

Three-year Interim Review of 4th Wave KICs: EIT Manufacturing

Final Report

September 2023

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List of abbreviations

Table 1: List of abbreviations

Abbreviation	Full name/term
ASBL	Association Sans But Lucratif (not-for-profit organisation)
CEO	Chief Executive Officer
CLC(s)	Co-location Centre(s)
EC	European Commission
EIT	European Institute of Innovation and Technology
EU	European Union
DG(s)	Directorate(s) General
FS	Financial Sustainability
GB	Governing Board
GDP	Gross Domestic Product
GGP	Good Governance Principles
IP	Intellectual property
IP Board	Intellectual Property Board
IPR	Intellectual Property Rights
KAVA(s)	KIC Added Value Activity/-ies
KCA	KIC Complementary Activities
KIC	Knowledge and Innovation Community
KPI(s)	Key Performance Indicators
KTI	Knowledge Triangle Integration
LE	Legal Entity
MoU	Memorandum of Understanding
NGO(s)	Non-governmental organisation(s)
RoI	Return on Investment
RIS	Regional Innovation Scheme
RTO(s)	Research and Technology Organisation(s)
SASU	Société par Actions Simplifiée Unipersonnelle (Simplified Joint Stock Company. Basically, it is a SAS, but with only one partner)
SB	Supervisory Board
SDG(s)	Sustainable Development Goal(s) (refers to the United Nations)
SIA	Strategic Innovation Agenda
SME(s)	Small and medium enterprises
SO(s)	Strategic Objective(s)

1. Introduction

This report covers the findings of the three-year interim assessment of EIT Manufacturing, a Knowledge and Innovation Community (hereinafter “KIC” and/or “EIT Manufacturing”) conducted by White Research and Deloitte. Beyond the methodological overview, the report is organised into chapters, which also represent the evaluation criteria, as follows:

- Relevance to the EU global challenges
- EU added value and relevance with regard to the objectives of the EIT
- Achievement of KICs own objectives
- Efforts to coordinate KICs activities with other relevant research and innovation initiatives
- Capacity to ensure openness to new members
- Achievements in attracting new members from across the EU
- Compliance with good governance principles
- Efforts and results in designing and implementing gender-sensitive measures and activities
- Capacity to develop sustainable innovation ecosystems and the achieved level of financial sustainability

In each chapter the relevant indicators are assessed and recommendations are made. The report concludes with separate chapters featuring recommendations based on the findings and a justification for the overall scoring of the KIC. An overview of the methodology and data sources is provided in ANNEX II. Reference list.

European Institute of Innovation and Technology

Established in 2008 as a driver of European innovation¹, the European Institute of Innovation and Technology (hereinafter “EIT”) is an agency of the European Union (hereinafter “EU”) based in Budapest, Hungary. The EIT was created to strengthen the EU’s innovation capabilities and increase EU competitiveness and sustainable economic growth by fostering and enhancing cooperation among entrepreneurs, academia, and research institutes. The EIT supports the development of dynamic, long-term, cross-border and public-private partnerships among businesses (industry and SMEs), research centres and universities to address and devise solutions to pressing global challenges through partnerships called Knowledge and Innovation Communities (hereinafter “KICs”).

The KICs are institutionalised European Partnerships that develop innovative products and services and launch them on the market, create the environment for the establishment of new innovative companies, and train a new generation of entrepreneurs and allow them to thrive. In 2019, the EIT created two additional KICs to address urban mobility and manufacturing challenges. As described in Article 11(5) of the Regulation (EU) 2021/819², the KICs shall be evaluated along the nine criteria presented above, to decide whether the partnership agreement shall be extended with the KIC, and respectively the same criteria shall be applied for the three-year interim review.

EIT Manufacturing

EIT Manufacturing (KIC) was established in 2019 to connect manufacturing actors across Europe, including industry partners, academics and research institutions, with the intention to lead manufacturing innovation globally. EIT Manufacturing’s vision is for Europe to lead Global Manufacturing Innovation³. The KIC aims to succeed in fulfilling its vision through five strategic objectives; 1) competitive manufacturing skills and social sustainability, 2) powerful manufacturing innovation ecosystems, 3) globally competitive and resilient manufacturing, 4) environmentally sustainable manufacturing, and 5) manufacturing fit for the digital age.

¹ European Parliament and Council of the European Union. 2008. Regulation 294/2008. Accessed on June 15th, 2023. Available at: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32008R0294>.

² European Parliament and Council of the European Union. 2021. Regulation 2021/819. Accessed on June 15th, 2023. Available at: [EUR-Lex - 32021R0819 - EN - EUR-Lex \(europa.eu\)](https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32021R0819)

³ EIT Manufacturing. Strategic agenda 2021/2027. Accessed on June 6th, 2023. Available at: <https://www.eitmanufacturing.eu/who-we-are/>

Europe’s prosperity strongly depends on the manufacturing sector, which accounts for 15% of European GDP and creates about 30 million jobs. Thus, by integrating innovation, education and business creation, referred to as its pillars, EIT Manufacturing strives to accelerate faster innovation to safeguard Europe’s strong competitive position. As the sector makes up the backbone of Europe’s economy, it additionally endeavours to tackle long-term goals in other areas, such as making Europe the first climate-neutral continent by 2050 whilst preparing it for the digital age. In addition, EIT Manufacturing introduces ‘Regional Innovation Schemes (RIS)’ and ‘Cross-KIC activities’ as pillars. With its headquarters in Paris and six strategically located Co-Location Centres (CLCs), it ensures that innovation is boosted in every region and area.

Currently, EIT Manufacturing has gathered more than 190 partners that build on strong collaboration to work toward its goals. These strongly align with EIT targets and need to be achieved by 2027, namely:

- engage more than 320 members in the community
- educate 2 100 graduates via its programmes
- create and support 156 start-ups and launch 360 solutions in the field of manufacturing.

Meanwhile, the KIC aspires to increase the sector’s share of GDP to over 16% whilst reducing its greenhouse gas emissions by 25%⁴.

Three-Year Interim Assessment of 4th-Wave KICs

As the seven-year Partnership Agreements for EIT Urban Mobility and EIT Manufacturing approach their midway point, an interim review is needed to analyse and assess the achievements of the KICs over the period of 2019-2022 (and partially 2023) compared with what was outlined in their proposals, Strategic Agendas, Business Plans and grant reports and to market/public benchmarks/references⁵. The three-year interim reports will provide relevant conclusions as well as recommendations for improvement.

With major societal challenges both in the areas of operation for EIT Urban Mobility and EIT Manufacturing, this review is an opportunity to assess the advancements made by the KICs and areas for improvement.

In accordance with requirements in the EIT Regulation and Strategic Innovation Agenda, the EIT shall carry out an interim review of the KICs’ activities, to map out the KICs’ performance and flag any issues or shortcoming if relevant. According to Article 11(6) of the EIT Regulation, should the interim review uncover any issues with the progress of the KIC, the EIT Governing Board must take corrective measures.

To provide a comprehensive assessment, scores (maximum 10 for each criterion)⁶ and pre-defined weighting were applied, as shown below for each criterion:

Table 2: Three-year assessment scoreboard

0-10 Scores interpretation	
0	The profile does not meet the criterion at all or cannot be assessed due to missing or incomplete information
1-2	Poor – serious weaknesses
3-4	Fair – goes some way to meeting the criterion, but with significant weaknesses
5-6	Good – but with a number of shortcomings
7-8	Very good – but with a small number of shortcomings
9-10	Excellent – meets criterion in every relevant respect. Any shortcomings are minor.

⁴ EIT Manufacturing. Strategic agenda 2021/2027. Accessed on June 6th, 2023. Available at: <https://www.eitmanufacturing.eu/who-we-are/>

⁵ Request for Service No. 03 implementing Framework Contract No: 21-3030-03/EIT, Purpose of Contract: Three-year interim review of EIT Urban Mobility and EIT Manufacturing

⁶ The maximum and threshold points for each criteria was predefined by EIT.

Points were awarded based on whether the detailed indicators under each criterion category were met, the number and significance of shortcomings and weaknesses. Desk research was conducted, supplemented by key-informant interviews to assess the performance of each KIC. The desk research reviewed:

- EIT regulations, guidance, and principles
- KIC proposals, agreements, business plans, reports and action plans
- previous evaluation, impact study findings and relevant findings stemming from previous 7-year assessments and
- internal monitoring data and EIT recommendations
- other background data and materials shared by the KIC throughout the entire assessment period.

Qualitative, semi-structured interviews were carried out with representatives of the KIC's management and key KIC's partners to complement, triangulate, and further clarify data collected through desk research.

2. Executive summary

The report covers the findings of the three-year interim review of EIT Manufacturing conducted by White Research and Deloitte, according to the framework contract 21-3030-03/EIT. Under the contract, two 4th wave KICs have been assessed, namely EIT Urban Mobility and EIT Manufacturing, using a single assessment methodology. This report covers the overall evaluation proceeding and findings related to EIT Manufacturing.

EIT Manufacturing was established with the aim of connecting different participants in the manufacturing sector across Europe. These include partners from industry, educational institutions and research institutes, all with the overarching goal of driving global progress in manufacturing innovation. Europe's well-being is closely linked to the strength of its manufacturing industry, which accounts for 15% of the continent's GDP and is responsible for approximately 30 million jobs. Thus, by integrating innovation, education and business creation, referred to as its pillars, EIT Manufacturing strives to accelerate faster innovation to safeguard Europe's strong competitive position. As the sector makes up the backbone of Europe's economy, it additionally endeavours to tackle long-term goals in other areas, such as making Europe the first climate-neutral continent by 2050 whilst preparing it for the digital age. Therefore, EIT Manufacturing contributes to 'Regional Innovation Scheme (RIS)' and 'Cross-KIC activities' as part of the EIT Community. With its headquarter in Paris and six strategically located Co-Location Centres (CLCs), it ensures that innovation is boosted in every region and area within Europe.

The assessment has been carried out in line with the requirements set out in the Request for Service No. 03 implementing document (Ref. Ares (2022)5580508 - 04/08/2022), using **these methodological tools:**

Desk research:

The goal of the desk research was to collect both qualitative and quantitative data on the KIC's activities, results and impact. The documents assessed were partly laid out in the abovementioned Request for Services document, additional documents needed for the assessment were requested from the EIT and EIT Manufacturing.

Semi-structured interviews:

The semi-structured interviews have been carried out with EIT Manufacturing representatives to complement the data collected during the desk research.

Triangulation, conclusions and recommendations:

The goal of using this method was to address all the data findings from the aforementioned collection, and if necessary, complete it with any additional findings to reach solid conclusions of this assessment. Based on this, we were able to formulate all relevant recommendations.

During the assessment, the KIC's results and activities were assessed along the nine criteria set out by EIT and the following areas were also taken into account and expanded upon as part of Section 5.2:

- KIC Governance, KIC Partnership
- KIC Funding, Financial Sustainability
- Knowledge Triangle Integration, Innovation Ecosystem and CLCs
- Education & Alumni
- Innovation
- Entrepreneurship & Business Creation
- EIT Regional Innovation Scheme (EIT RIS)
- Synergies, Complementarities & Cross-KIC collaboration
- Communications, Dissemination & Outreach
- Achieved economic and societal impact against impact targets in the KIC Strategic Agendas, EIT Impact Framework impact KPIs or market benchmarks

Summary of the Assessment Criteria

Table 3: Assessment summary

Criterion	Summary Assessment	Scoring (points)	Weight
Global Score (after weighting was applied): 6,7 / 10 Global Threshold: 6 / 10			
Relevance to the Union's global challenges	<p>The activities of EIT Manufacturing are very well aligned with the objectives of the Union but it is not clear whether the results of these activities contribute towards addressing the KIC's societal challenge, due to the maturity of the KIC. Therefore, the KIC's performance for this criterion has been assessed as Very Good.</p> <p><u>Assessment</u></p> <p>1.1 – 7 – Very Good: EIT Manufacturing's activities are assessed annually by the EIT through Business Plans and Grant Report assessments, as well as additional monitoring, to assess alignment with the KIC's strategic objectives. The KIC's activities have been assessed as in line with these objectives and working towards solving the societal challenge it was created for. However, there have been recommendations by the EIT towards the KIC, targeting a deeper contribution to EU sustainability goals and industry diversification through the KIC's Business Plan. Although EIT Manufacturing contributes to EU sustainability goals, and thus to increasing the EU's competitiveness, it has received several negative comments for the impact it generates towards these areas. Assessments show that the KIC should demonstrate its contribution to the specific areas and should cooperate more closely with other relevant KICs towards achieving its goals.</p>	7 / 10 (Threshold: 6)	1.5
KIC's EU added value and relevance with regard to the objectives of the EIT	<p>The KIC is overall aligned with the objectives of the EIT. However, there are shortcomings regarding specific activities performed by the KIC. Most notably, the KIC underperforms in the innovation pillar, where it has not yet managed to display impact through its activities. In addition, the KIC does not meet several of its financial sustainability targets, raising issues as to its long-term financial sustainability. Furthermore, the KIC has not yet realised a satisfactory number of synergies and as such is lacking in creating added-value in the manufacturing sector. The number of presented shortcomings regarding the above, in conjunction with the KIC's overall performance in several RIS-related indicators, synergies and its financial sustainability led to this criterion to be assessed as Very Good.</p> <p><u>Assessment</u></p> <p>2.1 – 7 – Very Good: EIT Manufacturing has not yet created significant European added value with respect to building a sustainable innovation ecosystem through knowledge triangle integration. It has, however, developed concrete solutions to the societal challenge it addresses. Nevertheless, measuring</p>	7 / 10 (Threshold: 6)	1.5

Criterion	Summary Assessment	Scoring (points)	Weight
<p>Global Score (after weighting was applied): 6,7 / 10</p> <p>Global Threshold: 6 / 10</p>			
	<p>societal impact so early is very challenging, due to the KIC’s short existence. Moreover, the KIC should pay attention to innovation activities and enhance balanced representation from all sides of the knowledge triangle.</p> <p>2.2 – 6 – Good: The majority of EIT Manufacturing activities have been fully aligned with and are relevant to the EIT objectives as defined in the EIT Legislative Framework. Shortcomings in financial sustainability, synergies and RIS were observed. The KIC should ensure all activities, including RIS, ambitiously contribute to its financial sustainability.</p> <p>2.3 – 8 – Very Good: EIT Manufacturing RIS activities have been well aligned with the EIT RIS Guidance Note 2018-2020 and with the RIS Implementation Framework (2022-2027). Minor shortcomings were observed, mostly related to innovations from RIS countries. EIT Manufacturing should better monitor the processes of RIS Hubs and cultivate a cooperation environment that includes actors from relevant initiatives.</p>		
<p>Achievement of KIC’s objectives</p>	<p>There is mixed performance of EIT Manufacturing regarding the targets set in its Strategic Agenda and Business Plans with more overperformance on some KPIs and limited under-performance on others, an issue which is presented in the relevant chapter. As such, the criterion has been assessed as Very Good.</p> <p><u>Assessment</u></p> <p>3.1 – 6 – Good: The majority of EIT Manufacturing indicators are very likely to be achieved in the future. There are, however, shortcomings in relation to its financial sustainability that need to be tackled. The KIC should pay attention to diversification of its portfolio, revenue sources and collection of membership fees.</p> <p>3.2 – 6 – Good: EIT Core KPIs likely to be achieved in the mid to long-term. A number of shortcomings have been observed though, as there is a severe lack of reporting for KIC-specific indicators. However, due to the immaturity of the KIC, there is still time to remedy this issue. The KIC should specify which specific KPIs will be monitored in the future.</p> <p>3.3 – 8 – Very Good: EIT Manufacturing performs very well in most RIS areas with minor shortcomings related to RIS contribution in its financial sustainability. The KIC should deploy a new strategy towards leveraging RIS activities’ potential to contribute to its financial sustainability.</p>	<p>7 / 10</p> <p>(Threshold: 6)</p>	<p>1.5</p>

Criterion	Summary Assessment	Scoring (points)	Weight
Global Score (after weighting was applied): 6,7 / 10 Global Threshold: 6 / 10			
KICs efforts to coordinate their activities with other relevant research and innovation initiatives	<p>Overall, based on the medium performance of EIT Manufacturing to cultivate relevant synergies, this criterion has been assessed as Very Good.</p> <p><u>Assessment</u></p> <p>4.1 – 7 – Very Good: EIT Manufacturing has already established a number of synergies. However, there is still a lot of effort to be made to achieve the synergies described in its plans. The KIC should focus on attracting more partners across the EU and the globe.</p> <p>4.2 – 6 – Good: EIT Manufacturing has not yet realised enough concrete synergies with relevant initiatives. The KIC should focus on pursuing more concrete synergies in the near future and establish itself as a key player in the manufacturing sector.</p>	7 / 10 (Threshold: 6)	0.5
KIC’s capacity to ensure openness to new members	<p>EIT Manufacturing has made efforts to ensure growing and open partnerships. However, its network has still room for improvement as it is mostly industry driven, with less representation from higher education and research organisations. This shortcoming is identified as an important issue that must be resolved by the KIC in the future. Thus, this criterion has been assessed as Very Good.</p> <p><u>Assessment</u></p> <p>5.1 – 7 – Very Good: The KIC has managed to establish a good ecosystem across Europe and RIS countries, although its partnership is growing at a slower pace than expected. EIT Manufacturing should focus on attracting new partners as soon as possible.</p> <p>5.2 – 7 – Very Good: The KIC’s Calls for Proposals have encountered several shortcomings and criticism for lack of openness and transparency in the selection process, but those were resolved by the KIC in due time. However, EIT Manufacturing should continue to adapt its processes to the conclusions of the monitoring reports addressing this issue to avoid repetition of such shortcomings. The KIC should deal with openness in representation of consortia by revising its selection process and aligning it with the EIT’s principles.</p> <p>5.3 – 6 – Good: There is relatively good performance in addressing Good Governance Principles relevant to openness, although some limitations exist in terms of openness and transparency. During the first years of the KIC’s operations, several criteria were in place that limited the openness of calls to external participants, leading to core partners benefitting the most from EIT funding. After serious monitoring processes by the EIT, the KIC has shown positive progress. However, the KIC should</p>	7 / 10 (Threshold: 6)	0.5

Criterion	Summary Assessment	Scoring (points)	Weight
<p>Global Score (after weighting was applied): 6,7 / 10</p> <p>Global Threshold: 6 / 10</p>			
<p>continue dealing with openness in representation of consortia by revising its selection process and aligning it with the EIT's principles.</p> <p>5.4 – 6 – Good: There is a good representation of all sides of the KTI. However, shortcomings are observed in the innovation portfolio. As mentioned above, the KIC should try to focus on extending its innovation activities and relevant partnerships.</p>			
<p>KIC's achievements in attracting new members from across the Union</p>	<p>The KIC focuses on existing partners instead of trying to engage with new ones. The KIC has an established ecosystem around Europe and is very well represented in numerous countries, including RIS, thus this criterion is assessed as Very Good.</p> <p><u>Assessment</u></p> <p>6.1 – 8 – Very Good: The KIC has an established ecosystem around Europe and is very well represented in numerous countries, including RIS. EIT Manufacturing should continue to evolve its ecosystem and diversify its areas by focusing on innovation.</p> <p>6.2 – 8 – Very Good: The KIC has made good efforts in expanding its partnership, however it should focus more on engaging with new members. EIT Manufacturing should focus more on attracting new partnerships, especially from areas of innovation and research to help diversification of its portfolio.</p> <p>6.3 – 8 – Very Good: The KIC has an established presence in RIS countries with a good number of CLCs and RIS Hubs. EIT Manufacturing should continue the expansion in other RIS areas than in the existing ones.</p>	<p>8 / 10</p> <p>(Threshold: 6)</p>	<p>1</p>
<p>KIC's compliance with good governance principles</p>	<p>EIT Manufacturing has shown progress in governance and diversity but needs improvement in operational transparency and compliance with independent board members. While it has made strides in areas like gender balance and sustainability alignment, there are still small shortcomings about revenue, management assessment, and board independence. Thus, this criterion has been assessed as Very Good.</p> <p><u>Assessment</u></p> <p>7.1 – 7 – Very Good: EIT Manufacturing appears to have made significant progress in several areas of governance and accountability, demonstrating good practices in terms of diversity and separation of ownership and supervision. However, there are small shortcomings in operational transparency and</p>	<p>8 / 10</p> <p>(Threshold: 6)</p>	<p>1</p>

Criterion	Summary Assessment	Scoring (points)	Weight
<p>Global Score (after weighting was applied): 6,7 / 10</p> <p>Global Threshold: 6 / 10</p>			
	<p>compliance with the requirement for independent board members. These areas of improvement suggest that while EIT Manufacturing has made positive strides, there is still room for enhancement in certain aspects of its performance.</p> <p>7.2 – 8 – Very Good: EIT Manufacturing has made significant progress in several areas, including clarifying its business model and strategy, improving gender balance within the organisation, encouraging women's leadership, and aligning with EU sustainability goals. However, there are small shortcomings, including concerns about revenue flows, the methodology for assessing the management team, and the independence of SB members. The overall performance is generally positive, with some areas requiring further improvement.</p>		
<p>KIC's efforts and results in designing and implementing gender-sensitive measures and activities</p>	<p>The KIC has made substantial efforts in ensuring gender balance representation in its governance system, thus this criterion is being assessed as Excellent.</p> <p><u>Assessment</u></p> <p>8.1 – 9 – Excellent: The KIC has properly designed and implemented gender-sensitive measures.</p> <p>8.2 – 8 – Very Good: There is a lack of data in terms of experts' assessments. However, the KIC progresses well based on relevant data available. As described in Chapter 11, the KIC has made progress in appointing more women in critical positions, it now operates under the supervision of a female CEO and continues to grow by embracing gender-sensitive issues.</p>	<p>9 / 10</p> <p>(Threshold: 6)</p>	0.5
<p>KIC's capacity to develop sustainable innovation ecosystems and the achieved level of financial sustainability</p>	<p>The KIC has made efforts to cope with relevant financial sustainability targets. However, many shortcomings in financial assets, lack of revenues and diversification of its portfolio led this criterion to be assessed as Good.</p> <p><u>Assessment</u></p> <p>9.1 – 6 – Good: EIT Manufacturing has successfully created an ecosystem. However, many of its activities only contribute nominal amounts to its financial sustainability. The KIC should pay particular attention to several areas, such as collection of membership fees, RIS area's contribution to its financial sustainability, and attraction of investments.</p>	<p>6 / 10</p> <p>(Threshold: 6)</p>	2

Criterion	Summary Assessment	Scoring (points)	Weight
<p>Global Score (after weighting was applied): 6,7 / 10 Global Threshold: 6 / 10</p>			
	<p>9.2 – 6 – Good: The KIC has made substantial efforts to establish a viable Financial Sustainability Strategy, however there are a number of shortcomings in relevant areas, such as revenue generation and financial assets. EIT Manufacturing should conclude all remaining partnership agreements and collect fees to increase its revenue, and later consult with the EIT on redefining its Financial Sustainability Strategy towards attracting more investments.</p> <p>9.3 – 6 – Good: There is lack of data regarding exploitation of IPR from EIT Manufacturing and the revenues targets are still very low, mainly due to reliability on partnership fees.</p> <p>9.4 – 6 – Good: The KIC has performed well in FS co-efficient, although mainly this was related to the lower grant it claimed and lacks good performance in revenues and assets generation.</p> <p>9.5 – 8 – Very Good: The KIC performs well in co-funding rates and targets are likely to be reached.</p> <p>9.6 – 6 – Good: EIT Manufacturing is still very low in RoI and equity, however the percentage of financial assets compared to its revenues and start-up phase is good.</p>		

3. Methodology overview

3.1. Our approach

The methodology used in this assessment is in line with the requirements set out in the Request for Service No. 03 implementing document (Ref. Ares (2022)5580508 - 04/08/2022). According to the document referenced above, the assessment has been carried out through a comprehensive analysis of all areas of activities and aspects relevant for a KIC, namely the following assessment criteria:

- Relevance to the Union's global challenges
- KIC's Union added value and relevance with regard to the objectives of the EIT
- Achievement of KIC's objectives
- KICs efforts to coordinate their activities with other relevant research and innovation initiatives
- KIC's capacity to ensure openness to new members
- KIC's achievements in attracting new members from across the Union
- KIC's compliance with good governance principles
- KIC's efforts and results in designing and implementing gender-sensitive measures and activities
- KIC's capacity to develop sustainable innovation ecosystems and the achieved level of financial sustainability.

During the analysis of each of the above chapters, the following key elements are presented, notably:

- Main activities, results, and societal impact targets/progress against impact targets, including EU added value, and KPIs achieved.
- Strengths and weaknesses: what have worked well and what did not work.
- Recommendations for improvement: what should be improved in the next three years.

In addition to the chapters above, the three-year interim assessment is carried out along the following aspects:

- KIC Governance and KIC Partnership
- KIC Funding, Financial Sustainability
- Knowledge Triangle Integration, Innovation Ecosystem and CLCs
- Education & Alumni
- Innovation
- Entrepreneurship & Business Creation
- EIT Regional Innovation Scheme (EIT RIS)
- Synergies, Complementarities & Cross-KIC collaboration
- Communications, Dissemination & Outreach
- Achieved economic and societal impact against impact targets in the KIC Strategic Agendas, EIT Impact Framework impact KPIs or market benchmarks.

