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COMMISSION STAFF WORKING DOCUMENT

IMPACT ASSESSMENT

Accompanying the document

Proposal for a Regulation of the European Parliament and of the Council on the European Institute of Innovation and Technology (recast)

and

Proposal for a Decision of the European Parliament and of the Council on the Strategic Innovation Agenda of the European Institute of Innovation and Technology (EIT) 2021-2027: Boosting the Innovation Talent and Capacity of Europe

 $\{ COM(2019) \ 330 \ final \} - \{ COM(2019) \ 331 \ final \} - \{ SEC(2019) \ 275 \ final \} - \{ SWD(2019) \ 331 \ final \}$

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Glossary

Term or acronym	Meaning or definition					
CLC	Co-Location Centre, a geographical hub for the practical integration of the knowledge triangle					
DG EAC	Directorate-General Education, Youth, Sport and Culture, a Directorate General of the European Commission					
DG GROW	Directorate-General Internal Market, Industry, Entrepreneurship and SMEs					
DG RTD	Directorate-General Research and Innovation					
ECA	European Court of Auditors					
EFSI	European Fund for Strategic Investments					
EIC	European Innovation Council					
RIS	EIT Regional Innovation Scheme					
EIT	European Institute of Innovation and Technology					
ERASMUS+	The EU programme supporting education, training, youth and sport in Europe during the 2014-2020 period					
ERDF	European Regional Development Fund					
ESIF	European Structural and Investment Fund					
EU	European Union					
ExCo	Executive Committee of the EIT Governing Board					
GB	Governing Board of the EIT					
Horizon 2020	Horizon 2020 – the EU's framework programme for research and innovation 2014-2020					
неі	Higher Education Institution					

HEInnovate	Joint initiative of the European Commission and the OECD supporting HEIs wishing to increase their innovative and entrepreneurial potential				
HLG	High Level Group				
JRC	Joint Research Centre, a Directorate General of the European Commission				
KAVA	KIC Added Value Activities				
KCA	KIC Complementary Activities				
KIC	Knowledge and Innovation Community				
KPI	Key Performance Indicator				
KTI	Knowledge Triangle Integration - close, effective links between education, research, and innovation				
MFF	Multiannual Financial Framework				
OECD	Organisation for Economic Co-operation and Development				
OPC	Open Public Consultation				
R&I	Research and Innovation				
R&D	Research and Development				
SIA	Strategic Innovation Agenda				
SME	Small and Medium-sized Enterprise				
SPD	Single Programming Document				
SWD	Staff Working Document				
TFEU	Treaty on the Functioning of the European Union				
TRL	Technology Readiness Level - a method of estimating the maturity of technology				

1. Introduction: Policy and legal context

1.1. Scope of the impact assessment

This impact assessment accompanies the Commission proposals for an amendment of the European Institute of Innovation and Technology (EIT) Regulation¹ through a recast² and for a new Strategic Innovation Agenda (SIA) for the EIT for the period 2021-2027. These initiatives aim to align the EIT legislative framework with the Commission proposal establishing the Horizon Europe Programme³, the next Union framework programme supporting research and innovation, to define the new priority fields of the EIT as well as its financial needs, and to improve the functioning of the EIT taking into account the lessons learned from the past years.

The Impact Assessment accompanying the proposal for Horizon Europe⁴ provided a clear, evidence-based blueprint for how the programme will help to consolidate European leadership in research and innovation to deliver scientific, economic and societal impact. It described the key objectives and rationale of the programme including a stronger focus on the added value of its parts.

The Horizon Europe proposal confirmed the importance and contribution of the EIT and its Knowledge and Innovation Communities (KICs) in delivering the EU's strategic priorities in the area of innovation. It proposes the EIT budget for 2021-2027, its scope, added-value and main areas of activity, while pointing to a revised role of the EIT in order to reinforce its contribution to Horizon Europe's objectives. However, the Horizon Europe proposal itself does not provide the legal basis for continuing EIT operations beyond 2020, which would continue to be laid down in the EIT Regulation.

This impact assessment does not cover the decisions already taken concerning the EIT in the Horizon Europe proposal (see section 1.3 and 1.4), since these were assessed as part of the Horizon Europe impact assessment. Instead, this impact assessment focusses on key problems and issues that have been identified as hampering the effectiveness of the EIT based on lessons learned from the EIT interim evaluation and other key sources of evidence.

1.2. Legal and operational context of the EIT and the KICs

The European Institute of Innovation and Technology

The EIT's overall mission is to boost sustainable European economic growth and competitiveness by reinforcing the innovation capacity of the Member States and the Union. Set up in 2008, and part of Horizon 2020 since 2014, the EIT seeks to integrate the knowledge triangle of higher education, research and innovation, reinforce the Union's innovation capacity, and address societal challenges. The EIT achieves these goals primarily through its Knowledge and Innovation Communities (KICs): large-scale European partnerships (with

¹ Regulation (EC) No 294/2008 of the European Parliament and of the Council of 11 March 2008 establishing the European Institute of Innovation and Technology (OJ L 97, 9.4.2008, p. 1). Amended by Regulation (EU) No 1292/2013 of the European Parliament and of the Council of 11 December 2013 (OJ L 347, 11.12.2013, p. 174).

² Interinstitutional Agreement of 28 November 2001 on a more structured use of the recasting technique for legal acts. OJ C 77, 28.3.2002, p. 1.

³ Proposal for a Regulation of the European Parliament and of the Council establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination. COM(2018) 435 final. 4 SWD(2018) 307 final.

~50-400 partners) focusing on global societal challenges. The EIT provides grants to the KICs, monitors their activities, supports cross-KIC collaboration and disseminates results and good practice. The EIT's Governing Board is responsible for the strategic orientation of the EIT and of the KICs and takes the decisions on the designation of the KICs and their funding.

The Horizon Europe Impact Assessment highlighted the role of the EIT in addressing specific structural weaknesses in the EU's innovation capacity which are common to EU Member States. They include: the under-utilisation of existing research strengths to create economic or social value; the lack of research results brought to the market; low levels of entrepreneurial activity and mind-set; low leverage of private investment in research and development; and an excessive number of barriers to collaboration within the knowledge triangle of higher education, research, business and entrepreneurship on a European level. The EIT addresses these challenges through the KICs.

The EIT's objectives, rationale, EU added value, budget, broad lines of activity and performance indicators are currently defined in the Horizon 2020 Regulation⁵. The EIT Regulation sets out, in parallel, the mission and tasks for the EIT along with the framework for its functioning. The strategic, long-term priority fields and financial needs of the EIT for each seven-year period are laid down in the Strategic Innovation Agenda (SIA) of the EIT⁶. The SIA includes the detailed operating modalities of the EIT such as the selection and designation of the KICs and their performance monitoring, based on the framework set out in the EIT Regulation. The graph below illustrates the key aspects of the current regulatory environment.

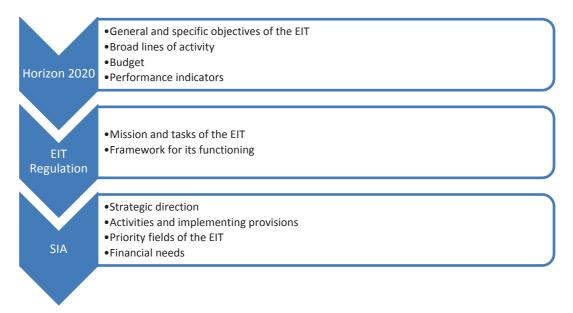


Figure 1: Current regulatory context of EIT, own illustration

5 Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020). OJ L 347, 20.12.2013, p. 104.

6 Decision No 1312/2013/EU of the European Parliament and of the Council of 11 December 2013 on the Strategic Innovation Agenda of the European Institute of Innovation and Technology (EIT): the contribution of the EIT to a more innovative Europe. OJ L 347, 20.12.2013, p. 892.

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Knowledge and Innovation Communities

The KICs are autonomous partnerships of businesses, research institutes and higher education institutions (HEIs). The KICs are set up as legal entities under respective Member States' laws, appoint a Chief Executive Officer to run their operations and have their own governance systems. The relations between the EIT and KICs are laid down in contractual agreements, which set out their respective rights and obligations, ensure an adequate level of coordination and outline the mechanism for monitoring and evaluating KIC activities and outcomes. The KICs report on their activities on a yearly basis to the EIT. Specifically, the KICs submit their annual Business Plans to the EIT as the basis for the award of the EIT grant.

Since 2010, eight KICs have been set up or designated to address specific societal challenges. According to the EIT Regulation (Article 7b) and the financial sustainability principles adopted by the EIT Governing Board⁷, the duration of EIT grant for each KIC is expected to last a maximum of 15 years after which the KIC should be able to pursue its activities without EIT funding. The areas of intervention of the current KICs are indicated below, together with their missions.

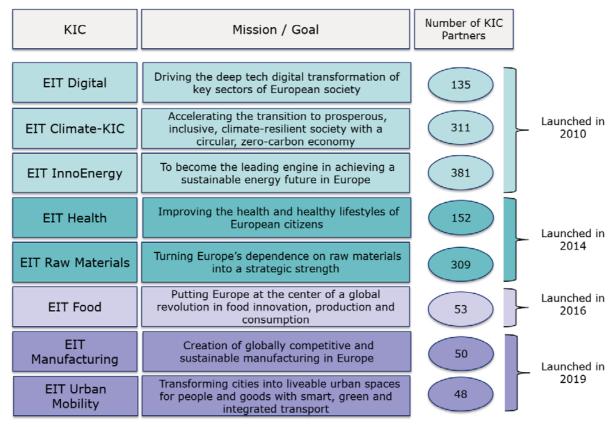


Figure 2: Overview of current KICs, their missions and number of partners; own illustration

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⁷ https://eit.europa.eu/sites/default/files/EIT% 20 GB% 20 Decision% 20 on% 20 principles% 20 on% 20 KIC% 20 Financial% 20 Substainability.pdf

Each KIC aims at reinforcing innovation capacities by running a balanced portfolio of activities in three areas:

- 1. **Innovation support projects**: aimed at supporting and developing new innovative products, services and solutions that address societal challenges in the KICs areas of activity. They may include the support to demonstrators, pilots or proofs of concept.
- 2. **Education**: these include innovative educational and training programmes offered by each KIC in the form of post-graduate (MSc/PhD) programmes, executive/professional development courses, lifelong learning modules, summer schools, etc. The EIT Label ensures quality of the KIC education programmes and recognition within and beyond the EIT Community.
- 3. **Business creation and support activities**: these include start-up and accelerator schemes to help entrepreneurs and potential entrepreneurs translate their ideas into successful business. The focus is primarily on access to market, access to finance, and access to networks, mentoring & coaching.

KICs also engage in a range of outreach, communication, dissemination and horizontal cross-sectoral activities. Since 2014, the EIT has developed the EIT Regional Innovation Scheme (RIS) as part of its outreach strategy in regions in Europe that are modest or moderate innovators according to the European Innovation Scoreboard⁸.

1.3. The EIT as part of the Horizon Europe Programme

The Horizon Europe impact assessment emphasises that the EIT should be more strongly integrated within Horizon Europe than is currently the case in Horizon 2020 and greater synergies with other components of the programme should be created. Within the Commission's proposal for Horizon Europe the EIT activities thus become part of the Pillar III "Open Innovation", which focuses primarily on supporting breakthrough and market-creating innovation. The EIT and the KICs are also expected to play a key role in addressing global challenges and European industrial competitiveness - and achieving the objectives of future R&I missions - (Pillar II "Global Challenges and Industrial Competitiveness") while also contributing to excellent science (Pillar I).

A novelty of the Horizon Europe proposal is the introduction of multiannual Strategic Planning¹⁰ for ensuring the implementation of the programme-level objectives in an integrated manner based on wide consultations about priorities and the suitable types of action and forms of implementation, in particular European research and innovation partnerships. These European Partnerships are initiatives where the Union, together with private and/or public partners (such as industry, public bodies or foundations) commit to support jointly the development and implementation of a programme of research and innovation activities. Horizon Europe promotes a more strategic, ambitious and impact-oriented approach to these partnerships, ensuring that they can effectively contribute to the Union's policies and priorities¹¹.

⁸ http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_en

⁹ e.g. it is expected that the EIT will contribute to the climate-related expenditure target which should exceed 35 % of the overall Horizon 2020 budget

¹⁰ Annex I, COM(2018) 436 final, pp. 1-2.

¹¹ European Partnerships will be designed on the basis of key principles of Union added value, transparency, openness, impact, leverage effect, long-term commitment of involved parties, flexibility, coherence and complementarity with Union, national and international initiatives. The criteria for the selection, implementation, monitoring, evaluation and phasing out of Union funding for European partnerships are set out in Annex III of the proposed Regulation for Horizon Europe.

Under the Horizon Europe proposal, the EIT KICs are considered as institutionalised European Partnerships. The alignment with the Horizon Europe framework will be supported through the multiannual Strategic Planning, which will in particular incorporate interdisciplinary and cross-sectoral perspectives and ensure that all activities under Horizon Europe are coordinated in an effective manner. In particular, the Horizon Europe proposal emphasises that "proposals for future EIT KICs in compliance with the EIT Regulation will be indicated in the EIT Strategic Innovation Agenda (SIA) and will take into account the outcome of the Strategic Planning process and the priorities of the Global Challenges and Industrial Competitiveness pillar" 12.

To deliver on Horizon Europe objectives close cooperation with, in particular the European Innovation Council (EIC), will also be important to ensure synergies and impact. The EIT and the EIC are complementary. The EIC will identify, develop and deploy breakthrough innovations, and support the rapid scale-up of innovative firms carrying out market-creating innovations at the European and international levels. On the other hand, the EIT will develop innovation capacity through knowledge triangle integration and support to innovation ecosystems. It will contribute to Horizon Europe with its distinctive focus on human capital, entrepreneurial education and support to business creation and development in specific thematic areas.

1.4. What decisions on the future of the EIT have already been taken in the Horizon Europe proposal and what are their implications?

A number of policy choices relating to the future of the EIT have already been made by the Commission through the adoption of the Horizon Europe proposal. Specifically, the Horizon Europe proposal sets out the budget for the EIT (EUR 3 billion for the period 2021-202713), its rationale, the areas of intervention which are the basis of EIT's general objectives, and its broad lines of activity14. In particular, the general objectives of the EIT are reflected in its areas of intervention defined by the Horizon Europe proposal:

- (1) Strengthening sustainable innovation ecosystems across Europe;
- (2) Fostering the development of entrepreneurial and innovation skills in a lifelong learning perspective and support the entrepreneurial transformation of EU universities;
- (3) Bring new solutions to global societal challenges to the market;

The Horizon Europe proposal also defines the criteria for selection, implementation, monitoring, evaluation and phasing-out of European Partnerships (including EIT KICs). It sets out the programme's rules for participation and dissemination, as well as monitoring and evaluation requirements, which will apply to the EIT, in addition to relevant provisions of the EIT Regulation ¹⁵.

The Horizon Europe programme, however, does not specify the concrete actions nor the means and instruments to achieve the EIT's objectives. In addition, it does not specify the expected results and resources that are needed to implement the EIT key actions to deliver on Horizon Europe objectives and expected scientific, economic and societal impacts.

¹² Explanatory memorandum, COM(2018) 435 final, p. 15.

¹³ Article 9, COM(2018) 435 final, p. 32.

¹⁴ Annex I, COM(2018) 435 final, p. 3 and Annex I, COM(2018)436 final, pp. 70-72.

¹⁵ In particular, with regard to entities eligible for participation, entities eligible for funding, award criteria, funding rates, indirect costs, eligible costs.

Indeed, the Horizon Europe proposal and its impact assessment recognise the role of the EIT Regulation in setting out the scope of the EIT's functioning and in governing the selection and priority-setting process of the KICs taking into account the outcome of the Strategic Planning process and Horizon Europe criteria for partnerships. They also recognise the role of the Strategic Innovation Agenda in setting the priority fields of the EIT and KICs for the 7-year programming period.

