



Energy Transition Audits towards Decarbonization

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Table of contents

EXECUTIVE SUMMARY	4
1.	5
1.1.	5
1.2.	6
2.	13
3.	14
3.1.	14
3.2.	22
4.	35
5.	36

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Table of figures

FIGURE 1. DECARBONIZATION ROADMAP WORKFLOW	6
FIGURE 2. THE ONLINE ENTRAINER TOOLS	11

List of tables

TABLE 1. DETAILS ABOUT THE ACCREDITED TRAINING COURSE FOR ENERGY PROFESSIONALS	7
TABLE 2: DETAILS ABOUT THE ACCREDITED TRAINING COURSE FOR ENERGY AUDITORS	9
TABLE 3: SWOTMATRIX FOR E&T PROGRAMME	14
TABLE 4: SWOT MATRIX FOR ENTRAINER ETAs	18



List of Acronyms

Acronym	Meaning
BMC	Business Model Canvas
CPD	Continuing Professional Development
E&T	Education and Training
ECTS	European Credit Transfer and Accumulation System
EIB	European Investment Bank
EPC	Energy Performance Contract
EQF	European Qualifications Framework
ESCO	Energy Services Company
ETA	Energy Transition Audit
EU	European Union
GHG	Greenhouse gases
M&T	Measurement & monitoring
M&V	Measurement & verification
MoU	Memorandum of Understanding
NGO	Non-Governmental Organisation
SME	Small and Medium Enterprise
WP	Work Package

Executive summary

This document, prepared in the framework of LIFE EnTRAINER project, Work Package 6, sets out the key actions the EnTRAINER project's Consortium will undertake to ensure the **replication and long-term sustainability of the project's results** and findings after the end of the project. Specifically, it details how EnTRAINER's objectives, good practices, and the Energy Transition Audit (ETA) approach, as well as the associated online tools and accredited training programs, will be **mainstreamed and scaled** beyond the project's lifetime.

In line with this purpose, the report sets out concrete actions to carry EnTRAINER project forward:

- Explain how the Consortium will keep key functions active after project close, and how the accredited training courses will continue and expand
- Establish an ETA implementation strategy that links communication and outreach to a steady pipeline of new company audits, reinforced by rolling training cycles so capacity grows in step with demand
- Confirm partners' commitment to keep EnTRAINER's online tools available via a central platform, free for registered users, companies, and energy experts, so practical resources remain at hand for the clean energy transition.
- Describe how partner universities will embed selected EnTRAINER modules into their curricula, ensuring that the next generation of energy professionals engages with the project's methods, tools, and good practices as part of formal education.

Three main elements have been identified to ensure the sustainability of ENTRAINER project:

- (1) the findings of the project which are the solid basis toward the project sustainability.
- (2) the variety of partners and networks including professional associations, policy and decision makers etc. to whom the project results are addressed.
- (3) a proactive Consortium and identification of stable funding sources that will allow the project to deliver the created educational and training courses adaptable to market needs.

This report is closely aligned with **D6.4 Capacity Building and Exploitation** that presents the strategy for exploiting the results of the EnTRAINER project and building sustainable capacity within project partners and relevant stakeholder groups, detailing specific activities, timelines and metrics for success.

1. Introduction

Sustainability is the capacity to deliver results today while preserving the ability to operate and improve over time. It sets out how an organization will achieve goals that create **financial viability**, **societal value**, and **environmental impact** in balance.

Community sustainability concerns how well the project is embedded in its local and professional ecosystems, and how those communities will **carry the work forward** once LIFE funding ends.

Financial sustainability is the project's ability to **cover its costs and reinvest**, using diversified revenue (services, training, subscriptions), co-funding, and efficiencies to remain viable.

Organizational sustainability is the consortium's ability to **endure and adapt**, with the governance, skills, processes, and partnerships needed to maintain quality, evolve the offer, and scale impact after the project's completion.

The present document aims to outline the strategic actions that ensure the sustainability of the EnTRAINER project. The goal is to provide, for the members of the EnTRAINER's consortium, a clear picture of what could be done to guarantee there are long-lasting results after the end of the EU's funding.

1.1. The problem

The EU's pathway to climate neutrality by 2050, under the European Green Deal, Fit for 55, and REPowerEU, raises the 2030 ambition on **GHG reduction, renewable deployment, and decarbonization** while reinforcing energy security and affordability. While the EU is cutting emissions and adding renewables, energy efficiency improvements are inconsistent. Higher consumption and scattered, project-by-project implementation, notably in highly intensive industries, limit overall progress.

Across Europe the technical and economic potential for energy-efficiency investment is high, yet much of it is still untapped. Persistent barriers include limited awareness of the multiple benefits at decision-maker level; weak understanding of financing by both companies and lenders; absence of integrated, long-term efficiency strategies; inconsistent support schemes; low organizational motivation and follow-through; scarce fiscal incentives; and administrative complexity.

EnTRAINER project directly targets these gaps. **ETA methodology** provides a standardized, portfolio-ready roadmap that can help in turning opportunities into bankable plans. The **online energy scan tools** lower entry costs and scale rapid assessments across sites, helping prioritize action and build investment pipelines. **Accredited training programs** are upskilled for managers, auditors, municipal staff, and finance teams, improving execution capacity and lender confidence. Together, these results enable stakeholders to progress from awareness to analysis, through implementation, and to continuous improvement, helping Member States meet 2030 targets and stay on a credible path to climate neutrality.

1.2. The solution

Recent market analysis and partner consultations within EnTRAINER project implementation reveal a persistent mismatch between many existing energy-training offers and what organizations need to deliver decarbonization. Gaps include (i) limited undergraduate exposure to practical energy-transition topics, (ii) courses that remain largely theoretical and classroom-bound, (iii) insufficient coverage of measurement & monitoring (M&T) and measurement & verification (M&V) issues, and (iv) scarce, widely recognized credentials that signal job-ready competence. In several participating countries, companies are still weakly incentivized by regulation or support schemes to conduct energy audits, which further depresses demand for quality training and applied tools.

EnTRAINER addresses these gaps head-on with a coherent package:

- Energy Transition Audit methodology,
- Online energy scan tools for fast portfolio screening and prioritization
- Accredited training programmes that blend theory with hands-on learning, real case studies, and instrumented M&T/M&V practice

1.2.1. EnTRAINER project findings

ETA METHODOLOGY AS A SERVICE

The main objective of the EnTRAINER project is to shift the paradigm from the traditional energy audit process by introducing a holistic and comprehensive methodology known as **Energy Transition Audits (ETA)**.

ETA methodology takes an inside-out, outside-in approach to sustainability strategy development, considering both business-driven initiatives and external forces that shape an organization. This unique combination of management consulting and strong technical knowledge is supported by digital tools, to ensure that the engaged companies will clearly identify achievable targets that can maximize economic and environmental opportunities.

With this new approach, the focus is to provide a multi-benefit scheme and a complete action plan towards full **decarbonization of the audited sites** (Figure 1).

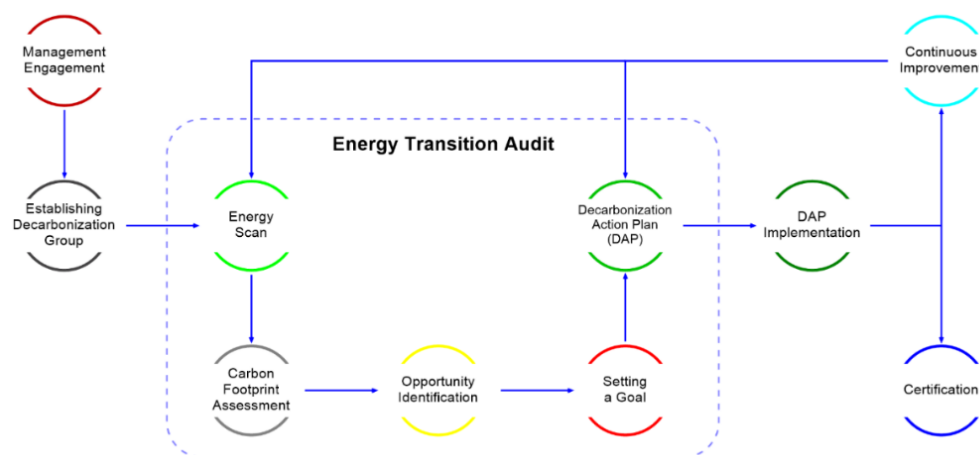


Figure 1. Decarbonization roadmap workflow

The proposed holistic energy transition audit methodology:

- Include what an energy transition audit means, in terms of the effective approach and goals.
- Aggregate the multiple benefits of the ETA methodology for the audited companies in terms of direct and indirect gains, solutions to overcome the existing barriers and lead to the implementation of the decarbonization action plan.
- Contain a collective approach in performing the energy transition audits, engaging along with the Energy Auditors, the Energy Managers from the audited companies, the environmental staff, the maintenance staff and the top decision makers, so as the energy transition audit with its main component - the decarbonization action plan - to have the highest chances to be effectively implemented.