To harmonise the report structure and the assessment criteria, we have assigned each indicator to one chapter, as agreed with EIT. Furthermore, we have incorporated the above-mentioned aspects to the structure by choosing a thematic area that relates to all listed indicators and have expanded upon the thematic areas as part of this chapter. In later sections we will refer to the paragraphs mentioned in the earlier chapter. The complete list of the assessment criteria and indicators are presented in the table below:

Table 4: Assessment matrix

Assessment criteria	Indicators	Thematic Area
Relevance to the Union’s global challenges (Weighting: 1.5)	1.1 The results of the KIC’s activities have been relevant to the objectives of the Union, including boosting economic growth, strengthening the innovation capacity of the Member States, fostering innovation and entrepreneurship, and have contributed to addressing the societal challenge it was designated for.	<ul style="list-style-type: none"> • Education & Alumni • Innovation • Entrepreneurship & Business Creation • EIT Regional Innovation Scheme (EIT RIS) • Communications, Dissemination & Outreach
KIC’s Union added value and relevance with regard to the objectives of the EIT (Weighting: 1.5)	2.1 The KIC has created a significant European added value with respect to building a sustainable innovation ecosystem through knowledge triangle integration, and as a result has developed concrete solutions to societal challenge it addresses as foreseen in the original proposal.	<ul style="list-style-type: none"> • Education & Alumni • Innovation • Entrepreneurship & Business Creation • EIT Regional Innovation Scheme (EIT RIS) • Knowledge Triangle Integration, Innovation Ecosystem and CLCs • Achieved economic and societal impact against impact targets in the KIC Strategic Agendas, EIT Impact Framework impact KPIs or market benchmarks
	2.2 All KIC’s activities have been fully aligned with and relevant to the EIT objectives as defined in EIT legislative framework.	<ul style="list-style-type: none"> • KIC Governance and KIC Partnership • KIC Funding, Financial Sustainability • Knowledge Triangle Integration, Innovation Ecosystem and CLCs • Education & Alumni • Innovation • Entrepreneurship & Business Creation • EIT Regional Innovation Scheme (EIT RIS) • Synergies, Complementarities & Cross-KIC collaboration • Communications, Dissemination & Outreach • Achieved economic and societal impact against impact targets in the KIC Strategic Agendas, EIT Impact Framework impact KPIs or market benchmarks
	2.3 KIC RIS activities have been fully aligned with the EIT RIS Guidance note 2018-2020 and RIS Implementation Framework (2021-2027).	<ul style="list-style-type: none"> • Knowledge Triangle Integration, Innovation Ecosystem and CLCs • Education & Alumni • Innovation • Entrepreneurship & Business Creation • EIT Regional Innovation Scheme (EIT RIS) • Synergies, Complementarities & Cross-KIC collaboration

Assessment criteria	Indicators	Thematic Area
<p>Achievement of KIC's objectives (Weighting: 1.5)</p>	<p>3.1 A KIC is on track to achieve its 7-year Strategic Agenda objectives and expected results in line with its initial strategic objectives. Any deviation from the Strategic Agenda has been justified, approved by the EIT and has led to maximizing impact.</p>	<ul style="list-style-type: none"> • Achieved economic and societal impact against impact targets in the KIC Strategic Agendas, EIT Impact Framework impact KPIs or market benchmarks • KIC Governance and KIC Partnership • KIC Funding, Financial Sustainability • Knowledge Triangle Integration, Innovation Ecosystem and CLCs • Education & Alumni • Innovation • Entrepreneurship & Business Creation • EIT Regional Innovation Scheme (EIT RIS) • Synergies, Complementarities & Cross-KIC collaboration • Communications, Dissemination & Outreach • Achieved economic and societal impact against impact targets in the KIC Strategic Agendas, EIT Impact Framework impact KPIs or market benchmarks
	<p>3.2 KPI targets defined in the KIC original proposal, Strategic Agenda and Business Plans likely to be achieved.</p>	<ul style="list-style-type: none"> • KIC Governance and KIC Partnership • KIC Funding, Financial Sustainability • Knowledge Triangle Integration, Innovation Ecosystem and CLCs • Education & Alumni • Innovation • Entrepreneurship & Business Creation • EIT Regional Innovation Scheme (EIT RIS) • Synergies, Complementarities & Cross-KIC collaboration • Communications, Dissemination & Outreach • Achieved economic and societal impact against impact targets in the KIC Strategic Agendas, EIT Impact Framework impact KPIs or market benchmarks
	<p>3.3 The KICs have delivered EIT RIS activities and achieved results within the scope of their EIT RIS Strategies. Any deviations are duly justified and having led to maximized results.</p>	<ul style="list-style-type: none"> • KIC Governance and KIC Partnership • Knowledge Triangle Integration, Innovation Ecosystem and CLCs • Education & Alumni • Innovation • Entrepreneurship & Business Creation • EIT Regional Innovation Scheme (EIT RIS) • Synergies, Complementarities & Cross-KIC collaboration

Assessment criteria	Indicators	Thematic Area
KICs efforts to coordinate their activities with other relevant research and innovation initiatives (Weighting: 0.5)	4.1 The KIC has achieved the concrete synergies and complementarities described in the original proposal and Strategic Agenda.	<ul style="list-style-type: none"> • Synergies, Complementarities & Cross-KIC collaboration • Communications, Dissemination & Outreach
	4.2 Number of synergies with other relevant education, research and innovation initiatives in the same area of the societal challenge at national, EU and global level.	<ul style="list-style-type: none"> • Synergies, Complementarities & Cross-KIC collaboration
KIC's capacity to ensure openness to new members (Weighting: 0.5)	5.1 Partnership size, growth, composition and performance are adequate for achieving the long-term objectives of the KIC Strategic Agenda.	<ul style="list-style-type: none"> • KIC Governance and KIC Partnership • Knowledge Triangle Integration, Innovation Ecosystem and CLCs • Education & Alumni • Synergies, Complementarities & Cross-KIC collaboration • Communications, Dissemination & Outreach
	5.2 KIC's Calls for activities have been fully open to new members.	<ul style="list-style-type: none"> • KIC Governance and KIC Partnership
	5.3 KIC has fully addressed the EIT Good Governance Principles (GGP) – based on relevant GGP assessments related to openness to new members.	<ul style="list-style-type: none"> • KIC Governance and KIC Partnership
	5.4 Balanced representation of all key knowledge triangle players in the partnership.	<ul style="list-style-type: none"> • KIC Governance and KIC Partnership • Knowledge Triangle Integration, Innovation Ecosystem and Co-location Centres
KIC's achievements in attracting new members from across the Union (Weighting: 1)	6.1 Number of the EU Member States covered by the KIC partnership and representation of all the knowledge triangle players.	<ul style="list-style-type: none"> • KIC Governance and KIC Partnership • Knowledge Triangle Integration, Innovation Ecosystem and CLCs • EIT Regional Innovation Scheme (EIT RIS) • Communications, Dissemination & Outreach
	6.2 Number of the RIS countries and regions covered by the KIC partnership and representation of all the knowledge triangle players in its activities.	<ul style="list-style-type: none"> • KIC Governance and KIC Partnership • Knowledge Triangle Integration, Innovation Ecosystem and CLCs • EIT Regional Innovation Scheme (EIT RIS)
	6.3 Trend of new active partners over the 3-year period.	<ul style="list-style-type: none"> • KIC Governance and KIC Partnership
	6.4 Balanced geographical presence of CLCs and EIT RIS Hubs in line with the strategic objectives and societal challenges.	<ul style="list-style-type: none"> • KIC Governance and KIC Partnership • EIT Regional Innovation Scheme (EIT RIS)

Assessment criteria	Indicators	Thematic Area
KIC's compliance with good governance principles (Weighting: 1)	7.1 KIC fully addresses the EIT Good Governance Principles (GGP) – based on the relevant GGP assessment.	<ul style="list-style-type: none"> • KIC Governance and KIC Partnership
	7.2 EIT GB Strategic recommendations have been effectively addressed and fully implemented by the KIC.	<ul style="list-style-type: none"> • KIC Governance and KIC Partnership
KIC's efforts and results in designing and implementing gender-sensitive measures and activities (Weighting: 0.5)	8.1 KICs have designed and implemented gender sensitive measures and activities.	<ul style="list-style-type: none"> • KIC Governance and KIC Partnership
	8.2 Positive expert's assessment of the outputs and results delivered by these activities.	<ul style="list-style-type: none"> • KIC Governance and KIC Partnership
KIC's capacity to develop sustainable innovation ecosystems and the achieved level of financial sustainability (Weighting: 2)	9.1 The KIC has created a sustainable innovation ecosystem effectively addressing the societal challenges and skill gaps it was established for.	<ul style="list-style-type: none"> • Knowledge Triangle Integration, Innovation Ecosystem and Co-location Centres • Innovation
	9.2 Effective Financial Sustainability Strategy, including Financial Sustainability mechanisms in place including diversified revenue sources and aligned with the original proposal and subsequent business plans/reports.	<ul style="list-style-type: none"> • KIC Funding, Financial Sustainability
	9.3 An adequate level of revenues from its activities is demonstrated and a plan for the management and exploitation of intellectual property and financial assets supporting the KIC's business model is in place.	<ul style="list-style-type: none"> • KIC Funding, Financial Sustainability • Entrepreneurship & Business Creation
	9.4 Financial Sustainability (FS): revenues of KIC LE, FS coefficient.	<ul style="list-style-type: none"> • KIC Funding, Financial Sustainability
	9.5 Co-funding rates.	<ul style="list-style-type: none"> • KIC Funding, Financial Sustainability
	9.6 Financial asset valuation.	<ul style="list-style-type: none"> • KIC Funding, Financial Sustainability

Furthermore, all data and information collected has been linked to the relevant criteria and indicators from the assessment table in the methodological note, ensuring that they can be scored appropriately and consistently against the EIT's scoring system. The indicative scoreboards can be found in Table 2 above.

3.2. Methodological tools

Thanks to the applied methodology, the assessment is based on robust and reliable results and incorporates multiple data sources. During the assessment, three main methodological tools have been applied:

1. Desk research

The goal of the desk research was to collect both qualitative and quantitative data on the KIC's activities, results and impacts. The key documents for the desk research were:

- Key EIT documents (e.g., old EIT Regulation (2008), EIT Regulation Amendment (2013), new EIT Regulation (2021), EIT Financial Regulation, EIT SIA 2014-2020 and EIT SIA 2021-2027, Triennial Work Programmes, Single Programming Documents)
- Calls for KIC Proposals documentation; KIC Proposals
- Framework Partnership Agreements, new Partnership Agreements and KICs' Strategic Agendas (originals and any later updates)
- KICs Business Plans and Reports for relevant years and experts' assessments
- KIC Assessments: Business Creation, Education, Knowledge Triangle integration, and subsequent RIS evaluations
- EIT consolidated reports on the KIC Monitoring/GB Rapporteur visits and reports
- Specific EIT guidance to KICs (e.g., governance, code of conduct, etc.)
- EIT Principles on KICs' Financial Sustainability (old and new)
- EIT Guidance on the EIT Regional Innovation Scheme (EIT RIS) 2018-2020 and EIT RIS Implementation Framework 2021-2027
- EIT Good Governance Principles and respective assessments
- EIT and KICs websites (deliverables included in websites and those submitted with KIC reports)
- KICs' action plans for tackling specific issues (i.e., EIT and EU co-branding; communications strategy; Project Partners, gender balance etc.)
- Annual Grant KIC Performance Assessment Reports
- Multiannual Dashboard
- Annual Grant KIC Performance Assessment Reports
- EIT GB Strategic Recommendations issued during the assessed period
- EIT GB Rapporteur Reports
- Communications Activities Assessments
- Publicly available relevant EU documents

Additional documents and databases have been collected from/provided by the EIT and the KIC and assessed during the desk research. This has included outstanding recommendations from the most recent reports from EIT monitoring, such as the GGP assessments and Multiannual Dashboards.

Throughout the overview of the documents, we have opted for a tree structure to log each document into a database and do a first rough screening of relevance, indicating the following in the database:

- The level of documentation (EIT general, cross-KICs, KIC-specific, etc.)
- The assessment criteria and indicators to which it is (potentially) relevant, based on the assessment criteria from the methodological note
- The level in the Horizon Europe impact pathway to which the data is (potentially) relevant, based on the EIT Impact Framework.

After the collection of the documents, we have continued with their analysis.

1.1. Document Analysis

In the document analysis, we have systematically reviewed each document using the database developed as part of the desk research. During this review we have added further data to each relevant indicator (i.e., if the in-depth review of document X proves to be relevant to assessment criteria/indicators not identified during the fast screening, carried out in the previous activity, this will be updated in the database).

Whilst going through each document, we have extracted relevant information on the KIC performances, linking it simultaneously to the areas to be covered by the report. We have subsequently created a matrix to link the data for each year which ensures that data gaps can be easily identified. Once all the data has been grouped using this approach, we have analysed the data using the following methods:

- **Synthesis of text** – In instances where the documents already contained elements of analysis of the performance, this text has been synthesised and reported directly as findings, with full sourcing.
- **Qualitative content analysis** – In instances where data has been presented in direct qualitative manners, the analysis has consisted of finding overall trends and tendencies, patterns and links in these documents based on which overarching summaries and findings have been drawn.
- **Quantitative analysis** – In documents containing quantitative data, the data has been combined with further quantitative analysis, or in some cases (e.g., KPIs) data was considered as standalone and indicative.

2. Primary data collection method: Semi-structured interviews

To gather further information and gain insights, semi-structured interviews have been carried out with EIT Manufacturing representatives to complement the data collected during the desk research. These interviews provided in-depth qualitative data that allowed for data verification and triangulation. The interview carried out with EIT Manufacturing has been conducted first via e-mail and then via video platform, using Microsoft Teams. In total, one interview took place and questions were answered in detail by the management of the KIC. The interview outline can be found in ANNEX I. Summary of the interviews.

3. Triangulation, conclusions and recommendations

Through this task we managed to address all the data findings from the aforementioned collection and, if necessary, complete it with any additional findings from further consultations with EIT Manufacturing representatives and further requested documents, databases, to reach solid conclusions. By comparing and aggregating all information gathered, we were able to formulate all relevant recommendations.

3.3. Challenges faced in the assessment

Although this assessment was thorough and objective, there were several challenges that limited how comprehensive this assessment could be. Communication with the KIC was a challenge at the beginning of the evaluation, but this was resolved within a couple of weeks, with the intervention of the EIT, after which the collaboration was fruitful. The work was able to be carried out and, in the end, this initial difficulty did not have an impact on the final outcome. In addition, there were limited data available due to the maturity of the KICs; this issue led to several indicators (e.g., KIC's social and economic impact indicators, positive experts' assessment on gender sensitive measures) being assessed mainly through limited available information and interviews. Further difficulties arose because KPIs set changed in 2021 and a number of KPIs values for 2020 were not available until the delivery of the report. Also, KPI data for 2022 were treated as reported, therefore during the assessment of affected indicators (Relevance to the Union's global challenges; KIC's Union added value and relevance with regard to the objectives of the EIT; Achievement of KIC's objectives; KIC's capacity to ensure openness to new members; KIC's capacity to develop sustainable innovation ecosystems and the achieved level of FS) only data self-reported by the KIC could be used. This could result in slight discrepancies during the evaluation.

Please note, that as the assessment only covered the first three years of the KIC, some indicators were difficult to measure, as only limited progress can be expected within three years of operation. However, as all KICs must be assessed according to a common methodology designed by EIT, all assessment indicators have been used in the evaluation. Therefore, all conclusions and assessment detailed in the report shall be interpreted considering the rather limited timeline of the KIC's operations relevant to the evaluation.

4. Relevance to the EU global challenges

EIT Manufacturing focuses on connecting with established networks in the manufacturing value chain. It supports start-ups and scale-ups through relevant education programmes and activities. The KIC aims to contribute to societal challenges, although how the impact will be measured should be improved. Diversifying the portfolio and aligning with these challenges are key objectives. EIT Manufacturing invests in sustainability and circular economy through EIT-labelled Master programmes and supporting eco-conscious start-ups. Addressing these shortcomings will help establish the organisation as a well-established actor in the manufacturing value chain.

4.1. Relevance to the Objectives of the Union

Indicator: The results of the KIC's activities have been relevant to the objectives of the Union, including boosting economic growth, strengthening the innovation capacity of the Member States, fostering innovation and entrepreneurship, and have contributed to addressing the societal challenge it was designated for.

This criterion primarily assesses the specific Union goals of:

- Boosting economic growth by supporting the creation of new products, businesses or services, which in turn lead to job creation and increased industrial competitiveness throughout Europe
- Strengthening innovation capacity of the Member States through activities that foster synergies and cooperation among higher education institutes, research and innovation organisations, and industry corporations
- Contribution to addressing the KIC's societal challenge.

Boosting Economic Growth

EIT Manufacturing has made substantial progress in working towards the objectives of the Union, and more specifically is committed to foster economic growth by supporting start-ups and scale-ups through the attraction of investments. Regarding the above, the KIC has already reportedly overachieved the 2022 targets for several KPIs regarding supported start-ups and scale-ups in general and from RIS countries. More specifically, EIT Manufacturing has already supported a total of 660 start-ups/scale-ups (62 in 2020, and reportedly 471 for 2021 – 2022), while the total target for the respective years was 250 (30 in 2020, 90 in 2021 and 130 in 2022). In addition, EIT Manufacturing has achieved its targets for supported start-ups and scale-ups from RIS countries, by counting 340 for 2021-2022 (95 for 2021 and 245 for 2022). While the KIC performs very well in supporting a wide network of start-ups and scale-ups, it also attracts a satisfactory amount of investment, and achieves the targets it had set in its Business Plans and Strategic Agenda. The KIC has reportedly attracted EUR 47.4 million until 2022 from start-ups and scale-ups, while the target for the respective years was EUR 4 million for 2021 and EUR 9 million for 2022. Therefore, EIT Manufacturing is well on track to achieve and surpass its 2022 targets for start-ups and scale-ups supported by the KIC.

For the period under evaluation, the KIC performs very well regarding the quantitative indicators relevant to boosting economic growth. EIT Manufacturing's results seem to be relevant to the specific Union's objectives, as the results brought forward by the KIC may be considered quite significant. EIT Manufacturing has also managed to create a portfolio of innovative start-ups, by reaching a number of 36 start-ups created for innovation by 2022, as reported.

Strengthening the innovation capacity of the Member States, fostering innovation and entrepreneurship

EIT Manufacturing endeavours to build an innovative ecosystem are quite reflected in its portfolio. Based on KIC reporting data, EIT Manufacturing fosters innovation through the selection of numerous KAVAs (call and non-call based), and through specific goals such as tested and marketed innovations, support of innovative start-ups, RIS scheme and calls. Activities and initiatives to support the above-mentioned have been introduced by EIT Manufacturing. The innovation network, AGORA, was launched in 2021 and aims for participants to exchange ideas, participate in events and collaborate with peers on issues that matter for industry, from the energy crisis to regional innovations and from sustainable value chains to technology

commercialisation. It also provides the opportunity to network with organisations and participate in Calls for Proposals. Another example is the Innovation Funding Catalyst, a service brought forward by EIT Manufacturing to help partners and innovators in the manufacturing area apply for EU funding.

EIT Manufacturing has launched numerous Calls for Proposals since its creation and reportedly achieved its targets for the marketed innovations, by reaching 60 marketed innovations until 2022. However, based on EIT's assessments of KAVAs for the past years, those innovations have not generated any revenue and could not be considered as reaching the targets the KIC had set. Nevertheless, and as mentioned above, the KIC has managed to achieve a good number of start-ups created of/for innovation by 2022 (2 for 2020, 14 for 2021 and 22 for 2022), while it is on track to achieve its targets for the designed/tested innovations by counting 35 for 2021 and 20 for 2022, being slightly below the target of 22 for 2022.

Contribution to addressing the KIC's societal challenge

The activities of EIT Manufacturing seem to contribute to the societal challenges it was created for. Based on the KIC's Strategic Agenda, EIT Manufacturing was created to address specific societal challenges in a rapid changing environment. The KIC focuses both on industry and society and functions to address challenges in those areas. More specifically, EIT Manufacturing was designed to address four critical areas of the 2030 Agenda for UN SDGs; **people** (education, reskilling, female underrepresentation and social sustainability in manufacturing jobs and workplaces), **planet** (reduce negative environmental impact of companies' operations and entrepreneurs building businesses that provide new eco-solutions and environmentally sustainable business models), **prosperity** (prepare a European Manufacturing fit to compete in the future), and **partnerships** (build a powerful and open innovation ecosystem fostering the creation of novel solutions and the cross-fertilisation of new and established businesses by integrating the players of the Knowledge Triangle). To achieve the above, the KIC introduced five strategic objectives that will aid in tackling the challenges that threaten the European manufacturing industry. The five strategic objectives that guide the activities and innovations the KIC supports are the following:

- Competitive Manufacturing Skills and Social Sustainability (the KIC has achieved to develop numerous educational nuggets resulting in learning paths)
- Powerful Manufacturing Innovation Ecosystems (the first group of PhD students for 2021 was enrolled in EIT Manufacturing Doctoral School)
- Globally Competitive and Resilient Manufacturing (key success of EIT Manufacturing: the Large Additive Manufacturing Machine – LAMM activity, which has received the first order for its new technology before the end of the year)
- Environmentally Sustainable Manufacturing (six activities aligned with S04 were funded in 2022, contributing to developing solutions to monitor and reduce energy consumption)
- Manufacturing fit for the Digital Age (During 2022, 10 education activities covered topics focusing on the development of digital skills or linked to digital technologies such as artificial intelligence, predictive maintenance, digital transformation, among others).

By aligning all activities to these strategic objectives, EIT Manufacturing aims to aid the bringing together of manufacturing actors across Europe to integrate innovation and education for entrepreneurial and sustainable Europe. Project proposals are assessed partially on their alignment with both EIT Manufacturing's and global strategic goals.

EIT Manufacturing's activities are assessed annually by the EIT through Business Plans and Grant Report assessments, as well as additional monitoring, to assess alignment with the KIC's strategic objectives. The KIC's activities have by now been assessed as in line with these objectives and working towards solving the societal challenge it was created for. However, there have been recommendations by the EIT in targeting a deeper contribution to EU sustainability goals and industry diversification by the KIC's Business Plan. Although EIT Manufacturing contributes to EU sustainability goals, and thus to increasing the EU's competitiveness, it has received several negative comments for the impact it generates towards these areas. Assessments show that the KIC should demonstrate its contribution to the specific areas and should cooperate more closely with other relevant KICs towards achieving its goals.

Table 5: Activities of the KIC

KPI	2020	2021	2021-2022 reported	2020 targeted	2021 targeted	2022 targeted
Supported Start-ups/Scale-ups	57	127	471	20	90	130
Investment attracted by KIC supported start-ups/scale-ups	EUR 1 000 000	EUR 3 210 000	EUR 68 104 543	EUR 1 000 000	EUR 4 000 000	EUR 9 000 000
Start-ups created of/for innovation	n/a	14	36	3	2	7

The evolution of the annual budget of all relevant activities of the KIC is presented in Chapter 6.

4.2. Strengths, weaknesses and recommendations

Strengths

EIT Manufacturing has managed to cultivate strong performance in innovation areas by supporting a very good number of start-ups/scale-ups and attracting relatively large investments.

The KIC has implemented multiple successful programmes focusing on innovation and entrepreneurship.

EIT Manufacturing supports non-degree education and pays attention to upskilling activities. This is proven through a good record of participants in non-degree education, where the results achieved and reported are very positive.

Weaknesses

Recommendations

EIT Manufacturing underperforms in areas of marketed innovations, despite relevant reported values.

EIT Manufacturing should implement a focused approach to improve the market performance of its innovations in the next three years, before entering its 7-year assessment. Given that several of its KAVAs struggle to launch innovations into the market as of 2022, the KIC should prioritise assessing its KAVAs to identify those with the highest market potential and allocate its resources and efforts to support them more effectively. EIT Manufacturing could also explore the implementation of a market validation process before launching innovations. Gathering feedback from potential customers and other relevant stakeholders is important to ensure that innovations address real market needs.

5. EU added value and relevance with regard to the objectives of the EIT

According to the 2008 EIT Regulation, the primary objective of the EIT is to strengthen innovation capacity and contribute to sustainable economic growth and competitiveness in Europe through higher education, research, and innovation. EIT Manufacturing has made significant strides in establishing innovation ecosystems and partnerships that align with these goals. However, it is crucial for the KIC to ensure better alignment with the societal challenges it aims to address in all the areas. To enhance its contribution to the EU's sustainability objectives, the KIC needed to refine its strategy. Concerns have been raised by the EIT through monitoring reports regarding the composition of the partnership and the limited participation of external organisations in proposals. However, those were duly addressed by the KIC recently in its 2023 Calls for Proposals. While education activities are still ongoing, greater ambition is required in terms of targets and offerings. The KIC should also prioritise addressing challenges and increasing innovative projects in RIS countries. Nonetheless, EIT Manufacturing actively seeks to align with European Initiatives and collaborates with various DGs of the European Commission to achieve EU objectives, such as those outlined in the European Green Deal.

5.1. European Added Value

Indicator: The KIC has created a significant European added value with respect to building a sustainable innovation ecosystem through knowledge triangle integration, and as a result has developed concrete solutions to societal challenge it addresses as foreseen in the original proposal.

With high partnership involvement overall and good KTI throughout the KIC's portfolio, EIT Manufacturing has done well in the creation of innovation ecosystems that did not previously exist. There are, however, specific areas that deserve attention to ensure alignment of innovation ecosystems with the societal challenges it addresses. For instance, regarding addressing the societal challenges for which the KIC was established, there are examples of ways in which the ecosystem created has resulted in progress being made. As already mentioned above, EIT Manufacturing supports innovative start-ups/scale-ups. However, several innovation aspects are lagging behind, such as marketed innovations as a result of KAVAs. Nevertheless, most of the KAVAs submitted in the past years do have in their descriptions a variety of outputs to be achieved that align with the KIC's targets, and specifically in areas related to FS. More specifically, EIT Manufacturing has a pool of KAVAs that address educational nuggets and innovation. In addition to the above, the KIC will continue to improve its performance with regard to relevant Calls for Proposals aspects such as openness and transparency, as requested by the EIT in previous monitoring reports (specifically that from 2022) relevant to open calls.

First, because of these requirements and activities, the innovations brought forward through these ecosystems all contribute in some way to addressing societal challenges. As described in relevant chapters below, the KIC is already progressing well by introducing activities that blend innovation, research and education. Examples of such activities are the Skills.Move platform, the Open Innovation Platform and the KIC's Masters and Doctoral Programmes. Though, EIT Manufacturing has limited data available to assess the contribution or the extent to which the KIC's results addressed societal challenges. Second, interviewees expressed their views of the successes of EIT Manufacturing in this area, by highlighting that the KIC's projects contribute to the environmental challenges and to the EU's sustainability goals. Furthermore, they mentioned that future Business Plans will highlight its competitiveness and efforts in providing an industry diversification environment. EIT Manufacturing is aligned with many of the United Nations SDGs, according to the interviews, for example:

- SDG4: Quality education
- SDG5: Gender equality
- SDG6: Clean water and sanitation
- SDG7: Affordable and clean energy
- SDG8: Decent work and economic growth
- SDG9: Industry, innovation and infrastructure
- SDG10: Reduced inequalities
- SDG12: Responsible consumption
- SDG13: Climate action

- SDG17: Partnership for the goals

Some representative examples of how EIT Manufacturing contributes to the EU's sustainability goals under the 2021-2022 Business Plan include the annual innovation, education and RIS Calls for Proposals in 2021 and 2022 following EIT Manufacturing flagships of Flexible Production Systems for Competitive Manufacturing, Low Environmental Footprint Systems & Circular Economy for Green Manufacturing, Digital & Collaborative Solutions for Innovative Manufacturing Ecosystems and Human-machine co-working for socially sustainable manufacturing.

5.2. Alignment with and Relevance to the EIT objectives

Indicator: All KIC's activities have been fully aligned with and relevant to the EIT objectives as defined in EIT legislative framework.