1.5. The need to act

1.5.1. The need to amend the EIT Regulation

The EIT Regulation, adopted in 2008, establishes the EIT. It sets out the mission and tasks of the EIT and the framework for its functioning. The Regulation was amended in 2013 in order, *inter alia*, to align it with Horizon 2020. ¹⁶

The EIT Regulation is not in principle time bound, contrary to the SIA. However, given that a number of provisions in the EIT Regulation make a direct reference to the current Horizon 2020 programme established for the period 2014-2020, these provisions need to be amended, to make them compatible with the next Union framework programmes supporting research and innovation.

1.5.2. The need for a new Strategic Innovation Agenda of the EIT

In line with Article 17 of the EIT Regulation a new **Strategic Innovation Agenda** (SIA) is to be adopted for each 7-year programming period (MFF).

The SIA lays down the strategic, long-term priority fields and financial needs for the EIT for the period covered by the MFF. It also includes an overview of the planned higher education, research and innovation activities and the respective budget breakdown. The current SIA is limited in time and covers only the period 2014-2020.

The new SIA will put forward the strategic orientations, financial needs and sources of funding of the EIT for the next MFF. Furthermore, the SIA will define the priority fields and time schedule for the selection and designation of KICs for the next programming period. It will include an overview of the planned higher education, research and innovation activities and the budget breakdown over the period. The SIA is also a legislative tool to align the priority setting of the EIT with the Horizon Europe strategic programming.

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¹⁶ Regulation (EC) No 294/2008 of the European Parliament and of the Council of 11 March 2008 establishing the European Institute of Innovation and Technology (OJ L 97, 9.4.2008, p. 1). Amended by Regulation (EU) No 1292/2013 of the European Parliament and of the Council of 11 December 2013 (OJ L 347, 11.12.2013, p. 174).

Timing and coherence of the Strategic Innovation Agenda and Strategic Planning Process

The new Strategic Innovation Agenda of the EIT for the period 2021-2027 needs to be in place before 1 January 2021¹⁷. The SIA will be adopted by the European Parliament and the Council, in accordance with the ordinary legislative procedure. ¹⁸

While the scope of the Strategic Planning process under Horizon Europe, its legal form and overall timing are to be decided by the co-legislators, the preparatory process supporting the strategic planning has already started. The Commission is discussing currently possible partnerships in order to ensure the highest coherence and complementarity at service, cabinet and political level in the form of the Project Team Meeting on Competitiveness and Innovation. In this context, it clearly emerged that the best option would be to include initially one priority area/KIC theme in the new SIA proposal for the programming period 2021-2027. Other priority areas/theme(s) for future KIC(s) within the said period would be proposed subsequently by the Commission taking into account the outcome of the multiannual Strategic Planning process, new emerging priorities, and any other relevant developments. The SIA will outline the selection of the KICs taking into account the Strategic Planning process and the criteria for partnerships in line with Horizon Europe. The total number of future KICs for the programming period will depend on the adopted EIT budget.

This approach would be in line with the EIT Regulation and would avoid any delay in the preparation and launching the call of the first new KIC in 2021. This would enable the EIT to continue developing innovative solutions addressing societal challenges through new KICs and contributing to the attainment of the objectives of Horizon Europe through a new KIC starting from 2021.

The proposed approach for the adoption of the SIA would therefore ensure (i) the continued functioning of the EIT as from 1st January 2021, (ii) avoidance of unnecessary delay of the launch of any new KIC and (iii) addressing the need for the planning of new KICs to take account of the strategic planning process under Horizon Europe.

1.5.3. Lessons learned

Given that the EIT Regulation needs to be revised to align it with the applicable Union framework programme supporting research and innovation and that a new SIA needs to be proposed, it is appropriate to consider what other changes would be needed in order to improve the functioning of the EIT and enable it to fulfil its mission and objectives. These considerations should take account of a number of evaluations, audits reviews and reports on the EIT that have been carried out over the past few years.

The following sections describe the key issues and technical problems that have been identified in these reports and assess the options for addressing these issues through the amendment of the EIT Regulation and the proposal for a new SIA.

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¹⁷ According to Art. 1 of the current SIA, it will expire at the end of 2020.

¹⁸ Based on Art. 17(4) of the EIT Regulation, which provides that acting on a proposal from the Commission, the European Parliament and the Council shall adopt the SIA in accordance with Art. 173(3) of the TFEU.

The table below indicates the most important sources of evidence for this impact assessment.

Lessons learned

The **Court of Auditors report of 2016**¹⁹ acknowledged the raison-d'être of the EIT but recommended a number of changes to the implementation model such as a revision of its funding model and changes to the EIT staff provisions in order to increase the overall effectiveness and achieve the expected impact of the EIT.

The **EIT interim evaluation of 2017** and the related Commission Staff Working Document²⁰ concluded that the EIT model remains valid. They highlighted the need for the EIT to improve in a number of operational areas and develop further synergies with other EU initiatives.

The **High Level Group on the EIT of 2017**²¹ identified a clear need to strengthen the role of the EIT as a provider of shared services and expertise to the KICs. It recognised the distinctive role education plays in knowledge triangle integration and called for the EIT to strengthen it.

Table 1: Key sources of evidence on EIT; own illustration

¹⁹ European Court of Auditors (2016), Special Report on performance of the EIT (subsequently mentioned as ECA (2016), Special Report) 20 C. Wilkinson and al./ICF (2017), Evaluation of the European Institute of Innovation and Technology (EIT) (subsequently mentioned as ICF (2017), Evaluation), and European Commission, Staff Working Document on the Interim Evaluation of the EIT, SWD (2017) 351 final (subsequently mentioned as SWD (2017) 351 final).

²¹ The High Level Group was established by Commissioner Tibor Navracsics in 2016 to review the EIT's workings and make recommendations that can help guide the European Commission and the EIT Governing Board. High Level Group on the EIT (2016), The Future of the European Institute of Innovation and Technology (EIT). Strategic Issues and Perspectives (subsequently mentioned as High Level Group (2016), Future of the EIT).

2. PROBLEM DEFINITION

This chapter presents the main problems and further technical issues driving EIT intervention within the Horizon Europe framework. It presents only those problems and technical issues that need to be addressed in the next programming period (2021-2027) through legislative changes and decisions. These adjustments will increase the EIT's efficiency, effectiveness and overall internal and external coherence, in combination with operational and managerial measures. The problems and issues identified below stem primarily from the EIT evaluation, the Court of Auditors report, and the High-Level Group report, and include references to the findings of those documents.

2.1. Suboptimal funding model

The EIT provides annual grants to KICs for a maximum of 15 years. The KICs implement their knowledge triangle integration activities based on annual Business Plans which are implemented by the KIC partners. The KIC activities are divided into two categories:

- a) activities funded up to 100 % by the EIT; and
- b) complementary activities which are not funded by the EIT.

The distinction between these two types of activities determines the ceiling of the EIT's contribution. According to the EIT Regulation, EIT funding may only cover a maximum of 25 % of a KIC's overall costs (i.e. the sum of the costs of EIT-funded activities and non-EIT-funded activities - this complex model is set out in the Figure 3 below).

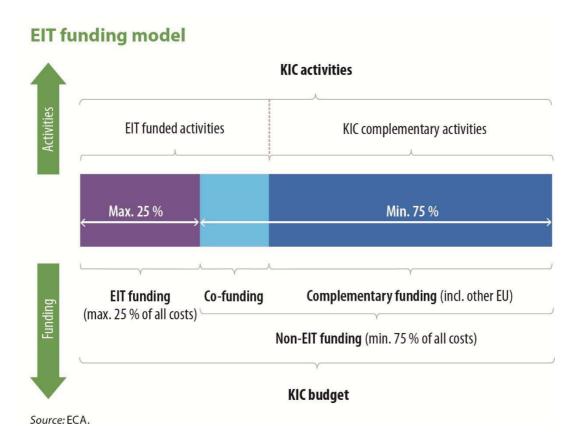


Figure 3: EIT funding model, European Court of Auditors illustration

According to the Court of Auditors 2016 report, the inclusion of "complementary activities" in the funding model is suboptimal given that both their definition and their interpretation are rather general and vague.²² This creates problems in applying the eligibility rules among partners and KICs. The criteria for the designation of complementary activities, i.e. their links to key activities and their proportionality, are unclear, and thus, of little added value.²³

As the Court of Auditors observed, "the measuring and reporting of KIC complementary activities are not essential to the achievements of the EIT's objectives" as many complementary activities are not additional in practical terms, ²⁴ i.e. they are not directly triggered by the EIT intervention, already exist or will happen anyway. Therefore, the intended EIT financial leverage effect, i.e. ensuring that a substantial part of the overall KIC budget comes from non-EIT funding (such as membership fees, national or regional funding), is not applied in practice. ²⁵ In addition, the current funding modalities create a disproportionate administrative burden in terms of financial reporting for the KICs. The Court of Auditors implied in its report clearly the need to focus on EIT-funded activities and concluded that the EIT funding model was not effective and requested its change in order to improve it. ²⁶

An additional important aspect of the EIT funding model is the financial sustainability objective: KICs should gradually reduce their dependency from EIT funding for their further consolidation and further expansion. In accordance with the EIT Regulation the EIT grants provided to KICs should normally cease after a maximum of 15 years. In order to support this objective, the EIT has adopted principles²⁷ obliging each KIC to develop and implement a financial sustainability strategy and submit an annual progress report. However, the current funding model does not provide any specific incentives to KICs to gradually increase their levels of private funding. As a result, progress towards financial sustainability remains uneven amongst KICs (see Figure 4).

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²² ECA (2016), Special Report, pp. 15-20.

²³ An example used also by the European Court of Auditors is that KIC partners have reported as a KIC complementary activity the cost of non-EIT students attending courses in which EIT students also participate. However, these costs are not additional as the courses were part of the standard educational programme of the university.

²⁴ Ibid., p. 24

²⁵ The overall level of co-funding of KAVA activities by KICs was 23% in 2016 and 20% in 2017.

²⁶ Ibid., pp. 15-20

²⁷ Decision 4/2015 of the Governing Board on Principles of KICs financial sustainability.

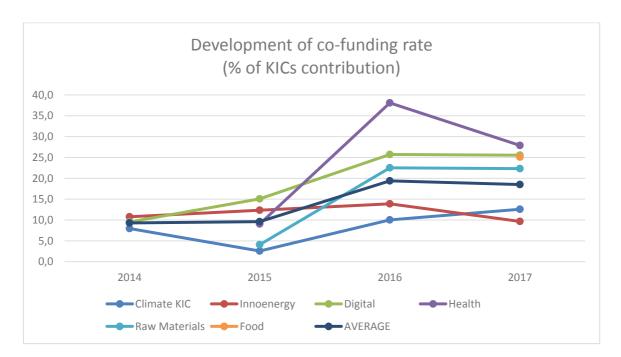


Figure 4: Co-funding attracted by KICs, 2017; own chart based on EIT data

An additional challenge of the current funding model is the annual nature of the planning and preparation cycle of the KIC Business Plans. As the Court of Auditors observed, the current annual grant process is at odds with the need to reflect the longer-term perspective of innovation activities. The annual grant process is also a major obstacle to planning and coordinating multiannual innovation projects. This limits the potential of the KICs and leads to a suboptimal selection of innovation activities, low engagement of some KIC partners and limited networking and interaction. 30

Questions related to the EIT funding were also part of an Open Public Consultation (OPC) which was launched in the context of the impact assessment. The majority of respondents³¹ supported the notion that KICs need a robust financial sustainability strategy from the outset (64% of respondents) and that securing other public funding for the operations of KICs is necessary (60% of respondents). Furthermore, securing funding from other sources, including those from private actors was the most popular solution cited by respondents in an openended question regarding financial sustainability.

2.2. Limited impact of EIT's education activities

Since its set-up, the EIT has supported innovative education and training programmes by linking education, research and business; learning-by-doing curricula; entrepreneurship education; and international and cross-sectorial mobility. EIT students have strong entrepreneurial competences and high employability rates, suggesting that their skills and

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²⁸ The KICs' Business Plan contains the detailed description of the activities that the KIC and its partners will run in the course of the year and forms the basis on which the grant allocations are decided by the EIT Governing Board; (see details in Annex 5). 29 ECA (2016), Special Report, pp. 26-30.

³⁰ Based on the network analysis of partnering within KICs in the Study to support the Impact Assessment (SQW, November 2018), Annex

³¹ See Annex 2B

education are both recognised and useful.³² In the last four years, 43 ventures and persons from the EIT Community have been featured in Forbes Europe 30 under 30 lists.³³ As highlighted by the EIT evaluation³⁴, there are benefits to EIT-supported education activities resulting from: knowledge triangle integration and the integration of research results and innovative practices into the education offer; involvement of industry in the design and delivery of the programmes; and access to accelerator programmes.

However, the EIT evaluation and the High Level Group report to the Commissioner also highlighted that the impact of the education activities of the EIT remains limited. The evaluation referred to the low awareness of the EIT education brand³⁵. The EIT labelled programmes do not appear to have sufficient traction to create market demand. Moreover, the evaluation found that links "between education and innovation-support activities [are underexploited], and will require further efforts in the coming future." More generally, in terms of overall impact, the Commission concluded in its Staff Working Document on the EIT evaluation that "stronger impact is expected from [EIT] education activities".³⁷

A recent report³⁸ of the Joint Research Centre argues that "together with research centres, HEIs are co-innovators of 70% of the innovations derived from H2020 projects. However, further changes in strategic orientation and university governance are required for universities to realise their potential contribution as enablers of innovation. Excellence in research, high-quality education, entrepreneurship and contributions to innovation all need to be strengthened, while at the same time ensuring synergies between them."³⁹

The Horizon Europe proposal has outlined a stronger role for the EIT in education. This relates to the need for stronger entrepreneurial and innovation capabilities and skills in HEIs. 40 Against this backdrop, the Horizon Europe impact assessment called for "an enhanced role for the EIT in embedding innovation and entrepreneurial capabilities, prospective skills identification and talent development in HEIs". 41

The challenge to increase the innovation capacity of HEIs is set to grow as they become more integrated in local, national and global innovation chains.⁴² In this context, the proposal for the Specific Programme under Horizon Europe identifies "entrepreneurial and innovation skills in a lifelong learning perspective and the entrepreneurial transformation of EU universities"⁴³ as one of the intervention areas for the EIT.

³² There were close to entrepreneurial 1200 EIT Label graduates as of 2017, in addition to EIT students engaged in other programmes. See EIT (2017), Our Impact, from 2010 to 2016, pp. 33-34 (eit.europa.eu/interact/bookshelf/eit-our-impact-2010-2016), and SWD (2017) 351 final, p.28.

³³ See EIT (2017), Our Impact, p. 37 and EIT Press release: EIT entrepreneurs in the spotlight in Forbes 30 under 30 (eit.europa.eu/newsroom/eit-community-entrepreneurs-spotlight-forbes-30-under-30).
34 SWD (2017) 351 final, , pp. 40-44.

³⁵ SWD (2017) 351 final, p.31.

³⁶ Ibid., p.28.

³⁷ Ibid., p.44.

³⁸ C. Benedetti Fasil et al. (2017), Current challenges in fostering the European innovation ecosystem, EUR 28796 EN, Publications Office of the European Union, Luxembourg, 2017, ISBN 978-92-79-73862-3, doi:10.2760/768124, JRC108368.

 $^{40~}See~OECD~(2009),~Universities,~innovation~and~entrepreneurship:~criteria~and~examples~of~good~practices. \\ $(\underline{http://www.oecd.org/cfe/leed/43201452.pdf})$ as well as OECD country reviews on $\underline{https://heinnovate.eu}$$

⁴¹ SWD (2018) 307 final, p. 256

⁴² See Renewed EU Agenda for Higher Education (COM(2017) 247) and the ones set in the Renewed EU Agenda for Research and Innovation (COM(2018) 306) as well as High Level Group on maximizing the impact of EU Research & Innovation Programmes (2017) LAB – FAB – APP. Investing the European future we want, p.13. 43 COM(2018) 436 final, p. 71

The stakeholders responding to the Open Public Consultation called for a stronger role of the EIT in education. A total of 65% of all OPC respondents⁴⁴ agree or strongly agree that training opportunities to become more entrepreneurial and innovation minded are insufficient in Europe. The most popular suggestions from the respondents for achieving the educational policy objective are for the EIT to provide funding for innovation capacity development and rewarding/recognising HEIs to become more innovative and entrepreneurial (71% of respondents) and to launch new actions supporting education and human capital development through the identification of future skills needs (69% of respondents). In the same consultation however, only 23% of respondents support the strengthening of the EIT label. Furthermore, the representatives of business and regional associations interviewed by the Commission⁴⁵ expressed the view that HEIs should play a key role for a more entrepreneurial environment in Europe.

