**Piloting a lower funding rate in co-programmed partnerships of Cluster ‘Digital, Industry and Space’**

1. **Objectives of the pilot**

Under Horizon Europe, a new, more ambitious approach to European partnerships is proposed. Amongst others, more ambition means attracting more private investments and ensuring a higher leverage effect of EU funding under Horizon Europe. While this approach applies to all European partnerships, whether institutionalised or co-programmed, the pilot described in this note focuses on co-programmed partnerships, as their topics are covered in the relevant Work Programmes of the Clusters through which they are funded.

**Reducing the funding rate** (below the maximum level of 70% set out in the legal base for Innovation Actions) **is one way of increasing the commitment and contributions of private partners in partnerships** – which typically target higher technology readiness levels. This is in line with Horizon Europe legal base (Article 34), which allows to increase private investments in near-market activities for partnerships, and to deliver on their extremely ambitious objectives by 2030.

In the first Work Programmes of Horizon Europe, a pilot is proposed to trial the use of a funding rate of 60% for with-profit entities, in some of the Innovation Actions of the Co-programmed Partnerships of Cluster ‘Digital, Industry and Space’ (as well as in analogous actions in Cluster ‘Climate, Energy and Mobility’). This pilot will contribute to the evidence base regarding the impact of the funding rate on the objectives for partnerships: investments from industry; a focus on the actions of the private partners to enhance impact; and a more proactive role of industry in close-to-market activities.

A 60% funding rate is also consistent with the funding rate offered to energy-intensive industries under the Innovation Fund. It is more cautious than the 50% approach tested under the NMBP work programme.

1. **Experience under Horizon 2020**

Such an approach is not completely new. A first and even more ambitious test has been recommended by the Advisory Group of the former industrial programme of Horizon 2020 (NMBP, Nanotechnologies, Advanced Materials, Industrial Biotechnologies and Advanced Manufacturing and Processing). In June 2016, the Group called for ‘public support targeted at public-private risk sharing’. It suggested that the Commission ‘secure further sources of funding, including possibly a 50% funding rate’, with a strong support for lower funding rate at higher Technology Readiness Levels (TRLs), to secure industrial commitment. As in Horizon Europe, there was no distinction between SMEs and larger enterprises.

Hence, in the Work Programme 2018-20 of NMBP, there was already a pilot, involving Innovation Actions with 50% funding for with-profit entities. There were five topics of relevance (Factories of the Future, FoF, has been succeeded by Made in Europe; SPIRE has been succeeded by Processes4Planet):

FoF-04-2018 Pilot lines for metal additive manufacturing

FoF-08-2019 Pilot lines for modular factories

FoF-10-2020 Pilot lines for large-part manufacturing

SPIRE-03-2018 Energy and resource flexibility in process industries

SPIRE-05-2019 Adaptation to variable feedstock in process industries

The experience from that pilot was good in the case of the manufacturing topics: the participation was as high as for topics with a 70% funding rate, including SMEs, the competition amongst proposals was healthy, and in the funded projects the high capital expenditure in infrastructure (which has a utility after the project) was borne to a larger extent by industry than would have been the case otherwise.

In the case of the process industry topics, the experience from the pilot was more mixed: the participation resulted in excessively high success rates of 75% and 100% in the two topics, though excellent projects were funded. An additional factor to bear in mind in those cases was the more specialised nature of the topics, in particular industrial symbiosis requiring the involvement of regions. Moreover, the success rates in the area of process industries have routinely been relatively high, around 30%.

The success rates and SME participation levels are shown in the table below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Topic** | **Proposals and Budget** | **Selected projects and Budget** | **Success rate** | **SME budget in selected projects** |
| DT-FOF-04-2018 | 19 |   209 M€  | 2 |   25.0 M€  | 12% | 18% |
| CE-SPIRE-03-2018 | 4 |     37 M€  | 3 |   28.4 M€  | 77% | 10% |
| DT-FOF-08-2019 | 15 |   169 M€  | 2 |   28.2 M€  | 17% | 26% |
| CE-SPIRE-05-2019 | 2 |     18 M€  | 2 |   17.8 M€  | 100% | 16% |
| DT-FOF-10-2020 | 12 |   149 M€  | 1 |   14.8 M€  | 10% | 14% |

NB: In the case of SPIRE-03, the low SME participation is due to the fact that one of the selected projects had no SMEs in the consortium; nevertheless, this topic attracted four proposals with 25% of SME participants (15 out of 61 participants).

1. **Experience under the Research Fund for Coal and Steel (RFCS)**

The Clean Steel partnership is a novelty under Horizon Europe. It is important to note that steel projects under the RFCS – a programme run in parallel to Horizon Europe – follows a different legal basis.[[1]](#footnote-1)

According to this legal basis, the funding rate is up to 50% for pilot and demonstration projects (Art. 30).

A pilot project shall be characterised by the construction, operation and development of an installation or a significant part of an installation on an appropriate scale and using suitably large components with a view to examining the potential for putting theoretical or laboratory results into practice and/or increasing the reliability of the technical and economic data needed to progress to the demonstration stage, and in certain cases to the industrial and/or commercial stage (Art. 15).