The original objective outlined in the 2008 and 2021-2027 EIT Regulation, and the SIA was as follows⁷: "The EIT's objective is to contribute to sustainable European economic growth and competitiveness by reinforcing the innovation capacity of the Member States and the Community. It should do this by promoting and integrating higher education, research and innovation of the highest standards." Additionally, the EIT adopts the Horizon Europe overall objective of "contributing to building an economy based on knowledge and innovation across the whole Union by leveraging sufficient additional research, development and innovation funding" reinforced by three priorities "a) excellent science; b) industrial leadership; c) societal challenges."⁸

These general objectives are encompassed by the specific objectives of:

- integrating the knowledge triangle of research, innovation and education and thus to reinforce the Union's innovation capacity and address societal challenges⁹
- responding to the priority of "Societal challenges"¹⁰
- fostering "Leadership in enabling and industrial technologies"¹¹

The Regulation outlines the basic rationale behind the EIT as integrating education and entrepreneurship with research and innovation and following the business logic and a result-oriented approach. As stated in the Regulation, "EIT should (further) foster entrepreneurship in its higher education, research and innovation activities. It should promote excellent entrepreneurial education and support the creation of start-ups and spin-offs"¹².

Regarding the above, the KIC has made serious efforts in aligning its activities with the EIT's objectives. Overall, most of the KIC's activities are aligned with the EIT's objectives. As mentioned above, EIT Manufacturing seems to perform very well regarding innovation activities and specifically delivers very good results in the innovations that reach the market. Although relevant KPIs values are presented in Grant Report assessments as overperforming (i.e., Marketed Innovations), recent evaluations have shown that this is not the case. More specifically, according to the Final Grant Report 2021-2022 resolution meeting, a large number of KAVAs faced issues in regard to marketed innovations. For instance, there were KAVAs where customers expressed their interest to buy the proposed solutions, but no details were provided for the above contracts, thus relevant KPI is practically considered to be underperforming. EIT Manufacturing should pay particular attention to KAVAs evolution, and especially in regard to marketed innovations, as in principle

⁷ 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, Accessed on October 12, 2023, Available at: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32008R0294>

⁸ 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) and repealing Decision No 1982/2006/EC, Accessed on January 13th, 2022. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013R1291>

⁹ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Horizon 2020 - The Framework programmed for Research and Innovation, Accessed on January 13th, 2022. Available at: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0808:FIN:en:PDF>

¹⁰ REGULATION (EU) No 1291/2013

¹¹ Ibidem.

¹² REGULATION (EU) No 1291/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 establishing Horizon 2020 - the Framework Program for Research and Innovation (2014-2020) and repealing Decision No 1982/2006/EC, Accessed on January 13th, 2022. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013R1291>

such transactions generate particular revenues, which are crucial for the KIC's existence and continuation. The KIC should continue refining its strategy in several areas to ensure contribution to the overall sustainability goals of the EU. The KIC's financial sustainability strategy, included in its yearly Business Plans, has been an important deficiency for EIT Manufacturing, as presented in various recommendations. The KIC should demonstrate diversification of its revenues and alignment with the goals of its Strategic Agenda (which the KIC has lately modified) and past recommendations. In addition, the KIC has been criticised for the lack of openness in several Calls for Proposals, as shown by the EIT's reinforced monitoring process. Although the principles of openness and transparency are in place, EIT Manufacturing lacks in the alignment of the above-mentioned principles as described in several reports, requesting the KIC to diversify also in relation to the selection of consortia in the open calls. EIT has previously requested from the KIC to revisit the selection process of the calls and re-align them with relevant EIT principles on openness and transparency. On this specific issue corrective measures have been taken by EIT Manufacturing and presented in relevant chapters below, as openness is one of the main principles of the EIT.

5.2.1. KIC Governance and KIC Partnership

EIT Manufacturing is a not-for-profit association based in Paris, France. The organisation consists of three governing bodies: the Supervisory Board (hereinafter SB), the Partner Assembly and the Management team. Adding to these three layers, there are bodies with advisory functions, e.g., the EIT Manufacturing Innovation Forum, which only started in 2021¹³. Furthermore, the KIC has established a commercial arm, Manufacturing SASU, to serve as the owner of assets and equity shares, while also collecting all relevant income, excluding the membership fees. More specifically, EIT Manufacturing ASBL is the administrative headquarters and makes strategic decisions for the KIC, such as approving annual Business Plans or updating strategies. EIT Manufacturing ASBL is legally responsible to the EIT for selecting the KIC's portfolio of activities, preparing and implementing the approved Business Plan in line with its Strategic Agenda, and finally for reporting on the use of funds and monitoring the level of impact achieved. In addition, the KIC has six Co-Location Centres (CLCs) geographically spread across Europe that are the regional offices responsible for rolling out the activities of the KIC in line with the strategic agenda. The CLCs are limited liability companies under the sole ownership of EIT Manufacturing.

The governance structure of the KIC is lean and has been assessed through EIT reports as being compact, well-designed, and well-structured. It follows a decision-making process that allows for bottom-up content definition and top-down delivery and implementation. The Partner Assembly and the SB are the main decision-making bodies of EIT Manufacturing. The Partner Assembly consists of the different types KIC's partners (Core partners with voting rights and Associate Partners with no voting rights) and defines the mission and strategy of the organisation. The SB is composed of up to 15 members which are selected through an open procedure, aiming to achieve a balanced representation of partners and non-partners. The Board serves as the steering board of EIT Manufacturing and approves of the KIC's Business Plans.

EIT Manufacturing was in a transition period from March 2023; a new female CEO was named as incoming until May 2023, when she was appointed. Although this could have impacted the KIC's operations, it appears that the handover process run in a very smooth manner, as the new CEO was already involved in the discussions for the revision of the KIC's Strategic Agenda prior to starting in her new position, according to the interviews. In addition, the KIC's former CEO remained in post to assist the new CEO in the handover process; a positive cooperation step which was also part of the discussion during the interview with the KIC's representatives.

¹³ <https://www.eitmanufacturing.eu/who-we-are/organisation/>

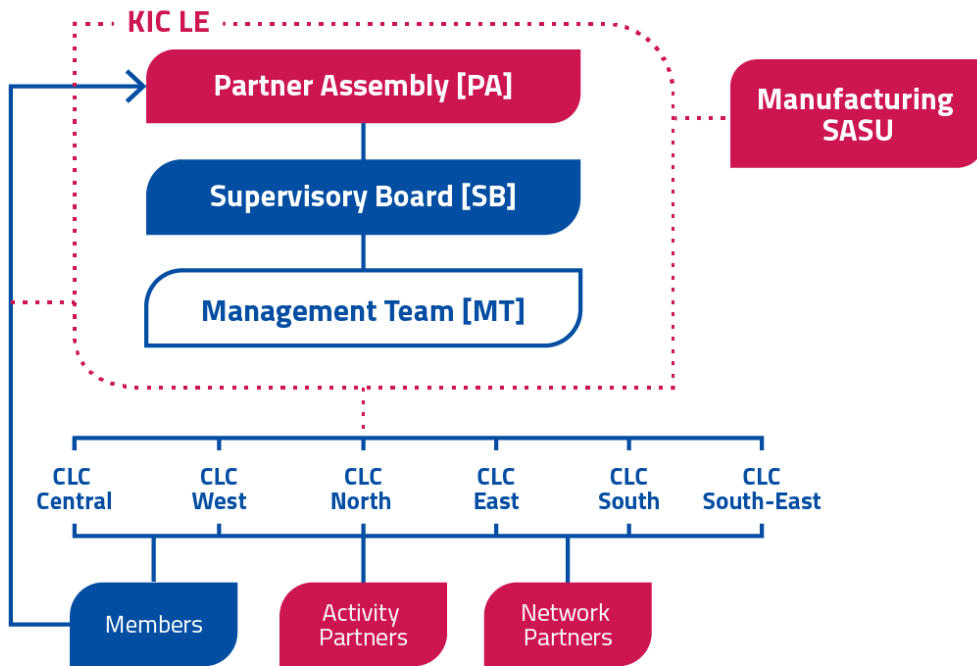


Figure 1: EIT Manufacturing Governance Model

The EIT Manufacturing partnership has a strong distribution of partners across the EU. However, it lacks a global approach, as the KIC has not still initiated partnerships with global actors. The KIC has been assessed as having a broad, diverse, and well-balanced partnership across all sectors and geographic locations. EIT Manufacturing currently has two partnership types; Core Partners with voting rights and Associate Partners who participate in the KIC’s activities. More specifically, EIT Manufacturing’s partnership model splits partners in three categories, as presented in the figure above:

- Members (Full members – Core Partners): among others, they receive funding from the KIC, have voting rights in the Partnership Assembly and represented in the SB
- Activity Partners (as of 01/01/2023 Associate Partners): among others, they receive funding from the KIC and participate as observers in the Partnership Assembly. It is worth noting that even after the revision of its partnership model, the KIC retained all Activity Partners’ status and fees
- Network Partners: entities outside Europe that, among others, participate in activities without funding, but with the right to lead them.

Whereas the KIC’s partnership has been quite positively assessed as diverse, there have been comments regarding the partners’ consortia in proposals. More specifically, the KIC has been criticised for repetitive consortium patterns and concentration of partners in several of them. More specifically, EIT Manufacturing received relevant comments in monitoring reports for Calls for Proposals regarding the openness of the calls. Observations highlight that applicant consortia include a significant concentration of partners, and this limits the effective openness of the calls to external organisations. However, the above-mentioned concerns have been successfully tackled by the KIC in the recent Calls for Proposals 2023, where it has been observed that EIT Manufacturing has removed problematic elements that limited the Calls’ openness.

Additionally, the KIC’s management mentioned several challenges regarding the KIC’s partnership. During the interviews, they mentioned that changing the mindset of the partners from a research-oriented one to a more market-oriented one was one of their main challenges. Adding to that, the COVID-19 pandemic was also a rather important challenge and specifically its effect in ramping up the partnership, given that the large majority of the manufacturing actors was seriously hit by the pandemic.

EIT Manufacturing’s ecosystem still has room for improvement in several areas. Firstly, the KIC is lacking Network partners, as the majority of the partnership is focused on EU Member States. However, due to the maturity of the KIC, this would be normal. Nevertheless, the KIC should act more intensively in attracting

Network Partners in the upcoming period. The 2021-2027 Strategic Agenda outlined an internationalisation strategy that would incorporate partners and create synergies with organisations based around the world. According to the KIC’s internationalisation strategy, the focus would be given to countries such as the USA, China, Israel, Japan, and South Korea. However, no international partnerships are recorded at the time of this assessment.

Nevertheless, interviewees expressed that EIT Manufacturing is still in the process of building its partnership network, especially after the amendment to its partnership model. During the interviews, the KIC’s staff referred to their continuing efforts in building a strong partnership network and that they are working towards this by signing MoUs with partners in other EU countries. Those actions could be beneficial for the KIC, as it will enhance its presence in such countries (most of them being RIS countries) and it would help establish more synergies and deepen partnerships. The KIC will be able to leverage any local networks at a deeper level – apart from the CLC level – and integrate more actors into its partnership. At a secondary phase, extending this internationally could be beneficial.

The partnership cultivated by EIT Manufacturing is widely viewed by employees and partners as one of the KIC’s greatest strengths. Both the size and the quality of the network are an achievement. More specifically, EIT Manufacturing has a very strong presence of technical partners in the innovation and research area that ensure delivery of relevant activities. A strong commitment of education partners has also been observed by EIT through recent assessments. Nevertheless, the KIC should focus on expanding the number of partners in the business creation pillar and closely involve partners in Cross-KIC activities. In addition, there have been concerns regarding the participation of several organisations in the KIC’s Calls for Proposals. More specifically, it has been observed that for the past years the participation of external organisations to proposals was rather low – especially for the RIS area and education, but this issue was resolved in the last two Calls, where a good number of external organisations applied for funding (e.g., in the September 2022 Call, 100 external organisations applied of a 191 total applications). More details are presented in the chapter on Openness, Chapter 8.

The partnership’s network covers all areas – industry, education, and research institutions – and is open to eligible entities for funding under Horizon Europe. The partnerships number has been steadily increasing from 2020 until 2022, when the KIC reached 273 partners (including Associate Partners) and affiliated entities. As previously mentioned, the KIC has revised its partnership model and adjusted its membership fees, mainly based on the size of partners. However, the partnership data did not distinguish between core and associated partners but only between affiliated entities and partners, thus the nature of each organisation might differ.

Table 6: Partnership benefits

	Core partners (large enterprises, RTOs and Universities, Mid-sized companies, SMEs, young companies)	Associated partners (project participants, large enterprises, RTOs and Universities, Mid-sized companies, SMEs)
Benefits	<ul style="list-style-type: none"> • Formal accession process • Voting right on Partner Assembly • Representation in governance • Participation in strategy development • Involvement of Affiliated entities (former linked third parties) • Privileged access to services, events, and tools • Annual membership fee 	<ul style="list-style-type: none"> • Participation on activity basis • No voting right on Partner Assembly • Representation in governance as an observer • No participation in strategy development • Restricted access to services, events, and tools • Annual membership fee

While only active from 2019, EIT Manufacturing has managed to cultivate a strong partnership network with more than 150 partners, irrespective of their status. While the representation of partners across all sectors remains an issue, the partnership network of EIT Manufacturing grows steadily and the comments it receives remain positive.

5.2.2. KIC Funding, Financial Sustainability

This specific three-year review indicator aims to provide an overview of the KIC’s FS and funding. A more detailed overview of the KIC’s Financial Sustainability Strategy, targets and achievements is presented in Chapter 12.

EIT Manufacturing is currently in its start-up phase. Based on this, the KIC is being assessed against its short and medium-term targets. The evaluation of the KIC’s FS can only be performed based only on the results it has achieved so far, specifically relying on the years from 2020 and 2021, since data from 2022 can only be treated as reported.

The KIC’s funding sources, as presented in its Strategic Agenda mainly rely on the following:

- EIT Grant: it includes the financial support all KICs receive from the EIT. The EIT’s financial support is highly increased for the first seven years of the KICs’ existence, and it gradually decreases until the KICs reach their 14-year mandate.
- Partner financial contributions: those contributions concern the annual fees paid by the KIC’s members and activity partners, who provide a stable and reliable source of income.
- In-kind contributions: those contributions refer to the activities carried out by the KIC and are co-funded by its partners.
- Third party contributions: national, regional, and other EU funding programmes make up the sum for those contributions.
- EIT Manufacturing revenue sources: those sources consider the KIC’s own generated resources from RoI and equity, education, services, and consulting.

Table 7: KIC Funding and Financial Sustainability

KIC Revenue (EUR million)	2020	2021	2021-2022 reported
RoI and equity*	EUR 0	EUR 515 699	EUR 616 969.35
Education*	EUR 2 000	EUR 2 715.46	EUR 17 080
Services and consulting*	EUR 0	EUR 1 500	EUR 46 461
Membership fees*	EUR 4 378 947	EUR 5 230 000	EUR 10 325 000
Alternative funding sources*	EUR 258 281	EUR 457 000	EUR 1 012 045.86
Total revenue*	EUR 4 639 228	EUR 6 206 914.46	EUR 12 017 556.21
Education**	EUR 23 413 794.04	EUR 8 167 212.67	EUR 9 513 419.83
Innovation**	EUR 74 359 669.32	EUR 18 306 480.01	EUR 24 260 498.17
Business Creation**	EUR 9 633 380.81	EUR 2 983 105.86	EUR 6 294 552.04
Management**	EUR 4 422 064.98	EUR 5 442 813.25	EUR 7 178 268.57
Dissemination and Outreach**	EUR 120 071.78	EUR 138 330.31	EUR 209 347.97
EIT Regional Innovation Scheme**	EUR 5 936 985.52	EUR 3 648 358.27	EUR 5 370 257.49
Cross-KIC Scheme**	EUR 573 388.91	EUR 1 436 873.01	EUR 2 869 055.16

*Based on Annex V of the Grant Reporting page on DUNA portal

**Based on KAVA+KCA costs on Annex III-A of the Grant Reporting page on DUNA portal

The KIC’s performance has been assessed as not being on track with the expected results. More specifically, the KIC shows good performance for several of its targets, especially the FS co-efficient, while it underperforms in several areas, such as revenue generation. EIT Manufacturing has managed to gradually

raise the performance from 2020 and is on track for achieving the targeted outcomes in the future. However, the KIC has only managed to perform well in attracting funding from alternative sources. The KIC is highly dependent on membership fees and has also started to generate nominal amounts of revenue from alternative sources, as mentioned above. This has been well received, according to past monitoring, as an overall approach of generating immediate revenue.

Although EIT Manufacturing performs well in some areas, there are concerns raised about the overall revenue generated until 2022. Revenue is below the targets set by the KIC and this mainly stems from lack of generating enough diverse revenue, except for alternative funding.

The following revenue areas underperformed in 2021:

- Membership fees (EUR 5 230 000 achieved vs. EUR 5 375 000 budgeted), although it was 23% higher than in 2020 (EUR 4 378 947);
- RoI and Equity (EUR 515 699 achieved vs. EUR 2 025 000), although it was significantly higher than in 2020 (EUR 0);
- Education (EUR 2 715.46 achieved vs. EUR 10 000 budgeted), although it was slightly higher than in 2020 (EUR 2 000 000);
- Services and Consulting (EUR 1 500 achieved vs. EUR 20 000 budgeted), although it was significantly higher than in 2020 (EUR 0).

Further information about the KIC’s revenues and performance regarding its FS can be found in Chapter 12.

The KIC’s financial sustainability, as presented in its Strategic Agenda mainly relies on the following:

- RoI and equity: mainly rely on backflow from innovation activities. The KIC has introduced a mechanism where all innovation activity proposals are required to suggest a mechanism contributing to its FS. In addition, EIT Manufacturing aims to earn equity shares from start-ups and scale-ups in exchange for services provided to them.
- Education: mainly relies on tuition fees. EIT Manufacturing currently offers Masters and PhD programmes and is charging a certain amount of fees to students (EU and non-EU/EFTA) each year.
- Services and consulting: mainly rely on the Open Innovation Platform and Innovation Services. The Open Innovation Platform offers EIT Manufacturing the chance to act as an open innovation accelerator and provide dedicated tools to clients. Innovation services may include support to digital transformation, matchmaking, etc.
- Membership fees and Alternative Funding Sources.

Table 8: KIC Financial Sustainability forecast

Financial Sustainability forecast revenues	2021	2022	2023	2024	2025	2026	2027	TOTAL
INCOME FROM RoI & EQUITY	0.02	0.28	1.42	1.78	4.64	4.57	5.11	17.82
EDUCATION	0.05	0.08	0.50	0.60	0.80	1.50	2.00	5.53
SERVICES & CONSULTING	0.02	0.03	0.05	0.07	0.18	0.38	0.47	1.20
MEMBERSHIP FEES	6.02	7.93	9.75	10.92	12.69	13.67	14.04	75.02
ALTERNATIVE FUNDING SOURCES FOR KIC LE (PUBLIC AND PRIVATE)	0.48	0.65	0.80	0.90	1.30	1.65	2.13	7.91
SUM of FS REVENUES	6.59	8.97	12.52	14.27	19.61	21.77	23.75	107.48
EIT grant PROJECTION	42.00	50.00	63.50	71.50	71.50	70.00	70.00	438.50
FS COEFFICIENT (%)	16%	18%	20%	20%	27%	31%	34%	-

Source: EIT Manufacturing Strategic Agenda 2021-2027

5.2.3. Knowledge Triangle Integration, Innovation Ecosystem and Co-location Centres

Knowledge Triangle Integration activities are a very important part of the KICs' operations. As per Partnership Agreement, Article 7.4, KTI activities consider the research and innovation activities, education and training activities and business creation and support activities. One of the main tasks of the EIT is to reinforce the innovation capacity of the EU¹⁴. This is done by the KIC through the cultivation of coordination and integration across the three sides of the knowledge triangle: between higher education, research, and industry. The goal is to inspire dialogue across different perspectives and areas of knowledge to ignite the innovation process and more successfully address societal challenges. Each side of the knowledge triangle is meant to benefit from this integration:

- Universities learn exactly which skills are needed by the industry and can tailor educational programmes to fit these gaps.
- Innovators and entrepreneurs benefit from industry guidance and access to tailored education programmes to increase the likelihood of new start-ups filling a gap in the market.
- Corporations have more direct access to new talent from tailored education programmes as well as the opportunity to tailor innovation projects to their specific needs.

Successful knowledge triangle integration (KTI) results in the creation of ecosystems throughout Europe of organisations working in synergies to develop innovations, bring these innovations to the market, and contribute to the solving of societal challenges. KTI is therefore one of the most crucial aspects of KIC activities, and the strategies used to achieve this vary among KICs. According to interviews, the KIC has successfully managed to create and strengthen sustainable innovation ecosystems throughout the EU, with organising and collaborating on projects designed to solve societal challenges. These ecosystems have led to increased cooperation among the different actors in the manufacturing field across the EU and have increased the innovation capacity of the bloc. EIT Manufacturing has several activities and programmes in place to cultivate KTI and the core ones are:

- Its academic programmes; Masters and Doctoral schools (they offer a wide variety of activities in universities across Europe, where RTOs, Universities and Industry are blended), Enhance Flexy programme (personalised learning trajectories with final certification to equip learners with entrepreneurial & sustainability skills, together with competences on advanced technology applications, where academic mentoring and industrial coaching interface), Pioneering Learning Journeys (innovative pedagogical learning approaches to support learners in developing competencies)
- Its innovation activities; flagship activities include the AGORA Open Innovation Platform, the Innovation Funding Catalyst, and the Technology Radar
- Its business creation activities; for start-ups (Switch On programme), scale-ups (the Supercharge programme) and SMEs (the Level Up programme)

In addition to specific activities, the CLCs play a significant role in facilitating KTI among the partners associated with them. They initiate and implement various education, innovation and business creation activities delegated by EIT Manufacturing at KAVA level, also supporting entrepreneurial capacity locally and on a pan-European level.

As outlined in the governance structure above, EIT Manufacturing has six CLCs responsible for rolling out the activities of the KIC in line with the strategic agenda. The CLCs run the KIC's operations on the ground and ensure the KIC's activities are well implemented on a local level. The CLCs operate transnationally and are distributed across Europe in a geographically balanced way. They are tasked with applying the KTI model at a regional level to stimulate collaboration and increase innovation capacities across Europe.

EIT Manufacturing has overall been positively assessed in regular EIT monitoring regarding KTI due to the strong integration of KTI throughout the KIC's processes. More specifically, the KIC progresses well in KTI

¹⁴ European Parliament and Council of the European Union. 2008. Regulation 294/2008. Accessed on September 17th, 2021. Available at: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32008R0294>

activities and has transparent processes for the selection of beneficiaries in the business creation area. However, there have been several cases observed where EIT Manufacturing should pay more attention regarding its strategy and processes. More specifically, it has been observed that the business creation activities do not contribute significantly to the KIC's FS, as start-ups created do not still generate much revenue, while the KIC has not yet developed an Intellectual Property Rights framework. As it has also been mentioned above, post-funding of the Calls package is also a weakness of EIT Manufacturing, as numerous marketed innovations were reported but most of them were not validated by EIT, as they still do not generate revenue.

EIT Manufacturing has many Business Creation activities (e.g., the Gazelle accelerator, where start-ups receive support to excel in business life, providing access to innovators, as well as the Green Manufacturing accelerator, where innovative manufacturing solutions are developed and merged with impact investments) that perform well and are integrated with other activities in the KTI triangle, i.e., education and innovation. However, at the time of this assessment, there is no inflow of entrepreneurs from education, and there is limited start-up creation. There are still further actions to be taken for the KIC to be assessed as perfectly delivering its KTI activities and results.

The broader sector and the local ecosystem both benefit from KTI—well beyond the EIT Manufacturing partnership, as this is described above. Both accelerator programmes of EIT Manufacturing are a living example of how the manufacturing sector and the wider society can benefit from KTI integration in the KICs. Both programmes resulted in numerous start-ups being supported by the KIC, while also involved more than 20 industry corporates. The KIC's management described in an interview how better-informed ideas and proposals come from coordinating across different sides of the knowledge triangle, allowing activities to better follow market trends or sector needs. Working with other sides of the knowledge triangle also makes things easier for partners; they have access to insights they would not so easily have otherwise. Partners representing each side of the knowledge triangle described the concrete benefits they have from strong KTI. It allows for stronger outputs overall.

Innovation ecosystems

Successful KTI brings added value on a regional, sectoral, and European level. Bringing together different perspectives on the same issue leads to better informed and more creative solutions to problems. EIT Manufacturing's KTI approach was designed to foster these dialogues and contribute to long-standing collaborations across the sector. For example, the KIC's activities bring together all sides of the knowledge triangle to cultivate dialogue. Core partners provide updates and share sector information, while also making collective decisions on strategies moving forward. As sector needs are identified, these are addressed by the KIC in the following KIC Calls for KAVA projects.

The partnership benefits from KTI by receiving insights from other parts of the sector that they would not normally receive, and they can discuss and build consensus over future strategies to collectively address sector-related challenges. Whereas national efforts can struggle to develop momentum due to the fragmentation of the knowledge triangle, the EIT Manufacturing ecosystem fosters pan-European dialogue for impact across Europe. The EIT Manufacturing membership, through these strategic KTI exercises, involving key players in the field, participates in strategy development and influences the agenda for the manufacturing sector. Because of this sector-wide influence, the KIC should try and move beyond being a funding instrument and pave the way towards addressing societal challenges in the long-term.

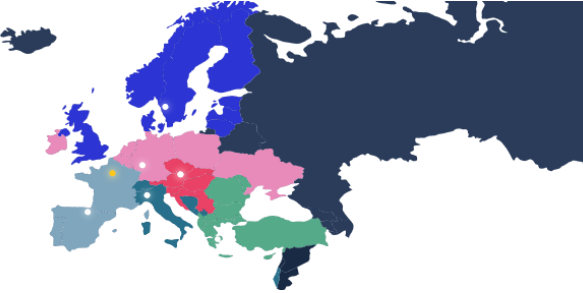
Several specific activities have resulted in concrete solutions being brought forth to address EIT Manufacturing's societal challenges. It is clear from this assessment that local ecosystems and the EU could benefit from EIT Manufacturing's partnership and their KTI activities due to smart innovation, research, and educational activities. The level of this impact cannot be known from existing data, as it is impossible to know exactly what KTI existed before or how well earlier innovations fit the exact needs and orientation of the market. What can be assessed, however, is the extent to which the goals of the KIC have been met. As outlined below, many of the KPIs intended to estimate societal impact have not been met yet, however, it is still very early to draw conclusions regarding the KIC's societal impact as it is still in its start-up phase. More information on the innovation ecosystem of EIT Manufacturing can be found in Chapters 5.2.5 and 12.1.

CLCs

EIT Manufacturing’s geographic presence through its CLCs and RIS Hubs is strong and in line with the KIC’s strategic objectives and societal challenges. They support the KIC in building a strong ecosystem since they are consistently integrating national and regional initiatives. The network also benefits manufacturing stakeholders from RIS countries by promoting their participation and identifying products and services from RIS countries. The 2021-2027 Strategic Agenda outlined the distribution of the five CLCs, whereas a sixth one was added recently in Greece. The decision for the establishment of the sixth CLC in Greece was mainly a product of reflection, after EIT criticism on CLC East, which was based in Austria and was covering mainly RIS countries, with Austria not being a RIS country itself. Thus, CLC South-East was established to cover relevant requirements. The establishment of CLCs prioritised coverage across Europe to ensure physical proximity to all partners, as shown in Table 9 below.