2.3. Limited impact of EIT's regional outreach

The KICs consist of geographical hubs or co-location centres (CLCs) that bring together, at a local or regional level, education, research and industry partners of the KIC. As the EIT evaluation confirmed, CLCs broaden the EIT innovation support to some of EU's moderate innovation performers; nevertheless, the CLCs' support to the group of "moderate and modest innovator" countries⁴⁶ remains limited to a small number of Member States (Portugal, Poland, Estonia, Greece, Slovenia)⁴⁷.

Both the evaluation of the EIT and the High-Level Group report highlighted that efforts are still needed for the KICs to be fully integrated into the local innovation ecosystems. 60% of respondents to the consultation on the mid-term evaluation of the EIT reported that "the KIC had had little or no systemic impact on local, regional or national innovation ecosystems". 48

The majority (77%) of all respondents to the OPC agree or strongly agree that the joint activities between HEIs, businesses and research organisations are not sufficiently integrated within their regional and local ecosystems. This perception is even stronger (89% of respondents) in "moderate and modest innovators" countries. Similarly, the main issue raised by the representatives of the business and regional associations during the consultation organised by the Commission in November 2018 related to the necessity of linking the EIT and KIC activities to the regional and local Smart Specialisation Strategies.

The problems of insufficient engagement of KICs in developing strong local innovation communities are further amplified by the fact that 73% of the EIT financial contribution is concentrated in five countries.⁴⁹ This results in a lack of integration and promotion of KIC activities within the regions and local innovation ecosystems across Europe and limits their overall impact on regional innovation ecosystems.

Through its Regional Innovation Scheme (EIT RIS) which was launched in 2014, the EIT developed an outreach strategy, which is carried out through the activities of the KICs. Its

⁴⁴ Cf. Annex 2B

⁴⁵ Views expressed in the stakeholder workshops organised by the Commission in November and December 2018.

⁴⁶ This report adopts the categorisation of the European Innovation Scoreboard. The Scoreboard identifies countries as: Innovation Leaders; Strong Innovators; Moderate Innovators; and Modest Innovators. ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_en 47 ICF (2017), Evaluation, p. 36, i.e. Portugal, Poland, Estonia, Greece, Slovenia

⁴⁸ Ibid., p. 84. and High Level Group (2016), Future of the EIT, p. 13.

⁴⁹ ECA (2016), Special Report, pp. 42-43. Funds are concentrated in partners from: Netherlands (24%), Germany (15%), France (13%), Sweden (12%) and United Kingdom (9%)

main objective is to support countries and regions that lag behind in innovation performance⁵⁰ by strengthening their capacity for innovation and by bringing the EIT model to these regions. EIT RIS is a voluntary scheme and KIC do not have an obligation to implement it unless they decide to include it their Business Plans.

Incentives for KICs to operate in EIT RIS territories are still limited, in comparison to the total budget available. The EIT RIS guidelines foresee that each KIC can apply for EUR 1.5 to EUR 4 million annually. This is between 1.7% to 5% of the total annual grant for a first generation KIC in 2018. Such incentives appear insufficient to fully exploit the potential of the regional outreach of the KICs activities and do not adequately mitigate existing regional disparities.

Given the novelty of the RIS any conclusions regarding its impact would be premature at this stage. However, there are indications that its effect is likely to be limited, partly due to low budgets as well as differing strategies between the horizontal EIT RIS strategy and the individual strategies of the KICs that ultimately implement it on a voluntary basis.

2.4. Technical issues

In addition to the three key problem areas described above, the interim evaluation, the Court of Auditors Report, the High-Level Group Report, the Commission's observations on the EIT functioning also point to a number of technical issues that the EIT needs to address in order to increase the effectiveness, efficiency and coherence of its operations, in line with its objectives and mission.

KICs: openness, transparency and collaboration

Limited transparency and openness of the KICs affect their partners and stakeholders. As the Court of Auditors observed in relation to KIC internal processes, the major challenges relate to the limited number of partners involved in the strategic and operational decision-making of the KIC⁵¹; the selection of activities financed by the EIT⁵²; and the lack of transparency and communication⁵³, hindering wide participation, roll-out and replication.⁵⁴ The high concentration of EIT financial support in a small number of partners negatively impacts the attractiveness of the KICs for potential new partners.

The High-Level Group report found that the limited openness of KICs, and their innovation ecosystems as a whole, to new partners, as well as the lack of clear guidelines associated with becoming a partner can reduce the effectiveness of the EIT model. The Group report referred to the perception of the KIC as "closed clubs" and called for principles that can better engage external partners including SMEs.⁵⁵ A similar view was reiterated by some participants in the

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⁵⁰ Modest and moderate innovators in 2018, based on the European Innovation Scoreboard: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Portugal, Romania, (South) Italy, Slovakia, Slovenia, Serbia and Turkey. 51 ECA (2016), Special Report, p. 42.

⁵² lbid. p. 44; 50% of the respondents to the survey do not believe that the selection of the activities within the KIC is fair and transparent.

⁵³ Ibid. p. 44; some KIC partners have expressed their concerns by stating that "there are a couple of influential partners and they distribute the funds among themselves".

⁵⁴ E.g. the websites of some KICs still lack basic information on the supported projects such as contact details of project coordinators, project duration, amount of EU-funding, and key deliverables. The EU as funding source is not properly indicated throughout the co-funded projects

⁵⁵ High Level Group (2016), Future of the EIT, pp. 17-18.

consultations on Horizon Europe.⁵⁶ Some stakeholders highlighted that "it is essential that the EIT and the KICs improve their openness and responsiveness to include new relevant actors and keeping a continuous outreach effort to renew and reinforce the member base".⁵⁷ Stakeholders also highlighted the potential synergies from more active collaboration between and across the KICs.⁵⁸

More than 50% of OPC respondents indicated that the EIT brand is not well recognised.⁵⁹ The current EIT mechanisms to ensure systematic and wide dissemination of results to better inform European, national and regional policy makers of the achievements of KICs/EIT are not effective.⁶⁰

The integration of the activities of HEIs, research organisations, and businesses is a cornerstone of the EIT innovation model and requires efficient collaboration among these actors. As confirmed by participants in the consultation activities run by the Commission, the level of cooperation between education and training institutions and businesses is insufficient. Business actors were not always willing to partner with academia thus confirming a broader problem in university-business collaboration.⁶¹

Furthermore, the social network analysis in Annex 7 suggests that in selected KICs up to 83% of KIC beneficiaries participated in only one or two projects meaning that some organisations have weak ties with the system and that activities are concentrated around a small number of organisations.

EIT Governance

Good governance of the EIT is essential for achieving its objectives and ensuring long-term success. Structures, processes, roles and responsibilities as established in the EIT Regulation are interrelated. Several bodies play an important role and these are (1) a *Governing Board* (high-level members experienced in higher education, research, innovation and business) assisted by an *Executive Committee*, (2) a *Director*, appointed by the *Governing Board* and (3) an *Internal Auditing Function* advising the *Governing Board* and the *Director*. The Commission has an observer role in the *Governing Board*. It also appoints the members of the *Board* but the latter is not obliged to report to the Commission. Therefore, the Commission's contribution to the effective and efficient functioning of the EIT and KICs is limited.

58 See Annex 2A

⁵⁶ E. Griniece and M. Muizarajs (2018), Synthesis of stakeholders input for Horizon Europe, p. 64.

⁵⁷ Ibid.

⁵⁹ ICF (2017), Evaluation, pp. 51-52

⁵⁰ Ibid

⁶¹ European Commission (2018), The state of university-business cooperation in Europe. Publication available at.europa.eu/en/publication-detail/-/publication/1b03ee59-67a4-11e8-ab9c-01aa75ed71a1/language-en

⁶² It adopts, for example, the draft EIT's SIA, the SPD, the EIT's budget, appropriate measures if the evaluation of a KIC shows inadequate results, appoints and dismisses the *Director* and exercises disciplinary authority over him/her, promotes the EIT globally, etc.

The external evidence on governance is not as extensive as in other areas; however, in the Commission's experience it is clear that the current form of governance has an impact on the efficiency of the EIT's functioning. As an example, the current EIT Regulation does not rigorously distinguish between the supervisory powers of the Governing Board and the executive powers of the Director, e.g. with regard to the continued monitoring and evaluation of the activities of the KICs. The governance structures should also better ensure that KICs operate in synergy with each other and with relevant EU policy objectives

According to the EIT Regulation, the *Stakeholder Forum* is intended to be a platform open to national, regional and local authorities, organised interests and individual entities from business, higher education, research, associations, civil society and cluster organisations, as well as other interested parties from across the knowledge triangle. However, its implementation is through one annual event⁶³, which suggests that it is not effectively fulfilling its function due to its limited scope.

The governance of the EIT has also been the subject of recommendations from the High Level Group on the EIT (HLG)⁶⁴. Consequently, there is a need to clarify and adjust roles, responsibilities and the division of tasks between the *Governing Board*, the *Executive Committee* and the *Director* with a view to increase clarity, avoid duplication and the need to simplify the EIT's decision-making process⁶⁵. In addition, a clarification of the role of the Stakeholder Forum is necessary in order to maximise its impact.

Other issues

As highlighted by the Court of Auditors' 2016 report, there is a high staff turnover at the EIT linked to the fact that EIT staff contracts have limited duration compared to other similar EU bodies. This is an issue that needs to be addressed as it has impact on the continuity of EIT's operations and its functioning.

⁶³ The EIT is organising every year an event gathering EIT stakeholders. See for more information https://eit.europa.eu/innoveit 64 High Level Group (2016), Future of the EIT, pp. 22-24.

⁶⁵ Supported by evidence from decentralised EU agencies concluding that a clear separation of roles and functions between the *Management Board* and the *Director*, as foreseen in the founding regulations, is meant to avoid overlap between the two, and allow the *Management Board* to focus on strategic priorities and key management decisions.

2.5. Summary of problems and technical issues to be addressed:

The following problem tree exemplifies the drivers of the problems and technical issues:

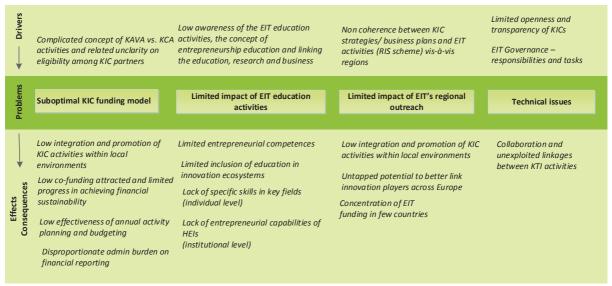


Figure 5: Problem tree; own illustration

The following table shows the sources of problems and technical issues:

Problem/technical issue	Regulation	SIA	Operational/managerial measures
Suboptimal funding model	Х	X	
EIT governance	Х		X
Future themes for new KICs		X	
Limited impact of education activities	X	X	
Limited impact of regional outreach	Х	X	
Openness, transparency and collaboration of KICs	X	X	X
Horizontal: ensuring alignment within Horizon Europe and synergies		X	X

Table 2: Sources of problems and technical issues; own illustration

3. WHY SHOULD THE EU ACT?

3.1. Legal basis

The EU has a shared competence in industry policy based on Article 173 TFEU (Title XVII). According to Article 173(1), the Union and the Member States shall ensure that conditions necessary for the competitiveness of the Union's industry exist. For that purpose, in accordance with a system of open and competitive markets, their action shall be aimed also at fostering better exploitation of the industrial potential of policies of innovation, research and technological development. Article 173(3) foresees that the European Parliament and the Council, acting in accordance with the ordinary legislative procedure referred to in Article 294, may decide on specific measures in support of action taken in the Member States to achieve the mentioned objective, excluding any harmonisation of the laws and regulations of the Member States. This provision is the legal basis of the EIT Regulation and of the EIT's Strategic Innovation Agenda 2014-2020.

The proposed reinforcement of the activities of the EIT, including in the area of education and the regional dimension, are innovation-driven and aim at the fulfilment of the objective set out in Article 173 TFEU. Therefore, the industry legal base provided in Article 173 TFEU constitutes the legal base of both proposals assessed in this impact assessment.

3.2. Subsidiarity and proportionality: need for, and added value of EU action

The Commission proposals for amending the EIT Regulation through a recast and for a new SIA respect the principles **of subsidiarity** and **proportionality**. They do not go beyond what is required for achieving the Union's objectives and provide a clear EU added-value in terms of economies of scale, scope and speed of investments in research and innovation areas, compared to national and regional initiatives and solutions. Moreover, EU action would not interfere with purely domestic scenarios or require harmonisation of the laws and regulations of the Member States.

The EIT has a unique way of building EU-wide innovation ecosystems of education, research, business and other stakeholders. Its activities have a cumulative effect, which support and stimulate Europe's expertise, notably, in key strategic fields. This strengthens the Union's competitiveness and innovation capacity for the benefits of society as a whole. Furthermore, cooperation activities supported by the EIT lead to an increased quality of action, innovation and internationalisation of KIC partners and organisations, the creation of cross-border, multidisciplinary networks, more cross-sectoral cooperation and geographical outreach.

The EIT is also the sole instrument within Horizon 2020 and the future Horizon Europe with a distinct focus on education as a key driver of innovation, growth and competitiveness. The EIT and the KICs develop innovative education and training programmes by linking education, research and business; learning-by-doing curricula and robust entrepreneurship education. The EIT contributes to increasing the number of entrepreneurs and skilled professionals thus contributing to the overall development of human capital in Europe.

⁶⁶ ICF (2017), Evaluation, p. 36.

4. OBJECTIVES: WHAT IS TO BE ACHIEVED?

The general objectives are reflected in the Horizon Europe programme proposal and presented below, along with the specific objectives that address the problems and technical issues facing the EIT.

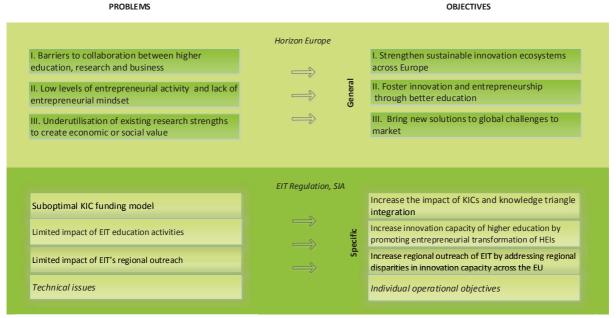


Figure 6: General and specific problems and objectives of the EIT; own illustration

In line with the identified problems, the specific objectives, to be defined in the SIA are:

- a. To increase the impact of KICs and knowledge triangle integration through an effective and efficient EIT funding model;
- b. To increase the innovation and entrepreneurial capacity of the higher education sector by promoting institutional change in HEIs in Europe;
- **c.** To increase the regional outreach of the EIT in order to address regional disparities in innovation capacity across the EU;

HOW OPTIONS ADDRESS PROBLEMS AND TECHNICAL ISSUES

A number of options regarding the EIT's future direction were considered and discarded in the Horizon Europe impact assessment⁶⁷: namely, the Reduction/Discontinuation of EIT KICs interventions; the Continuation of the approach to EIT/KICs as implemented under Horizon 2020⁶⁸; the Direct integration of KICs into the Framework Programme (without the EIT). Annex 5 provides details on policy options which were not considered viable and the reasons for this.

Before proceeding to the discussion of the three policy options, sections 5.1.-5.3. discuss measures to be taken in response to problems and technical issues described in section 2 for which only one alternative is viable. The policy options are presented in the backdrop of a targeted EU level intervention on the basis of the Horizon Europe proposal for an EIT budget of EUR 3 billion (allowing the launch of one or two new KICs during 2021-2027 according to the option chosen). The options offer different strategic choices and are not cumulative even though a wide range of similarities exists across all of them.