Therefore, ETA methodology establishes a clear goal and a step-by-step approach for the energy audit, i.e., instead of identifying an energy efficiency action plan and potential energy saving quantification, to undertake from the very beginning a focused evaluation called energy transition audit, with the clear aim to provide not the conventional energy efficiency action plan, but the short-, medium- and long-term decarbonization action plan.

EDUCATIONAL & TRAINING PROGRAMS

EnTRAINER project focuses also on providing the necessary skills and knowledge to the stakeholders participating in the implementation of the new methodology. Additionally, this dimension aims to upskill current and aspiring energy professionals, who may also pursue careers as energy auditors, raise awareness among company staff members and effectively communicate the importance of sustainability plans. To this end, were designed and delivered three educational and training courses in the form of (*more detail in report [D5.1_Accredited Training programmes in Energy Transition Audits](#)*):

- Accredited training course for energy professionals
- Accredited training course for energy auditors
- Short training course for company staff, aimed especially at the top decision-makers.

Table 1. Details about the accredited training course for energy professionals

Title of the program: Course on Energy Transition Audits for energy professionals
Description of the program objectives:
This E&T program provides the necessary skills to build an innovative energy audit culture among current and future energy professionals, to establish the holistic EnTRAINER approach through the new concept of ETA and a comprehensive action plan to achieve the partial or full decarbonization of industrial companies. It also analyses the energy efficiency measures, digital tools and financial instruments currently available to quantify and implement the most promising energy saving opportunities accurately.
Target group:
• Current (energy expert and managers) and future energy professional

- Holder of a level 5 EQF vocation training degree in the fields of energy, industry or Environment.
- Engineering students or graduates with an energy, industrial or technical background
- Energy experts and professionals or other qualified individuals such as energy consultants or energy managers.
- Personnel of industrial companies

Program outline:

LU1 – European and national policies and legislation for energy efficiency, energy transition and decarbonization
 LU2 – Cutting-edge energy efficiency and decarbonization solutions as measures for ETA
 LU3 – Energy transition audits and decarbonization action plans
 LU4 – Tools for monitoring and managing energy and related CO2 emissions
 LU5 – Financing energy efficiency and decarbonization measures, tools and evaluation
 LU6 – Team project - Applying an ETA to a case study

Learning outcomes:

LU1	- Be able to recognize the environmental impacts of industry and possible company actions within energy policies and identify and interpret EU and national regulatory frameworks for energy efficiency, energy transition, and decarbonization.
LU2	- Be able to evaluate the effectiveness and context-fit of cutting-edge efficiency measures and BATs, identify energy-management and staffing changes that improve performance, and assess decarbonization potential via renewables integration, CO ₂ capture, and electrification.
LU3	- To gain the skills to perform Energy Transition Audits, analysing industry-specific energy and emissions data with appropriate metering and benchmarking, to translate findings into Decarbonization Action Plans and Roadmaps and to actively engage companies in audit and decarbonization initiatives.
LU4	- Understand energy-saving uncertainty and standards, use digital tools to streamline Energy Transition Audits, and interpret their outputs to identify energy-efficiency and decarbonization opportunities.
LU5	- Assess the economic feasibility of energy-efficiency and decarbonization projects, identify suitable funding options to improve profitability, and formulate an Energy Performance Contract (EPC).
LU6	- Demonstrate effective application of the E&T program's tools and knowledge to a case study while collaborating productively in a team.

Didactic methodology:

During course delivery, participants had access to the EnTRAINER training and knowledge-hub platform, which **incorporated ICT tools** to facilitate learning, share quality-assured materials, enable instructor–

trainee interaction, support practical exercises, build datasets, and capture feedback; the platform also **allowed learners to connect** with other experts and professionals in the sector.

Table 2: Details about the accredited training course for energy auditors

Title of the program: <i>Energy Transition Auditors Course for Energy Auditors</i>	
Description of the program objectives:	
This E&T program provides the necessary skills to build an innovative energy audit culture among current energy auditors, to establish the holistic EnTRAINER approach through the new concept of ETA and a comprehensive action plan to achieve the full decarbonization of industrial companies. It also provides an analysis of energy efficiency measures, digital tools and financial instruments currently available to accurately quantify and implement the most promising energy saving opportunities.	
Target group:	
• Energy auditors and energy managers • Future energy auditors;	
Program outline:	
LU1 – Energy Transition Audits LU2 – Decarbonization Action Plans LU3 – Tools for monitoring and managing energy and related CO2 emissions. LU4 –Project - Applying an ETA to a case study	
Learning outcomes:	
LU1	- Equip participants with the essential skills to perform Energy Transition Audits—analyzing industry-specific energy and emissions data using appropriate metering and benchmarking, while actively engaging companies in audits and broader decarbonization initiatives.
LU2	- Understand the Decarbonization Action Plan (DAP) concept and design short-, medium-, and long-term Decarbonization Roadmaps (DRM) based on ETA findings.
LU3	- Develop a solid understanding of energy-savings uncertainty and standards, learn to use digital tools to streamline Energy Transition Audits, and be able to interpret their outputs to identify efficiency and decarbonization opportunities.
LU4	- Be able to effectively apply the knowledge and tools of the E&T program to a case study.
Didactic methodology:	

During the delivery of the course participants had access to the EnTRAINER project training and knowledge hub platform, for the ICT tools to facilitate the learning process, exchange useful information and training material with an appropriate quality, allow the interaction between instructors and trainees, conduct practical exercises, create databases and provide feedback. In addition, through this platform, learners will be able to interact with other experts and professionals in the sector.

During ETA implementation in companies, were delivered also in-house training to build capacity across the organization, covering maintenance and technical teams as well as administration and senior management, so the benefits of energy-transition and decarbonization plans translate into concrete improvements on the shop floor.

ONLINE TOOLS

1. CUSUM

Web: <https://entrainer-project.eu/cusum-tool/>

CUSUM Analysis is easily accessible through its designated tab. Users are guided through three options for defining time frameworks crucial for analysis. These time frameworks are the following:

- Time Period for drawing data from the database.
- Baseline period for establishing the period which is considered best to calculate the baseline trend line.
- Control chart period for setting the period used in the control chart.

Once these time frameworks are defined, the tool automatically populates a table with three distinct parts. The first part retrieves real input data from the database, while the second part applies trend line functions to establish baseline consumption estimates. The resulting differences between actual consumption values and estimated values enable CUSUM analysis, visually represented through plotted graphs. Figure. 6 depicts the period frameworks and generated table of the CUSUM tool.

2. HEAT LOSS CALCULATOR

Web: <https://entrainer-project.eu/heat-loss-tool/>

Like the previous tool, the Heat Loss Calculator is available on the project's website under the tool's menu. It is a tool engineered to allow quantification of heat transfer dynamics and energy requirements of structures. The tool is partitioned into four distinct modules, each tailored to address specific facets of the heat loss assessment process.

3. ENERGY AUDIT ESTIMATOR

Web: <https://entrainer-project.eu/energy-audit-estimator/>

The third online tool "Energy audit estimator" aims to provide users with insights into potential energy and cost savings, as well as environmental benefits, based on specific actions related to energy usage. It consists of four questions, each addressing a different aspect of energy efficiency and sustainability:

Building on responses the tool calculates potential power savings, cost savings, and CO₂ emissions reductions.

