

## EREA position on the European Innovation Fund

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The European Innovation Fund (EIF) has significant resources at its disposal, also for innovation to make aviation more sustainable. However, besides SAF-projects very little proposals are being put forward for funding and with unchanged framework conditions, not much can be expected in the future. Considering the critical mass of the fund and the theoretical complementarity with other key European funds, this is a major shortcoming and a missed opportunity. EREA has identified several issues and puts forward recommendations to overcome them.

### 1. EIF is not well connected to Horizon Europe, causing a disruption in the innovation process

The Innovation Fund's stakeholder consultation event of 13 June 2023 clearly exposed a disconnect between Horizon Europe and the EIF. Projects reaching higher TRLs after a Horizon Europe project seem to be not ready for an EIF call. There is a need for large-scale demonstrators and pilot lines that test and validate technologies, crossing the valley of death and progressing technologies through the innovation funnel. This phase exists before one can speak of scaling up of market readiness. This phase will also not (yet) bring you the emission reduction, as its goal is not to reduce emissions, but to validate technologies that will. Fill this gap and Europe will have a connected innovation funnel with appropriate funding instruments each step of the way.

**Recommendation 1:** reserve a part of the EIF budget for large-scale demonstrator projects or pilot lines. A dedicated set of award criteria is needed as demonstrators themselves will not significantly reduce emissions, but the products and services that are built upon them eventually will. Such projects would pick up where Horizon Europe stops, closing the gap that exists between the two programmes.

### 2. Emission reduction award criteria difficult to comply with

Projects are expected to directly reduce emissions within a certain timeframe, often 10 years. Such notion disregards the specificities of the aviation sector where the lead time for new products and services is extremely long. Moreover, the interdependencies among different actors in the sector make it difficult to positively assess the credibility of the reduction calculation. An airport can invest in hydrogen distribution system, but relies on a hydrogen aircraft to become available and airlines to integrate it into its fleet in order to make good on its promise. It will be extremely difficult for aviation to comply with the criteria to have projects directly reduce emissions in a short timeframe.

### 3. Aviation disadvantaged with other sectors in the same call

Even if aviation partners are able to put forward a proposal with significant emission reduction potential, it would still be very difficult to compete with projects in other sectors that are often able to promise a much more direct and short-term emission reduction with relatively reduced prior investment requirements to reach the same maturity levels. To illustrate, a SAF project would be able to claim emissions reductions the moment the SAF is put into the aircraft in service. This is possible because significant investments have already been made to test, validate and certify engines for 50-50 blends. This claim can only now be made due to significant prior investment over many years. In general, any technological innovations at aircraft or systems level would have to undergo such significant testing, validation and certification that will take years, sometimes decades, which can include flight tests that are costly and time consuming. EREA believes this should not disqualify proposals, particularly those that are needed to contribute to the eco-system effect resulting from interdependencies discussed in point 2 above and elaborated here.

**Recommendation 2:** in order to prevent unfair competition, aviation should have a dedicated call where aviation projects compete with one another on a fair and level playing field. Alternatively, the GHG emission reduction award criteria need to be tailor made to the eligible sectors applying and weighted to create a level playing field across all sectors.

#### 4. There is no funding for key framework conditions for innovation: the Technology Infrastructures

To test, validate and eventually scale-up technologies, products and services, it is important that the appropriate infrastructures are available. Without these 'Technology Infrastructures' (TIs), technologies cannot progress adequately through the innovation process and emission reduction risks being severely delayed. It is a misconception that the EU's framework programme Horizon Europe funds these facilities. Yes, it has a Research Infrastructures programme (not the same as TIs), but that programme does not fund the facilities themselves. For those capabilities that require an investment that no member state can carry alone, a pan-European funding mechanism is needed. The EIF is excellently positioned to do so, complementing the EU's framework programme and enabling a steep acceleration of time-to-market for innovations.

**Recommendation 3:** create, in close coordination with the Framework Programme for Research and Innovation, a dedicated instrument funding necessary test and validation infrastructures that are needed to test, validate and certify innovations to have a chance of ever reaching the market.

#### 5. Cater to specific partners in projects

The logic of public intervention is clear: the higher the technology readiness level, the lower the public investment and the more private investment are to be expected. After all, the closer to the market, the higher the market potential and potential future returns on investment. However, some partners that are necessary in innovation projects are (semi) publicly funded or not-for-profit and, as such, will never benefit from such market potential. In most cases because they are not allowed to, due to market forces or decree, for example. In particular, most public-funded research establishments (REs) and universities are not allowed by law to receive loan funding. Especially REs, being active also in the mid- to high-TRL range, would not be able to participate in EIF projects if their costs are not suitably covered. One is to be reminded of the fact that eligible costs are only part of the actual costs, so even 100% funding of the eligible costs would cover about 50% to 60%<sup>1</sup> of the actual costs. In mid- to high TRL ranges, REs are technology developers and providers, and test- and validation-centres and, as such, play an important role in the innovation process. Catering for their participation acts as an enabler and accelerator to innovation.

**Recommendation 4:** allow for an exception to reduced funding rates, similar to the one in the Horizon Europe Rules of Participation Regulation<sup>2</sup>

### Conclusion

It is clear that the current EIF favours short-term impacts over long-term ones, and in itself EREA does not believe that is a bad thing. However, the notion of short term and long term is relative when taking into account particular industries' and technologies' market dynamics. The technologies that may be integrated in the first next A320-like aircraft to reach the market will not be market ready until 2035, as can be observed in the Clean Aviation SRIA. That is what short term is in aviation; 13 years from now. If we do not act now, we will not only not make the 2035 deadline for this A320-like aircraft, but we will also lose the window of opportunity for other aircraft types, such as a longer-range wide body aircraft that are even harder to decarbonise. If the next wide-body aircraft is not as innovative and sustainable as we wish it to be, we would need to wait another 30 years before we get another chance. The impact of inaction may not be very high today, but it will last for decades.

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<sup>1</sup> This differs per organisation, depending on overhead and other non-eligible costs levels

<sup>2</sup> Horizon Europe Rules of Participation (2021/695) – Article 34-1(b)