journals^[1]. These publications by ERC funded scientists are seven times more likely than average to be in the top 1% most cited category.

An [annual review of ERC projects](#) finds that a very [high proportion](#) result in a scientific breakthrough or major advance. ERC researchers are disproportionately represented amongst the [world's most highly cited researchers](#) and contribute disproportionately to the world's ["hot and emerging" research fields](#) and lists of [breakthroughs of the year](#).

The ERC is also helping to train the next generation of excellent scientists and to attract them to Europe from all over the world. ERC principal investigators have employed over 100,000 other researchers, mainly PhD candidates and postdocs, in their teams. These teams are extremely international with 18% originally from outside the European Research Area.

The ERC's Scientific Council has consistently taken the lead on the key issues affecting European science such as [open science](#), [gender balance and diversity](#), [widening participation](#) to the ERC's calls and reforming [research assessment](#).

An analysis for the [ex-post evaluation of FP7 in 2015](#) argued that the ERC, “has been, overall, highly successful. It has produced remarkable scientific results in a relatively short time frame. It has used the resources available effectively and efficiently. It should be continued and possibly expanded. The European Research Area has long been in need of this institution.”

In 2017, a study^[2] showed that the ERC funded publications had: the highest category normalised citation impact; the highest percentage of papers in the world’s top 1%; and the highest percentage of papers involving international co-authorship compared to publications from the 50 funders most frequently acknowledged by authors in the Web of Science between 2007 and 2016.

The ERC has produced comprehensive analyses of the broad portfolio of research activities it funded during [FP7](#) and [Horizon 2020](#). Through exercises like this, the ERC can show that it is contributing to many of the wider goals of the EU in terms of the green and digital transitions, societal challenges such as health as well as key enabling and industrial technologies. The latest mapping exercise of ERC projects funded under Horizon 2020 found that a large share of the research – proposed by the researchers and supported by the ERC without thematic priorities – tackles key global challenges. Hundreds of these “bottom-up”, curiosity-driven projects advance the EU’s current policy aims in climate change, health and digital transformation. Of the 6,707 analysed ERC projects worth €13.3 billion, 34% are likely relevant for addressing health challenges. One in ten projects addressed topics linked to the digital transition, half of which were in artificial intelligence, and 14% were found to be relevant to climate policies and green solutions.

An in-depth analysis from 2021 looked at the contribution of EU research funding to [COVID- 19 related research](#). This analysis showed that ERC funded projects have contributed to 607 research papers on COVID-19. It must also be noted that the Pfizer vaccine was developed by the ERC grantee Uğur Şahin, who was able to repurpose his ERC-funded work on mRNA vaccines against cancer. Another [analysis](#) showed similar results for the publications referenced in the four reports of the sixth Intergovernmental Panel on Climate Change (IPCC) assessment cycle of which 854 came from ERC projects.

ERC grantees also prove the potential economic impacts of frontier research. ERC grantees have applied for over 2,200 patents and other forms of intellectual property protection, such as trademarks, and have founded or co-founded over 400 [start-up companies](#). 40% of ERC projects have produced research which has been subsequently cited by [patents](#). Proposals stemming from ERC funded research are also very successful in the [European Innovation Council’s “Transition” funding scheme](#).

In October 2023, the European Commission published a list of ten [critical technology areas](#) for the EU’s economic security, including four deemed particularly sensitive: advanced semiconductors; artificial intelligence; quantum technologies; and biotechnologies. All of these areas are exactly areas where frontier research of the kind funded by the ERC is still necessary; ERC researchers are world leaders in many of these [areas](#) (also [here](#)). For example, over the course of Horizon 2020, ERC funded 757 projects worth €1,466 million in areas of interest for a Europe fit for the [digital age](#), including in artificial intelligence, quantum technologies and cryptography and security.

[1] According to the Horizon Dashboard ERC projects have produced 46% of all the peer reviewed publications produced by the framework programmes since 2007 despite having just 17% of the budget. [Funding & tenders \(europa.eu\)](#)

[2] Thomson, S., & Kanesarajah, V. (2017). The European Research Council - The first 10 years. Clarivate Analytics