5.1. Discussion of technical issues

Openness, transparency and collaboration

Limited transparency and openness affect negatively the collaboration of EIT stakeholders. Technical amendments in the EIT Regulation would be necessary to reinforce the principles of openness and transparency, particularly: the provision on transparency of both the EIT and KIC and access to documents and extending the selection criteria for KICs to incentivise the addition of new members and including references to Horizon Europe principles of transparency and openness for European Partnerships.

A number of technical measures can be introduced by the EIT which do not require additional amendments to the EIT Regulation. Such measures include the creation of guidelines by the EIT to be followed by KICs as regards transparency and openness aspects, in particular the selection of new partners, the preparation of the Business Plan⁶⁹ and the openness of activities to third parties. The Governing Board (GB) would monitor how KICs apply the guidelines and take them into account in the assessment of KICs' performance for the funding allocation. This includes the possibility to explore how strategic priorities that are not foreseen to be addressed by new KICs can eventually be efficiently supported through collaborative action among several KICs (cross-KIC actions). This applies even more so if more than one KIC already foresee activities common for a policy objective.

In addition, the KICs' multi-annual strategies need to describe how the KICs will ensure openness to relevant partners and stakeholders and how it intends to reach new potential partners across Europe. Other measures include ensuring that KICs transparently share the conditions and the criteria to become partners as well as improving the procedure for the preparation of a KIC multi-annual strategy and Business Plan (including the identification of priorities, synergies with other KICs and other EU-activities, the selection of activities and the allocation of funds). Finally, the Governing Board could incentivise KICs that demonstrably increase the share of calls, in particular for innovation projects that are open to third parties.

⁶⁷ SWD(2018) 307 final, p. 129

⁶⁸ This approach was discarded due to its perceived lack of integration of EIT in the overall R&I framework

⁶⁹ Including guidance on streamlining the policy goals/targets and its monitoring.

In its monitoring, the EIT should signal over-concentration of EIT financial support to the Governing Board which should be able to request operational measures from the KIC that mitigate such over-concentration. More generally, transparency guidelines should ensure that KIC Business Plans contain the information on the level and intensity of cooperation between KIC partners (i.e. overview/ratio of KIC partners/beneficiaries within individual KIC activities, innovation projects or education programmes; and breakdown of funding distribution among individual partners). Such measures should be monitored by the EIT via relevant indicators and trigger action at the level of the Governing Board if related objectives are not met.

Governance

There is a need for clarification of the roles for the EIT Governing Board, Executive Committee and Director. The Governing Board needs to strike the right balance between strategic leadership of the EIT and KICs and responsibility for operational aspects of the EIT and KICs. In addition, the Governing Board has to give overall guidance to the EIT while respecting the autonomy of the KICs. While the EIT Regulation qualifies all decisions of the Governing Board as 'strategic', it is clear that some decisions are operational in nature such as the establishment of advisory groups or the implementation arrangements for the operation of an Internal Auditing Function.

The EIT would benefit from a more guidance from the Governing Board on key strategic issues. The Governing Board currently does not play a sufficiently strong role in the monitoring, supervision and steering of KICs, which could be strengthened by supervising more closely the ongoing evaluation and monitoring of KICs. A clearer division of tasks could help the Governing Board to achieve balance between strategic leadership and operational aspects.

The assistance by the Executive Committee to the Governing Board should be clarified in order to provide more effective support (eg. preparation by Executive Committee of the meeting of the Governing Board in cooperation with the Director; consultation of the Exectutive Committee by the Director on key documents such as the draft Single Programming Document and draft consolidated annual activity report). The Commission's role should also be clarified to reflect its legal obligations in terms of monitoring and sound financial management. A requirement for agreement by the Commission on a limited number of strategic issues (e.g. monitoring and financial allocation principles) should be introduced.

The EIT Stakeholder Forum should take into consideration the activities of the Forum of Member States and Associated Countries' public authorities and bodies to be established under the Horizon Europe programme. This forum will promote coordination and dialogue on the development of the EU's innovation ecosystems and between EU and national innovation policies and programmes.

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⁷⁰ Under the current EIT Regulation, the GB has to i) take the necessary strategic decisions on the EIT and KICs by, for example, adopting the Strategic Programming Document (SPD) and EIT's budget, the draft SIA, selecting a partnership as a KIC; ii) exercise responsibility for operational aspects of the EIT and KICs, e.g. by adopting procedures for financing, monitoring and evaluating the activities of the KICs; and iii) respect the substantial autonomy of the KICs by not influencing their internal organisation and composition, precise agenda or working methods.

⁷¹ As a result of the broad scope of the KICs autonomy in the EIT Regulation, the KICs have tended to grow large, strong and independent, while the GB has built up the corresponding capacity to successfully oversee their strategic development and performance. The result is a lack of operational transparency of the KICs, a problem identified in ECA (2016), Special Report, and High Level Group (2016), Future of the EIT.

Moreover, several amendments to the EIT Statutes annexed to the EIT Regulation would be necessary to reinforce the EIT governance provisions. In particular, this would include changes to clarify the role of the Governing Board, the Executive Committee, the Director and the Commission in the governance of the EIT with a view to increase its effectiveness; and to clarify the role of the Stakeholder Forum. In addition, provisions as regards staff contracts should be amended to allow for contracts of an indefinite duration in line with other comparable bodies, in order to ensure the continuity of EIT operations.

5.2. Discussion of priority fields

According to the EIT Regulation, the SIA should define the priority fields for the future KICs. The Governing Board of the EIT proposed four possible priority themes for future KICs in its Strategic Outline on the Future of the EIT⁷² and the draft Strategic Innovation Agenda of the EIT that was submitted to the European Commission in accordance with the EIT Regulation. The priority fields proposed by the Governing Board have been subject to a further thorough assessment by the Commission (see Annex 9 for more details). It should be noted that this assessment did not include a detailed specific assessment of the potential economic, social and environmental impacts of possible KICs launched under each of the proposed priority fields since this is not explicitly required by the EIT Regulation.⁷³

The final Commission assessment, summarised in the table below, 1) builds on several reports and assessments conducted by the EIT and the Commission against various sets of criteria and 2) is based on the evaluation of 9 key aspects that condition the selection of the priority fields. Annex 9 summarizes the assessment process and its different steps and outcomes. Annex 6 outlines the European partnerships criteria that will be reflected in the call for selection of future KICs and in their multiannual strategies.

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 $^{72 \} See \ for \ more \ details \ the \ strategic \ outline \ published \ by \ the \ EIT \ GB: \ \underline{https://eit.europa.eu/sites/default/files/eit_strategic_outline_0.pdf}$

⁷³ The same approach was followed by the Commission and co-legislators for the preparation and adoption of the current Strategic Innovation Agenda 2014-2020.

Key aspects	Cultural and Creative Industries	Security and Resilience	Water, Marine and Maritime	Inclusion, Integration and Migration	
Coherence and synergies with EU R&I and Education landscape	++	++	++	+	
Not covered by planned similar EU initiatives (i.e. partnerships)	++	+	+	++	
Fragmentation of the innovation value-chain	++	+	+	++	
Suitability of the EIT model to address innovation bottlenecks	++	++ ++		0	
Ability to mobilize investment and sufficient market for innovation	+	+	+	0	
Modernisation/transformation potential of the Education system and skills gap	++	+	+	++	
Regional dimension	++	+	++	+	
Citizen-focus approach	++	++ +		++	
Synergies with and complementarity to existing KICs	++	+	+	0	
TOTAL	17	12	12	10	

Table 3: Selection of future priority fields, Commission assessment

As a result of this assessment process, the field of Cultural and Creative Industries (CCI) has been identified as the most adequate thematic priority for the first KIC to be launched under Horizon Europe as it obtained the best results in the overall assessment against the proposed criteria. CCI are a sector with a high growth potential, many grass-roots initiatives and strong citizen appeal. They are strongly embedded in their local and regional ecosystems. However, the innovators and business creators in this sector lack the needed entrepreneurial and innovation skills. For these reasons, the KIC model seems particularly well adapted.

Cultural and Creative Industries also complement very well the themes of the 8 already existing KICs in the EIT portfolio. Last but not least, they cover an area for which no other potential partnership is foreseen and where there is a strong political support from the European Parliament and from Member States. Therefore, this theme has proven to be the most suitable to the KIC model and complements well the activities of the existing ones. These conclusions would be reflected in the SIA, along with an indication for the launch of such a KIC. A call would be launched in 2021 that would lead to the designation of a KIC in the year after, i.e. 2022.

5.3. Discussion of funding model

In line with the EIT Regulation provision that requires funding for KICs to cease normally after a maximum of 15 years, the EIT Governing Board adopted principles for the financial sustainability of the KICs in 2015, based on its initial experience with the first generation KICs launched in 2010. In the principles, the Board outlined that that the maximum EIT contribution to a KIC for eligible costs should start to decrease from 100% to 80% in year 11 of the EIT grant agreement with the KIC⁷⁴, implying there is no co-funding obligation for the KIC in the years one to ten. While this decision was the first to explicitly introduce cofunding from the KIC partners, given that no KIC has entered its eleventh year by 2019, its effectiveness cannot currently be assessed.

KIC partners already attract co-funding, albeit to a very different extent. The figure below provides an overview of the co-funding attracted by KICs so far – ranging from 9.7% in EIT InnoEnergy (launched in 2009) to 27% in EIT Health (launched in 2014). The figure shows the average co-funding increasing from 9% to 19% between 2014 and 2017 (see Annex 11 for more details). However, as shown in the Figure 7, it is evident there are significant performance differences between the KICs. In particular, two out of three first generation KICs have significant difficulties in attracting co-funding.

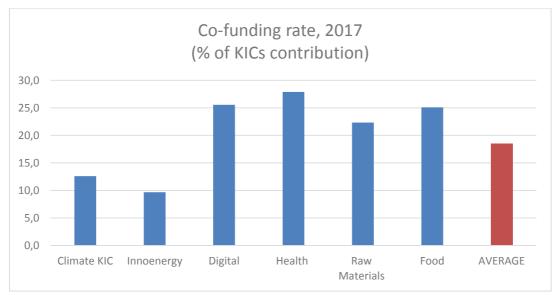


Figure 7: Co-funding rate (% of KICs contribution) in different KICs in 2017; EIT data

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⁷⁴ The decision applies to the so-called KAVA activities (KIC-value added activities), ie. the activities that can be funded with up to 100% (see chapter 2.1. for an explanation). The Governing Board decided in 2015 that the maximum EIT contribution to a KIC will be reduced from up to 100% funding to KAVA after 10 years of a KIC's designation to 80%, on average, in year 11 and thereafter progressive annual reductions: 60% in year 12, 40% in year 13, 20% in year 14 and 10% in year 15. This decision has not been revoked since then as it is expected that the Commission will revise the funding model, in accordance with the Court of Auditors recommendation.

In this context and in view of the recommendation of the Court of Auditors, different solutions have been analysed in order to address the suboptimal funding model of the EIT: a continuation of the current practice; an introduction of a co-funding rate in line with the Horizon Europe provisions for partnerships; and a decreasing EIT co-funding rate. Annex 10 provides a financial modelling analysis of the implications of co-funding.

5.3.1. Continuation of current funding model (discarded)

Not changing the current funding model would mean that there would continue to be a funding model that does not distinguish clearly between the EIT grant and real external investment. The KIC activities not funded by the EIT would continue to be included in the calculation basis when determining the EIT'S financial contribution to the KIC. The yearly reporting of the KIC complementary activities, both in the Business Plans and in the financial reports submitted by the KICs, would continue to add considerable burden with limited added value.

As a result, the funding allocation would continue to be ineffective and disincentivise KICs from implementing sound financial sustainability strategies. The expected leverage effect will continue to be undemonstrated. Finally, not responding to the recommendation of the Court of Auditors⁷⁵ is not a justified option, so this solution is discarded.

5.3.2. Introduction of a 50/50 co-funding rate (discarded)

In light of the 2015 decision of the Board, the subsequent recommendations of the High Level Group and the Court of Auditors, the data available, and the need to strengthen KIC partners contributions or other revenue sources, an alternative to the continuation of the current model is to consider the introduction of an explicit co-funding model to replace current practice.

One possibility would be to adopt the guidance provided for institutionalised European Partnerships based on Articles 185 and 187 of the TFEU. The provisions in Annex III on Partnerships of the Horizon Europe proposal stipulate, "the financial and/or in-kind, contributions from partners other than the Union, will at least be equal to 50%". The shift to such a funding model would however raise a number of serious concerns in terms of feasibility and the overall impact on the KIC.

While it can be assumed that co-funding of KICs would gradually increase, it seems implausible that KICs would be able to adapt to a co-funding rate of 50% in the transition to the Horizon Europe framework as of 2021 onwards. Such a change in the funding model of all existing KICs would imply a far-reaching revision of all existing financial management and planning practices. Such an abrupt change would need to be agreed by all KIC partners putting the KIC partnership at risk. It is not excluded that it can seriously destabilise the current structure which is based on existing guidance.

⁷⁵ ECA (2016), Performance report, p. 51 76 See COM(2018) 435 final, Annex III, p.7.

⁷⁷ It is expected that the final HE Regulation will require the limit of 50% of EU financial contribution will apply only to institutionalised partnerships under Article 185 and 187 of the TFEU.

In addition, the application of a harmonised co-funding rate of 50% across all eight KICs - that are in very different stages of development - would disrupt all KICs and the entire KIC operation model. It would be contradictory to the guidance provided by the EIT GB which aimed to allow for some flexibility in preparing KICs better for financially sustainability with a decreasing rate of co-funding by the EIT.

Moreover, such a rate would not provide sufficient incentives to any new KICs to apply to upcoming calls or to the achievement of the financial sustainability goals by the current ones. In the case of new KICs, the obligation to co-fund 50% of the budget from the very beginning entails a clear risk of non-implementation, as partners would be more reluctant to engage in long-term partnerships that requires them to commit significant resources over up to 15 years. It is very likely that calls for proposals for future KICs would not attract interest under this cofunding rate.

Apart from the significant operational implications of a shift to a 50% co-funding model, the financial modelling in Annex 10 shows that even though attractive in theory in the short term, a co-funding rate of 50% would be a suboptimal solution in the long-term. Moreover, there are significant enforcement issues with such a rate that may prevent partners from participating in the activities, both for existing and new KICs.

In addition, a co-funding of 50% appears more suitable for research-industry partnerships where industrial partners have a core interest in shaping and controlling the research and development agenda. It seems however less suitable for a KIC that includes at its core also education and entrepreneurship activities that aim at developing skills and a more entrepreneurial culture. Such activities are traditionally addressed by and in close collaboration with the education sector and are more difficult to fund from private sources.

In conclusion, there is a considerable risk that a co-funding rate of 50% applied across all KICs may lead to premature termination of the activities of at least some KICs, while causing severe disruption in all of them and preventing new ones from starting. For this reason this option is discarded as well.

5.3.3. Introduction of a gradually decreasing EIT co-funding rate (retained)

A number of reasons suggest a gradually decreasing EIT co-funding rate would be an appropriate solution to the problem at hand.

First, the establishment of EIT co-funding rates that would reflect the decision adopted by the Governing Board in 2015 and the needs of KICs across their different phases (start-up phase, ramp-up phase, maturity phase, exit from the EIT grant). It would support them more effectively towards achieving financial sustainability and result in additional economic benefits due to the significant investment made already. It would provide clarity on specific co-funding conditions for the different phases. This would result in higher planning security and private investment in KIC-supported projects/sectors, enabling KICs to gradually focus more on higher added-value activities and services they provide.

Secondly, the introduction of a gradually decreasing rate of EIT co-funding would stimulate and reward performance and best practice. While most of the KICs already have adequate

⁷⁸ See Annex 10 for details

non-EIT co-funding rates, some of them do not. This is the case of two out of the three first generation KICs (EIT InnoEnergy at 9.7% and EIT Climate-KIC at 12.6% in 2017) despite them being fully mature and receiving a grant of around EUR 85 million and EUR 80 million, respectively for 2017. However, given the clear guidance of the Governing Board from 2015 it is expected that their performance will improve between 2018 and 2020 (latest data available is 2017) as the EIT Governing Board has raised this issue with the KICs in its monitoring and supervision.