4. ON-SITE AUDITOR

Web: <https://entrainer-project.eu/on-site-auditor/>

The "On Site Auditor" tool serves as a remote platform, enhancing the energy audit process. It enables integration of on-site measurements and additional data, such as notes and visual documentation (images). Furthermore, this tool automates certain aspects of the energy audit report generation, enhancing efficiency in the auditing process. This tool is designed for energy auditors, carrying out ETA audits.

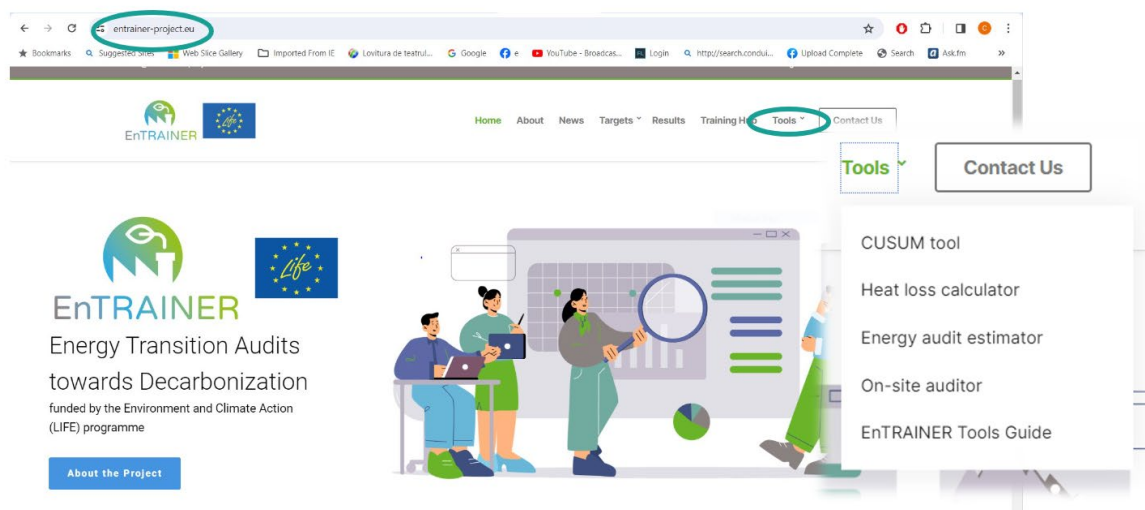


Figure 2. The online EnTRAINER tools

ONLINE PLATFORM AND KNOWLEDGE HUB

The online platform offers a short overview of the EnTRAINER partners, objectives and its fundings. Additionally, information and knowledge accumulated during the projects implementation, such as webinars, newsletters, deliverables, online tools, events and useful links to other projects and databases can be accessed via this webpage.

The [Knowledge Sharing HUB](#) can establish a solid communication channel among all involved energy professionals, managers and auditors, aiming to benefit by the training materials, recording, announcements or feedback received during educational and training programmes implementation.

1.2.2. Partners and networks to be addressed

For the **EnTRAINER project**, long-term development will not rely solely on the project's immediate results. Sustained impact depends on building **enduring partnerships** with the actors who can carry EnTRAINER forward once EU funding ends. Accordingly, sustainability will be secured through strong cooperation not only within academic networks, but also with **professional associations, policy makers** at local, regional, and national levels, **industry bodies, municipal agencies**, and **financial/energy agencies** that can embed ETA approach, online tools and accredited training into routine practice.

Through EnTRAINER's education and training activities - courses, workshops, and round-table dialogues - the consortium has identified the primary beneficiaries for future editions of the programme:

- Energy experts and auditors
- Engineers and facility/energy managers
- Energy professionals in SMEs and larger enterprises
- Business and industry associations
- Key company staff (operations, maintenance, procurement, finance/ESG)
- Professionals with an interest in energy efficiency and decarbonization
- Graduates from technical and economic disciplines
- Municipal and public-sector staff responsible for buildings and procurement

Within EnTRAINER's **business model**, these beneficiaries constitute the core **customer segments** for whom the programme creates value, by enabling compliant, investment-ready **energy transition audits**, equipping teams with **accredited skills**, and providing **digital tools** that turn plans into measurable energy, cost, and CO₂ savings.

1.2.3. EnTRAINER E&T programs as a service adaptable to market needs

The sustained impact rests on two pillars: a **proactive, well-governed Consortium** and **reliable post-project funding**. Combined with an **Education & Training (E&T) programs** tailored to priority market segments, these pillars ensure the long-term legacy of EnTRAINER's core outputs: **ETA methodology**, **online energy-scan tools** and **accredited training courses**.

Future editions of the E&T programs will be framed by a clear business plan that emphasizes **newness** (modules on emerging tech, policy, and finance), **performance** (measurable outcomes and M&V practice), **customization** (sector-specific pathways and case work), **cost efficiency/price** (modular, stackable offers for companies and public bodies), and **accessibility** (blended/online delivery, micro-credentials, and flexible scheduling).

Continuous improvement is built in each cohort, closing the loop through structured feedback from **universities, market actors (ESCOs/industry/municipalities), and participants**, with content and tools updated after each edition. Because training is an investment, EnTRAINER's outreach highlights **tangible benefits** (€/kWh/tCO₂ savings, compliance readiness, financing access) and adapts content to participant needs. Where relevant, modules extend beyond buildings to **machinery and process efficiency**, reflecting the real profiles of many companies.

Together, these practices make the EnTRAINER E&T programs **flexible, scalable, and need-driven**, ready to serve **companies, public institutions, professionals, and other stakeholders** who stand to benefit from practical decarbonization skills and tools.

2. Community dimension

Community sustainability addresses the issue of how well the project is rooted in the community. It also describes how the community will continue with the project, once there is no more financial support from the donor. A good way to ensure community sustainability is to include beneficiaries from the get-go in planning and implementation. Participatory methods can be very helpful for this. It is important to consult with all stakeholders, whenever possible, to make sure that the community feels ownership for the project and that their preferences are implemented within the project. The partners confirm that dissemination will continue well beyond the project's formal end, with actions tailored to their national ecosystems but converging on the same goal: scaling the EnTRAINER training programs and mainstreaming ETA approach in practice, education, and policy.

In Italy, USEEFF and CASACLIMA will keep EnTRAINER visible and active in the market. USEEFF will maintain a **dedicated presence on its website** to showcase results and upcoming opportunities, while both organizations will reference EnTRAINER at **national events** to stimulate new cohorts and collaborations. CASACLIMA plans to fold selected EnTRAINER skills and tools, most notably the Decarbonisation Action Plan, into its KlimaFactory support programmes, ensuring that Italian companies encounter the method not only in classrooms but also in real upgrade pathways. Universities and CASACLIMA will also weave EnTRAINER topics into existing courses and organize new national trainings to serve emerging demand.

In Spain, the focus is on turning field experience into peer-reviewed knowledge and pedagogical influence. The partners intend to document the implementation of ETAs in Spanish contexts through **scientific publications**, pairing technical evidence with practical insights. In parallel, results from the E&T programme will be taken to **educational actions**, positioning EnTRAINER as a reference for curricula that blend theory with hands-on measurement, verification, and business case design.

Greece and Romania will concentrate on institutional embedding and professional recognition. AUTH, UOWM and UTC plan to integrate EnTRAINER content directly into **undergraduate and postgraduate syllabi** for Electrical & Computer Engineers and to explore **new postgraduate modules** on environmental sustainability. To support professional uptake, the universities will pursue an MoU with the Technical Chamber of Greece (TEE) and other associations so that EnTRAINER certification carries CPD credit. The teams will remain active on the events circuit—workshops and sector fora that keep energy efficiency top of mind—and will contribute evidence and recommendations to policy discussions (e.g., NECP updates, Ministry regulations) so that the programme's good practices inform the next generation of national measures. As part of their ongoing research mission, the Greek and Romanian partners will also produce **conference papers and journal articles**, adding to the scientific backbone of EnTRAINER.

Taken together, these strands form a coherent post-project narrative: **web visibility and events** to keep demand high, **new and embedded training** to meet it, **professional and policy recognition** to legitimize it, and **scientific outputs** to sustain credibility and improvement. The strategy ensures that EnTRAINER is not simply concluded but **carried forward**, as a set of usable tools, recognized competencies, and living practices that continue to shape company roadmaps, university teaching, and public policy.