Table 9: Partner distribution across CLCs (left) & EIT Manufacturing Geographic Distribution of CLCs (right)

CLC	Grand total
Central	31
East	42
North	16
South	41
South East	5
West	57
Total	192



This geographic distribution has remained consistent throughout the KIC’s operations so far, with the addition of 12 RIS Hubs in 2020 that coordinate further pan-European innovation activities for regions with lower innovation capacities. New RIS Hubs will continue to be created, based on the interviewees’ points.

5.2.4. Education & Alumni

EIT Manufacturing was only established in 2019 and desk research showed that this resulted in education activities being launched in 2021, including Masters and PhD programmes. Thus, the education targets remain at zero, which the evaluators consider on track, due to the start date of such activities.

The KIC has already established education programmes at all levels of the higher education pillars (Masters and PhD programmes). EIT Manufacturing initiated its Master and Doctoral School and pioneering learning journeys, all addressed to students interested in the manufacturing area. Entrusted with the goal to transform the manufacturing industry, the KIC also offers programmes for companies and employees. In addition, EIT Manufacturing established the “Engage programme” focusing on citizens and young pupils.

The KIC’s Master School combines the forces of three universities and provides students with the possibility to receive two degrees and an EIT Label certificate, as its two-year programme is being taught in two universities with an option to attend a summer school in a third university. The Master School programmes offer a variety of courses that combine technical and technological knowledge, all aligned with its primary strategic objectives and goals. Below is the list of the five programmes provided by the Master School:

- People and Robots for Sustainable Work
- Additive Manufacturing for Full Flexibility
- Zero Defect Manufacturing for a Circular Economy
- Platforms for Digitalized Value Network – Digital manufacturing technologies
- Data Science and AI for a Competitive Manufacturing (providing one degree in engineering and one degree in ITC).

Currently, the programmes are offered by 10 EU universities, with a balanced geographical spread.

EIT Manufacturing’s Doctoral school functions under the slogan of “Turn your thesis into a startup”, which emphasises on the importance of business creation. By supporting students into transforming their research work into solutions to be brought into the market, the KIC focuses on delivering more results in the market and innovation area soon. The Doctoral programme includes PhD students from selected universities and provides the opportunity of cooperation with industrial partners, highlighting the synergies between education and industry. The programme focuses on a two-year education applied on manufacturing innovation and entrepreneurship. Part of the Doctoral school is the Innovation and Entrepreneurship programme, which allows PhD students that are not enrolled in the school to be part of the EIT Manufacturing education community. A summer and a winter school are provided in the framework of this programme.

Another success of EIT Manufacturing with regard to the education pillar is the launch of the Skills.Move platform. This initiative serves as EIT Manufacturing’s learning platform supporting Europe’s manufacturing industry to upskill and reskill its current and future workforce by providing individuals easy access to a personalised learning experience. What is important to mention is that the platform’s content has been explicitly designed by EIT Manufacturing together with the partners to reflect industry needs. With regard to its connection to education, the platform offers students the opportunity to connect with manufacturing players and learn about new technologies, by offering educational nuggets for free. The KIC is also the leading entity in the Deep Tech Talent initiative, which offers courses and contributes to the development of deep tech learners. The initiative focuses on three groups of learners; pupils, students of higher education and adult learners. EIT Manufacturing started a new KAVA dedicated to setting up and launching the initiative’s website and launch communication. Furthermore, the education pillar is not only focused on students, but it also includes professionals, by offering the opportunity for them to develop and enhance their innovation and entrepreneurship skills. A quite successful example is the TURING activity, which addresses highly flexible and personalised programmes for professionals needing to upskill and develop more innovation and entrepreneurial skills.

In addition, the KIC also considers the education of industrial actors and employees as an integral part of its activities. By establishing the EIT Manufacturing Labelled Enhance Flexy, the KIC supports companies which enrol their employees/professionals in learning activities. In addition, the KIC’s professional school is one of the core vehicles of EIT Manufacturing towards realising its educational activities. Its activities currently consume the largest part of the education budget (close to EUR 4 million out of the EUR 18 million) as of 2022. The KIC’s professional school has concluded the most educational activities in the education pillar and is expected to continue.

As mentioned above, EIT Manufacturing established its first education activities in 2021 and thus, it is apparent that the performance of these activities could not be assessed by this review. The process is still ongoing as most of the students (93 students reported in Masters and PhD programmes by 2022) from the KIC’s activities will graduate in 2023 the earliest, as most of its programmes span across two years. However, as of 2021 and according to Governing Board (hereinafter GB) report the education financial targets remained low and need to become more ambitious to show a balanced and diversified portfolio. Although such recommendations were raised in different cases (EIT monitoring reports, GB reports, Multi-annual dashboard 2022), the KIC has not managed as of today to portray significant progress in this area. Based on the above, it still necessary for EIT Manufacturing better to design and closely monitor educational activities that include feedback from the target groups, this may also help the revenue streams from a diversification of its education portfolio.

Table 10: KIC's education activities

KPI	2020*	2021	2021-2022 reported	2020 targeted	2021 targeted	2022 targeted
Start-ups created of EIT labelled MSc/PhD programmes	0	0	0	0	0	0
Graduates from EIT-labelled MSc/PhD programmes	0	0	0	0	0	0

KPI	2020*	2021	2021-2022 reported	2020 targeted	2021 targeted	2022 targeted
Participants in (non-degree) education and training	-	5 856	15 333	-	642	1 496
# of educational nuggets created (short term)	-	776	1 867	-	550	550
# of educational nuggets consumed (short term)	-	17 999	52 343	-	18	100

*Shows only reported values, validated values, and targeted values for 2020 were unavailable.

5.2.5. Innovation

The EIT was created to drive innovation in Europe. The EU needs innovative solutions to address the fact that it depends to a very large degree on imports from outside the bloc. There is a very urgent need for the mobilisation of researchers and innovators to create solutions to the manufacturing sector challenges, such as demographic changes, rapid technological progress, increasingly varying consumer demands, scarcity of raw materials, environmental concern as well as increasing global competition¹⁵. EIT Manufacturing seeks to develop manufacturing into a major strength for Europe and aims to achieve this through its innovation activities. To achieve this significant innovation and research into the broader manufacturing sector is needed and EIT Manufacturing is tasked with providing that.

Innovation and research are a core part of EIT Manufacturing. EIT Manufacturing aims to create value by strengthening the innovation and technological capabilities of the EU to address the manufacturing challenges the Union faces. EIT Manufacturing aims to combat the segmented and short-sighted approach with which manufacturing challenges are treated by bringing together actors across the manufacturing value chain. In this way, more sustainable solutions may be achieved through simultaneous investment by key stakeholders in the sector. One of the ways EIT Manufacturing has done this is through the creation of their AGORA Social Innovation network, the Innovation Funding catalyst, and the Technology Radar. All three activities compose the KIC’s efforts to enhance its innovation activities.

The Agora Social Network is a space for innovators to share their interests and projects for the manufacturing industry. The network’s focus stems from the need to tackle challenges in the sector, while driving the industry forward. The Innovation Funding catalyst is a service by EIT Manufacturing to help partners and innovators identify and apply for EU funding. This service provided by the KIC highlights the importance of innovation across Europe and is also aligned with the overall scope of EIT Manufacturing; bringing together the manufacturing actors across Europe to integrate innovation. Lastly, the Technology Radar maps out the technologies in place that have the highest technology-readiness levels and transformative potential.

In addition, EIT Manufacturing launches around 30 innovation activities annually that are divided across four different areas of interest. The KIC as successfully completed several innovation activities launched in 2021, with an example for each area presented below:

- Flexible Production Systems for Competitive Manufacturing, e.g., Additive Manufacturing and AI (AMAI): Coordinated by Politecnico di Milano, the project launched a toolkit for electron beam-based which is continuously being improved by the AMAI team.
- Low Environmental Footprint Systems & Circular Economy for Green Manufacturing, e.g., PURE: The project has industrialised an air purification system to detect the presence of contaminants and measure environmental parameters.
- Digital & Collaborative Solutions for Innovative Manufacturing Ecosystems, e.g., BOOSTER: The project aimed at delivering an industrial ‘secure by design’ solution to accelerate the execution of data processing applications.

¹⁵ EIT Manufacturing Strategic Agenda 2021-2027

- Human-machine Co-working for Socially Sustainable Manufacturing. Sustainable human-robot co-production for cargo bicycles (Robofiets): In collaboration with TU Delft, the project intended to provide sustainable workplaces within the EU bike industry.

EIT Manufacturing is successfully progressing towards planned innovation activities. Its innovation portfolio consisted of 29 call-based and two non-call KAVAs only in 2022, while in 2021 it included 25 call-based and two non-call KAVAs. Most of the KAVAs until 2022 touched upon the already foreseen areas of innovation activities and complied with all relevant requirements. However, as already mentioned on several occasions in the course of this report, EIT Manufacturing did not perform well in the innovations launched in the market, which is a requirement for all innovation KAVAs. This should be an area, where the KIC should improve in the future. In addition, as per EIT’s comments to the KIC’s final report for 2022, EIT Manufacturing should also pay closer attention to the financial sustainability agreements to make them more favourable to the KIC.

To further boost the innovation and research aspects and adapt the manufacturing sector to the needs of the present, EIT Manufacturing has created the Technology Radar, a service of the AGORA Social Network, as mentioned above. This includes webinars about hot topics, such as CO₂ footprint, 5G, Blockchain and more. Furthermore, the AGORA Social Network is promoted as a community network for the manufacturing industry that provides opportunities and the latest updates to Industry 4.0, by cultivating discussions for these areas. Outside of such activities the KIC also supports research and innovation through the upscaling of innovation projects as well as by mapping facilities and infrastructure that can facilitate research and the generation of innovation.

EIT Manufacturing has also made visible efforts to increase research and innovation in manufacturing by identifying projects with high exploitation potential. The KIC succeeded in setting up many collaborations; however, recent EIT assessments have recommended the KIC should do more to promote marketed innovations deriving from its activities. In addition, all innovation KAVAs should have at least one marketed innovation in their proposal. EIT Manufacturing has managed to increase marketed innovations throughout its existence, although, most of them happened in 2021 and 2022 instead of 2020.

EIT Manufacturing should make sure to closely monitor the Calls as well as the selection process, paying particular attention to the technology-readiness level of innovation projects to ensure that they are close to the market. In the Calls for Proposals for 2022, there has been wide criticism over the funding and project partners in innovation projects. Applicants in innovation remain quite concentrated – it has been observed that the same partners win several calls – and this leads to those specific partners having an advantage in accessing funding. This may be an obstacle when seeking the most impactful innovations. For this reason, previous assessments recommended the KIC to recruit external experts for the selection of relevant innovation proposals, ensuring the selection of proposals with the highest innovation impact. As such, the KIC aligned its selection processes and utilised external experts, thus significantly improving the situation as seen in Calls for Proposals monitoring for 2023.

Interviews with representatives from EIT Manufacturing confirmed that the KIC has successfully managed to create and strengthen sustainable innovation ecosystems throughout the EU, which have increased the innovation capacity of the bloc, as already mentioned above. Across various indicators, EIT Manufacturing generally performs quite well, as shown in Table 11. These include the number of products and processes launched onto the market and start-ups created as a result of innovation projects.

Table 11: KIC’s innovation activities

KPI	2020*	2021	2021-2022 reported	2020 targeted	2021 targeted	2022 targeted
Designed/Tested Innovations	-	35	55	-	21	22
Marketed Innovations	4	30	72	12	11	20
Start-ups created of/for innovation	0	14	36	3	2	7

KPI	2020*	2021	2021-2022 reported	2020 targeted	2021 targeted	2022 targeted
EIT RIS Designed/Tested Innovations	-	22	34	-		18%
EIT RIS Countries – Marketed Innovations	-	21	48	-		15%
EIT RIS Start-ups created of/for innovation	-	13	35	-		15%
EIT RIS Countries – start-ups created of/for innovation	-	10	16	-		15%

*Shows only reported values, validated values, and targeted values for 2020 were unavailable.

5.2.6. Entrepreneurship & Business Creation

Entrepreneurs and innovators benefit from several EIT Manufacturing activities, including matchmaking and networking activities as well as validation and acceleration activities. Matchmaking and networking activities include the creation of networks, events, and websites that stimulate links across the knowledge triangle and manufacturing value chain, as well as between entrepreneurs and established corporations. Through specific matchmaking events, entrepreneurs are paired with industry mentors who provide guidance on bringing innovations to the market and methods of securing funding. Validation and acceleration activities are selected based on the maturity of the business or innovation. Upscaling activities support established organisations in bringing their innovative ideas to the market, whereas the Switch On programme provides funding and entrepreneurship coaching to early-stage start-ups. For scale-ups, EIT Manufacturing has established the Supercharge programme, and for SMEs the Level Up programme. Through these programmes, entrepreneurs benefit from access to market services, product expansion, marketing and communication support and other relevant services. In addition, the BoostUp competition mentioned above is another EIT Manufacturing’s initiative that helps start-ups grow and scale their solutions.

Furthermore, the KIC offers specific services led by its partners, such as the Gazelle accelerator and the Green Manufacturing accelerator. Gazelle accelerator is a programme that provides start-ups with the support to scale up their business by aiding them in identifying connections, while the Green Manufacturing accelerator programme helps green technology start-ups with their novel materials and resources.

EIT Manufacturing has shown good performance on several of its original goals in supporting start-ups. The KIC has managed to cultivate a good reputation, which has resulted in many start-ups submitting proposals not just for the funding, but also because of the KIC’s support services. Networking, mentoring, and testing are crucial for start-ups who wish to scale-up and break into the market, and these services are difficult to come by alone. All things considered, creating a start-up is a high-risk endeavour, but EIT Manufacturing has designed some tools to help mitigate this risk wherever possible. The KIC has created specific education programmes to help inform young students in EIT-labelled Masters programmes about how EIT Manufacturing can support them in founding a start-up. The KIC has also designed support activities aimed at increasing the chances of the start-ups’ success.

Another successful aspect of the KIC is the establishment of a network of key stakeholders that enables the creation of valuable synergies in the manufacturing sector. Industry partners are drawn to EIT Manufacturing to access new talent from the KIC’s network, while at the same time young professionals and entrepreneurs are given the opportunity to integrate within the broader manufacturing sector. The increased networking opportunities provided by the KIC have in part led to the creation of an innovation ecosystem.

The KIC’s performance in its Entrepreneurship and Business Creation KPIs was excellent, as shown in Table 12. EIT Manufacturing has performed very well in terms of all the Business Creation targets that it set in its Strategic Agenda. For the number of start-ups supported and the amount of investment attracted by the supported start-ups, the KIC surpassed its targets, a fact which was also highlighted in the interviews.

Table 12: KIC's Entrepreneurship and Business Creation activities

KPI	2020	2021	2021-2022 reported	2020 targeted	2021 targeted	2022 targeted
Supported Start-ups/Scale-ups	57	127	471	20	90	130
Investment attracted by KIC supported start-ups/scale-ups	EUR 0	EUR 3 210 000	EUR 68 104 543	EUR 1 000 000	EUR 4 000 000	EUR 9 000 000

5.2.7. EIT Regional Innovation Scheme (EIT RIS)

Innovation is one of the top priorities of the EU; however, innovation capabilities across Europe vary greatly among countries and their regions. The European Innovation Scoreboard scores countries based on their level of innovation capabilities and outputs. The EIT Regional Innovation Scheme (RIS) was introduced in 2014 to advance the innovation capabilities in countries with moderate or modest innovation scores as defined by the Scoreboard. The EIT RIS fosters innovation through the dissemination of the KTI approach, fostering linkages between business accelerators, incubators, start-ups, scale-ups, businesses, educational institutions, and research institutions. For the 2021-2027 period, the EIT RIS initiative has been enhanced and aims to deliver on:

- Improving innovation capacities of the local ecosystem
- Integrating potential new EIT KIC partners and linking local innovation ecosystems to pan-European innovation ecosystems
- Using the EIT RIS as a bridge towards relevant Research and Innovation Smart Specialisation Strategies (RIS3s)
- Leveraging additional private and public funding, with particular attention to the European Structural and Investment Funds (ESIF).

Through the EIT RIS, the EIT expects significant outcomes such as an increased number of ventures from all targeted countries and regions, an increased number of students from those countries and regions, as well as an increase in overall collaborations in these countries and regions.

KICs must implement their own self-defined strategies to meet the RIS objectives, including integrating more participants from the EIT RIS eligible countries and regions in their KTI activities. Through the EIT RIS, the KICs can generate useful inputs and access talent, business skills, and broader cooperation in education. Table 13 shows the countries that were set as target areas of the EIT RIS between 2014-2020 and 2021-2024. This includes countries from three categories:

1. Moderate and modest innovators
2. Horizon2020 countries, apart from those considered as innovation leaders or strong innovators
3. Outermost regions.

Table 13: EIT RIS Eligible Countries (2014-2020 and 2021-2024)

EU Member States	H2020 Associated Countries in Europe	Outermost Regions (2021-2024)
Bulgaria	Albania (2014-2020)	Guadeloupe
Croatia	Armenia (2014-2020)	French Guiana
Cyprus	Bosnia and Herzegovina (2014-2020)	Reunion
Czechia	Faroe Islands (2014-2020)	Martinique
Estonia	North Macedonia (2014-2020 and 2021-2024)	Mayotte and Saint-Martin (France)
Greece	Georgia (2014-2020)	The Azores and Madeira (Portugal)
Hungary	Moldova (2014-2020)	Canary Islands (Spain)
Italy	Montenegro (2014-2020 and 2021-2024)	

EU Member States	H2020 Associated Countries in Europe	Outermost Regions (2021-2024)
Latvia	Serbia (2014-2020 and 2021-2024)	
Lithuania	Turkey (2014-2020 and 2021-2024)	
Malta	Ukraine (2014-2020 and 2021-2024)	
Poland		
Portugal		
Slovakia		
Slovenia		
Spain		
Romania		

EIT Manufacturing embeds its EIT RIS strategy in boosting innovation in RIS countries, as originally designated in its Strategic Agenda. More specifically, the KIC planned to closely collaborate with organisations and individuals from EIT RIS-eligible countries, as many of suppliers and solution providers in the manufacturing sector are in RIS countries. To achieve the abovementioned, the KIC has a team dedicated to the implementation of its RIS Strategy, the European Affairs and RIS team. The KIC’s RIS Strategy is embedded in its Strategic Agenda 2021-2027, where EIT Manufacturing described that it aimed to establish hubs in 13-16 RIS countries by 2023 (including the two CLCs in Italy and Spain). The KIC falls shortly below this target, as by the time of this assessment it has established Hubs in 12 RIS countries. EIT Manufacturing had also planned to spend at least 10% of the funds it receives to its RIS strategy implementation. Currently, the KIC is close to achieving this target, as EIT Manufacturing spends amounts close to 10% of its funding to RIS activities, as reported in the DUNA portal. As presented in the Multiannual Dashboard, the KIC’s RIS strategy was included in Strategic Agenda, which was adopted in 2021. EIT Manufacturing has developed a comprehensive offer that is either entirely focused on or very open to RIS-eligible countries, including BoostUp! Bridge, Innovate Together, LEADERS and EVO-R. The KIC is an integral part of the Cross-KIC Strategic Regional Innovation Cluster and participates in the EIT Jumpstarter. It also makes an important contribution to the work packages within the cluster. EIT Manufacturing has a large network of EIT RIS Hubs spread across the EIT RIS eligible geographical area and plans further expansion.

Table 14: KIC’s RIS activities

KPI	2020	2021	2021-2022 reported	2020 targeted	2021 targeted	2022 targeted
EIT RIS Designed/Tested Innovations	-	22	34	-		18%
EIT RIS – Marketed Innovations	-	21	48	-		15%
EIT RIS Start-ups/scale-ups Supported	-	-	-	-		-
EIT RIS Countries - KIC supported start-ups/scale-ups	-	95	340	-		15%
EIT RIS Start-ups created of/for innovation	-	13	35	-		15%
EIT RIS Countries - start-ups created of/for innovation	-	10	16	-		15%
EIT RIS start-ups created of EIT labelled MSc/PhD programmes	-	0	0	-		15%
EIT RIS Countries - Start-ups created of EIT labelled MSc/PhD programmes	-	0	0	-		15%
Investment attracted by KIC supported EIT RIS start-ups/scale-ups	-	EUR 0	EUR 9 089 195	-		15%

KPI	2020	2021	2021-2022 reported	2020 targeted	2021 targeted	2022 targeted
EIT RIS Country - Investment attracted by KIC supported EIT RIS start-ups/scale-ups	-	EUR 0	EUR 5 000 000	-		15%
EIT RIS Graduates from EIT labelled MSc/PhD programmes	-	0	0	-		20%
EIT RIS Participants with (non-degree) education and training	-	0	10 555	-		20%
EIT RIS EIT labelled MSc/PhD students and graduates who joined start-ups	-	0	0	-		20%
EIT RIS Success stories	-	9	41	-		15%
EIT RIS Countries - Success Stories	-	6	16	-		15%

The KIC established six CLCs in total, with two CLCs in EIT RIS countries (Italy and Spain) and added another CLC in Greece in 2022. The 2021-2027 Strategic Agenda outlined the distribution of the five CLCs, whereas a sixth one was added recently in Greece. The decision for the establishment of the sixth CLC in Greece was mainly a product of reflection, after EIT criticism on CLC East, which was based in Austria and was covering mainly RIS countries, with Austria not being a RIS country itself. Thus, CLC South-East was established to cover relevant requirements. The establishment of CLCs prioritised coverage across Europe to ensure physical proximity to all partners. Additionally, 12 RIS Hubs already operate in EIT RIS countries. With the CLCs and RIS Hubs the KIC will increase its regional impact and enhance its outreach to a wide range of stakeholders and potential partners integrating them into the KIC community and its activities along the knowledge triangle.

EIT Manufacturing’s RIS strategy and activities since 2019 have been good, as the KIC is succeeding in achieving most of the RIS related KPIs, as presented in Table 14 above. More specifically, the KIC has supported more start-ups/scale-ups in RIS countries than it had targeted (17 vs 12 for 2021 and 20 vs 19 in 2022), while it is also counting a high number of participants in non-degree education from RIS countries (10 555 in 2022). However, past recommendations have commented on a lack of ambition in RIS countries. The KIC should take remedial measures to tackle such challenges, which have been foreseen in its SWOT analysis in the Strategic Agenda. In addition, the KIC has established – as mentioned above – CLCs in three RIS countries though its presence in these countries is already considered as well-developed. To avoid future concerns about the KIC’s decision to enhance its presence in RIS countries where its operations are well standing, the KIC should continue to focus on expanding in other countries where its operations have insufficient impact. As mentioned above, EIT Manufacturing’s focus on RIS countries in its activities has been acknowledged in the 2022 Multiannual Dashboard, suggesting that the KIC is currently on the right track in this regard.

5.2.8. Synergies, Complementarities & Cross-KIC collaboration

Based on the desk research and interviews conducted for this review, it is clear that EIT Manufacturing aims to put forth considerable efforts in aligning with European Initiatives. As early as its Strategic Agenda stage, the KIC was already collaborating with several DGs of the European Commission, by being in constant exchange with them. In addition, the KIC worked and continues to work towards achieving EU objectives and relevant policies, such as the European Green Deal. Concerning global synergies, the KIC has already established close collaboration with the World Economic Forum for its programmes, by participating in numerous of its meetings. The KIC will continue to cultivate further synergies, resulting in relationships and impact throughout Europe and internationally. Further information on the KIC’s efforts toward synergies and complementarities are addressed in Chapter 7, and the number of synergies that have been established so far can be found in Table 15 below.

In addition, EIT Manufacturing is involved in multiple Cross-KIC RIS activities, including the Jumpstarter programme that has a mandatory quota for RIS projects being supported. This programme was launched alongside EIT Health and won the Best Training Programme Award in the European Associations Award in

2019 and the Emerging Europe Award in 2020 in the Young Empowerment Initiative category. EIT Manufacturing joined the rest of the KICs to co-run the programme. Additionally, the Cross-KIC HEI Capacity Building Initiative, led by EIT RawMaterials, aims to establish university incubators in the EIT RIS eligible countries and regions to increase these universities’ innovation and entrepreneurship capacities, to which the KIC already participates.

Table 15: KIC’s planned Synergies and Collaborations with European and International Initiatives

Category	Synergies	Examples of Activities
European Commission	DG GROW, DG EAC, DG ENV, DG RTD, DG CONNECT	Collaboration, regular meetings, ongoing dialogues, exchange of funding priorities, and collaboration on events
EU Initiatives	Joint Research Centre, EFSI, EIB	Collaboration on projects, coordination on thematic content, dialogue on key societal issues, contributing to tasks, regular meetings, and participation in events
National	Austria, Slovakia	General synergies in bilateral level
International	World Manufacturing Forum	Creation a global network of students

On a global level, EIT Manufacturing has not yet established itself as a thought leader in the manufacturing sector, as planned in its Strategic Agenda. However, it is a commonality in early start-up phase KICs. Additionally, through other collaborations with international actors (e.g., the World Manufacturing Forum), the KIC works on issues beyond the EU borders. Nevertheless, there is still more room and opportunity for greater collaborations on global initiatives. At European level, EIT Manufacturing has not yet created an adequate network of initiatives and instruments. As such, more attention should also be paid by the KIC towards enhancing its collaborations at EU level. At national level, the KIC has developed synergies with national initiatives in Austria, Slovakia, and most recently Serbia by signing MoUs. As stated by the KIC’s management during an interview, these are expected to yield concrete results in the future. The bilateral collaborations have been pursued by identifying mutual interest that eventually led to an agreement, enhancing mutual support for local manufacturing SMEs. Its aim is to facilitate access to support mechanisms to connect with European value chain networks. However, desk research highlighted that these national initiatives have been too focused on national needs, which makes it difficult to deploy European interests.

5.2.9. Communications, Dissemination & Outreach

For EIT Manufacturing, communication is a key tool which will enable the KIC to reach its long-term goals. The KIC aims to leverage its communication strategy to place itself as a leading ecosystem around manufacturing and innovation in Europe. According to its Strategic Agenda, EIT Manufacturing’s communication strategy includes four objectives, which are presented below:

Table 16: Communication, Outreach and Dissemination Strategy Objectives*

Goal	Objectives
<i>Awareness</i>	Build awareness about EIT Manufacturing and promote activities and achievements related to activities while championing the EIT Community brand, across all its activities, programmes, and events
<i>Understanding manufacturing</i>	Create understanding of the role of Europe’s manufacturing industry as an accelerator and enabler for change, innovation, and competitiveness, while increasing the sector’s attractiveness
<i>Stakeholder engagement</i>	Identify, attract, and engage with relevant stakeholders (incl. alumni) and target audiences to drive participation in the activities, to share good practices and results, to reinforce the KIC’s impact, to support the KIC’s sustainable growth, and to contribute to the building the innovation ecosystem
<i>Dissemination</i>	Disseminate results and support exploitation of results to maximise impact of the Innovation, Education and Business Creation activities, making them available for further use and to support knowledge management through the KIC’s platforms

*As described in the EIT Manufacturing Agenda 2021-2027

Those objectives are the point of reference for the KIC's Communications Strategy. EIT Manufacturing aims to be the key organisation in the manufacturing sector, and this can be achieved through the first two objectives. By enhancing the EIT Manufacturing's reputation and visibility, more effective results can be achieved. Key messages and relevant narratives are examples that will bring more recognition to the KIC.