A co-funding rate applicable to the KICs should reflect best performance and aim to increase the performance of KICs that under-perform. Based on the KIC development model, a decreasing funding rate would involve four phases. A start-up phase (years one to four) will involve the set-up of the organisational structure of the KIC, establishing its management and operational structures and defining the short-term business strategy. This phase will be supported with up to 100% of the eligible cost within the available grant. This is necessary as the KICs build up their operations in the first years and the absolute size of the grant is growing only over time (for example, EIT Health, launched in 2014, received the followings amounts: EUR 3.2 million (2015); EUR 20.7 million (2016), EUR 34.2 million (2017) and EUR 57.7 million (2018)).⁷⁹

In the ramp-up phase (years five to seven) the KIC will consolidate its partnership structure and deliver on its mid-term business strategy. The EIT will support the KIC with up to 80% of the eligible costs, requiring the KIC to match at least 20% of the cost. In the maturity phase (years eight to eleven), the KIC will grow, expand and the EIT will support it with up to 70% of the budget. Finally, in line with the Governing Board principles for financial sustainability, during the exit phase (years twelve to fifteen), the EIT will request the KIC to gradually increase its co-funding rate on an annual basis. The "exit from EIT grant" phase is in line with the guidance of the Governing Board that stipulated a decrease starting with 80% in year 11 and thereafter progressive annual reductions: 60% in year 12, 40% in year 13, 20% in year 14 and 10% in year 15".80 The EIT will discontinue its annual grant to the KIC after year fifteen.

The table below provides an overview of the proposed decreasing co-funding rate that adapts and formalizes the decision taken by the Governing Board.

	Start-up	Ramp-up	Maturity	Exit from EIT grant
Years	1 – 4	5 – 7	8 – 11	12 – 15
EIT Co- funding rate	Up to 100%	Up to 80%	Up to 70%	50% at year 12, decreasing by 10% per annum

Table 4: Overview of the proposed decreasing co-funding rate for the EIT grant; own illustration

80 The same document stipulates "in year 11 and thereafter progressive annual reductions: 60% in year 12, 40% in year 13, 20% in year 14 and 10% in year 15".

 $^{79\} Internal\ data$ and reporting provided by the EIT to the European Commission.

Unlike the Governing Board proposal of 2015, the proposed decreasing co-funding rate would ensure that co-funding is applied early on in the KIC operations (starting at year 5 instead of 11), thereby significantly increasing the commitment of the partners and their long-term planning security. The proposed EIT co-funding rate would gradually decrease over the years 5 to 15 and facilitate the KICs transition to financial sustainability, rather than start to fall steeply after 10 years. All other things being equal, the proposed decreasing rate would also trigger higher private investment than the current GB proposal (see also Annex 10). Finally, such a co-funding rate reflects well the best performing KICs today that should gradually become the benchmark.

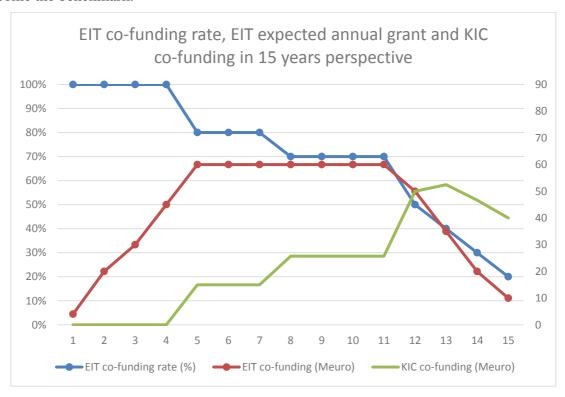


Figure 7: EIT co-funding rate, EIT expected grant and KIC co-funding in perspective; own projection

The adaptation of the funding model would increase the non-EIT co-funding share. As a result, higher private investments from both existing KIC beneficiaries as well as new partners investing in KIC-supported projects would be likely in the medium to the long term as the simulations in Annex 10 demonstrate. Furthermore, the adaptation of the funding model is in line with the views of the majority of stakeholders expressed in the Open Public Consultation. Securing other public or private funding for the operation of KICs from the outset was the most popular solution cited and supported by 64% of the respondents.

⁸¹ The simulation results in Helsinki-Uusima and Noord-Brabant regions suggest that the accelerating of the private investment in the medium- to long-run is the most effective when the increasing co-funding rate over time is applied (policy option 2) attracting annually EUR 96.62 million and EUR 324 million respectively in 2035.

The implications of changes to the funding model would be different for different waves of KICs:

First wave (three KICs launched in 2010): somewhat affected as the funding by the EIT will be discontinued after 2024 and Governing Board guidance from 2015 is broadly in line with current proposal.

Second and third wave (three KICs launched in 2014 and 2016): moderately affected since the change in the funding model would happen in the middle of their programming period. However, the KICs of 2014 and 2016 already now have a non-EIT co-funding rate of between 20 to 25 % which is in full compliance with the proposal.

Fourth wave (two KICs launched in 2018): no significant implications as they would start up their activities in 2019 and 2020 which would allow for smooth integration into any new funding model.

For any **future KICs**: no particular implications as they would be launched in the next programming period.

Table 5: Implications of new co-funding model on KICs; own analysis

The theoretical and empirical simulation analyses in Annex 10, point to the overall large potential of the EIT investment support to leverage additional private investment into KIC projects through gradually decreasing EIT co-funding rates. However this may also have an effect on the number of KIC partners and the membership. Higher KIC co-funding rates could imply fewer partners willing to participate and contribute to the operation of the KICs. Such a scenario could however be counterbalanced with appropriate EIT incentives that reduce the financial, technology or market uptake risks of the potential KIC investors.

A number of additional measures aimed at improving the efficiency of the funding allocation will support the application of the new funding model. First, a comprehensive and in-depth review after seven years of KIC operations would be the opportunity for the EIT Governing Board to decide if a KIC has demonstrated adequate and expected results with the option to discontinue funding⁸². This review would guarantee transparency and would be in line with the guiding principles and criteria for European Partnerships in Horizon Europe and best practice in the EU.⁸³

A possible challenge may emerge if there is non-compliance by the KIC with the non-EIT cofunding rule. For this there are effective mitigation measures. Firstly, a KIC must respect the financial principle of the EIT when preparing their Business Plans (prepared and submitted in year n-1), necessitating that the KIC will have to make the relevant calculations before proposing its Business Plan and requesting a budget to implement it. Secondly, should a KIC still have difficulties to match the EIT grant, then the Governing Board could reduce the

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⁸² The possibility that the EIT Governing Board has of terminating a KIC should its results be inadequate is foreseen in the current EIT Regulation. The new EIT Regulation should include a clear reference to the 7-year review and the possible termination or suspension of funding.

⁸³ Cf. the review process of the Exzellenzinitiative in Germany which can extend the status of an "excellent university". Deutsche Forschungsgemeinschaft, http://www.dfg.de/foerderung/programme/exzellenzinitiative/

absolute EU contribution to a level that the KIC can match, according to the rules. Such flexibility is currently possible and can be implemented through managerial measures.

5.4. Description of policy options

Three policy options are presented below: a baseline reflecting the continuation of business as usual; and two different options addressing the problems and technical issues identified in the impact assessment.

The following graph presents comprehensively the intervention logic of all the Options 1, 2 and 3. It is to be noted that the options are expected to achieve the outputs, results and impacts to a different extent (further developed in section 6).

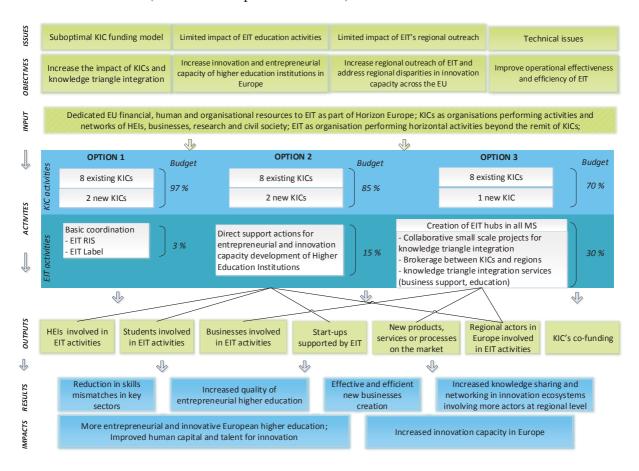


Figure 8: Intervention logic; own illustration

5.4.1. Option 1: Baseline

The baseline option represents the continuation of EIT's activities as they are today with essential adjustments necessary to align it with the proposal for Horizon Europe. The EIT's activities would be planned and implemented to maximise synergies and complementarities with the actions (clusters and missions) under the *Global Challenges and Industrial Competitiveness* Pillar. EIT would comply with implementation, monitoring and evaluation criteria for European Partnerships.

In addition, the EIT will develop synergies with the European Innovation Council in offering support to highly innovative ventures in both start-up and scale-up stages, in particular through KICs. In order to ensure alignment with the overall Horizon Europe proposal in terms of administrative rules, a simplification of rules would be pursued.

The EIT and the KICs would keep their **current model** and continue business as usual. The EIT would continue to operate only through KICs. The role of KICs as drivers of innovation ecosystems in specific fields and the EIT as primarily a grant management agency would not change. The funding model of KICs would stay unchanged. Horizontal activities, such as the EIT Label or the EIT Alumni would continue operating on their current basis. The Regional Innovation Scheme (EIT RIS), would continue to be performed on a voluntary basis and its activities would not be part of a KIC' overall strategy.

No new actions would be launched by the EIT to further address education and regional aspects as part of the baseline.

In line with the EIT Regulation, the first three KICs⁸⁴ **would cease** to receive EIT financial support after 2024. The five KICs⁸⁵ that started operations between 2015 and 2019 would reach maturity in the new programming period.

Within the proposed budget of EUR 3 billion and based on the current funding model, **two new KICs would be launched** within the timeframe of 2021 – 2027, the first in the field of Culture and Creative Industries (CCI), the second on a theme to be defined taking into account the Horizon Europe Strategic Planning exercise.

In terms of **budget**, Option 1 would represent a continuation of the current distribution of budget between KIC activities, the EIT-driven activities and the EIT administrative budget, i.e. 97% of the budget for the grants to KICs and the rest divided between the EIT-driven activities and its administrative budget. No changes would be made to the EIT staff provisions and duration of staff contracts.

	2021	2022	2023	2024	2025	2026	2027	Total
Admin budget	6	7	7	7	7	7	7	48
KIC-related expenditure	401	388	424	427	424	435	431	2930
EIT-driven activities	2	2	3	3	4	4	4	22
Total EIT Budget	409	399	437	441	439	446	444	3000

Table 6: Indicative budget under option 1 (MEUR); own illustration

5.4.2. Option 2

Option 2 builds on the baseline. In addition to the essential adjustments necessary to align with the proposal for Horizon Europe, (=baseline), it adopts a number of technical measures to enhance the functioning of the EIT. **Synergies** with the proposal for Horizon Europe will be similar to those under the baseline.

Option 2 introduces **a new EIT action** in order to address its specific objectives in the fields of education and regional outreach. The main defining feature of this action would be the direct support action for entrepreneurial and innovation capacity development of Higher

⁸⁴ EIT InnoEnergy, EIT Digital, EIT Climate-KIC

⁸⁵ EIT Food, EIT Health, EIT Raw Materials, EIT Manufacturing, EIT Urban Mobility

Education Institutions (HEIs). In addition, complementarities with other EU level programmes (e.g. ERDF, Erasmus+) or national programmes and funding instruments would increase.

The EIT would adapt its **funding model** and implement a gradually decreasing EIT cofunding rate, as described in section 5.2. Another important aspect of this Option would be the introduction of a long-term planning perspective of innovation activities (multiannuality). In order to address **technical issues** hampering its functioning, the EIT would also adapt its governance model and improve openness, transparency and collaboration.

The **Regional Innovation Scheme** will be further strengthened by integrating it fully in the KIC Business Plans and making it a core activity of the KIC with an increased budget.

A substantial number of stakeholders in the Horizon Europe consultations referred to the role of the EIT in Horizon Europe in bridging R&I instruments with support to higher **education**. The EIT will simplify the EIT labelling process, extending it to a wider lifelong learning perspective and to external quality assurance. In order to address its specific objectives, the EIT would launch a **new support and coordination action** aimed at supporting the **development of entrepreneurial and innovation capacity of HEIs**. This action will build on HEInnovate, a proven concept developed by the Commission and OECD.

HEInnovate is a policy framework of the Commission and the OECD launched in 2013, that offers (1) a methodology for HEIs to develop their innovation and entrepreneurial capacities and (2) a methodology to Member States to review their higher education systems. To date more than 1000 HEIs have used HEInnovate and a number of Member States have hosted HEInnovate policy reviews by OECD. 88 This demand suggests that there is a strong need in HEIs to develop their innovation and entrepreneurial capacity in a structured and systematic way. However, to the current programming period (2014-2020) the use of HEInnovate is not linked to any funding support.

Given its experience in the knowledge triangle integration that directly supports innovation capacity development the EIT is uniquely positioned to implement an action aimed at supporting the development of entrepreneurial and innovation capacity of HEIs. The action would integrate the HEInnovate methodology of the Commission and the OECD and would fund entrepreneurial and innovation capacity development in HEIs. The new support and coordination action would include the following elements:

⁸⁶ E. Griniece and M. Muizarajs (2018), Synthesis of stakeholders input for Horizon Europe, p. 62.

⁸⁷ Such an approach could build on e.g. the 'European Innovation Associate' pilot (DG GROW) –a test to establish a SME-driven scheme to attract foreign recent PhD graduates (or PhD graduate returnees to their countries of origin) to R&I posts in small innovative enterprises, or the toolbox initially developed for the EC and now operated by the 'European Innovation Management Academy' in Düsseldorf, Germany (www.improve-innovation.eu)

⁸⁸ Five Member States (NL, IE, HU, PL, BG) completed an OECD review and four (IT, AT, CR, RO) are currently undergoing one.

Support the entrepreneurial and innovation capacity development in HEI in the following HEInnovate dimensions: Leadership and Governance; Digital Transformation; Organisational Capacity; Entrepreneurial Teaching and Learning; Preparing and Supporting Entrepreneurs; Knowledge Exchange; Internationalisation; and Measuring Impact.

Transferring innovation and entrepreneurial know-how between HEIs, by networking partners established in one region with HEIs established in other regions;

Bringing innovative HEIs from across the EU closer to KICs stakeholders communities and the EIT RIS stakeholder communities and connect local HEIs to European value chains in which KICs are involved;

Entrepreneurial and innovation capacity building services - including business support services, entrepreneurial education;

Support synergies and alignment between different EU programmes contributing to innovation capacity;

Table 7: Overview of new action supporting the entrepreneurial and innovation capacity of HEIs; own illustration

The EIT would implement the aforementioned action through annual calls and a dedicated budget. The calls would support collaborative projects comprising consortia of a minimum of three HEIs.⁸⁹ The EIT would provide specific guidance, expertise and coaching to participating HEIs and develop evidence on best practices and share it with the wider innovation community.

Bridging **regional disparities** will be a significant part of the new action as the EIT would particularly target HEIs from modest and moderate innovator countries to help them strengthen the regional innovation footprint and smart specialisation strategies of their HEIs. The EIT would allocate at least 25% of the overall budget of the action (around EUR 420 million) to projects led by a partner from a modest or moderate innovator country. The open nature of the calls (open to all HEIs) and the widening dimension will reach out to as many institutions from modest and moderate innovator countries as possible.

Within the proposed budget of Euro 3 billion and based on the introduction of a co-funding model that aims to increase private investment from KIC, Option 2 would see **two new KICs** launched within the timeframe of 2021-2027, the first on Cultural and Creative Industries and a second on a theme to be decided by taking into account the future Strategic Planning Process. In line with the EIT Regulation, the first three KICs (launched in 2010) would cease to receive EIT financial support after 2024.

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⁸⁹ The specific rules for setting up consortia will be in compliance with the relevant rules of Horizon Europe programme.