3. Financial dimension

The financial sustainability of a project refers to how the consortium will be able to access funding to ensure that future EnTRAINER activities will be financially viable. As a first step in this direction, the project partners, who delivered E&T program courses and/or ETAs, carried out SWOT analysis in their own countries to identify opportunities and threats for future similar activities. Next, using the Business Model Canvas tool, each partner drew up an adapted business model, which highlights the possibilities to deliver future editions of the E&T program.

The partners will also identify funding sources such as international project competitions, national funding schemes, funding from professional associations, etc. to support future EnTRAINER activities.

3.1. SWOT Analysis

To develop a deeper understanding of future opportunities regarding the EnTRAINER project activities, a SWOT analysis was applied by the project consortium for the E&T programs and for the ETAs. In response to the identified strengths and weaknesses (S-W), as well as broader opportunities and threats (O-T), all project partners developed strategic planning actions which will contribute to the sustainability of the E&T program after the conclusion of the EnTRAINER project.

3.1.1. SWOT analysis for EnTRAINER E&T Programme

The Entrainer E&T programme is an accredited training course designed to upskill professionals in the rapidly evolving field of energy efficiency. The programme offers a specialized curriculum, experienced lecturers and practical case studies, enabling trainees to gain a comprehensive understanding of modern energy technologies and policies. To evaluate its strategic position, the following SWOT analysis draws on the programme's internal strengths and weaknesses as provided in the table, and integrates external evidence from industry reports, academic analyses and policy documents to identify opportunities and threats in the broader energy landscape. This holistic assessment can guide programme development and strategic decision-making.

Table 3: SWOT matrix for E&T Programme

STRENGTHS (S)	WEAKNESSES (W)
- Each partner country accredits the programme, and its modules are aligned with ECTS standards. - Accreditation ensures that trainees gain formally recognised qualifications and can use the course for continuing professional development (CPD), enhancing the programme's credibility and portability. - The curriculum focuses on contemporary energy topics such as energy efficiency, emerging technologies and policy. - Supported by training material and platform tools that are freely available and aligned with	- Some emerging areas—such as energy storage, hydrogen economy and artificial intelligence in energy management—are insufficiently covered. - EnTRAINER tools were not ready or comprehensive enough to meet participants' needs. - The course's lecture hours are not always sufficient to transmit all necessary knowledge, and advanced technical aspects may not be fully covered. - Professionals with busy schedules may find it difficult to attend longer sessions, which could reduce engagement and knowledge retention.

learning objectives, enabling trainees to access content flexibly and revisit resources later. ● Focus on cutting-edge topics addresses the talent shortage identified in the energy sector ● Courses are delivered by professors and lecturers with both academic and industry backgrounds, and the programme collaborates with energy companies, utilities and governmental organisations. ● Partnerships expose trainees to real-world practices and create networking opportunities among professionals. ● Training materials and tools are available online, so geographical constraints are minimised, and professionals can adapt learning to their schedules. ● Positive feedback from previous editions demonstrates learner satisfaction and validates the programme's format.	● Energy efficiency policies and regulations change quickly; maintaining up-to-date training material requires continuous resource investment. ● Although trainees work on case studies, there is limited opportunity to implement energy assessments in real companies ● Limits of the programme's practical exposure and may reduce its appeal compared with courses offering hands-on experience.
OPPORTUNITIES (O)	THREATS (T)
● Growing demand for energy experts ● Clean energy employment is expanding rapidly. ● Residential decarbonization projects are also spurring job growth, with employers reporting challenges finding skilled workers and a shortage of training programmes aligned with market needs. ● Strong market for high-quality training like EnTRAINER E&T. ● The rise of AI, IoT, blockchain and energy storage is reshaping the energy sector. ● New skills gap and increasing demand for energy managers who can integrate digital infrastructure with clean energy ● The EU's revised Energy Efficiency Directive (EU 2023/1791) requires enterprises with energy consumption above 85 TJ to implement certified energy management systems and those above 10 TJ to undergo energy audits by 2026. ● SMEs are encouraged to conduct audits through national programmes. ● Rising energy costs and tightening regulations are putting energy audits in the spotlight for businesses. ● Training professionals to perform audits and manage energy systems aligns directly with these policy drivers.	● Numerous universities, training institutes and private organisations offer energy-efficiency courses, and the number of such programmes is growing. ● Advances in AI, hydrogen, energy storage and blockchain mean that course content can quickly become outdated. If the curriculum fails to adapt frequently, there is a risk of misalignment with industry needs, potentially diminishing the programme's relevance. ● Changes in government policies, such as cuts to clean-energy incentives or shifts in national priorities, can reduce demand for energy training. ● If energy prices fall or subsidies disappear, companies may become less willing to invest in audits and training. ● Professionals may hesitate to dedicate time and resources to training if company priorities shift or if budgets are tight. ● Broader geopolitical tensions and economic downturns could divert attention and funding away from decarbonisation and training initiatives. ● Companies might prioritise immediate survival over long-term energy efficiency, reducing enrolment.

● Funding schemes across Europe provide financial incentives for training and upskilling, ● Public concern about climate change is rising ● Citizen pressure, combined with decarbonization campaigns and corporate sustainability commitments, increases demand for trained energy auditors and efficiency experts.	
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Strategic actions to maximize the impact

To make the most of its strengths and the opportunities emerging in the energy sector, EnTRAINER E&T can expand its course portfolio by adding modules on energy storage, hydrogen technologies, AI-enabled energy management and digitalisation. The International Energy Agency warns that data-centre electricity consumption will more than double by 2030 due to the rise of artificial intelligence. By proactively incorporating training on AI, the Internet of Things, blockchain and advanced storage systems, the programme can address a critical skills gap and stand out among competitors. Its online and distance-learning capability means it can attract participants from across Europe, positioning it to tap into National Recovery and Resilience Plan funding and to forge co-branded courses with universities and industry partners. Marketing efforts should emphasise the programme's accredited status and close ties to utilities and energy companies, offering prospective employers' assurance that trainees are prepared to meet mandatory audit requirements for enterprises consuming over 10 TJ.

Maintaining a competitive edge amid a crowded training market requires EnTRAINER E&T to play to its recognised strengths. It should leverage its accreditation, experienced lecturers and industry partnerships by providing hands-on projects with real companies; such practical experience will keep learners engaged and improve the programme's visibility. Given that EU regulations now require large enterprises to implement energy-management systems and undergo regular audits, the programme can cement its relevance by offering tailored modules that prepare professionals for compliance and audit certification. Regular consultation with its extensive professional network will help keep course content aligned with evolving industry needs and ensure that case studies reflect contemporary challenges.

Funding opportunities also provide a path to remedy internal weaknesses. Investments from EU and national programmes can be used to fill curricular gaps—expanding coverage of advanced technical topics, artificial intelligence and energy storage—and to develop better tools and materials. Collaborations with technology firms and universities will bring in cutting-edge expertise without overburdening internal staff. A modular course structure can be designed to accommodate busy professionals: shorter, asynchronous modules with recorded lectures and interactive tutorials allow deeper learning without demanding excessive time. Practical exposure can be enhanced by partnering with energy companies and public organisations so that trainees can perform live energy assessments or digital audits; these experiences not only build expertise but also broaden the programme's network and visibility.

To mitigate weaknesses and guard against external threats, EnTRAINER E&T should adopt an agile curriculum review process, scheduling updates at least annually and soliciting guidance from an advisory board of industry experts, policy-makers and alumni. This practice will ensure the curriculum stays current with emerging technologies and legislative changes. Targeted marketing campaigns through digital platforms, professional associations and alumni networks will raise the programme's profile and highlight its role in helping organisations meet regulatory requirements. Finally, diversifying revenue sources by forming corporate partnerships, applying for EU and national grants, and offering bespoke corporate training will reduce dependence on any single funding stream and insulate the programme from policy or economic shifts.

Risk mitigation measures

The utilities sector faces regulatory complexity; navigating multiple regulations often requires significant investments in training and process improvements. Investing in regular staff training and adopting technology for compliance monitoring reduces exposure to penalties.

Rising energy prices currently drive demand for training, but market conditions can change. Scenario planning and financial reserves can help the programme adapt to shifts in demand, while offering shorter courses or modular certifications can maintain revenue streams during downturns. Public pressure for climate action remains high, with 80 % of people wanting more government action and 72 % supporting a rapid transition away from fossil fuels. Staying attuned to societal expectations helps tailor course content and maintain relevance.