The internal communication of EIT Manufacturing aims to enhance networking and collaboration activities in the wider manufacturing community. It targets stakeholders and partners with a clear focus on maintaining relationships across the value chain. These certain activities can be carried out in the digital environment, aiming to enhance knowledge sharing. An integral part of those activities is the networking and matchmaking events, open innovation events and the EIT Manufacturing yearly summit, an annual conference that puts EIT Manufacturing in a leading position in innovation and technology in the manufacturing sector, as stated by the KIC.

The external communication activities of EIT Manufacturing aim to enhance the information provided to relevant stakeholders concerning the KIC's overall achievements and activities. The manufacturing sector is a rather segmented community with many complexities and there is a strong need to target multiple audiences, including business, students, academia. As a general communication principle, for the communications approach to be secured, the achievements of any organisation – in this case EIT Manufacturing – should be highlighted with a clear focus on the impact generated through its activities. Media relations and enhanced media relationships will be leveraged to achieve this purpose.

EIT Manufacturing has established a clear and concrete plan on how to effectively set the communication strategy for its projects. Communicating about research and innovation, two of the core activities of EIT Manufacturing, is of paramount importance. The communication plan aims to highlight the importance of research and innovation and their strong contribution to the EU. During the communication and dissemination activities for each project, the EIT Manufacturing is focusing on informing the public of the achievements of the KIC in terms of partnerships and highlighting the KIC's "success stories". In addition, the communications plan includes a rigorous follow-up with relevant policymakers to make sure that the results of the project are properly communicated and reach the potential influence in the policy scene.

A communications plan should be concrete and focus on different, yet interlinked sections, such as:

- The reason of communication
- The audience that is targeted
- The expected impacts of the project that is being communicated
- The expected response from the target group¹⁶

Over the 2020-2021 period, EIT Manufacturing communication activities have been assessed rather positively. The KIC has already managed to effectively address parts of its Communication Strategy relating to corporate communications, innovation and RIS activities. However, there have been strong recommendations towards the corporate publications' performance of the KIC's activities (Calls for Proposals, etc.), mostly regarding brand identity and logos. However, the KIC's social media presence and reach could not be assessed due to lack of data. However, as it is still in its early stages, the KIC's social media performance will likely be enhanced when more activities are in place.

The communication activities of EIT Manufacturing can be observed through its objectives:

- Promote awareness about EIT Manufacturing
- Create an understanding of the role Europe's manufacturing industry plays
- Engage with relevant stakeholders

¹⁶ Developing a plan for communication, Available at: <https://ctb.ku.edu/en/table-of-contents/participation/promoting-interest/communication-plan/main>

- Support dissemination of results

Those objectives are realised through communication activities tailored to the needs of EIT Manufacturing by its relevant team. Reinforced branding both for EIT and EIT Manufacturing, recruitment of a communications team, communication channels and events were the vehicles to implement the KIC’s Communication Strategy.

The KIC successfully complies with relevant branding and logo requirements, and such documents are available to the KIC’s intranet. In addition, the KIC has recruited new people dedicated to its communication team and plans to recruit more roles. The KIC introduced these roles both in its Headquarters and in CLCs, as those are also expected to realise a fair communication strategy abiding by the Horizon rules. Furthermore, the KIC pays particular attention to its communication channels, mainly relying on its digital presence where it posts more of the KIC relevant information on activities, events, etc. The KIC’s digital presence is steadily growing and can be seen in the figure below.



Figure 2: EIT Manufacturing Social Media presence, 2020-2022 (EIT Manufacturing Communication report 2022)

The KIC has also cultivated a satisfactory relationship with traditional media, by issuing a good number of press releases in 2022 (13), although those were less than 2021 (28). Furthermore, the KIC is organising large events that help in the dissemination of its activities. It may seem that it fails to achieve its targets, but it may also be considered that for the first three years of its operations, the COVID-19 pandemic did not allow for on-site events to take place.

5.2.10. Achieved economic and societal impact against impact targets in the KIC Strategic Agendas, EIT Impact Framework impact KPIs or market benchmarks

With all its activities, EIT Manufacturing strives to achieve impact in the four societal challenges it recognised in the Strategic Agenda 2021-2027, namely people, planet, prosperity, and partnerships. As such, the KIC introduced its five strategic objectives, which are analysed in Chapter 6 below. Those objectives are the following:

- SO1 - Competitive Manufacturing Skills and Social Sustainability
- SO2 - Powerful Manufacturing Innovation Ecosystems
- SO3 - Globally Competitive and Resilient Manufacturing
- SO4 - Environmentally Sustainable Manufacturing
- SO5 - Manufacturing fit for the Digital Age

In addition to the above, the KIC introduced four flagships, reflecting both the priorities of the manufacturing industry and the strategic objectives of EIT Manufacturing:

- Flexible production systems: 12 projects in 2022
- Human-machine co-working: 7 projects in 2022
- Low environmental footprint systems: 6 projects in 2022 and
- Digital and collaborative solutions: 4 projects in 2022

However, societal and economic impact achieved from such activities is very difficult to be assessed due to the maturity of the KIC. More details could be provided by the KIC's specific KPIs, which reflect on relevant activities. It should be noted that KIC-specific KPIs are not subject to validation from the EIT, thus only reported data by the KIC can be assessed.

Table 17: KIC Specific KPIs

KPI	Achieved by 2022 (GA)			2020 Target (2020-26 SA)	2021-2022 Target (SA)		
	2020	2021	2021-2022 reported		2020	2021	2022
# of educational nuggets created (s.t.)*	-	-	-	-	550	550	550
# of educational nuggets consumed (in thousands) (s.t.)	-	-	-	-	18	100	339
# Badges issued to document and testify the achievement of a learning outcome	-	808	-	-	830	1 208	2 182
% of female leaders of KIC Activities, across all pillars (s.t.)	-	31	71	-	20	25	25
# of KIC activities contributing to workplace and job attractiveness (s.t.)	-	-	-	-	4	7	8
# of socially sustainable and attractive workplaces established as a result of KIC	-	-	-	-	1	2	2
# of users actively utilising the Open Innovation Platform for partner discussions, project	-	-	-	-	30	50	100
# of non-partner organisations submitting an expression of interest to participate in EIT Manufacturing open Call for Proposals (s.t.)	-	362	1 140	-	200	250	250
# expressions of interest to participate in and/or participations of organisations from EIT RIS countries in EIT Manufacturing Open Call(s) for Proposals	-	166	641	-	50	70	80
# of Activities facilitated through the Open Innovation Platform (m.t.)**	-	-	-	-	0	15	15
# of Manufacturing clients introduced to Start-ups and SMEs, through the KIC Activity (s.t.)	-	267	1 291	-	33	42	51
# of deals (business transactions) initiated by Start-ups and SMEs, through KIC Activity (m.t.)	-	2	37	-	7	14	21
# of KIC Activities increasing the agility, flexibility, or resilience of manufacturing systems of KIC Members/ Activity Partners (s.t.)	-	-	-	-	6	9	10
# of KIC partners that implemented strategies and technologies for agility, flexibility, or resilience of manufacturing systems based on KIC activities (m.t.)	-	-	-	-	3	5	7
# of Activities, across all pillars, contributing to environmental sustainability	-	-	-	-	30	30	35
# of Activities across all pillars (including new ventures) that lead to a reduction of material consumption of at least 20% (related to the process / product targeted) three years after the end of the Activity (m.t.)	-	-	-	-	0	0	4
# of Activities that lead to a decrease in the participating companies' green-house gas emissions of at least 20% (related to the process targeted) (m.t.) three years after the end of the Activity	-	-	-	-	0	0	3
# of Activities utilising advanced digital technologies or digital business platforms to enhance manufacturing applications (s.t.)	-	-	-	-	5	10	15
# of KIC partners who have deployed and adopted advanced digital tools or digital business platforms to increase performance, following the activity (m.t.)	-	-	-	-	3	5	10
# of events organised (internal and external)	-	635	996	-	30	30	35
# of visits on digital platforms (GLP, OIP) in thousands	-	-	-	-	6	22.5	145
# of projects with other KICs	10	9	18	10	10	12	13

*Short-term **Medium-term

As it can be seen above, it is very difficult to assess the KIC's performance in terms of societal and economic impact achieved, as the majority of the KIC specific KPIs are not regularly reported. This is an issue the KIC should focus on, as it will generate valuable results for future assessments.

5.3. Alignment with the EIT RIS Guidance

Indicator: KIC RIS activities have been fully aligned with the EIT RIS Guidance note 2018-2020 and RIS Implementation Framework (2021-2027)

EIT RIS Guidance Note 2018-2020¹⁷

The aim of EIT RIS Guidance Note 2018-2020 was to provide an updated approach to the EIT RIS to help KICs readjust their strategy. It also provided certain flexibilities in the design process of relevant activities. Table 18 provides a description of the primary objectives of the EIT RIS Guidance Note 2018-2020. Action Line 1 describes the efforts the KICs are meant to make regarding the engagement of actors at a local level. For the activities highlighted in Action Line II, the KICs are meant to undertake the role of promoting KTI and networking through events. The activities that take place under both Action Lines should ensure sustainability and durability, while also ensuring the activity is of interest to national authorities.

RIS Hubs can act as an “interaction point” between the KIC and local actors. They are local entities that collaborate with the KIC and aim to facilitate all activities, including engaging local actors and facilitating KTI. For this reason, RIS Hubs should receive adequate visibility as members of the EIT Community. The entities that are considered eligible of becoming a RIS Hub should fulfil several criteria:

- Thematic alignment with KIC-specific focus areas
- Capacity to work with KT actors and relevant national and regional authorities
- Commitment to the EIT RIS implementation
- Relations with national/international authorities so as to increase synergies and complementarities.

Table 18: Description of Action Lines of EIT RIS Guidance Note 2018-2020

Action Line	Descriptions of Activities and Example Outputs
<i>Action line I: Engage local players in KIC activities</i>	<p>Descriptions of Activities:</p> <ul style="list-style-type: none"> - Education: establishment of RIS scholarship programmes, campaigns and events, facilitation of industry involvement in educational programmes, internships for graduates focused in EIT RIS eligible countries and regions - Entrepreneurship: foster participation of start-ups and scale-ups in acceleration programmes, establishment of partnerships with local businesses, matchmaking and networking events, support of start-ups creation - Innovation and Research: augment the involvement of researchers originating from EIT RIS eligible countries and regions in KTI innovation projects, pilot testing of the outcomes of KIC innovation projects, foster involvement of local start-ups in technology and know-how transfer <p>Example Outputs:</p> <ul style="list-style-type: none"> - EIT RIS scholarships, internships, networking and matchmaking for start-ups, students, and researchers in innovation projects, etc.
<i>Action line II: Mobilize, interlink and internationalize national / regional networks</i>	<p>Description of Activities:</p> <ul style="list-style-type: none"> - The KIC should work towards raising awareness and best practices from the KTI model, along with KT stakeholders at national level. Such process might include the linking of activities in the sectors of research, education and business with the aim of enabling innovation. As a next step of the process, the KIC should facilitate the development and implementation of joint innovation and entrepreneurship strategies to

¹⁷ Note: EIT RIS Guidance Note 2018-2020 remained into force for the year 2021, as it was considered a transitional year.

Action Line	Descriptions of Activities and Example Outputs
	<p>connect knowledge triangle partners, while also facilitating the development of innovation related ecosystems practicing KTI.</p> <p>Example Outputs:</p> <ul style="list-style-type: none"> - Identification and initiation of joint projects and pilots based on KTI approach among local knowledge triangle actors

Overall, EIT Manufacturing was well aligned with the EIT RIS Guidance Note for 2018-2020, which was replaced by the RIS Implementation Framework 2021-2027. As such, only relevant information as of 2020 are presented below. EIT Manufacturing performed well on the activities included in Action Line 1 and 2, by introducing networking activities through its Open Innovation Platform and by organising piloting activities through the Green and digital twin transition for SMEs at EIT RIS. Although not as a direct objective of the EIT RIS Guidance note, the KIC had also established CLCs in RIS countries that contribute to the promotion of RIS activities. EIT Manufacturing had further pursued innovation partnerships focusing on integrating more RIS players. Its RIS strategy included a comprehensive offering quite open to RIS eligible countries, including numerous innovation activities. In addition, EIT Manufacturing is an integral part of the Cross-KIC Strategic Regional Innovation Cluster. The KIC has already established a large network of RIS Hubs and plans to expand further in the upcoming years. However, the KIC should pay more attention to the RIS Hubs in terms of their cooperation and coordination with other KICs’ offices in the region.

RIS Implementation Framework 2021-2027

The RIS Implementation Framework of 2021-2027 aims to provide alignment with the RIS Strategy and priorities for the 2021-2027 programming period. The EIT aims to improve the geographical spread of the KICs networks, thus it has made EIT RIS a mandatory part of the KICs multiannual strategies. One of the main goals is to generate tailor-made approaches for different EIT RIS countries to address their needs separately and to achieve better quality performances. The KICs should deliver on the following objectives:

- Improve the innovation capacities of the local ecosystem, via capacity building activities and closer interactions between the local knowledge triangle innovation actors (such as, clusters, networks, regional public authorities, Higher Education Institutions (HEIs), research organisations, Vocational Education and Training (VET) institutions, SMEs) and their activities;
- Support the objective of attracting and facilitating the integration of potential new partners in the EIT KICs and link local innovation ecosystems to pan-European innovation ecosystems, including through the establishment of CLCs and RIS Hubs, as part of a “place-based” innovation approach;
- Used as a bridge towards relevant RIS3s;
- Leverage additional private and public funding, with particular attention to European Structural and Investment Funds (ESIF).

The KICs will be assessed for their results in delivering those objectives across all areas, such as business creation, education and innovation and especially in the following KPIs:

- Number of organisations from EIT RIS countries and regions have joined the EIT KICs’ activities,
- Number of universities from the EIT RIS countries and regions take part in EIT Label programmes,
- Number of start-ups and SMEs from the EIT RIS countries and regions are supported in the KICs’ mainstream accelerators,
- Number of innovation, education and business creation projects have been implemented in EIT RIS countries and regions, and their impact.

The EIT impact Framework also includes four other RIS-specific indicators:

- Number of organisations from RIS countries that attracted funding from ESIF, in line with RIS3s, with support from KICs and the amount of funding attracted,
- Number of new CLCs and RIS Hubs established in RIS countries and regions,
- Number of new and established KIC Partners from RIS countries and regions,
- Share of indicated innovation and business ecosystems that cover RIS countries and regions.

According to the RIS Implementation Framework, the KICs should deliver an impact in EIT RIS countries and regions equivalent to a minimum total of 15% of the KICs’ aggregated core KPIs.

EIT Manufacturing’s RIS strategy outlined in the KIC’s 2021-2027 Strategic Agenda is very well aligned with the RIS Implementation Framework for 2021-2027. The KIC aims to continue building innovation ecosystems in EIT RIS eligible countries and regions through the creation of additional RIS Hubs and targeted RIS activities. Additionally, the updated KPI monitoring system for EIT Manufacturing includes a significant number of RIS-specific KPIs, which cover nearly all of those required by the RIS Implementation Framework for 2021-2027. The KPIs currently not included in the KIC’s specific monitoring system that may be difficult to assess without regular data collection include: the number of organisations from EIT RIS eligible countries, regions that have attracted funding from ESIF and the amount of funding attracted, and the share indicated of innovation and business ecosystems that cover EIT RIS eligible countries and regions.

With regard to the KIC’s planned RIS activities under the RIS scheme, the general action plan of the KIC is built up in line with the EIT RIS Guidance note 2018-2020 and takes into account the aspects specified in the RIS Implementation Framework (2021-2027). The KIC’s RIS portfolio initiated 18 activities in 2022 only. EIT Manufacturing reported important figures in regard to the implementation of its RIS strategy; more than 209 organisations originating from 16 RIS countries participated in the last Calls for Proposals, 15 RIS eligible countries participated in 11 RIS call activities in 2022, more than 130 start-ups supported, more than 10 start-ups created, at least 40 cooperation agreements signed between RIS Hubs and RIS actors.

The RIS has been active in all aspects specified by the EIT RIS Guidance note 2018-2020 and the RIS Implementation Framework 2021-2027. It has been specifically successful with regards to its goals to deliver on business creation, having supported 340 start-ups and scale-ups in the period between 2021-2022 compared to the targeted rate of 15% of the overall start-ups/scale-ups supported. Furthermore, the KIC has focused on innovation activities which is visible from their programme including DigTrafoRIS (digital transformation in RIS), and Smart Reconfigurable Manufacturing Cell. The KIC is matching their KPIs in this area with 39 EIT RIS Marketed innovations compared to the 15% of the overall marketed innovations targeted.

While KPI targets seem to be mostly on track, it must be pointed out that in some cases, compared to the rates of the KIC’s EIT Core KPIs, the EIT RIS KPIs seem to overperform. For example, the indicator for ‘Investment attracted by KIC supported start-ups/scale-ups’ has reached a rate of EUR 6 million for the period between 2021-2022, whilst its RIS counterpart has reached EUR 9 million.

Overall, it can be concluded that the KIC managed to conduct its activities fully in line with the EIT RIS Guidance Note 2018-2020 and the RIS Implementation Framework 2021-2027 and continuity in the RIS action plan is visible.

5.4. Strengths, weaknesses and recommendations

Strengths
The KIC performance well in being on track with the implementation of its good governance system and responding to the EIT’s requests within the deadlines.
EIT Manufacturing has cultivated a large partnership ecosystem, counting more than 190 partners, representing all sides of KTI.
Due to the amendment partnership model, the KIC managed to attract diverse partners by offering reduces fees, especially SMEs, thereby establishing a broad, diverse, and well-balanced partnership.
The geographical coverage of EU is well established in the activities of EIT Manufacturing.
EIT Manufacturing has cultivated a strong KTI ecosystem, although being in its start-up phase. KTI representation is very well balanced and relevant activities are implemented adequately.

Strengths

The KIC has managed to create a good education portfolio so far, by establishing several EIT-labelled programmes. EIT Manufacturing also promotes education for businesses and entrepreneurs and cultivates an ongoing process of learning activities throughout its offerings.

EIT Manufacturing fully supports the creation of new businesses and fosters entrepreneurship. Through its CLCs, the KIC has successfully explored synergies to support local manufacturing SMEs to further develop digital maturity and enhance innovation.

The RIS area’s activities are valued by EIT Manufacturing. The KIC has established strong relations with partners and relevant activities in RIS countries and is on track to achieve its targets for the future.

Based on its objectives, the KIC has consistently been performing well in implementing external communication activities to disseminate relevant results.

Weaknesses	Recommendations
<p>The participation of external applicants in the KIC’s Calls for Proposals remained weak especially in RIS countries, until 2022, where progress has been made by addressing relevant EIT requirements.</p>	<p>EIT Manufacturing should, by 2025, implement a targeted strategy for the long-term improvement of the participation of external applicants, especially in RIS countries, in the KIC’s Calls for Proposals. Through enhanced openness, awareness raising campaigns, capacity building, mentorship and support, the KIC could incentivise more applicant from RIS countries to apply for Calls. The KIC should also continue addressing all necessary EIT feedback and focus on delivering better results in this area.</p>
<p>A pattern has been observed in Calls for Proposals, leading to an overall concentration of same partners applying and winning the Calls until early 2022. The issue highlights particular weaknesses in the openness of Calls for Proposals.</p>	<p>The KIC should ensure balanced representation of all partners and external organisations in Calls for Proposals within 2023 and continue to do so in the future, by refining its selection process for relevant Calls.</p>
<p>EIT Manufacturing underperforms in innovation areas, such as generating revenues from innovation activities.</p>	<p>The KIC should focus on delivering good results to ensure FS. EIT Manufacturing should pay particular attention to generating revenue from a variety of areas, such as education, services etc. within 2023-2024 and before the conclusion of the 7-year assessment. To ensure the necessary backflow, the KIC should, with all remaining partners, conclude relevant FS agreements with strong terms and favouring high-potential innovations.</p>
<p>EIT Manufacturing underperforms in FS areas, as it keeps generating revenue only from membership fees.</p>	<p>The KIC should focus on delivering good results to ensure FS. EIT Manufacturing should pay particular attention to generating revenue from a variety of areas, such as education, services, etc. within 2023-2024 and before the conclusion of the 7-year assessment. It should properly conclude relevant FS agreements with all remaining partners, to ensure necessary backflow. Starting from 2023, EIT Manufacturing should start seeking additional revenue sources and explore opportunities beyond traditional channels, e.g., licensing agreements. By developing a comprehensive diversification plan, the KIC should be able to start increasing its revenue and perform better in FS areas.</p>
<p>Business Creation activities, although good in number, do not contribute a large share of</p>	<p>EIT Manufacturing should address relevant shortcomings, by redefining its strategy towards the absorption of revenue from activities related to Business Creation. The KIC needs to make</p>

Weaknesses	Recommendations
<p>revenue to add significant financial value.</p>	<p>sure to support activities that expect to initiate sufficient business transactions in the future, especially within the timeframe prior to its 7-year assessment.</p>
<p>Reluctancy of RIS Hubs to cooperate with similar initiatives in their regions.</p>	<p>To address the reluctancy of RIS Hubs to cooperate with similar initiatives in their regions, the KIC should take proactive steps to foster a culture of collaboration and inclusivity. This involves closely monitoring the processes of RIS Hubs and actively engaging with relevant stakeholders in the next years prior to the KIC's 7-year assessment. The KIC should start enhancing its engagement strategy and emphasise on the benefits of collaboration.</p>

6. Achievement of KICs own objectives

EIT Manufacturing plays a pivotal role in transforming the European manufacturing sector to meet the needs of current and future generations. Its goal is to become a leading partner in a pan-European ecosystem that effectively harnesses research and drives innovation to the market. Discussions are currently underway to amend the KIC's Strategic Agenda and adjust KPI targets, and the new CEO has been already integrated in the process. During the discussions with EIT Manufacturing representatives in the interviews, the former CEO mentioned that a reform of the KIC's Strategic Agenda was introduced to reduce the KIC's strategic objectives from five to three and ensure the KIC focuses on reskilling and upskilling activities, environment and competitiveness. Recommendations have been made to align the KIC's objectives with the evolving trends in the manufacturing sector. It is crucial for EIT Manufacturing to expand its geographical presence and foster cooperation in areas lacking synergies, particularly in innovation activities. The organisation is also actively seeking to strengthen its presence in other RIS eligible countries and collaborate with relevant stakeholders. By addressing these recommendations, EIT Manufacturing will enhance its impact and successfully achieve its strategic objectives.

6.1. 7-year Strategic Agenda objectives and expected results

Indicator: A KIC is on track to achieve its 7-year Strategic Agenda objectives and expected results in line with its initial strategic objectives. Any deviation from the Strategic Agenda has been justified, approved by the EIT and has led to maximizing impact.

The manufacturing industry is an important component and key to the EU's sustainability in terms of its economy, society and environment. The manufacturing sector is a complex area, combining many high value-added activities. For these reasons, EIT Manufacturing was entrusted with the goals to empower the manufacturing community and transform the manufacturing sector. The strategy of EIT Manufacturing stems from the need to transform the European manufacturing sector to meet the demands of present and future generations. Based on the present challenges, EIT Manufacturing's strategy is to become the leading partner of a pan-European ecosystem that effectively exploits research and brings innovation to markets.

To reach these ambitious goals, the KIC faces several challenges, such as value network fragmentation and strong stakeholder engagement. EIT Manufacturing presents most of the mechanisms to deal with those challenges in its Strategic Agenda and Business Plans for 2020 and 2021. Its first Business Plan includes the first important steps to tackle these challenges by creating an ecosystem for change, an open and trusted environment for all manufacturing stakeholders.

The KIC's strategic objectives also stem from the need to tackle the abovementioned challenges. EIT Manufacturing has identified five strategic objectives in its Strategic Agenda, and these are:

- Competitive Manufacturing Skills and Social Sustainability
- Powerful Manufacturing Innovation Ecosystems
- Globally Competitive and Resilient Manufacturing
- Environmentally Sustainable Manufacturing
- Manufacturing fit for the Digital Age.

The KIC's progress regarding its seven-year Strategic Agenda are further outlined below.

SO1 - Competitive Manufacturing Skills and Social Sustainability

EIT Manufacturing aims to address the development of skills through its first strategic objective. As described in its Strategic Agenda, skills development is a quite pressing challenge of the manufacturing industry. The KIC planned to offer a range of programmes and activities to educate, upskill and reskill European citizens. Its medium-term goal (until 2023) is to establish five MSc and PhD programmes, the GLP, HEI Initiatives and the TLF networks. The KIC managed to already establish, as mentioned above, five Masters programmes under its Masters Programme that are part of its education pillar. In addition, EIT Manufacturing has also established a Doctoral School, including a summer and winter school, offering students the opportunity to focus both on academic and entrepreneurial aspects.

SO2 - Powerful Manufacturing Innovation Ecosystems

EIT Manufacturing focuses – inter alia – on establishing open innovation ecosystems. The KIC addressed in its Strategic Agenda the need to connect with stakeholders from the manufacturing sector. Such cooperation is already achieved through the AGORA innovation platform. In addition, the KIC's Calls for Proposals are a very important cornerstone in regard to open innovation ecosystem. Whereas the KIC has been under excessive monitoring in past years relating to the limited openness of its Calls, it seems that it is now on track to align its Calls with the openness principles. The KIC aimed to growing its partnership for the medium term (until 2023), by attracting 260 active partners, launch the open innovation platform and reach its first 100 users. It has also targeted to enter partnerships with EU actors (EIC, EIF) and establish its own VC. However, EIT Manufacturing has only managed to perform well in some of the above areas, only relevant to the open innovation platform, as already described above. Its partnership still counts 190+ partners but given the medium-term goal which will be judged by the 2023, it could not be completely assessed as lacking performance. Unfortunately, the KIC has not yet managed to create its own VC, nor create valuable synergies with the actors described.

SO3 - Globally Competitive and Resilient Manufacturing

Through the third SO, EIT Manufacturing aims at developing innovative products, processes and services. The KIC focuses on supporting innovation activities with a high technology readiness level (TRL) equal to 7 and higher. Its medium term was set to the open innovation platform and EMIF and to identifying at least one new innovation hotspot per year. Concerning the development of new innovative products, the KIC is already performing well by designing and testing a good number of innovations (55 until 2022, against a target of 35 for 2021 and 20 for 2022).