The more efficient funding of KIC through the decrease of EIT co-funding will result in the EIT being able to launch EIT-driven activities within its proposed **budget**. The distribution of budget between KIC activities, EIT-driven activities and EIT administrative budget would be as follows: 83% of the budget for the grants to KICs and the rest split between EIT-driven activities (15%) and administrative budget (1.8%).

	2021	2022	2023	2024	2025	2026	2027	Total
Admin budget	10	10	10	10	10	10	10	70
KIC-related expenditure	342	335	367	370	366	374	360	2513
EIT-driven activities	19	36	56	66	79	76	85	417
Total EIT Budget	371	381	432	445	454	464	454	3000

Table 8: Indicative budget under option 2 (MEUR); own illustration

5.4.3. Option 3

Similar to option 2, option 3 builds on the baseline, adopts essential adjustments necessary to align with the Horizon Europe proposal and develop **synergies** with it, and includes the same co-funding model and technical measures to enhance the functioning of EIT as option 2.

Option 3 differs from option 2 in that it would introduce **a new activity** of setting up a EIT Hub in each Member States in order to address the limited impact of the EIT's regional outreach activities, instead of the support and coordination action aimed at supporting the development of entrepreneurial and innovation capacity of HEIs proposed in option 2.

The EIT Hubs in the Member States would build on and gradually absorb the current **Regional Innovation Scheme** of the EIT. The EIT would directly implement the EIT Hubs to foster knowledge triangle integration, for example, via support for collaborative projects on a smaller scale than KICs. The projects would include partners from **higher education**, research and business. The EIT Hubs would also serve as a broker between the existing KICs and the needs of the local innovation community of the Member States and regions.

The EIT Hubs would ensure pro-active engagement with beneficiaries, development of local ecosystems as well as provision of services and small-scale grants to the beneficiaries, based on transparent criteria. They would also facilitate the management of knowledge triangle projects targeting regions where they operate. The EIT Hubs would serve the following functions:

Brokerage between KIC activities and local partners and support cross-KIC collaboration in connecting to local partners

Bringing the KICs stakeholders communities and the RIS stakeholder communities closer together, as well as support collaboration between European Structural and Investment Funds (ESIF) managing authorities and KICs and connect stakeholders to European value chains in which KICs are involved

Managing annual grants in support of knowledge triangle integration for collaborative projects, including business support services, entrepreneurial education;

Transferring expertise and know-how between KIC and regions, by networking partners established in one region with EIT Hubs established in other Member States;

Establishing links between local actors including innovation agencies, KICs and related R&I Initiatives, notably Strategic Value Chains, European partnerships, other EUfunded initiatives like Digital Innovation Hubs;

Table 9: Overview of EIT Hubs activities; own illustration

The EIT would manage the Hubs in all Member States⁹⁰. The Hubs would support small-scale knowledge triangle integration projects between at least one HEI, one business and one research organisation from at least 3 countries89⁸⁹. A particular emphasis will be put on developing effective collaboration between HEIs and businesses as this is usually the weakest link in innovation projects. The EIT would provide specific guidance, expertise and coaching to participating organisations and develop evidence on best practice and share it with the wider innovation community. The EIT would allocate around EUR 800 million of the total budget to this action.

In terms of budget implications, Option 3 would foresee 70% of the budget for the grants to KICs and the rest would be split between EIT-driven activities (27%) and administrative budget (3%). Only one new KIC would be launched during the next programming period, on the theme of Cultural and Creative Industries. In line with the EIT Regulation, the first three KICs launched in 2010 would cease to receive EIT financial support after 2024.

	2021	2022	2023	2024	2025	2026	2027	Total
Admin budget	8	12	12	13	14	15	16	90
KIC-related expenditure	290	281	307	308	307	311	298	2100
EIT-driven activities	37	76	111	129	139	158	160	810
Total EIT Budget	334	361	426	447	464	489	477	3000

Table 10: Indicative budget under option 3 (MEUR); own illustration

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⁹⁰ In Hungary as the EIT wwouldassume this role through its headquarters based in Budapest

5.4.4. Inputs of options

The following table summarises the inputs to the presented options:

	Option 1 (baseline)	Option 2	Option 3
EIT administrative budget (mio EUR)	48	60	90
EIT funding to KICs (mio EUR)	2930	2500	2100
Maximum number of KICs active during SIA	10	10	9
Budget for EIT-driven activities (mio EUR)	22	440	810
EIT Hubs in EU Member States ⁹¹	0	0	26

Table 11: Inputs of discussed options; own illustration

5.4.5. Key features of options

The following table summarises the key features of the presented options:

Issue	Option 1 (baseline)	Option 2	Option 3	
Number of KICs	• 8 existing KICs • 2 new KICs	• 8 existing KICs • 2 new KICs	 8 existing KICs 1 new KIC	
Alignment with Horizon Europe	• synergies with partnerships, missions, EIC	• Same as option 1	• Same as option 1	
Technical issues (openness and transparency; governance)	No changes	 adaptation of governance measures to increase openness and transparency 	• Same as option 2	
Funding model	• No changes	New funding model based on gradually decreasing co-funding rate	• Same as option 2	
New actions addressing problems on limited impact of education and regional outreach	• None	 New action to support actions for entrepreneurial and innovation capacity development of HEIs Strengthening of Regional Innovation Scheme Strengthening of EIT Label 	 New action to create EIT Hubs in Member States to support collaborative small scale projects for knowledge triangle integration Strengthening of EIT Label 	

Table 12: Key features of options, own illustration

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⁹¹ Hubs would operate in all Member States except Hungary and the United Kingdom following its expected withdrawal in 2019.

6. IMPACT OF POLICY OPTIONS

The following section contains a qualitative and quantitative assessment of the main economic, societal and innovation impacts identified in areas where the options are likely to have effects. The projections of future performance are based on past data reported by the EIT using existing performance indicators. The accuracy of forecasts based on historical data is limited but considered the best method to assess the results of the KICs. While undertaking such an assessment ex-ante, it is important to remember that the EIT operates in the dynamic and evolving innovation landscape. The novel character of the EIT and the knowledge triangle integration model suggest that its impacts are gradually evolving and can only be demonstrated in the long-term.

6.1. Option 1: Baseline

The EIT would continue to support KICs and build innovation ecosystems across the EU. The first three KICs, launched in 2010, will cease to receive an EIT grant after 2024 (in line with the maximum duration for support provided by the EIT to KIC) while one new KIC would be set up in 2022 and a second in 2025.

Synergies and complementarities with other EU programmes and funding instruments would increase due to the closer alignment with Horizon Europe, and in particular Pillars II and III. Consequently, the overall effectiveness in spending public money on innovation would improve although its quantification is not available. The presence of the EIT will remain **concentrated** in a limited number of Member States (see below). More than half of the EIT co-location centres (CLC) are placed in 6 countries, while only six CLCs out of 51 in total are located in moderate and modest innovator countries.

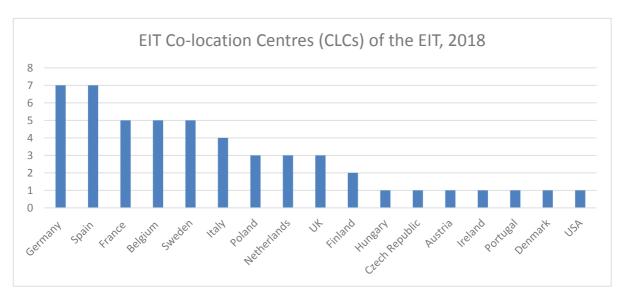


Figure 9: Co-location centres of the EIT as of 2018; EIT data

In the absence of effective transparency, openness and collaboration measures, activities of the EIT would remain limited to the KICs' partners. No significant diversification of the partnership is expected in the absence of a change in the approach towards openness and transparency.

No enhancement of SME participation is expected in this option as there would be no particular incentives for SMEs in place.

Concentration of funds would be unlikely to change, in line with the current trends, with around 73 % of the total budget concentrated in partners from five countries (see problem definition, page 16).

The establishment of the EIT with the KICs and their co-location centres were directly responsible for approximately 430 FTE direct jobs in 2016 (with a portfolio of 5 KICs, two of which only starting) across the EU.⁹² Based on this data, and a portfolio of 10 mostly mature KICs between 2021-2027, it is estimated that the number of equivalent FTE in the EIT and KICs would reach 1000.

Data reported from the three first-wave KICs, suggests that they have supported start-ups, scale-ups and business ventures that have created around 6,100 jobs⁹³ by 2016. Building on a portfolio of up to 10 KICs between 2021 and 2027, it is assumed that the number of indirectly created jobs will more than double, i.e. around 12,000 jobs will be indirectly created.

The structure of the KIC with regard to the type of partners and their overall weight would not be expected to change.

Around 300 HEIs would continue to be part of the EIT Community as KIC partners, with some fluctuations over the years due to the cessation of the EIT grant to the first generation of KICs after 2024 and the set-up of two new KICs during the Horizon Europe programming period.

With additional and more mature KICs, opportunities for knowledge transfer would increase proportionately. Based on past performance, it is estimated that between 2021-2027 around 3500 new products, services or processes would reach the market.⁹⁴

It is estimated that over 2021-2027 around 10,000 students would participate in EIT **education** activities through the EIT label and adjacent activities, which would equip them with solid entrepreneurial and innovation skills. It is likely that a part of them would become entrepreneurs and attract economic activity to regions where they are based, meaning agglomeration effects would continue. Currently, the ratio of student-to-entrepreneur in the EIT is around 1.8%, meaning some 200 start-ups could be created by students (8 start-ups created by EIT students in 2017). Together with the start-ups created as a result of KIC innovation projects, the number of start-ups supported by the EIT would reach almost 400.

The impacts described above would be visible across all the sectors in which KICs operate, though to different extents: the most significant impacts would be observed in the areas of health, raw materials, food, urban mobility, and added-value manufacturing as the KICs addressing these priority fields would all reach maturity during 2021-2027. The impacts of the first generation of KICs (EIT Climate-KIC, EIT InnoEnergy and EIT Digital) would be expected to remain. The impacts of new KICs would be visible mainly in the field of Cultural and Creative Industries – to be launched in 2022. The impact of the second KIC, if launched as expected around 2025, would be marginal during the Horizon Europe programming period.

⁹² EIT (2017) Our Impact, p. 4, available at https://eit.europa.eu/sites/default/files/11983-eit-2017_our_impact_from_2010_to_2016.pdf

⁹⁴ See output table at the end of this section

Students participating in EIT education activities would continue to acquire entrepreneurial competences, and have high employability rates ⁹⁵. However, the systemic impact of EIT educational activities, i.e. beyond the direct KIC partners and beneficiaries, would remain restricted due to the lack of external quality assurance and limited visibility of the EIT Label.

There would be no changes in the funding model. The yearly reporting of the KIC complementary activities, both in the Business Plans and in the financial reports submitted by the KICs would continue to add significant administrative burden with no added value. The absence of clear rules for external co-funding will result in missed efficiencies and lost opportunities to establish stronger incentives for financial sustainability.

Option 1 would mean a continuation of EIT administrative expenditure at current levels (EUR 48 million over 7 years) in line with the overall budget increase of the EIT over the programming period of seven years arising from staffing. Within this option, the staff provisions of the EIT and duration of staff contracts would not be amended.

6.2. Option 2

The EIT would continue to support KICs and build innovation ecosystems across Europe. The key results of KIC activities (EIT Label graduates; start-ups created by EIT; new products and services on the market) would be broadly similar to the baseline given that the number of new KICs will be the same. However, there would be a number of efficiency gains resulting from the improvements related to the technical issues and the introduction of a co-funding model.

Establishing clearer implementation measures and tools regarding openness, transparency and collaboration would facilitate access to KIC and CLCs⁹⁶ and improve the interaction with partners. This would be particularly the case for partners from modest and moderate innovator countries or SMEs. This would increase the likelihood of new CLCs in modest and moderate innovator countries for both existing and new KICs. While difficult to estimate an absolute result, it is likely that the number of the CLC in modest and moderate innovator countries will at least double.

The integration of the Regional Innovation Scheme in the KICs multi-annual strategies and Business Plans would increase the effectiveness of EIT's regional outreach. Assigning a higher budget to the RIS activities from the current average of 4.3% to at least 10% will also increase their impact. Stronger impact would be expected to materialise in those countries and regions that are moderate and modest innovators as the number of organisations engaged with KICs would grow and their activities would increase due to increased knowledge and technology transfers linked to a stronger EIT regional focus. ⁹⁷

Improving the functioning of the EIT governance would have a generally positive effect for the function of the EIT and the KIC in terms of effectiveness and efficiency.

⁹⁵ See Annex 4

⁹⁶ EIT RIS innovation hubs could be seen as embryonic CLCs in RIS-eligible countries, directly sharing and disseminating KIC knowledge and know-how to local knowledge triangle stakeholders.

⁹⁷ Liang J. and Goetz, S. (2018), "Technology intensity and agglomeration economies", *Research Policy* 47, pp. 1990–1995; see also: Apa, Noni, Orsi and Sedita (2018), "Knowledge space oddity: How to increase the intensity and relevance of the technological progress of European regions", in *Research Policy* 47, pp. 1700–1712

The change in the funding model would mean annual reporting of the KIC complementary activities would no longer be necessary, resulting in significant reduction of administrative burden. The information obligations arising from the KIC grant agreements (i.e. declaration of costs of associated activities) with its intention to show the financial commitment of KIC partners and its leverage effect will become redundant with the introduction of the new cofunding model for KICs. The alleviation of such a requirement on the side of the EIT as well as KICs and their partners will ease their resources for other tasks and improve the efficiency of the KICs operations.

The introduction of explicit conditions for co-funding will lead to stronger private investment and external involvement. Specifically, between EUR 1500 and 1800 million in co-funding is expected to be generated. This would reflect the preferences of the majority of stakeholders in the OPC who expressed their support to co-funding. Commitment from partners would further increase the likelihood of KICs to achieve financial sustainability in the long-run as the number of their stakeholders will grow. KICs are expected to adjust to the new funding model as most of them already have significant co-funding. Greater openness and stronger performance monitoring by the governing board would contribute to raising the overall efficiency of the KIC model. In the case of difficulties for some KICs (for example the first generation that will stop to receive an EIT grant after 2024), the EIT Governing Board could introduce transitory measures.

The introduction of a long-term planning perspective of innovation activities and the move away from the current annual granting scheme (annuality) would imply that KICs would offer greater legal and financial security for KIC partners. It would also consolidate the innovation activities in line with the multiannual strategies adopted by the KIC. It would ease the administrative burden by reducing the annual reporting and would facilitate the assessment of the KIC performance over the long term. Generally, it would help to ensure business continuity.

The number of start-ups generated would not necessarily increase in linear terms in 2021-2027, compared to the baseline. However, the higher private investment and external participation would improve the general quality of new business creation. While difficult to quantify, some efficiency gains are expected in terms of survival rates of start-ups and higher commercialisation of ideas and technological maturity (TRL ⁹⁸).

Compliance and implementation costs arising from the adaptation of the funding model would be expected to be higher for those KICs and their partners that would have to adjust their established processes and operation systems, and relatively low for those that are at the starting phase and establishing their operation modes. However, given that most KICs already attract co-funding, the measure would likely increase on average the performance across KICs, as those lagging behind would need to accelerate their efforts in attracting co-funding and catch up with best practice or risk correction measures requested by the EIT Governing Board.

The impacts described above will be visible across all the sectors that KIC operate in with the most significant impacts in the areas of health, raw materials, food, urban mobility, and added-value manufacturing as the KICs addressing these priority fields will all reach maturity during 2021-2027.

⁹⁸ Technology Readiness Level (TRL) – a method of estimating technological maturity and capability.

Impact of the new Action on supporting the entrepreneurial and innovative capacity of HEIs

On top of the KIC results, the impact of the EIT would be distinctive as a result of the new actions that the EIT would launch to support the innovative capacity of HEIs. The new EIT actions would spread best practice and help create a community of entrepreneurial HEIs across institutions, disciplines, countries and regions⁹⁹. The social impact of the entrepreneurial transformation of higher education through this measure would be reflected by the involvement of staff, students and institutions. Providing funding for innovation capacity development of HEIs is the most popular suggestion among the OPC respondents in order to achieve the educational policy objective for the EIT.