The EnTRAINER E&T programme possesses strong foundational elements—accreditation, a specialised curriculum, experienced faculty and flexible delivery—that align well with growing market demand for energy-efficiency expertise. However, to remain competitive and maximise its impact, the programme should address weaknesses by updating the curriculum to include emerging technologies (e.g., AI and energy storage), expanding practical training with real-company projects and ensuring that lecture hours and materials keep pace with regulatory changes. By capitalising on opportunities such as rising demand for energy experts, regulatory drivers like the EU Energy Efficiency Directive, public funding through recovery plans and increasing societal pressure for climate action, Entrainer E&T can position itself as a leader in energy education. Concurrently, proactive adaptation to market changes, strategic marketing and engagement with industry partners will help mitigate threats and secure the programme's long-term success.

3.1.2. SWOT analysis for EnTRAINER ETAs

The Entrainer ETAs programme is a methodological framework designed to help companies assess decarbonisation options and plan energy-transition actions (ETAs). According to the programme's internal documentation, each ETA is short in duration, raises awareness across departments and builds a roadmap towards carbon neutrality by combining short-term and long-term measures tailored to each firm. The programme integrates energy-audit principles, aligns with national and EU regulations and emphasises holistic, data-driven analysis. Below is a detailed SWOT analysis, supported by evidence from recent regulatory and market developments.

Table 4: SWOT matrix for EnTRAINER ETAs

STRENGTHS (S)	WEAKNESSES (W)
○ The programme's curriculum is tailored to specific company needs rather than offering generic training. ○ It covers a wide range of topics and is delivered in a condensed timeframe, ensuring minimal disruption to operations while still providing a comprehensive analysis of decarbonisation potential. ○ Participants include senior management and non-technical staff, encouraging cross-departmental understanding and collaboration. ○ Each ETA produces a detailed roadmap that combines short-term measures with quick returns and longer-term investments aimed at reducing carbon emissions. ○ Measures are decided jointly with company staff using a multi-benefit approach. ○ Participatory process increases buy-in from management and employees and fosters innovation. ○ The methodology is designed to align with current and emerging national and EU decarbonisation regulations. ○ ETAs organise the collection of consumption data in a systematic way, enabling accurate assessments and facilitating later audits. ○ Relies on knowledgeable auditors and maintains strong links to energy management associations, ensuring that recommendations are technically sound and credible.	○ May not address complex issues requiring deeper technical analysis. ○ Participants may struggle with the learning curve associated with sophisticated methodologies, especially when data gathering tools or digital platforms are not intuitive. ○ As the programme is relatively new, there are few documented success stories or client testimonials to demonstrate effectiveness. ○ Limited access to accurate data - particularly in companies that are not obliged to carry out energy audits - can compromise the accuracy of ETAs and discourage implementation. ○ Long-term plans are also vulnerable to changing market or political conditions. ○ The ETA methodology may be perceived as complex and time-consuming. ○ Smaller firms without dedicated sustainability teams may struggle to allocate resources, and the absence of industry-specific context could hinder implementation.
OPPORTUNITIES (O)	THREATS (T)
○ The revised Energy Efficiency Directive increases the scope of companies required to implement energy-management systems or undergo regular audits. ○ Supply-chain ESG requirements are intensifying ○ The European Investment Bank announced a €17.5 billion initiative to finance energy-efficiency and decarbonisation projects for SMEs. ○ A 2024 analysis noted that improving energy efficiency in residential and commercial buildings is key to combating energy price hikes and that lower energy bills mitigate the impact of future inflation ○ Employers struggle to find skilled workers due to low awareness of energy-efficiency careers, a shortage of	○ Companies facing tight budgets or other strategic priorities may deprioritise sustainability training. ○ The absence of clear objectives and long-term planning can undermine engagement. ○ Some companies and their staff may resist adopting new methodologies, favouring traditional energy audits or other established decarbonisation approaches. ○ Inadequate implementation could damage the programme's credibility and hamper its adoption.

training programs and inconsistent licensing requirements ○ Companies are increasingly embedding sustainability into their core strategy. ○ Large firms require suppliers to demonstrate carbon efficiency. ETAs can serve as a tool for suppliers to meet customer expectations and maintain access to global supply chains. ○ ETA can partner with NGOs, consultancies and universities to enrich content, provide internships and access cutting-edge research. Collaboration with energy service companies (ESCOs) and energy-manager associations can widen participation and increase credibility.	○ Changes in government policy, economic recessions or geopolitical tensions can affect energy prices, availability of funding and the regulatory landscape ○ Poorly implemented policy changes or delays may also reduce urgency among companies. ○ High compliance costs could discourage companies from undertaking additional programmes such as ETAs unless the benefits are clearly demonstrated. ○ ETAs rely on detailed energy consumption and operational data. Some firms may lack accurate data collection systems or be unwilling to share sensitive information. ○ The scarcity of trained energy professionals can limit the scalability of ETAs. ○ Employers report that workforce shortages due to inadequate training programmes and low awareness hinder progress on decarbonisation.
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Strategic actions to maximize the impact

To maximize the impact of the Entrainer ETAs programme's SWOT analysis, it helps to translate its findings into clear strategic actions. Below are strategies for each dimension of the SWOT matrix, designed to leverage strengths, address weaknesses, seize opportunities and counter threats.

Leverage strengths to exploit opportunities (SO strategies)

Use the programme's flexible, targeted curriculum and experienced audit team to introduce modules on AI-enabled energy management, IoT, blockchain and advanced storage technologies. Such content directly responds to intensifying ESG and supply-chain requirements, where companies must collect and validate sustainability data on partners. Early adoption of these topics helps differentiate the programme and prepare participants for impending regulatory and market demands.

Strengthen the integration of ETAs with mandatory energy audits and management systems. The revised Energy Efficiency Directive requires enterprises consuming over 85 TJ to implement energy-management systems by 11 October 2027 and those consuming 10–85 TJ to conduct audits every four years from October 2026. By aligning ETAs with these obligations, the programme can market itself as a turnkey solution for compliance, attracting businesses that seek to fulfil legal requirements and demonstrate ESG leadership.

Leverage the programme's strong network to access financial incentives. The EIB's €17.5 billion initiative to finance energy-efficiency projects aims to support more than 350,000 SMEs and mobilise €65 billion of investment by 2027. Collaborations with NGOs, universities and ESCOs can open

pathways to these funds and enable co-developed projects. Use the systematic data-collection approach to show how ETAs help businesses manage rising energy costs and inflation. Energy prices in 2024 remained more than 40 % higher than in January 2021 and improving energy efficiency can lessen the impact of future price hikes. Demonstrating tangible savings will encourage uptake.

Leverage strengths to mitigate threats (ST strategies)

Promote the programme's accreditation, comprehensive roadmaps and cross-departmental engagement to stand out against established methods. Use case studies and pilot projects to demonstrate successful implementation and return on investment, countering scepticism that sustainability initiatives are merely "performative."

Maintain an advisory board of legal and industry experts to track evolving EU and national regulations. This ensures ETAs remain compliant and helps clients anticipate future requirements, reducing the risk of non-compliance or obsolescence. Use participatory decision-making as a selling point. By involving employees across departments in developing roadmaps, the programme can cultivate internal champions who are more resistant to budget cuts or competing priorities.

Convert weaknesses into opportunities (WO strategies)

Develop user-friendly digital tools to simplify data collection and analysis, reducing the learning curve and resource burden. Partnerships with tech providers can accelerate tool development without straining internal capacity. Address the programme's short duration by breaking content into modular units that cover complex technical topics in depth. Offer asynchronous online modules and interactive workshops so participants can engage at their own pace, making the training more accessible to busy professionals.

Document early ETAs with clear metrics—such as energy savings, cost reductions and regulatory compliance achievements—to build a repository of case studies and testimonials. Sharing these results through webinars or conferences will reassure potential clients and enhance credibility. Tackle the shortage of energy professionals by collaborating with universities and vocational institutes to develop specialised curricula. By training more auditors and energy managers, the programme strengthens its own capacity while contributing to the broader industry need.