SO4 - Environmentally Sustainable Manufacturing

The KIC will work towards zero-waste manufacturing and closing material loops to reduce costs and increase profitability, as particularly mentioned in its Strategic Agenda. EIT Manufacturing has established a Masters Programme relevant to the fourth strategic objective, called Zero Waste and Circular Economy. It is also working towards the achievement of this objective by taking part in the Secretariat of EU Environmental Technology Verification. As a medium-term goal, the KIC has set to establish at least three cooperations to gain and disseminate knowledge, which has been already achieved by establishing cooperation and partnerships with numerous organisations across the KTI to foster knowledge.

SO5 - Manufacturing fit for the Digital Age

The KIC considers digitalisation to be a connecting factor between all strategic objectives. Emerging technologies in artificial intelligence, automation, connectivity, and robotics will further enable the implementation of digitised and customisable products and services. Especially in these areas the KIC offers a wide variety of learning and developing opportunities, an EIT-Labelled Master on Platforms for digitised Value Network as well as hands-on learning activities, to equip the European workforce with the relating skills. The medium-term goal the KIC has set is to engage at least three European Digital Innovation Hubs (EDIHs) to advance digitalisation through all pillars and on all levels, especially on CLC level. However, as of today there is no data regarding the targets for the medium term. There have already been discussions on amending the KIC's Strategic Agenda to adapt several KPI targets. EIT Manufacturing is currently in the process of revising its Strategic Agenda, especially after a new CEO was appointed. For the sake of this evaluation, the original Strategic Agenda was taken into consideration and all data stemming from 2022 have been treated as reported. However, recommendations have already been made regarding the alignment of the KIC's objectives with the current trends in the manufacturing sector. More specifically, EIT Manufacturing should greatly consider its geographical spread and presence and incentivise greater presence in areas where it lacks synergies, particularly regarding innovation activities.

6.2. Achievement of KPI targets

Indicator: KPI targets defined in the KIC original proposal, Strategic Agenda and Business Plans likely to be achieved.

The KIC has established, in conjunction with the EIT recommendations, its targets for its multiannual strategy. However, as this evaluation covers a very narrow set of years (2020-2022), the KIC's impact targets and achievements are still in a very early stage to be completely assessed against their original purpose. Nevertheless, targets and achievements are presented in Table 19 below, where all EIT KPIs and KIC Specific KPIs are presented. Based on the values in the achieved column, the KIC has been assessed on whether the KPI targets are likely to be achieved. The narrative also includes comments from past recommendations and GB reports towards the right direction for the future of EIT Manufacturing.

Table 19: EIT Core KPIs

KPI	2020	2021	2021-2022 reported	2020 targeted	2021 targeted	2022 targeted
Designed/Tested Innovations	-	35	55	-	21	22
EIT RIS Designed/Tested Innovations	-	22	34	-	18%	18%
EIT RIS Countries – Designed/Tested Innovations	-	7	7	-	15%	15%
Marketed Innovations*	4	30	72	28	11	20
EIT RIS Marketed Innovations	-	21	48	-	15%	15%
EIT RIS Countries – Marketed Innovations	-	9	11	-	15%	15%
Supported Start-ups/Scale-ups	57	127	471	30	90	130
EIT RIS Start-ups/scale-ups Supported	-	95	340	-	15%	15%
EIT RIS Countries - KIC supported start-ups/scale-ups	-	17	20	-	15%	15%
Start-ups created of/for innovation*	0	14	36	4	2	7
EIT RIS Start-ups created of/for innovation	-	13	35	-	15%	15%
EIT RIS Countries - start-ups created of/for innovation	-	10	16	-	15%	15%
Start-ups created of EIT labelled MSc/PhD programmes	-	-	0	-	0	0
EIT RIS start-ups created of EIT labelled MSc/PhD programmes	-	-	0	-	15%	15%
EIT RIS Countries - Start-ups created of EIT labelled MSc/PhD programmes	-	-	0	-	15%	15%
Investment attracted by KIC supported start-ups/scale-ups	-	EUR 3 210 000	EUR 68 104 543	EUR 1 000 000	EUR 4 000 000	EUR 9 000 000

KPI	2020	2021	2021-2022 reported	2020 targeted	2021 targeted	2022 targeted
Investment attracted by KIC supported EIT RIS start-ups/scale-ups	-	0	EUR 9 089 195	-	15%	15%
EIT RIS Country - Investment attracted by KIC supported EIT RIS start-ups/scale-ups	-	-	5	-	15%	15%
Graduates from EIT labelled MSc/PhD programmes	-	-	93	-	9	0
EIT RIS Graduates from EIT labelled MSc/PhD programmes	-	-	0	-	20%	20%
% of Graduates in same disciplines from partner HEIs	-	-	0	-	-	-
Students enrolled in EIT labelled MSc/PhD programmes	-	-	93	-	-	-
Participants in (non-degree) education and training	-	-	15 333	-	642	1 496
EIT RIS Participants with (non-degree) education and training	-	-	10 555	-	20%	20%
EIT labelled MSc/PhD students and graduates who joined start-ups	-	-	0	-	0	0
EIT RIS EIT labelled MSc/PhD students and graduates who joined start-ups	-	-	0	-	15%	15%
# Active KIC Partners	-	-	-	-	-	-
# Active RIS EIT KIC Partners	-	-	-	-	-	-
# EIT RIS Countries - Active KIC Partners	-	-	-	-	-	-
FS revenues	-	EUR 5 691 21	EUR 12 017 556	EUR 5 045 000	EUR 6 594 000	EUR 8 975 000
FS coefficient	-	19.30%	26.99%	11.91%	16%	18%
Co-funding rate	-	74.42%	-	-	19%	18%
KIC success stories	13	18	58	7	15	20

KPI	2020	2021	2021-2022 reported	2020 targeted	2021 targeted	2022 targeted
EIT RIS Success stories	-	9	41	-	15%	15%
EIT RIS Countries - Success Stories	-	6	16	-	15%	15%
Disseminated results, good practices and lessons learnt	-	-	0	-	-	-
# HEIs involved in EIT and KIC activities	-	-	-	-	-	-
#RIS HEIs	-	-	-	-	-	-
#HEIs involved in the new HEI Action	-	-	-	-	-	-
# RIS HEIs	-	-	-	-	-	-
EIT Grant for health activities	-	-	-	-	-	-
EIT Grant for sustainability development-related activities (SDGs)	-	-	-	-	-	-
Budget consumption of KICs	-	-	-	100%	-	-
Error rate of KICs	-	-	-	0%	-	-
Number of new and/or improved support structures and mechanisms (e.g., testbeds, units, programmes, spaces, infrastructures, etc.) established within or mobilised by the HEIs participating in the HEI Capacity Building Initiative	-	-	-	-	-	-
Number of new partnerships established by participating HEIs and businesses, research organisations, other actors.	-	-	-	-	-	-
Number of organisations from RIS countries that attracted funding from ESIF (in line with Smart Specialisation Strategies) with support from KICs, and the amount of funding attracted	-	-	-	-	-	-

KPI	2020	2021	2021-2022 reported	2020 targeted	2021 targeted	2022 targeted
Innovation testbeds established	-	-	-	-	-	-

*A duplication on DUNA portal was observed with regards to these KPIs:

- KPI EITHE 02.1 and EITHE 02.4 are both marked with the same name "Marketed Innovations" and are represented with different data. For the purpose of the assessment, we have taken into account KPI EITHE 02.1 which is the only indicator present in the 2021-2027 Strategic Agenda
- KPI EITHE 04.1 and EITHE 04.4 are both marked with the same "Start-ups created of/for innovation" and are represented with different data. For the purpose of this assessment, we have taken into account KPI EITHE 04.1 which is the only indicator present in the 2021-2027 Strategic Agenda

EIT Manufacturing has made substantial progress in several targets during its first years of existence. However, it has also failed to reach specific targets that are considered highly important for the smooth continuation of its activities. The KIC performs very well in numerous areas related to innovation activities, both in general and in RIS. More specifically, the KIC has already surpassed its targets until 2022 regarding marketed innovations and tested innovations as described in Table 19 above. The KIC's efforts to enhance efficiency in innovation-related areas yielded concrete results in terms of values achieved. For a KIC in its start-up phase, the numbers are specifically high and surpass expectations, as in some cases it has doubled the numbers originally targeted. In addition to the above, EIT Manufacturing has performed equally well in supporting start-ups and scale-ups. The KIC even exceeded its initial targets set in the Strategic Agenda and Business Plans, especially in terms of the RIS-related KPIs. Although, it can be argued that the targets it had set seem quite modest, the KIC managed to overperform in a percentage over 100% in specific cases of supporting start-ups and scale-ups. As already mentioned, the KIC managed to create education programmes and trainings specifically designed for businesses, but this has not yielded any concrete results since the number of start-ups created of such trainings is still 0. However, a success of the KIC is the creation of start-ups for innovation, where the KIC achieved its targets. However, some of the targets set in the original Strategic Agenda can be considered as quite modest (e.g., RIS related KPIs' targets are quite lower than EIT Core KPIs, only described in percentages of the corresponding core KPI). Nevertheless, the KIC will proceed with a revision of its Strategic Agenda with timing that does not allow for these results and targets to be assessed and presented in this review. EIT Manufacturing will very likely continue to progress very well in the above areas and will most probably overperform in the targets it had set by the end of 2027.

Contrary to the above, the KIC underperforms in areas crucial to the smooth implementation of future activities. EIT Manufacturing, although for 2021-2022 has reported progress in terms of its FS, did not manage to reach its targets in 2021 and scored below the threshold it had previously set. It is a rather known fact that for the first years of their existence, KICs heavily rely in contributions from partners and services they provide, rather than attracting investments and start capitalising from their numerous activities. However, EIT Manufacturing seems to be reaching its targets for 2022. Additionally, according to the interviews, the KIC's management feels quite positive in regard of reaching the FS targets until 2027 and gradually exit the EIT-funding period. More information is presented in the relevant Chapter 12 below.

Although there is extensive monitoring of KPIs both from the EIT and EIT Manufacturing, there have been observations regarding the lack of reporting regarding several KIC Specific KPIs, as shown in Table 17 above. In addition, there are KPIs that were monitored in 2021 but have no data for 2021-2022 (# of badges issued). Obsolete and/or non-reported KPIs will render future assessments very challenging, thus EIT Manufacturing should revise and later report the KIC-Specific KPIs according to the overall goals of the KIC.

6.3. EIT RIS Activities and Results

Indicator: The KICs have delivered EIT RIS activities and achieved results within the scope of their EIT RIS Strategies. Any deviations are duly justified and having led to maximized results.

There were delays in fully implementing the KIC's RIS objectives during the KIC's start-up phase, as found through this assessment's desk research, but since then it has consistently improved on its RIS activities. EIT Manufacturing's RIS activities over the course of the past years pursued the establishment of a stable ecosystem in RIS countries by engaging entities, individuals and relevant authorities in promoting KTI. The number of RIS activities increased from 2020 and the KIC participated in Cross-KIC RIS activities. The KIC has a strong presence in RIS countries, having already established three CLCs in RIS eligible countries and counting 12 RIS Hubs.



Figure 3: EIT Manufacturing's geographical distribution of RIS Hubs

The EIT RIS eligible countries and regions are particularly relevant to EIT Manufacturing because they are naturally resource-heavy areas, and thus promote the establishment of large innovative and industrial ecosystems that add value to the manufacturing sector, as raw materials and manufacturing are closely related sectors. While the distribution of CLCs and RIS Hubs is balanced, a recent assessment of the KIC's KTI reflected in the Multiannual dashboard, noted that EIT Manufacturing should focus on realigning its strategy and start incentivising participation from additional geographical locations, instead of building deeper presence in countries where its ecosystem is already well embedded.

EIT Manufacturing aims to strengthen its presence in other RIS eligible countries, as past recommendations concluded that it should focus more on attracting synergies from other RIS areas and not only concentrate on those it has already established good cooperation with. Through the Multiannual dashboard, it has been brought to the KIC's attention that some RIS Hubs tend to be reluctant in cooperation with other KIC offices in that same area. It is imperative for EIT Manufacturing to facilitate collaboration within its network and reinforce its RIS Hubs capacity to enable efficient implementation of RIS activities.

Table 20: EIT RIS KPIs

KPI	2020*	2021	2021-2022 reported
EIT RIS - Designed/Tested innovations	-	22	34
EIT RIS Countries - Designed/Tested innovations	-	7	7
EIT RIS Marketed Innovations	-	21	39
EIT RIS Countries - Marketed Innovations	-	9	11
EIT RIS - KIC Supported Start-ups/Scale-ups	-	95	340
EIT RIS Counties - KIC Supported Start-ups/Scale-ups	-	17	20
EIT RIS - Start-ups created of/for innovation	-	13	35
EIT RIS Countries - Start-ups created of/for innovation	-	10	16
EIT RIS - Start-ups created of EIT labelled MSc/PhD programmes	-	0	0
EIT RIS Countries - Start-ups created of EIT labelled MSc/PhD programmes	-	0	0



KPI	2020*	2021	2021-2022 reported
EIT RIS - Investment attracted by KIC supported start-ups/scale-ups	-	0	EUR 9 m
EIT RIS Countries - Investment attracted by KIC supported start-ups/scale-ups	-	0	EUR 5 m
EIT RIS - Graduates from EIT labelled MSc and PhD programmes	-	N/A	0
EIT RIS - Participants in (non-degree) education and training	-	N/A	10.555
EIT RIS - EIT labelled MSc/PhD students and graduates who joined start-ups	-	N/A	0
EITRIS # EIT RIS Active KIC Partners	-	-	-
EITRIS # EIT RIS Countries – Active KIC Partners	-	-	-

*Values for 2020 were not provided

6.4. Strengths, weaknesses and recommendations

Strengths
The KIC’s efforts to enhance efficiency in innovation-related areas have yielded concrete and positive results. Despite being in a premature phase, the KIC has achieved high numbers and efficiency improvements in various domains, showcasing its ability to drive impactful innovation.
EIT Manufacturing performs well in supporting start-ups and scale-ups, highlighting its role in fostering entrepreneurship and growth in the manufacturing sector.
EIT Manufacturing participates in numerous cross-KIC activities and constantly progresses towards establishing new cooperations, demonstrating its willingness to collaborate and engage with other KICs within the EIT ecosystem.

Weaknesses	Recommendations
EIT Manufacturing has set rather modest targets in the Strategic Agenda, especially when compared to EIT core KPIs.	The KIC is recommended to set ambitious and challenging targets that drive significant progress and impact in the revised version of its Strategic Agenda for 2021-2027.
The KIC underperforms in FS related KPIs, with the most important being the low revenues generated.	The KIC should effectively introduce sound mechanisms to reflect on FS issues. It should increase its efforts in areas of innovation and education to start generating revenue from these sources in the short term, i.e., within 2023-2024, instead of solely relying on membership fees.
EIT Manufacturing has not yet proven its contribution to the EU’s sustainability goals and relevant initiatives.	The KIC should focus on its Business Plans for the future, especially by adequately diversifying its portfolio until 2025. This will allow for the inclusion of more actors in the KIC’s activities and streamlined processes.

7. Efforts to coordinate KICs activities with other initiatives

EIT Manufacturing is strongly committed to aligning with European Initiatives, as demonstrated through its collaboration with various DGs of the European Commission already during the Strategic Agenda stage, as well as its ongoing efforts to contribute to EU objectives and relevant policies, such as the European Green Deal. The KIC has also fostered close collaboration with the World Economic Forum in several programmes, such as 'Young Manufacturing Leaders', where they join forces to create a global network of students. Together with the appropriate stakeholders, synergies are explored in education, innovation, and business creation—key areas of focus for the KIC. By proactively creating concrete synergies with other initiatives, EIT Manufacturing will significantly enhance its presence at both the EU and global levels, cultivating stronger relationships and maximising its impact across Europe and beyond.

7.1. KIC Synergies and Complementarities

Indicator: The KIC has achieved the concrete synergies and complementarities described in the original proposal and Strategic Agenda

Based on the desk research and interviews conducted for this assessment, it is clear that EIT Manufacturing aims to put forth considerable efforts in aligning with European Initiatives. As early as its Strategic Agenda stage, the KIC was already collaborating with several DGs of the European Commission, by being in constant exchange with them. In addition, the KIC worked and continues to work towards achieving EU objectives and relevant policies, such as the European Green Deal. Concerning global synergies, the KIC has already established close collaboration with the World Economic Forum for its programmes. The KIC will continue to cultivate further synergies, resulting in relationships and impact throughout Europe and internationally. A number of synergies that have been established by the KIC, are presented in Chapter 5.2.8.

Globally, EIT Manufacturing has yet to establish itself as a leading community in the manufacturing sector. However, this is a common trend among early-stage KICs. Furthermore, the KIC has not yet engaged in sufficient collaboration with international partners, addressing issues that extend beyond the EU's borders. Nevertheless, there remains untapped potential for further engagement in global initiatives. Within Europe, EIT Manufacturing boasts a well-developed network of initiatives and tools. Nonetheless, the KIC should allocate more attention to fostering collaborations at the EU level as well. At the national level, the KIC has forged synergies with national initiatives in Austria and Slovakia, as indicated by the afore-mentioned MoUs in the interviews. Nevertheless, desk research has illuminated challenges in aligning the European perspective with national initiatives, largely due to a prioritisation of individual national interests.

As previously described, the KIC has already initiated synergies with various European bodies, such as several departments of the European Commission, and closely collaborates with them by attending relevant meetings and exchanging opinions. What is more, the KIC has established local synergies, by signing MoUs with different countries in the EU, aiming to cultivate close collaboration between local authorities, CLCs, and consecutively EIT Manufacturing.

EIT Manufacturing is leading the Deep Tech Talent Initiative, a flagship initiative of the European Commission, bringing together several KICs, European Commission stakeholders and many organisations and individuals across Europe. In addition, the Innovative Together programme, linking pillar 2 and 3 of Horizon Europe funded projects with EIT Manufacturing is another successful project that enters the category of synergies. More specifically, DG RTD and EIT Manufacturing are exploring possibilities to scale-up the initiative together, information provided by KIC officials.

However, the KIC has not yet realised numerous synergies it targeted in its Strategic Agenda 2021-2027. It could be argued that the KIC's maturity plays a pivotal role in the limited expansion of the KIC's synergies. Nevertheless, the KIC should particularly focus on collaborating with more actors in the near future, as one of its goals is to become a leading actor in the manufacturing sector.

Table 21: Synergies targeted in 2021-2027 Strategic Agenda

Activity Category	Initiatives	Synergies
Research and Innovation	Horizon Europe	Support funded projects with the goal of entering commercial markets
Business Development	EASME, EIC	Support SME's and foster entrepreneurship in manufacturing sector
Solving the Societal Challenge	World Manufacturing Forum	Active engagement and collaboration on working tackling similar issues, contribution to the transition of the European economy
Regional Outreach	European Bank for Reconstruction and Development, Western Balkans Agenda on Innovation, Research, Education, Culture, Youth and Sports	Establishing innovation and entrepreneurial ecosystems in EIT RIS eligible countries and regions

7.2. Synergies with other Relevant Initiatives

Indicator: Number of synergies with other relevant education, research and innovation initiatives in the same area of the societal challenge at national, EU and global level

The 2021-2027 Strategic Agenda of EIT Manufacturing outlined many synergies that, over the course of the last three years of activities, have not been realised. For example, synergies with H2020, international education institutions, and venture capital firms have not been reported by the KIC. On the contrary, the KIC has reported extensive collaboration with local authorities. More specifically, the KIC has launched a process, where it signs MoUs with local authorities to promote its activities and leverage their network. Concrete examples of those MoUs are:

- Under the umbrella of the RIS initiative FOSTER, EIT Manufacturing entered into MoUs in March with the Slovak Centre for Digital Innovation, and in November with the Romanian Ministry of Innovation and Research. Additionally, numerous supplementary meetings were arranged with national and regional governing bodies across several countries such as Italy, Lithuania, Serbia and more. These meetings delved into prospective avenues of collaboration, encompassing discussions about potential MoU endorsements in the upcoming timespan.
- MoUs signed with several countries for innovation activities, i.e., Austria, Italy, Romania, and Slovakia.

EIT Manufacturing should aim to expand its synergies with more stakeholders in all areas, especially in education, innovation and business creation, which are the most important areas for the KICs. Its presence at an EU and a global level will rapidly increase, should the KIC decide to create more concrete synergies with other initiatives.

7.3. Strengths, weaknesses and recommendations

Strengths
EIT Manufacturing managed to be a key actor in several cross-KIC activities and is leading one of them.
The KIC has entered into several MoUs with national authorities for further collaboration. Agreements are in place with Austria and Slovakia and more discussions take place with other relevant authorities to ensure the KIC's presence and collaboration with more initiatives.

Weaknesses	Recommendations
<p>The KIC has not yet managed to achieve concrete synergies with relevant actors, as presented in its 2021-2027 Agenda. This might lead to discrepancies in several sectors, i.e., innovation ecosystems, FS, etc.</p>	<p>EIT Manufacturing should adopt a proactive approach to establish concrete synergies with relevant EU and global actors as outlined in its 2021-2027 Agenda. This strategy involves conducting assessments, engaging key stakeholders, forming strategic partnerships, and deploying targeted dissemination and outreach activities. By diversifying synergies through collaboration, resource sharing, and international presence, EIT Manufacturing can foster a more cohesive innovation ecosystem, address sector-specific discrepancies, and maximise its impact in areas such as FS and innovation ecosystems until 2025.</p>

8. Capacity to ensure openness to new members

EIT Manufacturing has been implementing a growth strategy to expand its partnership through two types: Core and Associate Partners. However, the partnership expansion has been slower than anticipated, partly due to decreasing interest due to the pandemic. Efforts were made to attract partners from RIS countries, with a target of 95 Formal Members by 2022 in RIS countries. While the target was not fully met, 85 members were engaged, including a significant proportion from RIS countries. Calls for Proposals have been opened to non-KIC members, but a requirement for 50% KIC partners in consortia limited external participation to 33%. However, it has already increased to 52% in the last Call launched in the second half of 2022, showing good progress in external participation. The partnership covers a wide range of manufacturing areas, but commitment levels vary among partners.

8.1. Partnership characteristics and performance

Indicator: Partnership size, growth, composition and performance are adequate for achieving the long-term objectives of the KIC Strategic Agenda.

EIT Manufacturing has implemented a partnership structure divided into two types, as already mentioned above: Core and Associate Partners. EIT Manufacturing had set the goals for the partnership network growth in its Strategic Agenda 2021-2027, where it presented the approach towards establishing a competitive ecosystem. The KIC aimed at having 120 Members by the end of 2022, a target which has already been met as the KIC is currently counting more than 200 members. Besides its members, the KIC also aimed at increasing its activity partners to enhance the participation of SMEs, start-ups and scale-ups. However, as discussed below, this is a weak point in the KIC's strategy, as SMEs are underrepresented in this partnership network.

The purpose of this partnership growth strategy is to expand the partnership at a sufficient pace to achieve the long-term objectives set in the Strategic Agenda 2021-2021. However, due to the pandemic, many organisations have lost interest in joining the network, which has slowed down the process. In response, the KIC planned to attract more partners from EIT RIS countries (25%) and underrepresented countries, with a target of engaging 95 organisations as Formal Members by the end of 2022. The target was not fully achieved but the KIC still managed to engage up to 85 members, with up to 25% coming from RIS countries, though the latter was significantly lower in the last Call.

Another objective of the growth strategy is to increase the participation of SMEs and start-ups as Activity Partners. The EIT Manufacturing partnership was predominantly composed of large industry members (55%). However, as mid-size and smaller companies constitute over 90% of the European manufacturing sector, they play a significant role in the EU's competitiveness and EIT Manufacturing should further embrace this in the partnership composition. Activity Partners enjoy reduced fees and a simplified administrative process, making it more attractive to join the network. The KIC has also implemented different levels of membership fees, with lower fees for SMEs, which are expected to be compensated for by their increased participation. Although the KIC managed to engage 113 Activity Partners in 2021 and 2022, the partnership has been expanding at a slower pace than anticipated.

In terms of performance, the partnership has achieved a well-balanced representation across the manufacturing ecosystem and knowledge triangle, albeit with a slight bias toward the industry. Partners have expressed satisfaction with the collaboration and believe that the KIC can generate multi-level impact. The partnership has demonstrated value to the EIT, the manufacturing sector, and Europe as a whole, making good progress towards its objectives and developing sectoral solutions. However, some concerns have been raised regarding the bureaucracy and administrative burden associated with the KIC's partnership, as well as its lack of transparency in processes and decision-making. To ensure the longevity of this partnership, EIT Manufacturing needs to enhance communication with current partners, particularly since current collaboration efforts merely consist of matchmaking events. Similarly, the KIC should intensify its efforts to make the partnership more appealing to potential partners if it aims to fulfil its ambition of becoming the largest community for manufacturing innovation worldwide.

8.2. Openness of Calls

Indicator: KIC Calls for activities have been fully open to new members.

As laid out in article 7 part 2.b) of the EIT Regulation Framework, the KIC should ensure and promote their openness through clear and transparent accession and exit criteria, including through open Calls, to potential new partner organisations across the Union that add value to the partnership. From 2020 onwards, EIT Manufacturing has implemented open Calls by allowing non-KIC members to participate in KAVAs as Activity Partners for a period of one year. These Calls for activities are published on the KIC's publicly accessible website and the EC Funding and Tenders portal. To ensure transparency and broad communication, the KIC organises matchmaking events to facilitate the submission of proposals. During 2021-2022, 113 Activity Partners have actively participated in EIT Manufacturing activities.

In the KIC's first Calls for Proposals 2023, external organisations represented only 22% of the participants on average, with a particularly low rate of 9.93% for RIS and 12.86% for Education. However, those issues were duly resolved in the second Calls for Proposals 2023 in September, with increased values of external organisations applications of 52%. Additionally, there was a notable concentration of partners within applicant consortia due to the requirement of having at least 50% of the KIC's partners in each consortium. This concentration creates an advantage for existing partners in accessing funding, which limits the KIC's openness to new members. The identified weaknesses of the proposal selection process that reinforced this issue have been addressed in the second Calls for Proposals 2023, including the implementation of quality control measures, evaluation reports and consensus processes.

On the positive side, the KIC has addressed some transparency aspects effectively. The exit criteria have been provided and published on the website. The last Calls for Proposals for 2022 and 2023 underwent assessment with the participation of three external evaluators, and the KIC's final scoring was transparently documented. In the business creation area, the same Calls' processes have been open, well-promoted through relevant channels, and accompanied by clear and well-defined selection criteria in some programmes. The KIC has also demonstrated proficiency in utilising corporate communication strategies and branding for specific activities. Despite these improvements, the level of openness displayed by the KIC was deemed unsatisfactory, as it failed short of complying with the main principles, as further elaborated in the following section. However, as already mentioned in several cases above, the KIC has made substantive progress in addressing relevant shortcomings and it now progresses well in regard to openness.

