

Future-proof Horizon Europe through balanced cluster calls

Joint statement by CESAER and EUA

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[CESAER](#) and the [European University Association](#) (EUA) represent key beneficiaries of EU Framework Programmes for research and innovation. We welcome the constructive and open approach of the European Commission in working with the stakeholder community to continually improve EU funding programmes and learn from past experiences.

However, in this joint statement, our associations wish to express concern about the unbalanced share of funding for basic and applied research projects within the Horizon Europe clusters under the second pillar, in comparison to projects further along in their development and implementation phases.

Following an analysis of calls carried out under the Horizon Europe clusters in the first two years of the programme, we found a substantial decrease in the proportion of calls with Technology Readiness Levels (TRLs) up to level 4 as compared to the corresponding calls under Horizon 2020. This is a considerable shift towards funding more projects at a higher TRL, to the detriment of projects at a lower TRL.

- Referring to Article 7.3 of Regulation 2021/695 establishing Horizon Europe, we call on the European Commission to rebalance the proportion of calls with lower, medium and higher TRLs for collaborative call topics within the Horizon Europe clusters.

Significant decrease of share of calls with TRLs up to level 4

The share of Research and Innovation Actions and Innovation Actions calls with TRLs up to level 4 in the Horizon Europe work programme 2021-2022 appeared significantly lower than in the first two years of Horizon 2020. We therefore assessed calls under the Horizon 2020 Societal Challenges and Space, Nanotech and ICT work programmes 2014-2015 and compared them with the number of calls under the Horizon Europe clusters.

The data analysis confirmed that the share of calls with TRLs 1-4 has decreased significantly: in the first two years of Horizon 2020, over 20% of these calls had a TRL up to level 4. In Horizon Europe, the corresponding

Technology Readiness Levels

Originally developed by NASA, the [TRL](#) is a 'measurement system used to assess the maturity level of a particular technology'. The TRL scale uses a parameter that evaluates the maturity of a technology according to a series of indicators that go from 1 (the basic principles are documented) to 9 (the technology is released, and industrial production is started). The scale was introduced at the start of Horizon 2020 as the reference point for determining the maturity of a new technology under development, and its readiness for market uptake.

Universities and research & technology organisations undertake research and innovation activities across all TRLs, in particular at TRL 1-4. This has also been [summarised](#) by the Joint Research Centre of the European Commission.

figure decreased by one third (six percentage points) to just below 14%. Some 27 calls out of 193 featured TRL 1-4 in Horizon Europe, and 68 calls out of 338 in Horizon 2020 (the full data analysis can be made available on request).

Why this is an issue

The significant decrease of the share of calls with TRLs 1-4 is problematic for several reasons, notably:

- It **impedes key transformations**: to tackle local and global challenges, and deliver on key commitments such as the [European Green Deal](#) and the digital transition, Europe depends on scientific and technological developments across all TRLs, as well as a strong science base and [frontier research, as outlined in the Lund Declaration](#).
- It **impedes cooperation** between beneficiaries: in collaborative research projects with TRLs 1-4, collaboration between universities, research & technology organisations, industry partners and other players are a crucial bridge between basic research and the deployment of new science and technologies in and for society.
- It **challenges Europe's leadership in deep-tech and key technologies**: to be a strong knowledge actor in the world, especially in deep-tech and emerging [key technologies](#), success depends on Europe's ability to link different types - and readiness levels - of research across the full knowledge chain.

Towards an interconnected model

While acknowledging the need to address the immediate issue of the unbalanced funding, we also reiterate the need to go beyond the notion of TRLs. CESAER and EUA encourage the Commission to explore and pilot new approaches that move beyond a merely linear understanding of innovation, as captured by the TRL concept, towards more modern and sophisticated methods that take full account of innovation and their interconnections. One example that could act as inspiration is the [KTH Innovation Readiness Level](#) approach.

We stand ready to support the development and piloting of modernised approaches to achieve this, for example through pilot actions in the context of the interim evaluation of Horizon Europe and the design of its successor programme.

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