Minimise weaknesses and neutralise threats (WT strategies)

Set up a risk register covering economic volatility, policy changes and data-privacy issues. RiskWatch notes that complying with multiple regulatory bodies often requires substantial investment in technology, training and process improvements. Assign clear responsibilities and mitigation actions for each risk to avoid resource misallocation.

Reduce reliance on a single funding source by offering customised corporate training, subscription-based data tools and consulting services. This buffers the programme against shifts in government funding or economic downturns.

Establish robust data-management protocols, including anonymisation and encryption, to alleviate clients' concerns about sharing sensitive information. Compliance with data-protection regulations will also strengthen the programme's reputation.

Recognise that resistance to new methodologies is a major barrier. Provide change-management training for client leaders to help them integrate ETAs into corporate culture. Align decarbonisation goals with broader business objectives to ensure sustainability initiatives are not perceived as peripheral.

By adopting these targeted strategies, the Entrainer ETAs can better harness its strengths, address its weaknesses and respond to evolving market and regulatory conditions, ultimately enhancing its impact and long-term sustainability.

Risk mitigation measures

To ensure that the strategies outlined for maximising the Entrainer ETAs impact are resilient, it is important to embed risk-mitigation measures that anticipate potential challenges. Below are several robust measures tied to the framework strategic priorities:

- Regulatory complexity can overwhelm organisations and drive-up costs. Entrainer should establish a dedicated compliance team to monitor evolving EU and national regulations, create internal guidelines and provide timely updates to participants. This framework should include scenario planning for new energy-efficiency mandates (such as the revised Energy Efficiency Directive) and incorporate periodic audits to ensure alignment with industry standards.
- EnTRAINER can formalise risk identification and mitigation by assigning likelihood and impact scores to potential threats, including funding cuts, data breaches, policy delays or negative market responses. Each risk entry should specify mitigation strategies (e.g., transferring, mitigating, avoiding or accepting risk), responsible stakeholders and review schedules. This will help prioritise resource allocation and ensure that the programme adapts quickly to changes.
- The ETAs depend on collecting detailed energy and operational data. To mitigate privacy and security risks, Entrainer should adopt strong data-protection measures such as encryption, anonymisation and strict access controls. Clear data-usage policies will build client trust and align with tightening data-protection regulations.
- Economic volatility and changing incentives can threaten funding. EnTRAINER should broaden its income sources by offering customised corporate training, accessing public grants (e.g., the EIB's €17.5 billion SME initiative) and partnering with NGOs or industry consortia. Maintaining a reserve fund and engaging in financial scenario planning can cushion the programme against delays in public funding or policy shifts.
- Shortages of skilled energy professionals can limit the programme's scalability. Mitigate this risk by collaborating with universities and vocational institutions to create training pipelines, providing continuous professional development for staff and building documentation and knowledge-sharing platforms. This approach strengthens internal capacity and ensures continuity even if key personnel leave.

3.2. Future EnTRAINER actions

3.2.1. Business Model Canvas

As a result of the SWOT analysis, each of the project partners developed a **Business Canvas Model**, which constitutes the basis of the **plan for future editions** of the E&T program and ETAs.

The Business Model Canvas (BMC) is a single-page, visual framework that distils a business model into nine interconnected building blocks: key partners, activities, resources, value propositions, customer relationships, channels, customer segments, cost structure and revenue streams. This holistic mapping encourages teams to articulate how an organization creates, delivers and captures value and to see how changes in one area affect the rest. Because it portrays products or services, company infrastructure, customers and finances in one coherent view, the BMC functions as a strategic management tool that allows teams to describe, design, challenge, invent and pivot their business model.

Businesses use it to brainstorm innovations, compare multiple business model options and identify risks and opportunities early. By visually aligning cross-functional perspectives, the canvas enhances communication, fosters strategic thinking and streamlines planning. Its flexibility supports new ventures and helps mature organizations adapt to fast-changing markets and fosters continuous improvement.

In **Greece**, the Business Model Canvas supports both Training Programmes and ETAs, strengthening national capacity for energy efficiency and decarbonization. Universities, vocational centers, and associations collaborate to deliver accredited courses, case studies, and EnTRAINER tools, enhancing employability and building a professional community. Meanwhile, the ETA model targets energy-intensive SMEs and large companies, promoting cost savings, non-energy benefits, and stronger ESG performance. Together, these models show how the BMC addresses professional growth and organizational needs while driving systemic energy transition.

In **Italy**, the BMC bridges policy and practice through targeted training and advanced ETA methodologies. Training Programmes, developed with academic and professional bodies, provide recognized credits and align with Decree 102/2014, linking professional growth to compliance. ETAs offer expert-led audits and tailored decarbonization roadmaps aligned with EU targets. With universities, associations, and industrial federations as partners, the BMC shows how Italian initiatives combine academic rigor, regulatory compliance, and practical benefits in a scalable model.

For **Romania and Spain**, the BMC highlights how tailored strategies meet local needs while ensuring consistency with the EnTRAINER vision. In Romania, Training Programmes emphasize online delivery, practical actions, and networking, supporting current and future energy professionals while preparing companies for evolving regulations. ETAs, meanwhile, integrate detailed energy analysis with supplier collaboration, creating long-term partnerships for decarbonization. In Spain, the Training Programmes leverage digital platforms and university alliances to upskill participants through accredited courses and case studies, while ETAs deliver company-specific roadmaps for savings and decarbonization.

Business Model Canvas - Training Programme, Greece				
Key Partners ○ Lecturers that are experts in energy efficiency and decarbonization ○ Long Life Learning Structure of AUTH or UoWM ○ Professional associations ○ Local and central government representatives ○ Vocational training centres ○ Chambers and Associations	Key Activities ○ Delivery of high-quality educational courses ○ Case study ○ EE measures plan	Value Propositions ○ Holistic approach based on international knowledge ○ Experience gained form the 2 E&T courses editions ran the last 2 years at partners countries ○ Free access to EnTRAINER tools ○ Community for professionals. ○ For professionals: Accredited certification enhances employability in a high demand field ○ For companies: Upskilling of staff to manage energy transition and reduce reliance on external experts	Customer Relationships ○ Participants will join the EnTRAINER training hub, accessing all training material and tools, ○ Continuous communication through periodical newsletters ○ Participation in workshops and events for the promotion of the courses	Customer Segments ○ Energy professionals ○ Energy Auditors ○ Various professionals with interests in energy efficiency ○ Graduates from universities related to technical/economic studies
	Key Resources ○ Training material ○ EnTRAINER training hub ○ EnTRAINER tools		Channels ○ Professional association network ○ Mass media	
Cost Structure ○ Fixed Costs: salaries, long-learning structure payment ○ Variable Costs: utilities, administrative costs		Revenue Streams ○ Participation Fees, with standard fees for professionals, discounted rates for companies for group participation. ○ National/international fundings for long-learning programs, like DYPA (Public Service for Employment) ○ Funding mechanisms that promote EE in the EU		
Monitoring & Evaluation ○ Number of enrolled users in the training hub and EnTRAINER portal, ○ Number of trainees ○ Feedback from trainees				

Business Model Canvas - ETA, Greece				
Key Partners ○ Professionals in energy sector ○ Energy Auditors ○ Professional associations, ○ Local and central government representatives ○ Policy makers	Key Activities ○ Data analysis and benchmarking ○ The E&T courses, ○ Organizational culture improvements, ○ Promotion of the ETA through workshops, conferences, associations ○ Post audit implementation, support and monitoring	Value Propositions ○ Energy efficiency improvement and decarbonization lead to cost savings and revenue protection opportunities. ○ The identification and assessment of the non-energy benefits reduce operational costs ○ Support companies against future regulatory changes and market demands. ○ Enhances the corporate brand and ESG profile of the companies	Customer Relationships ○ Participation in workshops and events for the promotion of the ETA ○ The ETA and DAP methodologies will be freely available on the EnTRAINER portal	Customer Segments ○ Energy intensive SMEs ○ Big companies leading in ESG ○ Export oriented companies,
	Key Resources ○ The ETA methodology ○ EU and local policy on decarbonization and energy efficiency, ○ Financial resources.		Channels ○ Partnership with ESCOs	
Cost Structure ○ Costs for ETA auditors		Revenue Streams ○ Fixed costs based on company size ○ Subscription models for on-going support and monitoring ○ Pay-as-you-save models linked to achieved savings		
Monitoring & Evaluation ○ Number of companies pursued an ETA ○ Number of measures implemented				