8.3. Good Governance Principles and Openness

Indicator: KIC has fully addressed the EIT Good Governance Principles (GGP) – based on relevant GGP assessments related to openness to new members.

As mentioned above, the GGP encompass specific requirements regarding operational transparency and openness to new partners of the KIC. To comply with these principles, the KIC needs to raise stakeholder awareness and actively encourage their participation by issuing fully open Calls for projects that include non-KIC partners. Additionally, the KIC has an obligation to make all relevant documents related to its strategies, decision-making processes, partnerships, and activities available to stakeholders.

According to a 2021 assessment of the KIC's adherence to the EIT GGP, EIT Manufacturing has performed well in meeting these requirements. The criteria and objectives to become a partner have been assessed as very clear. In addition, EIT Manufacturing has a well-established process of accession and evaluation for potential partners, which also includes a notification to the organisations that did not make it to the partnership. Furthermore, as already described in numerous occasions above, EIT Manufacturing has successfully addressed the issue of openness of KAVA Calls for Proposals to external organisations in the most recent Calls for Proposals 2023, by increasing the number of external applicants. The KIC has established clear and objective criteria for becoming a partner or a member of the SB, and it has made the evaluation process accessible to potential partners. At the time of the assessment, 61.5% of the KIC's members and 50% of the SB members were independent from EIT Manufacturing, as per Partnership Agreement, Article 7. However, it should be noted that the KIC's openness is somewhat limited due to the recurrence of partners in Calls, and it should focus more on continuing to attract more external applicants to fully enhance its openness.

8.4. Balanced Representation

Indicator: Balanced representation of all key knowledge triangle players in the partnership.

One of the primary objectives of the EIT is to strengthen the innovation capacity of the EU. This goal is pursued by the KIC through fostering coordination across the three pillars of the knowledge triangle: higher education, innovation, and business creation. The aim is to facilitate dialogue and collaboration among the knowledge triangle players with different perspectives, to drive the innovation process and effectively address societal challenges. EIT Manufacturing implements various activities to cultivate KTI, and the core activities within each dimension are outlined below:

- Education activities/Academic partners focus on providing lifelong learning opportunities for individuals and upskilling initiatives for organisations in the European Manufacturing Innovation Community. Their objectives in 2022 included enhancing the education organisation, expanding programmes, and adapting to changes in the EIT landscape. This involved extending the EIT Label and participating in the Deep Tech Talent initiative.
- Innovation activities/RTO partners aim to support impactful projects and foster pan-European connections within the manufacturing sector. In 2022, the focus was on commercialisation aspects and expanding the social network and innovation platform called AGORA. The team also aimed to identify and pilot innovation services for partners and the wider community.
- Business creation activities/Industry partners are geared towards assisting start-ups and small businesses in becoming significant players within the manufacturing ecosystem. In 2022, efforts were made to expand the portfolio of supported companies and services on a pan-European scale. FS was managed through mechanisms such as start-up support services, corporate fees, external funding, and equity share exits by Manufacturing SASU.

The figure below illustrates the representation of key knowledge actors, which was well-balanced across the knowledge triangle in 2021. Activities involve manufacturing technologies, sectors, innovation chains, and value networks. While there is a slight majority of business creation actors, their contribution to the KIC's FS has been relatively weak. Many of the business creation activities exhibit close interconnections with relevant initiatives in the education and innovation pillars, although the creation of start-ups related to the latter pillar has been limited. Consequently, the KIC should strive to combine the pillars more effectively in its activities to ensure comprehensive representation of KTI, as the innovation pillar is currently underrepresented. Furthermore, the KIC has ensured geographical balance across Europe within its partnership, including regions and countries within the RIS framework, as elaborated in the subsequent section.

EIT Manufacturing

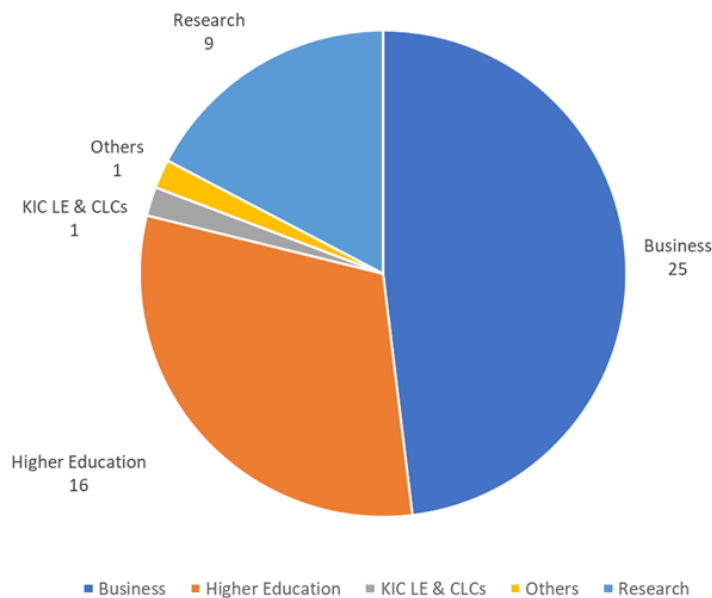


Figure 4: Representation of key knowledge actors (Annex 1 GG - assessment 2021)

8.5. Strengths, weaknesses and recommendations

Strengths

- The partnership is broad, diverse and well-balanced, covering organisations from various sectors, value chain roles and geographical locations.**
- The entry/exit criteria for new partners have been published, ensuring openness and transparency to potential members.**
- EIT Manufacturing has well-described and transparent processes for beneficiary selection in the business creation area.**
- The KIC has been publishing open Calls on the appropriate portals with clear eligibility criteria.**

Weaknesses

Recommendations

The participation of external organisations in the Calls for Proposals was relatively low, indicating a limited openness to new members.	The KIC should streamline the selection process within 2023 to remove potential barriers or complexities that might discourage external organisations from participating.
KTI is not sufficiently reflected in the innovation portfolio.	The KIC should revise the selection process for activities within 2023 to explicitly include guidelines and evaluation criteria that assess the extent to which projects promote KTI.
The selection process for activities needs significant revision to align it with main principles, according to the EIT’s observations and recommendations.	The KIC should enhance transparency in the selection process within 2023 by clearly communicating the criteria, evaluation methodology, and decision-making process to all participants. It should also implement measures to ensure fairness, such as involving external experts in the evaluation and selection process.

9. KIC’s achievements in attracting new members from across the Union

EIT Manufacturing has a strong geographic presence through its CLCs and RIS Hubs. The distribution of CLCs across Europe was strategically planned to ensure proximity to partners and remains consistent. RIS Hubs have been added to support regions with lower innovation capacities, with recent additions in South-East Europe and plans for more in the future. These regions are important to EIT Manufacturing due to their resource-heavy nature. In addition, EIT Manufacturing has changed its membership model, having as a goal to unite more closely a relatively fragmented industry by significantly increasing the number of mid-sized companies and SMEs engaged in the partnership. The chapter below includes additional detail.

9.1. EU Member States Coverage

Indicator: Number of the EU Member States covered by the KIC partnership and representation of all the knowledge triangle players.

The partnership has shown a steady growth between 2020 and 2022, as the number of partners increased to 207, while the number of affiliated entities increased to 54, covering 24 EU Member States and 5 non-EU countries. The Member States not covered by the partnership are the Republic of Cyprus, Luxembourg, and Malta. The partnership is balanced across the knowledge triangle, however due to sector specific aspects, the number of research institutions are somewhat lower. A key role is given to industry organisations in the partnership, as the KIC is asking all other partners to bring onboard an industry organisation.

Based on the aggregated Grant Report of the KIC for 2021-2022, the knowledge triangle distribution can be seen in Table 22 below:

Table 22: Number of partners and their distribution within KTI

	Business	Cities, regions, NGOs	Higher Education	Research	Total*
Partner	146	5	28	28	207
Affiliated entity	32	1	9	12	54

*The table does not include the KIC LE and CLCs, and other type of partners. The table includes only partners.

The partnership is quite unbalanced, as business organisations take up most of the percentage of partners, something that is justified by the requirement for future partners to bring an industry organisation onboard while joining. However, it is showcased that the partnership lacks in the education and research side, which is quite problematic, since the KICs are mostly innovation communities, and the underrepresented areas contribute a lot to innovation activities. Therefore, the KIC should enhance its efforts in attracting more partners from all sides of the knowledge triangle, rather than focusing only on the business aspect of the partnership. The higher education and research institutions’ lower participation rate vis-à-vis businesses can be explained by the industry-oriented nature of the manufacturing sector. The KIC has yet managed to attract some prominent academic and RTOs to represent all sides of the knowledge triangle in the partnership. Currently, the EIT Manufacturing partnership is predominantly composed of large industry members (55%), whereas mid-size and smaller companies constitute over 90% of the European manufacturing sector. The KIC should pay particular attention to this issue in the future, as failing to do so will render its decisions an object of wide criticism from European actors. SMEs play a significant role in the EU’s competitiveness and EIT Manufacturing should also embrace this policy, as it started to do so by revising its membership model. However, results from this revision are not yet presented as it took place in 2022. Nevertheless, the KIC should pay particular attention to this issue, especially now that it has integrated relevant initiatives.

9.2. Coverage of RIS Countries and Regions

Indicator: Number of the RIS countries and regions covered by the KIC partnership and representation of all the knowledge triangle players in its activities.

EIT Manufacturing has been actively establishing a stable ecosystem across 15 EIT RIS eligible countries. This is being accomplished through the strategic placement of six CLCs and 12 RIS Hubs across Europe, engaging individuals, entities, and national/local authorities in activities that promote the integration of the

knowledge triangle. The KIC has successfully initiated synergies in RIS countries such as Czechia, Greece, Italy, Romania, Slovakia, Montenegro, and Serbia, through signing MoUs for collaboration in research and innovation activities. In 2022, EIT Manufacturing’s RIS activities encompassed 17 initiatives implemented under two streams: "Engage local players in KIC activities" and "Foster collaborations, mobilise, interlink and internationalise national/regional networks and ecosystems." These activities have engaged knowledge triangle players from RIS countries via 11 calls, covering topics such as society and pupils, teaching and learning factories, digital transformation, research results dissemination, and circular economy.

As indicated in Table 23 below, the KIC has performed well in distributing its education, innovation, and business creation activities across various regions in Europe. In detail, southern Europe leads in all three categories, with 13 entities in Industry, 4 in Universities, and 4 in Research. Central Europe has a significant total of 17 entities, mainly driven by its Industry category. However, south-eastern Europe has the lowest numbers across the board, with no universities or research institutions yet; CLC South-East was only established in 2022. Last, western Europe ties with southern Europe at 21 total entities but has a more even distribution between Industry, Universities, and Research.

To effectively attract key knowledge triangle players from RIS countries, the KIC organised several core communication events targeting both internal and external audiences. These events included the Match Making Event 2022, the Business Creation Competition (BoostUp! and BoostUp! Bridge), and the EIT Manufacturing Summit 2022. The aim of these events was to engage stakeholders such as the KIC Headquarters, CLCs, partnership members, cross-KIC partners, EIT Alumni Community, as well as external interest groups and society at large. The RIS Hubs provided support to 37 start-ups and scale-ups from RIS countries and generated interest from approximately 90 new organisations for potential collaboration in 2022. However, the representation of organisations coming from RIS countries was relatively low in the KIC’s most recent Call for 2023.

Table 23: Knowledge Triangle distribution across EU regions

Region	Industry	Universities	Research	Total
Central Europe	9	5	3	17
Eastern Europe	5	4	2	11
Northern Europe	2	3	2	7
Southern Europe	13	4	4	21
South-Eastern Europe	4	0	0	4
Western Europe	11	4	6	21
Overall	44	20	17	81

9.3. New Active Partners

Indicator: Trend of new active partners over the 3-year period

As mentioned earlier, the level of involvement within the partnership varies and is based on the respective categories discussed above. Core partners hold the highest level of involvement, followed by Associate partners who have less involvement, as they do not participate in the Partner Assembly, thus have no participation in strategy development. A small but diverse group of highly engaged partnerships comprising industry leaders and SMEs across the entire value chain is crucial for fostering the KIC’s innovation ecosystem and FS. Both partnership types are expected to make the high annual contribution even after 2022, but this is an issue that needs to be resolved by the KIC, as it currently relies to a large extent on membership fees.

To encourage greater participation from SMEs, the KIC has implemented reduced fees specifically tailored to them. Despite these initiatives, the growth of the partnership has been slower than anticipated. The

original goal was to attract 120 new core Members by 2022, but only up to 90 partnerships were established. Discussions with KIC’s officials revealed that administrative burden was one of the reasons why the KIC failed to keep such partnerships while the pandemic and war in Ukraine have taken their toll as well. Despite the above, the partnership has been growing at a steady pace over the years. Albeit the growing pace of the partnership, the KIC struggles to demonstrate the value and benefits of the partnership to potential partners, which needs to be more accessible to non-members.

Table 24: Trend of active partners, 2019-2022

Year	2020	2021	2022
Partners	76	120	210
Affiliated entity	16	42	62

In the Strategic Agenda 2021-2027, EIT Manufacturing set the target of 95 partners by 2022 and 170 partners by 2027. Based on the partnership growth witnessed between 2020-2022, the KIC progresses very well against its targets for 2022.

Table 25: Planned number of partners, Strategic Agenda 2021-2027

	2021	2022	2023	2024	2025	2026	2027
# Number of partners¹⁸	74	95	110	140	160	165	170
# Number of project partners¹⁹	47	80	150	150	150	150	150

9.4. Balanced geographical presence of CLCs and EIT RIS Hubs

Indicator: Balanced geographical presence of CLCs and EIT RIS Hubs in line with the strategic objectives and societal challenges.

The KIC ensured a geographical balance through its six CLCs strategically located in Europe and its 12 Hubs distributed across RIS countries, with a strategy towards the US and China in terms of future synergies. CLCs and RIS Hubs function as the KIC’s antennas to the relevant areas they are established in. Both entities provide opportunities for local interactions by covering a large number of European countries. As presented in Chapter 5.2.3, EIT Manufacturing has currently six CLCs divided in regions, covering geographical corridors of the EU. Those CLCs are the following:

- CLC Central, based in Darmstadt, Germany: it covers countries of Belgium, Germany, Ireland, Luxemburg, the Netherlands, Poland and Ukraine
- CLC East, based in Vienna, Austria: it covers countries of Austria, Croatia, Czechia, Hungary, Serbia, Slovakia and Slovenia
- CLC North, based in Gothenburg, Sweden: it covers countries of Denmark, Norway, Sweden, Finland, Estonia, Latvia, Lithuania and the UK
- CLC South, based in Milan, Italy: it covers countries of Italy, Malta, Switzerland, Israel, Bosnia and Herzegovina, Kosovo and Montenegro
- CLC Southeast, based in Athens: it covers countries of Albania, Bulgaria, Cyprus, Greece, Moldova, North Macedonia, Romania and Türkiye

¹⁸ Partners, which have an influence on a KIC’s operations. This includes Core, Project and Networks partner

¹⁹ Activity partners, which are involved only in implementation of KICs activities

- CLC West, based in San Sebastian, Spain: it covers countries of Spain, Portugal and France.

This geographic distribution has remained consistent throughout the KIC’s operations so far, with the addition of 12 RIS Hubs in 2020 that coordinate further activities for regions with lower innovation capacities. Although not assessable at this stage, the KIC’s management did state in an interview that new RIS hubs will continue to be created.

According to the Strategic Agenda for 2021-2027, the KIC is progressing very well towards the goals it had set for the creation of CLCs and RIS Hubs.

Table 26: Planned number of CLCs and RIS Hubs, Strategic Agenda 2021-2027

	2021	2022	2023	2024	2025	2026	2027
#CLCs	5	6	6	6	7	7	8
#EIT RIS Hubs	13	15	16	16	16	16	16

9.5. Strengths, weaknesses and recommendations

Strengths
The EU geographical coverage is suitably ensured through the KIC partnership with sufficient organisations coming from RIS countries.
EIT Manufacturing offers a comprehensive range of programmes and initiatives specifically designed for RIS-eligible countries.
The KIC has managed to continuously grow the partnership throughout its lifetime.

Weaknesses	Recommendations
The KIC faced challenges in capturing the value of the partnership and making it attractive to new partners.	EIT Manufacturing should promptly develop a comprehensive strategy in the next years (2023-2024) to showcase the value of its partnership to current and potential new partners. This entails compiling success stories and impact reports that demonstrate the tangible benefits partners have gained, using a variety of communication channels, organising showcases, and encouraging partner testimonials. Additionally, maintaining data transparency and seeking feedback from partners will ensure that the value proposition remains aligned with partners’ evolving needs and expectations, ultimately making partnership with EIT Manufacturing more appealing and reinforcing its ecosystem’s impact.
The funding and project partners in innovation projects remained highly concentrated, especially for RIS.	The KIC should develop targeted initiatives in the short term to engage and support innovation projects in underrepresented regions.
The KIC’s partnership is industry-driven, resulting in an unbalanced representation of the knowledge triangle.	EIT Manufacturing should enhance its efforts for the next three years to include more universities and RTOs, ensuring that all sides of the KT are well represented in the partnership.

10. Compliance with good governance principles

EIT Manufacturing has made steady progress in addressing the strategic recommendations of the EIT GB. At the moment, the KIC's compliance with GGP is partially met. The KIC has been performing well in communication efforts, but there is room for improvement in knowledge sharing with other KICs and the proposal selection process. In general, the KIC's Management Team has been relatively stable, with some recent changes, and its Procurement policy has been solid. The objectives and assessment criteria of the Management Team should be further aligned with those of the Strategic Agenda.

10.1. CLC and Governance Level Good Governance Principles

Indicator: KIC fully addresses the EIT Good Governance Principles (GGP) – based on the relevant GGP assessment.

The GGP Assessment from 2021 and 2022 acknowledges that the KIC is making progress towards adhering to the principles, especially within the governance system at the CLC level. Several improvements are highlighted; the KIC ensures the separation of ownership and supervision from operations, which promote accountability and oversight. Regarding the selection process of SB members, it is deemed suitable. The KIC publishes calls for independent SB members, accompanied by clear criteria for their selection. Furthermore, the code of conduct covers the SB to some extent, ensuring accountability and ethical conduct. In terms of diversity, the composition of the SB is recognised as good, encompassing professional, gender and geographical diversity. The share of women in KIC governance bodies is between 30-40% and the representation of RIS countries is appropriately addressed. The KIC's internal agreements also reflect the rules pertaining to gender, professional, and geographical diversity of the SB.

However, the report suggests that the KIC should enhance its operational transparency to select its members, indicating a potential area for improvement. Concerns are highlighted about the composition of the KIC's SB. It failed to comply with the requirement of having at least 50% independent members, including the chairperson, as laid out in Article 6.1 of the Partnership Agreement. Out of the 13 members, only six were recognised as independent, while eight are CLC Representatives or otherwise affiliated with the KIC. However, by the end of 2022, the KIC calculates the share of independent SB members as 50%, which complies with the EIT's Good Governance Principles. As such, the KIC should continue to progress in strengthening the governance system.

10.2. Implementation of EIT GB Strategic Recommendations

Indicator: EIT GB Strategic recommendations have been effectively addressed and fully implemented by the KIC.

EIT Manufacturing made significant efforts to address the EIT GB strategic recommendations from 2021, although further implementation is needed for some important measures. One key recommendation was for the KIC to clarify its business model and Financial Sustainability Strategy across different pillars. The KIC has made improvements in these areas, including generating revenues from alternative funding sources and making progress towards the FS Coefficient target. The KIC also set realistic revenue and expenditure targets in line with its strategy. However, concerns were raised about underperformance in revenue flows, specifically related to membership fees, equity, and RoI and equity, posing risks for the short-term FS. While the KIC has taken steps to address shortcomings in the openness of calls, further improvements are required in their operations and proposal selection process to enhance transparency.

The relevant GB Strategic Recommendations for 2021 do highlight that there is still room for improvement in several areas. Although there is partial progress in some areas, such as gender balance within its SB, the methodology to assess the performance of the KIC's Management Team is rather unclear. It is mentioned by the GB that it is still not clear whether the proposed team has the required expertise to deliver on the strategy of EIT Manufacturing. Albeit the technical knowledge its members possess, this issue specifically reflects several gaps within the team, relating to impact investment and Intellectual Property (IP) knowledge.

Another recommendation was to strengthen the governance system, particularly in terms of gender diversity within the SB and Management Team. Based on the relevant GB Strategic Recommendations from 2022, the KIC has made good progress in this regard, with the hiring of women for management and SB positions

and highlighted that 59% of its working staff are women, with high numbers in CLCs. Women are now well represented among the KIC’s staff. The KIC was also advised to proactively encourage women’s leadership in manufacturing, given the sector’s significant gender imbalance. In response, the KIC specifically looked for female candidates in the call for GB members in 2021. In addition, it initiated initiatives like the Girls Go Circular programme and the LEADERS RIS Call for Women Innovators in Manufacturing.

Lastly, the KIC was recommended to demonstrate its contribution to EU sustainability goals, Europe’s competitiveness, and industry diversification in its Business Plans. Collaboration with other relevant KICs and knowledge sharing were also emphasised. By early 2022, the KIC was required to provide a concise summary of how its 2021-2022 Business Plan aligns with its Strategic Agenda and medium-term direction. The KIC’s activities and initiatives, as outlined in the document "EIT Manufacturing – Contribution to EU sustainability goals & Europe's competitiveness and industry diversification," support these objectives. The Master programmes and EIT RIS Innovation prioritise sustainability and circular economy, while start-ups focus, among other areas, on emissions reduction and magnet recycling. Notably, the OSCAR innovation and the flagship initiative "Low Environmental Footprint Systems & Circular Economy for Green Manufacturing" contribute to these goals.

Overall, the KIC has made good progress in addressing previous recommendations. It has taken a good number of measures to increase gender balance within the organisation, and also has encouraged women leadership in the broader sector, by participating in relevant events and programmes. However, it is noted that any results of these activities are still nascent, given the KIC’s maturity level at the time of the assessment. On the contrary, the KIC received negative comments in regard to the independence of its SB members, as it is currently reflected lower than 50%, which is required by the Partnership Agreement. Conflicting views regarding the above issue were presented by the EIT and the KIC, as the EIT considered a member of the SB and the SB vice-chairman as not independent, due to their linkages with EIT Manufacturing’s partners.

10.3. Strengths, weaknesses and recommendations

Strengths
The selection process for the KIC’s SB governance and management members is suitable, with published calls and clear criteria for selection.
The SB exhibits good diversity in terms of professional, gender and geographical representation, ensuring a well-balanced composition.
EIT Manufacturing is on its way to comply with the EIT’s GGP, putting the requested policies in place and making the appropriate governance reforms.

Weaknesses	Recommendations
The composition of the SB does not meet the requirement of ensuring at least 50% independent members, including the chairperson, as there are only six recognised as independent out of 14 members.	The KIC should consider revising the selection process within 2023-2024 to prioritise the inclusion of independent experts who can provide unbiased perspectives and diverse expertise.
There are risks regarding the effective separation of supervision and operations and potential conflicts of interest within the KIC’s function.	The conflict-of-interest policies should be strengthened to address potential risks and ensure effective separation between supervision and operations within 2023-2024.
The KIC’s proposal selection process is below ideal in terms of operational transparency and project selection legacy.	The KIC should directly review and improve the proposal selection process to ensure greater transparency. It should clearly define and publish the evaluation criteria, scoring mechanisms, and decision-making procedures for the upcoming Calls for Proposals for 2023-2024.

11. Gender- sensitive measures and activities

EIT Manufacturing recognises the importance of gender equality and has implemented a gender mainstreaming policy in line with EU regulations and UN SDGs. Efforts have been made to address the gender imbalance within their governance system by increasing the representation of women in leadership positions and overall staff. However, women are still underrepresented in the manufacturing sector, and further measures are needed to achieve gender balance and encourage women's participation. More data on the outcomes of gender mainstreaming activities would be beneficial for assessing progress.

11.1. Gender Sensitive Measures and Activities

Indicator: KICs have designed and implemented gender sensitive measures and activities

Gender equality is a fundamental value upheld by the EU, which has prioritised its integration into policymaking. In alignment with EU regulations and UN SDGs, the EIT has developed a gender mainstreaming policy to address the underrepresentation of women in STEM. This policy, implemented in January 2020, applies to both the EIT and the KIC level, aiming to promote gender-responsive content, maintain a balanced activity portfolio, and achieve a gender-balanced representation in staff and activities.

Initially, EIT Manufacturing faced a lack of gender diversity within its governance system, primarily due to the existing gender imbalance within the manufacturing sector. However, EIT Manufacturing has progressively intensified its focus on gender diversity. The primary objective has been to increase the participation of women in the manufacturing field, including leadership positions. As a result of these concerted efforts, the KIC has made significant strides in ensuring gender equality within its governance structure and addressing the issue in its Calls for Proposals. As of 2022, notable progress has been achieved in terms of gender balance. Specifically, 38% of the KIC's SB were women, while women constituted 36% of the KIC's Management Team and 59% of its overall staff. These figures demonstrate the positive impact of the KIC's initiatives toward achieving greater gender representation.

Regarding gender sensitive activities, EIT Manufacturing is involved and carries out a number of activities that promote gender balance. EIT Manufacturing recently co-organised along with other KICs (EIT Food, EIT Raw Materials and EIT Health) a panel called "The challenge of the gender gap in the STEAM sectors: driving innovative policies". This initiative brought together stakeholders from the business ecosystem. They deliberated on the hurdles, achievements, gaps, and requisites needing attention within their domains.

In addition, EIT Manufacturing participates in numerous initiatives that promote entrepreneurship among females, such as the following:

- The Supernovas initiative is a collaborative effort by EIT Food, EIT Manufacturing, and EIT Urban Mobility. It systematically addresses the primary barriers currently impeding the advancement of women within the entrepreneurial and innovation landscape. The programme introduces targeted activities that aim to unlock the latent potential of women, effectively bridging gender gaps within the ecosystem. It does so by identifying specific clusters of women and providing tailored support through carefully chosen tools and approaches.
- Under the banner of "Girls go Circular", the objective is to empower 40 000 young women aged 14 to 19 across Europe with both digital and entrepreneurial proficiencies by the year 2024. This ambition is pursued through an online educational curriculum centred around the principles of the circular economy.
- The EIT Woman Award stands as a tribute to exemplary accomplishments by women entrepreneurs and leaders within the Innovation Communities under the EIT umbrella.