As a result of the action, around 450 HEIs and more than 20,000 students would be expected to participate in HEInnovate-driven in capacity development actions. Entrepreneurial and intrapreneurial 100 activities in the participating HEIs would lead to higher levels of economic activity, particularly in modest and moderate innovator countries, given the open nature of the annual calls and the earmarked budget (25% of the action budget would be allocated to projects led by partners from modest and moderate innovator countries). The illustration below provides an overview of the key assumptions behind this actions.

Total budget of this action is around 420 Million, or 60 Million per year

Annual calls for projects including at least 3 HEIs and an average budget of max EUR 3 million per project

Each HEI will involve at least 50 students in the capacity building action

23 projects per year leading to ~150 projects in total (2021-2027)

150 projects with at least HEIs each means 450 HEIs (involving at least 50 students each) means at least 22500 students (2021-2027)

At least 25% of projects would directly involve partners from moderate and modest innovator countries, i.e. 25% of 450 HEIs, or ~110 HEIs

Overall participants from moderate and modest innovation countries, i.e. 200 (current RIS) and 200 (future RIS) and at least 110 (HEIs projects)

Table 13: Assumptions behind new action supporting the innovative capacity of HEI; own illustration

It is realistic to assume that at least 15% of all EU HEIs would be reached through the HEInnovate capacity development actions (450 in total over 7 years from around 3300 HEIs in the EU) over the 7 years. The impacts would be visible in both economic and social terms through teaching, research, and entrepreneurial activities. 101 More specifically, there is evidence that scientific productivity is positively associated with entrepreneurial effectiveness

⁹⁹ E.g. HEinnovate country reviews which demonstrate the importance and the challenge for HEIs to develop their entrepreneurial and innovation capacity. The reports show that pioneering initiatives emerge in a number of HEIs, but need to be broader, more systematic and taken forward by HEI leaders in collaboration with key stakeholders. The reviews are available at www.HEInnovate.eu. 100 Intrapreneurship is the act of behaving like an entrepreneur while working within a large organisation.

¹⁰¹ Jacob, M et al. (2003): "Entrepreneurial transformations in the Swedish University system: the case of Chalmers University of Technology", in: Research Policy 32, pp. 1555-1568. Also Guerrero, M., Cunningham, J. and Urbano, D., (2015), "Economic impact of entrepreneurial universities' activities: An exploratory study of the United Kingdom", in Research Policy, Volume 44, Issue 3, April 2015, pp. 748-764

so participating HEIs could be expected to increase their scientific production levels. ¹⁰² Finally, raising awareness about the entrepreneurial capacity of an HEI is crucial because perceiving an HEI as having a low or high entrepreneurial capacity has an important effect on whether an academic engages in entrepreneurial activities, thus influencing the overall entrepreneurial aptitude of academics. ¹⁰³

Together with the new action, the impact of the existing EIT Label, which is awarded to the KIC education programmes, would increase via stronger quality assurance mechanisms including external reviews. This would positively influence the recognition of the label outside the EIT community.

Synergies and complementarities with other EU programmes and funding instruments would increase due to closer alignment with the proposal for Horizon Europe, and in particular Pillars II and III¹⁰⁴. In addition, strong cross-over synergies and complementarities would be expected to emerge between the Horizon Europe and the Erasmus+ programme as a result of the scaling up of the action supporting the innovation capacity of HEIs by the EIT. In budgetary terms, Option 2 would mean a re-balancing of the expenditure of the EIT back to around one-third of the total budget allocated to education (currently, only 17% of the KIC-related expenditure are spent on education, this would increase to around 31% with the proposed action under Option 2).

Compared to the baseline scenario, Option 2 would mean an increase in EIT administrative costs (EUR 70 million compared to the EUR 48 million baseline) in line with the overall budget increase of the EIT over the programming period of seven years arising from staffing and setting up a stronger capacity and expertise in the EIT. This increase appears commensurate with the overall growth of activities and responsibilities of the EIT. Within this option, the staff provisions and duration of staff contracts of the EIT would be aligned with those of other agencies in order to ensure the continuity of the EIT operation.

6.3. *Option 3*

The EIT would continue to support KICs and build innovation ecosystems across Europe. Within the given budget distribution of this option only one KIC could be launched (in 2022). The key results of KIC activities (EIT Label graduates; start-ups created by EIT; new products and services on the market) would be broadly similar to Options 1 and 2.

Impacts resulting from the introduction of clearer rules for transparency, openness and collaboration would be similar to those under Option 2. The effect from the adjustments in the governance of the EIT would be similar to those under Option 2 with the exception of introducing relevant governance provisions for the implementation of the new Action described below. Compliance and implementation costs arising from the adaptation of the funding model would be similar to those under Option 2.

102 Van Looy, B., (2011), "Entrepreneurial effectiveness of European universities: An empirical assessment of antecedents and trade-offs", in *Research Policy* 40, pp. 553–564.

103 Kalar, B. and Antoncic, B., (2015) "The entrepreneurial university, academic activities and technology and knowledge transfer in four European countries", in *Technovation* 36-37, pp. 1–11.

104 E.g. it is expected that EIT actions will better contribute to 35% of the overall financial envelopes to climate objectives within the Horizon Europe.

Impact of new EIT Hubs-related action

The most significant differences in terms of impact under Option 3 would be linked to the creation of the EIT Hubs.

This option would have a high impact on the management and governing bodies of the EIT. It would have significant implications in terms of human resources, budget and task allocations. High administrative overhead costs for the EIT would arise from setting-up, staffing and developing EIT Hubs, ensuring quality of services provided, allocation of funds to these hubs as well as reporting to the EIT. The establishment of the EIT Hubs would mean that staff would need to be appointed on a permanent basis to maintain them. Assuming that each Hub would be staffed by a minimum of five persons (a head of the hub; three account managers for education, innovation, and entrepreneurship; and a communication officer), around 130 positions would have to be managed by the EIT structure, in addition to the resources needed at the EIT itself. This means that the EIT staff needs over the period of 2021-2027 would be expected to more than double compared to Option 2.

Total budget of EIT Hubs action over 7 years = around 810 Mio

Set up and maintenance of 26 EIT Hubs with average administrative cost of EUR 600 000 per year x 7 years = around EUR 110 million;

Operational budget over 7 years = EUR 700 million (annual budget = EUR 100 million);

Each Hub to run annual projects promoting knowledge triangle activities with at least 1 HEIs, 1 Research and Technology Organisation and 1 business and an average volume of max EUR 3 million per project; at least 20 students to be involved per project;

Total number of projects over 7 years: ~ 230;

Total number of organisations participating in EIT Hubs activities: ~ 700

60% of results should be traced directly to moderate and modest innovator countries

 $700 \times 60\% = c.450$ institutions involved in moderate and modest innovator countries

Overall participants from moderate and modest innovation countries, i.e. 200 (current RIS) + 200 (future RIS) + 450 (HEI projects)

Table 14: Assumptions behind new action on EIT Hubs; own illustration

The implementation of the EIT Hubs would need to take place gradually and would require strong efforts at the beginning for their establishment and continuous efforts for their coordination. The substantial time lag between putting operational structures in place, implementing tasks in regions and seeing the overall effects would significantly influence the perceived success of Option 3, particularly concerning the timeliness of impact.

Knowledge triangle integration in regions would increase as a result of operations of the EIT Hubs though the annual calls. In particular, the cooperation with education and training in the regional innovation ecosystems would improve, reflecting the positive operational experiences with the KICs. The EIT hubs would primarily serve as technology transfer hubs connecting businesses and knowledge providers and ensuring regional outreach of successful KIC activities and experiences already existing in agglomeration economies.

A moderate reduction in the skills gaps and skills shortages would be expected in the areas of active operation of EIT Hubs. The relative number of partners from modest and moderate innovator countries as compared to leading innovators in the regional ecosystem would increase. Job creation and revenue growth in local innovation ecosystem would increase marginally as a result of the activities of the EIT Hubs.

Interaction between agglomeration economies and the proposed new EIT Hubs¹⁰⁵

Agglomeration economies, in a general sense, refer to productivity improvements accruing to the co-location of economic activity, typically within, and near cities. Economically useful innovation is centred on corporate functions such as R&D which are typically co-located with other high-value adding activities such as marketing, design, or IT services. Economic analysis, most recently on global value chains (OECD 2013; Belderbos et al., 2016), confirms that these corporate activities thrive in cities, where they benefit from large, dynamic pools of highly qualified professionals and a dense network of complementary services, including public research. Such effects are clearly visible in the KICs.

However, excellent research and innovation do not take place only in cities. Converging evidence (Varga et al., 2013; De Backer et al., 2017) suggest that the geographical distribution of business-driven research differs considerably to that of public research-driven science and innovation. There is evidence to suggest that agglomeration is not particularly relevant for the creation of this latter type of knowledge (Bonaccorsi and Daraio, 2005; Varga et al., 2013). Therefore it can be assumed that regional outreach activities of the EIT such as those proposed by EIT Hubs can help connect businesses and public knowledge providers irrespective of location.

Table 15: Agglomeration economies and EIT Hubs, an overview of arguments

As in option 2, synergies and complementarities with other EU programmes and funding instruments would increase due to closer alignment with the proposal for Horizon Europe, and in particular Pillars II and III. In addition, specific synergies would be expected to emerge with relevant regional innovation policies such as smart specialisation strategies or the European Regional Development Fund (ERDF).

105 Based on literature review of: OECD (2013), Supporting Investment in Knowledge Capital, Growth and Innovation, OECD Publishing, Paris; De Backer, K., Destefano, T. and Moussiegt, L. (2017), "The links between Global Value Chains and Global Innovation Networks: An Exploration", OECD Science, Technology and Innovation Policy Papers, No. 37, April; Belderbos, R., Sleuwaegen, L., Somers, D. and De

Exploration", OECD Science, Technology and Innovation Policy Papers, No. 37, April; Belderbos, R., Sleuwaegen, L., Somers, D. and De Backer, K. (2016), "Where to Locate Innovative Activities in Global Value Chains: Does Co-location Matter?", OECD Science, Technology and Industry Policy Papers, No. 30, OECD Publishing, Paris.; Bonaccorsi, A. and Daraio, C. (2005), "Exploring size and agglomeration effects on public research productivity", Scientometrics, Vol. 63, pp. 87-120; Varga, A., Pontikakis, D. and Chorafakis, G. (2014), "Metropolitan Edison and cosmopolitan Pasteur? Agglomeration and interregional research network effects on European R&D

Option 3 would mean an increase in EIT administrative costs (EUR 90 million compared to EUR 70 million in Option 2 and the baseline value of EUR 48 million), primarily in order to manage the significant coordination and transaction costs incurred by the launch of a new Action, the EIT Hubs. Within this option, the staff provisions and duration of staff contracts of the EIT would be aligned with those of other agencies in order to ensure the continuity of the EIT operation.

6.4. Outputs of options

The following tables present a summary of the outputs of the presented options:

	Option 1 (baseline) ¹⁰⁶	Option 2 ¹⁰⁷	Option 3 ¹⁰⁸
# of HEI involved in EIT activities ¹⁰⁹	300	750 ¹¹⁰	530111
# of students involved in EIT activities ¹¹²	10000	30000113	14600114
# of businesses involved in EIT activities ¹¹⁵	800	950	1030
# of start-ups supported by EIT ¹¹⁶	400	680	490
# of products, services or processes on the market ¹¹⁷	3500	4300	4100
KIC partners' co-funding in EUR million (2021-2027) ¹¹⁸	500	1800	1520
# of participating organisations from moderate or modest innovator countries ¹¹⁹	200	500	850

Table 16: Outputs of options; own projections based on past EIT performance

¹⁰⁶ All figures in baseline refer to projections based on past performance and derive from the performance achieved by the KICs in 2013-

¹⁰⁷ See Table 12 on the new action under option 2 for detailed assumptions.

¹⁰⁸ See Table 13 on the new action under option 3 for detailed assumptions.

¹⁰⁹ HEIs refer to Higher Education Institutions involved the EIT educational activities. Baseline figure includes KIC partners.

 $^{110 \ \}mathrm{Figure}$ includes baseline + all HEIs to participate in the new action launched under option 2.

¹¹¹ Figure includes baseline + all HEIs to participate in the new action launched under option 3.

¹¹² Baseline includes students participating in EIT Label and related activities.

¹¹³ Figure includes students participating in the new action launched under option 2. It is assumed that 150 students are involved in each project.

¹¹⁴ Figure includes students participating in the new action launched under option 3. It is assumed that 20 students are involved in each project.

¹¹⁵ Baseline includes business partners in KICs. Option 2 and 3 figures include, respectively business partners in actions under Options 2 and 3.

¹¹⁶ Baseline includes start-ups supported by EIT through KICs. Option 2 and 3 figures include, respectively start-ups emerging from actions under Options 2 and 3. Under Option 2 at least 2 Start-ups are expected to emerge from each supported project, i.e. 280 start-ups over 7 years. Under Option 3 it is assumed that 1 start-up is created per 3 projects as the focus is on knowledge triangle integration more generally.

¹¹⁷ Baseline includes new products, services or processes brought to the market through KICs. Option 2 and 3 figures include, respectively business partners in actions under Options 2 and 3. It is assumed that at least 3 new products/services/processes/ideas are brought to the market as a result of each start-up, i.e. 840 new solutions over 7 years

¹¹⁸ Baseline includes co-funding attracted at a rate of 20% (slightly higher than today).

¹¹⁹ Baseline includes the number of EIT RIS partners. Option 2 and 3 include the expected number of additional partners participating in the actions supported by those options.

7. How do the options compare?

The following chapter summarises the evidence and arguments outlined above and presents the effectiveness, efficiency and coherence of the Options. It presents the risks associated to the Options.

	Option 1	Option 2	Option 3
Effectiveness	0	++	++
Objective 1: KIC funding	No particular effect as business as usual will continue.	Introduction of co-funding rates will increase long-term impact of investment and support the financial sustainability strategies.	Identical to Option 2
	0	++	++
Objective 2: Regional outreach	No particular effect as business as usual will continue.	New action supporting HEIs will positively impact institutions from countries so far not reached by the EIT. Widening dimension of the action will further support regional outreach.	Actions addressing the regional disparities in innovation capacity would be implemented through the EIT hubs. The impact is expected to be highest in regions from countries that are moderate and modest innovators.
	0	+	++
Objective 3: HEIs innovation capacity	No particular effect as business as usual will continue.	New EIT actions would create a structuring effect supporting the transformation of the HEI. Increased impacts through engagement of a high number of organisations and students.	Spill-over effects expected from Knowledge Triangle Integration projects supported by the Hubs due to the participation of at least one HEI per project.
	0	++	+
Objective 4: Other technical issues	No particular effect as business as usual will continue.	Significant improvements and adjustments resulting from adapting the technical issues.	Identical to Option 2.
	0	++	++

Efficiency	0	++	+
Cost-benefit of managing KICs	No particular effect as business as usual will continue.	Higher cost-effectiveness due to the establishment of co-funding rates, clearer measures for openness and collaboration. Reduction of administrative burden for KICs.	Identical to Option 2
	0	++	++
Cost of new actions	Not applicable	Low additional administrative costs due to use of established shared services (procurement, project management, IT, legal).	Increase in the capacities of the EIT, its staffing levels as well as the overhaul of its operational systems to manage EIT Hubs will incur significant costs. Administrative burden on the EIT and its regional operational hubs will increase. Given the ratio of spending moving towards the EIT hubs operation and their relatively marginal role in contributing to the objectives, the overall efficiency of spending will decrease.
	0	-	
Administrative burden	Significant as no mitigations measures are taken	Decrease in the administrative burden due to introduction of cofunding model and clearer measures on openness, transparency With regard to new action supporting HEIs, no significant burden as shared services of the EIT will be used.	Identical to Option 2. With regard to EIT Hubs, administrative burden is likely given the need to establish new structures.
	0	++	+

Coherence	0	++	+
Horizon Europe coherence	Alignment with European Partnerships; EIC; Strategic Planning Process.	Similar to baseline. High coherence with	Similar to baseline. Role of EIT in tackling
	Strategie Frammig Frocess.	Horizon Europe mandate for the EIT in terms of education.	regional disparities. However, possible ambiguities between excellence and cohesion principles.
	0	++	+
Synergies with other EU programmes or policies	No particular effect as business as usual will continue.	Strong synergies with other Commission initiatives (e.g. HEInnovate, smart specialisation strategy).	Strong synergies through alignment with smart specialisation strategies via EIT Hubs.
	0	++	++

Table 17: Comparison of options. Key: The Options are rated according to their impact. Policy Option 1 (baseline scenario) is set to zero and the impacts of the rest of the policy Options on the stated/foreseen KPIs are expressed as net changes compared to it, i.e. + positive effect, ++ significantly positive effect, - negative effect and – significantly negative effect.