Business Model Canvas - Training Programme, Italy				
Key Partners ○ USEEFF and CasaClima ○ World Federation of Engineering Organizations (WFEO) ○ CEN CENELEC ○ ENEA ○ University of Bolzano ○ University of Trento ○ Other universities ○ Energy auditor associations (Assoege) ○ Regional/National Orders for Engineers and Architects ○ University of Bolzano ○ University of Trento	Key Activities ○ Formation of a qualified trainer's team ○ Development of a suitable training calendar (timing, frequency) ○ Launch of a communication and registration campaign ○ Management of participants from registration to certification ○ Coordination with accreditation bodies or process to become an accredited body enabled to deliver CPD ○ Recording and archiving of training sessions	Value Propositions ○ Targeted, policy-aligned upskilling: ○ Recognised credits (CPD) from professional Orders and institutions ○ Bridge between policy and practice ○ Up-skilling for compliance with Decree 102/2014 and support for ETA implementation ○ Potential accreditation for CPD by CasaClima ○ Recognised professional development with expert instruction	Customer Relationships ○ Build trust through direct involvement of stakeholders (e.g., training delivered by members of professional organisations) ○ Leverage previous project collaborations (e.g., SMEmPower, EnTRAINER) ○ Relationship management through a mix of personal and digital interactions	Customer Segments ○ Energy professionals and auditors ○ Holders of higher vocational education diplomas (EQF Level 5) in energy, industry, or environment ○ Engineering students and graduates ○ Energy experts including EGEs, consultants, and energy managers ○ Personnel from industrial companies
	Key Resources ○ High-level trainers (academia, consultancy, technical experts) ○ Administrative staff ○ Accredited course content and platforms ○ Communication and marketing professionals ○ Institutional partnerships with Universities, Orders, and associations		Channels ○ SM campaign, including possible tools for boosting ○ Email and newsletter campaign ○ Direct contacts (email, SM chat, phone) ○ Online training sessions ○ Hybrid models in collaboration with Orders or universities	

			○ Helpdesk, CRM tools for participant questions and technical assistance	
Cost Structure ○ Direct costs ● Trainer fees (€/h) ● Admin software (3% total income) ● Online delivery tools e.g. Zoom subscription (€/month) ● Comms campaign (€) ● Risk buffer (5% cost) ○ Internal personnel costs ● Training material creation (day) ● Communication and promotion (day) ● Course preparation and administrations(day) ● Overall training management (day)			Revenue Streams ○ Income generation: ● Participation fee: €250 (with discounts for early birds and students) ● Recorded course fee: €180 (student discounts available) ● Pricing policy: Subject to revision based on actual costs ○ Minimum participants required to launch course: 40	
Monitoring & Evaluation ○ Minimum estimated number of participants to enable the stat of the training course: 25-30 ○ Minimum estimated participants benefitting of the recorded course: 20				

Business Model Canvas - - ETA, Italy				
Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
○ USEEFF and CasaClima ○ GSE (Gestore dei Servizi Energetici) ○ ENEA (National Agency for New Technologies, Energy and Sustainable Economic Development) ○ Confindustria and sectoral federations (e.g., Federchimica, Assolombarda) ○ Professional orders (Engineers, Architects) ○ Universities and Polytechnics ○ Regional Energy Agencies (e.g., ARPAE, APE FVG) ○ Energy Service Companies (ESCOs) ○ Chambers of Commerce (CCIAA) ○ Industrial clusters and associations (e.g., textile, food, manufacturing); ○ Industrial Companies, especially energy-intensive SMEs and large	○ Identification and engagement of clients ○ Audit team assignment trained on ETA methodology ○ Data collection ○ On-site assessments and stakeholder interviews ○ Application of EnTRAINER ETA methodology and tools ○ Generation of tailored decarbonisation roadmaps and recommendations ○ Integration with other services (e.g., training, follow-up) ○ Quality control and documentation ○ Impact assessment and client feedback loop ○ Ensure alignment with: Legislative Decree 102/2014; National Energy and Climate Plan (PNIEC); Regional energy efficiency targets	○ Identify effective and feasible decarbonisation measures for industrial clients, beyond standard energy audits. These measures should also address the goal of achieving carbon neutrality by 2050. ○ Identify cost-effective investments, improve energy efficiency, and reduce carbon emissions ○ Trusted methodology, expert-led analysis, and clear recommendations aligned with EU climate targets ○ The ETA is more than a compliance check—it enables real transformation toward net-zero in industry ○ Investment plans aligned with incentives (e.g., Conto Termico, TEE)	○ Initial outreach via associations, events, and partner networks ○ Tailored onboarding for each company (diagnostic and audit plan) ○ Ongoing technical interaction during the audit process ○ Delivery of customized, actionable reports and post-audit support ○ Continuous engagement through follow-up audits or services ○ Estimated personnel time for engagement: 3-7 days per client lifecycle	○ Industrial SMEs and mid-sized companies (textile, ceramics, food processing, engineering) ○ Large energy-intensive companies (steel, glass, chemicals) ○ companies required by law to undergo energy audits and/or to prepare sustainability reports ○ Industrial clusters / districts ○ Public-private consortia and innovation hubs ○ ESCOs and facility managers (as intermediary clients) ○ Companies preparing for green certification

D.6.3 Replication and sustainability plan

manufacturers. Sectors: food & beverage, chemicals, steel, paper, ceramics, automotive, etc. ○ Corporate Groups or Holding Companies looking to standardize and optimize energy across multiple sites; ○ Facility Management Companies / Energy Service Companies (ESCOs)	Key Resources ○ Certified auditors and EGEs (Esperti in Gestione dell'Energia) ○ National energy database and benchmarking tools ○ Sector-specific KPIs and templates for ETA reporting ○ Administrative and coordination staff ○ Digital infrastructure for data sharing and analysis ○ Access to funding and incentive frameworks (e.g., PNRR, Horizon Europe)	○ Delivered by certified professionals (EGE, CMVP) in collaboration with universities and accredited institutions	Channels ○ Direct outreach via associations, and events ○ Email and newsletter campaigns (via industry databases) ○ Webinars and regional roadshows (in collaboration with Chambers of Commerce) ○ Collaboration with regional bodies for promotion (e.g., energy desks) ○ Project website and digital platform	(ISO 50001, ESG ratings)
Cost Structure ○ Personnel costs (auditors, analysts, admin) ○ Travel and site visit expenses ○ Tools and software (data analysis, modelling, reporting) ○ QA and reporting framework ○ Communication and stakeholder engagement ○ Coordination with institutional partners (time/cost overhead) ○ Contingency for low uptake or delays			Revenue Streams ○ Direct fee per ETA (variable depending on company size, sector, site complexity): initial estimated cost from €8,000, depending on the company; to be assessed case by case	
Monitoring & Evaluation ○ Number of ETAs delivered by region/sector ● Implementation rate of recommended actions (follow-up surveys) ● Estimated vs. actual primary energy reduction ● Estimated vs. actual CO₂ reduction potential ○ Feedback from industrial clients (satisfaction, usability of recommendations)				

Business Model Canvas - Training Programme, Romania				
Key Partners ○ The lecturers form UTCN; ○ Department of Long-Life Learning from UTC; ○ Professional associations (SAMER, APITISAR, CNIPMMR etc.); ○ Local and central government representatives.	Key Activities ○ Online courses. ○ Practical actions. ○ Energy scans. ○ ETA implementation. ○ Practical case studies.	Value Propositions ○ Support companies against future regulatory changes and market demands. ○ Enhances the corporate brand and ESG profile of the companies	Customer Relationships ○ Participants will be part of the energy professional community. ○ Involvement in EnTReC workshops and events. ○ Networking events ○ Invitation to scientific workshops and conferences	Customer Segments ○ Current (energy expert and managers) and future energy professional. ○ Engineering students, graduates with an energy background. ○ Energy auditors.
	Key Resources ○ Training materials. ○ EnTRAINER Sharing Hub. ○ Online tools. ○ ETA Methodology as a service.		Channels ○ Social media campaign ○ University communication department ○ University alliances	
Cost Structure ○ Lecturers’ salaries ○ Organization services ○ Taxes for the use of virtual meeting platforms ○ Utilities		Revenue Streams Participation Fees.		
Monitoring & Evaluation ○ Minimum estimated number of participants to enable the stat of the training course: 25-30				