At the heart of it all, EIT Women serves as a unified platform for women affiliated with EIT and its various communities. Its mission revolves around enhancing the influence of women within the European framework of innovation and entrepreneurship. This is achieved through strategic initiatives that foster networking, knowledge exchange, and the sharing of valuable experiences. Despite these advancements, it remains evident that women continue to be significantly underrepresented in the traditionally male-dominated manufacturing sector, as they only represent 22% of the scientists in the manufacturing sector, according to data provided by the KIC. Currently, there is a lack of comprehensive data regarding the outcomes of EIT Manufacturing's gender mainstreaming activities, although given the KIC's maturity, such activities should be enhanced. Therefore, it is crucial for the KIC to continue pursuing measures aimed at achieving gender

balance among its network and fostering increased participation of women in the sector. While EIT Manufacturing has made commendable progress in promoting gender equality within its governance system, there is still work to be done to address the persistent underrepresentation of women in the manufacturing sector, a pertinent issue which does not rely solely on the achievements of EIT Manufacturing. The KIC should continue implementing further initiatives and encouraging women’s active involvement and encourage advancement toward a more balanced and inclusive industry.

11.2. Positive Expert’s Assessment Gender Sensitive Activities

Indicator: Positive expert’s assessment of the outputs and results delivered by these activities

As mentioned earlier, there is a lack of specific expert assessments regarding the outcomes of EIT Manufacturing’s gender mainstreaming activities. However, through regular monitoring activities conducted by the EIT, valuable insights and recommendations have been provided in this regard. These monitoring efforts have facilitated constructive feedback to the KIC, enabling them to enhance their gender mainstreaming policies. Notably, the KIC has made commendable progress by appointing more women to high-level positions within its governance system over the years, and it has recently appointed a female CEO in May 2023. Nevertheless, it is important for the KIC to further institutionalise the gender mainstreaming policy by ensuring its integration at the board level. This will guarantee a fair consideration of underrepresented groups when hiring new members of its SB, Management Team, and general staff. By adopting this approach, the KIC can effectively be a part of all relevant actors that try to address the existing gender imbalance and promote a more inclusive and diverse workforce within the manufacturing sector.

11.3. Strengths, weaknesses and recommendations

Strengths
The KIC has initiatives and programmes in place to encourage female leadership and entrepreneurship in the manufacturing sector.
The KIC has made significant progress in increasing gender diversity within its governance structure and leadership positions.

Weaknesses	Recommendations
Comprehensive data on the outcomes of EIT Manufacturing’s gender mainstreaming activities is lacking.	EIT Manufacturing should establish a systematic monitoring and evaluation framework to comprehensively assess the outcomes and impact of its gender mainstreaming activities within 2023-2024. This framework should include the regular collection of data on gender-related metrics, benchmarking against industry standards, and reporting findings transparently to stakeholders. There should also be a feedback mechanism for participants and stakeholders to provide input. EIT Manufacturing should offer diversity and inclusion training, and the leadership should demonstrate commitment to gender diversity. The framework should be implemented by a designated monitoring and evaluation team, and findings should inform action plans for continuous improvement in gender mainstreaming efforts across the KIC.
There is low integration of a gender mainstreaming policy at the board level of the KIC.	EIT Manufacturing should take proactive measures to institutionalise its gender mainstreaming policy at the board level, ensuring the integration of considerations for underrepresented groups, especially in the hiring process. This involves providing training to board members on gender mainstreaming and diversity, incorporating these principles into governing policies, assigning clear responsibilities to board members, and establishing reporting mechanisms for tracking progress on diversity initiatives. Furthermore, the KIC should actively seek diverse board representation, develop specific guidelines for board participation that prioritise diversity, and implement accountability measures to monitor compliance with gender mainstreaming policies, ultimately fostering a more inclusive and diverse organisational culture by 2025.

12. Sustainable innovation ecosystems and financial sustainability

EIT Manufacturing aims to achieve FS, defined as the ability to fund its activities independently. The KICs establish their Financial Sustainability Strategy, which includes diversifying revenue sources and is presented through Business Plans; the (multi-)annual activity and budget plan. One of the key goals of each KIC is to become financial sustainable by the end of the 15-year funding agreement. Since EIT Manufacturing is in its start-up phase, up to 100% of its annual funding can come from EIT sources, however EIT encourages the KICs to start generating own revenue, and to gradually reduce their dependency from EIT funding. All KICs shall have in place a strong financial sustainability plan and corresponding mechanisms in their KAVAs to facilitate financial independency.

EIT Manufacturing has not yet reached its expected financial sustainability goals but has slightly increased its revenues. Challenges, though, include a lack of diversified revenues and a clear work plan for its Commercial Arm. Despite underperforming in reaching targets, the KIC is positive about achieving FS by 2027. Efforts have been improved through minimal amount of revenue collected through educational activities and financial assets as presented below, but more action is required to meet short-term financial goals.

12.1. Sustainable Innovation Ecosystem

Indicator: The KIC has created a sustainable innovation ecosystem effectively addressing the societal challenges and skill gaps it was established for.

One of the main goals of all KICs is to introduce long-term and impactful innovation ecosystems that address societal challenges and skill gaps. For EIT Manufacturing the establishment of powerful manufacturing innovation ecosystems is one of the main societal challenges included in its portfolio. By the time of the introduction of the KIC's Strategic Agenda 2021-2022, EIT Manufacturing had already well-established partnerships with industry organisations, and less with academia and RTOs.

What is more important, EIT Manufacturing launched in 2021 the EIT Manufacturing Open Innovation Platform (AGORA), that that connects Europe and that will offer a large spectrum of tailored, pan-European services for start-ups, scale-ups, SMEs and large corporations. The platform already counts more than 2 500 members, with 1/3 of them originating from industry. The platform also encompasses a wide range of European countries, including more than 35. Other examples that promote innovation are the Innovation Funding catalyst, which supports manufacturing innovators in retrieving EU funding and the Technology Radar, which connects manufacturing innovators and helps EIT Manufacturing select innovation projects.

EIT Manufacturing is also addressing skill gaps in the sector by providing a variety of courses and programmes (Masters School, Doctoral School, Skills.Move platform) through its education portfolio, which do not only focus on students but also provide the opportunity for professionals to expand their knowledge. The KIC also plays a key role in fostering innovation ecosystems in the RIS regions through its 12 RIS Hubs, connecting key partners across the value chain.

12.2. Effective Financial Sustainability Strategy

Indicator: Effective Financial Sustainability Strategy, including Financial Sustainability mechanisms in place including diversified revenue sources and aligned with the original proposal and subsequent business plans/reports

The EIT defines FS as the capacity of a KIC to finance its knowledge triangle activities independently of contributions from the EIT. The Financial Sustainability Strategy elaborated by the KIC shall follow the criteria set out in Decision 4/2015 and Decision 13/2021 of the GB of the EIT. This includes annual reporting on the progress of the strategy, diversification of revenue sources, incorporating the strategy within all KAVAs, and developing a commercialisation strategy for each innovation activity.

Given the requirement of KICs to achieve this level of FS by the end of the 15-year funding period, the KIC established a Financial Sustainability Strategy. This includes a strategy with mechanisms in place, including diversified revenue sources driven by the original proposal and subsequent Business Plans. All eligible EIT

Manufacturing annual Business Plans and Grant Reports have been assessed regarding progress towards FS by the EIT with the relevant recommendations being provided.

In the past years, building and strengthening the FS of the KIC has been a priority for EIT Manufacturing. As detailed by Table 27 below, the EIT funding of these activities currently makes up 71.5% of the EIT Manufacturing budget. The primary revenue sources of EIT Manufacturing are:

- EIT funding
- Partner contributions, which include partnership fees and project co-funding
- Third party contributions, which include public funding from other national, regional, or international bodies, back-flow from start-ups and upscaling projects, and revenues generated through services provided.

The revenue targets set by EIT Manufacturing in its Strategic Agenda for each of these categories is outlined in Table 27 below.

Table 27: Overview of the financing of EIT Manufacturing activities, 2021-2027*

KIC Financing (EUR millions)	2021	2022	2023	2024	2025	2026	2027	TOTAL
EIT Grant Projections	42	50	63.5	71.5	71.5	70	70	438.5
KIC LE investments	0.09	0.40	1.97	2.44	5.61	6.45	7.57	24.53
Membership fees	6.02	7.93	9.75	10.92	12.69	13.66	14.04	75.01
Other partners contributions	9.90	11.24	14.66	17.49	18.47	18.33	18.30	108.39
Third party contribution	0.48	0.65	0.80	0.90	1.30	1.65	2.13	7.910
Total Funding	58.49	70.22	90.68	103.25	109.57	110.09	112.04	654.340
% of EIT grant of the total budget	72%	71%	70%	69%	65%	64%	62%	-

* As presented in ETI Manufacturing Strategic Agenda 2021-2027

In addition to the target revenues, the KIC will need to introduce measures to monitor the KIC’s progress towards FS and overcome the challenges faced by the lack of diversified revenues, such as the quarterly reporting to the EIT on FS revenues and assets built. However, the KIC has managed to slightly increase its total FS revenues in the Strategic Agenda 2021-2027, but it is missing quarterly targets per activity area and geographical distribution. What is more, the KIC has not yet managed to provide a clear work plan of its Commercial Arm, Manufacturing SASU, which was established in 2021. Nevertheless, the KIC’s management mentioned during the interviews that they feel very positive towards reaching their FS goals by the end of their seven-year period, especially after the introduction of their new Business Plan for 2023-2025.

This assessment concludes that over the course of EIT Manufacturing’s operations, the KIC has underperformed in reaching its own FS targets and there is a need to improve efforts concerning the amounts raised in the short-term. However, it is expected that the KIC’s strategy will improve through the adoption of future Business Plans, where the KIC was requested by EIT to present an ambitious FS strategy, which will include regular monitoring and increased efforts to diversify revenue sources. The KIC has until 2027 to become financially sustainable and their current efforts are contributing towards that.

12.3. Adequate Revenues and Leveraging of Assets

Indicator: An adequate level of revenues from its activities is demonstrated and a plan for the management and exploitation of intellectual property and financial assets supporting the KIC’s business model is in place.

The revenue of EIT Manufacturing 2019-2022, as reported in the yearly EIT-assessed Grant Reports, is detailed in Table 28. The category ‘Alternative Funding Sources’ includes national and regional funding, EU-

funding in the form of contracting services, private funding, IPR income, international donors and other sources.

Table 28: EIT Manufacturing's Revenue, 2019-2021

KIC Revenue (Thousand EUR)	2019	2020	2021	2021-2022 (reported)	Total
ROI & Equity	0	0	515 699.00	616 969.35	1 132 668.35
Education	0	2 000	2 715.00	17 080.00	21 795.00
Services & Consulting	0	0	1 500.00	46 461.00	47 961.00
Membership Fees	0	4 378 947.00	5 230 000.00	10 325 000.00	9 933 947.00
Alternative Funding Sources	0	258 281.00	457 000.00	1 012 045.86	1 727 326,86
Total Revenue	0	4 639 228.00	6 206 914.00	12 017 556.20	18 443 981

As previously described, the largest revenues generated derive from high membership fees and very low amounts flow from services. The new strategies that have been developed during 2020 and 2021 have a direction towards achieving FS by 2027; however, assessments have characterised the current plans as inadequate to address this issue. The 2021-2027 Strategic Agenda introduced backflow schemes, which will contribute to the goal of the long-term FS. However, shortcomings in the KIC's Financial Sustainability Strategy can already be traced; an issue that does not guarantee an effective long-term evolution. More specifically, what needs to be developed further is the plan for short-term revenue increase, as the KIC currently fails to even reach the goals it had set in its Strategic Agenda and Business Plans.

While the KIC is struggling with FS discrepancies, its IP policy is in place and bears the following characteristics, as presented in its Strategic Agenda 2021-2027:

- Support the EIT Manufacturing open and collaborative innovation approach
- Create a trusted environment for knowledge exchange and sharing
- Outline an acceptable profit-sharing model.

Regarding IP, the KIC has addressed the issue by designing an IP Board consisting of representatives from CLCs, academia, RTOs and industry. During the last quarter of 2019 the Board discussed the development of the KIC's IP policy and provided guiding support to activity participants in negotiating access to background and foreground IP, facilitate freedom-to-operate searches, review IP arrangements in innovation projects, propose mediation in case of disputes between partners regarding IP, provide IP guidance documents and templates and generally facilitate the rapid handling of IP policy issues and pursue maximum use of the IP generated. The IP Board provides operational support on IP issues to participants in the activities. Together with the individual CLCs, it is the main liaison with partners and provides advice, guidance and mediation on IP management and use issues. The EIT Manufacturing's IP policy takes into account common practices for collaborative research and development projects as well as the EIT Regulation and Guidelines IPR. It supports the open and collaborative innovation approach of EIT Manufacturing, creates a trustworthy environment for knowledge exchange and sharing, and outlines an acceptable profit-sharing model. As no major IP issues have arisen so far, the KIC's IP policy is considered successful, and no major changes are planned for the future. In 2022, the already established cooperation with the EUIPO will continue and IP appreciation seminars will be offered to the supported stakeholders.

Regarding the ownership of financial assets, EIT Manufacturing has also received consistent recommendations over the years to use financial asset ownership as an additional source of revenue generation. However, as presented in Table 33 below, the ownership of financial assets from EIT Manufacturing is still low. Nevertheless, the level of its performance in conjunction with the KIC's maturity is considered well placed. To enhance and ameliorate its performance, these activities should be monitored regularly, as is planned through the KIC's Financial Sustainability Strategy, to ensure that they are taken advantage of and properly implemented.

12.4. Financial Sustainability

Indicator: Financial Sustainability (FS): revenues of KIC LE, FS coefficient

EIT Manufacturing generates high revenues, largely due its membership fees. However, this can be considered as normal, as the KIC is still in its early phase and any investment in activities has not yet yielded concrete results. There have been nominal amounts generated in education services and small amounts generated through services and consulting. Past discussions showed that the KIC presented in its strategy diversified revenue sources, as a target only. However, as mentioned above, most revenues come from membership fees, which have changed from the past years due to the revision of the KIC’s partnership model. Moving forward, revenues generated through services and other activities is expected to increase due to the opportunities provided in the future, which have the potential of improving the FS of the KIC in the long-term.

An additional measure for reaching FS goals used by the EIT is the FS coefficient. This indicator is calculated by dividing the total revenue generation of the KIC LE by the total EIT grant for year N. It captures the ability of a KIC LE and its CLCs to attract revenues and other financing sources. The FS coefficient for EIT Manufacturing is planned to increase over time, but this is due to the EIT grant decreasing. EIT Manufacturing has overachieved its target FS coefficient, as assessed by the KIC’s annual grant reports and shown in Table 29. The latest FS coefficient reported is in line with other KIC’s, but it is still low overall.

Table 29: FS coefficient

KPI	2020	2021	2021-2022 reported	2020 targeted	2021 targeted	2022 targeted
FS Coefficient	15.73%	19%	26.99%	14%	16%	18%

12.5. Co-funding rates

Indicator: Co-funding Rates

The co-funding rate is the percentage of EIT funding that makes up the entire KAVA budget. The EIT has established guidelines for the KICs regarding the maximum co-funding rate that can be achieved in each period of the grant cycle. The target co-funding rates are outlined in Table 30 below:

Table 30: EIT Target Co-Funding Rates

Phase	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 percentage points per annum

The annual co-funding rates planned by EIT Manufacturing are at 83.6% for 2020, 84.2% for 2021, and 75.06% for 2022. As presented below, EIT Manufacturing has reported its co-funding rates and those are completely in line with its targets. Thus, being in its start-up phase, the KIC is in a very good place in terms of the co-funding rate.

Table 31: EIT Manufacturing's co-funding rates projections, 2020-2022

KPI	2020	2021	2022
EIT Co-funding rate	-	19%	18%

Table 32: EIT Manufacturing's co-funding rates achievements, 2020-2022

KPI	2020	2021	2021-2022 reported
EIT Co-funding rate	86.60%	74.42%	75.06%

12.6. Financial Asset Valuation

Indicator: Financial asset valuation.

As per the relevant EIT Regulation (REGULATION (EU) No 1292/2013), the KICs should have substantial overall autonomy to define their internal organisation and composition, as well as their precise agenda and working methods. KICs should develop strategies for FS.

Financial assets play a critical role in ensuring FS. These assets include a wide range of investments, including RoI, equity, etc. They serve as valuable resources that can generate income, preserve wealth, and provide a safety net during times of financial uncertainty. By diversifying the portfolio with different types of assets, KICs can mitigate risk and maximise potential returns. Financial investments allow KICs to build wealth over time, achieve their long-term financial goals, and secure their future. In addition, a solid financial portfolio provides flexibility and liquidity, allowing KICs to manage unexpected expenses or take advantage of investment opportunities. In summary, financial assets form the basis for financial stability and sustainability, enabling KICs to weather economic fluctuations, achieve financial independence and pursue their goals.

EIT Manufacturing has already begun generating revenue from private sources and diversifying its revenue portfolio. However, revenues from RoI and equity (which are considered financial assets) represent only a small percentage of KIC’s total revenue portfolio.

Table 33: KIC’s revenue & RoI and equity, 2020-2022

KIC Revenue (EUR millions)	2020	2021	2021-2022
RoI and equity	0	EUR 515 699.00 from equity investments in start-ups	EUR 31 538.21 from Innovation FS RoI EUR 585 431.14 from Bluesense, non-share exercise settlement
Total revenue	EUR 4 639 228.00	EUR 6 206 914.46	EUR 12 017 556.2
% of RoI and equity revenue	-	8%	5%

The KIC should aim to increase RoI and equity income to ensure a steady income stream in the medium term. Current levels of RoI and equity do not contribute significantly to KIC’s budget, and it is unclear whether current investments will generate significant cash flow in future years.

12.7. Strengths, weaknesses and recommendations

Strengths
The KIC’s FS co-efficient is performing very well and is on track to achieve relevant targets.
Revenues generated from alternative funding performed very well in the past years.

Weaknesses	Recommendations
The KIC’s membership fees were lower than expected.	To address the weakness of low membership fees, EIT Manufacturing should take targeted actions to enhance fee collection and emphasise its value proposition to members. The KIC should enhance its member engagement strategy, which will include clear articulation of the benefits and opportunities associated with membership, such as access to resources, collaborative projects, and networking opportunities. Alongside this, it should create a transparent fee structure that aligns with the value provided

Weaknesses	Recommendations
	<p>by EIT Manufacturing and consider implementing incentives for early or on-time fee payment. The KIC should also prioritise concluding partnership agreements with members, specifying fee obligations and payment schedules, and establish a robust monitoring and follow-up system. It should continuously assess member value through surveys and feedback sessions, utilising this insight to improve services and justify membership fees. Finally, EIT Manufacturing should explore revenue diversification opportunities and focus on member retention by delivering ongoing value, fostering collaboration, and maintaining strong relationships with existing members. By implementing these measures within 2023-2024, EIT Manufacturing can not only improve fee collection but also underscore its value proposition, enhancing its attractiveness to members, and ensuring FS and overall performance.</p>
<p>RoI and equity targets were not achieved.</p>	<p>To address the underperformance in RoI and equity targets, EIT Manufacturing should directly adopt a proactive approach by diversifying its investment portfolio and adhering to EIT's related recommendations by 2025. This should involve strategic investments in areas aligned with the KIC's mission, forming partnerships for expertise and resources, rigorous risk assessment, ongoing performance monitoring, and a flexible, iterative approach to strategy formulation. Resource allocation should prioritise investments that align with strategic objectives, with the ultimate goal of achieving the desired RoI and equity outcomes.</p>
<p>FS agreements not entered into by EIT Manufacturing.</p>	<p>To enhance FS, EIT Manufacturing should prioritise entering into all remaining agreements with partners by end of 2023, viewing this as the initial step towards revenue generation. Furthermore, diligent attention should be given to monitoring and fulfilling all aspects of these agreements, e.g., products with sale potential that will eventually generate revenue flow, as successful execution of all terms is vital to ensure revenue collection and avoid potential risks associated with incomplete agreements. This proactive approach will strengthen the KIC's financial position and contribute to its long-term sustainability.</p>

13. ANNEXES

13.1. ANNEX I. Summary of the interviews

Interviewee	Position	Date and Time of Interview
Klaus Beetz	Former (by the time this report is submitted) CEO, EIT Manufacturing	April 13, 2023, at 13:00-14:00 CET
Dimitris Mavrikios	COO, EIT Manufacturing	April 13, 2023, at 13:00-14:00 CET

13.2. ANNEX II. Reference list

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, received from EIT on 02.11.2021

REGULATION (EU) No 1292/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 amending Regulation (EC) No 294/2008 establishing the European Institute of Innovation and Technology, received from EIT on 02.11.2021

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, received from EIT on 02.11.2021

DECISION 13/2021 of the Governing Board of the European Institute of Innovation and Technology (EIT) on the principles of financial sustainability of knowledge and innovation communities (KICs), https://eit.europa.eu/sites/default/files/2021-13_20210317-gb66-13_new_eit_fs_principles.pdf, accessed on 01.11.2021

DECISION 4/2015 of the Governing Board of the European Institute of Innovation and Technology (EIT) on principles on KIC's financial sustainability, <https://eit.europa.eu/sites/default/files/EIT%20GB%20Decision%20on%20principles%20on%20KIC%20Financial%20Sustainability.pdf>, accessed on 01.11.2020.

DUNA Portal Grant Reporting and Business Planning modules (access granted by EIT)

EIT and KICs websites (deliverables included on websites, as well as those submitted alongside KIC reports)

Documents provided by EIT:

- Key EIT documents (e.g., old EIT Regulation and EIT Regulation (recast), EIT Financial Regulation, EIT SIA 2014-2020 and EIT SIA 2021-2027, Triennial Work Programmes, Single Programming Documents)
- Calls for KIC Proposals documentation; KIC Proposals
- Framework Partnership Agreements (repealed by 31 December 2020), new Partnership Agreements and KICs' Strategic Agendas (originals and any later updates)
- KICs Business Plans and Reports for relevant years and experts' assessments
- KIC Assessments: Business Creation, Education, Knowledge Triangle integration, Innovation
- RIS Evaluation 2020
- EIT consolidated reports on the KIC Monitoring/GB Rapporteur visits and reports
- Specific EIT guidance to KICs (e.g., governance, code of conduct, etc.)
- EIT Principles on KICs' Financial Sustainability (old and new)
- EIT Guidance on the EIT Regional Innovation Scheme (EIT RIS) 2018-2020 and EIT RIS Implementation Framework 2021-2027
- EIT Good Governance Principles and respective assessments

- ECA Reports and Recommendations
- EIT Impact Study (PwC)
- KICs' action plans for tackling specific issues (i.e., EIT and EU co-branding; communications strategy; Project Partners, etc.)
- Multi-annual Dashboard
- Annual Grant KIC Performance Assessment Reports
- EIT GB Strategic Recommendations issued during the assessed period.
- EIT GB Rapporteur Reports
- Communications Activities

		Report structure									
Assesment criteria	Indicator	KIC Governance and KIC Partnership	KIC Funding, Financial Sustainability	Knowledge Triangle Integration, Innovation Ecosystem and Co-location Centres	Education & Alumni	Innovation	Entrepreneurship & Business Creation	EIT Regional Innovation Scheme (EIT RIS)	Synergies, Complementarities & Cross-KIC collaboration	Communications, Dissemination & Outreach	Achieved economic and societal impact against impact targets in the KIC Strategic Agendas, EIT Impact Framework impact KPIs or market benchmarks
Relevance to the Union's global challenges	1.1 The results of the KIC's activities have been relevant to the objectives of the Union, including boosting economic growth, strengthening the innovation capacity of the Member States, fostering innovation and entrepreneurship, and have contributed to addressing the societal challenge it was designated for.				X	X	X	X		X	
KIC's Union added value and relevance with regard to the objectives of the EIT	2.1 The KIC has created a significant European added value with respect to building a sustainable innovation ecosystem through knowledge triangle integration, and as a result has developed concrete solutions to societal challenge it addresses as foreseen in the original proposal.			X	X	X	X	X			X
	2.2 All KIC's activities have been fully aligned with and relevant to the EIT objectives as defined in EIT legislative framework.	X	X	X	X	X	X	X	X	X	X
	2.3 KIC RIS activities have been fully aligned with the EIT RIS Guidance note 2018-2020 and RIS Implementation Framework (2021-2027)			X	X	X	X	X	X		X
Achievement of KIC's objectives	3.1 A KIC is on track to achieve its 7-year Strategic Agenda objectives and expected results in line with its initial strategic objectives. Any deviation from the Strategic Agenda has been justified, approved by the EIT and has led to maximizing impact.	X	X	X	X	X	X	X	X	X	X
	3.2 KPI targets defined in the KIC original proposal, Strategic Agenda and Business Plans likely to be achieved.	X	X	X	X	X	X	X	X	X	X
	3.3 The KICs have delivered EIT RIS activities and achieved results within the scope of their EIT RIS Strategies. Any deviations are duly justified and having led to maximized results.	X		X	X	X	X	X	X		
KICs efforts to coordinate their activities with other relevant research and innovation initiatives	4.1 The KIC has achieved the concrete synergies and complementarities described in the original proposal and Strategic Agenda								X	X	
	4.2 Number of synergies with other relevant education, research and innovation initiatives in the same area of the societal challenge at national, EU and global level								X		
KIC's capacity to ensure openness to new members	5.1 Partnership size, growth, composition and performance are adequate for achieving the long-term objectives of the KIC Strategic Agenda.	X		X	X				X	X	
	5.2 KIC's Calls for activities have been fully open to new members.	X									
	5.3 KIC has fully addressed the EIT Good Governance Principles (GGP) – based on relevant GGP assessments related to openness to new members	X									
	5.4 Balanced representation of all key knowledge triangle players in the partnership	X		X							
KIC's achievements in attracting new members from across the Union	6.1 Number of the EU Member States covered by the KIC partnership and representation of all the knowledge triangle players	X		X				X		X	
	6.2 Number of the RIS countries and regions covered by the KIC partnership and representation of all the knowledge triangle players in its activities	X		X				X			
	6.3 Trend of new active partners over the 3- year period	X									
	6.4 Balanced geographical presence of CLCs and EIT RIS Hubs in line with the strategic objectives and societal	X						X			

KIC's compliance with good governance principles	7.1 KIC fully addresses the EIT Good Governance Principles (GGP) – based on the relevant GGP assessment	X																					
	7.2 EIT GB Strategic recommendations have been effectively addressed and fully implemented by the KIC	X					X	X															
KIC's efforts and results in designing and implementing gender-sensitive measures and activities	8.1 KICs have designed and implemented gender sensitive measures and activities	X																					
	8.2 Positive expert's assessment of the outputs and results delivered by these activities	X																					
KIC's capacity to develop sustainable innovation ecosystems and the achieved level of financial sustainability	9.1 The KIC has created a sustainable innovation ecosystem effectively addressing the societal challenges and skill gaps it was established for				X			X															
	9.2 Effective Financial Sustainability Strategy, including Financial Sustainability mechanisms in place including diversified revenue sources and aligned with the original proposal and subsequent business plans/reports				X																		
	9.3 An adequate level of revenues from its activities is demonstrated and a plan for the management and				X					X													
	9.4 Financial Sustainability (FS): revenues of KIC LE, FS coefficient				X																		
					X																		
	9.5 Co-funding rates				X																		
	9.6 Financial asset valuation				X																		
Total indicators per chapter					16		8		11		8		9		9		10		8		7		5