A demonstration project shall be characterised by the construction and/or operation of an industrial-scale installation or a significant part of an industrial-scale installation with the aim of bringing together all the technical and economic data in order to proceed with the industrial and/or commercial exploitation of the technology at minimum risk (Art. 16).

The funding rate for research projects is up to 60% (Art. 30). A research project shall be intended to cover investigative or experimental work with the aim of acquiring further knowledge to facilitate the attainment of specific practical objectives such as the creation or development of products, production processes or services (Art. 14).

There is no distinction in funding rate between with-profit and non-profit entities.

RFCS runs a continuous annual call, which is distinct from the novel calls of the Clean Steel Partnership. The success rate in the annual call for proposals under RFCS in the steel sector fluctuates yearly depending on the budget available, being in average around 20% of success.

In the RFCS call for proposals of 2020, there were 978 participating entities, out of which 165 entities were selected for funding (16.9%). Out of the 978 participating entities, 357 entities were Private with-profit organizations; of these, 60 entities were selected for funding (16.8%). 85 SMEs participated in the evaluated proposals (8.7%) with a success rate of: 16.5%. These figures represent also the average over the last 3-4 years.

1. **Horizon Europe Pilot**

In the light of the experiences from Horizon 2020, and the increasing ambition in for industrial participation in Horizon Europe, it is now proposed to apply a funding rate of 60% for with-profit entities in some of the Innovation Actions of the co-programmed partnerships of Cluster 4 ‘Digital, Industry and Space’ (rather than the 50% used in Horizon 2020).

In the first Work Programme of Cluster 4, a ‘twin track approach’ is pursued by testing a lower funding rate of 60%, targeting with-profit making entities in some topics of co-programmed partnerships reaching TRLs 7 and 8 (with the exception of those that start at TRLs below 5). This selective approach leads to the pilot being applied to 13 topics in the first Work Programme of Cluster 4. These can all be found in Destination 1 (“Climate neutral, circular and digitised production”).

The topics are:

Made in Europe partnership:

HORIZON-CL4-2021-TWIN-TRANSITION-01-02: Zero-defect manufacturing towards zero-waste

HORIZON-CL4-2022-TWIN-TRANSITION-01-01: Rapid reconfigurable production process chains

HORIZON-CL4-2022-TWIN-TRANSITION-01-06: ICT Innovation for Manufacturing Sustainability in SMEs (I4MS2) (TRL 8)

Processes for Planet partnership:

HORIZON-CL4-2021-TWIN-TRANSITION-01-17: Plastic waste as a circular carbon feedstock for industry

HORIZON-CL4-2021-TWIN-TRANSITION-01-21: Design and optimisation of energy flexible industrial processes

HORIZON-CL4-2022-TWIN-TRANSITION-01-10: Circular flows for solid waste in urban environment

HORIZON-CL4-2022-TWIN-TRANSITION-01-11: Valorisation of CO/CO2 streams into added-value products of market interest

HORIZON-CL4-2022-TWIN-TRANSITION-01-17: Integration of hydrogen for replacing fossil fuels in industrial applications

Clean Steel partnership:

HORIZON-CL4-2021-TWIN-TRANSITION-01-18: Carbon Direct Avoidance in steel: Electricity and hydrogen-based metallurgy

HORIZON-CL4-2022-TWIN-TRANSITION-01-16: Modular and hybrid heating technologies in steel production

HORIZON-CL4-2021-TWIN-TRANSITION-01-19: Improvement of the yield of the iron and steel making (TRL 8)

HORIZON-CL4-2021-TWIN-TRANSITION-01-22: Adjustment of Steel process production to prepare for the transition towards climate neutrality (TRL 8)

HORIZON-CL4-2022-TWIN-TRANSITION-01-13: Raw material preparation for clean steel production (TRL 8)

This pilot, involving both Clusters 4 and 5, will make it possible to collect sufficient data on the effects of this measure, and to assess its pertinence while keeping the pilot within a limited number of topics.

The scope of the pilot in Cluster Digital, Industry and Space’ is shown in the table below:

|  |  |  |
| --- | --- | --- |
| **Co-programmed partnership** | **All topics**Topics / Budget M€ | **60% pilot**Topics / Budget M€ |
| Made in Europe 2021 | 6 | 143 | 1 | 27 |
| Processes for Planet 2021 | 4 | 108 | 2 | 78 |
| Clean Steel 2021 | 3 | 56 | 3 | 56 |
| **Total 2021**  | **13** | **307** | **6** | **161** |
| Made in Europe 2022 | 6 | 144 | 2 | 57.5 |
| Processes for Planet 2022 | 4 | 157.5 | 3 | 127.5 |
| Clean Steel 2022 | 2 | 24 | 2 | 24 |
| **Total 2022** | **12** | **325.5** | **7** | **209** |

The participation of SMEs, and other factors, in topics with a 60% funding rate will be closely monitored, and benchmarked against Innovation Actions with a 70% funding rate. **The Commission will present the results of the evaluation of the 2021 calls to the Programme Committee, re-assess the approach, and propose corrective measures if necessary, including for topics in 2022**.

1. Council Decision of 29 April 2008 on the adoption of the Research Programme of the Research Fund for Coal and Steel and on the multiannual technical guidelines for this programme (2008/376/EC). [↑](#footnote-ref-1)