Business Model Canvas - ETA, Romania				
Key Partners Suppliers of energy efficient technology and renewable energy sources	Key Activities - Pre-visit energy usage analysis and on-site findings, discussions with key staff - Data collection - Energy analysis and energy balances - Solution identification and collaboration with suppliers - Energy transition audit report elaboration	Value Propositions - Identification of cost-saving opportunities in energy use - Identification of CO2 emissions reduction solutions - Support in accessing grants or funding schemes - Helps avoid future taxes or penalties - Customised, actionable ETA - Expert guidance from experienced energy engineers and auditors - Strategic partner for long-term decarbonization	Customer Relationships - Online marketing through SEO, social media and Google Ads - Networking and direct outreach at Events & Webinars - Dedicated account manager - Regular follow-up meetings post-audit to help implement recommended solutions - Access to new tools and funding programs - Upselling and cross-selling other services: energy management, feasibility studies. - Long-term partnerships - Personal assistance, one-on-one interaction with the energy auditor and sales staff.	Customer Segments - Large companies aiming for decarbonization - Energy-intensive companies - Industrial facilities - Utility companies
	Key Resources - Certified energy auditors and engineers - Energy audit report templates and dedicated calculation software - Measurement equipment		Channels - Events and conferences, online webinars, online marketing, LinkedIn and email campaigns. - direct sales, on-site presence of energy auditors, Digital or in-site delivery of ETA - Dedicated account manager, phone and email support, surveys and feedback forms.	
Cost Structure - Fixed costs: salaries, office rent, software - Variable costs: travel, marketing, tools		Revenue Streams Direct revenue from delivering energy transition audits, tailored to the client’s size and complexity.		
Monitoring & Evaluation Follow-up on energy management practices				

D.6.3 Replication and sustainability plan

- Post-audit customer feedback form
- Benchmarking dashboards

Business Model Canvas - Training Programme, Spain				
Key Partners ○ Lecturers ○ Learning platform from department of Long-Life Learning from UPV ○ University and research institutes	Key Activities ○ Develop training material ○ Develop practical activities ○ Record training material and make it available on training platform ○ Accreditation ○ Solve any issue that may arise, address any concerns from participants ○ Analyze and integrate feedback from participants	Value Propositions ○ Upskill current and aspiring energy professionals, provide assets to build an innovative energy audit culture among participants. ○ Practical case studies shaped to simulate real-life scenario, advanced knowledge in energy efficiency, energy transition and decarbonization, involving critical thinking and valuable auditor skills.	Customer Relationships ○ Customer acquisition and growth: social media announcements, communication through UPV platform, referrals. ○ Customer retention: Solving issues that may arise at a general and/or individual level during the implementation of the courses. Feedback collection. ○ Relationship type: personalized attention to communication from participants. Questions are answered as soon as possible.	Customer Segments ○ Energy professionals ○ Engineering students ○ Energy auditors ○ Stakeholders participating in the implementation of ETA
	Key Resources ○ Training materials ○ EnTrainer website and platform ○ EnTrainer tools	○ Training courses attractive to energy professionals ○ Creation of a community of experts in energy efficiency field	Channels ○ UPV Platform and UPV Departments – ASES, IIE, UPV professional association network ○ Social media (LinkedIn) ○ Energy efficiency workshops	
Cost Structure ○ Fixed costs: salaries ○ Variable costs: utilities			Revenue Streams ○ Participation fees ○ Incorporating training material into engineering degrees subjects	
Monitoring & Evaluation ○ Training participation ○ Participants’ feedback				

Business Model Canvas - ETA, Spain				
Key Partners ○ Audit team ○ Company’s energy managers ○ Public agencies: IDAE, EU programs	Key Activities ○ Initial meeting with company manager ○ Data collection ○ Energy scans and energy analysis ○ On-site assessment ○ Energy Efficiency Measures plan ○ Decarbonization Roadmap development ○ ETA report elaboration	Value Propositions ○ Tailored identification of energy-saving and decarbonization opportunities ○ Economic, environmental and energy savings ○ Process optimization ○ Multiple benefits: process optimization, staff comfort, improved work environment	Customer Relationships ○ Customer acquisition: professional network, referrals and social media announcements. ○ Customer retention: trust-based communication, regular updates on ETA progress, personalized communication through emails, video calls, face-to-face and on-site visits. ○ Customer growth: long-term partnerships ○ Relationship type: personal and direct communication with energy managers; open and trustworthy.	Customer Segments ○ Energy-intensive industrial companies
	Key Resources ○ Skilled energy auditors ○ Energy analysis tools (EnTrainer tools, Excel) ○ Measurement instruments (power quality analyzer, thermal cameras...)		Channels ○ Professional network and industry associations ○ Referrals ○ Announcements on social media ○ Emails, video calls ○ Periodical newsletter	
Cost Structure ○ Fixed costs: salaries ○ Variable costs: travel expenses, equipment maintenance, software licenses			Revenue Streams ○ Direct revenue from delivering ETAs.	
Monitoring & Evaluation ○ KPI: energy, environmental and economic indicators				

- Companies' feedback

4. Organizational / consortium dimension

The consortium has identified several organizational mechanisms to ensure the long-term replication and sustainability of project outcomes.

Training courses. A joint, itinerant training course is intended to be delivered by EnTRAINER University partners, with trainers rotating across partner countries. In parallel, the curriculum will be translated into other languages and provided online to extend reach to EU and non-EU audiences. In subsequent phases, joint programmes with European accreditation are envisaged.

Energy transition assessments. Consolidation of ETA outcomes will be pursued with financial support from national and regional Energy Agencies, generating an evidence base for tracking decarbonization trajectories in partner countries. In each country, a reference practice (e.g., UNI/PdR in Italy) will be drafted to regulate ETA implementation and DAP development, with the intention that such guidance be adopted as a national standard.

Academic and research collaboration. Sustainability will be further advanced through co-authored outputs in pedagogy and research, including peer-reviewed publications and conference proceedings, and through follow-on research and innovation projects.

Consortium and network activities. The cooperation established within the consortium and with sister projects is expected to yield continued joint activities. These will comprise structured dissemination of results, systematic exchange of good practices, participation in sectoral events, and the preparation of future proposals.

Internationalization and mobility

- Introduce staff and student mobility schemes (short exchanges, joint summer/winter schools) and co-supervised theses on ETA/DAP topics.
- Seek joint degrees or double-badge certificates with European universities to enhance recognition outside the consortium.

National and regional platforms (Greece). Two complementary initiatives are proposed:

- Establishment of an expert forum on decarbonization and energy efficiency to serve as a recognized venue for knowledge exchange and replication planning.
- Formation of a Greek Energy Transition Alliance—potentially as a working group within the Technical Chamber of Greece—bringing together trained experts, company representatives, and policymakers to maintain structured dialogue and coordinated action towards decarbonization.

5. Conclusions

Energy management is increasingly part of companies' core business. Rising awareness of the benefits of resource efficiency, combined with challenging economic conditions, pushes companies to optimize consumption and invest in training that advances their energy and decarbonization goals. Building on these dynamics, EnTRAINER sustains impact by:

- **Removing barriers to project uptake** by catalyzing teaming between energy professionals and decision-makers, linking EnTRAINER-trained experts, company consultants, financiers and ESCOs, sector associations, and chambers, so that viable ETAs convert into funded implementation.
- **Enabling policy execution and industrial digitalization** by aligning ETA outputs with efficiency policies and supporting the digitalization of industry (Industry 4.0/IoT, digital M&V), making compliance simpler and performance more transparent.
- **Promoting the EnTRAINER approach at scale** by continuing to champion the ETA methodology, online scan tools, and accredited training so energy experts use effective toolchains for optimization and decarbonization—working in close coordination with CEOs, CFOs, and plant leaders to embed decisions in strategy and budgets.

In this way, EnTRAINER continues to raise companies' energy performance by connecting professionals, promoting intelligent energy tools and proven technologies, and providing decision support to all relevant stakeholders across the value chain.

EnTRAINER references



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