Source: own analysis

7.1. Risks associated with policy options

There are risks associated with all options that are set out in Table 17 below. The analysis is conceptual and based on qualitative assessment. It covers economic, consumer welfare, environmental quality and health risks. Due to the nature of the policy there will not be any particular health or environmental risks. Risks to consumer welfare are also considered to be low as it is deemed unlikely that the options will reduce the availability of goods or services, or make those available significantly more expensive. There are three principal economic risks:

Risk of closed ecosystems – i.e. the establishment of KICs as integrated legal entities leads to collusive behaviour between partners involved in the KIC. Such risk has a low probability with a potential moderate impact on economic welfare. A related risk is that EU actions in this area could distort markets if EU funds simply subsidise activities which would have occurred anyway and thus 'crowd out' private sector investment. This risk is estimated as high with a moderate impact on net economic welfare. Due to these dead-weight risks the overall risk of market distortion is moderate with a potential moderate impact on economic welfare. The risk can be mitigated with increased openness and transparency of KICs.

Risk of disparities in economic growth due to EU support for KICs – i.e. supporting the development of a limited number of centres of excellence would enhance their economies and create positive externalities leading to the increased growth of these centres compared to other parts of the EU. The probability of this occurring is high whilst the magnitude of the effect on disparities in economic growth is likely to be moderate, all other things being equal. The establishment of integrated entities of firms and institutions of higher education and research could also create barriers to new market entrants in locations outside the centres of operation. This would be due to a more difficult access of external institutions and actors to knowledge, talent and finance. The probability of this occurring is high with effects of moderate magnitude if realised.

This risk can be mitigated through measures under Option 2 and 3 (deepening the Regional Innovation Scheme, the set up of new actions to support the entrepreneurial capacity of HEIs across the EU and the establishment of EIT Hubs) and boosting the dissemination of best practices beyond the EIT and KIC Communities.

Risk of KICs not reaching financial sustainability. The probability of this occurring is high whilst the magnitude of the economic effect on existing innovation ecosystems will be considerable. A continued low level of private funding may provide disincentives to KICs pursuing financial sustainability. Unclear guidance on the future relationship between EIT and KICs that stop receiving EIT grants after 15 years may further increase the risk. Potential future benefits and gains from long-term investments made by the KIC over their programming period may be forfeit. The risk can be mitigated with the introduction of specific co-funding rates that will increase private investment and with a clearer model for the future relationship between EIT and KICs that cease to receive funding from the EIT. Guidance from the EIT is also important - evidence suggests that the second and third generation of KICs incorporate financial sustainability objectives more effectively than the first generate of KICs.

Risk	Probability	Magnitude	
Consumer welfare	Low	Slight	
Negative health impacts	Low	Slight	
Environmental degradation	Low	Slight	
Economic well-being	Moderate	Moderate	
Collusive behaviour	Moderate	Moderate	
Deadweight	High	Moderate	
Disparities in economic growth	High	Moderate	
Agglomeration economies	High	Moderate	
Barriers to market entry	High	Moderate	

A potential risk is one of incomplete, or no policy implementation. It is possible that calls for proposals for future KICs would not attract interest. However, based on current experience this is unlikely. Currently, there seems to be sufficient demand in consortia to apply for new KICs. ¹²⁰

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¹²⁰ In the 2018 call for new KICs there were 6 and 4 proposals for Urban Mobility and Added-Value Manufacturing, respectively.

8. PREFERRED OPTION

The baseline would see a business as usual with essential but limited adjustments of the EIT into the Horizon Europe framework but without addressing the problems the EIT faces. Options 2 and 3 would address the identified problems, respond to the Horizon Europe ambitions in terms of education and regional outreach and include adaptations and improvements to address the technical issues identified.

Option 2 would see a concerted action by the EIT aimed at supporting the development of innovative capacity of HEIs that would lead to economic and social spill-overs and higher competitiveness. This would come at a relatively low cost and by using the existing administrative capacity of the EIT and economies of scale to a considerable extent. Involving HEIs from across the EU through the new Action would contribute to mitigate the unbalanced strengthening of existing centres of excellence at the expense of regions from countries with modest or moderate innovation performance.

Stronger openness and transparency measures would help to unlock the innovative potential in a wide range of organisations. Sharing knowledge and expertise in a targeted way beyond KICs would further add EU value. The introduction of co-funding would lead to greater levels of private investment in KICs and enhance the promotion of new business development and creation. This would increase the potential of reaching the EIT financial sustainability objectives in the medium- to long-term. There would be improvements in the regional outreach due to the integration of RIS in the KIC strategies and an increased RIS budget.

Option 3 in comparison would see the EIT increasing its regional outreach to local innovation ecosystems via a distributed network of EIT Hubs that support small-scale knowledge triangle integration projects. This would gradually lead to knowledge spill-over effects resulting in increased innovative behaviour of participating institutions. However, the relative cost of achieving this would be significantly higher than in Option 2. The impact of the regional outreach would be likely to occur only in the long-term due to the time lag between set up of EIT Hubs and any activities they would support. The financial and administrative resources required for setting up the structures to implement Option 3 would be high. Finally, the administrative burden created from the implementation of this Option in multiple locations and the need to coordinate at a centralised EIT level would not be commensurate to the potential benefits within the proposed budget.

Based on the assessment of impacts presented above, Option 2 represents the most suitable way to implement the objectives of the initiative while offering the highest impacts. It would allow for a targeted and proportionate action, amounting to an incremental strengthening of the intervention alongside reinforced legal certainty. Option 2 would be a significant improvement over the baseline Option, it would reflect well the stakeholders views and could be implemented within the suggested timeframe. Particular attention has been paid to the contribution of each Option to the attainment of the overall delivery of EU priorities as set in the Horizon Europe proposal and the role of the EIT in that programme, while also comparing their effectiveness, efficiency and coherence.

8.1. Implications of the preferred Option for the EIT Regulation and the SIA

EIT Regulation

A clear objective of the amendment to the EIT Regulation through the recast legislative technique would be to ensure greater legal certainty and stability of the Regulation in accordance with the Commission's better regulation and law-making principles¹²¹ in terms of structure and legal drafting. This would enable the EIT Regulation to focus on the main principles of the functioning of the EIT/KICs and, at the same time, facilitate the application of its provisions.

In light of the above, the recast EIT Regulation would be time-neutral and principle-based. This would be achieved by putting greater emphasis on the principle-based approach in the EIT Regulation, avoiding maximum harmonization and focusing on necessary provisions enabling the functioning of EIT and KIC, and at the same time, by developing and detailing these principles in the proposed new SIA. In addition, the new EIT Regulation would be time-neutral in the sense that the need for its amendments at the end of each MFF would in principle not be necessary or only minimal. It would be for the SIA to ensure the necessary alignments with the objectives of the European Framework programme for research and innovation funding the EIT, with the monitoring and obligations of that programme, and also to foster synergies with the other relevant programmes of the respective MFF.

Moreover, the EIT Regulation would be amended in order to reinforce the role of the EIT in developing innovation capabilities through addressing global challenges and to strengthen the legal clarity of its provisions. Additional adjustments would be needed to ensure compliance of the EIT Regulation with the new Commission's Framework Financial Regulation.

Strategic Innovation Agenda 2021-2027

The SIA will set the priorities of the EIT for 2021-2027. It will align the EIT future development with the Horizon Europe general framework and ensure synergies and complementarities with the latter. The SIA will include the specific objectives of the EIT. It will propose concrete measures to enhance the transparency and openness of the KIC model in line with Horizon Europe criteria for European partnerships and define guiding principles for the role of KIC co-location centres. The SIA will set clear co-funding modalities for implementation by the KICs. It will provide guidance to the KICs when they reach the maximum 15 year limit after which the EIT grant support to the KIC will stop. It will include the main principles of the post-15 year relationship between the EIT and KICs.

The SIA will include clear objectives for and in particular define the new action in support of increasing the innovation capacity of HEIs to be launched by the EIT in the next programming period. It will strengthen the regional impact of the EIT through the new actions and through strengthening of the RIS. The SIA will include an overview of the financial and human resources needed for the implementation of the EIT objectives. Clear monitoring and evaluation provisions will be defined taking into account the Horizon Europe framework and the EIT's specificities.

¹²¹ Commission's Better Regulation Guidelines; SWD(2017) 350 final. Interinstitutional Agreement on Better Law-Making; OJ L 123, 12.5.2016, p. 1. Interinstitutional Agreement on a more structured use of the recasting technique for legal acts. OJ C 77, 28.3.2002, p. 1

9. HOW WILL IMPACT BE MONITORED AND EVALUATED?

Monitoring and evaluation are fundamental tools in measuring the impact of the EIT and will be further strengthened and continuously improved over the next programming period. Given the nature of the knowledge triangle integration model, it will be important to apply a monitoring framework that allows flexibility at all relevant levels (EU, EIT, KIC) and ensures coherence with the general objectives of Horizon Europe and impacts sought.

Monitoring

The EIT has developed metrics to measure the progress of the KICs. Several Key Performance Indicators (KPIs) are applied to all KICs. ¹²² However, the KPIs could be further fine-tuned in terms of the relevance of KICs' performance. There is a need for a balance between a clear set of EIT key performance indicators (horizontal) to measure the KICs overall performance on the one hand and the KICs sector specific indicators (vertical) on the other. Moreover, the monitoring model and the KPIs of the EIT are perceived by stakeholders as too focused on input and output (short-term measures) with limited attention to results and impacts ¹²³ and are not aligned with the proposed indicators and monitoring system of the Horizon Europe Programme, including monitoring aspects of the partnerships. ¹²⁴

All inputs, outputs, results and impacts identified in this impact assessment will be monitored through indicators. Such indicators already exist for the majority of the examples. Whenever they do not exist, new indicators will be developed in order to enable the EIT to monitor the achievement of its objectives. The chart below provides an overview of how operational objectives and related indicators link to the specific objectives and related indicators.

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 $^{122 \ \} Full \ \ list \ \ of \ \ core \ \ \ KPIs: \ \ \underline{ec.europa.eu/research/participants/data/ref/h2020/other/guides \ for \ \underline{applicants/h2020-core-kpis-kic-eit-2018 \ en.pdf}$

¹²³ E.g. ICF (2017), Evaluation of the EIT, pp. 35-36, High Level Group on the EIT (2016), The Future of the EIT, p. 24, European Court of Auditors (2016), Special Report on performance of the EIT, pp. 30 and 49 and SWD on the Interim evaluation of the EIT, SWD (2017) 351 final, p. 44.

¹²⁴ Cf. Horizon Europe impact assessment, SWD (2018) 307; Regulation Horizon Europe, COM(2018) 435 final. Annex III.

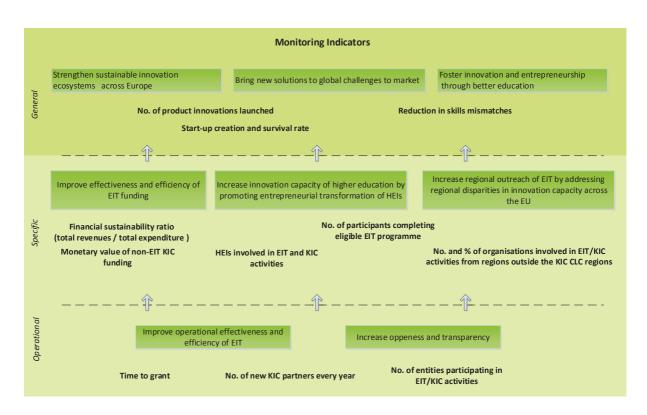


Figure 10: Link between operational objectives and indicators to specific objectives and indicators; own illustration

The table below provides an overview of key indicators that will be collected.

General objective	Monitoring Indicator	Targets ¹²⁵ 2023 2027	Sources of data / collection methods	Data availab ility	Responsi ble body	Link to Horizon Europe impact pathway
Strengthen sustainable innovation ecosystems and bring new solutions on the market	No. of product innovations (goods or services) launched on the market Start-ups supported and survival rate	1.500 4.000 300 700	Annual programme / monitoring data Rolling survey of organisations in receipt of KIC support at set time intervals (i.e. 1, 3, years post support) Annual programme / monitoring data Rolling survey of start-ups created as a	Yes No Yes No	EIT	Innovation-based growth Innovation-based growth
Foster innovation and entrepreneurship through education	Reduction in skills mismatches No. of direct and indirect jobs created by organisations benefiting from KIC support	40% increase 100% increase	result of EIT activity Rolling survey of organisations/employ ers in receipt of KIC support at set time intervals (i.e. 1, 3 and 5 years post support)	No	EIT, European Commiss ion	Strengthening the uptake of innovation in society

¹²⁵ Baseline for comparison is 2020

Specific objective	Monitoring Indicator	Targets 2023 2027	Sources of data / collection methods	Data avail abilit y	Respon sible body	Link to Horizon Europe impact pathway
Increase impact of KIC through more effective EIT funding	Monetary value of non-EIT KIC funding	700 MEUR 1500 MEUR	Annual programme / monitoring data	Yes	EIT	n.a.
	Financial sustainability ratio (total revenues / total expenditure)	n.a.	Annual programme / monitoring data	Yes	EIT	n.a.
Increase innovation capacity of higher	HEIs involved in EIT and KIC activities	300 750	Annual programme / monitoring data	Yes	EIT	Strengthening human capital in R&I
education	No. of participants completing eligible EIT/KIC education programme	10.000 30.000	Annual programme/ monitoring data	Yes	EIT	Strengthening human capital in R&I
Increase regional outreach	No. of entities/organisati ons participating in EIT/KIC activities from regions outside the KICs' CLC regions	50% increase 100% increase	Annual programme / monitoring data	Yes	EIT	Strengthening the uptake of innovation in society
Operational objectives	Monitoring Indicator		Sources of data / collection methods	Data avail abilit y	Respon sible body	Link to Horizon Europe impact pathway
Improve operational effectiveness and efficiency of EIT	Time to grant	n.a.	Annual programme / monitoring data	Yes	EIT	n.a.
Increase openness and transparency	No. of entities/organisati ons participating in EIT/KIC activities	20% increase 50% increase	Annual programme / monitoring data	Yes	EIT	Innovation-based growth

Table 19: Specific and operational objectives to be monitored by indicators; own illustration

In parallel and in full compatibility with existing monitoring tools, a close alignment will be sought between the EIT monitoring provisions and those that are put in place for Horizon Europe. For example, the EIT will align its monitoring tools with the Impact Pathways of Horizon Europe that seek to address the need for scientific, economic and societal impacts indicators more comprehensively. It will be a responsibility of the EIT to regularly monitor the operational performance of the KICs and to adapt its monitoring and reporting systems continuously. The results of such monitoring will feed into the business planning processes of the KICs and into the EIT decision-making on the allocation of the budget and preparation of

the framework partnership agreements with the KICs as beneficiaries. The monitoring results should feed continuously into the policy-making process.

Evaluation

The evaluation of the performance of the EIT will be carried out by the Commission in line with the requirements of the EIT Regulation and will feed into the overall Horizon Europe programme evaluation that will be carried mid-term and ex-post. This will include an assessment of the synergies of the EIT with the other instruments of the programme.

With regard to the KICs, a specific indicator framework will be used to assess the performance of the KICs during the next Strategic Innovation Agenda (2021-2027). The framework draws from current and previous indicators, fills gaps and deficiencies identified in the existing performance measurement system and is aligned to the Horizon Europe indicator framework. While this is still in development, some key parts are outlined in more detail in Annex 8. Further work on evaluation will be pursued with the JRC's Competence Centre on Microeconomic Evaluation.